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DEDICATION

To Lola and Penny
(our love and gratitude)

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Asia Pacific Economic Co-operation (APEC)	www.apec.org.sg
Association of South East Asian Nations (ASEAN)	www.asean.org
Bank for International Settlements (BIS)	www.bis.org
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NSW Education Standards Authority (NESA)	www.educationstandards.nsw.edu.au
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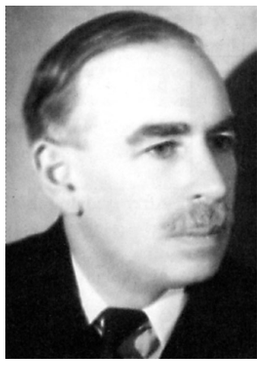
Reserve Bank of Australia (RBA)	www.rba.gov.au

John Maynard Keynes
(1883-1946)



John Maynard Keynes wrote *The General Theory of Employment, Interest and Money* in 1936 to explain how a depression was caused and to recommend effective policies to overcome it. The Great Depression of the 1930s exposed the inadequacy of Neo-Classical economics. *The General Theory* began the Keynesian Revolution, putting macroeconomic issues such as spending, output and employment to the forefront of the policy debate.

The Economics of Keynes

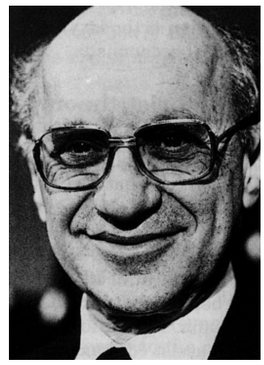
Keynes attacked the Neo-Classical assumption of full employment equilibrium, saying that equilibrium was possible at below full employment. His critique was based on a rejection of Say's Law. Say's Law stated that 'supply created its own demand' because the income generated by the production of goods and services would be spent in buying all of the goods and services produced. The Neo-Classicists also believed that markets would be self adjusting through changes in prices to clear any surplus output. Keynes developed a comprehensive theory of macroeconomics based on aggregate demand which he argued was the main determinant of economic activity including output and employment.

Keynes held that the Great Depression was caused by a lack of aggregate demand in relation to aggregate supply, resulting in the equilibrium level of income being less than the full employment level of income. The result was falling output, price deflation and rising unemployment.

Keynesian Fine Tuning

Keynes recommended the use of discretionary fiscal policy (such as spending and taxation measures) to stimulate aggregate demand to eliminate a deflationary gap. For example, increased government spending on public works would boost spending and reduce unemployment, helping to overcome deflation. Keynes argued that fiscal policy was more effective than monetary policy in achieving this outcome because of a 'liquidity trap' for money, if low confidence restrained borrowing and spending.

Milton Friedman
(1912-2006)



Milton Friedman was one of the most influential economists of the twentieth century and won the Nobel Prize for Economic Science in 1976, largely for his work on the permanent income hypothesis and the theoretical explanation for stagflation. Conservative and liberal academic colleagues alike viewed him as one of the twentieth century's leading economic scholars along with intellectual giants such as John Maynard Keynes, Joseph Schumpeter, John Kenneth Galbraith and Paul Samuelson.

Milton Friedman was a strong advocate of positive economics which is concerned with the formulation of economic theory and its empirical testing, which can be used for accurate forecasting of economic phenomena and events. Friedman taught at the University of Chicago between 1948 and 1979 and was one of the key members of what was to become the Chicago School of Economics. He is credited with the revival of the quantity theory of money and was the driving force behind the modern day school of economic thought known as Monetarism.

The Free Market

Friedman was a strong advocate of the efficiency gains from the operation of free markets. He believed that government interference in markets led to inefficiency and a lack of freedom of choice. Friedman echoed the thoughts of Adam Smith whose belief in the invisible hand of the price mechanism was one of the foundations for a strong economic system. Friedman advocated freely operating markets and minimal government intervention.

Milton Friedman became widely known for his research, writing and public speaking. His most well known academic books were *Studies in the Quantity Theory of Money* (1956) and the *Monetary History of the United States 1867-1960* (1963) co-authored with Anna Schwartz. In 1968 he wrote a paper entitled 'The Role of Monetary Policy', in which he outlined the concept of the natural rate of unemployment and the vertical long run Phillips Curve, which provided a theoretical explanation for the new phenomenon of stagflation in the 1970s.

THE GLOBAL ECONOMY

1

TOPIC FOCUS

This topic focuses on the study of the operation of the global economy and the impact of globalisation on individual economies.

Students should learn to examine the following economic issues and apply the following economic skills in Topic 1 of the HSC course:

EXAMINE ECONOMIC ISSUES

- Examine the effects of globalisation on economic growth and the quality of life, levels of unemployment, rates of inflation and external stability;
- Assess the potential impact on the environment of continuing world economic development;
- Investigate the global distribution of income and wealth;
- Assess the consequences of an unequal distribution of global income and wealth; and
- Discuss the effects of protectionist policies on the global economy.

APPLY ECONOMIC SKILLS

- Analyse statistics on trade and financial flows to determine the nature and extent of global interdependence;
- Assess the impact on the global economy of international organisations and contemporary trading bloc agreements; and
- Evaluate the impact of development strategies used in a range of contemporary and hypothetical situations.

Global economic activity was expected to strengthen in 2017-18 with a recovery in output, manufacturing, investment and trade. According to the IMF world growth was 3.1% in 2016 but forecast to rise to 3.5% in 2017 and 3.6% in 2018. This reflects stronger growth in the USA (2.3%), the UK (2%) and modest growth in Japan (1.2%) and the EU (1.7%). Major factors weighing on growth and financial market stability are the decision of Britain to leave the European Union (the 'Brexit' vote) in June 2016 and the policy uncertainty under the new US President, Donald Trump.

In the major emerging and developing market economies, the IMF forecasts growth of 4.5% in 2017 strengthening to 4.8% in 2018. China was forecast to grow by 6.6% and India by 7.2% in 2017, but Russia (1.4%) and Brazil (0.2%) are experiencing contractions in growth. Major factors affecting world growth prospects include low productivity and rising inequality in major advanced economies, and the threat of rising protectionism in the USA under President Trump. There is also ongoing geopolitical instability in the Middle East and some volatility in world financial markets.

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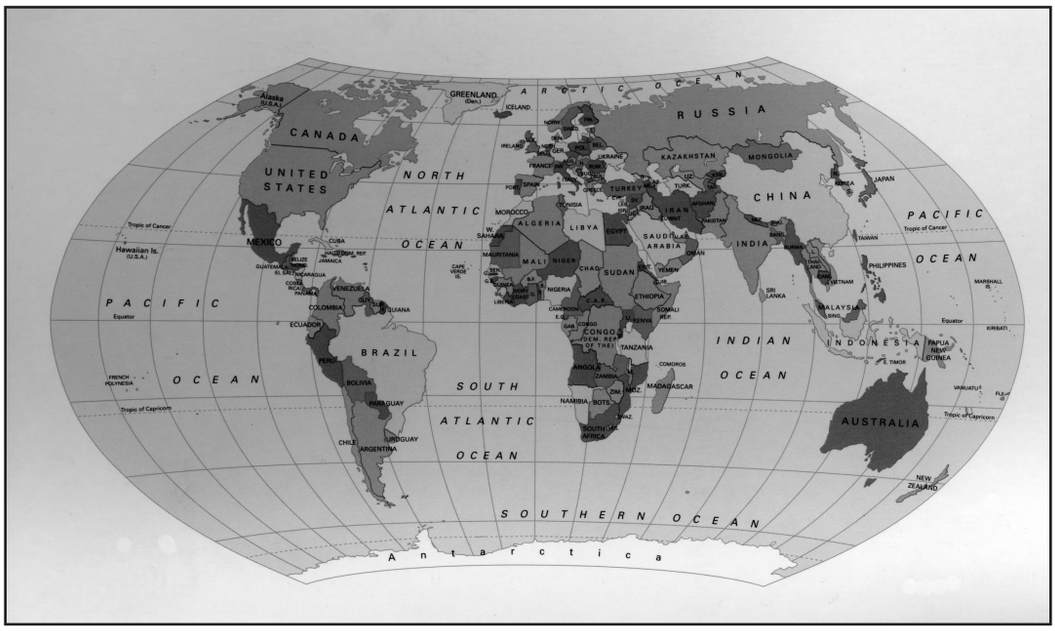


World Map

Chapter 1

International Economic Integration

THE GLOBAL ECONOMY AND ECONOMIC INTEGRATION

The global or world economy consists of all the countries in the world that produce goods and services and contribute to Gross World Product (GWP) or global output or GDP. These countries also engage in world trade in goods and services and are responsible for flows of foreign direct and portfolio investment. The economies of countries have become more integrated over time through a reduction in trade barriers (such as tariffs and subsidies) and this has led to greater **international economic integration**.

Economic integration refers to the liberalisation of trade between two or more countries or many countries within a region. This liberalisation of trade may lead to the formation of a free trade area, customs union, common market or a monetary union (as shown in **Table 1.1**). The most important examples of regional economic integration are the European Union (EU), the North American Free Trade Agreement (NAFTA), the Asia Pacific Economic Co-operation forum (APEC) and the ASEAN Free Trade Agreement (AFTA). The integration between these regional groupings of countries has resulted in a growing amount of **intra-regional trade** and intra-industry trade in the European Union, East Asia and North America. These three major regional geographic groups dominate world output and world trade. The main benefits of economic integration include increased trade and investment flows and rising standards of living.

Greater international economic integration has also been accompanied by an increasing proportion of world trade carried out by multinational corporations (MNCs). Much of their trade is intra-company trade, with goods and services traded between the international subsidiaries of multinational corporations. Many Japanese, European, American and Asian corporations have globally integrated operations through the development of regional and global supply chains based on production and distribution.

Table 1.1: The Main Forms of Economic Integration

- A free trade area is where a group of member countries abolish trade restrictions between themselves but retain restrictions against non member countries. An example of a free trade area is NAFTA where tariffs between the member countries of the USA, Canada and Mexico have been removed but each country maintains its own tariffs towards non member countries of NAFTA.
- A customs union is where member countries not only abolish trade restrictions between themselves but adopt a common set of trade restrictions against non member countries. An example of a customs union was the European Economic Community (EEC) prior to 1993, which abolished tariffs between member countries but set a common external tariff (CET) towards non EEC members.
- A common market involves the features of a customs union but allows the free mobility of labour and capital within the common market countries, as well as the free flow of goods and services. The European Community (EC) between 1993 and 1998 operated as a common market. In 1998 the European Union (EU) was formed and now has 28 member countries, although a majority of citizens in the United Kingdom voted by referendum to leave the EU ('Brexit') in June 2016.
- A monetary union is characterised by the features of a common market plus the adoption of a common currency and the co-ordination of monetary policy through a single central bank. Fiscal, welfare and competition policies may also be co-ordinated between member countries. The Economic and Monetary Union (EMU) is an example of a monetary union and consists of 19 members of the EU which adopted the single currency of the Euro in 1998 (or after) and have their monetary policy set by the European Central Bank (ECB). The EMU is known as the Euro Area.

The Global Economy

The International Monetary Fund (IMF) publishes the *World Economic Outlook* and classified 192 countries in the world into two main groups in the *World Economic Outlook* in April 2017:

1. The **advanced economies** (39), are characterised by high levels of economic development, with average per capita incomes of over US$30,000 per annum. The advanced economies are market based economies with free enterprise economic systems of resource allocation and limited government intervention in their markets. Examples of advanced economies include the USA, Japan, Germany, the United Kingdom, France, Italy and Canada (Group of 7 or G7), Australia and New Zealand.
2. **Emerging and developing economies** (153), include nations such as China, India, Nigeria and Brazil and former Communist countries (transition economies such as Russia) in Eastern Europe which are raising their rates of economic growth and development, but have lower per capita incomes and living standards than advanced economies. Many of these nations such as China and India are 'emerging economies' as they are sustaining rapid economic growth and development.

In 2016 there were 39 advanced economies in the world according to the IMF classification. These 39 countries and their shares of world GDP, exports and population are shown in **Table 1.2**. The advanced economies dominate world GDP and trade but this dominance has declined over time. They accounted for 41.9% of world GDP and 64.4% of world exports of goods and services in 2016, but only 14.5% of total world population. Three major sub groupings within the 39 advanced economies are:

(i) The **major advanced economies** are the seven largest in terms of GDP and include the world's second largest economy, the United States, and Japan, Germany, the United Kingdom, France, Italy and Canada. They are known as the **Group of Seven** or G7. They accounted for 31% of world GDP and 34.6% of world exports in 2016, yet represented only 10.3% of the world's population.

(ii) The **Euro Area** consists of 19 countries in the Economic and Monetary Union (EMU) which accounted for 11.8% of world GDP, 26.3% of world exports in 2016, but only 4.6% of world population. Germany, France, Italy and Spain are the largest four economies in the Euro Area.

(iii) The 16 **other advanced economies** include Australia, the Czech Republic, Denmark, Iceland, Israel, Puerto Rico, New Zealand, Norway, San Marino, Sweden, Switzerland and the **newly industrialised economies** (NIEs) of Korea, Taiwan, Hong Kong SAR, Macao SAR and Singapore. They produced 6.5% of world output, 17.4% of world exports and had 2.3% of world population in 2016.

Table 1.2: Advanced Economies' Shares of World GDP, Exports and Population in 2016

	Number of Countries	*% of World GDP*	*% of World Exports*	*% of World Population*
Advanced Economies	**39**	**41.9%**	**64.4%**	**14.5%**
USA	1	15.5%	10.8%	4.4%
Euro Area	19	11.8%	26.3%	4.6%
– Germany		3.3%	7.8%	1.1%
– France		2.3%	3.5%	0.9%
– Italy		1.9%	2.7%	0.8%
– Spain		1.4%	2.0%	0.6%
Japan	1	4.4%	3.9%	1.7%
United Kingdom	1	2.3%	3.6%	0.9%
Canada	1	1.4%	2.3%	0.5%
Other Advanced Economies (inc. NIEs)	16	6.5%	17.4%	2.3%
Major Advanced Economies (G7)	7	31.0%	34.7%	10.4%

Source: IMF (2017), *World Economic Outlook*, April. NB: Figures are rounded and may not total exactly

The group of **emerging and developing economies** consists of 153 countries which are not classified as advanced economies. This is because of their significantly lower levels of per capita income and economic development than the 39 advanced economies. The major emerging economies include Brazil, Russia, India and China (**the BRICs**) which sustained high rates of economic growth and development in the 2000s and as a group accounted for 30.8% of world GDP in 2016. Other emerging economies include the oil exporting countries in the Middle East such as Saudi Arabia, Iran, Iraq, Kuwait and the UAE. The developing countries (such as Pakistan, Mali, Ethiopia, Niger and Cambodia) are characterised by low per capita incomes and low levels of economic growth and development.

The developing countries are mainly located in developing Asia, the Middle East and North Africa, Sub Saharan Africa and Latin America. Many of these countries are members of the Organisation of Petroleum Exporting Countries (**OPEC**) and have significant oil exports to the rest of the world, whilst others such as Brazil and Venezuela are significant resource exporters. Emerging and developing economies are classified by the IMF according to their geographic region. In 2016 they accounted for 58.1% of world GDP, 35.6% of world trade and 85.5% of world population as shown in **Table 1.3**:

- Emerging and Developing Europe: The 12 countries in this region (such as Poland, Hungary, Romania and Turkey) accounted for 3.5% of world GDP and 3.5% of world exports in 2016.
- The Commonwealth of Independent States (CIS): The 12 countries in the CIS include Russia and former states of the USSR, accounting for 4.5% of world GDP and 2.4% of world exports in 2016.
- Emerging and Developing Asia: With 30 countries including China and India, this region accounted for 31.6% of world GDP and 17.9% of world exports in 2016. Developing Asia had 48.7% of the world's population in 2016, making it the largest and fastest growing region in the world.
- The Middle East, North Africa, Afghanistan and Pakistan: The 22 countries in this region accounted for 7.6% of world GDP and 5.2% of world exports in 2016, with many being members of OPEC.
- Sub Saharan Africa: This is the poorest developing region in the world with 45 countries accounting for only 3% of world GDP and 1.5% of world exports in 2016 despite having 13% of total world population. The World Bank targets this region with assistance to alleviate income poverty.
- Latin America and the Caribbean: There are 32 countries in Central and South America and the Caribbean, accounting for 7.9% of world GDP and 5% of world exports in 2016. Brazil and Mexico are the largest and most populous emerging economies in this region.

Table 1.3: Emerging and Developing Economies' Shares of World GDP, Exports and Population in 2016

	Number of Countries	*% of World GDP*	*% of World Exports*	*% of World Population*
Emerging and Developing Economies	**153**	**58.1%**	**35.6%**	**85.5%**
Emerging and Developing Europe	12	3.5%	3.5%	2.4%
Commonwealth of Independent States	12	4.5%	2.4%	3.9%
- Russia		3.2%	1.6%	2.0%
Emerging and Developing Asia	30	31.6%	17.9%	48.7%
- China		17.8%	10.7%	19.0%
- India		7.2%	2.1%	17.9%
Middle East, North Africa, Afgh. and Pak.	22	7.6%	5.2%	9.1%
Sub Saharan Africa	45	3.0%	1.5%	13.0%
Latin America and the Caribbean	32	7.9%	5.0%	8.4%
- Brazil		2.6%	1.1%	2.8%
- Mexico		1.9%	1.9%	1.7%

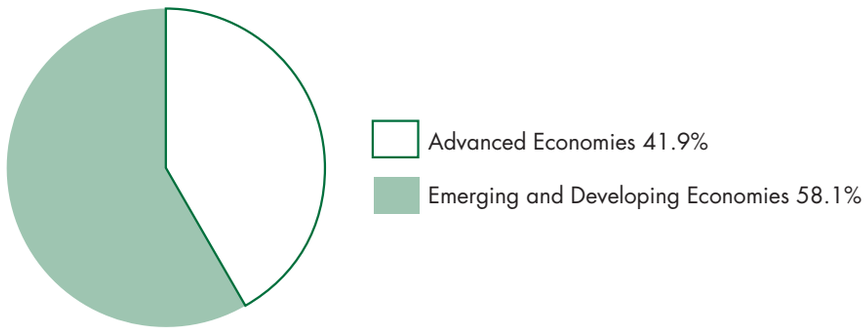
Source: IMF (2017), *World Economic Outlook*, April. NB: Figures are rounded and may not total exactly

Gross World Product

The size of the global or world economy is measured by the International Monetary Fund (IMF) through the compilation of data which values countries' Gross Domestic Products (GDPs) at **purchasing power parities** (PPP). World GDP at PPP is the total market value of all goods and services produced by all countries over a given time period (usually one year), adjusted for national variations in prices and different exchange rates. World GDP at PPP is valued in US dollars as this is the world's reserve currency and is a measure of the value of world output or production in real terms. The total value of real world output or GDP in PPP terms in 2016 was US$119,884b, with annual growth of 3.1%.

Figure 1.1 shows the composition of world output in 2016 between the advanced economies and the emerging and developing economies. The 39 advanced economies accounted for 41.9% of world GDP, whilst the 153 emerging and developing economies accounted for 58.1% of world GDP. This means that the relatively smaller number of advanced economies (39) dominate the global production of goods and services compared to the larger number of emerging and developing economies (153).

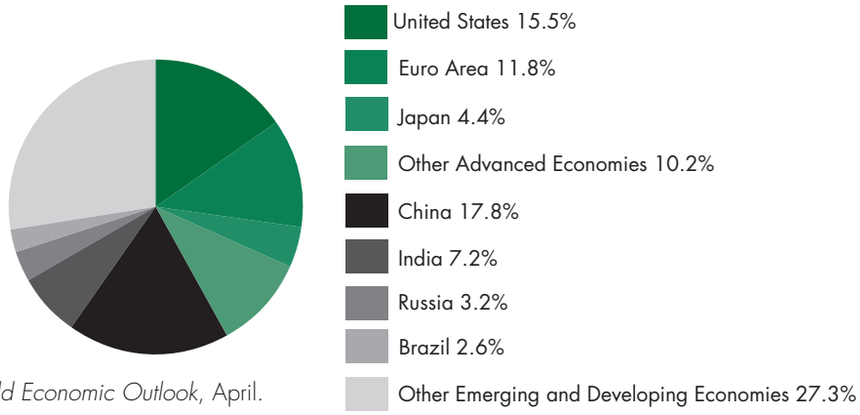
Figure 1.1: The Composition of World Output in 2016



Source: IMF (2017), *World Economic Outlook*, April.

However in terms of the growth of national GDPs, emerging and developing economies have sustained higher rates of growth (4%-7%) than the advanced economies (3%-4%) and their share of world GDP has increased steadily over time. This is evident in **Figure 1.2** which shows the shares of world output in 2016 according to major countries and groups of countries. The two largest emerging and developing economies of China and India in developing Asia, had shares of world GDP which were 17.8% and 7.2% respectively in 2016. Combined at 25% of world GDP, they exceeded the shares of world GDP of the Euro Area (11.8%) and the USA (15.5%). China became the world's largest economy in 2015 in PPP terms of its GDP but the USA is the largest in nominal US dollar terms of its GDP.

Figure 1.2: The Shares of World Output in 2016



Source: IMF (2017), *World Economic Outlook*, April.

Table 1.4: World GDP Growth 2014 to 2018 (f)

Country, Group or Region	*2014*	*2015*	*2016*	*2017 (f)*	*2018 (f)*
United States	2.4%	2.6%	1.6%	2.3%	2.5%
Euro Area	1.2%	2.0%	1.7%	1.7%	1.6%
Japan	0.3%	1.2%	1.0%	1.2%	0.6%
China	7.3%	6.9%	6.7%	6.6%	6.2%
Other East Asia	4.0%	4.1%	3.9%	4.0%	4.2%
India	7.2%	7.9%	6.8%	7.2%	7.7%
World	3.5%	3.4%	3.1%	3.5%	3.6%

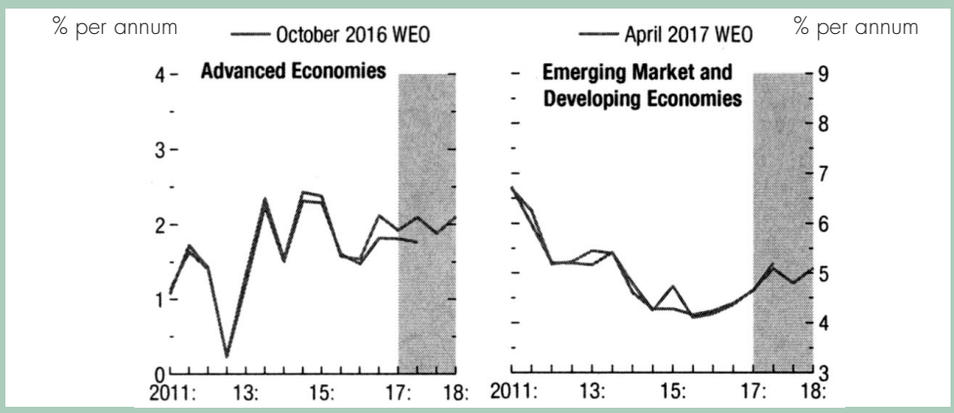
Source: IMF (2017), *World Economic Outlook*, April. (f) forecast

The divergence between the higher rates of growth in GDP recorded by major emerging and developing countries compared to the advanced economies is shown in **Table 1.4**. During the height of the Global Financial Crisis (GFC) in 2009 advanced economies contracted by an average of -2.7% whilst China (8.7%) and India (5.7%) and other major emerging and developing economies recorded slower but positive growth. This helped to lessen the overall fall in world GDP growth to -0.5% in 2009.

In 2010 a global economic recovery began, led by strong growth in China, India and other East Asian economies, whilst major advanced economies such as the USA, Euro Area and Japan experienced much lower but positive growth. However the deepening of the European Sovereign Debt Crisis and the widespread use of fiscal austerity measures in advanced countries to cut budget deficits and levels of public debt limited their capacity to achieve economic growth. Global growth remained moderate at 3.5% in 2014 as shown in **Table 1.4**, with a modest recovery in the USA (2.4%) but very low growth in the Euro Area (1.2%), Japan (0.3%), but much higher growth in China (7.3%) and India (7.2%).

In 2017 the IMF forecast moderate growth of 3.5% for the global economy. Whilst the major emerging and developing countries were forecast to grow faster than the major advanced countries in 2017-18 major macroeconomic challenges affected the growth prospects of both groups of countries. For the advanced countries these included large output gaps, high unemployment and Britain's decision to leave the European Union in June 2016. The large emerging and developing countries faced large falls in global commodity prices, the re-balancing of China's economy, and a buildup of deflationary pressures. **Figure 1.3** illustrates the long and slow global economic recovery between 2011 and 2017.

Figure 1.3: Global GDP Growth 2011 to 2017 (f)



Source: IMF (2017), *World Economic Outlook* (WEO), April.

REVIEW QUESTIONS

THE GLOBAL ECONOMY AND ECONOMIC INTEGRATION

1. Define the term *global economy*.
2. Explain what is meant by international economic integration.
3. Using examples from Table 1.1, distinguish between the main forms of economic integration: a free trade area; a customs union; a common market; and a monetary union.
4. Distinguish between the advanced economies and emerging and developing economies that make up the world economy.
5. List the major advanced economies or Group of Seven (G7). Using the data from Table 1.2 comment on the importance of the G7 to world GDP and world exports in 2016.
6. List the major advanced economies in the Euro Area. Using the data from Table 1.2 comment on the importance of the Euro Area to world GDP and world exports in 2016.
7. List the other major advanced economies (including the newly industrialised Asian economies). Use the data in Table 1.2 to describe their importance to world GDP and exports in 2016.
8. Distinguish between the emerging and developing economies. Using the data from Table 1.3 discuss the importance of these economies to world GDP and world exports in 2016.
9. List the six geographic regions where emerging and developing economies are located.
10. How is global GDP or world output measured by the IMF in Purchasing Power Parity (PPP) terms?
11. Discuss the composition of world output in 2016 between advanced and emerging and developing economies from Figure 1.1.
12. Discuss the composition of world output in 2016 by major countries and regions from Figure 1.2.
13. Using the data in Table 1.4 contrast the rates of GDP growth of major advanced and emerging and developing economies between 2014 and the forecasts for 2017.
14. Start a glossary of terms by defining the following terms and abbreviations:

advanced economies	world exports
common market	world GDP
customs union	AFTA
developing economies	APEC
economic integration	ASEAN
emerging economies	CIS
Euro Area	EMU
free trade area	EU
global economy	G7
global investment	GDP
global trade	GFC
gross world product	GWP
intra-industry trade	IMF
intra-regional trade	NAFTA
monetary union	NIE
newly industrialised Asian economies	OPEC
per capita income	PPP

GLOBALISATION AND ECONOMIC INTEGRATION

The most important recent trend to emerge in the world economy is the process of globalisation. **Globalisation** refers to the increasing level of economic integration between countries, leading to the emergence of a global market place or a single world market. Globalisation has linked people in various countries (often at different stages of economic development and with different cultures) through the use of common technologies (such as mobile phones, the Internet and computers) and the global customisation of goods and services. The World Bank's *Human Development Report 1999* provided an excellent summary of the features of the new global economy and appears in **Extract 1.1** on page 10.

Economic integration occurs when trade barriers (such as tariffs, subsidies and quotas) are reduced or removed between countries to facilitate the growth in free international trade and flows of foreign investment. This can occur through the signing of regional free trade agreements between countries (such as NAFTA, the EU, APEC, AFTA and the TPP), which facilitate free trade between member countries who are usually in the same geographic region. Economic integration can also be promoted through the standardisation or customisation of products and services which are marketed and distributed on a global basis. This may be the result of technological change (such as digital technologies and the use of social media) and using the Internet to conduct **electronic commerce**. There are other major characteristics of the globalisation process that account for its rapid spread throughout the world:

- The integration of national financial systems has created a world financial system. Increased global financial integration has resulted from financial deregulation in most countries, leading to the integration of capital markets, and greater mobility of capital flows globally. This includes flows of foreign direct and portfolio investment and foreign exchange between countries and regions.
- Major companies and businesses conduct trade and investment across national boundaries. These multinational corporations (MNCs) are increasingly 'footloose' in seeking out the most competitive (low cost) locations in which to do business and to receive the highest profits from their operations. Businesses also market new ideas, innovations and consultancy services on a global basis.
- The information and communications technology (ICT) revolution has led to new types of products, services and employment in businesses servicing the global market through the Internet, conducting electronic commerce and by using digital technology and social media platforms.
- The global market place includes the Asia Pacific region (e.g. Japan, China, Korea, India and the NIEs), as well as North America and Europe as major regions of global economic activity.
- The growth products in the global economy include elaborately transformed manufactured goods (ETMs), technology goods and specialised services such as finance, business, accounting, insurance, transport, telecommunications, entertainment, music, media and information technology.
- International trade is increasingly linked with foreign investment as companies use foreign direct investment (FDI) to gain access to foreign markets and to generate exports of inputs and expertise from the home country. Between 1998 and 2007 world trade volumes grew by an average of 7.5% per annum, and foreign direct investment grew similarly by 7.8% per annum. Intra-firm trade (i.e. trade between the subsidiaries of foreign companies) now makes up about 25% of world trade.

The forces 'driving the globalisation of economic activity' are strong and generally supported by the governments of advanced, emerging and developing countries. Globalisation has been adopted by governments in advanced economies as a policy strategy, through trade liberalisation and microeconomic reforms in commodity, finance and labour markets, to increase international competitiveness. Large emerging and developing economies such as China, India, Russia and Brazil have also embraced policies to liberalise their trade, and promoted internal economic reforms to capture the gains from being more integrated with the global economy. However the increased economic and trade linkages between countries and regions has also increased the risk of the transmission of 'financial contagion' from one country or region to others. This was evident by the speed and impact of the **Global Financial Crisis** in 2008-09 which caused a global recession in output, trade and employment.

Extract 1.1: Features of the New Global Economy

New Markets

- Growing global markets in services such as banking, finance, insurance, media and transport.
- New financial markets, which are deregulated, globally linked, 'working around the clock', with action at a distance in real time, with new instruments traded such as derivatives.
- Deregulation of anti-trust laws and the proliferation of mergers and acquisitions.
- Global consumer markets with global brands of products and services of multinational corporations.

New Actors

- Multinational corporations integrating their production and marketing, and dominating world production through global supply chains.
- The World Trade Organisation (WTO) is the first multilateral organisation with the authority to enforce national governments' compliance with rules on free and fair trade.
- An international criminal court system is now in operation.
- A booming international network of NGOs (Non Government Organisations) providing foreign aid such as humanitarian aid, disaster relief and technical assistance with development projects.
- Regional trade blocs proliferating and gaining in importance e.g. the European Union (EU), the Association of South East Asian Nations (ASEAN), Mercosaur (Brazil, Argentina, Uruguay and Chile), North American Free Trade Agreement (NAFTA), Southern African Development Community (SADC), ASEAN Free Trade Agreement (AFTA) and Asia Pacific Economic Co-operation (APEC).
- More policy co-ordination groups e.g. G7, G8, G10, G20, G77 and the OECD.

New Rules and Norms

- Market based economic policies have spread around the world, with greater privatisation and liberalisation than in earlier decades.
- Widespread adoption of democracy as the choice of political system.
- Human rights conventions and instruments building up in both coverage and the number of signatories, and growing awareness of people around the world of their basic human rights.
- Consensus goals and action agendas for development being adopted by developing countries.
- Multilateral agreements in trade (such as the Doha Round), taking on new agendas such as environmental and social conditions, minimum labour standards and intellectual property rights.
- Conventions and agreements (such as the Kyoto Protocol and the Paris Agreement) to protect the global environment such as biodiversity, the ozone layer, disposal of hazardous wastes, trade in endangered species, desertification and climate change.
- New multilateral agreements in the WTO for trade in services, intellectual property and communications which are more binding on national governments than any previous agreements.
- The multilateral agreement on investment is under debate.

New Tools of Communications

- Internet and electronic communications linking people simultaneously through the use of:
  - personal computers, iPads and other electronic tablets
  - email, cellular and smart phones and social media platforms such as Twitter, Facebook, Instagram and Linkedin
  - digital televisions, fax machines, cameras and iPods
  - faster and cheaper transport of people and goods by air, sea, rail and road
  - computer aided design and 'just in time' (JIT) production
- The global spread of digital technology, communications, social media and electronic commerce.

Source: Adapted from the World Bank (1999), *Human Development Report*, Oxford University Press, New York.

The European Sovereign Debt Crisis in 2011-12 was also transmitted to other regions and the world economy, leading to lower growth in output, trade and foreign investment flows. Another problem associated with globalisation and increased international economic integration is the widening gap in the distribution of income and wealth between advanced countries and emerging and developing countries. This is illustrated by the geographic distribution of world income in **Figure 3.3** on page 70 in Chapter 3. In summary, four major forces underpin the process of globalisation:

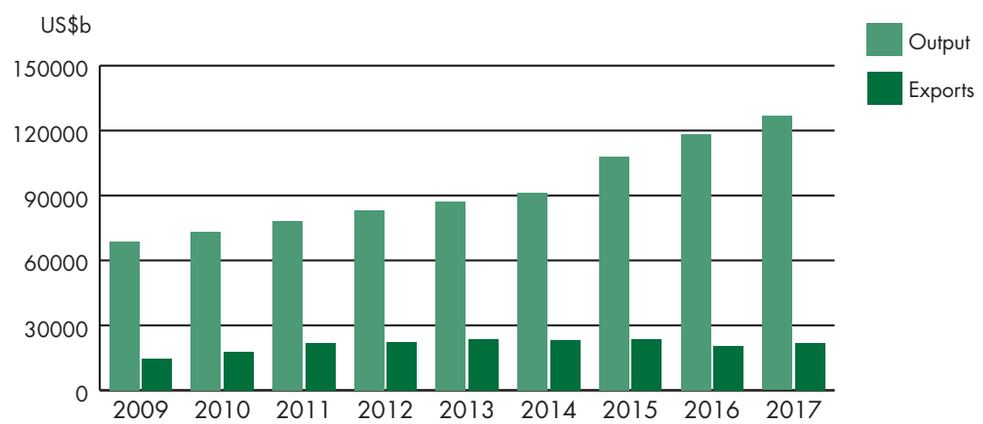
1. The increased customisation of products and services has led to the development of a network or global web of production and distribution facilities in major world markets by MNCs (see p18).
2. Improved levels of technology, communications, transport and information technology have reduced transport, communications and transaction costs in conducting global business.
3. The rapid liberalisation of the global trading environment, has occurred through the signing of bilateral, regional and multilateral trade agreements.
4. The financial and trade linkages between countries have been strengthened by globalisation, but has also led to the faster transmission of financial and real shocks between countries and regions.

WORLD TRADE, FINANCIAL FLOWS AND FOREIGN INVESTMENT

Globalisation has generally led to higher growth in world output, trade and foreign investment. However this trend was halted with the onset of the Global Financial Crisis in 2009. This is illustrated in **Figure 1.4** which shows the growth in the value of world output and world trade in US dollars between 2009 and 2017. The average annual growth in world output was 4.2% between 1998 and 2007 due to a global resources boom. However in 2009 global output contracted by -0.1% because of the Global Financial Crisis (GFC) which caused deep recessions in most advanced economies. The ensuing global recovery between 2010 and 2014 was weakened because of the European Sovereign Debt Crisis and the 'fiscal cliff' in the USA, with world growth decelerating from 5.4% in 2010 to 3.1% in 2015.

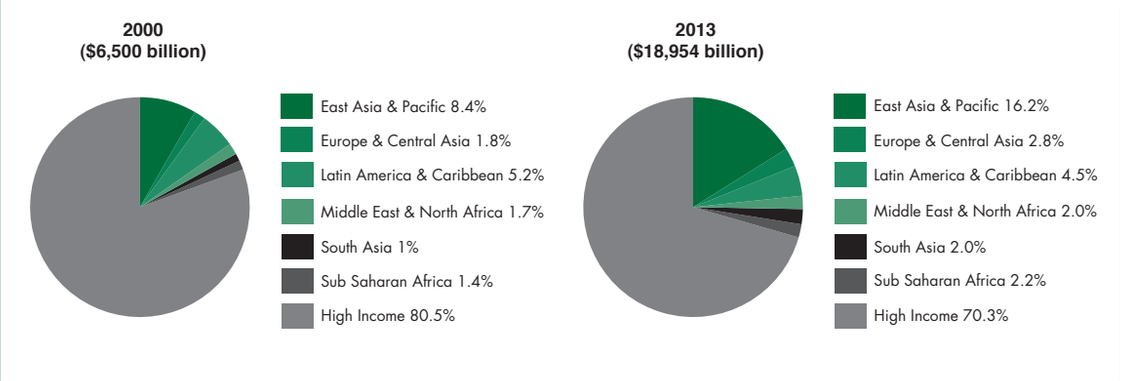
World exports of goods and services increased by 7.8% annually between 1998 and 2007 with exports of advanced countries growing by 5.9%, and the exports of the emerging and developing countries growing by 9%. In 2009 the exports of advanced economies declined by -13.1% and by -8.7% in emerging and developing economies due to the global recession. World exports recovered and grew by 5% annually between 2010 and 2015 before slowing to 2.2% in 2016 due to slower growth in China and falling commodity prices. Major global merchandise exports are food, agricultural raw materials, fuels, ores, metals and manufactured goods. The main service exports in the global economy include commercial, transport, travel, insurance, financial, computer, information and communications services.

Figure 1.4: Growth in the Value of World Output and Trade 2009-2017 (f)



Source: IMF (2017), *World Economic Outlook*, April.

Figure 1.5: Changes in Shares of World Exports of Goods 2000-2013



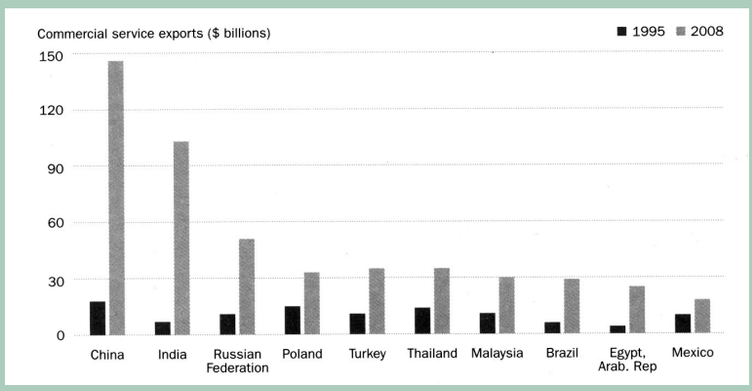
Source: World Bank (2015), *World Development Indicators 2015*, Table 4.4, World Bank, Washington DC.

Changes in the shares of world exports of goods between 2000 and 2013 are shown in **Figure 1.5**. East Asia and the Pacific increased its share the most from 8.4% to 16.2% whilst the high income countries' share fell from 80.5% to 70.3% between 2000 and 2013. World trade in services has grown with the rise in incomes and demand for specialised services, as well as lower costs for global technology, transport and communications. The main categories of services in world trade in 2015 were the following:

- Transport services (20% of the total) performed by the residents of one economy for those of another economy. They include the carriage of passengers and the movement of goods or freight.
- Travel (26% of the total) includes goods and services acquired from an economy by travellers or tourists for their own use during personal or business visits of less than one year.
- Insurance and financial services (9% of the total) include freight, insurance, and financial intermediation services such as commissions, foreign exchange transactions and brokerage.
- Computer, information, communications and commercial services (45% of the total) include telecommunications; postal and courier services; computer data; news related services; construction services; royalties and licence fees; technical services; and personal, cultural and recreational services.

World service exports were valued at US$4,839b in 2015 with the advanced economies accounting for 78.5% (down from 84% in 1995) and emerging and developing economies for 21.5% (up from 16% in 1995). The top ten developing economy exporters of commercial services (refer to **Figure 1.6**) accounted for 13% of world commercial service exports in 2008. The growth in service exports from emerging and developing countries is mainly due to the increased use of outsourcing and offshoring.

Figure 1.6: Top Ten Developing Economy Exporters of Commercial Services 1995-2008



Source: World Bank (2010), *World Development Indicators 2010*, World Bank, Washington DC.

Globalisation and Financial Flows

The GFC and economic downturn in 2008-09 led to significant falls in activity on world financial markets. This was due to the increased risk aversion of lenders, a higher cost of credit and increased volatility in asset prices such as equities and exchange rates. Total activity on global capital markets fell from US$6,284b in 2008 to US$5,391b in 2009. It continued to decline after the GFC, with the European Sovereign Debt Crisis in 2010-11 and slower world growth between 2012 and 2014. There was a recovery in corporate debt lending in 2016 as shown in **Table 1.5** due to low global interest rates.

The most noticeable feature of global capital market activity between 2008 and 2014 was the decline in net issues of debt securities by corporations as they de-leveraged and reduced their debt to equity ratios during and after the Global Financial Crisis. Another feature was the increase in net bond issuance by governments in 2009-10 to fund their higher budget deficits during the GFC due to falling tax revenue and the use of fiscal stimulus packages. Activity on global equity markets was subdued in 2008 as volumes traded fell as did global equity prices. However equity issues increased in 2009 as corporations raised additional equity capital and reduced their debt borrowings between 2009 and 2014.

Table 1.5: Financial Activity on Global Capital Markets 2010-2016* (US$b)

	2010	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*
Bonds and Notes	1,500	1,227	713	499	607	496	420
Equities	707	485	605	678	612	618	794
Debt Securities	1,514	1,221	734	512	674	839	2,610
Other Money Market Instruments	14	-7.0	21	12	67	71	49
Total	3,735	2,926	2,073	1,701	1,960	2,024	3,873

Source: Bank for International Settlements (2017), *Quarterly Review*, June. * Figures are for net issues of finance

Global derivatives trading in futures, options, swaps and forward rate agreements (derived from primary debt and equity securities) is used as part of corporate management strategies to hedge risk. Offsetting fluctuations in share, currency and commodity prices and interest rates is the principal objective of derivatives trading. The two main types of derivatives are exchange traded and 'over the counter' or OTC. OTC instruments, particularly interest rate swaps, are the most dominant form of derivative traded, reaching a peak of US$584,364b in 2013 (**Table 1.6**). Total derivatives trading fell from US$524,544b in 2007 to US$482,498b in 2008 due to the Global Financial Crisis but recovered from US$561,513b in 2010 to US$710,183b in 2013 as shown in **Table 1.6**. Derivative activity fell between 2013 and 2016 largely due to a contraction in interest rate contracts with lower global interest rates.

Table 1.6: Derivative Activity on Global Capital Markets 2013-2016* (US$b)

	2013	*2014*	*2015*	*2016*
Foreign Exchange Contracts	70,553	75,879	70,446	68,598
Interest Rate Contracts	584,364	505,454	384,025	368,356
Equity Contracts	6,560	7,940	7,141	6,140
Commodity and Other Contracts	48,706	40,876	31,299	39,807
Total	710,183	630,149	492,911	482,901

Source: Bank for International Settlements (2017), *Quarterly Review*, June. * Notional amounts outstanding

The World Foreign Exchange Market

According to the Bank for International Settlements (BIS) the daily turnover in global foreign exchange (FX) markets declined slightly from US$5,357b in 2013 to US$5,067b in 2016 (see **Table 1.7**). This was mainly due to two factors: a 16% decline in the value of international trade between 2013 and 2016 as world growth remained below trend; and the appreciation of the US dollar against other currencies which reduced the US dollar value of turnover in other currencies. However over the long term foreign exchange markets have grown reflecting the growth in foreign exchange derivatives and trading by hedge and pension funds to make profits. According to the data in **Table 1.7** the main types of global foreign exchange transactions are **spot transactions** (where there is receipt or delivery of foreign exchange within two business days); **outright forward transactions** (where there is receipt or delivery of foreign exchange in more than two business days); and **swaps**, which are transactions in which parties agree to exchange two currencies on a specific date and to reverse the transaction at a date in the future.

Table 1.7: Global Foreign Exchange Market Turnover 2010-2016 (Daily average in US$b)

	2010	*2013*	*2016*
Spot Transactions	1,489	2,047	1,652
Outright Forwards	475	679	700
FX Swaps and Options	2,009	2,631	2,715
Total Turnover	3,973	5,357	5,067

Source: Bank for International Settlements (2016), *Triennial Survey of Foreign Exchange and Derivatives*, December.

The main participants in global foreign exchange markets according to the most recent *BIS Triennial Survey* in 2016 were the following:

1. Reporting dealers are mainly commercial and investment banks acting on behalf of clients. They accounted for US$2,121b or 41.9% of the total daily average turnover of US$5,067b in 2016.
2. Other financial institutions include hedge funds and pension funds that buy and sell currencies on behalf of clients to make profits. They accounted for US$2,564b or 50.6% of the total daily average turnover of US$5,067b in 2016. They have increased in importance over time.
3. Non financial institutions include governments, multinational or transnational corporations, and international organisations such as the World Bank, IMF and the UN. They accounted for US$382b or 7.5% of the total daily average turnover of US$5,067b in 2016.

Other financial customers (outside the official reporting dealer community) accounted for most of the strong rise in global foreign exchange turnover between 2010 and 2013. This growth was sourced from institutional investors (such as hedge and pension funds) looking for short term returns, as well as superannuation funds diversifying their portfolios in the longer term in seeking higher returns. Investment strategies such as the **carry trade**, which uses leverage (or debt borrowings) to exploit interest rate and exchange rate differentials to earn returns for investors, was a less important 'driver' of foreign exchange turnover between 2010 and 2013 because of lower world interest rates. The largest foreign exchange markets are in the United Kingdom, the USA, Singapore, Hong Kong and Japan.

Table 1.8 shows the percentages of global foreign exchange turnover accounted for by the eight top ranked countries or markets. The UK and USA dominated world foreign exchange turnover in 2016 accounting for 56.4% of the global market. Next in importance were markets in Singapore, Hong Kong, Japan, France, Switzerland and Australia. Singapore and Hong Kong have grown in importance because of their dealings with China, Japan and other newly industrialised Asian economies. Large European countries such as France and Germany are also important foreign exchange markets.

Table 1.8: Global Foreign Exchange Turnover by Country 2013-16 (% of total)

Country	2013	2016
1. United Kingdom	40.9%	36.9%
2. United States	18.9%	19.5%
3. Singapore	5.7%	7.9%
4. Hong Kong	4.1%	6.7%
5. Japan	5.6%	6.1%
6. France	2.8%	2.8%
7. Switzerland	3.2%	2.4%
8. Australia	2.7%	1.9%
Other countries	16.1%	15.7%

Source: Bank for International Settlements (2016), *Triennial Survey of Foreign Exchange*, December.

Table 1.9: Global Foreign Exchange Turnover by Currency in 2016

Foreign Exchange Turnover By Currency	By Currency pair
1. US Dollar	EUR/USD
2. Euro	USD/JPY
3. Japanese Yen	GBP/USD
4. GB Pound	AUD/USD
5. Australian Dollar	USD/CAD
6. Renminbi (RMB)	
7. Other currencies	Other currency pairs

NB: US dollar (USD); Euro (EUR); Japanese Yen (JPY); Great Britain Pound (GBP); Australian dollar (AUD); Canadian dollar (CAD) and Renminbi (RMB)

Source: Bank for International Settlements (2016), *Triennial Survey of Foreign Exchange*, December.

Table 1.9 indicates that the major currencies traded on global foreign exchange markets in 2016 were the US dollar, Euro, Japanese Yen, Great Britain Pound, Australian dollar and Chinese RMB. The Australian dollar was the fifth most traded currency in 2016. The BIS noted in its 2016 *Triennial Survey* the dominance of the US dollar as the world's reserve currency. The US dollar featured in the top five currency pairs with the Euro, Japanese Yen, Great Britain Pound, Australian dollar and Canadian dollar.

Globalisation and Foreign Investment

Foreign direct investment (FDI) is where companies establish or buy a controlling interest in a foreign subsidiary. Total world net inflows of FDI were valued at US$2,185,721m by the World Bank in 2015 (see **Table 1.10**). This was over six times their level in 1995. **Foreign portfolio investment** is where equity and debt securities are acquired, and has also grown substantially, totalling US$1,116,140m in 2014, almost six times their level in 1995. However in 2008 portfolio equity investment flows fell substantially due to the Global Financial Crisis and were valued at US$662m in 2015.

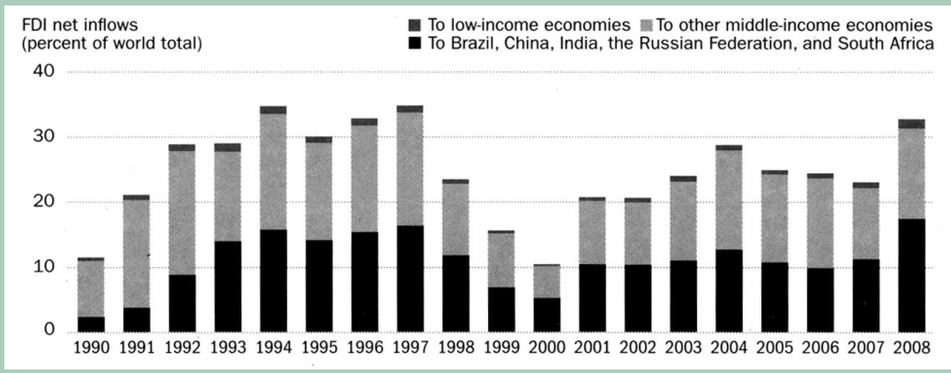
Table 1.10 shows that the high income countries had 70.5% of world FDI in 2015 and the share going to middle income countries was 28.7% in 2015. The low income countries' share of FDI was 0.8% in 2015 with FDI flows to low and middle income countries falling with slower growth in world trade.

Table 1.10: Net Inflows of Foreign Direct Investment in 1995 and 2015

Category of Countries	*Foreign Direct Investment (FDI)* 1995	2015	*Percentage of World Total* 1995	2015
Low Income Countries	US$3,243m	US$16,791m	1.0%	0.8%
Middle Income Countries	US$95,596m	US$627,017m	29.1%	28.7%
High Income Countries	US$229,657m	US$1,541,913m	69.9%	70.5%
World Total	US$328,496m	US$2,185,721m	100.00%	100.00%

Source: World Bank (2017), *World Development Indicators 2017*, World Bank, Washington DC. Table 6.9

Figure 1.7: Foreign Direct Investment Flows to Emerging and Developing Countries



Source: World Bank (2010), *World Development Indicators 2010,* World Bank, Washington DC.

The general growth in foreign direct and portfolio investment has mainly been due to the easing of capital controls between countries as the process of financial deregulation has spread globally. Foreign exchange controls were lifted in the 1970s and 1980s in most OECD countries when they floated their exchange rates. Central banks also removed direct lending controls, allowing a greater role for market forces to allocate saving and investment resources. World share markets, linked by new technologies (such as electronic trading), have also increased their turnover by providing greater access for individuals, companies and governments to raise funds and companies to engage in merger and acquisition activity.

Figure 1.7 shows trends in the net inflows of FDI for low and middle income economies. The share of FDI inflows to developing countries increased substantially between 2007 and 2008 because of decreasing inflows to high income countries. Brazil, China, India, the Russian Federation and South Africa received over half of the net FDI inflows to all developing countries in 2008. This was because they sustained high growth and provided profitable investment opportunities for foreign investors. Net FDI inflows tended to slow to emerging countries like China after 2012 with slower world growth.

Multinational Corporations and Foreign Investment

Multinational or transnational corporations (MNCs or TNCs) are enterprises that manage production or deliver services in more than one country. MNCs are responsible for much of the world's foreign direct investment since they set up subsidiaries in other countries to gain access to global markets. Many MNCs have offices, branches, resource projects or manufacturing plants in other countries (known as host countries), from where their main headquarters are located in what are known as parent countries.

Many multinational corporations are huge in terms of sales revenue, profits, output and employment and therefore can exert a powerful influence on host economies and the world economy through their control of resources, production, employment and sales activities. They also play a major role in world trade and investment and have influenced the pace and spread of the globalisation of economic activity.

The top ten MNCs listed by *Fortune* magazine based on revenues for 2016 appear in **Table 1.11**. The top ten MNCs include companies involved in a diverse range of activities such as retailing (e.g. Wal-Mart Stores), energy (State Grid), petroleum (e.g. China National Petroleum, Sinopec, Royal Dutch Shell, Exxon Mobil and BP), automobiles (Volkswagen and Toyota Motor) and technology (Apple).

MNCs with offshore subsidiaries, factories, mines, branches or offices employ a range of staff and managers. Parent Country Nationals (PCNs) tend to manage offshore operations of MNCs and may train Host Country Nationals (HCNs) to work in these multinational businesses. MNCs also import labour from other countries to work in subsidiaries if there are labour or skills shortages that need to be addressed. Such imported labour is often referred to as Third Country Nationals (TCNs) because they are distinct from expatriate PCNs and inpatriate HCNs in the operations of multinational corporations.

Table 1.11: The Top Ten MNCs by Revenue in 2016

Rank	*Company*	*Country*	*Industry*	*Revenue*
1.	Wal-Mart Stores	United States	Retailing	US$482.1b
2.	State Grid Corporation	China	Energy/Utilities	US$329.6b
3.	China National Petroleum	China	Petroleum	US$299.3b
4.	Sinopec Group	China	Petroleum	US$294.3b
5.	Royal Dutch Shell	Netherlands/UK	Petroleum	US$272.2b
6.	Exxon Mobil	United States	Petroleum	US$246.2b
7.	Volkswagen	Germany	Automobiles	US$236.6b
8.	Toyota Motor	Japan	Automobiles	US$236.5b
9.	Apple	United States	Technology	US$233.7b
10.	BP	United Kingdom	Petroleum	US$225.9b

Source: Fortune Global 500 (2016), *Fortune* magazine. NB: Revenue figures are for the 2015-16 fiscal year

Fortune's list of the top Global 500 companies in 2015 included a ranking of the top ten countries with the most Global 500 companies. This list is shown in **Table 1.12** and includes the advanced economies of the USA, Japan, France, Germany, the UK, South Korea, Switzerland, the Netherlands and Canada. It also includes the emerging economy of China which had 98 state owned MNCs in 2015.

Table 1.12: Top Ten Countries with the Most Global 500 Companies in 2016

Rank	*Country*	*Companies*	*Rank*	*Country*	*Companies*
1.	United States	134	6.	United Kingdom	26
2.	China	103	7.	South Korea	15
3.	Japan	52	8	Switzerland	15
4.	France	29	9.	Netherlands	12
5.	Germany	28	10.	Canada	11

Source: Fortune Global 500 (2016), *Fortune* magazine.

Table 1.13 lists *Fortune's* top twelve cities with the most Global 500 companies as well as their combined revenue in 2010. It is interesting to note the geographic coverage of the MNCs in this list, with the largest Global 500 companies located mainly in the continents of Asia, Europe and North America.

Table 1.13: The Top Twelve Cities with MNCs in 2010

Rank	*City*	*Number of Global 500 Companies*	*Global 500 Revenues (US$m)*	*Rank*	*City*	*Number of Global 500 Companies*	*Global 500 Revenues (US$m)*
1.	Tokyo	51	US$2,237,560m	7.	Madrid	9	US$434,393m
2.	Paris	27	US$1,399,172m	8.	Toronto	7	US$195,510m
3.	Beijing	26	US$1,361,407m	8.	Zurich	7	US$242,595m
4.	New York	18	US$869,150m	8.	Osaka	7	US$29,492m
5.	London	15	US$994,772m	8.	Moscow	7	US$380,530m
6.	Seoul	11	US$519,351m	8.	Munich	7	US$485,386m

Source: Fortune Global 500 (2010), *Fortune* magazine.

Foreign direct investment by MNCs involves the acquisition of 10% or more of the voting power or shareholdings of an enterprise in another economy such as China by any of the following methods:

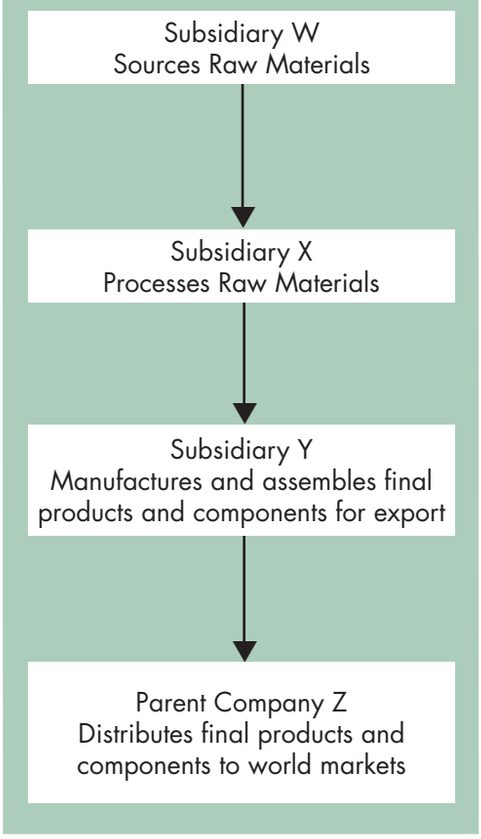
- By incorporating a wholly owned subsidiary or company;
- By acquiring shares in an associated enterprise;
- Through a merger or acquisition of an unrelated enterprise; or
- By participating in an equity joint venture with another investor or enterprise.

In competing for FDI and the establishment of MNCs, many host governments offer incentives to MNCs such as tax allowances, government assistance, access to infrastructure, and less stringent labour and environmental regulations. However some MNCs can exert undue market power over host governments and can avoid tax through **profit shifting** to tax havens, and undermine labour and environmental legislation. They also remit profits and dividends to their parent companies which causes an outflow of funds in the host country's balance of payments. On the otherhand the benefits that MNCs can bring to a host economy include a transfer of technological know how, the creation of export and employment opportunities, and the generation of additional tax revenue to host governments.

Global Production Webs and Supply Chains

One of the key features of globalisation is the emergence of strategic global value added chains or networks established and managed by multinational corporations (MNCs). This is where raw materials, processing, manufacturing and the assembly of products takes place in different countries under the centralised control of the corporation (see **Figure 1.8**).

Figure 1.8: Global Value Added Chain



A major factor driving global and regional value added chains is the minimisation of costs to achieve economies of scale. Manufacturing plants tend to be located in countries with low labour costs and favourable government policies like tax concessions, cheap power and export incentives. Typically, much manufacturing of high technology export products is geographically dispersed in low labour cost countries such as China, India, South Korea, Taiwan, Hong Kong SAR, Singapore, Malaysia, Indonesia and Mexico.

Once manufactured and assembled, these component and final products are distributed by MNCs to major high income markets such as East Asia, North America and Europe. A common theme is for high technology products to be customised and modified to meet the preferences and needs of consumers in various market segments throughout the world. MNCs headquartered in North America, Europe, China, India, Japan, Korea and Australia may also outsource service functions including call centres to offshore locations.

Developments in technology, transport and communications have enabled MNCs to utilise global and regional supply chains where they can source the cheapest inputs of raw materials, labour, capital and enterprise for their operations. The speed and efficiency of world transport means that large volumes of freight can be moved by road, rail, sea and air through the use of containers. These containers are moved around the world to service major markets. Hence the expansion of road, rail, port, airport and communications facilities has become a major feature of global distribution networks used by MNCs.

TECHNOLOGY, TRANSPORT, COMMUNICATIONS AND LABOUR

Technology

A major change in the global economy and the process of globalisation is the **information technology (IT) revolution**, which began in the USA in the 1980s. This technological revolution was based on the use of personal computers and the 'take up' and spread of digital and other technologies. The main development was the Internet and the World Wide Web discussed in **Extract 1.2**. The 'take up' of new technologies has led to greater productivity of labour and capital in production and reduced the costs of conducting international business. In economic terms this is called the generation of **economies scale in production**, where unit costs or average costs of production fall as output increases.

Extract 1.2: The Development of the Internet

"The Internet is a centreless web of computer networks that was funded by the US Department of Defence in the late 1960s as a strategy for communicating during a nuclear attack. Soon it was used to link technically skilled science and university communities. In the early 1990s 'user friendly' innovations (e.g. the creation of the World Wide Web or WWW and the distribution of free browsers) turned the complexity of computer language into the 'simple point and click of a mouse', making the Internet more widely accessible. At the same time, computers became much cheaper and the network 'took off'. Even people in the industry did not foresee the revolution. Today more than 50 million households in the USA and almost 50 million in Europe have at least one computer at home and many have two. The Web began as a 'free for all', an unregulated domain, with a spirit of exploration and spontaneity. Now that it is of commercial interest, laws and regulations are needed in the areas of privacy, liability, censorship, taxation and intellectual property."

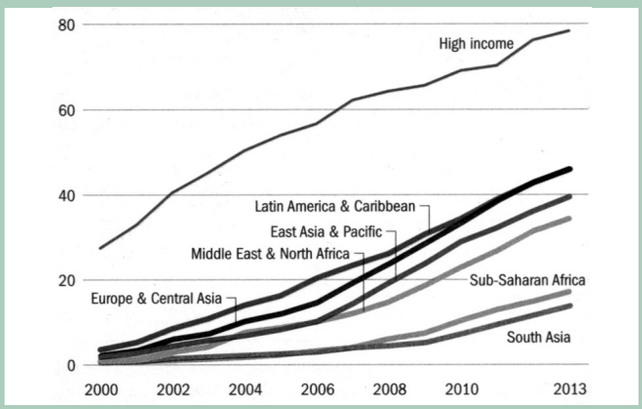
Source: World Bank (1999), *Human Development Report,* Oxford University Press, New York, p58.

Technological innovation has led to a global market in Information and Communications Technology (ICT) goods such as smart phones, DVDs, televisions, computers, iPods, iPads and electronic tablets. The wave of ICT innovation has spread to most countries, resulting in structural changes to the production and distribution of goods and services to consumers. **Electronic commerce** is now one of the major means for conducting domestic and global business. Businesses can access and use information through Internet websites more quickly and efficiently to expand their operations, reduce costs and increase sales to consumers. Firms engaging in electronic commerce may derive the following economic benefits:

- The ordering of stock and inputs can be done instantaneously, and allows firms to respond to changes in demand quickly, and to reduce the wastage of resources.
- Firms can use information technology systems to maintain their inventories more efficiently, thereby reducing inventory and warehousing costs.
- New products and services have increased the range of choice for consumers. With greater international competition, this has led to lower prices of many goods and services in global markets.
- Time savings through the use of the Internet and electronic commerce, have allowed firms to reduce labour costs in marketing and distributing final goods and services to consumers.
- The role of wholesalers and middlemen in the distribution chain has been reduced with the use of electronic commerce, further cutting costs and helping to boost business profits.
- The rapid changes in technology allow for a faster rate of innovation in product development, production methods, marketing and distribution.

The growth of global Internet usage has led to the growth in electronic commerce. This has been driven by the spread of broadband Internet technology where users have a digital subscriber line, cable modem or other high speed technology device (such as a smart phone) to access the Internet. For both consumers and businesses this development is evident in the high percentage of Internet users in advanced economies and the growing number of Internet users in emerging and developing economies.

Figure 1.9: The Growth in Internet Users (per 100 people) **Worldwide 2000 to 2013**



Source: World Bank (2015), *World Development Indicators 2015*, World Bank, Washington DC.

Figure 1.9 shows the growth in Internet users worldwide. In 2014 the World Bank estimated that 40% to 80% of businesses used broadband Internet to conduct business. Global trade in exports of ICT goods has also grown with increased exports from China and East Asian economies to the USA, Europe and other markets. **Table 1.14** shows that manufactured exports accounted for over two thirds of world merchandise exports in 2015, and high technology exports for 18.3% of world merchandise exports.

Table 1.14: The Structure of World Exports in 2015

	Primary Exports (% of merch. exports)	*Manufactured Exports (% of merchandise exports)*	*High Technology Exports (% of manufactured exports)*
World	27.7%	68.8%	18.3%
Developing countries	30.8%	68.4%	19.2%
High income countries	25.1%	70.3%	17.9%

Source: World Bank (2017), *World Development Indicators 2017*, World Bank, Washington DC. Tables 4.4 & 5.13

Technology Diffusion

Changes in technology are created by countries which are technology leaders and innovators such as the United States, Japan and selected countries in the European Union such as Germany, France, Italy, Britain, Sweden and Finland. Innovative technologies in these countries are exported to the rest of the world, and the extent to which they are adopted is known as **technology diffusion**. The diffusion of new technologies is best illustrated by the extent to which high technology products dominate export expansion due to their high value adding in production. For example high, medium and low technology manufactured goods had the fastest growth in export categories in the world between 1985 and 1998. Since 2000 the growth in mobile phone subscriptions worldwide has been a defining feature (along with increasing Internet usage) of the spread and diffusion of new telecommunications technologies.

Transport

Transport infrastructure includes roads, railways, ports, waterways, airports and air traffic control and the services that flow from it. These capital assets are vital for the operation of domestic economies and the global economy. This importance stems from the movement of resources including raw materials, finished goods, capital equipment and labour between households, producers and governments. Data from the World Bank (2014) estimated that 57% of the world's roads were paved with high income economies having 84.6% of their roads paved, whilst low income (16.3%) and middle income (55%) economies have much less, which restricts the efficient movement of people and freight.

Table 1.15: Selected Indicators of World Transport Services (av. annual data for 2005-15)

Indicator	*USA*	*Euro Area*	*China*	*World*
Paved roads (%)	67.4%	93.8%	63.7%	57.0%
Passengers carried by road (million passenger kilometres)	6,798,346	89,700	1,676,025	not available
Goods hauled by road (millions of tonnes x kilometres)	1,929,201	26,408	5,137,474	not available
Rail lines (kms)	228,218	130,277	67,212	1,051,839
Passengers carried by rail (m/pass. kms)	10,519	4,449	723,006	2,946m
Goods hauled by rail (millions of tonnes x kilometres)	2,547,253	7,507	1,980,061	4,807m
Port container traffic (thousands of containers)	46,489	87,653	181,635	679,265
Registered air carrier departures (000s)	9,496	4,063	3,616	33,272
Passengers carried by air (000s)	798,222	450,835	436,184	3,463,849
Air freight (tonnes x kilometres)	37,219	27,877	19,806	187,616

Source: World Bank (2015-17), *World Development Indicators 2015-17*, World Bank, Washington DC. Table 5.10

Table 1.15 shows selected statistics on various transport services for the United States, the Euro Area, China and the world economy. These statistics are annual averages between 2005 and 2015. They show the high volume of movement of goods and people in the major economies of the USA, Euro Area and China by road, rail and air transport, as well as the high volume of containers handled in the world's major ports. Improvements in technology and communications have enabled the expansion of transport services but have also increased congestion and pollution in major urban centres and ports around the globe.

Communications

In the last two decades new technology and methods of financing, along with privatisation and market liberalisation have led to the dramatic growth of telecommunications in many countries. This has resulted in the rapid spread of mobile phone technology, the global expansion of Internet access, and information and communications technologies (ICT). These technologies have become essential tools for economic development, helping to contribute to the global economic integration of countries.

Access to telephone services has grown at an unprecedented rate over the last 20 years driven primarily by wireless technologies and the liberalisation of telecommunications markets. This has enabled a faster and less costly 'rollout' of telecommunications networks. In 2002 the number of mobile phones in the world surpassed the number of fixed telephones or land lines (refer to **Table 1.16**). In 2008 there were an estimated 4b mobile phones globally, representing the fastest spread of technology in history.

Table 1.16: Indicators of Global Communications in 2015

	World	*USA*
Fixed telephone lines (per 100 people)	14	38
Mobile phone subscriptions (per 100 people)	98	118
Mobile network coverage (% of population)	98	100
Telecommunications revenue (% of GDP)	2.4	3.3
Mobile and fixed telephone subscribers (per employee)	1,206	626

Source: World Bank (2016-17), *World Development Indicators 2016-17*, World Bank, Washington DC. Table 5.11

The International Division of Labour and Migration

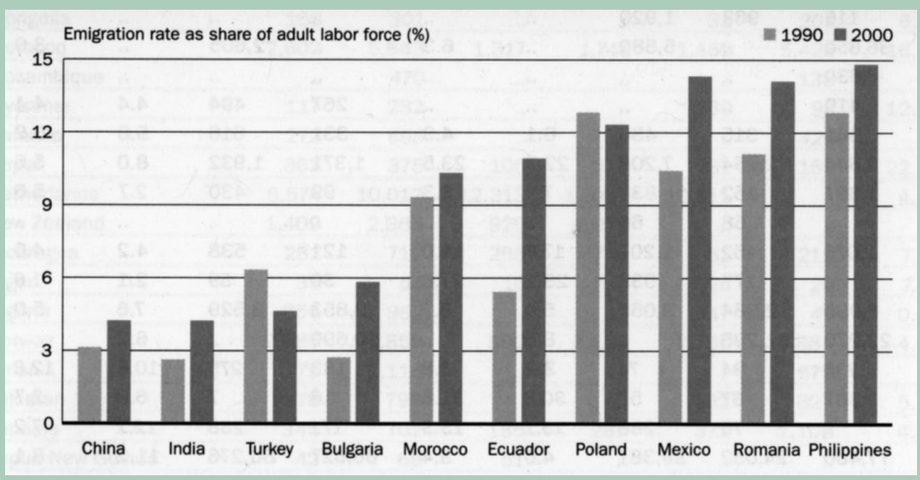
The division of labour refers to the specialisation of people according to labour tasks in production. It is evident by workers who have specialist labour skills in the primary, manufacturing and service sectors of various economies. On a global basis the international division of labour is closely linked with the operations of MNCs in establishing subsidiaries (i.e. **offshoring**) in foreign countries to utilise labour skills at a lower cost and increasing profits by selling goods and services to the large global market. This phenomenon has led to the re-location of many manufacturing and service industries to emerging and developing countries where labour is cheaper. This has caused de-industrialisation and job displacement in advanced economies as more industries locate offshore or outsource some of their services overseas.

Labour skills may be provided through the employment of highly skilled Parent Country Nationals to manage an MNC's subsidiary, and the employment of unskilled and semi-skilled Host Country Nationals to work in an enterprise. Also Third Country Nationals may be hired to provide skills that are in short supply in an enterprise or growing economy that needs additional labour. An international market for specialist labour skills has emerged, and the increased mobility of many skilled, semi-skilled and professional people leads them to work in foreign countries to earn higher incomes than in their country of birth or citizenship. The following are examples of the **international division of labour**:

- The establishment of manufacturing plants (either as subsidiaries or joint ventures) by MNCs in China and Asian NIEs to utilise an abundant supply of cheap local unskilled labour;
- The **outsourcing** of telecommunications, computing, information technology, accounting, insurance, finance and banking services to offshore locations such as India, the Philippines, Singapore and Malaysia, where there is an abundant supply of cheap skilled and semi-skilled labour.
- The migration of unskilled labour from emerging and developing economies to work in primary, manufacturing and service industries in advanced and newly industrialised Asian economies.

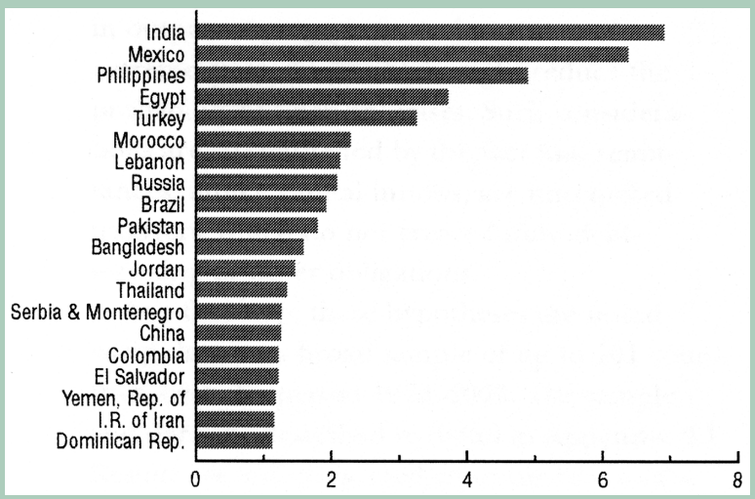
The international migrant stock was estimated by the World Bank to be 221m people in 2010 with an emigration rate of 5.4% in 2000 of tertiary educated people to OECD countries. Unskilled labour from developing and emerging countries is also in high demand in advanced countries, the NIEs and OPEC nations in the Middle East such as Saudi Arabia and Dubai. Despite the cost and restrictions on work permits and visas, highly skilled, semi-skilled and unskilled workers from countries such as the Philippines, Romania, Mexico and Poland seek work in other countries as shown in **Figure 1.10**.

Figure 1.10: Emigration Rates of Highly Skilled Workers from Developing Countries



Source: World Bank (2007), *World Development Indicators 2007*, World Bank, Washington DC.

Figure 1.11: Developing Countries: 20 Largest Recipients of Workers' Remittances (US$b)



Source: IMF (2005), *World Economic Outlook*, April.

The rates of emigration (as a percentage of the total labour force) from these countries varied between 3% and 15% in 2000 as shown in **Figure 1.10**. Net world migration was estimated by the World Bank at 26m in 2012, mainly by workers from emerging and developing economies to the advanced economies, including the NIEs and oil rich countries in the Middle East such as Saudi Arabia.

Workers' remittances (i.e. payments sent by foreign workers to their families at home), reached US$393b or 1.6% of developing countries' GDPs in 2013 (see **Figure 1.11** for the top 20 recipients). By 2015 this had grown to a value of US$553.5b in foreign remittances received. Foreign workers make a substantial contribution to the balance of payments of their home countries by remitting savings from their incomes as current transfers to their families. The United Nations estimated that in 2010, 213m people lived outside the country of their birth, which was 2.3% of total world population. An estimated 1.5% of the world's workforce currently works in countries other than those of its citizenship.

The International Labour Organisation (ILO) in a publication entitled *Workers Without Borders - The Impact of Globalisation on International Migration* discussed a number of problems that had emerged with the global movement of people, mainly through international migration, the number of guest workers in foreign countries and the flow of refugees. These included the following problems:

- Workers from developing countries were often exploited by their employers in foreign countries, because they were not protected by ILO minimum standards for wages and working conditions.
- There is an emerging black market in migrant workers being smuggled into advanced countries to work in illegal industries such as prostitution, drug trafficking and other criminal activities.
- There is a growing need for advanced countries to increase their labour supply because of population ageing. This has often led to the use of illegal migrant labour, and the associated cost to governments of expending resources in enforcing visa and other regulations on illegal workers.
- There has been a flow of illegal refugees from many emerging and developing economies into developed countries in the European Union and North America seeking asylum. This has led to increased anti-immigration sentiment and stronger border protection policies. In 2015 the World Bank estimated there were 21.3m refugees of which 4.8m were Syrians fleeing the civil war.

Another problem in the global labour market is the 'brain drain' of highly skilled workers (e.g. in medicine, pharmaceuticals, finance, science and information technology) leaving advanced and developing countries to seek employment and higher incomes in other advanced countries. This has reduced the availability of highly skilled labour in many countries, and has led to governments increasing incentives, such as lower income tax rates, to retain or attract highly skilled labour in their economies.

REVIEW QUESTIONS

GLOBALISATION AND ECONOMIC INTEGRATION

1. Define the process of globalisation and explain how it has affected people's lives.
2. Refer to Extract 1.1 and discuss the main features of the new global economy.
3. Define the term 'economic integration' and explain how it is linked to the process of globalisation.
4. Describe the characteristics and forces that underpin the process of globalisation.
5 Discuss the growth in world output and trade due to the process of globalisation. Why did world output and trade decline in 2009?
6. Discuss the main categories of world exports of goods and services.
7. How has globalisation affected the shares of world exports going to high, middle and low income countries? Refer to Figure 1.5 in your answer.
8. Discuss the impact of the Global Financial Crisis on global financial flows in 2008-09. What are the main types of financial instruments traded in global capital markets?
9. List the most important currencies and foreign exchange markets that made up the world foreign exchange market in 2016 from Table 1.8 and Table 1.9.
10. Distinguish between foreign direct and portfolio investment. What factors have led to the growth of these types of investment on a global scale?
11. Contrast the composition of world foreign direct investment between 1995 and 2015 for high, middle and low income countries from Table 1.10. Account for the changes in the shares of world foreign direct investment for each of these three country groups between 1995 and 2015.
12. Discuss the linkages between MNCs and foreign direct investment. List some examples of the largest MNCs in 2016, their countries of origin and the industries in which they operate.
13. Discuss the main features of global production webs or value chains operated by MNCs.
14. Explain how developments in technology, transport and communications have assisted the process of globalisation and the growth in world output and world trade.
15. What is meant by the international division of labour? How has the specialisation and mobility of labour assisted the globalisation of production? What problems has it created?
16. Discuss the impact of globalisation on the growth of migration, workers' remittances and refugees.
17. Define the following terms and abbreviations and add them to a glossary:

communications	global trade flows	ETMs
debt securities	globalisation	FDI
derivatives trading	information technology revolution	HCNs
economic integration	international division of labour	ICT
electronic commerce	international migration	ILO
equity securities	Internet	MNCs
foreign direct investment	portfolio investment	NIE
global financial flows	technology diffusion	PCNs
global foreign exchange	transport	TCNs
global production webs	workers' remittances	WWW

INTERNATIONAL AND REGIONAL BUSINESS CYCLES

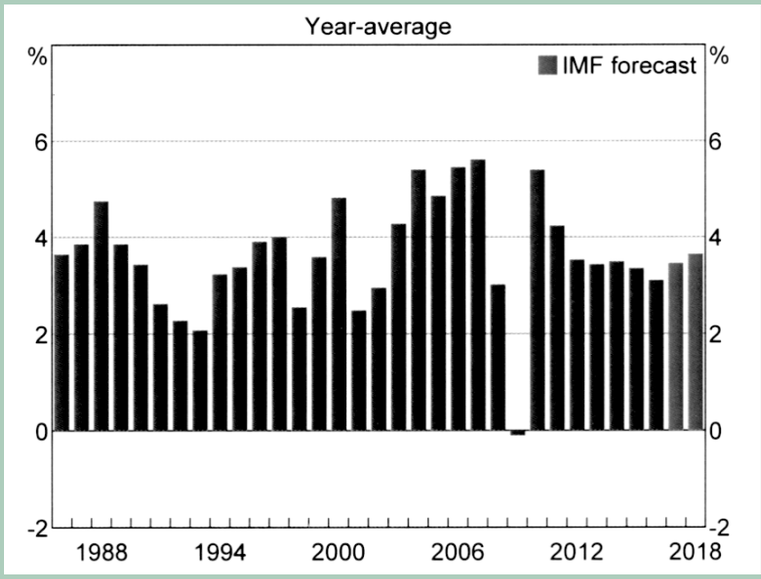
The **international business cycle** refers to changes in world output or GDP over time. **Figure 1.12** shows changes in world output between 1986 and 2016 with IMF forecasts for 2017-18. The general trend is for world output and trade to grow by about 4% annually in real terms over time. Between 2004 and 2008 the global resources boom led to world growth averaging nearly 5% per annum, with the advanced countries (such as the USA, Euro Area and Japan) growing by 3% to 4% annually, and the large emerging economies of the BRICs (i.e. Brazil, Russia, India and China) growing faster by 7.5% annually. However the **Global Financial Crisis** (GFC) in 2009 led to a synchronised fall in global output as shown in **Figure 1.12**. A global recovery occurred in 2010 with world GDP rising by 5.2% but slowed to 3% in 2013 because of the European Sovereign Debt Crisis and 'fiscal cliff' in the USA. World growth was an average 3.3% between 2014 and 2016 as China's economic growth moderated. The IMF forecast world GDP growth to strengthen to 3.5% in 2017 and 3.6% in 2018.

Deviations from the average trend in world growth (4%) may lead to upturns (or booms) in the international business cycle, where the growth in output is above trend, and to downturns (or recessions) in the cycle where the growth in output is below trend. Changes in the international business cycle reflect short term fluctuations around the longer term upward trend in world GDP. Since national economies are increasingly linked through the process of globalisation, changes in the international business cycle will impact directly on domestic business cycles. Changes in the business cycles of the world's largest economies of China, the USA and Euro Area affect world growth. World growth remained below trend between 2014 and 2016 as the USA experienced modest growth (2.2%), the Euro Area recorded very low growth of 1.6%, and China's growth slowed to 6.7% in 2016 as its economy re-balanced.

The four **major phases of the international business cycle** are expansion or upswing; boom or peak; contraction or downswing; and recession or trough. These four phases are evident in **Figure 1.12**:

1. **Expansion** is characterised by an upturn in demand, a fall in inventories, increased demand for resources including labour, and new investment in plant and equipment e.g. between 2003 and 2005 the global resources boom led to world growth of 4.5% per annum, which was above trend.
2. The **peak** is characterised by supply or capacity constraints, where inflation starts to rise and the growth in global output is no longer sustainable e.g. between 2006 and 2007 global growth peaked at 5.2% and global inflationary pressures emerged due to higher oil and commodity prices.

Figure 1.12: World GDP Growth 1986 to 2018 (f)



Source: Reserve Bank of Australia (2017), *Statement on Monetary Policy*, May.

Table 1.17: World GDP Growth 2012 to 2018 (f) - year average percentage change

	2012	*2013*	*2014*	*2015*	*2016*	*2017 (f)*	*2018 (f)*
United States	2.2%	1.7%	2.4%	2.6%	1.6%	2.3%	2.5%
Euro Area	-0.9%	-0.3%	1.2%	2.0%	1.7%	1.7%	1.6%
Japan	1.5%	2.0%	0.3%	1.2%	1.0%	1.2%	0.6%
China	7.9%	7.8%	7.3%	6.9%	6.7%	6.6%	6.2%
Other East Asia	4.0%	4.1%	4.7%	3.7%	3.9%	4.0%	4.2%
India	5.5%	6.5%	7.2%	7.9%	6.8%	7.2%	7.7%
Emerging Europe	2.4%	4.9%	3.9%	4.7%	3.0%	3.0%	3.3%
Latin America	3.0%	2.9%	1.2%	0.1%	-0.1%	1.1%	2.0%
World	3.5%	3.4%	3.5%	3.4%	3.1%	3.5%	3.6%

Source: IMF (2017), *World Economic Outlook 2017*, April, Washington DC.

3. The **downswing** is characterised by falling demand and output and rising rates of unemployment as global economic activity slows. This was the case with the onset of the Global Financial Crisis in 2007-08 and the impact of the European Sovereign Debt Crisis in 2011-12, and China's slower growth rate in 2015-16, falling commodity prices and global deflation (see **Figure 1.12**).
4. The **trough or recession** is where the fall in global output and demand reach their minimum point such as the Global Financial Crisis and world recession in 2009 when global GDP contracted by -2.0%, before a recovery began in 2010-11 but weakened over 2012-16 (refer to **Figure 1.12**).

Globalisation and the greater level of economic integration between countries have meant that the economic performance of individual countries is more closely linked to changes in the international business, commodity and financial cycles. For example, the global resources boom accelerated between 2004 and 2007 and led to the rising demand for raw materials and capital from fast growing economies like China and India. This upturn in commodity demand led to rising commodity prices and higher than average world growth of around 5% between 2005 and 2007.

However the outlook for the global economy deteriorated in the second half of 2007 because of a collapse in the sub prime mortgage market in the USA, which led to the Global Financial Crisis (GFC). This was evident by the shortage and rising cost of global credit, and falling asset prices such as equities and real estate. There was a contraction in output in major industrial economies such as the USA (-2.8%), Euro Area (-4.4%), and Japan (-5.5%) in 2009. This decline in real GDP growth in major advanced economies resulted in a global recession because world GDP contracted by -2.0%. National governments responded to the GFC by easing their monetary policies by cutting interest rates, and used large fiscal stimulus packages to support consumer confidence, aggregate demand and employment.

The recovery from the GFC began in 2010 with stronger growth in China, India, the NIEs, and a modest upturn in the USA, leading to world growth of 5.4%. However the world recovery stalled between 2011 and 2016 largely because of the European Sovereign Debt Crisis, and the process of fiscal consolidation in major advanced countries. This cut world growth to 3.5% in 2014. China's growth rate also fell to 7.3% in 2014 leading to lower commodity prices, investment and trade volumes.

In 2015 slower growth in China of 6.9% and lower global commodity prices led to deflationary pressures and slower world growth of 3.4%. In early 2016 this was compounded by a major correction in China's share market followed by Britain's vote to leave the European Union (Brexit) in June 2016. The IMF revised its forecast for world growth to 3.5% in 2017, rising to 3.6% in 2018 as shown in **Table 1.17**.

The Impact of Changes in the International Business Cycle on Economies

All national economies are affected by changes in the international business cycle. Changes in the international business cycle can have varying effects on domestic business cycles, depending on a country's level of internationalisation (i.e. its exports and imports as a percentage of GDP and its exposure to changes in world trade), and the integration of a national economy with the world economy through trade, finance, foreign direct investment and foreign exchange flows. The main transmission mechanisms for these changes are through changes in world demand, output, trade and finance:

- An increase in world spending, output and rate of growth will lead to an increase in the demand for a country's exports of goods and services, raising its rate of GDP growth. A decrease in world spending, output and rate of growth on the otherhand will usually lead to a decrease in the demand for a country's exports of goods and services and reduce its rate of GDP growth.
- If world growth exceeds a country's domestic rate of growth, with exports increasing faster than imports, its balance of payments on current account should improve and move into surplus. If domestic growth exceeds the world rate of growth, with imports increasing faster than exports, a country's balance of payments on current account may deteriorate and move into deficit.
- A period of higher world growth (such as the resources boom between 2004 and 2007) will usually lead to an increase in commodity prices and an appreciating exchange rate for those countries experiencing a rise in export income such as resource exporters. Lower or negative world growth (such as during the GFC in 2008-09 and deflation in 2015-16) will usually lead to a decline in commodity prices and a depreciating exchange rate for countries whose export income declines.
- Changes in financial flows can also impact on national economies. For example, a rise in foreign investor confidence may lead to increasing capital inflows (i.e. foreign direct and portfolio investment) to a country or region, helping to raise the domestic rate of growth, by providing additional foreign exchange and capital. This may lead to an appreciating exchange rate and rising asset prices for shares, real estate and bonds. Conversely, a fall in foreign investor confidence, may lead to capital outflows, a decline in domestic growth, as well as an exchange rate depreciation, and lower asset prices for shares, real estate and bonds.

External Shocks Transmitted to Domestic Economies

Two types of **external shocks** can be transmitted from the world economy to a domestic economy:

1. **Real shocks** refer to changes in real variables such as world output, commodity prices or technological change. These shocks can cause structural changes to occur in the real economy. Real shocks can be either positive or negative. Examples of **negative real shocks** were the two world oil crises in 1973 and 1979, which raised the cost of energy, causing inflation and slowdowns in world growth, particularly in oil importing nations like the USA, Japan and members of the European Community. These slowdowns led to a world recession and an increase in both inflation and unemployment rates. **Stagflation**, which is a situation of high inflation and unemployment rates, coupled with stagnant economic growth, emerged as a worldwide economic phenomenon in the 1970s in major industrial countries like the USA, Japan, Germany, France, Britain and Italy.

   On the otherhand, a **positive real shock** occurred in the world economy between 2004 and 2007 when a global resources boom lifted world growth to over 5% per annum. This increased the demand for commodities such as iron ore, coal, oil, gas and metals from emerging countries such as China and India which were sustaining high rates of growth of between 8% and 10%. The global resources boom had the immediate effect of increasing world commodity prices and the volume and value of exports from resource exporting countries such as Australia, Russia, Brazil, South Africa and the OPEC nations. This increased the national income of these countries through a rise in their terms of trade. It also stimulated investment in resource development projects to increase supply and the construction of additional infrastructure to support resource export industries.

2. **Financial or monetary shocks** refer to changes in financial variables such as international share prices, interest rates or inflation rates. Financial shocks are transmitted more quickly than real shocks, through changes in asset prices (such as interest rates, exchange rates and share prices) and capital flows in financial markets. An example of a **negative financial shock** was the rapid withdrawal of capital from some Asian economies in 1997 which caused the Asian Currency Crisis. This led to the Asian recession which affected countries such as South Korea, Thailand, Indonesia and the Philippines. Another negative financial shock was the collapse in global credit markets in 2008-09, which caused the Global Financial Crisis and a global recession. Recent financial shocks include the crash in the Chinese share market in early 2016 and the increase in financial market volatility following Britain's decision to leave the European Union (Brexit) in June 2016.

   Financial or monetary shocks can lead to a collapse in asset prices and consumer and business confidence, and then be transmitted from financial markets to the real economy, and lead to lower economic growth and higher unemployment rates in affected countries. An example of this type of shock was the collapse of the sub prime mortgage market in 2007-08 in the US housing industry. This financial crisis was transmitted to global credit and share markets (the global credit crisis) and caused a global recession in 2009 as world output, trade and capital flows contracted sharply.

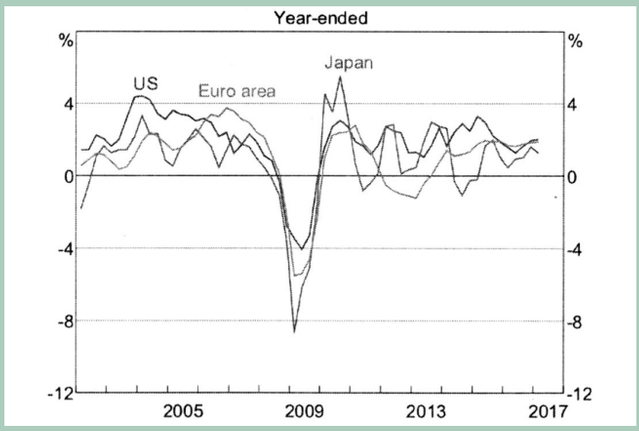
Regional Business Cycles

Regional business cycles refer to changes in real output, trade and financial flows in particular geographic regions where economies are very integrated, usually through a free trade agreement, customs union or monetary union. Regional business cycles contribute to the international business cycle, with most of world growth or GDP being sourced from the following three major regions:

1. North America, including the USA, Canada and Mexico, with these three countries being linked by the North American Free Trade Agreement (NAFTA).
2. The European Union (EU) which has 28 member countries, 19 of which use the euro and is called the Euro Area. Within the EU, Germany, the UK, France and Italy are in the Group of Seven (G7).
3. East Asia which includes Japan, China, the Asian NIEs (Korea, Taiwan, Singapore and Hong Kong) and other major East Asian economies in ASEAN such as Thailand, Indonesia and the Philippines.

The growth of the US economy as the world's largest economy has historically been the main driver of world growth in the post 1945 period, with its linkages to the EU helping to sustain GDP growth in Western Europe. In Asia, Japan and the NIEs contributed to strong world economic growth between the 1960s and 2000s. The emergence of China and India as major economic powers in the 1990s and 2000s helped to sustain even higher rates of world growth due to their demand for resources and capital.

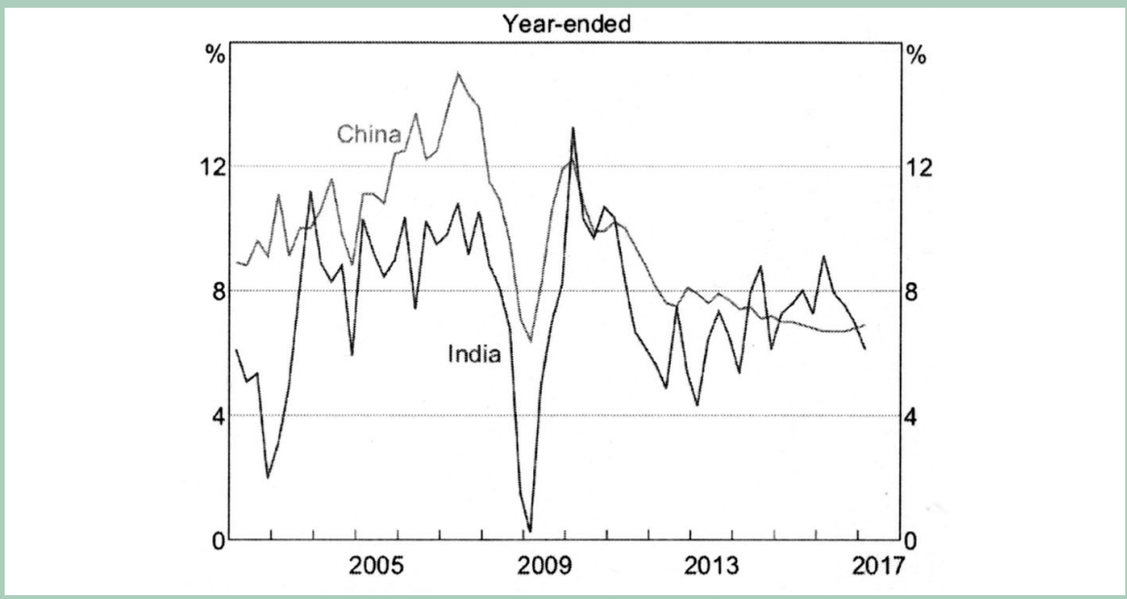
Figure 1.13: GDP Growth in Advanced Economies 2002-17



Source: Reserve Bank of Australia (2017), Chart Pack.

Figure 1.13 shows GDP growth rates for the major advanced economies of the USA, Euro Area and Japan between 2002 and 2017. After contracting during the Global Financial Crisis in 2008-09 these economies experienced long and slow recoveries between 2010 and 2017 as the European Sovereign Debt Crisis, the policy of fiscal consolidation and the Brexit decision restricted their GDP growth.

Figure 1.14: GDP Growth in China and India 2002-17



Source: Reserve Bank of Australia (2017), Chart Pack.

In contrast to the below trend growth performance of the major advanced economies, the major emerging economies of China and India sustained higher growth rates before and after the Global Financial Crisis as shown in **Figure 1.14**. This helped to support world GDP growth but growth fell between 2014 and 2016 as the world recovery stalled. In 2008-09 the downturn in Emerging Asia due to the GFC was much less severe than in the advanced economies and its recovery was more rapid in 2010-11. In 2017 the Australian Treasury forecast growth of 2.25% in the USA, 1.25% in the Euro Area and 0.75% in Japan (0.5%) compared to 6.5% in China and 7% in India:

- In the USA the economic outlook improved in 2012 with growth of 2.2%, as consumer confidence and business investment recovered after the GFC. However the US labour market remained weak with high unemployment and the financial sector underwent restructuring. Further adjustment problems (i.e. the 'fiscal cliff') emerged in 2011-12 with the financing of the US budget deficit and US government public debt. However the recovery strengthened over 2014-15 with 2.4% growth.
- The Euro Area contracted by -0.9% in 2012, with the Sovereign Debt Crisis in Greece, Spain, Portugal and Ireland and high unemployment reducing consumer and business confidence. Despite IMF and ECB bailout packages in 2011, growth was just 1.2% in 2014 as the crisis reduced confidence and spending. The IMF forecast growth of 1.7% for the Euro Area in 2017.
- Japan experienced a contraction in GDP of -5.5% in 2009 during the GFC. It returned to positive growth of 4.7% in 2010, as exports underpinned a recovery. However an earthquake and tsunami in 2011 led to widespread devastation and a nuclear accident, resulting in negative growth of -0.5% in 2011. Japan was forecast by the IMF to grow by 1.2% in 2017.
- China grew by 9.2% in 2009, helped by growth in domestic demand due to the government's fiscal stimulus programme and an easing of monetary policy. Growth was 10.4% in 2010, although rising inflation led to the Bank of China tightening monetary policy over 2010-11. In 2011, 9.3% growth was achieved, but between 2012 and 2014 it fell from 7.9% to 7.3%. China is transitioning to domestic sources of growth and was forecast by the IMF to record growth of 6.6% in 2017.
- Other East Asian economies (i.e. the NIEs and ASEAN Four) grew by 9.6% in 2010 after recording -0.4% growth in 2009 at the height of the Global Financial Crisis. They benefited from strong exports to China and India, and averaged around 4% annual growth between 2012 and 2016 and were forecast by the IMF to grow by 4% in 2017.

Case Study of the Global Financial Crisis 2007-09

In July and August 2007 international financial markets experienced extreme volatility because of the collapse in the sub-prime mortgage market in the USA. Sub prime mortgages are housing loans by major financial institutions (such as banks and other credit providers) to individuals with a lower credit rating than those who borrow prime mortgages. Bankruptcies rose in major sub-prime mortgage markets in 2006 and 2007, reflecting the decline in the credit worthiness of many borrowers and bank lending standards, as well as the expiration of discounted interest rates applying for the first two years of many sub-prime mortgage loans. The collapse in the market was worsened by a lack of liquidity as there was an acceleration in mortgage delinquencies for sub prime loans to over 16% in 2007.

The immediate effects of this collapse were transmitted to international financial markets where asset prices for shares, bonds and other securities fell and there was an upward movement in interest rates to reflect the increased risk of borrowing funds. The US Federal Reserve and other central banks injected liquidity into cash markets to restore confidence and to prevent the crisis from having a major impact on the real economy through constraints on growth in spending, output and employment. However the financial crisis in the US housing market deepened in 2008 when it spread to the real economy.

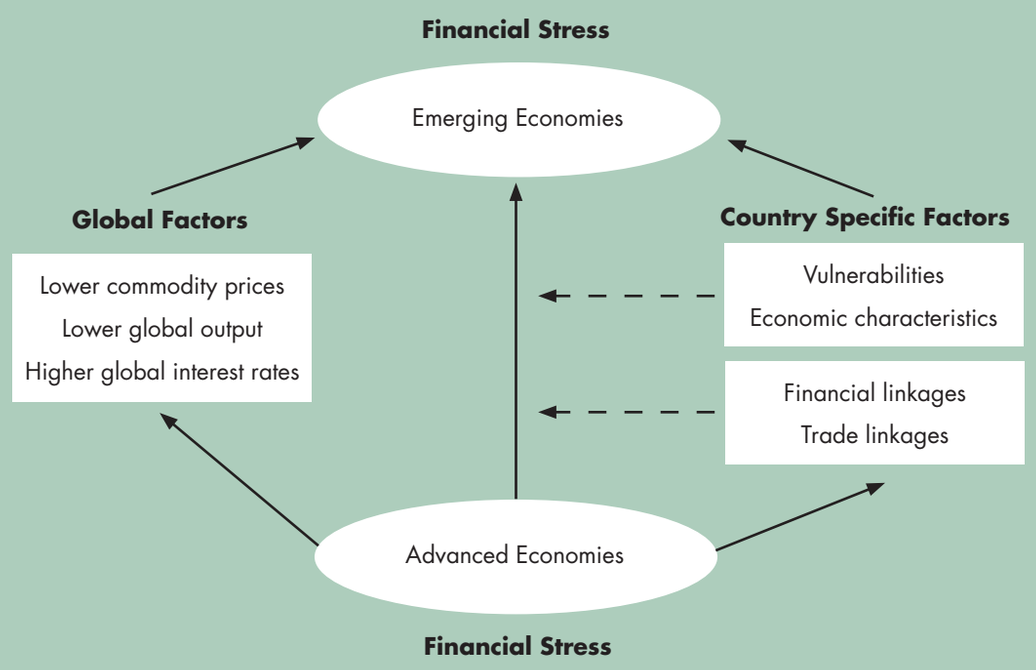
Sentiment in global financial markets deteriorated throughout 2008 as banks tightened or withdrew funding to highly leveraged investors, which triggered the forced sale of assets. Bear Sterns, the fifth largest securities firm on Wall Street sought emergency funding from the US Federal Reserve and was ultimately sold to J. P. Morgan. In response to the weakening conditions in the US economy, the US government introduced a fiscal stimulus package worth US$146b (including tax cuts and investment incentives) to support household spending and business investment. The Federal Reserve cut the federal funds rate to 2% to underpin confidence and liquidity. The crisis worsened in September 2008 with the collapse of Lehman Brothers merchant bank and the US government providing financial support for two mortgage guarantors, Freddie Mac and Fannie Mae, and the American Insurance Group (AIG).

The US economy weakened in 2008 with GDP growing by just 1.1% because of weaker household consumption spending and business investment and rising unemployment, especially in the financial services sector. Lower US house prices also had a dampening effect on consumer confidence and household wealth. The credit crisis in the USA was transmitted to other major advanced countries in the Euro area (such as Britain, France and Germany), as well as Japan and the NIEs, because of their linkages to US financial markets and the US export market. By the December quarter of 2008 the financial crisis had led to an unprecedented and synchronised global contraction in output, trade and capital flows. The estimated contraction in global GDP was -6.25% in the December quarter 2008.

It is important to analyse the transmission process of the Global Financial Crisis (GFC) in 2008-09 to understand why it spread so quickly to most countries in the world and caused a global recession:

- Firstly, the Global Financial Crisis represented an **external financial shock** to domestic economies caused by a disruption to the functioning of global credit markets. These markets are necessary for the smooth functioning of economic activity including international trade and investment.
- Secondly, the financial shock was transmitted very quickly from the USA to other advanced economies and finally to emerging economies, causing a global credit crisis and ultimately a Global Financial Crisis. This synchronised shock led to a recession in the global economy.
- Thirdly, the Global Financial Crisis developed into a global recession because it was transmitted from the financial sector to the real economy, affecting confidence, spending, output and employment.
- The Global Financial Crisis required co-ordinated policy responses by G20 governments in the form of cuts to official interest rates, the use of fiscal stimulus packages to support aggregate demand and employment, and reforms to the regulation of financial markets such as more stringent lending standards, regulation of credit ratings agencies and more transparency of banks' balance sheets.

Figure 1.15: The Transmission Channels of the Global Financial Crisis in 2008-09



Source: IMF (2009), *World Economic Outlook*, April, Washington DC.

Figure 1.15 provides a model of the transmission channels of the Global Financial Crisis between advanced and emerging economies. The result of the transmission of the Global Financial Crisis was **financial stress or financial contagion** in all affected economies. The two main channels of transmission were global factors (such as lower commodity prices, lower global output and higher interest rates); and country specific factors such as the particular characteristics of domestic economies and the extent of their financial and trade linkages with the global economy. The increasing extent of financial and trade integration between advanced and emerging economies facilitated the spread of this financial stress. This was evident by the decline in capital flows from advanced to emerging economies, and exports to advanced economies from emerging economies. The same was true of capital flows and exports between advanced economies and regions such as North America, the European Union, and North East Asia (which includes Japan, China, Korea, Taiwan and Hong Kong SAR).

The intensification of the Global Financial Crisis stemmed from the collapse of Lehman Brothers investment bank in September 2008, which severely reduced business, investor and consumer confidence. The US Federal Reserve provided immediate liquidity to financial markets to support activity and confidence. Since then government policy responses have focused on breaking the vicious cycle between financial market stress and real economic activity by using the following policies:

- Governments worldwide extended guarantees for bank deposits and announced guarantees of banks' wholesale funding, and in some countries such as the USA and Britain, insolvent financial institutions were re-capitalised with public funds.
- Central banks cut official interest rates to record lows and used a range of liquidity tools (such as quantitative easing) to support demand and ease the 'tightness of conditions' in credit markets.
- Governments around the world implemented substantial fiscal stimulus packages to boost growth and support employment. For example, in March 2009 the G20 economies announced fiscal stimulus packages equivalent to 2% of GDP in 2009 and 1.5% of GDP in 2010.
- At the G20 London Summit in April 2009 leaders committed to policies to address the problem of 'toxic debt' and the restoration of financial system stability, including US$1.1 trillion in funding for international financial institutions (such as the IMF and World Bank) and trade finance.

Case Study of the European Sovereign Debt Crisis

During the Global Financial Crisis most governments, but especially those in major advanced economies increased government spending to support confidence and employment. This increase in government spending occurred at a time when tax revenues fell because unemployment rose and business profits and consumer spending fell. This led to a cyclical deterioration in tax revenue and a structural rise in government spending, resulting in larger budget deficits and increased levels of public borrowing.

Over the three decades leading to the GFC in 2008-09 governments in advanced economies (such as the USA, Japan, the UK, Canada and the Euro Area countries) spent more than they collected in revenue. The fiscal positions of most advanced economies then deteriorated during the GFC in 2008 and 2009 because of the following factors: a decline in the level of real GDP; the budgetary impact of automatic stabilisers on revenue and spending; fiscal stimulus measures which raised spending; and government support for their banking systems in the form of bank guarantees.

Although budget deficits have generally narrowed since 2009, they remain large in many economies and public debt to GDP ratios have continued to increase. Most major advanced economies implemented policies in 2011 to achieve fiscal consolidation based on a combination of factors:

- Discretionary fiscal actions such as reductions in government spending and increased taxes;
- An improvement in the automatic stabilisers of rising tax revenue and reduced government spending associated economic recoveries which led to higher growth and lower unemployment; and
- Changes in interest payments as the level of net public debt is reduced over time.

Fiscal consolidation was synchronised across eight of the largest advanced economies (the G7 plus Spain). However some of the worst affected countries were small economies such as Greece, Ireland, Portugal and Cyprus, which together with Spain precipitated the European Sovereign Debt Crisis in 2011-12 which required large bailout packages from the IMF and ECB in return for fiscal austerity measures. Overall it was forecast that policies used for fiscal consolidation would have a contractionary effect on the economies concerned. Therefore these policies needed to be managed carefully to avoid excessive contraction and further increases in unemployment, especially in the Euro Area countries.

Case Study of China's Transition to More Balanced Growth

A period of extraordinary growth has made China one of the largest economies in the world. China is now entering a new stage of development which the Chinese authorities have characterised as the 'new normal'. The Chinese economy faces the task of transitioning to a more balanced growth model. Unlike in recent decades of growth of over 10%, growth will moderate to below 10% and be increasingly driven by consumption and services and less reliant on industrial production, investment and exports. Since 2011 consumption growth has outstripped GDP growth and whereas China has been an important global manufacturing producer and exporter, the service sector now contributes over 50% of GDP.

As a consequence, growth is moderating in China as the economy transitions towards a more balanced growth model increasingly reliant on consumption and services and less on investment and exports. The Chinese authorities were targeting growth of between 6.5% and 7% in 2016, down from a target of around 7% for 2015. China was forecast to grow at 6.7% in 2016, 6.6% in 2017 and 6.2% in 2018. Despite moderating growth China is expected to continue to make a sizeable contribution to global growth. A key risk to the global economy is that China's transition does not proceed smoothly.

China is a major trading partner to more than 100 economies and these economies account for more than 80% of world GDP. A larger than expected slowdown in China's economy, further instability in its financial markets, or greater geopolitical tension in the South China Sea and on the Korean Peninsula could have a negative impact on confidence, output, trade and investment in the global economy.

CHANGES IN WORLD TRADE, FINANCIAL FLOWS AND FOREIGN INVESTMENT

Increased levels of **economic integration** between countries that make up the global economy have widened and deepened the ties that link national economies. International trade, finance, investment, the movement of people, and transportation and communications technology are the means by which this has occurred. As **global economic integration** proceeds, developing and emerging countries are expanding their share of the global economy, especially the large emerging economies of China, India, Brazil, the Russian Federation and South Africa. However this process was halted by the Global Financial Crisis in 2008-09 but has since resumed with a modest global recovery between 2010 and 2017. However the recovery stalled in 2016 with lower growth in China, falling commodity prices and deflationary pressures. During the 1990s and 2000s major trends emerged in world trade and finance:

- The globalisation of world trade led to the emergence of a global market place, with the integration of financial systems and the dominance of MNCs in world trade.
- The growth of **intra-regional trade** based on trade liberalisation (through multi-lateral trade agreements such as the EU, NAFTA, APEC and AFTA) linked trade to direct foreign investment.
- The growth of the Asia-Pacific region and China as the dynamos of the world economy. The increasing economic power of the NIEs, China and India, fuelled by sustained high rates of economic growth, investment and trade volumes, posed a competitive threat to the USA and EU.
- Trade has become linked with investment as companies use foreign direct investment to access foreign markets. They have developed intra-firm and intra-industry trade networks or hubs through global production webs and supply chains and the expansion of exports to global markets.
- Trade in **elaborately transformed manufactures** (ETMs) and services has grown more rapidly than trade in primary products or resources. Exports of ETMs are less subject to protection, and involve a high degree of value adding activity. MNCs have exploited the cheapest resource inputs (such as labour) in emerging and developing countries to develop global production networks for ETMs.
- Capital flows became more mobile, with the trade surplus countries of Japan, Germany, China, Taiwan, Hong Kong and Singapore exporting capital to trade deficit countries such as the USA and Australia. Foreign direct investment was dominated by the 'triad' of the USA; Japan, China and the NIEs; and the European Union (EU). Japan, the EU and USA have financed much of the growth in the Asian region, including China; whilst the EU injected capital into former communist Eastern Europe and also financed German reunification after the fall of the Berlin Wall in 1989.

The emergence of a global market place is closely linked to the increasing integration of the world's major economies, including the OECD countries, the NIEs of Asia, China and India. As more countries engage in free trade, they increase their trade with each other and within their region (i.e. intra-regional trade). Some of the reasons for increasing world economic and trade integration include the following:

- Financial deregulation and floating exchange rates have increased the mobility of capital;
- The reduction in trade barriers through bilateral, regional and multi-lateral trade agreements (such as trade negotiations in the World Trade Organisation or WTO) has increased trade flows;
- There is increased international specialisation and exchange in ETMs and services (e.g. finance, business, insurance, health, education, entertainment, media, tourism and telecommunications);
- The collapse of communism in the former Soviet Union and eastern European countries has increased the demand for capital, as transition countries have sought more integration with the EU and the global economy through international trade and investment; and
- The rise of **regional economic integration**, with the signing of regional trade agreements such as the EU (Europe), NAFTA (North America), APEC and AFTA (Asia), SADC (Southern Africa), Mercosaur (South America) and the TPP (Asia-Pacific) has led to more intra-regional trade flows.

Changes in the Size, Pattern and Direction of World Trade and Investment

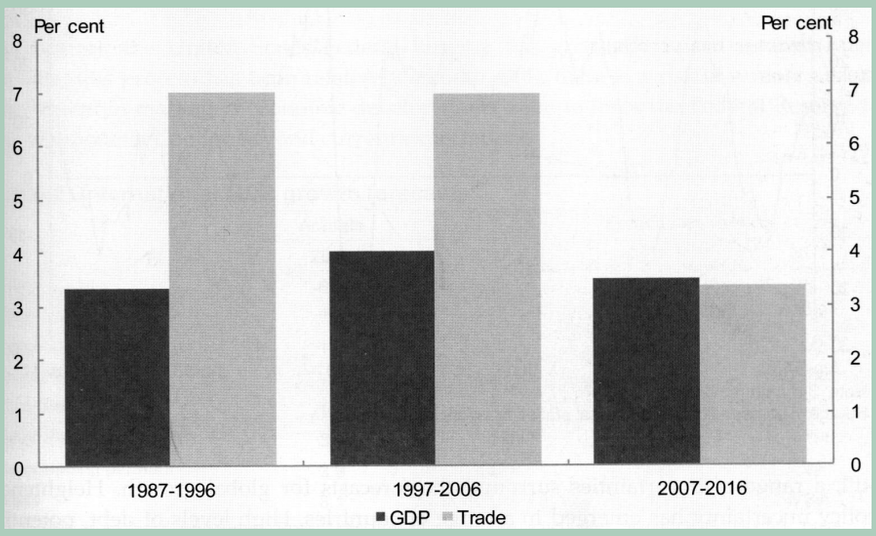
In the two decades to 2006 the world economy grew at an average annual rate of 3.7%, with world trade volumes growing at an average 7% as shown in **Figure 1.16**. Trade growth was driven significantly by the emerging Asian economies (such as China, India and ASEAN) pursuing export oriented growth strategies and increased economic integration in Europe. However after the GFC world annual GDP growth slowed to 3.5% and the growth in trade volumes had halved to around 3.4%. Export growth also slowed in the emerging Asian economies. The slowdown in global trade growth has been attributed to low growth in industrial production and business investment after the GFC.

The strong growth in trade volumes prior to the GFC were partly due to reductions in policy barriers to cross border trade and capital flows, and partly due to improvements in information and communications technology (ICT) and transport. The subsequent increase in global economic integration has raised living standards by allowing countries to focus on the production and export of goods and services in which they have a **comparative advantage**, in exchange for those goods and services in which other countries have a comparative advantage. Greater **financial integration** has also allowed savings to be invested where returns are expected to be highest, and enabled financial risks to be better diversified. While this increase in global integration has been substantial, there is scope for it to expand as emerging economies increase their share of world trade, raise their living standards and increase their trade in goods as well as services which are 66% of world output, but less than 20% of world trade.

Increasing Regionalism

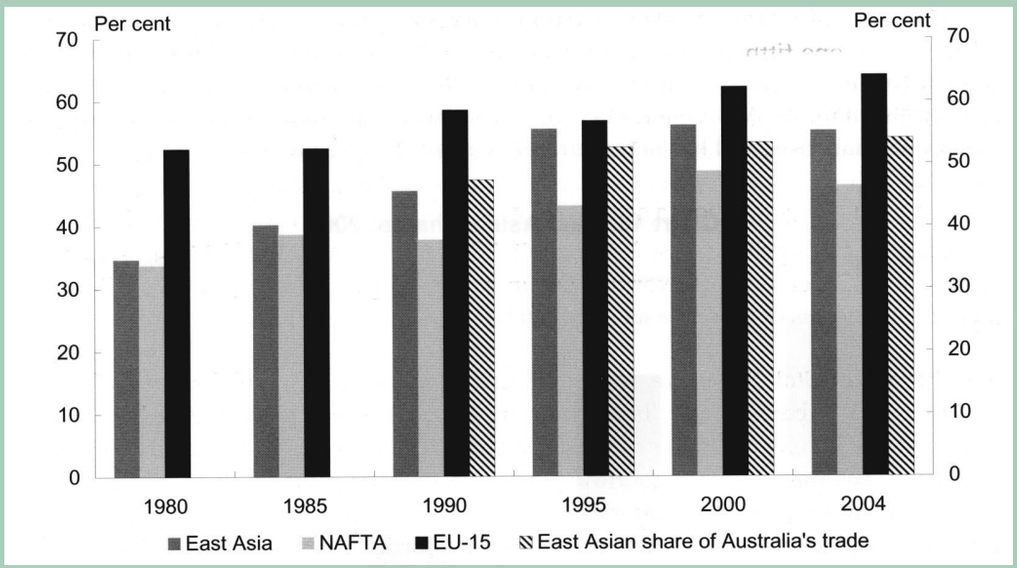
Trade for the three major economic groupings of the world (Europe, North America and East Asia) has become increasingly intra-regional over time. For example, East Asia's intra-regional trade (i.e. between countries in the region) rose from around 35% of these countries' total trade in 1980, to 55% in 2004 as illustrated in **Figure 1.17.** Trade within these three regions (i.e. East Asia, NAFTA and the EU) now accounts for over half of world trade. **Intra-regional integration** has been accelerated by preferential liberalisation favouring intra-regional trade, both within the European Union (EU) and with the formation of the North American Free Trade Agreement (NAFTA). Integration within East Asia has been driven mainly by non preferential liberalisation and economic complementarity. Even so, the intra-regional share of East Asia's trade is not far below that of the EU at 65% (see **Figure 1.17**).

Figure 1.16: Average Annual Global GDP and Trade Volume Growth by Decade



Source: Commonwealth of Australia (2017), *Budget Strategy and Outlook 2017-18*, Canberra.

Figure 1.17: Intra-Regional Shares of Total Trade 1980 to 2004 (% of total trade)

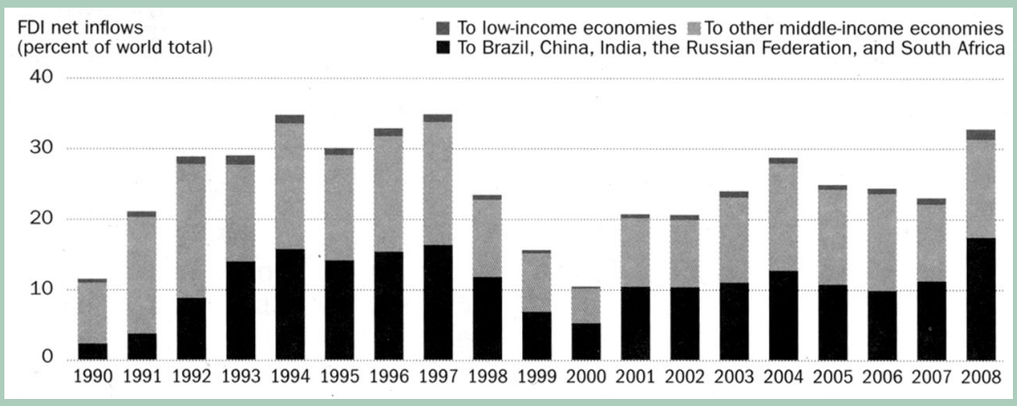


Source: Commonwealth of Australia (2006), *Budget Strategy and Outlook 2006-07*, Canberra.

East Asia's intra-regional integration has complemented its broader integration with the rest of the world, since much of the process has been driven by the development of intra-regional supply chains for the manufacture of goods for final sale in markets outside the region such as Europe and North America. This trend is based on the network of global production webs that have been established in the region, especially in China, Japan, South Korea, Taiwan, Hong Kong, India and the ASEAN countries.

Changes in the size, pattern and direction of foreign investment flows have occurred in the world economy because of greater economic integration between the advanced and emerging and developing economies. More foreign direct investment (FDI) to developing and emerging economies between 2000 and 2008 reflected the increasing importance of countries such as Brazil, China, India, the Russian Federation and South Africa as destinations for foreign capital. These countries received half of the FDI to developing countries between 2007 and 2008. In the case of Brazil, Russia and South Africa this was for MNCs to exploit natural resources such as minerals, oil, gas and timber. This was a particular feature of the global resources boom between 2004 and 2007. In contrast foreign investment in China was largely directed to manufacturing and urban infrastructure development, whilst in India foreign investment was largely directed to developing the services and information technology sectors. **Figure 1.18** shows the trend towards increasing FDI in developing countries in the 1990s and 2000s.

Figure 1.18: Global Foreign Investment Flows



Source: World Bank (2010), *World Development Indicators 2010*, Washington DC.

REVIEW QUESTIONS

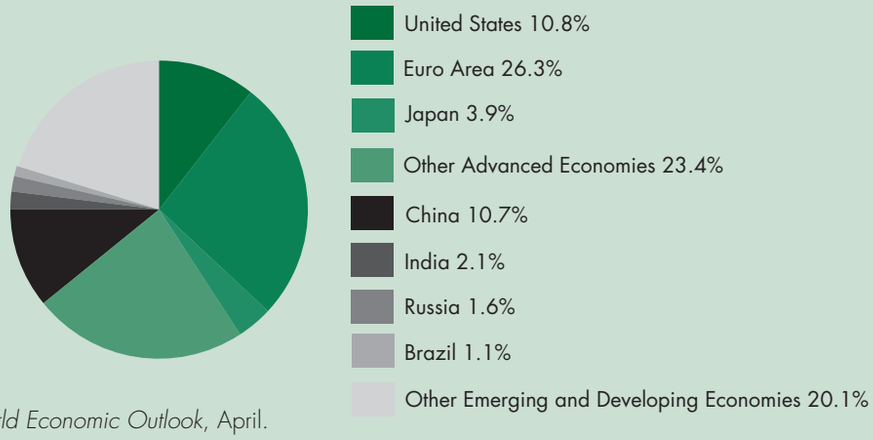
INTERNATIONAL AND REGIONAL BUSINESS CYCLES

1. What is meant by the international business cycle? Using examples discuss the four phases of the international businesses cycle.
2. Discuss the trends in the international business cycle between 2002 and 2017 from Figure 1.12.
3. Contrast the change in the international business cycle due to the Global Financial Crisis in 2008-09 with the forecasts for world and regional growth in 2017 and 2018 from Table 1.17.
4. Explain how a change in the international business cycle may affect a country's rate of GDP growth, exports, balance of payments and exchange rate.
5. How can changes in international financial flows affect a country's rate of GDP growth, exchange rate and asset prices?
6. Using examples, distinguish between real and financial shocks to world output or world growth.
7. Using real examples distinguish between negative and positive real and financial shocks.
8. What is meant by regional business cycles? How can changes in regional business cycles (e.g. major advanced and emerging economies) affect the international business cycle?
9. Contrast the growth performance of the USA, Euro Area and Japan, with China and India, during and after the Global Financial Crisis (GFC) from Figure 1.13, Figure 1.14 and the text.
10. Explain the background to the sub-prime mortgage crisis in the United States in 2007-08.
11. How did the US sub-prime crisis lead to a global credit crisis and a global recession in 2009? Discuss the transmission channels of the Global Financial Crisis from Figure 1.15.
12. Discuss the reasons for the deterioration in the budget positions of major advanced economies during the Global Financial Crisis. How have governments pursued fiscal consolidation policies?
13. How is China moving to a more balanced growth model? How might this affect the global economy in the future?
14. How has global economic integration changed the pattern of world trade? Discuss the impact of China and India on world output and trade. Why did world trade growth slow between 2007 and 2016?
15. Refer to Figure 1.17 and describe and account for the increasing importance of intra-regional trade as a share of total world trade between 1980 and 2004.
16. Define the following terms and add them to a glossary:

Asian recession	financial contagion	intra-regional trade
boom	financial shock	real shock
commodity exports	fiscal consolidation	recession
commodity prices	global credit crisis	regional business cycle
currency crisis	global financial crisis	stagflation
downswing	global recession	sub-prime mortgage crisis
energy crisis	international business cycle	upswing

CHAPTER FOCUS: INTERNATIONAL ECONOMIC INTEGRATION

The graph shows shares of world exports of goods and services valued at US$21,802b in 2016.



Source: IMF (2017), *World Economic Outlook*, April.

Marks

1. Define the term 'international economic integration'. (1)

2. Calculate the value in US dollars of exports for the advanced countries in 2016. (1)

3. Distinguish between advanced, emerging and developing economies. (2)

4. Explain TWO reasons for the increasing share of world exports by emerging economies. (3)

5. Explain TWO strategies that emerging and developing economies have used to increase their share of world exports. (3)

CHAPTER 1: EXTENDED RESPONSE QUESTION

Discuss the main features of international economic integration and analyse its impact on world GDP, trade and financial flows.

CHAPTER SUMMARY

INTERNATIONAL ECONOMIC INTEGRATION

1. International economic integration occurs when trade barriers are reduced or removed between countries to facilitate the growth in international output, trade, investment and the mobility of resources including labour and capital. This integration can be in the form of a free trade area, customs union, common market or monetary union.

2. The global economy consists of all the countries in the world that produce goods and services and contribute to gross world product (GWP), global GDP or world output.

3. The categories of countries that make up the world economy include the advanced economies, emerging economies and developing economies.

4. The major advanced economies dominate world output, trade and investment flows. They include the USA, Euro Area countries, Japan, the UK and the newly industrialised Asian economies (NIEs). Major emerging economies include Brazil, Russia, India and China (the BRICs).

5. Global GDP is measured by the IMF by valuing countries' GDPs using purchasing power parities (PPPs). PPPs adjust countries' GDPs for price changes (or inflation) and market exchange rates.

6. The process of globalisation refers to the increasing level of economic integration between countries, leading to the emergence of a global market place or single world market. China and India's rising economic importance in the 2000s has 'driven' the process of globalisation.

7. The forces underpinning globalisation include the customisation of goods and services; the dominant role played by multinational corporations (MNCs) in world trade; improved technology, transport and communications; and the liberalisation of the world trading environment.

8. World trade and foreign direct investment flows exceeded the growth in world output in the 1990s and 2000s up until the Global Financial Crisis in 2008-09. This reflected the liberalisation of trade and the deregulation of financial markets. Major global financial flows include debt and equity securities, bonds, foreign exchange, direct and portfolio investment.

9. Multinational corporations use foreign direct investment as a means of establishing overseas subsidiaries and developing global production webs or networks to service the global market.

10. The information technology revolution and spread of electronic commerce have enabled firms to reap economies of scale in production through lower unit costs. Improvements in technology, transport and communications have also helped to increase the extent of the globalisation of economic activity through the increased efficiency of conducting global business.

11. The international labour market has become more mobile, with flows of skilled, semi skilled and unskilled workers to industrialised and newly industrialised countries from emerging and developing countries. This is referred to as the international division of labour and has led to the growth in global migration and workers' remittances.

12. Changes in the international business cycle and regional business cycles can impact on national economies and regions through changes in the growth of GDP, trade and financial flows. Both real and financial shocks can be transmitted from the global economy to national economies. An example of a real shock was the global recession in 2008-09. Examples of financial shocks were the global credit crisis in 2007-08 and the European Sovereign Debt Crisis in 2011-12.

Chapter 2

Free Trade and Protection

THE BASIS FOR FREE TRADE

International trade refers to the specialisation of production and the exchange of goods and services between countries. Since different countries have **different factor endowments** (of land, labour, capital and enterprise), the specialisation of production takes place, and expected gains will result if countries engage in trade. This occurs because output, prices and incomes will be more competitive as a result of greater productive efficiency. **Free trade** occurs when there are no protective barriers such as tariffs, quotas, subsidies and voluntary export restraints, which can divert trade, rather than create trade flows.

Nations engage in international trade as a means of specialising in production, increasing the productivity of their resource use, and achieving a larger output and economies of scale than by pursuing self sufficiency or autarchy. If the potential positive outcomes of free trade are achieved, a nation's residents will enjoy a higher standard of living than if the nation attempted to become self sufficient. Free international trade is based on the principles of **absolute and comparative advantage** which are outlined below. The rationale for world trade is based on two main factors:

1. The global distribution of economic resources or factor endowments is uneven; and
2. The efficient production of various goods and services requires different resource combinations and technologies.

The Principles of Absolute and Comparative Advantage

The **principle of absolute advantage** was developed by Adam Smith in *The Wealth of Nations* (1776). Absolute advantage is where a country, with a given level of resources, can produce more output than another country with the same level of resources. An example of absolute advantage is illustrated in **Table 2.1** which shows the production possibilities for two countries, X and Y, in the production of two goods, computers and wheat. The model makes the assumptions that there are only two countries; they only produce two goods; and each country has the same level of resources. Country X can produce either 300 computers or 800 tonnes of wheat with its resources, whereas Country Y can produce either 200 computers or 400 tonnes of wheat with its resources. If each country had 100 resources and devoted 50 resources to the production of each good, total computer output would be 25,000 (15,000 + 10,000) and total wheat output would be 60,000 tonnes (40,000 + 20,000) as shown in **Table 2.1**:

(i) If each country specialised in computer production by devoting all of its resources to computer production, Country X could produce 300 units of computers, whereas Country Y could only produce 200 units of computers. Therefore Country X has an absolute advantage in the production of computers (300), since it can produce 100 more computers than Country Y (200).

Table 2.1: Production Possibilities for Countries X and Y

	Computers		*Output*	*Wheat*		*Output*
Country X	300	x 50 =	15,000	800	x 50 =	40,000
Country Y	200	x 50 =	10,000	400	x 50 =	20,000
Total Output	500		25,000	1200		60,000

(ii) If each country specialised in wheat production by devoting all of its resources to wheat production, Country X could produce 800 tonnes of wheat, whereas Country Y could only produce 400 tonnes of wheat. Therefore Country X has an absolute advantage in the production of wheat.

Since Country X has an absolute advantage in the production of both computers and wheat, there is no basis for international trade between the two countries. David Ricardo, in his *Principles of Economics and Taxation* (1817), refined Adam Smith's principle of absolute advantage. He argued that a country could still engage in trade if it did not have an absolute advantage in production. By this he meant that if a country was comparatively more efficient in the production of a good than another country, it could engage in trade. David Ricardo's **principle of comparative advantage** was based on the concept of opportunity cost in production. If a country can produce a good with greater comparative efficiency (as measured by a lower opportunity cost of production) it should specialise and engage in trade.

Comparative advantage refers to production at the lowest opportunity cost, and can be calculated in our example by the opportunity cost of computer and wheat production in countries X and Y in **Table 2.1**, to determine which country has a comparative advantage in the production of each good:

- The opportunity cost of computer production in Country X is 800/300 = 2.6 wheat
- The opportunity cost of computer production in Country Y is 400/200 = 2 wheat
- The opportunity cost of wheat production in Country X is 300/800 = 0.3 of a computer
- The opportunity cost of wheat production in Country Y is 200/400 = 0.5 of a computer

The opportunity cost co-efficients above are listed in **Table 2.2.** Country Y has a comparative advantage in the production of computers since the opportunity cost is 2 wheat, whereas in Country X it is 2.6 wheat. Country X has a comparative advantage in wheat production since the opportunity cost is 0.3 of a computer, whereas in Country Y it is 0.5 of a computer. Therefore Country Y should specialise in the production of computers and Country X should specialise in the production of wheat. If each country did this they could engage in international trade. Total computer output would be 20,000 (200 x 100 resources) and total wheat output would be 80,000 (800 x 100 resources). Therefore, according to comparative advantage or specialisation, wheat output would increase by 20,000 tonnes, but computer output would fall by 5,000 (i.e. compare the results for total output in **Tables 2.1** and **2.2**). This could be overcome by Country X producing some computers but largely specialising in wheat production.

A reason for a country specialising in the production of goods in which it has a comparative advantage (i.e. producing a good with greater comparative efficiency than another country) is that it may be able to generate **economies of scale in production**. This means that with increasing output it may be able to reduce the unit cost of production, and therefore sell its goods at a more competitive or lower price in overseas markets. Economies of scale may result from the use of specialised labour, land, capital or entrepreneurial resources in production. Different countries will have different factor endowments and can utilise these according to their comparative advantage in different types of production. For example, Australia has abundant land resources, including minerals and agriculture, which are important exports in the balance of payments. Japan on the otherhand, has abundant capital and skilled labour resources, which are used to manufacture and export high technology products such as cars to overseas markets. Australia therefore exports natural resources to Japan and imports manufactured goods from Japan.

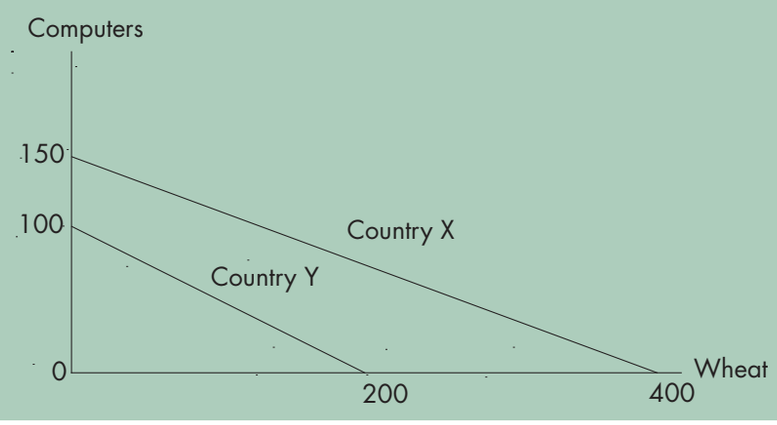
Table 2.2: Opportunity Cost Co-efficients for Countries X and Y

	Computers	*Output*	*Wheat*	*Output*
Country X	300 (2.6)	_____	800 (0.3) x 100 =	80,000
Country Y	200 (2.0) x 100 =	20,000	400 (0.5)	_____
Total Output		20,000		80,000

Comparative Advantage and Production Possibility Curves

An alternative way of showing the specialisation of production according to comparative advantage is to use production possibility curves (PPCs). Using the previous example, the production possibilities in Countries X and Y for computer and wheat production are graphed in **Figure 2.1.** The PPC model assumes that each country uses half of its resources to produce each good in order to be self sufficient.

Figure 2.1: Production Possibilities for Countries X and Y



Since Country X has an absolute advantage in the production of both computers and wheat, there is no basis for international specialisation and trade between the two countries. However according to the principle of comparative advantage, Country X is more efficient in producing wheat than Country Y, since the opportunity cost of wheat production is 0.3 computers in Country X, compared to 0.5 computers in Country Y. Therefore Country X should specialise in wheat production and trade its surplus with Country Y. Country Y is more efficient in producing computers than Country X, since the opportunity cost of computer production is 2 wheat in Country Y, compared to 2.6 wheat in Country X. Therefore Country Y should specialise in computer production and trade its surplus with Country Y.

Table 2.3: Production after Specialisation based on Comparative Advantage

	Computer Output	*Wheat Output*
Country X (all resources used to produce wheat)	-	800
Country Y (all resources used to produce comp.)	200	-
Total Production	200	800

Production of computers and wheat after specialisation is illustrated in **Table 2.3.** Total production after specialisation is 200 computers and 800 wheat. Computer production has fallen by 50 units (from 250 to 200) but wheat production has risen by 200 units (from 600 to 800). Country X should therefore produce some computers to make up the shortfall, but largely specialise in wheat production. If country X produced 100 computers, computer production would rise by 100 to 300, and wheat production would fall to 700. After trading their surplus output, both countries can consume more computers and wheat (consumption gains) than by being self sufficient. This is illustrated in **Table 2.4.**

Table 2.4: Consumption Gains from Specialisation based on Comparative Advantage

		Computer Output		*Wheat Output*
Country X	(100 + 100 imports)	200	(700 - 300 exports)	400
Country Y	(200 - 100 exports)	100	(300 imports)	300
Total Production		300		700

The Advantages of Free Trade

Countries may benefit from free trade due to the specialisation of the factors of production according to the principles of absolute and comparative advantage. The potential gains from free trade include:

- **Increased specialisation of production**, leading to economies of scale through lower unit costs of production (i.e. technical efficiency). This can result in greater levels of output and employment.
- Specialisation allows for a **greater range of output**, increasing the quantity and quality of goods and services available to consumers who experience a rise in their real incomes and living standards.
- **Increased productivity of resources** and a more optimal allocation of resources can lead to greater allocative efficiency (i.e. where prices equal or reflect the marginal cost of production).
- **Increased competition between firms** in the tradable goods sector (exports and import substitutes) of domestic economies can lead to lower consumer prices and higher real incomes.
- Producers have a **greater incentive to innovate in production**, through the use of the latest cost reducing technology to increase their competitiveness. This enhances the dynamic efficiency of firms if they respond to changes in consumer demand and technology over time.

At a global or world level, the gains from free trade based on international specialisation can include:

- A **more efficient allocation of the world's resources** according to comparative advantage;
- **Higher world output** and growth in world GDP due to economies of scale in production;
- **Equalisation of resource prices** in trading countries through greater competition;
- **Higher national income and living standards** generated by a multiplier effect of the growth in export income as a percentage of gross domestic product (i.e. greater trade intensity); and
- **Greater competition between domestic and foreign producers** and the opportunity to generate economies of scale in production, leading to **lower prices** of goods and services for consumers.

The Disadvantages of Free Trade

Although free trade has clear benefits in theoretical terms, it can lead to a number of disadvantages for individual firms, the owners of productive resources and national or regional economies, if markets are not perfectly competitive and resources are not perfectly mobile:

- Newly established firms in **infant industries** will find it difficult to compete against more efficient and established foreign firms. Infant industries will take longer to achieve the necessary economies of scale to compete globally, and may go out of business before reaching an optimal scale of plant.
- Under conditions of free trade, the most efficient and competitive producers will attract resources away from less efficient and less competitive industries, causing some regions to lose key industries and experience unemployment. **Job displacement** in uncompetitive industries can lead to **structural unemployment** and more regional inequality. As a result, governments will need to provide job retraining schemes and welfare assistance to the structurally unemployed in affected industries.
- Free trade (with no government intervention) can lead to **negative externalities** if firms do not pay for the unintended consequences of their production activities, such as higher levels of pollution, the degradation of the environment, or the exploitation of labour in developing economies.
- Countries pursuing free trade strategies may not be able to **diversify their economic base** because they specialise in production according to comparative advantage. For example, countries specialising in agricultural exports may not have a high level of industrialisation, and therefore be increasingly dependent on imports of manufactured, energy and capital goods from other countries.
- Free trade may lead to **unfair price cutting**, if countries which are efficient producers of agricultural or manufactured goods, sell their exports at below factor cost in foreign markets.

This is known as the **dumping** of surplus output in export markets and may lead to higher unemployment in import competing industries in other countries.

- A country pursuing free trade can often experience a sustained or persistent **current account deficit** in the balance of payments, if it is unable to finance its import expenditure with its export income. This may occur if domestic import replacement industries are relatively inefficient compared to export industries. This situation can lead to high levels of import penetration and a shortfall in export income to finance import expenditure, resulting in a trade or current account deficit.

Since the formation of GATT in 1947 and the World Trade Organisation (WTO) in 1994, there has been a tendency for the levels of global protection to fall as more countries pursue free trade. Many developing countries have joined the WTO in seeking further reductions in the protection of agriculture, textiles, clothing and footwear by advanced nations (through subsidies and tariffs). Negotiations in reducing protection in the WTO's Doha Round began in 2001. There was however an upsurge in global protection in 2008-09 in response to the Global Financial Crisis (GFC), with many countries using protection to support employment in major industries such as agriculture, manufacturing and services. However in a breakthrough Trade Facilitation Agreement in December 2015 in Nairobi, Kenya, the WTO's 164 members agreed to abolish all government subsidies to farmers between 2015 and 2018.

REVIEW QUESTIONS

THE BASIS FOR FREE TRADE

1. Define 'free international trade' and give an example of an international trade transaction.

2. Why do countries engage in international trade? What are the expected gains from international trade?

3. Using an example, explain what is meant by Adam Smith's principle of absolute advantage.

4. Refer to Table 2.1 and explain why Country X has an absolute advantage in both computer and wheat production over Country Y.

5. What is the principle of comparative advantage? Refer to Table 2.2 and calculate the opportunity cost of computer and wheat production for Country X and Country Y.

6. Refer to the following production possibilities for Australia and Japan:

	Iron ore	Cars
Australia	30	10
Japan	20	30

   (a) Which country has an absolute advantage in iron ore and car production?

   (b) Calculate the opportunity cost of iron ore and car production in Australia and Japan. Which country has a comparative advantage in iron ore and car production?

   (c) On what basis should Australia and Japan trade? What are the gains from free trade?

7. Define the following terms and add them to a glossary:

absolute advantage	efficiency	opportunity cost
comparative advantage	factor endowments	real income
diversification	free trade	resources
dumping	gains from trade	specialisation
economies of scale	infant industries	standard of living

THE ROLE OF INTERNATIONAL ORGANISATIONS AFFECTING TRADE

The most important international organisations that affect world trade, investment and financial flows include the World Trade Organisation (WTO), the International Monetary Fund (IMF), the World Bank, the United Nations and the Organisation for Economic Co-operation and Development (OECD). The WTO is the main multilateral trade agreement which provides a forum for countries to promote free trade and resolve trade disputes. The IMF is primarily responsible for lending funds to countries which experience short term balance of payments, exchange rate or financial crises. The World Bank's main function is to promote economic development in developing countries through the provision of grants, loans, aid and technical assistance. The United Nations (UN) has 192 member states and through the UN Conference on Trade and Development (UNCTAD) promotes economic growth and development along with free trade. The role of the OECD is to carry out economic research and make policy recommendations to improve the economic performance of OECD member nations.

These global organisations promote policy co-ordination amongst countries and attempt to provide rules for trade and investment transactions, and a forum for the discussion of trade related issues and disputes. However many of the decisions made by organisations such as the WTO, IMF and World Bank are considered to be controversial, since their power structures are controlled by major advanced countries. Emerging and developing countries often criticise their policy decisions on the basis of unfair treatment of the developing world through denying market access to advanced nations' markets or the stringent policy conditions imposed on developing countries receiving IMF or World Bank assistance. However with the occurrence of the Global Financial Crisis and the global recession in 2008-09 a number of international organisations such as the OECD and G8 expanded their reach to include future membership by large emerging countries such as Brazil, Russia, India and China (the BRICs).

The World Trade Organisation (WTO)

The General Agreement on Tariffs and Trade (GATT) was signed by 23 countries in 1947. Its membership grew to over 100 nations and GATT was responsible for a steady reduction in tariff and non tariff barriers on manufactured goods between 1947 and 1995. The World Trade Organisation (WTO) replaced the GATT secretariat in 1995, and monitors developments in world trade and reviews barriers to world trade such as tariffs and subsidies. The WTO had 164 members in 2017 and is based in Geneva, Switzerland. It is the most important multilateral trade treaty governing the rules of world trade. The basic guiding principles of GATT and its successor, the WTO, are the following:

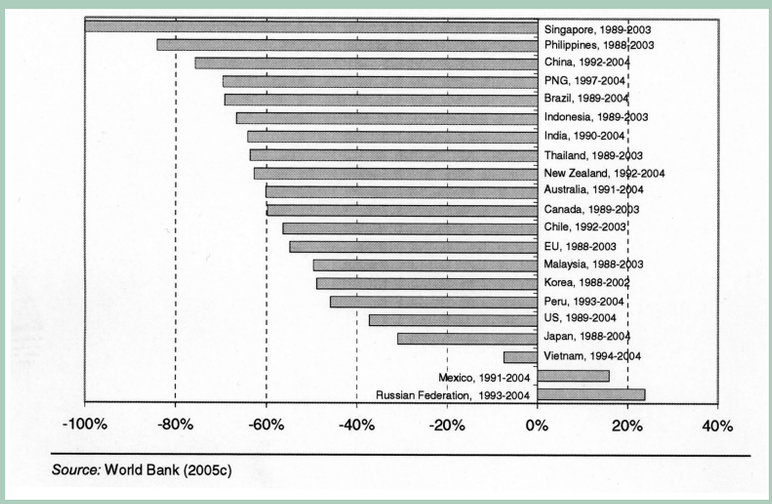
- Non discrimination, which means that trade concessions granted to one member nation must be extended to all member nations.
- Trade liberalisation, where the WTO works towards the elimination of all tariff and non tariff barriers through a process of multilateral negotiations (trade rounds) between member countries.
- Stability of trading relations, where WTO mechanisms are set up to discuss and solve trade disputes between countries.
- Transparency of trade agreements, where trade preferences between countries are open to scrutiny and discussion in the WTO forum.

The Uruguay Round

The eighth or Uruguay Round of GATT trade negotiations began in 1986, and was completed in 1993 in Geneva, and signed in 1994 in Marrakesh in Morocco. The 15 negotiating committees concentrated on trade in areas where GATT rules did not previously exist. These included new agreements on:

- Trade in agriculture
- Trade in services or the GATT Agreement on Trade in Services (GATS)
- Trade related intellectual property rights (TRIPS)
- Trade related investment measures (TRIMS)

Figure 2.2: Percentage Changes in Simple Average MFN Tariffs



Source: Productivity Commission (2006), *Trade and Assistance Review 2004-05*, Melbourne.

For the Cairns Group of free trading agricultural exporters (including Australia), the major outcome of the Uruguay Round was an agreement by the USA and EU to cut their agricultural subsidies by 2000:

- An average cut in all agricultural tariffs of 36%;
- Domestic support measures (i.e. subsidies) to be cut by 20%; and
- Export subsidies to be cut by 36% in budgetary terms, and 21% in quantitative terms.

Other measures in the Uruguay Round included reductions in beef and rice subsidies by the EU and USA for exports to the Asian market over 1994-2000, and for Japan and South Korea to open their domestic rice markets to imports. GATT also cut tariffs on trade in many industrial products.

The Doha Round

The ninth round of WTO talks began in November 2001 in the city of Doha in Qatar, and is known as the Doha Development Round which has the intention of reducing global protection and achieving free and fair trade. The main agenda items include the following:

- Further reductions in agricultural protection, that build on those in the Uruguay Round, where agricultural subsidies were cut by an average of 30% between 1994 and 2001;
- Trade concessions from advanced countries to developing countries to give them more market access for their agricultural and manufactured exports; and
- Measures to allow environmental and labour standards to be imposed on trade related activities.

WTO meetings in Cancun (Mexico) in 2003, and Geneva in July 2006, collapsed as the EU, USA and developing countries such as China, India and Brazil failed to reach agreement on the reform of agricultural trade. The WTO Ministerial meeting in Geneva in 2008 negotiated the formulae for cutting tariffs and agricultural subsidies but there was an upsurge in protectionist sentiment during the GFC in 2009 and the Doha Round was not concluded in 2010 as negotiations were suspended.

The ninth WTO Ministerial meeting in Bali in December 2013 progressed the Doha Round with major decisions on trade facilitation, export subsidies and development issues. At the tenth WTO Ministerial Meeting in Nairobi in December 2015, countries agreed to abolish all government subsidies to farmers, including agricultural export subsidies. This was to be effective immediately for developed nations with developing nations to follow by 2018. Due to the slow progress in finalising the Doha Round, many countries reduced their Most Favoured Nation (MFN) tariffs unilaterally in the 1990s and 2000s as shown in **Figure 2.2**. In many cases MFN tariffs were reduced by more than half over the last decade and a half, especially by countries in the APEC region which sought to increase regional trade.

The International Monetary Fund (IMF)

The International Monetary Fund (IMF) was created by the Bretton Woods Agreement in 1944 to promote international financial stability. The IMF is based in Washington DC and had 189 member countries in 2017. The IMF's current primary mission is to ensure the stability of the international monetary system based on the system of exchange rates and international payments in global trade:

1. The IMF conducts surveillance of member countries policies and global financial developments;
2. The IMF provides financial assistance to countries experiencing balance of payments problems; and
3. The IMF provides technical assistance and training to member countries.

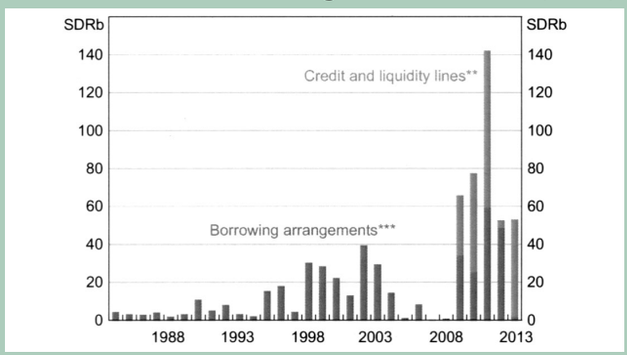
The IMF was established with a pool of central bank reserves and national currencies which could be made available, under certain conditions, to countries experiencing short term balance of payments problems such as current account deficits, which were likely to be corrected over the short term. Members of the IMF were allocated a quota of drawing rights based on their cash deposits, economic size and stability. Voting rights were also allocated to each member country on this basis.

In the early 1970s many countries adopted floating exchange rates, creating a need for a new form of reserve asset with the IMF. **Special Drawing Rights** (SDRs) were introduced in the 1970s based on the value of the US dollar, enabling countries to obtain foreign exchange by drawing on their own currency balances held by other IMF countries. With the general adoption of floating exchange rates, and rise in economic power of countries other than the USA (such as Japan, Germany, France, Britain, Canada and China), the value of SDRs is determined by a basket of five major currencies (US dollar, Euro, the RMB, Yen and Pound) weighted according to each country's share of world trade and investment.

One of the key roles of the IMF is to provide financial assistance to countries experiencing temporary balance of payments difficulties. During the Asian currency crisis in 1997-98 the IMF lent funds to Thailand, Korea and Indonesia. The IMF also lent funds in 1992 to Russia, Turkey, Argentina and Brazil after these countries experienced financial crises after sovereign debt default.

During the Global Financial Crisis (GFC) in 2009 many developing and emerging countries had difficulty in accessing private capital markets and sought access to IMF lending arrangements. The IMF boosted global liquidity by increasing the issue of SDRs to member countries. At the April 2009 summit of the G20, leaders supported an increase in the allocation of SDRs by SDR183b. This raised the global stock of SDRs from SDR21b to SDR204b helping to increase global liquidity. Around 21 countries accessed these new lending arrangements and the IMF doubled normal borrowing limits and reduced the extent of the economic reforms normally required by the IMF of borrowing countries. The GFC led to substantial changes to the IMF's lending programmes with an increase in the size of countries' borrowings and the introduction of new credit and liquidity lines as shown in **Figure 2.3**. Between 2010 and 2012 the IMF agreed to provide financial assistance to countries in danger of sovereign

Figure 2.3: The Value of New IMF Lending Commitments (SDRb)



Source: Reserve Bank of Australia (2012), *Bulletin*, December Quarter.

debt default in Europe such as Greece (SDR26.4b), Portugal (SDR23.7b) and Ireland (SDR19.4b). Other countries in receipt of IMF financial assistance were Pakistan (SDR7.2b), Colombia (SDR3.8b), Mexico (SDR47.2b) and the Ukraine (SDR4.7b). As of March 2017 the IMF had lent funds valued at SDR426b (US$575b). The IMF's five main responsibilities in the global economy are the following:

1. Promoting international monetary co-operation and global monetary stability;
2. Facilitating the expansion of international trade;
3. Promoting exchange rate stability;
4. Supporting the multilateral payments system; and
5. Making resources available to members experiencing balance of payments difficulties.

During the Global Financial Crisis in 2008-09 the IMF's funds were insufficient to meet the demand for credit by advanced, developing and emerging countries. At the Pittsburgh Summit in 2009 the G20 leaders committed to tripling the IMF's lending capacity to US$750b to deal with the Global Financial Crisis. The IMF played a major role with the European Central Bank in lending funds to Greece, Ireland and Portugal during the height of the European Sovereign Debt Crisis between 2010 and 2012. In mid 2015 Greece defaulted on its loan repayments to the IMF. The Greek government negotiated with European leaders and the IMF over reforms to help Greece to remain in the Euro Area.

The World Bank

The World Bank, like the IMF had 189 member countries in 2017, and is based in Washington DC in the USA. It evolved from the International Bank for Reconstruction and Development (IBRD) which was also established under the Bretton Woods Agreement in 1944. Unlike the IMF, the IBRD was set up initially to promote and provide funding for long term development projects in countries rebuilding their infrastructure which was damaged or destroyed in World War Two. They included many countries in Western Europe such as Britain, Germany, France, Italy, Holland and Belgium.

The World Bank now focuses on long term development projects in developing or emerging countries by providing financial and technical assistance, particularly to the poorest countries in Africa, Central and South America, and South and West Asia. In 2016 it set two goals for the world to achieve by 2030:

- Ending extreme poverty by decreasing the percentage of people living on less than US$1.90 a day to no more than 3%.
- Promoting shared prosperity by fostering the income growth of the bottom 40% for every country.

The World Bank also attempts to influence the design of macroeconomic and microeconomic policies in developing countries to encourage foreign investment and development. In 2009 the World Bank called for the advanced countries to allocate 0.7% of their economic stimulus packages to a 'Vulnerability Fund' to help developing countries to overcome the Global Financial Crisis. The World Bank estimated that up to 90b more people would be trapped in poverty due to the crisis. The World Bank consists of five separate organisations, each with specific functions:

1. The International Bank for Reconstruction and Development (IBRD) provides loans and development assistance (foreign aid) to developing countries;
2. The International Development Association (IDA) provides interest free or 'soft loans' to the poorest developing countries;
3. The International Finance Corporation (IFC) encourages economic development in developing countries by supporting private investment projects;
4. The Multilateral Investment Guarantee Agency (MIGA) supports private investment in developing countries by providing guarantees to cover economic and political risks; and
5. The International Centre for the Settlement of Investment Disputes (ICSID) administers a process for dispute settlement over investment projects involving host governments and private investors.

Many developing countries are critical of the conditions imposed by the IMF and World Bank on countries receiving financial assistance (i.e. the **Conditionality Principle**). These conditions may involve a loss of autonomy over economic policy or directives on how assistance funds are spent. The IMF and World Bank usually require governments in developing countries to implement structural reforms in their economies to receive financial assistance. As the IMF and World Bank are controlled by advanced countries, many developing countries interpret their policies as undermining their national sovereignty.

The United Nations Development Programme (UNDP)

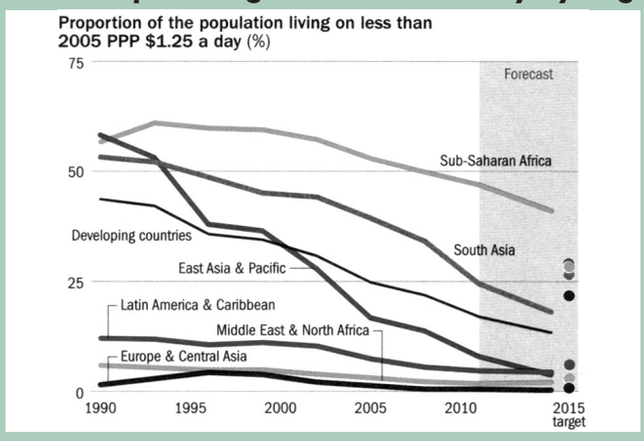
In September 2015, the UN General Assembly adopted the 2030 Agenda for Sustainable Development which established a new set of 17 global goals known as the Sustainable Development Goals with an associated 169 targets. These build on the former 8 goals and 18 targets of the Millennium Development Goals but are wider in scope and far more ambitious (and perhaps unrealistic) as shown in **Table 2.5**.

Table 2.5: The Sustainable Development Goals

Goal 1:	End poverty in all its forms everywhere
Goal 2:	End hunger, achieve food security, improved nutrition and promote sustainable agriculture
Goal 3:	Ensure healthy lives and promote well-being for all at all ages
Goal 4:	Ensure inclusive and equitable quality education and promote lifelong learning for all
Goal 5:	Achieve gender equality and empower all women and girls
Goal 6:	Ensure availability and sustainable management of water and sanitation for all
Goal 7:	Ensure access to affordable, reliable, sustainable and modern energy for all
Goal 8:	Promote sustained, inclusive and sustainable economic growth and employment for all
Goal 9:	Build resilient infrastructure, promote inclusive and sustainable industrialisation/innovation
Goal 10:	Reduce inequality within and among countries
Goal 11:	Make cities and human settlements inclusive, safe, resilient and sustainable
Goal 12:	Ensure sustainable consumption and production patterns
Goal 13:	Take urgent action to combat climate change and its impacts
Goal 14:	Conserve and sustainably use the oceans, seas and marine resources
Goal 15:	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and biodiversity loss
Goal 16:	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
Goal 17:	Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development

According to the World Bank in its *World Development Report 2015* developing countries as a whole met or had made substantial progress in meeting the Millennium Development Goal (MDG) targets in 2015. For example, developing countries as a whole met the MDG target of halving the proportion of the population living in extreme poverty (on less than US$1.25 per day) with around 1b people being lifted out of extreme poverty between 1990 and 2015 as shown in **Figure 2.4**.

Figure 2.4: Reduction of People Living in Extreme Poverty by Region 1990 to 2015



Source: World Bank (2015), *World Development Indicators 2015*, Washington DC.

The Organisation for Economic Co-operation and Development (OECD)

The OECD was formed in 1961 and has 35 member countries, including 22 members of the EU (Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Luxembourg, the Netherlands, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden and the UK); and 13 non EU countries (Australia, Canada, Chile, Iceland, Israel, Japan, Korea, Mexico, New Zealand, Norway, Switzerland, Turkey and the USA). The main objectives of the OECD are to promote sustainable economic and employment growth and rising living standards in member countries, whilst maintaining financial stability, and contributing to world economic development. The OECD is based in Paris, France, and engages in research, consultation, co-operation and the co-ordination of a wide range of economic, trade and development issues. It publishes regular reports (such as the *OECD Economic Outlook*) on each member country's economic performance and prospects.

The OECD consists of countries whose governments are committed to maintaining democracy and a market system of economic organisation. Its main objectives include the following:

- Promoting sustainable economic growth;
- Boosting employment;
- Raising living standards;
- Maintaining financial stability;
- Assisting other countries with economic development; and
- Contributing to the growth in world trade.

In 2008-09 the OECD promoted the use of monetary and fiscal stimulus by member governments to prevent the Global Financial Crisis from reducing employment and living standards. In 2012 the OECD promoted policies for crisis affected countries in the Euro Area to restore public finances; strengthen the public's trust in their banking systems; and invest in knowledge based skills as a source of future growth. In 2016 the OECD's focus was on reducing unemployment rates in OECD countries with the release of its *Employment Outlook* series which focused on measures to boost job skills and training.

The Group of Seven (G7)

The Group of Seven (1975) is a meeting of finance ministers and leaders from the seven largest democratic industrialised market economies in the world: the USA, Japan, Germany, the UK, France, Italy and Canada. Together they account for almost half of the world's GDP, trade and financial flows. The European Union (EU) is also represented within the G7. The G7 leaders met in Washington DC in April 2008, and on February 14th 2009 in Rome, to discuss the Global Financial Crisis (GFC) and agreed to co-ordinate macroeconomic policies to overcome the GFC between 2007 and 2009. The G7 finance ministers pledged to co-ordinate the use of monetary and fiscal stimulus and government bailouts of failed banks to support public confidence and world economic activity. In March 2014 the G7 met in The Hague in Holland and condemned Russia's violation of Ukraine's sovereignty after the invasion of the Crimean Peninsula (The Hague Declaration) and expelled Russia from the G8. In June 2015 the leaders of the G7 met in Bavaria to discuss security and policies to support global growth. The G7 leaders met in Japan in May 2016 to discuss measures to support the global economic recovery and in Italy in May 2017 to discuss global security issues and measures to boost global trade.

The Group of Eight (G8) Summits 2005-2012

The Group of Eight was formerly known as the Group of Six (France, Germany, Italy, Japan, the United Kingdom and the USA) which was established in 1975 as an annual leaders' summit to discuss major political and economic issues. In 1976 Canada joined the Group of Six and in 1997 Russia was admitted to the group which became known as the Group of Eight. At the G8 Summit in July 2005 in Scotland, leaders agreed to increase foreign aid to developing countries by US$50b, and aid to Africa by US$25b, to help countries to achieve the World Bank's MDGs for reducing world poverty. The G8 also cancelled the multilateral debt of US$100b for the 37 poorest countries in Africa, Asia and Latin America.

The G8 leaders met in St Petersburg, Russia, in July 2006, and urged WTO negotiators in the Doha Round to reach an agreement on a broad outline for liberalising world trade. G8 meetings in 2007 and 2008 discussed possible reductions in greenhouse gas emissions by 2050 and at the July meeting in Japan in 2008 the G8 leaders adopted a 50% target for reducing greenhouse gas emissions by 2050. At the G8 Summit in May 2012 at Camp David, Maryland, USA, leaders agreed to greater fiscal discipline to prevent the European Sovereign Debt Crisis from undermining global growth. In June 2014 the G7 leaders met in Brussels instead of Sochi, Russia, as Russia was expelled from the G8 due to its violation of Ukraine's sovereignty with the invasion of the Crimean Peninsula. The G7 leaders' meeting replaced the G8 after Russia's expulsion from the G8 in 2014 because of its violation of Ukraine's sovereignty.

The Group of 20 (G20) Summits between 2008 and 2017

The Group of 20 consists of the G8 countries plus 12 major advanced, emerging and developing countries (i.e. Argentina, Australia, Brazil, China, the European Union, India, Indonesia, Mexico, Saudi Arabia, South Africa, South Korea and Turkey). The Global Financial Crisis in 2008 led to urgent meetings of G20 leaders that reflected the '**new world economic order**' with the large emerging countries of Brazil, Russia, India and China attending the G20 Summit in Washington DC in November 2008. The G20 leaders discussed measures to re-capitalise the world financial system, strengthen the regulation of global financial markets, and the use of expansionary monetary and fiscal policies to support global growth.

At the G20 meeting in London in April 2009, leaders pledged US$1 trillion in loans and guarantees to crisis affected countries and additional finance of US$250b of Special Drawing Rights (SDRs) for the IMF to help countries with balance of payments or exchange rate crises. In 2009 the G20 replaced the G8 as the main economic forum of wealthy nations, with the following broad objectives:

1. Policy co-ordination between members to achieve global economic stability and sustainable growth.
2. Promotion of financial regulations that reduce risks and prevent future financial crises.
3. Creation of a new international financial architecture.

Australia hosted the G20 meeting in Brisbane in November 2014. The final G20 communique stated a commitment for trade and economic reforms by members to lift global economic growth by 2%. The G20 leaders also agreed to strengthen measures to reduce tax evasion and cut carbon emissions. G20 meetings were held in Turkey in 2015 and China in 2016 with a focus on supporting world growth. At the G20 meeting in Hamburg in July 2017 all leaders (19) except US President Donald Trump reaffirmed their commitment to the Paris Agreement to reduce global carbon dioxide emissions.

REVIEW QUESTIONS

INTERNATIONAL ORGANISATIONS AFFECTING TRADE

1. Discuss the guiding principles of the WTO. What were the results of the Uruguay Round of GATT negotiations? How did Australia benefit from the outcomes at the Uruguay Round?
2. Discuss the agenda for the WTO's Doha Round of trade talks. How did the Doha Round progress at the Ministerial Meeting in Nairobi in 2015?
3. Distinguish between the history and functions of the IMF and World Bank.
4. How did the IMF and World Bank try to assist countries in dealing with the Global Financial Crisis in 2009? What role did the IMF play during the European Sovereign Debt crisis?
5. Why have the policies of the IMF and World Bank been criticised by developing countries?
6. Discuss the Sustainable Development Goals (SDGs) for 2030 set by the UN in Table 2.5.
7. Discuss the influence of the OECD, G7, G8 and G20 on the world economy and world trade.

TRADING BLOCS, MONETARY UNIONS AND FREE TRADE AGREEMENTS

Economic integration refers to the liberalisation of trade between two or more countries. This liberalisation may lead to the formation of a free trade area, customs union, common market or monetary union (refer to **Table 2.6**). The most important examples of global economic integration are the EU, APEC, NAFTA and ASEAN. The integration between these regional groupings of countries has resulted in a growing amount of intra-regional trade and intra-industry trade, particularly in the European Union, East Asia and North America. These three major regions dominate world trade. These changes have also been accompanied by an increasing proportion of world trade carried out by multinational corporations.

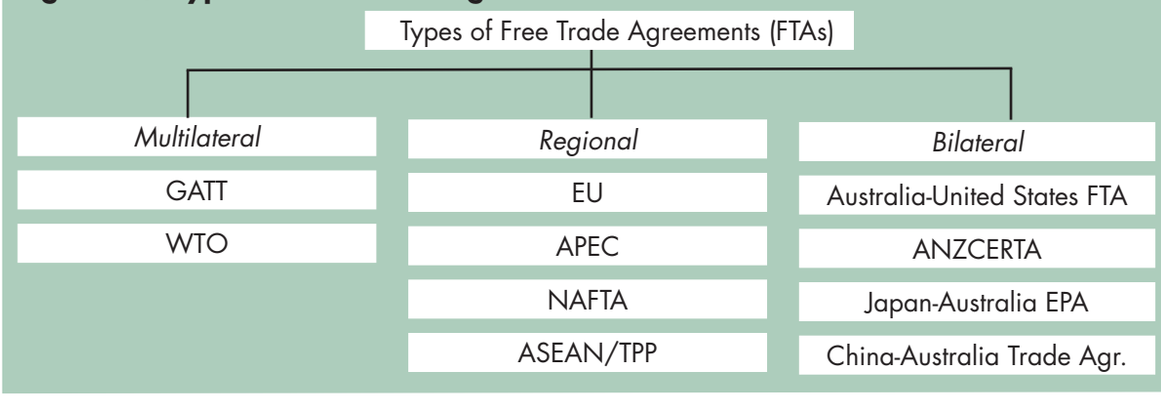
Trading blocs such as the EU (28 members) are when a group of countries join together in a formal preferential trade relationship to the exclusion of other countries. Whilst they have free trade between themselves they have adopted a common external tariff against imports from the rest of the world. A trading bloc is only beneficial to the growth in world trade if there is **trade creation** rather than **trade diversion** within regions. An important consideration is that there is no distortion of comparative advantage by tariff and non tariff barriers. Within the EU, 19 countries are also members of a **monetary union** (the Economic and Monetary Union or EMU) which use a common currency called the euro (the Euro Area), They also have their monetary policy co-ordinated and conducted by the European Central Bank (ECB).

Table 2.6: The Main Forms of Economic Integration

- A free trade area is where a group of member countries (e.g. the EU) abolish trade restrictions or barriers between themselves but may retain restrictions against non member countries.
- A customs union is where member countries not only abolish trade restrictions between themselves but adopt a common set of trade restrictions against non member countries (e.g. the EU).
- A common market involves the features of a customs union but also allows for the free mobility of labour and capital between the common market countries (e.g. the EU).
- A monetary union has the features of a common market plus the adoption of a common or single currency and the co-ordination of monetary policy through a single central bank (e.g the EMU). Fiscal, welfare and competition policies may also be co-ordinated between member countries.

The three types of **free trade agreements** (FTAs) are bilateral (i.e. between two countries such as the US-Australia Free Trade Agreement); regional (i.e. between many countries in a region such as APEC, NAFTA, ASEAN and the TPP); and multilateral (i.e. between many countries not necessarily in the same geographic region such as the WTO). Examples of these three types of trade agreements are contained in **Figure 2.5.** Multilateral trade agreements such as the WTO (rather than bilateral or regional agreements) are considered to be the most effective way of achieving trade liberalisation on a global basis, because they are non exclusive, and lead to trade creation rather than trade diversion.

Figure 2.5: Types of Free Trade Agreements



The European Union (EU)

The European Community (EC) was formed in 1959 by the Treaty of Rome, which established a **common market** between the six founding members of Germany, France, Italy, Belgium, Luxembourg and the Netherlands. This involved the free mobility of goods, capital and labour between member states. By 1969 these six countries had achieved a **customs union** through two major policy initiatives known as the Common External Tariff (CET) and the Common Agricultural Policy (CAP):

- The EC countries abolished tariffs between members and erected a common tariff wall called the common external tariff (CET) against non member countries. The CET made it difficult for non EC countries like Australia and New Zealand to compete and gain access to EC export markets.
- The EC's Common Agricultural Policy (CAP) involved the subsidisation of EC farm output, which led to surplus production and lower world prices for commodities such as wheat, sugar and dairy products. This policy led to a loss of markets and export income for Australian agricultural exporters, forcing them to seek new markets in the Americas, Asia, Africa and the Middle East.

The EC moved from a common market to complete **economic union** under the Maastricht Treaty (voted on by member countries) which came into effect in 1993 with seven years for implementation. The name of the EC was changed to the European Union (EU), and an **Economic and Monetary Union** (EMU) was achieved between 1999 and 2000, with the adoption of a single currency called the euro, and monetary policy co-ordinated by the European Central Bank (ECB). Membership of the EU grew to 15, with nine more countries joining the original six: Britain, Ireland, Denmark, Greece, Spain, Portugal, Austria, Finland and Sweden. Another ten countries (Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovak Republic and Slovenia), eight of which were transition economies in former communist Eastern Europe, became members in 2004. In 2007 Bulgaria and Romania became EU members and Croatia joined in 2013, taking total EU membership to 28 countries in 2015 as shown in **Table 2.7**. Nineteen of the EU countries use the euro currency.

The major impetus for greater economic integration in the EU came in the 1990s because of the increasing global competitiveness of the North American, Japanese and East Asian economies. Full monetary union occurred in the EU in 1999, and meant that the euro replaced national currencies for the 19 members who adopted a single interest rate, and foreign exchange and monetary policies conducted by the European Central Bank. These 19 countries form the **Euro Area** or **Eurozone**. The perceived advantages of a monetary union in the EU are the reduction in transaction costs by using a single currency in business; greater potential economic stability; and improved economic performance with the use of co-ordinated monetary, exchange rate and other economic and social policies.

Table 2.7: Member Countries of the European Union in 2017 (*the 19 Euro Area countries)

1. Austria*	11. Germany*	21. Portugal*
2. Belgium*	12. Greece*	22. Romania
3. Bulgaria	13. Hungary	23. Slovak Republic*
4. Croatia	14. Ireland*	24. Slovenia*
5. Cyprus*	15. Italy*	25. Spain*
6. Czech Republic	16. Latvia*	26. Sweden
7. Denmark	17. Lithuania*	27. The Netherlands*
8. Estonia*	18. Luxembourg*	28. United Kingdom
9. Finland*	19. Malta*	NB: Britain voted to leave
10. France*	20. Poland	the EU (Brexit) in June 2016

Source: www.europa.eu.int *the 19 Euro Area or Eurozone countries use the euro as a common currency

The disadvantages of monetary union in the EU include the loss of national currency sovereignty, and macroeconomic policy autonomy, and political opposition that arises if the economic benefits of monetary union are not realised in member countries. The main features of the European Union are:

- **Economic and political integration** has led to common policies for member countries, who take joint decisions on many economic and political matters. Examples include the Kyoto Protocol (2004) to reduce greenhouse gas emissions; and the Treaty of Lisbon (2007) to promote democratic and transparent government, and sustainable development in the EU.
- The **creation of a single European market** through the removal of trade barriers has led to the free movement of goods, services, people and capital between member countries.
- The **single currency of the euro** managed by the European Central Bank has created an Economic and Monetary Union (EMU) in the EU. In 2002 euro notes and coins replaced national currencies in 12 of the 15 EU countries, and the official interest rate in the EU was set by the ECB.

The EU has a combined population of 508m and its total GDP was €14,600b in 2015. The EU accounts for around 14% of world GDP and 20% of world trade, with trade between EU countries (i.e. intra-regional trade) accounting for 62% of all EU trade. In 2008-09 the Global Financial Crisis led to negative economic growth, rising unemployment rates and current account deficits in the EU.

A **sovereign debt crisis** emerged in the Euro Area in 2010-11 because of the rising budget deficits and sovereign debts of the governments of Portugal, Ireland, Greece and Spain. The crisis exposed flaws in EMU fiscal governance with government debt reaching an average of 85.3% of GDP in 2013. The crisis caused 'financial contagion' in the Euro Area, with the ECB and the IMF providing a US$200b loan to Greece. Europe's finance ministers set up a comprehensive rescue package in May 2010 of US$1,000b by creating a European Financial Stability Facility. IMF and ECB bailout packages to governments in Greece, Ireland and Portugal in 2010-11, Spain in 2012, and Cyprus in 2013, were conditional on cuts to government spending and higher taxes to reduce budget deficits and public debt.

The Brexit Vote to Leave the EU

In June 2016 Britain voted in a referendum to leave the EU based on arguments to solve Britain's immigration, housing and welfare problems. The voting decision led to severe turbulence in global financial markets, a lower Pound, uncertainty for businesses, and political instability in the British parliament. Article 50 of the Treaty of Lisbon must be invoked for Britain to leave the EU by 2018. The UK Prime Minister Theresa May formed a minority Conservative government after the 2017 election.

Asia Pacific Economic Co-operation (APEC)

Asia Pacific Economic Co-operation (APEC) is a **multilateral regional trade forum** formed in 1989. It has 21 member countries which are the USA, Japan, Australia, New Zealand, Canada, Brunei, Chile, Singapore, South Korea, Taiwan, Hong Kong SAR, China, Indonesia, Thailand, Malaysia, Philippines, Vietnam, Mexico, Papua New Guinea, Peru and Russia.

APEC has pursued common trade policy issues and mechanisms for closer trade and investment links in the Asia Pacific region. In 2015 APEC members accounted for 2.8b people, 59% of world GDP and 49% of world trade. APEC members' combined GDP was valued at US$16 trillion in 2015. The *Bogor Declaration* was signed in November 1994 in Indonesia, with APEC leaders agreeing to dismantle trade barriers by 2020, by implementing Individual Action Plans (IAPs) for trade liberalisation, and Collective Action Plans (CAPs) for the regional facilitation of common standards, rules and procedures. Advanced countries in APEC agreed to achieve the target of free trade by 2010, with the developing countries of APEC, given until 2020 to achieve the target. APEC's major achievements to date are:

- Promoting regional economic integration and trade with annual APEC leaders' meetings;
- Making it easier to conduct trade and do business across the borders of APEC countries;
- A review and streamlining of regional customs procedures to make them more efficient; and
- Structural reform of policies and regulations including IT and environmental sustainability.

APEC does not impose a formal rules based structure like the EU or NAFTA on its members, but conducts a series of forums for ministers and leaders, who formulate policy and allow industry based working groups to collaborate on a wide range of trade and economic issues. APEC's importance to regional trade and economic development is its commitment to four major areas of reform:

1. Trade liberalisation within the region supplementary to, but consistent with WTO initiatives.
2. Trade facilitation in the region through the development of an Asia Pacific investment code; dispute settlement procedures; macroeconomic policy co-ordination; mutual recognition of testing and certification arrangements; and closer co-ordination of competition policy.
3. Technical co-operation to facilitate the development of physical and human capital resources needed for future economic development in the region.
4. Institutionalisation of APEC's role through regular annual leaders' meetings and an enhanced role for members' economic ministers in guiding the APEC process in achieving the Bogor goals.

The advantage of APEC's approach to economic integration and trade liberalisation is that it is based on '**open regionalism**' where reductions in trade barriers are based on non discrimination, by liberalising trade between members, but not discriminating against non APEC members. APEC's initiatives are therefore consistent with the WTO's guiding principles for free trade. Between 1989 and 2012 APEC economies reduced their tariffs from an average 17% to 5.2%, and trade increased over seven times.

At the APEC meeting in Lima, Peru in 2008, leaders reinforced their commitment to achieving the Bogor Goals; promoting recovery from the global slowdown; and examining ways to create a future **Free Trade Area of the Asia Pacific** (FTAAP). At the APEC meeting in 2009 in Singapore, leaders responded to the Global Financial Crisis by strengthening trade and investment links within the APEC region (i.e. **regional economic integration**) and opposing protectionism. The APEC meeting in Yokohama, Japan in 2010, reaffirmed support for the Bogor Goals; concluding the Doha Round; the UN Framework Convention on Climate Change (UNFCCC); taking steps to establish the FTAAP; and providing continued economic and technical assistance to APEC members. In 2011 in Honolulu the APEC leaders' declaration was based on moving *Towards a Seamless Regional Economy*.

The APEC leaders met in Bali in October 2013 under the theme, *Resilient Asia-Pacific, Engine of Growth*, and reaffirmed their commitment to achieving the Bogor Goals by 2020. In 2014 in Beijing the APEC leaders met under the theme of *Integrated, Innovative and Interconnected Asia*. The theme of the APEC leaders' meeting in Manila, in November 2015, was *Building Inclusive Economies, Building a Better World*, where there was a renewed commitment to achieving the Bogor Goals. In November 2016 in Lima, Peru, the APEC leaders' theme of *Quality Growth and Human Development* supported free and open trade and investment, sustainable economic growth and shared prosperity in the APEC region.

The North American Free Trade Agreement (NAFTA)

Following the Canadian-United States Trade Agreement (CUSTA) of 1988, the North American Free Trade Agreement (NAFTA) linked the developed countries of the USA and Canada with the developing country of Mexico. NAFTA negotiations commenced in 1991 and the agreement was formally signed by the participants in 1992 and came into force in 1994. It was created to improve the USA's competitiveness with the EU and Japan, and to integrate the North American market by eliminating tariff and other barriers to trade and investment, in creating a market of some 444m consumers equivalent in size to the EU. For the USA and Canada it provided an opportunity to increase their international competitiveness by exploiting lower production costs in Mexico. For Mexico, the advantage of the free trade area was greater access for its exports to the large and high income US and Canadian markets.

Whilst NAFTA created the largest trade bloc in the world after the EU, opponents of NAFTA argued that the agreement would cause **trade diversion** rather than lead to **trade creation**, since there would be an incentive for industries and firms to relocate to Mexico where labour was cheaper. There were also concerns that non member countries might locate in Mexico, to access Canadian and US markets and

avoid tariffs and other barriers imposed by the USA and Canada on imports. In 1993 NAFTA was endorsed by the US Congress, with proponents arguing that the benefits to the US economy would be substantial. **Rules of origin** were established to avoid the problem of trade diversion. The rules of origin are used to determine if imported goods are entitled to tariff free treatment through the extent of value adding activity of products in a NAFTA member country, according to the following criteria:

- If they are wholly produced in the region;
- If they are produced from materials that originate in the region according to the rules of origin governing regional content;
- If the non originating materials used in their production have been subjected to special tariff provisions that treat them as finished goods (e.g. finished goods are subject to higher tariffs than intermediate goods); and
- If they satisfy a regional content requirement, which is usually a percentage of the total value added in the production of a good.

Major industries benefiting from NAFTA's elimination of trade barriers include agriculture, automobiles, energy, petrochemicals, financial services, transport and intellectual property. NAFTA is now the world's largest trade bloc in terms of GDP in PPP terms which was estimated by the IMF at US$19,951b in 2013. Merchandise trade between the NAFTA partners was estimated to have tripled, reaching US$946b in 2008. In 2001 governments from 34 nations in North, Central and South America agreed to work towards the formation of a Free Trade Area of the Americas (FTAA) which would expand the scope of NAFTA. The FTAA is still under negotiation, but could provide the member countries with greater market access for their exports, and far exceed the EU as a major global trade bloc.

Overall NAFTA has led to significant specialisation and trade creation between the USA, Canada and Mexico, with increased manufacturing in Mexico and increased raw material exports from the USA and Canada. However there is evidence of some de-industrialisation and loss of employment in the Canadian and US manufacturing sectors through the relocation of some industries to Mexico. A North American Agreement on Labour Co-operation (NAALC) was signed to address this problem. Also the North American Agreement on Environmental Co-operation (NAAEC) was signed in 1994 to address concerns over NAFTA's impact on environmental sustainability. In early 2017 new US President Donald Trump announced his intention to renegotiate the terms of NAFTA more favourable to the USA.

Association of South East Asian Nations (ASEAN)

The Association of South East Asian Nations (ASEAN) was formed in 1967 by the five countries of Singapore, Malaysia, Indonesia, Thailand and the Philippines. ASEAN promotes economic growth and development, social progress and cultural development amongst member nations. Since 1967, Brunei, Vietnam, Laos, Cambodia and Burma (Myanmar) have joined ASEAN, making it an important regional trade forum, which is administered by a Ministerial Council comprised of the foreign ministers of the ten member countries. ASEAN initiatives include fostering commerce and industry links, consultation on banking and finance, and dialogues with regional groupings such as NAFTA, APEC and the EU.

In 1992 a major development at the fourth ASEAN summit was the formation of the **ASEAN Free Trade Area** (**AFTA**) by 2003. The goal was to enhance global competitiveness by strengthening intra-regional trade ties between members. This would allow for greater regional specialisation and economies of scale and attract more foreign investment into the region. Members agreed to work towards a reduction in tariffs to 5% on products accounting for 80% of intra-ASEAN trade. ASEAN is an important regional trade grouping to Australia, since it is a major export market for resources, manufactured goods and business services, and a source of imports such as petroleum, timber and light manufactured goods.

Australia attended the East Asia Summit in Laos in 2005 and applied to join AFTA. In an historic decision, economic ministers from ASEAN, Australia and New Zealand signed the **ASEAN-Australia-New Zealand Free Trade Area** (AANZFTA) Agreement in Thailand in February 2009.

In 2007 in Singapore ASEAN leaders adopted the *Cebu Declaration* to establish an ASEAN Economic Community (AEC) by 2015 through further reductions in tariff and non tariff barriers. This would transform ASEAN into a region with the free movement of goods, services, skilled labour and more capital mobility between member countries. ASEAN leaders at the 27th ASEAN Summit in Kuala Lumpur in November 2015, adopted the *AEC Blueprint* to guide the ASEAN integration process between 2016 and 2025. The 30th ASEAN Summit was held in the Philippines in April 2017 and discussed the Master Plan on ASEAN Connectivity (MPAC) 2025 to progress regional integration.

ASEAN is a major free trade area or region, and had a combined population of 622m in 2015, an annual GDP of US$2,400b, annual trade of US$2,500b, and annual foreign direct investment of US$121b. ASEAN was the third largest economy in Asia and seventh largest in the world in 2015 with average economic growth of 4.5% in 2016 well above average global growth of 3.1%.

Bilateral Free Trade Agreements

The slow progress in concluding the Uruguay Round of GATT's multilateral trade talks and the impasse reached in finalising the WTO's Doha Round has led to the rapid growth in bilateral trade agreements or Preferential Trade Agreements (PTAs) between countries. Examples include the Australia New Zealand Closer Economic Relations Trade Agreement (ANZCERTA), the Australia-US Free Trade Agreement, the Australia-Thailand Free Trade Agreement, the Singapore-Australia Free Trade Agreement and new agreements with Japan, Korea and China in 2014 and 2015. Globally, over 400 such agreements have been signed by countries in reducing trade barriers. PTAs provide more flexibility in promoting free trade and may enhance regional free trade as is the case in ASEAN and APEC which can then be multilateralised in the future through WTO negotiations.

However the disadvantages of PTAs are that they can undermine the key 'Most Favoured Nation' principle of WTO rules and multilateral global trade liberalisation. PTAs can divert trade from the most efficient countries and entrench support from the beneficiaries of PTA discrimination for less ambitious multilateral trade reform in the WTO. PTAs can also divert resources away from their most efficient uses and introduce trade distorting preferential tariff rates and rules of origin. Whilst PTAs have their place in promoting bilateral trade, more substantial trade liberalisation is likely to result from multilateral negotiations in the WTO between advanced, emerging and developing countries.

REVIEW QUESTIONS

TRADING BLOCS, MONETARY UNIONS AND FREE TRADE AGREEMENTS

1. What is meant by economic integration? Refer to Table 2.6 and distinguish between a free trade area, customs union, common market and a monetary union.
2. Explain the difference between trade diversion and trade creation.
3. Discuss the formation of the European Community and its evolution to the European Union under the Maastricht Treaty. What are the benefits and costs of the EU and EMU? Discuss the impact of the European Sovereign Debt Crisis and the Brexit vote in 2016 on the EU and EMU.
4. How does APEC attempt to liberalise trade? Explain the significance of the *Bogor Declaration* in 1994. How is APEC a different form of regional economic integration to the EU and NAFTA?
5. Explain how NAFTA was formed. What advantages and disadvantages does NAFTA provide for the USA, Canada and Mexico? How might NAFTA be affected by Donald Trump's policies?
6. Explain the importance of ASEAN and the formation of the AEC in liberalising Asian trade.
7. Discuss the advantages and disadvantages of bilateral trade agreements.

THE REASONS FOR PROTECTION

The potential gains from international trade arise from the assumption that free trade between countries takes place in the absence of government protection. Free trade occurs when there are no artificial barriers imposed by governments on the free flow of goods, services and resources between international markets. Free trade relies upon the interplay of market forces to secure the benefits of efficient resource allocation, greater competition (from international specialisation and exchange) and higher living standards for consumers. However in the real world, many national governments protect their domestic industries from international competition by imposing restraints on trade such as tariffs, subsidies, quotas, local content rules, embargoes and export incentives. Multilateral trade agreements (such as the World Trade Organisation) involve many countries attempting to reduce or eliminate such barriers to trade, in order to improve market accessibility, and to promote the growth of world trade and living standards. The goal of greater trade liberalisation has been a major objective of both the Uruguay and Doha Rounds of trade talks under the auspices of GATT and the WTO in the 1990s and 2000s.

Protection refers to any artificial advantage given by countries' governments to domestic industries to protect them from international competition. Protective devices include both tariff and non tariff barriers (NTBs) to trade. The major forms of protection include tariffs (i.e. taxes on imports), subsidies (i.e. cash payments to producers and exporters), bounties, quotas, embargoes, local content schemes, technical standards, government procurement programmes, voluntary export restraints (VERs) and anti-dumping legislation. Both economic and non-economic arguments are used to justify the protection of domestic industries from international competition. The following are the five **major economic arguments** used to justify government protection of domestic industries from import competition:

1. The **protection of infant industries** is based on allowing newly established industries sufficient time to achieve economies of scale to compete in global markets. It is argued that only 'temporary protection' from imports is needed until the infant industry is able to become internationally competitive. However investing in infant industries may be inefficient, as firms receiving protection may become reliant upon it, and lack the incentive to innovate. Despite protection, infant industries may remain uncompetitive and inefficient by world standards for long periods of time.
2. The **protection of employment during a recession** is used as an economic argument to justify protection. Proponents of this view argue that 'importing goods exports jobs' during a recession. Erecting tariff walls to protect import competing industries may increase their relative competitiveness, share of production and employment. However, protection of these industries may be at the expense of employment in efficient export industries, and foreign countries may also retaliate with similar schemes to protect their domestic employment. Reducing imports through trade barriers may also raise the exchange rate and reduce the competitiveness of export industries.
3. **Protection against the dumping of imports below factor cost** is an economic argument often used to erect barriers to trade. It presupposes that imports are being sold below the cost of production, which is sometimes difficult to prove. Proponents may in fact confuse increased foreign competitiveness with an attempt to dump cheaper goods on the home market.
4. The **terms of trade argument** for protection maintains that a large country can use protection to improve its terms of trade. A tariff may decrease the country's demand for imports, and if the country buys a significant proportion of the world supply, it may encourage foreign producers to reduce prices to offset falling sales revenue. This would improve the home country's terms of trade and the welfare of its residents. However, such an argument ignores the possibility that the foreign country may also impose a retaliatory tariff on the home country's exports, nullifying the positive effect of the initial imposition of the tariff on imports. This is known as the **reciprocity argument**.
5. **Reducing a balance of payments deficit** is cited as an economic argument for imposing protection. For example, Australia has historically recorded a large current account deficit and level of foreign

debt, and could use protective devices to reduce import spending and switch import expenditure to domestically produced goods. This policy could have adverse effects, because specialisation is not encouraged according to comparative advantage and resources may be diverted to less efficient industries. Also, export and import competing industries and consumers may face higher prices for imported inputs and outputs, reducing competitiveness and living standards in the economy.

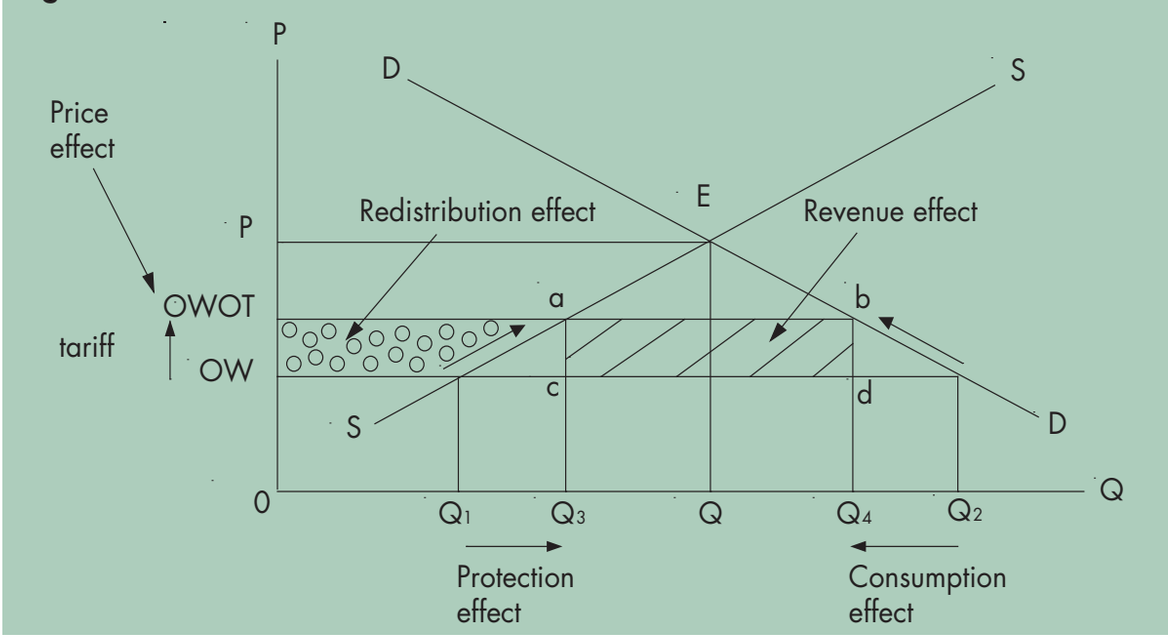
Other arguments used to justify protection may be based on non economic grounds, and seek to promote political, social or cultural goals. These include the military self-sufficiency or **defence argument** (where national defence industries are protected to ensure war-time supply); and the **national spending argument** such as the 'buy Australia' campaign which encourages expenditure switching from imports to domestic goods, irrespective of prices and quality. Associated with this argument is the desire to protect national sovereignty and Australia's cultural identity such as subsidising local films, television and the entertainment industry. Other arguments for protection include the diversification of industry; using protection as a strategic industry policy to 'pick winners' since the world trading environment is not considered to be a 'level playing field' because it is dominated by MNCs and trading blocs; and to increase government revenue through the imposition of higher tariffs on imports.

THE METHODS OF PROTECTION: Tariffs, Subsidies and Quotas

Both tariff and non tariff barriers are used to protect domestic industries. **Tariffs** are a tax on imports through the payment of customs duty. The payment of customs duty by an importer has the effect of raising the landed price of imported goods. Local producers can then raise their prices and compete more effectively with imports by capturing and maintaining a larger share of the domestic market than would occur in the absence of protection. Tariffs raise revenue for the government and cause resources to be reallocated from efficient and competitive industries to inefficient and uncompetitive industries.

The **effects of a tariff** on a traded good are illustrated in **Figure 2.6.** The domestic demand and supply curves, DD and SS intersect at E to give an equilibrium price of OP and quantity of OQ. The world or free trade price for the product is OW. At the world price OW, domestic firms only supply OQ_1 but consumers demand OQ_2. The shortfall in domestic supply in relation to domestic demand, is made up by imports of Q_1Q_2. If the government imposes a tariff equivalent to OT (OWOT - OW), domestic supply will extend from OQ_1 to OQ_3, but domestic demand will contract from OQ_2 to OQ_4. Therefore imports will contract from Q_1Q_2 to Q_3Q_4. The four direct effects of the tariff are the following:

Figure 2.6: The Effect of a Tariff



1. The price of the traded good rises from OW to OWOT, causing inflation and a loss in consumers' real incomes, as higher prices are paid for both imports and domestic goods (i.e. **the price effect**).
2. The quantity of imports falls, and is displaced by locally produced goods which may or may not be of the same quality or preferred to imports by consumers, since they are more expensive (i.e. **the consumption and protection effects**).
3. The government receives tariff revenue equivalent to the shaded rectangle **abcd**, which is equal to the tariff of OWOT-OW multiplied by the quantity of imports of Q_3Q_4 (i.e. **the revenue effect**).
4. There is a redistribution of income away from importers and consumers to the government and local producers. Resources are reallocated from importers to local producers, who improve their welfare at the expense of consumers and importers (i.e. **the redistribution effect**).

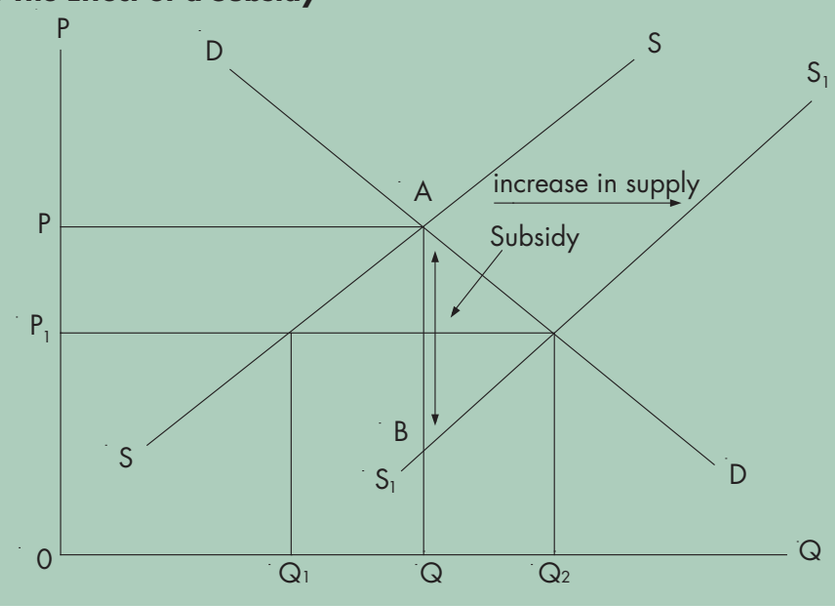
Subsidies are cash payments made to local producers to increase supply in the face of import competition. The **effects of a subsidy** are illustrated in **Figure 2.7.** Curves DD and SS represent domestic demand and supply respectively, with the equilibrium price at OP, and the equilibrium quantity at OQ. The price OP_1 is the world or free trade price for the traded good. At price OP_1 domestic producers supply OQ_1 but domestic demand is OQ_2. The market shortage of Q_1Q_2 at price OP_1 is made up by imports.

If a subsidy equivalent to **AB** is paid to local producers, they will be able to increase supply from SS to S_1S_1, and be willing to charge the lower world price of OP_1, and supply more goods at OQ_2, thereby eliminating the need for imports. Subsidies are preferable to tariffs because they are paid for from progressive taxation, are more subject to regular review, and lead to lower prices. However they distort resource allocation and redistribute income away from taxpayers to a small sector of the economy. Continuation of subsidies may also raise government expenditure and increase the taxation burden. Subsidisation of inefficient industries causes a misallocation of resources, since inefficient industries are favoured over efficient industries that are competitive in the market without government subsidies.

Bounties are similar to subsidies since they are cash payments to producers, but are paid on a per unit basis. For example, farmers may receive a bounty of $50 for each tonne of wheat produced.

Quotas are a quantitative restriction on certain categories of imported goods. The larger (smaller) the import quota the greater (lesser) the quantity of goods that may be imported and the less (more) the protection effect. Importers usually apply for an import licence to receive a quota and may lobby the government for the quota to be increased if local demand is high, whereas domestic competing industries would lobby the government for a reduction in the import quota to gain more protection.

Figure 2.7: The Effect of a Subsidy

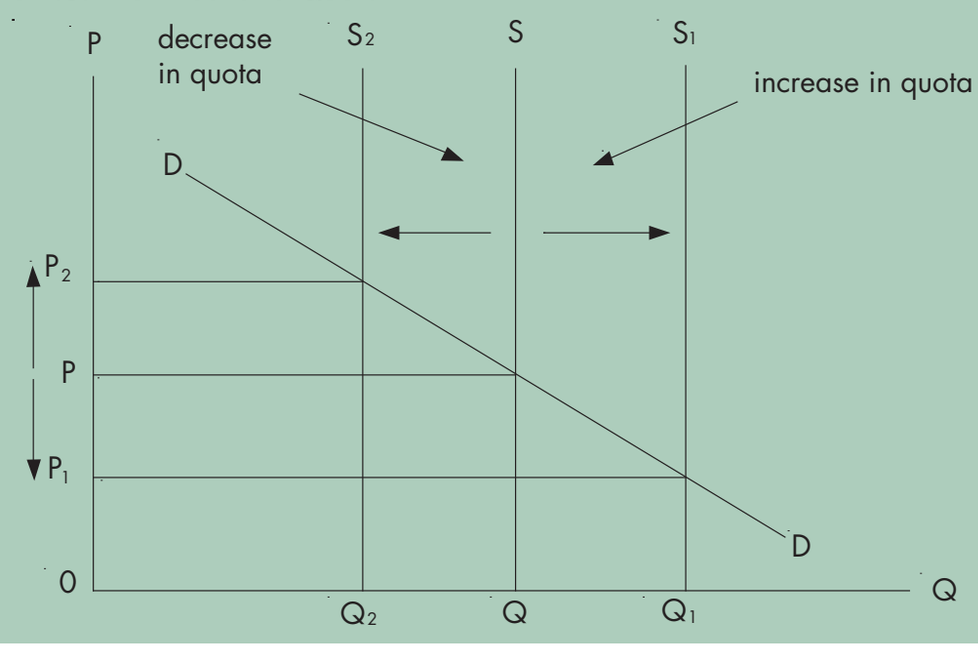


The **effects of a quota** are shown in **Figure 2.8.** Curve DD is domestic demand for the imported good and S is the import quota or the supply curve. The price of the good is OP and if the quota is reduced (i.e. the movement from S to S_2) the quantity of imports will fall from Q to Q_2 and the price of the imported good will rise to OP_2 leading to greater protection for domestic industry. Increased protection through quota reductions has a similar effect to the imposition of a tariff. If the quota is increased (e.g. the movement from S to S_1), the price of the imported good will fall to OP_1, leading to lower levels of protection for the domestic industry. **Tariff quotas** combine the effects of a quota and a tariff. Quotas are imposed on imports up to a certain quantity and then a tariff is also levied, further raising the price of the import. Another protective device similar to a quota is a **voluntary export restraint** (VER), where a country (e.g. Japan) agrees to limit its exports to another country (e.g. the USA), to reduce its trade surplus with that country. VERs have been used by the USA to limit the export of Japanese motor vehicles and electronic goods to the US market to protect US manufacturing firms and employment.

Local content rules refer to government procurement policies and industry plans, where a certain percentage of inputs or outputs must be manufactured within Australia. Examples include local content rules under the former Button Car Plan and local content specifications for government contracts. **Technical discrimination** is when a government imposes certain minimum technical standards on imported goods. Importers must comply with safety, health, quality and packaging standards before the imported goods can be offered for sale in the domestic market. **Quarantine regulations** are another means by which the government may restrict imports by enforcing health and agricultural regulations on importers of food, vegetable, plant and animal products into Australia. **Embargoes** are the complete prohibition of the import or export of certain goods. Examples of prohibited imports into Australia include firearms and illegal drugs. Australia also used to ban the export of Merino rams, as their sale to overseas producers was seen as a threat to the Australian wool industry through increased competition.

Export and tax incentives such as export subsidies in the US and EU or the Export Market Development Grant Scheme (EMDG) used in Australia, attempt to reduce the costs of production for exporters by allowing a tax deduction for expenditure incurred in developing export markets. The USA and EU both use domestic and export subsidies effectively to reduce the prices of their agricultural exports. This has led to US and EU farmers gaining a larger share of the world wheat and sugar markets, at the expense of efficient producers like Australia and other Cairns Group countries which do not subsidise their agricultural exports. Agricultural subsidies depress world farm prices and reduce market access.

Figure 2.8: The Effect of a Quota



THE EFFECTS OF PROTECTION ON THE DOMESTIC ECONOMY

Local industries and firms receiving protection gain in the short term because they are able to raise prices, increase output and maintain or increase their market share. The **macroeconomic effects** of protection are felt in the medium to long term as the effective rate of assistance (i.e. the percentage of local value added given in protection) impacts on resource allocation and income distribution. The major macroeconomic effects of protection on a domestic economy are negative. For example, in Australia **resources are misallocated** because they are directed away from efficient and competitive industries such as agriculture and mining and into inefficient and uncompetitive industries such as passenger motor vehicles (PMV), steel, and textiles, clothing and footwear (TCF). Employment and production grow in inefficient industries that are supplying only the domestic market, and not exporting to the global market. Capital resources are also wasted, and the returns to all the factors of production will necessarily be lower than they would be if they were allocated to their most efficient uses in the economy.

Inflation may result from the distorting effect of tariffs on import prices, which can be passed into the domestic cost and price structure. This may lead to additional wage demands by employees to maintain their real wages. Those industries using the outputs of protected industries as inputs in their production process (such as imported capital and intermediate goods) will pay a higher price for these goods because of tariffs. Efficient export industries such as mining and agriculture are penalised by paying higher prices for capital equipment, and since they cannot pass on these costs in world markets as they are 'price takers', their competitiveness may be reduced. This effect is known as negative protection.

Economic growth is restricted by protection because resources are not being used efficiently in protected industries. Capital and labour may not be utilised intensively, if output is geared only to the small domestic market in Australia, where it is difficult to reap economies of scale in production.

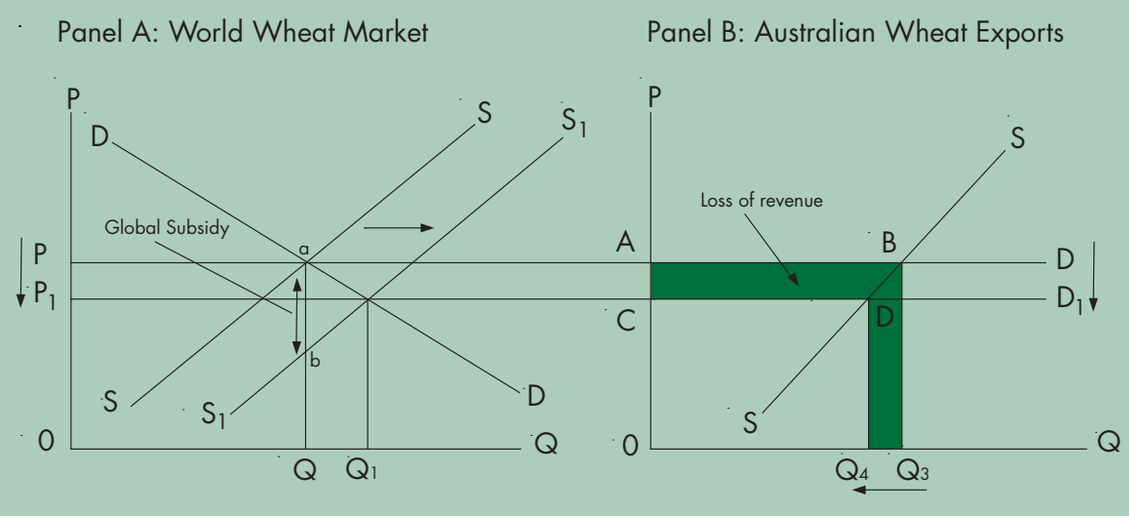
Export earnings are lower than optimal since protected industries tend not to seek overseas markets because they may be inward looking and abnormally risk averse. Coupled with this, is the lack of competitiveness with imports despite protection. Import spending in Australia is highly income elastic and growth in domestic income leads to 'import binges' which have created a large current account deficit. Australia's export growth and share of world trade have therefore been impeded by protection.

The **microeconomic effects** of protection tend to be negative on the performance of protected industries. The Australian car and textile industries for example, engaged in '**rent seeking**' behaviour where resources were devoted to the unproductive activity of lobbying the Australian government for the maintenance (or increase) in existing levels of protection. Rather than these resources being used to boost efficiency, exports and profitability, many protected firms continued to spend funds on political lobbying. The management and labour forces in protected industries used outdated work practices and had **low levels of productivity**. Furthermore, the willingness of protected industries to innovate by adopting the latest cost reducing technology was minimal, because they were not exposed to the competitive forces of the international market place. The culture of protection bred an inefficient and inward looking Australian manufacturing industry not willing to adapt to changes in consumer preferences and technology.

The Effects of Protection on the Global Economy

World trade, particularly trade in agricultural commodities (such as wheat, dairy and sugar) has been restricted because of the proliferation in non tariff barriers (NTBs), especially the use of farm and export subsidies in the EU, USA, Japan and Korea. Agricultural subsidies reduce Australia's net farm export income by depressing world agricultural prices and by denying market access to Australian farm exports. For example, Australia, like other Cairns Group countries, is an efficient wheat producer, not reliant on wheat subsidies to be internationally competitive, unlike US and EU wheat farmers. The use of wheat export subsidies by the EU and USA lowers the price of their agricultural exports and therefore depresses world prices and denies market access to more efficient producers like Australia and the Cairns Group.

Figure 2.9: The Effect of US and EU Wheat Subsidies on Australia



The effect of wheat subsidies through the EU's Common Agricultural Policy (CAP) and the USA's Export Enhancement Programme (EEP) on Australian wheat farmers is illustrated in **Figure 2.9.** As a perfect competitor in the world wheat market, Australia has to accept the market price for wheat determined by world demand (DD) and supply (SS) i.e. price OP in Panel A of **Figure 2.9**. The effect of a wheat export subsidy of **ab** is to increase world wheat supplies from SS to S_1S_1, causing the world wheat price to fall from OP to OP_1 as shown in Panel A of **Figure 2.9**. This reduces the supply of Australian wheat on the world wheat market from Q_3 to Q_4 and the total revenue (i.e. price x quantity) to Australian wheat farmers falls from rectangle $OABQ_3$ to rectangle $OCDQ_4$ in Panel B of **Figure 2.9**.

The Uruguay Round of GATT negotiations was held between 1986 and 1994 and resulted in an agreement by the EU and the US to cut their agricultural subsidies by up to 36%. The Doha Round of WTO trade talks which began in 2001 has the main agenda item (supported by the Cairns Group and developing countries), of further reductions or even the total elimination of agricultural subsidies in the EU and USA. The WTO's 162 members voted to end all farm subsidies in Kenya in December 2015.

The Australian Department of Foreign Affairs and Trade (DFAT) noted in 2003 that despite fifty years of trade reforms, remaining **global trade barriers** still impose considerable costs on both developing and advanced economies. International trade barriers hinder developing economies from specialising in production and exporting products in which they have a comparative advantage, and from reaping the maximum gains from free trade. The two main categories of developing countries' exports which face the highest tariffs imposed by rich industrial countries include agriculture and textiles.

The trade policies of advanced economies like those of the EU, the United States, South Korea and Japan finance huge agricultural production and export subsidy schemes that depress world agricultural prices by an estimated 12% (US Department of Agriculture, 2001). These subsidies significantly undermine the agricultural export income of developing countries. Developing countries' trade policies also damage each other through the use of protection. Eventhough their markets are smaller, developing countries on average impose up to three times higher trade barriers than advanced economies.

The World Bank (2002) estimated that developing economies could increase their welfare by over US$65b if they liberalised their trade regimes. The OECD (2001) has estimated that agricultural policies in OECD economies cost consumers and taxpayers around US$300b every year. Furthermore the World Bank (2002) has suggested that advanced economies would gain even more than developing economies from reducing their own trade barriers. The removal of agricultural protection would generate US$111b per year in additional welfare for advanced economies, due to consumers being able to buy lower cost agricultural products and increasing their spending on other products.

Table 2.8: Post Uruguay Round Tariffs & Reductions in Selected Countries & Groups

	European Union		*United States*		*Poor Countries*		*Rich Countries*	
Product Category	*Tariff*	*Reduction*	*Tariff*	*Reduction*	*Tariff*	*Reduction*	*Tariff*	*Reduction*
Agriculture	15.7%	-5.9%	10.8%	-1.5%	17.4%	-43.0%	26.9%	-26.9%
Textiles	8.7%	-2.0%	14.8%	-2.0%	21.2%	-8.5%	8.4%	-2.6%
Metals	1.0%	-3.3%	1.1%	-3.8%	10.8%	-9.5%	0.9%	-3.4%
Chemicals	3.8%	-3.3%	2.5%	-4.9%	12.4%	-9.7%	2.2%	-3.7%

Source: UNDP (2003), *Human Development Report*, Oxford University Press, New York.

Table 2.8 shows the average tariff reductions for four product categories for the EU, United States, poor countries and rich countries since the Uruguay Round of GATT was completed in 1994. Most rich countries apply higher tariffs to agricultural goods and simple manufactures (e.g. textiles), which are the types of goods that developing countries can produce and export cheaply to world markets.

In agriculture the tariffs of OECD countries are heavily biased against low priced farm products produced by developing countries. Tariffs against developing countries' manufactures also remain high. In the 1990s the average OECD tariff on manufactured goods from the developing world was 3.5%, more than four times the average of 0.8% on OECD manufactures. Whilst there have been tariff reductions in agriculture, textiles, metals and chemicals since the Uruguay Round, there remains greater scope for tariff reductions in the EU and the United States for agricultural goods. This also applies to reductions in quotas and export subsidies for agricultural goods in these countries. For developing countries a major aim in the Doha Round is to achieve cuts in tariffs on other labour intensive exports such as textiles. Progress was made in abolishing export subsidies by 2018 at the WTO's Ministerial Meeting in 2015 in Kenya.

REVIEW QUESTIONS

THE REASONS, METHODS AND EFFECTS OF PROTECTION

1. Define the term 'protection'. Why do governments protect their domestic industries from import competition?
2. Using examples, explain the five main economic arguments used to justify protection. Aside from economic arguments, what other reasons are advanced for the protection of domestic industries?
3. Distinguish between tariff and non tariff barriers to free trade.
4. With the use of a diagram such as Figure 2.6 explain the main economic effects of the imposition of a tariff on imports.
5. Use a diagram such as Figure 2.7 to explain the economic effects of a subsidy on domestic prices, output and imports. What are the advantages and disadvantages of subsidies over tariffs?
6. Briefly discuss forms of protection other than tariffs and subsidies.
7. Discuss the main macroeconomic and microeconomic effects of protection on a national economy like Australia. How do global wheat subsidies affect Australian wheat exports? Refer to Figure 2.9 in your answer.
8. Discuss the extent of global protection and the potential gains from global trade liberalisation.

CHAPTER 2: SHORT ANSWER QUESTIONS

The following table shows the production possibilities for two countries, A and B, in the production of two commodities, computers and wheat, using the same quantity of resources.

	Computers	*Wheat (tonnes)*
Nation A	4,000	12,000
Nation B	2,000	8,000

Marks

1. Which country has a comparative advantage in the production of computers? (1)

2. Which country has a comparative advantage in the production of wheat? (1)

3. According to the principle of comparative advantage, why should nations A and B trade? (2)

4. Explain THREE benefits that might result from nations A and B engaging in international trade in computers and wheat. (3)

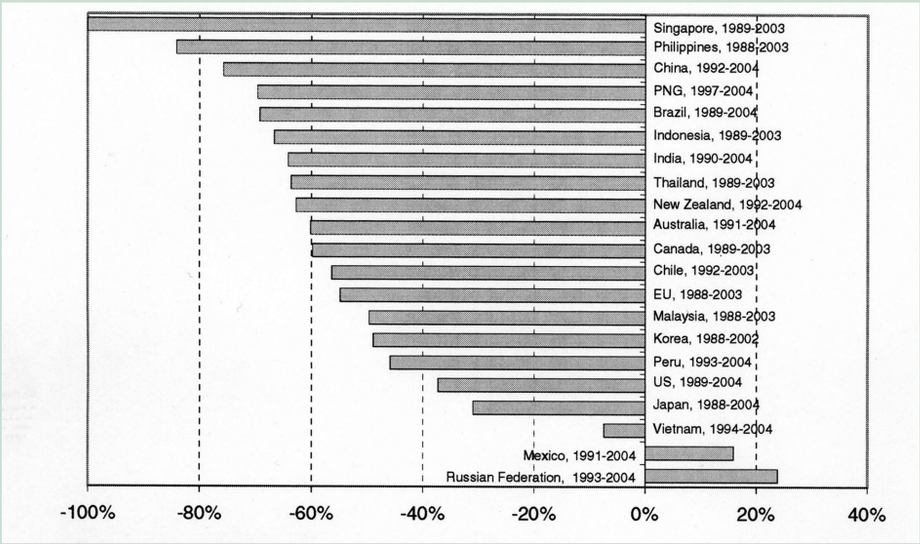
5. Explain the role of the World Trade Organisation in promoting free trade. (3)

CHAPTER FOCUS ON FREE TRADE AND PROTECTION

"In addition to Australia, many other countries have also significantly reduced their tariff barriers on a unilateral basis recently. For example, many countries have more than halved their Most Favoured Nation (MFN) tariffs over the last decade. These reductions have been particularly pronounced in the APEC region."

Source: Productivity Commission (2006), *Trade and Assistance Review 2004-05*, Melbourne.

Percentage Changes in Simple Average MFN Tariffs



Source: Productivity Commission (2006), *Trade and Assistance Review 2004-05*, Melbourne.

Discuss the reasons for countries reducing their tariff barriers on a unilateral basis and analyse the potential economic benefits for these countries and the global economy.

CHAPTER 2: EXTENDED RESPONSE QUESTION

Discuss the advantages and disadvantages of free trade and the role of the World Trade Organisation in promoting free trade in the global economy.

CHAPTER SUMMARY

FREE TRADE AND PROTECTION

1. International trade refers to the specialisation of production and the exchange of goods and services between countries or across national boundaries.

2. The basis for international trade is the uneven distribution of world resources (or factor endowments) and the use of different resource combinations to achieve the most efficient level of production.

3. A country has an absolute advantage in production if it can produce more output with a given level of resources than another country. A country has a comparative advantage in production if it is comparatively more efficient in production as measured by a lower opportunity cost.

4. The advantages of free trade include economies of scale in production leading to lower prices, a greater quantity and quality of goods, and higher living standards for a nation's residents.

5. The disadvantages of free trade are that infant industries cannot compete against more competitive overseas producers and some structural unemployment may occur in uncompetitive local industries.

6. International organisations that promote free trade as a means of raising economic growth and development and living standards include the following:

   - The World Trade Organisation (WTO)
   - The International Monetary Fund (IMF)
   - The World Bank
   - The United Nations Development Programme (UNDP)
   - The Organisation for Economic Co-operation and Development (OECD)

7. Global government economic forums that influence world trade and economic policy include:

   - The G7
   - The G8 (NB: Russia was expelled from the G8 in 2014 for violation of Ukraine's sovereignty)
   - The G20

8. Some of the main forms of economic integration include a free trade area; a customs union; a common market; and a monetary union. Examples of contemporary trade agreements include:

   - The European Union (EU)
   - Asia Pacific Economic Co-operation (APEC) forum
   - The North American Free Trade Agreement (NAFTA)
   - The Association of South East Asian Nations (ASEAN) and Asian Economic Community (AEC)

9. Protection refers to an advantage given to a local producer over a foreign competitor by a government. The five main economic arguments used to justify protection are establishing infant industries; protecting domestic employment during a recession; the prevention of dumping; improving the home country's terms of trade; and reducing a balance of payments deficit.

10. The main methods used to protect domestic industries from foreign competition include tariffs, subsidies, quotas, embargoes, local content schemes and export incentives.

11. Protection may have negative effects on a nation's economic performance including lower efficiency, export earnings, employment and rate of economic growth.

12. Protection has a damaging effect on the global economy by restricting the growth in world trade, living standards and levels of economic development in advanced and developing countries.

Chapter 3

Globalisation and Economic Development

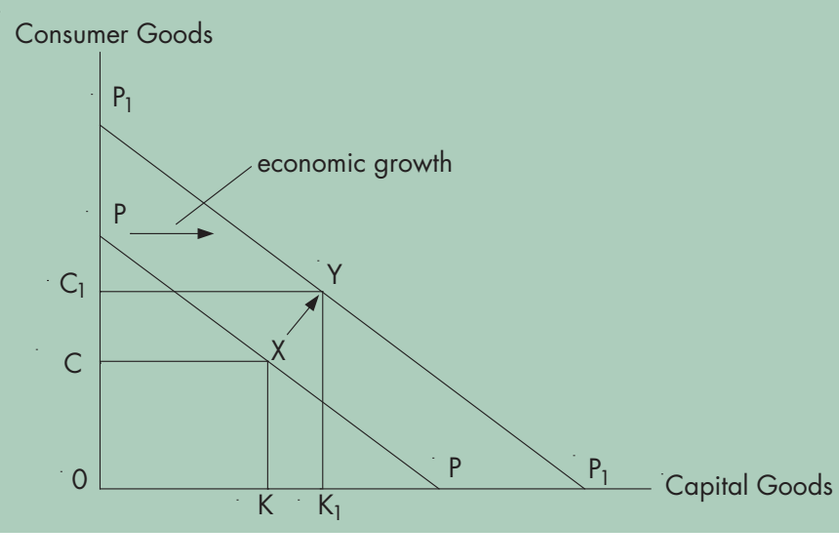
THE DIFFERENCES BETWEEN ECONOMIC GROWTH AND ECONOMIC DEVELOPMENT

In comparing the standards of living between countries in the world it is important to distinguish between the concepts of economic growth and economic development. All countries are trying to sustain economic growth in terms of increasing their real GDP and living standards. However governments are also pursuing strategies to raise the quality of life or level of economic development for their citizens. Economic growth refers to increases in real GDP over time. Real GDP is a quantitative concept since it involves increasing the productive capacity of an economy. This can lead to rising national output, incomes, employment and living standards. Economic growth can come about from two main sources:

1. The **increased use of productive resources** such as land, labour, capital and entrepreneurship due to improved technology, population and labour force growth or management techniques; and/or
2. The **increased productivity of existing resource use** through rising labour and capital productivity. **Capital widening** occurs when the capital stock keeps pace with the growth in the labour force. **Capital deepening** occurs when the capital stock outstrips the growth in the labour force.

Economic growth leads to an outward shift of an economy's production possibility curve or frontier, enabling it to achieve rising national output, material welfare and living standards over time. Economic growth is represented by an outward shift of an economy's production possibility curve as illustrated in **Figure 3.1**. Any point on the production possibility curves PP and P_1P_1 represents the full employment of resources. For example, at point X on PP, the economy can produce a combination of OC consumer goods and OK capital goods. However production combinations are limited to any point on the curve PP. Economic growth can only occur if more resources are used, or existing resources are used more productively, allowing the production possibility frontier to shift outwards from PP to P_1P_1. For example, economic growth is represented by a movement from point X on curve PP to point Y on curve P_1P_1. At point Y, OC_1 consumer goods and OK_1 capital goods can be produced or any combination of consumer and capital goods as long as they fall along the curve P_1P_1. The economy at point Y can achieve higher current living standards than at point X, with more consumer goods of OC_1, and also increase its future living standards, by increasing its stock of capital from OK to OK_1 capital goods.

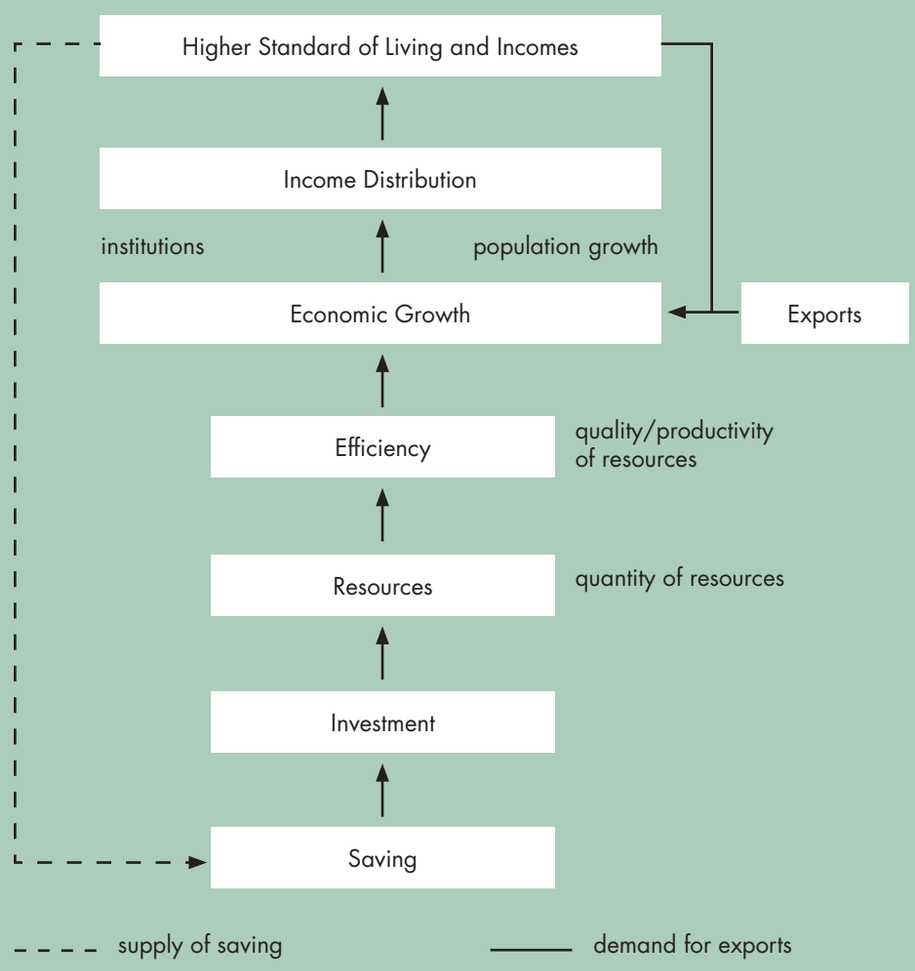
Figure 3.1: The Process of Economic Growth



In contrast to economic growth, economic development refers to the **process of structural change** needed in an economy for economic growth to occur. Economic development is a qualitative process, involving the development of an economy's **economic and social infrastructure**. A major structural change with economic development is the transformation of an economy from a rural based agricultural society, to an industrial and service based urban society. The composition of the workforce also changes, due to increasing specialisation of production, such as higher agricultural output due to improved mechanisation, technology and farming methods. This allows resources, including labour, to be released from agriculture into manufacturing and service industries, causing changes in employment patterns.

The construction of roads, railways, schools, hospitals, universities, dams, bridges, factories, power plants, ports and airport facilities are examples of economic development. In **Figure 3.2** the process of economic development is shown by the linkages between saving, investment and resource use, leading to economic growth. The development process involves the use of more resources and/or the use of better quality resources (through higher productivity) to improve the distribution of income and deliver **real increases in living standards** through a 'trickle down effect', where the benefits of economic growth may be spread throughout the whole population. Economic development involves improvements in infrastructure, and the human, physical and institutional capital necessary to sustain economic growth and improve the quality of life. Effective domestic and overseas demand are also important in developing markets for exports, and in encouraging domestic saving and investment. Also greater participation by a country in the process of globalisation can lead to increased foreign investment and transfers of technology and management skills, which can assist the process of economic development.

Figure 3.2: The Process of Economic Development



THE GLOBAL DISTRIBUTION OF INCOME AND WEALTH

Despite the economic benefits of globalisation, the rewards are not shared equally between advanced, emerging and developing countries. The advanced or high income countries dominate global output, trade and foreign direct investment. However extreme poverty, measured by the World Bank using US$1.25 a day as the global poverty line, has been decreasing since the 1980s. The number of people living in extreme poverty in the world fell from 1.9b (36.4%) in 1990 to 1.7b (29.1%) in 1999, and to 1b (14.5%) in 2011 as shown in **Table 3.1**. In 2015 the World Bank forecast that 836m people or 11.5% of the world's population would be in extreme poverty of living on less than US$1.25 per day.

Table 3.1 shows that the greatest reduction in poverty has occurred in East Asia and the Pacific, where the poverty rate declined from 57% in 1990 to 7.9% in 2011, and the number of people living on less than US$1.25 a day fell by more than 700m. Much of this decline was in China, where poverty fell from 60.2% to 11.8% in this period, leaving 400m fewer people in poverty. Between 1990 and 2011 the poverty rate in South Asia fell from 54.1% to 24.5%, but in contrast the poverty rate in Sub Saharan Africa fell by less from 56.6% to 46.8%. Poverty rose in Europe and Central Asia between 1990 and 1999 before falling to 0.5% in 2011. Poverty in Latin America and the Caribbean, and the Middle East and North Africa fell by more than 50% between 1990 and 2011. The World Bank estimated that there were 912m fewer people in poverty in 2011 (1,011m people) compared to 1990 (1,923m people).

Table 3.1: Global Distribution of Population Living in Extreme Poverty - 1990-2015 (f)
Share of people living on less than 2005 PPP US$1.25 per day (%)

	1990	*1999*	*2011*	*2015 (f)*
East Asia and the Pacific	57%	35.9%	7.9%	4.1%
South Asia	54.1%	45.0%	24.5%	18.1%
Europe and Central Asia	1.5%	3.8%	0.5%	0.3%
Latin America and the Caribbean	12.2%	11.0%	4.6%	4.3%
Middle East and North Africa	5.8%	4.8%	1.7%	2.0%
Sub Saharan Africa	56.6%	59.3%	46.8%	40.9%
Developing Countries	43.4%	34.2%	17.0%	13.4%
World	36.4%	29.1%	14.5%	11.5%

Source: World Bank (2015), *World Development Indicators 2015*, Washington DC, page 35.

According to the World Bank in its *World Development Report 2015*, the Millennium Development Goal (MDG) target of reducing 1990 extreme poverty rates by half by 2015 was met by developing countries as a whole in 2011 with the poverty rate falling from 43.4% in 1990 to 17% in 2011. It was forecast to fall to 13.4% by 2015 as shown in **Table 3.1**. Despite the reduction in extreme poverty amongst developing countries as a whole, progress in reducing extreme poverty has been uneven across regions. Whilst extreme poverty rates fell in East Asia and the Pacific, Europe and Central Asia, Latin America and the Caribbean, and the Middle East and North Africa, the extreme poverty rate did not begin to fall below its 1990 level until after 2002 in Sub Saharan Africa.

The Sub Saharan African region remains the poorest in the world and is most targeted by the World Bank's development aid. The median poverty line for developing countries was less than 2005 PPP US$2 per day in 2008, with 2.3b people in the world estimated to live on less than US$2 per day. This was approximately 43% of the world's population estimated to suffer from extreme income poverty with 1,125m in South Asia, 659m in East Asia and the Pacific, and 562m in Sub Saharan Africa.

Figure 3.3: The Distribution of World Income in 2017.

This map represents economies classified according to World Bank estimates of 2015 Gross National Income (GNI) per capita. Figures are in current (2015) US dollars.

Source: World Bank (2017), *World Development Indicators 2017*, World Bank, Washington DC.

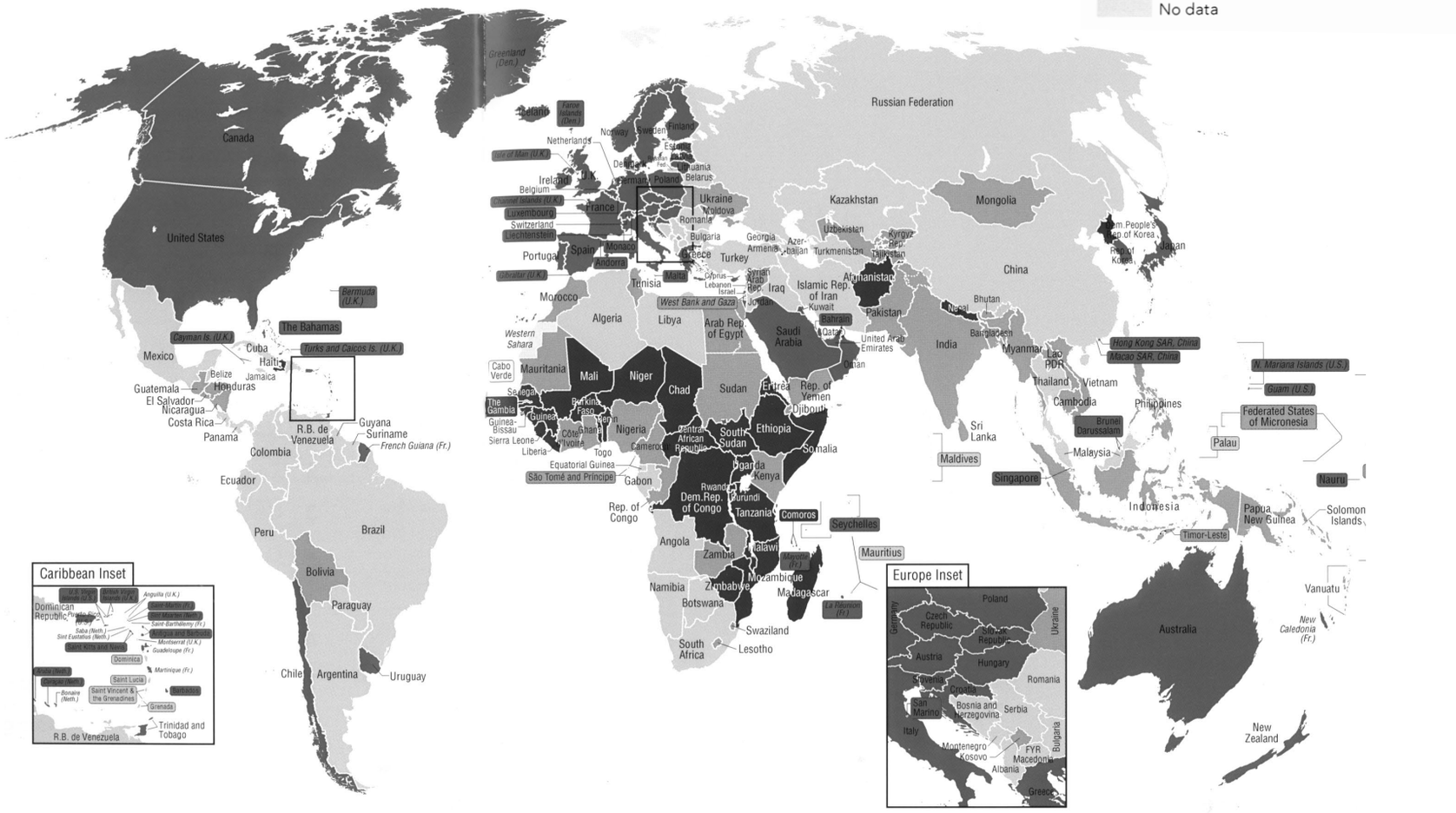


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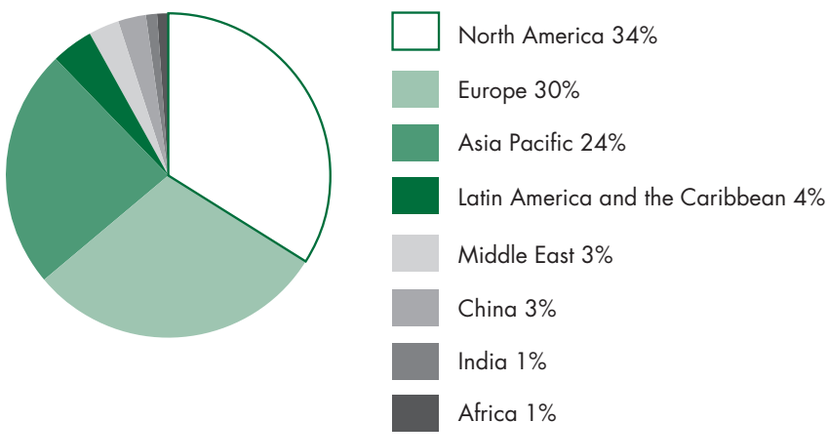
Figure 3.3 shows the uneven distribution of world income from World Bank data on Gross National Income (GNI) per capita (i.e. income per head of population) in 2017. The World Bank classified countries into four categories in terms of 2015 GNI per capita in current US dollars:

1. The low income countries (US$1,025 or less) are predominantly found in Central and Southern Africa (such as Chad and Niger) and West and South Asia (such as Afghanistan and Nepal).
2. Lower middle income countries (US$1,026 to US$4,035) are located in Eastern Europe (such as the Ukraine), the Middle East (such as Syria), Northern and Southern Africa (such as Morocco and Sudan), Central and South America (such as El Salvador and Bolivia) and Asia (such as India).
3. Upper middle income countries (US$4,036 to US$12,475) are located in Central and South America (such as Mexico and Brazil), North and South Africa (such as Libya and South Africa), Eastern Europe (such as Russia, Romania and Bulgaria) and Asia (such as China).
4. The high income countries (US$12,476 or more) are mainly located in Western and Eastern Europe (such as the UK, France, Germany and Italy), North America (such as the USA and Canada), North East Asia (such as Japan and Korea) and Australasia (such as Australia and New Zealand).

The global distribution of wealth refers to a comparison of the ownership of net assets between countries and regions of the world. The distribution of global wealth differs from the global distribution of income since it measures net assets rather than the current average annual income of citizens of countries. **Figure 3.4** shows regional shares of wealth for the global economy in 2010, with 64% of total global wealth estimated to be held in the rich continents of North America (34%) and Europe (30%).

Figure 3.4: Regional Shares of Global Wealth in 2010



Source: World Institute for Development Economics Research (2010), United Nations University.

It is clear from **Figure 3.4** that the global distribution of wealth is more uneven than the global distribution of income. For example, North America is estimated to have 34% of global wealth and 24% of global income or GDP, yet accounts for only 5.2% of world population. Similarly Europe is estimated to account for 30% of global wealth and 23% of world GDP or income, yet has only 9.6% of world population. Therefore North America and Europe accounted for 64% of global wealth and 47% of global income in 2010 yet represented only 14.8% of total world population.

The richest countries in Asia (such as the NIEs and Japan) are estimated to have 24% of global wealth and 31% of global GDP or income, and Asia accounts for 52% of world population. If China (3% of global wealth) and India (1% of global wealth) are included with the Asia Pacific region, it has a 28% share of the world's total wealth. The Middle East, with many large oil exporting nations, has around 3% of the world's wealth and accounts for 10% of world population. The least wealthy region in the world is Africa with just 1% of total global wealth, yet it accounts for 10% of the world's population.

Income and Quality of Life Indicators

Large variations in the standard of living occur between countries on a global basis. The standard of living in different countries is measured and compared in terms of real Gross National Income (GNI) per capita and a range of other material and non material indicators of development such as levels of adult literacy, nutrition, energy consumption and health services, which measure the quality of life.

The development indicators in **Table 3.2** are mainly from the United Nations Development Programme's (UNDP) *Human Development Report (HDR) 2016* which compared standards of living between countries in 2015. The *Human Development Report* separated 188 countries into three categories, based on three human development indicators: GNI per capita, mean years of schooling and life expectancy:

1. **Very high human development countries** (51) **and high human development countries** (55) included Canada, the USA, Australia, New Zealand, Germany, France, Italy, the United Kingdom, Norway and Singapore. A total of 106 countries were listed in this category in 2015.
2. **Medium human development countries** (41 were listed in 2015) included Egypt, the Philippines, Vietnam, Indonesia, Iraq, India, Cambodia, Morocco, Honduras, Ghana and Bolivia.
3. **Low human development countries** (41 were listed in 2015) included Nigeria, Uganda, Ethiopia, Tanzania, Papua New Guinea, Rwanda and Mozambique.

GNI per capita is a basic indicator of economic development of a country as it measures the standard of living of residents in that country. In 2015 low human development countries had per capita incomes that averaged PPP US$2,649, whilst medium human development countries had higher average per capita incomes of PPP US$6,281. This was significantly lower than the very high human development countries with per capita incomes that averaged PPP US$39,606 and the high human development countries with GNI per capita incomes averaging PPP US$13,844 in 2015. The growth in GDP per capita or income is an indicator of economic growth in a country. High human development countries had an average annual GDP pc growth rate of 1.1% in 2015, whereas the medium human development countries grew faster by 3.2%, and low human development countries grew by an average 1.3%.

Demographic indicators include particular population or human capital features of development. Medium and low human development nations account for approximately 70% of global population yet only produce about 25% of the world's GDP, whilst the very high and high human development countries account for 30% of global population, but produce nearly 75% of world GDP. Low and medium development countries tend to have high population growth rates, high birth rates, falling death rates, high fertility rates and lower life expectancy. In contrast, the high human development countries tend to have lower birth and death rates, lower population growth and fertility rates, and longer life expectancy. The extent of urbanisation in high human development countries approached 80.4% in 2015, whereas in low and medium human development countries it ranged from 35.8% to 38.5%, reflecting higher concentrations of population in rural areas, where agriculture is carried out.

Low and medium human development countries had higher rates of infant mortality in 2014 than the high human development countries, lower rates of adult literacy, and higher levels of undernourishment. Access to primary and secondary education in high and medium human development countries was relatively high compared to the low human development nations, where only 60.9% of the adult population on average was literate in 2015 (see **Table 3.2**). In addition, the number of doctors per 10,000 people in high income countries averaged 24.9 over 2001-14, compared to an average of 7.3 in the medium income countries, and only 1.8 in the low income countries in the same period.

Other indicators in **Table 3.2** include the high dependence of low human development countries on foreign aid and their high agricultural output to GDP ratio, compared to high and medium human development countries. In 2013 they had lower energy usage of 640 kgs of oil equivalent per capita, compared to the high human development nations' average of 4,792 kgs of oil equivalent per capita.

Table 3.2: World Development Income and Quality of Life Indicators - 2016

Development Indicators	*Very High & High Human Development Countries*	*Medium Human Development Countries*	*Low Human Devel. Countries*
*GNI per capita (av. PPP) 2015	US$39,606 - US$13,844	US$6,281	US$2,649
GDP pc Annual Growth 2016	1.1%	3.2%	1.3%
GDP 2015 US$b (av. PPP 2011)	US$42,931.2b	US$16,333.5b	US$2,516.9b
Total Population 2015	3,729.5m	2,622.3m	929.2m
Fertility Rate (births/woman) 2010-15	1.8%	2.7%	5.2%
Population Growth p.a. 2010-15	0.7%	1.4%	2.7%
Urban Population 2015 (% of total pop.)	80.4%	38.5%	35.8%
Undernourishment 2014 (% of total pop.)	< 5.0%	11%	26%
*Life expectancy (years) 2015	77.4	68.6	59.3
Doctors per 10,000 people (av. 2001-14)	24.9	7.3	1.8
Infant Mortality (per 1,000 live births) 2014	8.5	35.5	57.3
Secondary Education 2008-15 (% of age gr.)	91.0%	70.0%	41.0%
Primary Education 2008-15 (% of age gr.)	96.0%	90.0%	82.0%
*Adult Literacy Rate 2005-15	95.3%	76.4%	60.9%
Foreign Aid (% of GNI) 2015	0.0%	0.8%	8.7%
Manufactures/Total Exports (%) 2014	73.1%	68.4%	19.4%
Agriculture/GDP (%) 2016	1.0%	12.0%	30.0%
Energy Use 2013 (kgs of oil equiv.)	4,792 pc	2,203 pc	640 pc
Domestic Investment (% of GDP) 2016	21.0%	29.5%	24.0%
Domestic Savings (% of GDP) 2016	23.0%	30.0%	15.0%
Exports (% of GDP) 2016	31.0%	24.0%	20.0%
Imports (% of GDP) 2016	30.0%	25.0%	36.0%
Debt Service Ratio (% of exports) 2015	4.7%	12.6%	5.9%
Inflation 2015 (average annual growth)	1.4%	3.2%	6.2%

Sources: United Nations Development Programme (2016), *Human Development Report 2016*, New York and World Bank (2017), *World Development Indicators 2017*, Washington DC. * The three HDI indicators

Domestic saving and investment as percentages of GDP are 20%-30% in high and very high and medium human development countries as they are trying to sustain higher rates of economic growth. Although all three categories of countries had high percentages of GDP accounted for by exports and imports, the low human development countries tended to have a greater import share (36%) of GDP because of a reliance on imports of energy and capital goods. Given the large range and differences in many of the development indicators presented in **Table 3.2**, the UNDP calculated a **Human Development Index** (HDI) value for each of the 188 countries in the *Human Development Report 2016* by measuring three variables considered to be crucial for human development or progress. The HDI values for countries are then used to rank them in terms of their progress or otherwise in human development over time.

The following three variables are considered by the UNDP to be fundamental to human progress:

1. Life expectancy at birth (measured in years)
2. Adult literacy and educational attainment (measured in average years of schooling)
3. Real Gross National Income (GNI) per capita, measured in 2011 PPP US dollars

Once the Human Development Index is calculated by the UNDP, countries are ranked according to their human development achievements. The HDI is a more comprehensive measure of human development than GDP or GNI per capita, and can be adjusted over time. Changes in HDI ranks over time show the progress made by countries in each indicator and in overall human development.

The 106 countries in the very high and high human development category had HDI values in 2015 from 0.949 (Norway) to 0.800 (Kuwait); the 41 countries in the medium human development category had HDI values between 0.796 (Belarus) and 0.550 (Pakistan); whilst the low human development category of 41 countries had HDI values between 0.541 (Swaziland) and 0.352 (Central Afr. Rep.).

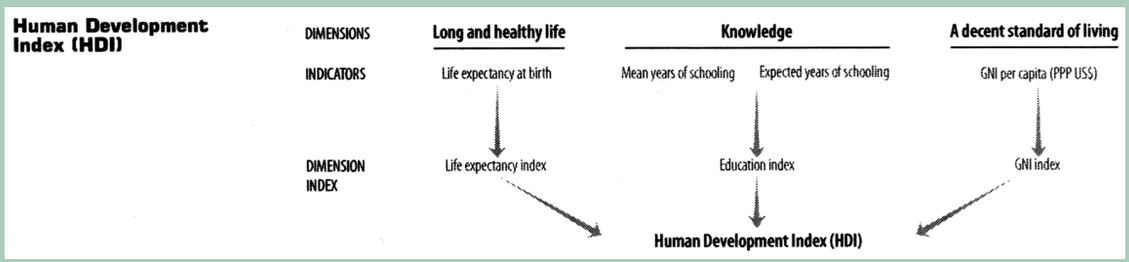
The top five, a selected middle five and the bottom five countries in terms of HDI rankings for 2015 are listed in **Table 3.3**, according to the three indicators used to calculate the HDI. Australia ranked equal second in 2015 (up from fourth in 2006) with 82.5 years for life expectancy; an average of 13.2 mean years of schooling per person; a GNI per capita of PPP US$42,822; and a HDI value of 0.939.

Table 3.3: The Top, Middle and Bottom Five Countries in the UN's 2015 HDI Rankings

HDI Rank	*Top Five Countries*	*Life Expectancy*	*Mean Years of Schooling*	*Real GNI pc (2011 PPP US$)*	*HDI Value*
1	Norway	81.7 years	12.7	67,614	0.949
2	**Australia**	82.5 years	13.2	42,822	0.939
2	Switzerland	83.1 years	13.4	56,364	0.939
4	Germany	81.1 years	13.2	45,000	0.926
5	Denmark	80.4 years	12.7	44,519	0.925
	Selected Middle Five Countries				
90	China	76.0 years	7.6	13,345	0.738
91	Fiji	70.2 years	10.5	8,245	0.736
92	Mongolia	69.8 years	9.8	10,449	0.735
92	Saint Lucia	75.2 years	9.3	9,791	0.735
94	Jamaica	75.8 years	9.6	8,350	0.730
	Bottom Five Countries				
184	Burundi	57.1 years	3.0	691	0.404
185	Burkina Faso	59.0 years	1.4	1,537	0.402
186	Chad	51.9 years	2.3	1,991	0.396
187	Niger	61.9 years	1.7	889	0.353
188	Central Afr. Rep.	51.5 years	4.2	587	0.352

Source: United Nations Development Programme (2016), *Human Development Report 2016*. www.undp.org
NB: PPP is purchasing power parity in US$ which adjusts GNIs for variations in national prices and exchange rates.

Figure 3.5: Calculation of the Human Development Index



United Nations Development Programme (2010), *Human Development Report 2010*, Palgrave Macmillan, NY.

Figure 3.5 shows a summary of how the HDI is calculated according to changes in a life expectancy index, an education index and a GNI index. The World Bank and UNDP believe that progress in economic development should lead to progress in human development within countries and regions. This progress can be measured by referring to the changes in the HDI over time to ascertain if citizens in medium and low income countries are improving their opportunities to achieve the following:

- Leading a long and healthy life as measured by changes in life expectancy.
- Acquiring knowledge and skills through higher rates of adult literacy and enrolment ratios in schools, colleges and universities. This is measured by mean years and expected years of schooling.
- Enjoying a decent standard of living through earning higher per capita incomes as measured by rising levels of GNI per capita (measured in PPP 2011 US$) over time.

REVIEW QUESTIONS

THE DIFFERENCES BETWEEN ECONOMIC GROWTH AND ECONOMIC DEVELOPMENT

1. Explain the difference between the processes of economic growth and economic development.
2. Discuss the extent of income poverty amongst regions that make up the world economy.
3. Refer to Figure 3.3 and describe the distribution of world income in 2017.
4. Refer to Figure 3.4 and describe the distribution of global wealth in 2010.
5. Refer to some key indicators in Table 3.2 and the text and contrast the standard of living in very high and high, medium and low human development countries.
6. How does the UNDP calculate the Human Development Index? Refer to Table 3.3 and account for the differences in HDI rankings between the top five countries, a selected middle five countries and the bottom five countries in 2015.
7. Define the following terms and add them to a glossary:

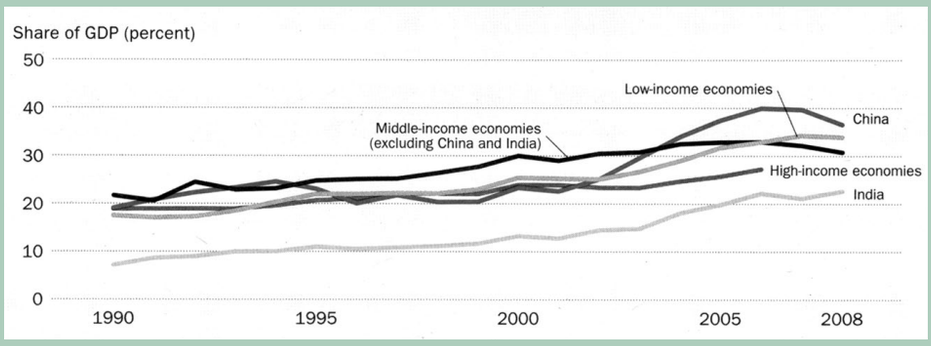
economic development	GNI per capita	life expectancy
economic growth	Human Development Index	literacy
global distribution of income	human development indicators	poverty
global distribution of wealth	infrastructure	quality of life

DEVELOPING, EMERGING AND ADVANCED ECONOMIES

A major change in the global economy has been the rising importance of developing and emerging economies (153 in total in 2017) in their contribution to world output and trade. Within this group of economies, the major emerging economies of Brazil, Russia, India and China (the BRICs) have become very dominant by sustaining higher rates of growth than the advanced economies (39 in total in 2017) such as the USA, countries in the Euro Area, Japan and the NIEs. This is why the BRICs are classified as major emerging economies. However the success of the BRICs and other emerging economies in sustaining high rates of growth and development has not been matched by many other developing economies such as Albania, Turkey, Bangladesh, Cambodia, Pakistan, Egypt, Chad, Malawi and Bolivia.

1. **Developing economies** are also known as low income economies since their levels of per capita income ranged from US$1,025 or less to a high of US$4,035 in 2017 according to the World Bank. Most of the poorest developing economies are located in Sub Saharan Africa with countries such as Nigeria, Zambia, Ethiopia, Sudan, Chad, Congo, Mali and Niger characterised by per capita incomes that are less than US$1,025. Whilst there is some link between increased global economic integration, increased trade and a reduction in poverty, this has not occurred in many developing countries. The reasons appear to be a lack of resources, poor levels of governance and stability, and high trade barriers faced in accessing export markets in emerging and advanced economies.
2. **Emerging economies** or high or upper middle income economies had per capita incomes ranging from US$4,036 to US$12,475 in 2017. Major emerging economies include Brazil, Russia, India and China (the BRICs), Mexico and South Africa and oil exporting countries in the Middle East such as Iran, Iraq, Libya and Algeria. As a group, emerging economies have generally increased their contribution to world output and trade and level of economic development. This has led to a significant reduction in poverty through rising per capita incomes, increased access to education and health care, and a general rise in living standards. The 153 emerging and developing economies according to the IMF accounted for 58.1% of world output and 35.6% of world trade in 2016.
3. **Advanced economies** had per capita incomes over US$12,476 in 2017, but amongst the very high income or major advanced economies the average per capita income was well over US$40,000. The major advanced economies include the USA, Euro Area (19 countries), Japan, the UK, Canada, the NIEs (Korea, Taiwan, Hong Kong SAR and Singapore) and other advanced economies (such as Australia, New Zealand, Norway and Sweden). The 39 advanced economies accounted for 41.9% of world output and 64.4% of world exports in 2016, making them the dominant group in the global economy. However as developing and emerging economies have become more open to trade, their exports as a percentage of their GDPs, rose from 18% in 1990 to 30% in 2008. The increasing export shares of low and middle income economies' GDPs is shown in **Figure 3.6**.

Figure 3.6: Export Shares of GDP for Low, Middle and High Income Economies



Source: World Bank, (2010), *World Development Indicators 2010*, Washington DC.

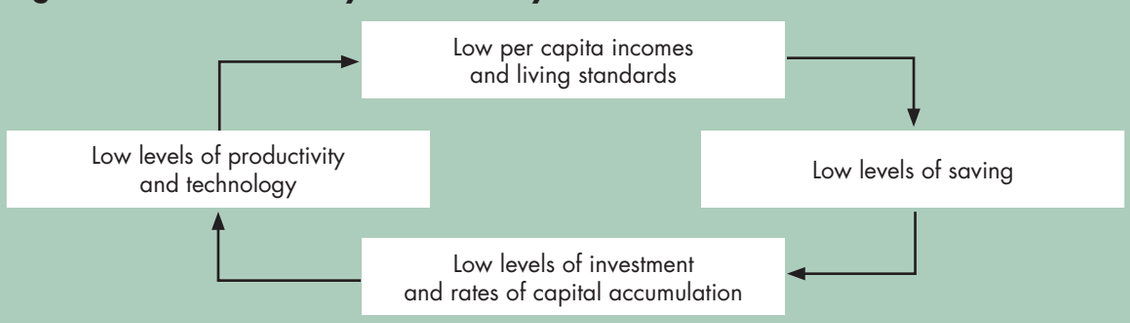
The Reasons for Differences in Economic Development between Nations

There is a large contrast in the levels of economic development achieved by advanced countries such as the USA and Australia, and emerging countries such as China and India, and developing countries such as Pakistan, Cambodia and Ethiopia. This contrast in the level of economic development between the three groups of countries is often referred to as the '**development gap**' since the distinguishing features of many emerging and developing countries are low per capita incomes, low levels of saving, investment, capital formation and economic growth, compared to advanced countries which are characterised by high real per capita incomes and high levels of saving, investment, capital formation and economic growth. However large emerging countries such as Brazil, Russia, India and China are closing this gap by sustaining higher rates of economic growth than advanced countries, rising per capita incomes and reductions in poverty. They have also increased their rates of domestic saving and investment.

The development gap leads to significant contrasts in living standards between advanced countries and emerging and developing countries. The majority of emerging and developing countries are located in the southern hemisphere and are largely confined to the continents of Asia, Africa, South and Central America. The advanced countries are mainly located in the northern hemisphere (except for Australia and New Zealand) in the continents of Europe, North America and parts of North East and South East Asia (such as Japan, Hong Kong SAR, Korea, Taiwan and Singapore). The income gap between the advanced and emerging and developing countries is therefore often referred to as the '**North-South Divide**'. Some of the main reasons for the differences or contrasts in the level of economic development between advanced and emerging and developing countries are as follows:

- **Low per capita incomes** in many emerging and developing countries reduce standards of living relative to advanced countries and increase the extent of income poverty. Low per capita incomes reduce the ability to save and invest and the supply of capital for capital widening and deepening to assist economic development. Therefore many emerging and developing countries experience problems in achieving high levels of productivity and economic growth relative to advanced countries, and may experience a self perpetuating **vicious cycle of poverty** as shown in **Figure 3.7**.
- **Low levels of saving** in many emerging and developing countries result from low per capita incomes and widespread rural poverty and indebtedness. Poorly developed capital markets can discourage saving, as does the 'conspicuous consumption' of Western luxury consumer goods. Governments in emerging and developing countries can also reduce savings by running large budget deficits and funding these deficits through external debt borrowings which can lead to high debt servicing costs.
- **A lack of infrastructure and capital formation** can restrict economic growth and development in emerging and developing countries by preventing the formation of markets, and the efficient use of labour and capital resources. This can lead to high rates of unemployment and underemployment.
- **Low levels of technological progress and labour productivity** can lead to low rates of economic growth being achieved in many emerging and developing countries. This may be sourced from the use of labour intensive and traditional methods of production in agriculture and manufacturing.

Figure 3.7: The Vicious Cycle of Poverty



- **High population growth rates** in many emerging and developing countries leads to high dependency ratios and increases the demand for education, health, housing, employment and transport services. If population growth outstrips economic growth in an emerging or developing country, living standards can fall, increasing the incidence of income poverty and retarding economic development.
- **Demand inflation** can arise in many emerging and developing countries if the volume of domestic production does not satisfy the economy's level of aggregate demand. Economic growth and progress in human development will fall if inflation reduces real incomes and misallocates resources.
- **A lack of foreign exchange and high levels of foreign debt** in many emerging and developing countries may lead to high debt servicing costs. Persistent current account deficits are often recorded by many emerging and developing countries because of their reliance on agriculture and labour intensive manufactured exports, and a high dependence on imports of energy and capital.
- **Economic dualism** is a common feature of many emerging and developing countries which have a colonial legacy: an urban elite in a formal commercial economy, alongside a less formal or traditional rural economy, dominated by subsistence agriculture and the use of barter for market exchange.
- The '**demonstration effect**' is a major problem in many emerging and developing countries caused by rural peasants migrating to cities in search of employment and a higher standard of living. If they are unable to find jobs, they live in poverty in shanty towns with inadequate water, power, education, health, sanitation, housing and employment. This creates extra demands on public resources and services. Large shanty towns are at risk to the spread of endemic diseases and natural disasters such as floods and mud slides, which can cause a major loss of life and increased poverty.
- **Institutional problems** can affect many emerging and developing countries, such as corrupt and inefficient governments, which can lead to political instability, civil wars and disorder (such as in Iraq and Syria). This can undermine flows of inbound foreign investment needed to support and finance the process of economic development. Traditional cultures and institutions in many emerging and developing countries can also impede the adoption of new technologies and management techniques which are needed to sustain higher rates of economic growth and development.

THE EFFECTS OF GLOBALISATION ON ECONOMIC DEVELOPMENT

The globalisation of world economic activity refers to the greater levels of integration between the world's economies. This has resulted from reductions in trade barriers and greater financial market liberalisation. This integration led to increased growth in world GDP, trade and financial flows and flows of portfolio and direct foreign investment up until the Global Financial Crisis in 2008-09.

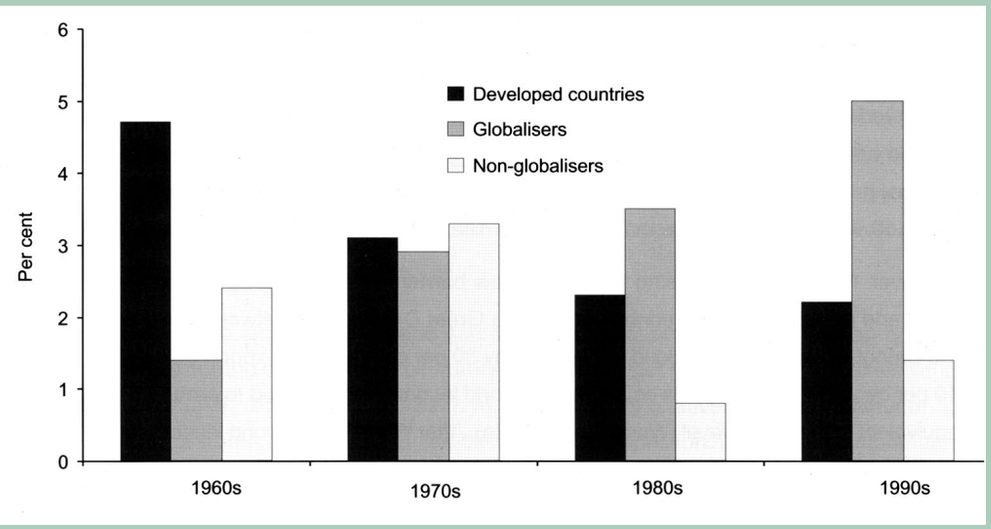
A study of 72 countries by the World Bank in 2001 found that the 'globalisers' or countries which increased their ratio of trade to GDP grew almost four times faster than those that did not (i.e. 'non globalisers'). The globalising economies, such as China, India, Malaysia, Brazil and Mexico grew on average by 5% in the 1990s compared to an average of 1.4% per year for 'non globalising' countries.

The 'globalisers' also grew faster than the developed or advanced countries and closed the income gap between them, by achieving higher rates of economic growth and development. These trends are shown in **Figure 3.8**. Globalisation has had its most profound effect on East Asian economies including China, the NIEs and ASEAN, where increased trade and economic development has led to a large reduction in world poverty and an improvement in the HDIs of these countries over time.

There have been several other effects of globalisation on world economic development:

- An **international convergence** of economic systems as more countries adopt market capitalism and democracy as the preferred types of economic system and government or political system.
- The increased risk of '**financial contagion**' as financial crises can be transmitted quickly from one economy or region to another as was evident by the Global Financial Crisis in 2008-09. This required macroeconomic policy co-ordination by the G20 and reform of global financial architecture.

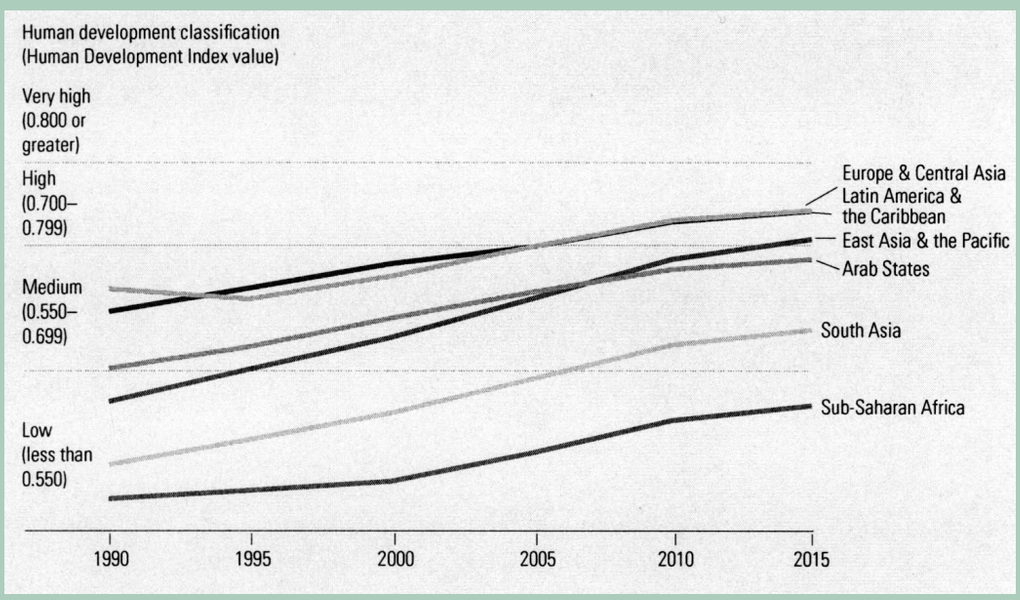
Figure 3.8: Growth Rates of Developed Countries, 'Globalisers' and 'Non Globalisers'



Source: DFAT (2003), *Globalisation, Keeping the Gains*, Economic Analytical Unit, Canberra.

Despite the positive impact of globalisation on some countries, it has tended overall to reinforce the existing income disparities between advanced and emerging and developing countries. However between 1990 and 2014 the world's HDI value increased by more than 20% and that of the least developed countries by more than 40%. Over time and across all developing regions, progress has been fairly steady, though at a slower pace during the last 15 years, with most countries moving up through the human development classifications as shown in **Figure 3.9.** This included improvements in HDIs in Latin America and the Caribbean, Europe and Central Asia, East Asia and the Pacific and the Arab States. This led to a rise in the number of countries in the very high human development classification from 12 to 51 between 1990 and 2016. The number of countries in the low human development classification fell from 62 to 41 in this period, as the population in that group fell from 3.2b to 1.2b, reflecting a substantial reduction in world poverty particularly in South Asia and Sub Saharan Africa.

Figure 3.9: Progress in the HDI Across Developing Regions 1990 to 2015



Source: UNDP (2016), *Human Development Report 2016*, New York.

Global Trade, Investment and Transnational Corporations

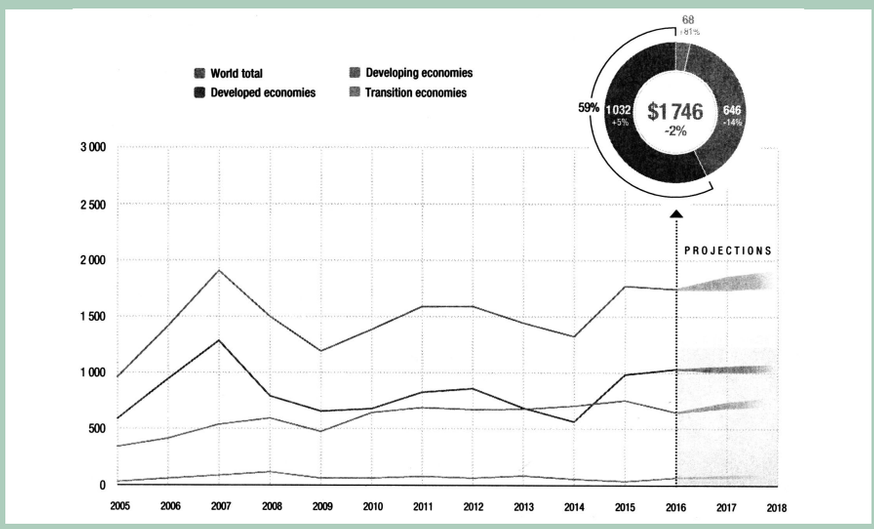
World trade in goods and services grew by an average of 8% per anum between 2003 and 2008 as the global resources boom led to strong demand for commodities and resources. The exports of the advanced economies grew by 5.6% per annum but the emerging and developing economies increased their exports by 9.7% per annum in the same period. However in 2009 world trade contracted by -12% because of the impact of the Global Financial Crisis. World trade volumes recovered in 2010 but grew by only 3.4% in average yearly terms between 2007 and 2016 due to lower world output growth.

Compositional shifts in world trade have occurred with more trade in ETMs (high technology goods), services and intellectual property. Trade in component parts is one example of this changing trade pattern, with one third of all manufactures traded in the 2000s involving trade in parts and components. This type of trade, along with services trade, has created a web of global production facilities which connect subsidiaries of transnational or multinational firms, leading to intra-industry trade. Many of the largest multinational corporations (MNCs) have sales that exceed the value of the GDPs of a number of emerging and developing nations. Underpinning much of the growth in world trade has been the liberalisation of trade regimes by developing countries through bilateral and regional trade agreements, membership of the WTO, and participation in the Doha Round of multilateral trade talks.

Global foreign direct investment (FDI) flows grew strongly between 2003 and 2007 reaching a total of US$2 trillion in 2008. However the Global Financial Crisis led to a 16% decline in FDI flows to US$1.1 trillion in 2009 (refer to **Figure 3.10**). FDI flows recovered to US$1.3 trillion in 2012 and reached US$1.74 trillion in 2016. The share of FDI going to developing and transition economies has increased over time. This reflects the trend towards growing MNC interest in investing in developing and emerging economies because of potentially higher returns on investment funds due to cheaper labour costs, extensive natural resources and fast growing local markets servicing the rising middle class. Major emerging and developing host economies receiving FDI include China, India, Brazil, Russia, Mexico, Vietnam, Indonesia, Thailand, Malaysia, South Africa and Peru. However FDI flows to emerging, developing and transition economies slowed in 2015-16 due to lower world growth.

The major sectors in receipt of FDI by MNCs in emerging and developing countries include the primary (e.g. agriculture, mining, petroleum and timber), manufacturing (e.g. chemicals, metals, machinery and motor vehicles) and service (e.g. electricity, gas, water, construction, transport, communications, finance and business) sectors. Another trend has been increased FDI outflows from Brazil, Russia, India and China (the BRICs) by MNCs to secure resources and investment projects in other countries.

Figure 3.10: Global FDI Inflows by Groups of Economies 2005-2016 (US$b)



Source: UNCTAD (2017), *World Investment Report 2017.*

Global Environmental Sustainability

Climate change (caused by greenhouse warming and ozone depletion), a rising sea level, the loss of biodiversity, deforestation, desertification, persistent organic pollutants and the environmental health of the seas and sea bed (including acidification) are some of the key issues relating to the global commons or the world's natural environments. These environmental problems have worsened as global economic activity increases, and overpopulation puts pressure on natural resources. There is a growing awareness amongst advanced, emerging and developing countries that global strategies and solutions are required to address these environmental issues for the benefit of current and future generations. For example, the historic **Paris Agreement** was adopted by 195 countries on December 12th 2015 to limit the rise in the global temperature to well below 2 degrees Celsius by 2100 compared with pre-industrial levels.

Advanced countries have created many global environmental problems through their high levels of carbon dioxide emissions caused by industrial pollution and high levels of energy consumption. Developing countries have pursued rapid economic development, but often at the cost of lower environmental quality. Increasing rates of industrialisation and urbanisation in the emerging and developing world have also led to higher levels of pollution and greenhouse gases. Since the Rio Earth Summit in 1992, substantial co-operation between countries on environmental matters has occurred, with over 130 environmental treaties signed on issues such as climate change and biodiversity (refer to **Table 3.4**).

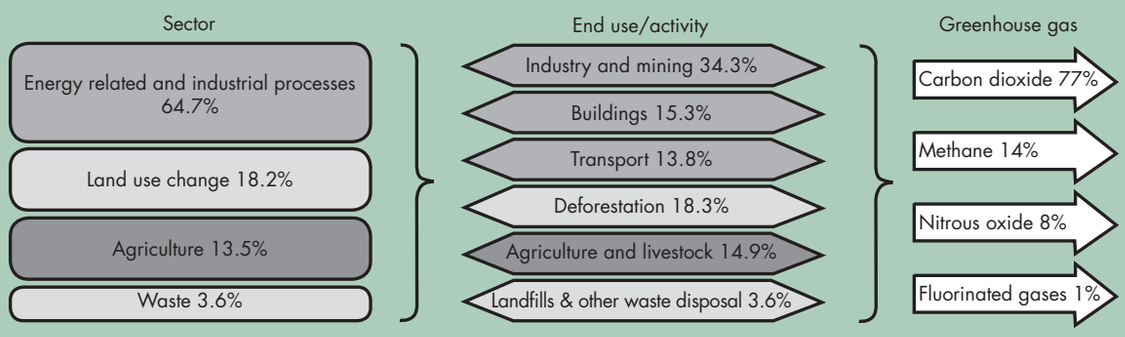
Table 3.4 : Responses to Global Environmental Issues and Problems

Environmental Issue or Problem	*Global Policy Responses*
• Climate change including greenhouse gas emissions, ozone depletion, a rising sea level, melting glaciers, shrinking ice sheets, coral bleaching and ocean acidification	• UN Framework Convention on Climate Change • Montreal Protocol 1987 on CFC emissions • Kyoto Protocol 1998 on greenhouse gas emissions • Paris Agreement 2015 on limiting CO_2 emissions
• Threats to biodiversity through land clearing, expansion of agriculture and illegal hunting	• UN Convention on Biodiversity • Convention on Int. Trade in Endangered Species
• Over fishing and exploitation of marine resources through illegal fishing, whaling and major oil spills in oceans and seas	• Economic Exclusion Zones • UN Convention on the Law of the Sea • Antarctic Treaty

Major disagreements arose between advanced and developing countries over the signing of the **Kyoto Protocol** and the acceptance of emission targets for greenhouse gases. The issue of action on global climate change was negotiated at the UNFCCC meeting over a new Kyoto Protocol in November 2015 in Paris after the first agreement lapsed in 2012. Reliable scientific evidence on climate change, undertaken by the Intergovernmental Panel on Climate Change or IPCC (2007), indicated that the average global temperature is predicted to rise by 3.5 degrees Celsius between 2000 and 2100 if global measures are not taken to reduce the level of greenhouse gas emissions. After conferences in Lima (December, 2014) and Bonn (June, 2015), the Paris Agreement in December 2015 was adopted by 195 countries to limit global warming to a maximum of 2 degrees Celsius by 2100.

Greenhouse gas emissions are mainly carbon dioxide (77%), methane (14%), nitrous oxide (8%) and fluorinated gases (1%) as shown in **Figure 3.11**. *The Stern Report* in 2006 recommended the development of a global carbon trading scheme to reduce global emissions. The sources of greenhouse gas emissions in **Figure 3.11** underline the scope of the problem as most human activities burn fossil fuels and generate greenhouse gases. These include energy related processes (64.7%), land use change such as deforestation (18.2%), agriculture (13.5%) and waste disposal (3.6%). Climate change poses risks for the global environment and economic development, with greater risks for people in developing economies who have the least resources to adapt to its impacts. Therefore climate change is an environmental issue with implications for the reduction of poverty, sustaining economic growth and preserving world ecosystems.

Figure 3.11: Greenhouse Gas Emissions by Sector and Activity



Source: World Bank (2008), *World Development Indicators 2008*, World Bank Washington DC, p123.

The International Energy Agency (IEA) released its *World Energy Outlook Special Report on Energy and Climate Change* in 2015. It recommended five strategies for reducing greenhouse gas emissions in an effort to slow the growth in global warming under a new Kyoto Protocol to operate from 2020:

1. Increasing energy efficiency in the industry, building and transport sectors.
2. Reducing the use of the least efficient coal fired power plants and banning new construction.
3. Increasing investment in renewable energy technologies in the power sector from US$270 billion in 2014 to US$400 billion by 2030.
4. Gradual phasing out of fossil fuel subsidies to end users by 2030.
5. Reducing methane emissions in oil and gas production.

Significant progress has been made by major advanced and emerging countries to commit to reducing their greenhouse gas emissions. The EU has committed to cutting its emissions by at least 40% by 2030 on 1990 levels; the USA to cut emissions by 43% by 2025 based on 2005 levels (although President Trump refused to endorse the Paris Agreement at the G20 meeting in 2017); and China has committed to cap its rapidly growing emissions by 2030 and increase its investment in renewable energy.

The International Business Cycle

Changes in the international business cycle have major implications for economic growth and development in all countries and major regions of the world economy. Changes in world demand will affect the growth in world output, trade and investment flows. With the majority of world output, trade and investment accounted for by the rich advanced countries such as the USA, Euro Area, Japan and other advanced economies (such as the NIEs), changes in the US and EU business cycles can affect the international business cycle and be transmitted to other countries and regions such as China, India and East Asia. However the rise in economic power of large emerging economies such as China, India, Brazil and Russia, means that the sources of world growth are now more balanced. Therefore changes in China's growth rate for example, which slowed in 2016-17, can also impact on world growth and trade.

Table 3.5 shows the growth in GDP for the world economy, advanced, emerging and developing economies between 2010 and 2016 with forecasts for 2017. It also shows growth rates for major advanced and emerging economies such as the USA, Euro Area, Japan, China and India in this period. Between 2006 and 2007 world growth averaged around 5% per annum because of a **global resources boom** sourced from China, India and other emerging countries contributing to strong world growth. Resource exporting countries benefited from this boom, largely sourced from China's large demand for resources such as coal, iron ore, metals and petroleum. Growth in the USA, Euro Area and Japan was also reasonably strong in this period, leading to a strengthening of world trade and investment flows between the regions of North America, Europe and East Asia. World commodity prices peaked in mid 2008 as the global resources boom reached its height. However loan defaults in the US sub prime mortgage market developed into a **global credit crisis** in late 2008, resulting in a higher cost of credit.

Table 3.5: World GDP Growth 2010-2017 (f) (%△ per annum)

	2010	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017 (f)*
World	5.4%	4.2%	3.5%	3.4%	3.5%	3.4%	3.1%	3.5%
Advanced Economies	3.1%	1.7%	1.2%	1.3%	2.0%	2.1%	1.7%	2.0%
United States	2.5%	1.6%	2.2%	1.7%	2.4%	2.6%	1.6%	2.3%
Euro Area	2.1%	1.5%	-0.9%	-0.3%	1.2%	2.0%	1.7%	1.7%
Japan	4.2%	-0.1%	1.5%	2.0%	0.3%	1.2%	1.0%	1.2%
Other Advanced Ecs.	4.6%	2.9%	1.9%	2.3%	2.9%	1.9%	2.0%	2.2%
China	10.6%	9.5%	7.9%	7.8%	7.3%	6.9%	6.6%	6.7%
India	10.3%	6.6%	5.5%	6.5%	7.2%	7.9%	6.8%	7.2%
Emerging and Developing Economies	7.4%	6.3%	5.4%	5.1%	4.7%	4.2%	4.1%	4.5%

Source: IMF (2017), *World Economic Outlook 2017*, April, Tables A1 and A4. NB: (f) IMF forecast for 2017.

A **Global Financial Crisis** (GFC) occurred in 2008-09 and exposed the problem of 'financial contagion' between countries and regions as a result of increased economic integration and a lack of regulatory oversight of the global financial system. In 2009 the world economy contracted, with the advanced economies contracting by -3.4%, and China and India slowing but still recording positive growth. The resulting global recession led to lower industrial output and a sharp contraction in world trade and investment in advanced, emerging and developing countries. A global recovery began in 2010 with 5.4% growth but the Sovereign Debt Crisis in the Euro Area in 2011-12 together with large budget deficits and high levels of public debt in major advanced economies led to a slowdown in the global recovery between 2012 and 2016. Slower growth in the advanced economies was transmitted to China which experienced lower growth of 6.6% in 2016. World output growth remained below average at 3.1% in 2016 but was forecast to strengthen to 3.5% in 2017 along with the growth in world trade.

REVIEW QUESTIONS

DEVELOPING, EMERGING AND ADVANCED ECONOMIES

1. List the main features of advanced, emerging and developing economies.
2. Discuss the reasons for the differences in economic development between nations.
3. Contrast the economic performance of countries that are 'globalisers' with those that are 'non globalisers'. Refer to Figure 3.8 in your answer.
4. Discuss the trends in HDIs in developing regions between 1990 and 2015 from Figure 3.9.
5. Discuss the links between world trade, foreign direct investment and multinational corporations.
6. Discuss the impact of globalisation on global environmental sustainability.
7. Discuss the commitment made to reducing global warming in the Paris Agreement in 2015.
8. Discuss the impact of the Global Financial Crisis in 2008-09, the European Sovereign Debt Crisis in 2011-12 and China's slower growth in 2014-15 on world economic growth.

CASE STUDY OF THE INFLUENCE OF GLOBALISATION ON CHINA

According to the IMF China became the world's largest economy in terms of the valuation of its GDP in PPP terms in 2014. China accounted for 17.8% of global GDP in 2016 surpassing the USA's share which was 15.5% in PPP terms. China is the largest country in the world in terms of population size with 1.3b people. China's rate of growth in real GDP averaged 10.1% between 1998 and 2008. Its growth rate was forecast to slow to 6.6% in 2017 because of slower growth in the advanced economies and the transition of China to domestic sources of growth rather than the reliance on export led growth.

China has made rapid progress in economic and human development by reforming its economy to become 'market driven' or capitalist in orientation. It has also become very integrated with the global economy through international trade and foreign investment. This has resulted in sustained increases in per capita income, improvements in living standards and a reduction in poverty in China.

China has a socialist economy ruled by a Communist government, which was formed after Mao Tse Tung's Communist forces defeated the Nationalists under Chiang Kai Shek in the Chinese civil war of 1949. Under Mao's Tse Tung's Communist rule, China attempted to modernise agriculture and industry in the '**Great Leap Forward**' in the 1950s. This policy failed to raise national output and resulted in widespread famine and poverty. In the ensuing **Cultural Revolution** of the 1960s, progress towards modernisation under socialist planning was further impeded by purges of reformers and progressives critical of Mao's failed economic strategy and China's isolation from the global economy.

China's Economic Reform Strategy

After Mao Tse Tung's death in 1978, Deng Xiao Ping became Chairman of the Chinese Communist Party. He implemented economic reforms between 1978 and 1997 to improve China's economic performance. These reforms were based on achieving rapid industrialisation and modernisation by sustaining high rates of economic growth to raise living standards. In 1979 Deng Xiao Ping introduced a 'one child policy' to contain China's population growth as part of the broad based reform process:

- **Agricultural reforms** between 1978 and 1994 involved the abandonment of the commune system of agriculture (de-collectivisation) and its replacement by the Household Responsibility System. This allowed households to make their own production decisions and sell surplus output in free markets once the state quota was met. This new system led to dramatic increases in food production and surplus income was invested in privately run town and village enterprises (TVEs) responsible for the light manufacturing of industrial goods which helped to raise industrial output.
- In 1980 an '**open door policy**' was adopted towards foreign trade and investment, with Special Economic Zones (SEZs) established in the southern and eastern coastal provinces of China. These SEZs attracted foreign investment by MNCs through a range of incentives such as low tax rates, exemption from import duties, cheap labour and power, and less stringent government regulations. Trade in exports and imports grew from 10% of China's GNP in 1978 to 36% of GNP by 1996. Inflows of foreign capital increased China's access to export markets, transfers of Western technology and management skills, and created employment in China's expanding manufacturing sector.
- In 1994 **taxation reforms** were introduced by the Chinese government. These reforms shifted the power to collect taxes away from provincial governments to the central government in Beijing, in order to improve the efficiency of tax collection and to finance public infrastructure spending.
- **Banking laws** were introduced in 1995, to develop a system of network banking, establish stock exchanges, and promote a more efficient capital market to facilitate saving and investment in China.
- In 1992 **cuts to tariffs** and other forms of protection were used to encourage greater domestic efficiency through direct import competition. China's average tariff rate was cut from 32% to 19% in 1996 and reduced to 15% in 2000. These cuts in import protection supported China's drive to attract foreign investment and open its domestic market to more foreign competition.

Economic Growth

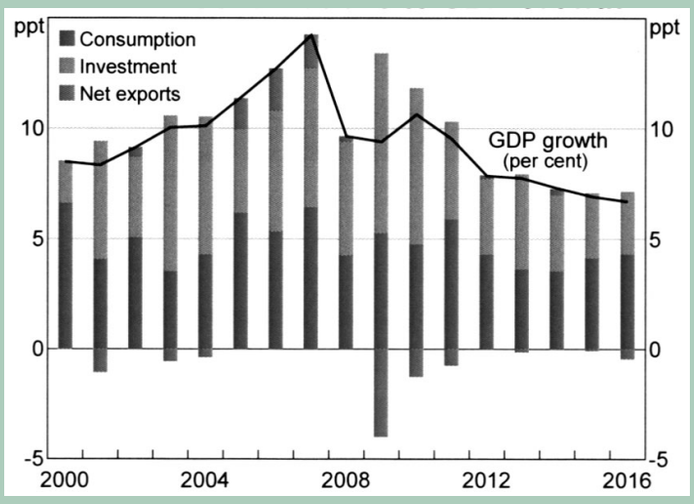
China sustained a high rate of average annual growth in real GDP of 10.1% between 1998 and 2008. The growth rate peaked at 14.2% in 2007 but slowed to 9.2% in 2009 due to the impact of the Global Financial Crisis (GFC) on China's exports and inflows of foreign investment. The Chinese government responded to the GFC by implementing a US$586b fiscal stimulus package in November 2008 to maintain a growth target of 8% in 2009-10. The stimulus package included infrastructure projects to re-balance growth from exports to increasing domestic consumption and investment. The Chinese economy recovered in 2010, growing by 10.4%, but growth fell to 9.3% in 2011 as natural disasters in Japan and the European Sovereign Debt Crisis impacted on China's exports. Chinese growth was a modest 7.8% in 2012-13 as world recovery slowed due to fiscal consolidation in the USA and Euro Area. The Chinese government set a minimum growth target of 7.7% in 2014 but lower growth of 7.3% was achieved. In 2015 China's growth was 6.9%, falling to 6.7% in 2016 and forecast at 6.7% in 2017. China's industrialisation and modernisation has been based on 'driving growth' through foreign investment and international trade. China's economy has been transformed in four main ways:

1. China has moved from being a **planned or socialist economy to a market or capitalist economy**.
2. China has moved from being an **agricultural economy to an industrialised economy**, and a **rural based peasant society to an urban based society with a rising middle class** in major cities.
3. China has moved from being an economy with a domestic focus, to one with a large **trade oriented focus**, highly integrated with the global economy to capture the benefits of globalisation.
4. China is a **major world economic power, contributing substantially to global output, economic growth, trade and investment**. China is also a major world political and military power.

China is the second largest economy in the world after the USA as measured by the nominal value of its GDP in US dollars and at market exchange rates. On a purchasing power parity (PPP) basis it is the largest economy in the world followed by the USA. In 2016 China's share of global GDP was 17.8%, its share of world exports of goods and services was 10.7%, and its share of world population was 19%.

Globalisation has had a large impact on China as economic growth was sustained at between 7% and 10% in the 1990s and 2000s, with the main 'drivers of growth' being business investment and net exports. However this growth rate began to fall between 2011 (9.5%) and 2015 (6.7%) as global growth stalled and China began the transition to domestic sources of growth (refer to **Figure 3.12**), with a growing middle class society demanding more goods and services for domestic consumption.

Figure 3.12: Contributions to China's GDP Growth 2000 to 2016



Sources: Reserve Bank of Australia (2017), *Statement on Monetary Policy*, February.

Economic Development

With rapid economic growth of about 8% in average real terms per annum over the last few decades, China has experienced a substantial reduction in poverty. The World Bank estimates that over the last 25 years extreme poverty has been reduced by 400 million people in China, previously living on one US dollar per day. Between 1990 and 2001 the reduction in income poverty in China was most rapid, with the incidence of people living below the international poverty line of US$1 a day, falling by 130 million.

China's rapid rate of economic growth in the 1980s, 1990s and 2000s has been based on an export oriented strategy financed by direct foreign investment. China's economy doubled in size in the decades of the 1980s and 1990s. This has resulted in rising real incomes and significant improvements in material indicators (such as real GDP per capita) and non material indicators of development (such as life expectancy and literacy) for much of the Chinese population. **Table 3.6** provides a summary of some of the major material and non material indicators of China's progress in economic development.

Table 3.6: Selected Indicators of China's Economic Development (*HDI Indicators)

Population 2016 (millions)	1,378.7m
GDP US$b 2016	US$11,393.6b
Annual Growth in GDP (%) 2016	6.7%
GDP per capita (US$) 2016	US$8,260
*GNI per capita PPP US$ 2015	US$13,345
Annual Rate of Inflation (%) 2015-16	3.8%
Annual Unemployment Rate (% of labour force) 2015	4.6%
Urbanisation Rate (% of population) 2015	56.0%
Agriculture as a % of GDP 2015	9%
Industry as a % of GDP 2015	40%
Services as a % of GDP 2015	51%
Exports of Goods and Services 2016 (US$)	US$2,197,922m
Exports of Goods and Services as a % of GDP 2016	20%
Manufactures as a % of Merchandise Exports 2016	94.3%
Imports of Goods and Services 2016 (US$)	US$1,948,009m
Imports of Goods and Services as a % of GDP 2016	17%
Net Direct Foreign Investment Flows 2015 (US$)	US$242,489m
Current Account Balance 2016 (US$b)	US$196.4b
*Adult Literacy 2005-2015 (%)	96.4%
Doctors per 10,000 people 2001-2014	19.4
*Life Expectancy at Birth 2015 (years)	76.0
Population Below Poverty Line (of US$1.90 a day) 2014	7.2%
Human Development Index Value 2015	0.738
Human Development Rank 2015 (out of 188 countries)	90th

Sources: UNDP, (2016), *Human Development Report 2016*, New York.
World Bank (2017), *World Development Indicators 2017*, Washington DC. *Fact Sheet on China* www.dfat.gov.au.

Income and Quality of Life Indicators

Table 3.7 illustrates China's progress in the three indicators that comprise the UNDP's Human Development Index (HDI): life expectancy at birth, the mean years of schooling and Gross National Income (GNI) per capita. Life expectancy in China rose from 63.2 years in 1975 to 76.0 years in 2015. The mean years of schooling and adult literacy (96.4% in 2015) also rose, and GNI per capita (in PPP US$ terms) grew by an annual average of 8.2% between 1975 and 2015 to reach US$13,345 in 2015.

Table 3.7: China's HDI Indicators in 2015

Life Expectancy at Birth	*Mean Years of Schooling*	*GNI per capita (2011 PPP US$)*	*HDI*
76.0 years	7.6 years	US$13,345	0.738

Source: UNDP (2016), *Human Development Report 2016*, New York.

With such improvements in economic and human development, China's HDI value rose from 0.518 in 1995 to 0.738 in 2015 as illustrated in **Table 3.8**. In 2015 China was ranked 90th out of 188 countries in the UNDP's HDI list. The annual growth in China's HDI was 1.57% between 1990 and 2015.

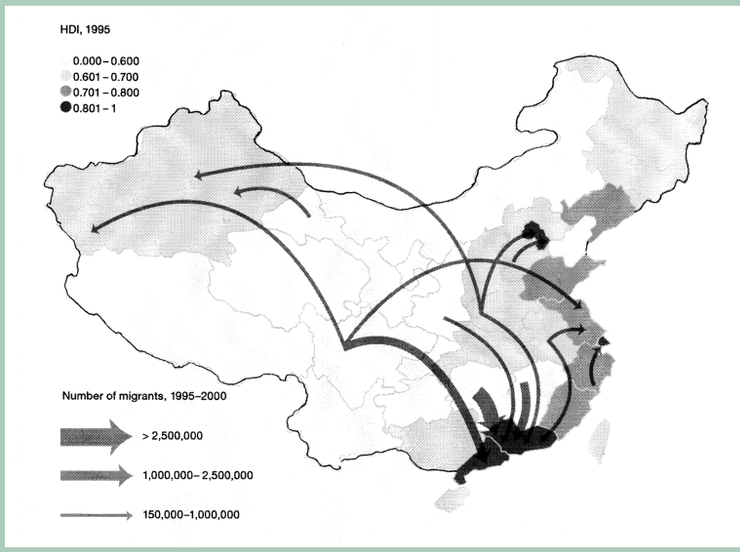
Table 3.8: Trends in China's Human Development Index from 1995 to 2015

1995	2000	2005	2010	2011	2012	2013	2014	2015
0.518	0.588	0.616	0.700	0.703	0.713	0.723	0.734	0.738

Source: UNDP (2015), *Human Development Report 2015*, New York.

Despite the improvements in human and economic development in China in recent decades, 7.2% of the population in 2014 was classified by the World Bank as being below the international poverty line of US$1.90 per day and 11.5% below an income of US$3.10 per day. This partially explains the migration of people in China shown in **Figure 3.13**, with large flows of migrants from inland provinces with low HDI values to coastal provinces with the highest HDIs and income and employment opportunities.

Figure 3.13: Inter-Provincial Migration Flows in China 1995-2000



Source: UNDP (2009), *Human Development Report 2009*, Palgrave Macmillan, New York.

Distribution of Income

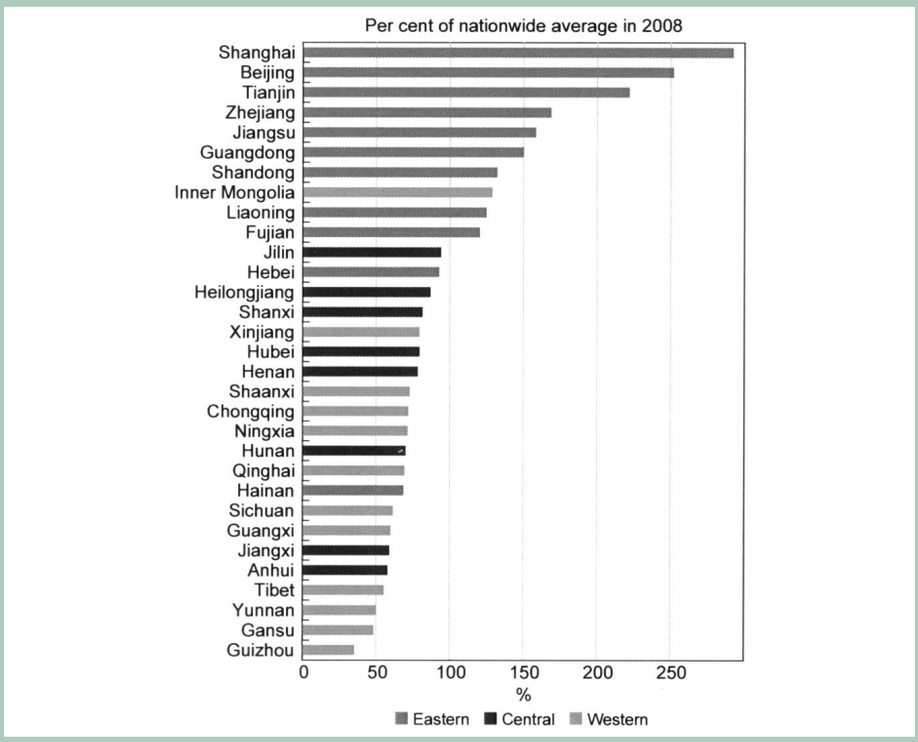
Real household incomes in China have averaged annual growth of 10% in the past two decades. However this growth has been accompanied by a notable rise in income inequality. The Gini co-efficient has risen from a low of 0.3 in the early 1980s to 0.5 in 2015. This rise in income inequality reflects the urban-rural income gap and large geographical variations in incomes between Chinese provinces:

1. Per capita incomes are higher in urban areas such as large cities and towns in eastern and southern China, compared to the rural areas in the central and western provinces of the country; and
2. Per capita incomes are higher in the southern coastal provinces of China compared to the north, and in the eastern coastal provinces, compared to the western provinces.

Coastal urban areas have experienced the fastest economic and employment growth and rising incomes because of their proximity to the Special Economic Zones such as Shanghai, Beijing, Tianjin, Guangzhou and Shenzen. The *Hukou* (household registration) system has hindered the free movement of labour from rural to urban areas in search of employment and higher incomes. Moreover the performance of coastal areas sped up in the 1990s, with annual growth averaging 13%, which was five times the level in China's slowest growing north western regions such as Tibet and Xinjiang. As a result, the bulk of national income has become concentrated in metropolitan and coastal regions in China.

Figure 3.14 shows the large disparities in income levels between the eastern, central and western regions of China in 2008. For example Shanghai, Beijing, Tianjin and Zhejiang had income levels that were 150% or higher than the national average, whereas Guizhou, Gansu, Yunnan and Tibet had income levels around 50% of the national average. Further, these large regional differences are also reflected in HDI levels between provinces and regions. For example, Tibet has lower values for educational attainment, income and life expectancy compared to Shanghai and Beijing. China's eastern regions achieved the Millennium Development Goals in 2015, whereas the western provinces did not and is a reason for the Chinese government targeting these regions with reforms to lift per capita incomes.

Figure 3.14: Differences in Regional Income Levels in China in 2008



Source: Reserve Bank of Australia (2009), *Statement on Monetary Policy*, August.

China's International Trade

In 2016 China accounted for 17.8% of global GDP and 10.7% of world exports of goods and services. China became the second largest goods trading nation in the world after the USA in 2010. China's exports and imports generally expanded between 2008 and 2014 as shown in **Table 3.9**, with exports valued at US$2,342b and imports at US$1,959b in 2014. China's exports grew by an average of 20% annually between 2005 and 2010, outstripping the growth in imports, resulting in a trade surplus of US$183.1b. However the value of both exports and imports fell in 2009 during the Global Financial Crisis because world trade contracted sharply. A strong recovery occurred in China's international trade between 2010 and 2014 before slowing in 2016 due to weaker world growth and trade volumes.

In 2016 manufactured goods dominated China's exports (94.3%) and imports (61.7%). Intermediate manufactured goods, including machinery and transport equipment, comprise a higher share of imports than exports and reflects China's role in the processing of high value added goods, including information and communications technology (ICT) equipment. China's export success has also been assisted by an undervalued currency. The Chinese authorities formerly fixed the value of the RMB to the US dollar and kept it undervalued to maintain the price competitiveness of exports in major world markets. However under pressure from the USA in 2005 (because of its large trade deficit with China), the Chinese government revalued the RMB and adopted a managed peg arrangement for its exchange rate. The People's Bank of China (PBC) devalued the RMB in 2015-16 to increase export competitiveness.

Table 3.9: China's Exports and Imports of Merchandise 2008 to 2016

	2008	*2009*	*2010*	*2012*	*2013*	*2014*	*2016*
Exports (US$b)	1,430.7	1,201.6	1,577.9	2,048.8	2,209.0	2,342.3	2,098.1
Annual % change	17.5	-16.0	31.3	16.5	7.8	6.0	-7.7%
Imports (US$b)	1,132.6	1,005.9	1,394.8	1,818.0	1,949.9	1,959.2	1,587.3
Annual % change	18.5	-11.2	38.7	11.8	7.3	0.5	-5.5%
Trade balance (US$b)	298.1	195.7	183.1	230.8	259.1	383.1	510.8

Source: World Bank (2017), *World Development Indicators 2017.*

China's main exports include electrical machinery and equipment, power generation equipment, apparel, iron, steel, optics, medical equipment, furniture, chemicals, ships and boats, motor vehicles, plastics, footwear and toys. China is a major importer of raw materials, energy and capital goods. Its major imports are electrical machinery and equipment, mineral fuels and oil, power generation equipment, metal ores, optics and medical equipment, plastics, chemicals, iron and steel. China accounts for around 10% of the world's consumption of resources. In 2005 China accounted for 25% of the world demand for steel, 35% of the world demand for iron ore and coal, and 20% of the world demand for aluminium, copper and zinc. The GFC in 2008-09 reduced China's rate of economic growth, exports and imports, but these recovered in 2010 as global economic conditions improved including international trade. However a slowdown occurred in 2011-12 with a fall in exports due to the impact of the European Sovereign Debt Crisis on world growth. The growth in exports (6%) and imports (0.5%) slowed further in 2014 as world growth and China's growth both moderated.

China's major trading partners are listed in **Table 3.10** for shares of exports and imports in 2014. Major export markets and sources of imports include East Asia, the European Union, the USA, Hong Kong, Japan, Australia, Russia, Brazil, India and Canada. They accounted for 78.2% of China's exports, 67.5% of total imports and 73.3% of China's total trade in 2014. East Asia, the EU, USA and Hong Kong were major export markets for Chinese manufactured goods and sources of imported capital goods, whilst Australia, Brazil and Russia were major sources of imported raw materials.

Table 3.10: China's Major Trading Partners - Shares of 2014 Trade

Country/Region	*Exports*	*Imports*	*Total Trade*
1. East Asia	14.5%	26.2%	19.8%
2. European Union	15.8%	12.4%	14.3%
3. United States	16.9%	8.1%	12.9%
4. Hong Kong	15.5%	0.7%	8.7%
5. Japan	6.4%	8.3%	7.3%
6. Australia	1.7%	5.0%	3.2%
7. Russia	2.3%	2.1%	2.2%
8. Brazil	1.5%	2.6%	2.0%
9. India	2.3%	0.8%	1.6%
10. Canada	1.3%	1.3%	1.3%
Total	78.2%	67.5%	73.3%

Source: Reserve Bank of Australia (2015), *Bulletin*, December Quarter.

China' Membership of the WTO

China was admitted as a member of the WTO at the Doha Conference in 2001 and became the 143rd member of the 164 nation WTO. China's admission to the WTO reflected its status as an economic superpower and opened its huge domestic market of 1.3b people to global exporters, as well as increasing China's access to other countries' markets. Greater access to world export markets through WTO membership is underpinning China's future growth and development by achieving three goals:

1. Diversification of its export base to include more value added ETM and service exports.
2. Attracting more foreign investment into the service sector of the Chinese domestic economy.
3. Encouraging more innovation and the use of ICT in the Chinese domestic economy.

The gains to China of WTO membership (through higher trade volumes) must be balanced against the costs of higher unemployment and structural change in domestic industries, which are facing more import competition such as retailing, banking, finance, telecommunications and motor vehicles. China must also abide by the rules for free and fair trade set down by the WTO, including adherence to agreements on intellectual property rights (such as copyright, patents, licence fees and royalties).

Managed Exchange Rate of the Renminbi (RMB)

On July 21st 2005 China abandoned its peg or fixed exchange rate against the US dollar and moved to a managed peg against a basket of selected currencies of China's major trading partners to determine the value of the RMB. The basket includes the US dollar, euro, Yen, Korean won, Singapore dollar, British pound sterling, Malaysian ringgit, Russian rouble, Australian dollar, Thai baht and the Canadian dollar. The change in the exchange rate mechanism for the RMB was in response to criticisms that China had given its export and import competing firms an unfair advantage in world trade, because the RMB was undervalued, making Chinese exports and import substitutes more internationally competitive.

In 2005 the RMB was revalued by 2%, with its US dollar exchange rate moving from 8.3 RMB to 8.1 RMB to the US dollar. Since then further small revaluations have taken place and in 2013 the RMB was trading at 6.2 RMB to the US dollar, with daily fluctuations in the RMB contained to a narrow band of plus or minus 0.3% against the US dollar. However in August 2015 there was a 2% devaluation of the RMB by the People's Bank of China to support China's export competitiveness as world growth slowed. The RMB came under significant selling pressure in early 2016 because of a large sell off in the Chinese share market. The RMB traded in a range of 6.5 to 7.0 against the US dollar in 2016-17.

Trade and Investment

The volume of China's exports grew annually by 8.8% between 2005 and 2015 and exports accounted for 20% of GDP in 2016. Much of the growth in exports reflects the expansion in the processing of goods that have been imported from other countries. Imports accounted for 17% of GDP in 2016 and whilst some of the imports have been subject to value adding and re-export, the rest of China's imported goods have been for domestic use. This reflects the **growing importance of domestic demand as a current source of Chinese growth**, especially after the impact of the Global Financial Crisis in 2008-09 and the European Sovereign Debt Crisis in 2011-12 in reducing export growth. Domestic demand includes household consumption and business investment, which finances the growth in China's rate of urbanisation (56% in 2015) through the following:

- New factories, industrial complexes and technology parks;
- Retail shopping malls and centres; and
- Commercial office complexes and residential development, including apartments and houses.

Chinese domestic demand grew at an annual rate of 9.8% between 2000 and 2016, in line with the growth of 9.9% in nominal GDP. Importantly annual investment growth averaged 12.5% over this period and investment is estimated to have accounted for 45% of China's nominal GDP in 2016.

The growth in investment in China appears to be broadly based across primary, secondary and tertiary sectors. Whilst investment in manufacturing was 12% of GDP in 2006, much of this was development related, through increased infrastructure, buildings, water and environmental management systems. A large share of infrastructure investment was for the construction of extensive subway systems in China's growing cities, and inter-provincial highways to facilitate the movement of goods and people. Recent surveys (2013) of China's urban fixed asset investment suggest the following trends:

- Investment in municipal infrastructure such as street lighting, urban roads, bridges and sewerage;
- Investment in utilities such as gas, water and electricity;
- Investment in transportation such as highways and railways including subway systems; and
- Investment in social infrastructure such as schools and hospitals.

Much of this fixed asset investment is driven by urbanisation in China as cities require infrastructure investment to support a growing population and middle class. However there was a decline in the growth of fixed asset investment between 2014 and 2016 due partly to a sharp decline in investment in the north eastern region of China (refer to **Figure 3.15**) with the build-up of excess capacity in the mining and manufacturing industries associated with the decline in iron ore and steel production.

Figure 3.15: Fixed Asset Investment Expenditure in China 2006-2016 (% annual growth)

Source: Reserve Bank of Australia (2016), *Statement on Monetary Policy*, May.

Foreign Direct Investment and Multinational Corporations in China

Foreign direct investment (FDI) in China remains a key driver of Chinese economic growth, although capital flows fell during the GFC in 2008-09 and have been modest during the global economic recovery between 2011 and 2017. The Chinese government uses capital controls to encourage foreign direct investment rather than portfolio investment. China has attracted record levels of foreign direct investment, as companies have established production facilities in major Chinese cities (e.g. Beijing, Shanghai, Guangzhou and Shenzen) to take advantage of cheap labour and power. Total foreign direct investment was valued at US$116b in 2011 (refer to **Table 3.11**), and doubled to US$242.4b in 2015.

China surpassed the USA to become the top recipient of foreign direct investment in 2002. Multinational corporations (MNCs) locate in China to manufacture goods for export markets and for sale to China's growing and increasingly affluent middle class in cities such as Beijing, Hong Kong SAR, Shenzen, Guangzhou and Shanghai. The main sources of direct foreign investment in China are from Hong Kong, Taiwan, Japan, Singapore, the USA, South Korea, the UK, Germany, Macao and Canada.

Table 3.11: Foreign Direct Investment in China in 2011

Type of Project	*Number of Projects*	*Utilised FDI Value*
Equity joint ventures	5,005	US$21.4b
Co-operative joint ventures	284	US$ 1.8b
Wholly foreign owned enterprises	22,388	US$91.2b
Foreign venture capital	35	US$ 1.6b
Total Foreign Direct Investment	27,712	US$116.0b

Source: The US-China Business Council (2011), *Foreign Investment in China*.

In 2011 foreign direct investment in China totalled US$116b, with a majority in wholly foreign owned enterprises (US$91.2b) and equity joint ventures as shown in **Table 3.13**. Foreign direct investment flowed into China as it implemented its World Trade Organisation (WTO) commitments to open up its domestic market to free trade in 2007. The opening of the domestic market to foreign competition in 2007 and the surge in foreign investment associated with the Beijing Olympics in 2008 helped to support high growth in Chinese domestic consumption and investment. In 2014-15 with a large current account surplus, US$450b of private capital flowed out of China to support the global expansion of Chinese MNCs as they gained overseas interests in manufacturing, resources and technology.

Environmental Sustainability

China sustained an average rate of economic growth of 9.9% between 2000 and 2016. This rapid rate of economic growth has led to a high level of resource use and **environmental degradation**. China is therefore experiencing severe environmental problems associated with resource depletion and environmental degradation. The Chinese government commissioned the OECD to conduct a study of the environment in 2007. The report found that unless pollution is controlled, by 2020 it will cause 600,000 premature deaths in urban areas and 20m cases of respiratory illness per year. The report also found that up to 7% of China's annual GDP is lost because of pollution, and this could rise to 13% of GDP if stronger environmental laws are not implemented and enforced.

China's carbon dioxide emissions were 10,249 million metric tonnes in 2013, 98% higher than the USA, mainly sourced from electricity, gas and cement production. **Figure 3.16** shows China's contribution of 20% to total global carbon dioxide emissions in 2006. Although the high income OECD countries accounted for 40% of global carbon dioxide emissions in 2006, developing countries such as China and India are responsible for an increasing share of the world total. In China's case it is due to over 70% of its electricity being sourced from coal fired power stations which pollute its environment.

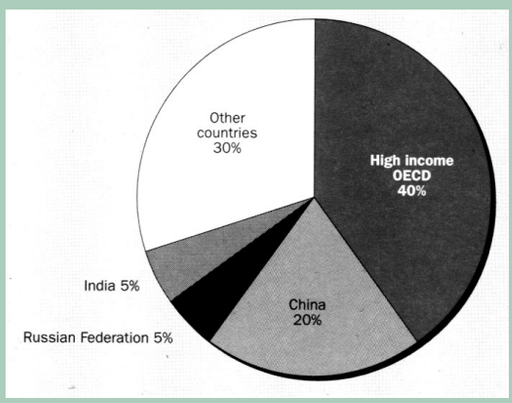
This is also reflected in China's rising per capita carbon dioxide emissions (see **Figure 3.17**), which were 3.2 metric tonnes in 2003, compared to 19.9 metric tonnes in the United States, 10.3 metric tonnes in the Russian Federation and 1.2 metric tonnes in India. The World Bank estimated that China's per capita carbon dioxide emissions had risen to 6.7 metric tonnes in 2011, growing by 6.5% annually between 1970 and 2011. China's total carbon dioxide emissions were estimated by the World Bank at 10,249.5 million metric tonnes in 2013, making it the largest polluting country in the world.

Many other environmental problems aside from carbon pollution are prevalent in China:

- The OECD estimates up to 300m people are drinking contaminated water every day in China.
- Loss of natural grasslands and forests because of the expansion of agriculture and industry.
- Loss of topsoil and subsequent desertification due to the removal of vegetation. This has caused severe levels of erosion and the loss of topsoil in farming regions during sandstorms.
- Loss of lakes and wetlands has resulted in China's total area of lakes shrinking by 15% since the 1950s, while its wetlands have shrunk by 26%.
- Shortages of water due to drought and the loss of water due to inefficient irrigation systems. China's major cities also face water shortages due to excess demand and the lack of available water supplies. The Chinese authorities have completed large dam building projects such as the Three Gorges Project to overcome water shortages and to generate additional hydro electric power.
- Inadequate disposal of household and industrial wastes, as estimates suggest that only 20% of solid waste per year is properly disposed of in China, and only 10% of sewage is treated, with the rest dumped straight into lakes and rivers causing water pollution.
- Severe levels of air pollution, with China having the world's highest emissions of sulphur dioxide, emitting 17 million metric tonnes per year. China's carbon dioxide emission levels are also amongst the highest in the world with 70% of China's energy needs supplied by coal fired power stations.
- A high incidence of respiratory diseases, with China having the world's highest rate of chronic respiratory disease. The outbreaks of SARS and bird flu occurred in 2003 and 2005 in China due to high levels of pollution and a lack of health and hygiene standards in both rural and urban areas.

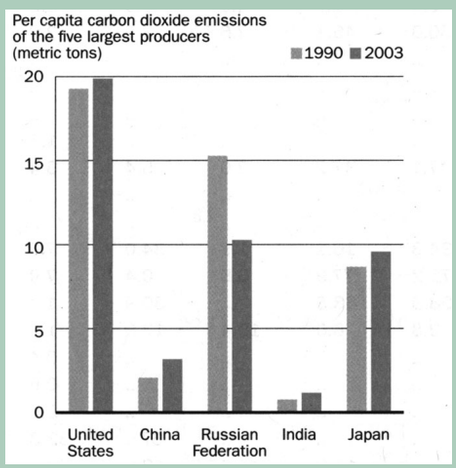
The Chinese government has addressed the environmental problems that have accompanied its rapid economic growth and industrialisation. It has set targets for reducing pollution levels by committing US$6.6b in 2015 in new spending, including the complete shutdown of coal fired power stations.

Figure 3.16: Shares of Global Carbon Dioxide Emissions in 2006



Source: World Bank (2010), *Word Development Indicators 2010*, World Bank, Washington DC.

Figure 3.17: Per Capita Carbon Dioxide Emissions of the Five Largest Producers 1990-2003



Source: World Bank (2007), *World Development Indicators 2007*, World Bank, Washington DC.

China signed the UNFCCC's Paris Agreement in 2015 as part of a new Kyoto Protocol and agreed to peak its CO_2 emissions in 2030 and launch a national cap and trade emissions programme in 2017. In 2015 the Chinese government also made a number of unilateral decisions to reduce pollution:

- It announced an increase in the share of renewables in its energy mix to 20% by 2030.
- It announced a cut in emissions by 60% - 65% per unit of GDP by 2030 compared to 2005 levels.
- It announced bans on coal imports with high ash and sulphur content to two very polluted regions: the Yangtze River Delta near Shanghai and the Pearl River Delta near Hong Kong and Guangzhou.

At the G20 meeting in Brisbane in late 2014 the USA and China announced a shared commitment to reducing greenhouse gases by 2030. This commitment was formalised by the signing of the Paris Agreement by both countries in December 2015 to limit the rise in global temperatures to 2^0C by 2100.

Evaluation of Chinese Government Economic Policy

Xi Jinping was appointed President of the People's Republic of China at the Chinese Communist Party's 18th Congress in 2012. He assumed office on March 14th 2013, replacing former President Hu Jintao. As a career politician, Xi Jinping served as governor of the coastal provinces of Fujian and Zhejiang between 1999 and 2007, before being promoted to the central leadership of the Communist Party of China in 2007 and was groomed to become Hu Jintao's successor. Xi Jinping adopted the slogan of the '**Chinese Dream**' to encapsulate his vision for environmentally sustainable development in China. In May 2013 he popularised the concept of the 'Chinese Dream' by urging young Chinese to 'dare to dream, work assiduously to fulfil the dreams and contribute to the revitalisation of the nation.'

The Chinese government is committed to further long term structural reforms in the Chinese economy as growth slows and the economy re-balances the sources of growth from exports and foreign investment to domestic consumption and business investment. The Chinese government wants private businesses and market forces to 'drive' the economy and set a growth target of around 6.5% in 2017. In May 2017 Xi Jinping announced the '**One Belt One Road**' initiative to build infrastructure and trade linkages to rival the ancient Silk Road. This would link China with Asia, the Middle East, Africa and Europe.

The Chinese government's priorities are to **promote sustainable economic development** and to **maintain social cohesion and stability**. The new leadership released broad proposals for reform in May 2013:

- Introducing gradual steps to allow market forces to determine bank interest rates;
- Encouraging private investment in services such as finance, energy, railways and telecommunications;
- Allowing more foreign investment in finance, transport, health care and other service sectors; and
- Easing foreign exchange controls to allow the RMB's value to be determined by market forces.

Despite China's modernisation and improved economic performance, many problems and inefficiencies are evident in its domestic economy, some of which are a direct result of the impact of globalisation:

1. **Dualistic economy**: China's growth and development are very dependent on the Special Economic Zones in the southern and eastern provinces which are dominated by MNCs through foreign direct investment and technology. In contrast, the northern and western provinces remain far less developed and more reliant on agricultural production for the generation of income and employment opportunities. China like other developing and emerging countries has a dualistic economy which creates inequality in the distribution of income and employment opportunities.
2. **Income and social inequality**: Inequality in China has grown between rural and urban populations, and the rich southern provinces and their poorer northern and western counterparts. For example in 2008, per capita incomes were 100% to 250% higher in eastern provinces such as Shanghai, Beijing, Tianjin and Guangdong, compared to inland western provinces such as Guizhou, Yunnan, Tibet, Sichuan, Qinghai and Hunan. The components of the HDI show that inland western provinces have much lower HDI values than Shanghai, Beijing, Tianjin and Guangdong where incomes and living standards are the highest in China.

3. **Political and social instability**: High urban incomes and the growth of employment opportunities in the SEZs are in contrast to low rural incomes and high unemployment in less developed provinces, and in state owned enterprises subject to restructuring and technological change. This has led to political instability and social division, with demands for democratic and economic reforms by the Chinese government to reduce this inequality. There are widespread peasant revolts in China over a lack of health and education services, low incomes and a lack of freedom to migrate to cities where the opportunities for employment and higher living standards exist. Peasants also resented the one child policy imposed by the government but this policy was relaxed to a two child policy in 2015 to address population ageing and emerging shortages of labour. Terrorism by Uighur separatists also emerged as a major internal security problem in 2014 in western Xinjiang province.
4. **Inflationary pressures**: More effective management of macroeconomic policy is needed in China because its high rates of economic growth have led to continuing inflationary pressures. This occurred in 2007 and 2010-11 with tighter monetary policy used to raise interest rates and tighten controls on lending to reduce demand pressures and speculative activity in China's stock market and the real estate market. Inflation pressures remained elevated at 3.8% in 2015-16 as higher global commodity prices flowed through to producer prices and underlying consumer inflation.
5. **Agricultural reform**: Improving the performance of China's agricultural sector remains a priority in terms of establishing a system of enforceable land rights; providing greater access to funds for farmers; and allowing the free migration of rural workers from country regions to cities for work.
6. **Reform of the financial sector**: The almost entirely state owned Chinese banking system has a large level of non performing loans to SOEs. This makes the privatisation of banks and broad reform of the wider financial sector, including access for foreign banks, a policy priority for the Chinese government. One of the biggest recent problems for the People's Bank of China is the large buildup in corporate debt following the rapid growth in Total Social Financing (TSF) over 2015 to 2017.
7. **Reform of fiscal policy**: The Chinese government records budget deficits and has set a target of 2.1% of GDP for the fiscal deficit. Tax reforms and more efficient spending programmes are necessary to reduce the budget deficit which was around 2.5% of GDP in 2014. Fiscal policy reforms could also include cutting subsidies to inefficient SOEs and reducing tax avoidance.
8. **Reform of SOEs**: China's state owned enterprises (SOEs) are inefficient and only remain in operation through direct government subsidies and loans from the People's Bank of China (PBC), which increase budgetary pressures and inflation. Over half of China's SOEs record losses, offsetting the profits made by the remaining SOEs. Bureaucratic corruption is also a problem with many SOE managers using their power over decision making for personal gain rather than for maximising SOE economic efficiency and assisting the process of Chinese economic development.
9. **Infrastructure development**: China's rapid economic growth has stretched domestic freight and logistics capabilities, leading to bottlenecks in the movement of goods and basic resources. There is widespread construction of new roads, railways, bridges, dams, airports and ports to meet the demand from the private sector. Inadequate electricity production capacity and distribution also places a limit on China's manufacturing capacity. The Chinese government has invested in new hydroelectric projects, nuclear reactors and renewable energy to develop cleaner sources of power.
10. **Legal infrastructure**: China's commercial laws and regulations need to protect private property rights, investors and creditors. Laws are also needed to protect the environment, human rights and eliminate corruption in government and the bureaucracy. Social and economic infrastructure such as transport, electricity, schools and hospitals need to be upgraded in some rural regions of China.
11. **Social security reform**: To reform SOEs and deal with an ageing population, the Chinese government needs a large social security system with unemployment benefits and pensions. The lack of a social security system in China is one reason for the high savings rate of 30% and relatively low consumption rate of 70%. The Chinese government has increased expenditure on health care and government transfers such as welfare payments and pensions to reduce income inequality.

12. **Unemployment**: China has been 'pump priming' its economy for the last decade to keep GDP growth running at close to 7%-8%, the level needed to keep unemployment from rising too fast. Unemployment is a major problem in China with the urban jobless rate rising from 4% in 2002 to over 5% in 2009 as the GFC reduced the rate of growth. China's official unemployment figures are misleading as they do not include the estimated 10 million workers made redundant from some of China's failed SOEs or unemployed and underemployed peasants in rural areas. The World Bank estimated China's unemployment rate at 4.6% in 2015 because of slower economic growth.
13. **Reform of the labour market**: The Household Registration System or *Hukou* in China restricts the freedom of movement of people from one province to another. This particularly affects rural peasants wanting to migrate to urban areas in search of new employment, higher incomes and living standards. China has an ageing population and is predicted to experience labour shortages by 2030. Greater use of market forces in the labour market could address future labour shortages.

    A major problem in China is the lack of well defined occupational health and safety regulations which exposes workers in dangerous industries such as coal mining and manufacturing to industrial accidents and unnecessary health risks. These problems are well documented and have led to the death and injury of thousands of workers. Another problem is the exploitation of workers by employers through under payment or non payment of wages. There have also been many cases of employers exploiting child labour in their quest to meet orders and generate higher profits.

China faces the long term challenge of re-balancing its economy away from its previous pattern of investment and export led growth, to more sustainable and non inflationary growth generated by expanding household consumption and the services sector. In order to sustain economic growth of 6.5% to 7% the Chinese government has also pursued a policy of supporting its global SOEs to secure resource supplies and invest directly in overseas markets. However the new US Trump Administration has threatened to impose tariffs and trade sanctions on Chinese imports to protect US firms and jobs.

In July 2016 the Permanent Court of Arbitration in the Hague declared that China's claim to most of the South China Sea was invalid. China has pursued an aggressive policy of building, reclaiming and occupying islands in the Spratly Islands and claiming sovereignty. The Court found that China's controversial island building violated neighbouring Philippines' sovereign rights and the freedom of navigation for other countries in using major commercial shipping lanes in the South China Sea.

REVIEW QUESTIONS

CASE STUDY OF THE INFLUENCE OF GLOBALISATION ON CHINA

1. Discuss the main elements of China's economic reform strategy.
2. How have China's economy and society been transformed by sustained high rates of economic growth in recent decades? How is the Chinese economy re-balancing its sources of growth?
3. Discuss how China's rapid economic development has led to an improvement in its HDI.
4. Discuss the reasons for inequality in the distribution of income in China.
5. Analyse the importance of international trade, foreign direct investment and the role of MNCs in China's economic development. Why are Chinese MNCs now investing overseas?
6. Discuss the problems encountered by China in achieving environmental sustainability.
7. Discuss the challenges faced by the Chinese government in conducting economic policy to promote China's transition to a consumption and service based economy.

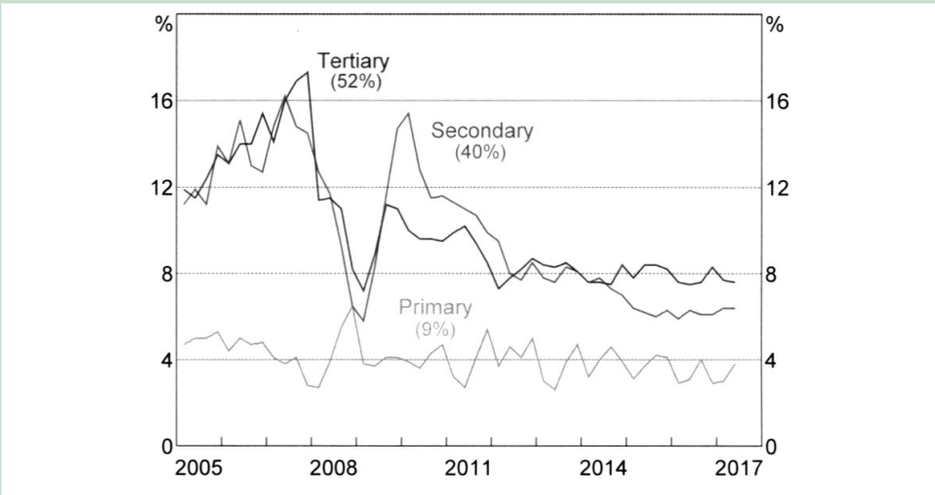
CHAPTER FOCUS ON THE IMPACT OF GLOBALISATION

China's Economic Transition

"A period of extraordinary growth has made China one of the largest economies in the world. China is now entering a new stage of development, which the authorities have characterised as the 'new normal'. The Chinese economy now faces the task of transitioning to a more balanced growth model. Unlike recent decades, growth will increasingly be driven by consumption and services, and be less reliant on investment and exports."

Source: Commonwealth of Australia (2016), *Budget Strategy and Outlook 2016-17.*

China - GDP Growth by Sector



Source: Reserve Bank of Australia (2017), *Statement on Monetary Policy.*

Discuss the changing composition of the Chinese economy and the policies used by the Chinese government to sustain economic growth and development.

CHAPTER 3: EXTENDED RESPONSE QUESTION

Discuss the reasons for variations in the standard of living between advanced, emerging and developing countries that make up the global economy.

CHAPTER SUMMARY

GLOBALISATION AND ECONOMIC DEVELOPMENT

1. The process of economic growth is where countries experience an increase in real GDP leading to rising incomes and living standards over time. Economic development on the other hand refers to the structural changes that must occur in an economy (such as the development of social and economic infrastructure) before economic growth can take place and be sustained over time.

2. The global distribution of income and wealth has become more uneven with the process of globalisation, with significant levels of poverty in Africa, South Asia and Latin America.

3. Differences in living standards between countries can be measured by using a variety of material and non material indicators of development. The United Nations Development Programme (UNDP) calculates a Human Development Index (HDI) based on three indicators: life expectancy at birth; mean years of schooling; and levels of per capita income. Countries are ranked in terms of their HDI value each year. In 2016 there were 188 countries ranked according to their HDI values.

4. The types of economies in the world include advanced, emerging and developing.

5. Large variations in the standard of living between countries occur on a global basis due to differing factor endowments and a range of other economic, social, cultural and political factors.

6. A number of reasons can be advanced for the development gap or income gap between nations, including low levels of savings, investment, capital accumulation and productivity in many emerging and developing economies compared to the advanced economies of the world.

7. The vicious cycle of poverty model helps to explain why many emerging and developing countries experience low levels of per capita income and living standards compared to advanced countries.

8. There is a general relationship between improvements in economic growth and development in countries that 'globalise' (through increased levels of international trade and investment) compared to countries that are 'non globalisers' and do not integrate with the global economy.

9. Multinational corporations (MNCs) play a major role in global production, trade and investment. They account for 40% of world trade through their global production webs and supply chains.

10. Global environmental problems include global warming and climate change, threats to biodiversity, pollution and over exploitation of some renewable and non renewable resources.

11. Changes in the international business cycle can impact on all economies as occurred with the Global Financial Crisis in 2008-09 and European Sovereign Debt Crisis in 2010-11. Governments attempt to co-ordinate their macroeconomic policies to encourage sustainable economic growth and increased trade flows, in order to derive the expected gains from global trade and investment.

12. China is a major world economic power and its development is linked to the policies of encouraging foreign trade and investment, and the reform of its agricultural and manufacturing sectors. Higher levels of economic growth and development have resulted in an improvement in China's human development and a reduction in income poverty. However China has persistent problems in its economy such as inflation, budget deficits, environmental degradation and income inequality.

AUSTRALIA'S PLACE IN THE GLOBAL ECONOMY

2

TOPIC FOCUS

This topic focuses on an examination of Australia's place in the global economy and the effect of changes in the global economy on Australia's economic performance. Students should learn to examine the following economic issues and apply the following economic skills in Topic 2 of the HSC course:

ECONOMIC ISSUES

- Assess the impact of recent changes in the global economy on Australia's trade and financial flows;
- Examine the effects of changes in trade and financial flows on Australia's economic performance;
- Analyse the effects of changes in the value of the Australian dollar on the Australian economy;
- Discuss the impact of free trade and protection policies on the quality of life in Australia; and
- Propose likely changes to the structure of industry within Australia as a result of current trends in the global economy.

ECONOMIC SKILLS

- Calculate the main components of Australia's balance of payments;
- Analyse the relationship between the balance of the capital and financial account and the net income balance;
- Explain the relationship between the current account balance and the balance of the capital and financial account;
- Use supply and demand diagrams to explain how the value of a currency is determined under different exchange rate systems; and
- Analyse the impact of changes in the components of the balance of payments on the value of the Australian dollar.

Australia is very integrated with the global economy and has very strong trade links with the Asian region. These include links with major trading partners such as China, Japan, the NIEs and ASEAN countries. Australia is a large exporter of commodities and services such as tourism to this region.

Australia's trade intensity (i.e. exports and imports as a percentage of GDP) has risen over time with exports and imports each accounting for 21% of GDP in 2016-17. This is a result of reductions in domestic protection, increased industry competitiveness and greater market access for Australian exports through the Australian government's negotiation of various bilateral (e.g. Korea, Japan and China), regional (e.g. APEC and the TPP) and multilateral trade agreements (e.g. the WTO).

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Chapter 4

Australia's Trade and Financial Flows

THE VALUE, COMPOSITION AND DIRECTION OF AUSTRALIA'S TRADE AND FINANCIAL FLOWS

International trade flows refer to the exchange of goods and services across national boundaries. International financial flows include debt and equity borrowings, foreign exchange and derivatives trading across national boundaries. This is known as **international finance and investment** which may be either **portfolio investment** (i.e. the purchase of financial securities such as shares and bonds) or **direct investment** (i.e. foreigners establishing a subsidiary or buying a controlling interest in a local firm). International trade is characterised by a number of specific features such as the following:

- It involves trade in more than one national currency such as US dollars, Euros, Pounds or Yen;
- It involves a special set of risks such as the loss of earnings from adverse currency movements, changes in market demand, commodity prices, interest rates or government economic policy;
- It tends to be dominated by the role of multinational corporations (MNCs) which have enormous power and influence in affecting global trade and investment patterns; and
- It is affected by changes in the pattern of world demand, technology and the international business cycle. Examples of these changes include the growth in trade in ETMs and services; the Internet boom and spread of electronic commerce; the global resources boom between 2004 and 2007; and the impact of the Global Financial Crisis and recession on world trade in 2008-09.

The Link Between Internationalisation and Globalisation

In the 1980s Australia became more internationalised and integrated with the global economy through a series of government policy changes. In 1983 the **Australian financial system was deregulated** and foreign exchange controls were removed. The exchange rate was also floated in 1983 and its value was determined by market forces. Financial deregulation led to much greater accessibility of Australian firms to world capital markets and reduced the cost of exporting, although it also increased the volatility of the exchange rate, because of changes in Australia's international trade and economic performance.

In the 1980s, 1990s and 2000s the Australian government **reduced the levels of protection** of Australian industry through cuts to tariffs, subsidies, local content schemes and quotas. This encouraged Australian manufacturers to export to the world market. Globally, the Australian government participated in international trade forums such as the Cairns Group of countries to secure better market access for Australian agricultural exports. In the World Trade Organisation (WTO) the USA and EU agreed to cut their agricultural subsidies after the Uruguay Round of GATT was completed in 1994. In the Asia Pacific Economic Co-operation (APEC) forum, Australia played an important role in negotiations with member countries who agreed to reduce their trade barriers by 2020 through the signing of the *Bogor Declaration* by APEC members in 1994 in Bogor, Indonesia.

Major changes also occurred in the 1990s with a **more integrated global economy** based on increasing economic integration between countries through greater trade liberalisation. This was also underpinned by new information and communications technologies (ICT) and the increasing conduct of electronic commerce. In the 2000s the **global resources boom** and China's increasing demand for resources greatly influenced Australia's trade pattern, its terms of trade and the exchange rate. The Australian government also negotiated bilateral trade agreements with the USA, ASEAN, Korea, Japan and China to strengthen trade relationships and signed the regional Trans Pacific Partnership Agreement in 2015.

Table 4.1: Australian Exports and Imports of Goods by Commodity Group 2016-17

Exports of Goods (Goods Credits)		*Imports of Goods (Goods Debits)*	
1. Total Rural Goods	**$46,547m**	**1. Total Consumption Goods**	**-$97,308m**
Meat and meat preparations	$11,073m	Food and beverages	-$14,233m
Cereal grains and cereal prep.	$9,359m	Electrical/transport equipment	-$29,511m
Wool and sheepskins	$3,619m	Textiles, clothing and shoes	-$16,977m
Other rural	$22,496m	Toys, books and leisure goods	-$6,449m
2. Total Non Rural Goods	**$225,313m**	Other consumption goods	-$30,138m
Mining	$178,978m	**2. Total Capital Goods**	**-$68,106m**
Machinery & transport equipment	$14,919m	Machinery & ind. equipment	-$19,837m
Other manufactures	$19,003m	ADP equipment	-$9,431m
Other non rural	$12,413m	Other capital goods	-$38,838m
3. Other (inc. non monetary gold)	**$20,149m**	**3. Intermediate Goods/Other**	**-$112,776m**
Total Exports of Goods	**$292,009m**	Total Imports of Goods	**-$278,190m**

Source: ABS (2017), *Balance of Payments and International Investment Position*, Catalogue 5302.0, June. Tables 6-7

Trends in the Value and Composition of Australia's Trade Pattern

The Australian economy has become more internationalised over time, with exports and imports of goods as a percentage of GDP (i.e. the level of trade intensity) rising from 12% of GDP in the mid 1980s to 21% of GDP by 2016-17. The total value of exports of goods was $292,009m in 2016-17 as shown in **Table 4.1**. The value of goods exports was 19.7% higher in 2016-17 than in 2015-16 mainly due to higher commodity prices, a higher terms of trade and a 31% increase in the value of mining exports from $136,608m to $178,978m. The value of rural exports in 2016-17 rose by 8% to $46,547m. The total value of imports of goods in 2016-17 was -$278,190m consisting of consumption, capital and intermediate goods. Australia recorded a **large surplus in the goods balance** of $13,819m in 2016-17 as the total value of exports ($292,009m) exceeded the total value of imports (-$278,190m).

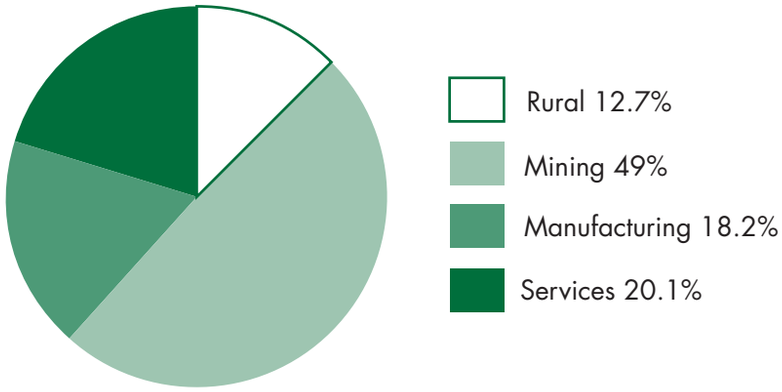
Rural exports were 15.9% of total exports of goods in 2016-17 and mining exports were 61.3% of total goods exports in 2016-17 due to higher commodity prices for coal and iron ore. Manufactured exports were 22.8% of total goods exports in 2016-17. Australia has a **diverse export base** of rural, mining and manufactured goods in its trade pattern, helping to sustain export income for the Australian economy.

Table 4.2: Australian Exports and Imports of Services 2010-2017

	Service Exports (Credits)	*Service Imports (Debits)*	*Net Services*
2010-11	$50,343m	-$57,263m	-$6,920m
2011-12	$50,529m	-$61,194m	-$10,665m
2012-13	$52,808m	-$66,365m	-$13,557m
2013-14	$57,606m	-$71,900m	-$14,294m
2014-15	$62,705m	-$70,501m	-$7,796m
2015-16	$67,922m	-$76,993m	-$9,071m
2016-17	$73,462m	-$75,116m	-$1,654m

Source: ABS (2017), *Balance of Payments and International Investment Position*, Catalogue 5302.0, June. Tables 8-9

Figure 4.1: Sectoral Composition of Australia's Exports of Goods and Services 2016-17



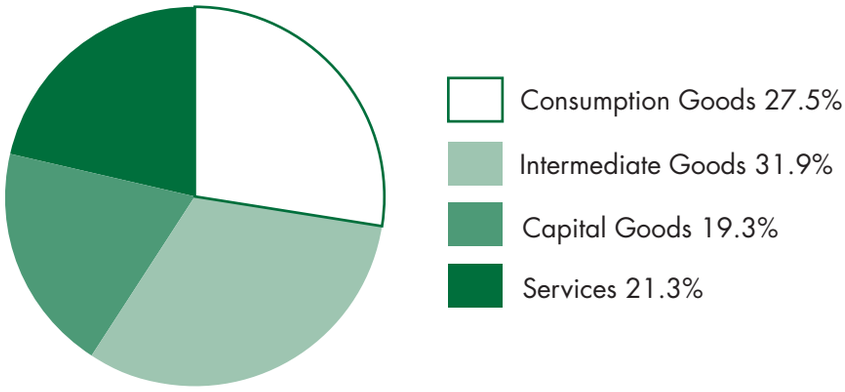
Source: ABS (2017), *Balance of Payments and International Investment Position*, Catalogue 5302.0, June. Tables 6-9

Another feature of Australia's trade is the strong recovery in service exports between 2012 and 2017, shown in **Table 4.2**. In 2016-17 Australia exported services worth $73,462m, an increase of $5,540m or 8.2%, from 2015-16. Service exports grew between 2012-13 and 2016-17 due to stronger global growth and the impact of a lower exchange rate increasing competitiveness. Service exports include freight, transport, travel, tourism, education, communications, finance, business and insurance. Imports of services fell from -$76,993m in 2015-16 to -$75,116m in 2016-17 as the lower exchange rate made imports more expensive. Service imports include freight, travel, tourism, education, communications, transport and business. The **net services deficit** fell substantially from -$9,071m in 2015-16 to -$1,654m in 2016-17 as service exports grew by 8.2%, and service imports fell by -2.4%.

The total value of exports of goods and services in 2016-17 was $365,471m, consisting of $292,009m of goods and $73,462m of services. The composition of Australia's exports of goods and services in 2016-17 is shown in **Figure 4.1**. Rural exports were 12.7% of the total, with mining's share a massive 49%, manufacturing's share at 18.2%, and the services share at 20.1% of the total.

Australia imports consumption (e.g. food, beverages, clothing, footwear and cars), capital (e.g. machinery, industrial and transport equipment and computers) and intermediate goods (e.g. parts, fuels, chemicals, textiles, plastics and paper) used in the production of other goods. The total value of imports of goods and services was -$353,306m in 2016-17 (-$278,190m of goods and -$75,116m of services). The composition of Australia's imports of goods and services in 2016-17 is shown in **Figure 4.2**. Consumer goods were 27.5% of the total, with intermediate goods at 31.9%, capital goods at 19.3% and services at 21.3%. Australia recorded a **surplus in goods and services** of -$12,165m in 2015-16.

Figure 4.2: Major Categories of Australian Imports of Goods and Services 2016-17



Source: ABS (2017), *Balance of Payments and International Investment Position*, Catalogue 5302.0, June. Tables 6-9

Table 4.3: Merchandise Trade Shares by Selected Countries and Country Groups 2016-17

Annual Australian Exports (% of total)		*Annual Australian Imports (% of total)*	
ASEAN	10.4	ASEAN	15.9
China	29.5	China	22.5
European Union	4.4	European Union	18.4
Hong Kong	6.6	Hong Kong	0.3
India	5.5	Japan	8.3
Japan	14.7	New Zealand	2.8
Republic of Korea	7.1	Republic of Korea	4.5
Taiwan	2.7	Taiwan	1.6
United States of America	4.4	United States of America	12.1

Source: ABS (2017), *International Trade in Goods and Services*, Catalogue 5368.0, June. Tables 14a and 14b

Trends in the Direction of Australia's Trade Pattern

The major change in the direction of Australia's trade since the 1960s has been the switch away from British and European markets to Asian and Pacific markets. **Table 4.3** illustrates the importance of Asia Pacific countries as export markets in 2016-17. Asian countries accounted for 76.5% of exports in 2016-17 (China 29.5%, Japan 14.7%, ASEAN 10.4%, Korea 7.1%, Hong Kong 6.6%, India 5.5% and Taiwan 2.7%). The Pacific Rim countries of the USA (4.4%) and New Zealand (2.7%) accounted for 7.1% of Australian exports in 2016-17. Together Asian and Pacific Rim countries accounted for 83.6% of Australian exports in 2016-17, with the EU accounting for a further 4.4% of exports.

China is Australia's number one export market with 29.5% of total exports in 2016-17, having surpassed Japan (14.7% of total exports) in 2009-10. In third position as an export market in 2016-17 was the Association of South East Asian Nations (ASEAN), with a 10.4% share of Australia's exports. Korea (7.1%), Hong Kong (6.6%) and India (5.5%) were the next most important export markets.

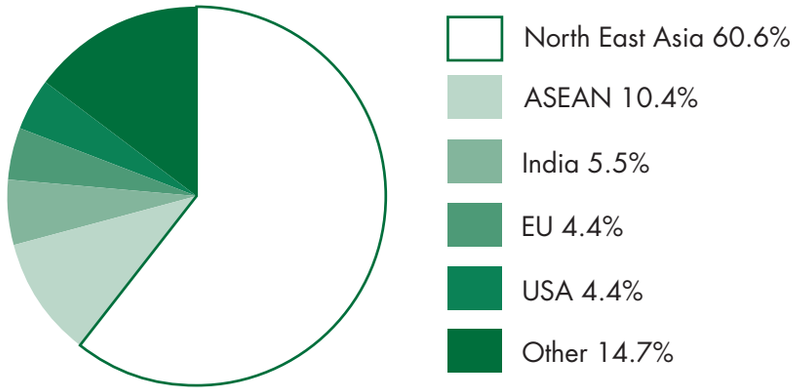
Table 4.4 shows the percentage of total Australian merchandise exports in 2016-17 accounted for by APEC countries, ASEAN, developing countries, least developed countries, the European Union and the OECD. Of these groups, APEC, developing countries and the OECD were the major export markets.

Table 4.4: Merchandise Trade Shares by Selected Groups of Countries 2016-17

Annual Australian Exports (% of total)		*Annual Australian Imports (% of total)*	
APEC	77.7%	APEC	71.6%
ASEAN	9.2%	ASEAN	15.8%
Developing Countries	66.5%	Developing Countries	55.4%
Least Developed Countries	1.0%	Least Developed Countries	0.4%
European Union	8.4%	European Union	19.3%
OECD	37.1%	OECD	51.1%

Source: ABS (2017), *International Trade in Goods and Services*, Catalogue 5368.0, June. Tables 14a and 14b

Figure 4.3: Major Australian Export Markets in 2016-17



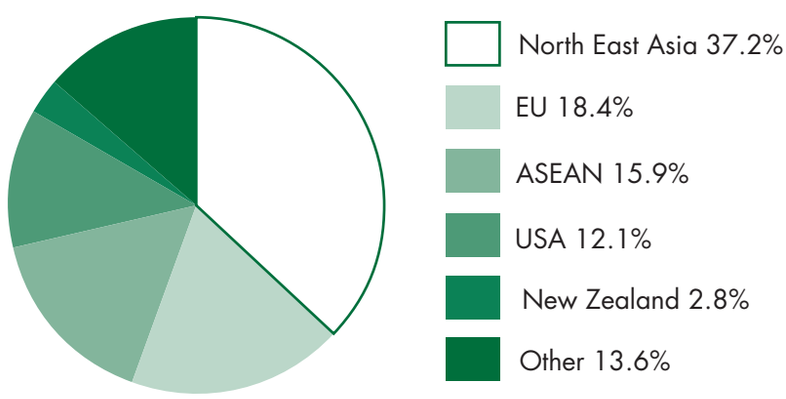
Source: ABS (2017), *International Trade in Goods and Services*, Catalogue 5368.0, June. Table 14a

Figure 4.3 shows the major destinations for Australia's exports in 2016-17 according to major region or country. North East Asia includes China, Japan, Korea, Taiwan and Hong Kong, which accounted for 60.6% of exports in 2016-17. A further 10.4% of exports went to the ten ASEAN countries; 5.5% to India; 4.4% to both the EU and USA; and 14.7% to other markets in Asia, Europe, the Middle East, South America, Africa and the Pacific. China's export share rose from 14.9% in 2007-08 to 29.5% in 2016-17 because of its large demand for Australian mineral and agricultural resources.

In terms of imports, China (22.5%), the European Union (18.4%) and ASEAN (15.9%) were the most important sources of Australian imports in 2016-17 as shown in **Table 4.3**. Singapore, Thailand, Malaysia and Indonesia were the most important export markets and sources of imports in ASEAN for Australia in 2016-17. Within the EU, Britain, Italy, Germany, Holland and France had the highest trade shares for both exports and imports in 2016-17. Next in importance as sources of Australian imports in 2016-17 were the USA (12.1%), Japan (8.3%) and Korea (4.5%). **Table 4.4** shows that APEC, developing and OECD countries were the major sources of Australian imports in 2016-17.

Figure 4.4 shows the major sources of Australian imports in 2016-17. North East Asia (37.2%), the EU (18.4%) and ASEAN (15.9%) were the major sources of Australian imports in 2016-17. China (22.5%) was the single most important country for imports, followed by the USA with 12.1% of imports. China and the ASEAN countries have become major sources of low cost Australian manufactured imports over time. The growth in Australia's export and import merchandise trade over time has been due to greater trade intensity (i.e. the ratio of exports and imports to GDP); trade liberalisation within the Asia Pacific region under WTO, APEC, AANZFTA and TPP agreements; and bilateral free trade agreements with Australia's major trading partners such as the USA, Singapore, Thailand, Korea, Japan and China.

Figure 4.4: Major Sources of Australian Imports in 2016-17



Source: ABS (2017), *International Trade in Goods and Services*, Catalogue 5368.0, June. Table 14b

REVIEW QUESTIONS

TRENDS IN AUSTRALIA'S TRADE PATTERN

1. What features characterise international trade and financial flows?
2. Discuss the factors that led to greater internationalisation of the Australian economy in the 1980s, 1990s and 2000s.
3. Refer to Tables 4.1 and 4.2 and the text and discuss trends in the value of Australia's exports and imports of goods and services in 2016-17.
4. Refer to Figure 4.1 and the text and discuss the composition of Australia's exports of goods and services in 2016-17.
5. Refer to Figure 4.2 and discuss the composition of Australia's imports of goods and services in 2016-17.
6. Refer to Tables 4.3 and 4.4 and the text and discuss Australia's major export markets and sources of imports in 2016-17.
7. Refer to Figures 4.3 and 4.4 and the text and discuss Australia's major export markets and sources of imports by region or major country in 2016-17.
8. Define the following terms and add them to a glossary:

capital goods	financial flows	merchandise trade
commodity exports	goods exports	pattern of trade
composition of trade	imports	service exports
consumer goods	intermediate goods	trade flows
direction of trade	internationalisation	trade intensity
exports	manufactured exports	trade liberalisation

Trends in the Value and Composition of Australia's Financial Flows

Investment flows into and out of Australia increased dramatically after the deregulation of financial markets and the floating of the Australian dollar in 1983. International investment has two dimensions: foreign investment in Australia and Australian investment abroad. **Foreign investment in Australia** refers to the stock of foreign liabilities (debt and equity borrowings) owed by Australian residents to non residents. The level of foreign investment in Australia increased during the 1980s, 1990s and 2000s. From a total of $325,980m in 1991-92 it had grown to $3,237,904m by 2016-17 (see **Table 4.5**). According to the ABS, foreign investment in Australia can take four forms:

1. **Direct investment** is a category of international investment that reflects the objective of obtaining a lasting interest by a resident in one economy, in an enterprise in another economy. It implies a significant degree of influence by the foreign investor over the management of the enterprise. According to the ABS, a direct investment relationship is generally deemed to be established when a direct investor, who is a resident in one economy, holds 10% or more of the ordinary shares or voting stock of an enterprise in another economy.
2. **Portfolio investment** refers to investment in equity securities (such as shares, options and rights) and debt securities (other than direct investment and includes bonds and notes).
3. **Other foreign investment** includes trade credits, loans, currency and deposits.
4. **Financial derivatives** include currency swaps, options and other derivative products.

Table 4.5: International Investment by Type of Investment 2016-17

Foreign Investment in Australia		*Australian Investment Abroad*	
Direct Investment	$880,804m	Direct Investment	-$623,041m
Portfolio Investment	$1,664,693m	Portfolio Investment	-$897,029m
Other Investment	$503,285m	Other Investment	-$477,120m
Financial Derivatives	$189,122m	Financial Derivatives	-$156,374m
		Reserve Assets	-$84,077m
Total Foreign Investment in Australia	$3,237,904m	Total Australian Investment Abroad	-$2,237,641m

Source: ABS (2017), *Balance of Payments and International Investment Position*, Catalogue 5302.0, June.

The main **sources of foreign investment** in Australia are from the USA, Britain, Japan, Hong Kong, China, Singapore and New Zealand. Multinational corporations from these countries have established subsidiaries or bought controlling interests in Australian manufacturing, agriculture, mining and service industries. Much of the growth in foreign direct and portfolio investment in Australia between 2004 and 2008 was due to the **mining or resources boom**. In 2008 there were over 3,000 foreign affiliates of MNCs located in Australia and 900 MNCs based in Australia. The advantages of foreign investment to Australia include transfers of technology and management skills; access to foreign exchange; the creation of employment opportunities and management training; and increased access to export markets.

The disadvantages to Australia of high levels of foreign investment include some loss of ownership and control of resources; the cost of servicing overseas debt and equity borrowings; and the volatile nature of speculative portfolio capital flows impacting on the exchange rate. The federal government established the **Foreign Investment Review Board** (FIRB) in 1976 to advise the federal treasurer on proposed foreign investment projects in strategic industries likely to be against the national interest.

For example, in 2001, the FIRB rejected Shell's takeover bid for Woodside Petroleum because it considered the bid to be against the public interest in the strategically important resources sector. In 2009 the FIRB approved the Chinalco bid to buy a large interest in the mining conglomerate Rio-Tinto, but this bid failed because of management and shareholder opposition, despite the FIRB arguing that it was not against the national interest. In 2011 the FIRB and the federal treasurer prohibited the acquisition of the ASX Ltd by the Singapore Exchange Ltd because they argued the proposal was not in the national interest. In 2016 the federal treasurer, on the advice of the FIRB, rejected a bid by the Chinese State Grid Corporation to buy Ausgrid as it was considered to be against the national interest.

Australian investment abroad generally refers to the stock of foreign financial assets (i.e. claims on non residents) owned by Australian residents. The level of Australian investment abroad grew significantly from -$107,940m in 1990-91 to -$2,237,641m in 2016-17 (see **Table 4.5**). Australian investment abroad has grown because of the rising offshore interests of major Australian companies like Rio-Tinto, BHP-Billiton, AMP, Amcor, Southcorp and Australian banks such as CBA, Westpac, NAB and ANZ. The five types of Australian investment abroad defined by the ABS contained in **Table 4.5** are as follows:

1. **Direct Australian investment abroad** is where an Australian investor acquires 10% or more of the ordinary shares or voting stock of an enterprise or business in another economy.
2. **Portfolio investment** refers to Australian investment in foreign equity (such as shares, options and rights) and debt securities (other than direct investment such as bonds and notes).
3. **Other Australian investment abroad** includes trade credits, loans, currency and deposits.
4. **Financial derivatives** include currency swaps, options and other derivative products.
5. **Reserve assets** are foreign financial assets available to and controlled by the monetary authorities (mainly the Reserve Bank of Australia) for financing payments and dealing in foreign exchange.

Table 4.6: The Top International Investors from Australia in 1999-2000

1.	Coles Myer	6.	Woolworths	11.	Westpac
2.	NAB	7.	Telstra	12.	Commonwealth Bank
3.	BHP-Billiton	8.	Rio Tinto	13.	Qantas
4.	News Corporation	9.	Lend Lease	14.	CSR
5.	AMP	10.	ANZ	15.	Amcor

Source: Department of Foreign Affairs and Trade (2002), *The Big End of Town*, Common. of Australia, Canberra.

The top 15 Australian investors ranked by foreign sales revenue in 1999-2000 are listed in **Table 4.6**. In the 1980s the list was dominated by mining companies and manufacturers, but the 1999-2000 rankings showed the growing importance of service sector businesses in retailing, banking, the media and airlines. Increased Australian investment abroad in the 1990s and 2000s was due to Australian businesses securing new export markets in foreign countries; seeking higher rates of return on their investments; and spreading the financial risks associated with their business activities.

Debt and Equity Borrowings from Abroad

Another aspect of Australia's financial flows includes the dissection of **Australia's international investment position** into foreign assets (i.e. debt and equity lending abroad) and foreign liabilities (i.e. debt and equity borrowings from abroad). This is shown in **Table 4.7**. Total foreign assets refer to Australian debt and equity lending abroad and this grew from -$2,177,279m in 2015-16 to -$2,237,641m in 2016-17. The growth in debt lending abroad decreased in this period whilst the growth in equity lending abroad rose. Total foreign liabilities refer to Australian equity and debt borrowings from abroad and these increased from $3,213,138m in 2015-16 to $3,237,904m in 2016-17.

In 2016-17 foreign debt borrowings of $2,089,463m represented 64.5% of total foreign liabilities, whilst equity borrowings of $1,148,441m represented 35.5% of total foreign liabilities. Since total foreign liabilities exceed total foreign assets, Australia is a net borrower of funds in international financial markets. Australia imports capital to supplement domestic savings which are insufficient to finance all of domestic investment. Therefore Australia has a large stock of gross or total foreign liabilities.

Australia's net international position is calculated by subtracting total foreign assets owned (debt and equity), from the total foreign liabilities owed (debt and equity). In **Table 4.8** net foreign equity and net foreign debt for 2015-16 and 2016-17 are shown. **The sum of net foreign equity and net foreign debt is the total of net foreign liabilities or Australia's net international investment position**. Net foreign equity was $9,665m and net foreign debt was $990,599m in 2016-17, resulting in net foreign liabilities of $1,000,264m. The large stock of Australia's net foreign liabilities creates a large servicing cost in terms of the net investment income component. This consists of the rent, interest, profits and dividends remitted overseas to service net foreign liabilities and this reached -$39,811m in 2016-17.

Table 4.7: Australia's International Investment Position in 2015-16 and 2016-17

	Total Foreign Assets	*(Foreign Assets)* *Equity*	*Debt*	*Total Foreign Liabilities*	*(Foreign Liabilities)* *Equity*	*Debt*
15-16	-$2,177,279m	-$1,032,299m	-$1,144,980m	$3,213,138m	$1,023,653m	$2,189,485m
16-17	-$2,237,641m	-$1,138,776m	-$1,098,865m	$3,237,904m	$1,148,441m	$2,089,463m

Source: ABS (2017), *Balance of Payments and International Investment Position*, Catalogue 5302.0, June.

Table 4.8: Australia's Net International Investment Position in 2015-16 and 2016-17

	Net Foreign Equity	*Net Foreign Debt*	*Total Net International Investment Position*
2015-16	-$8,647m	$1,044,505m	$1,035,858m
2016-17	$9,665m	$990,599m	$1,000,264m

Source: ABS (2017), *Balance of Payments and International Investment Position*, Catalogue 5302.0, June.

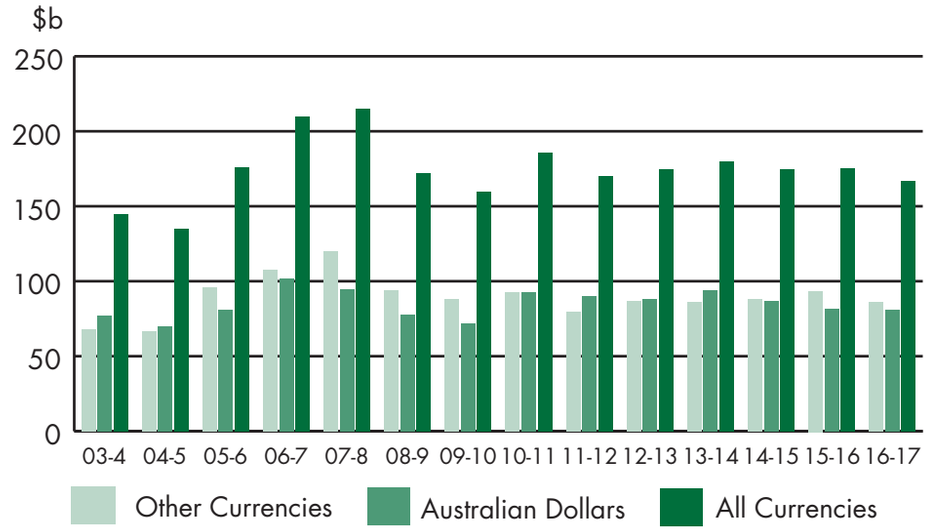
The Foreign Exchange Market

The floating of the Australian dollar and the removal of foreign exchange controls by the Reserve Bank in 1983 led to a more flexible regime for Australian companies to engage in international trade and investment. International borrowings in the Eurodollar market grew rapidly after 1983 as did foreign direct and portfolio investment in Australia. Financial innovation led to the growth in a variety of global financial instruments such as currency swaps, options and other derivatives, used to meet the risk management needs of international investors. The globalisation of financial markets and deregulation of Australia's financial system have dramatically altered the pattern of Australia's financial flows.

About 40% of funds borrowed overseas by Australian companies and financial institutions are denominated in Australian dollars, the rest in foreign currencies. Australia's increasing integration with global capital markets has led to the rapid growth in **foreign exchange turnover**. Daily foreign exchange turnover for all currencies rose from A$5b in 1984-85 to a high of A$215b in 2007-08 (see **Figure 4.5**).

However the Global Financial Crisis led to a decline in foreign exchange turnover in both 2008-09 and 2009-10, before a recovery in daily turnover to A$186b in 2010-11 and A$170b in 2011-12. The Australian dollar was the fifth most traded currency in the world in 2016 and the Australian foreign exchange market was the eighth largest with 1.9% of world turnover. The appreciation of the Australian dollar between 2010 and 2012 made it an attractive financial asset for international investors, and with strong exports to China and foreign investment in mining, supported the recovery in the foreign exchange market. In 2016-17, the average daily turnover was A$167b, with A$81b traded against Australian dollars and A$86b traded against other currencies (the US dollar, Euro, Yen and UK Pounds).

Figure 4.5: Daily Average Foreign Exchange Turnover 2003-04 to 2016-17 ($b)



Source: Reserve Bank of Australia (2017), *Statistics*, August. www.rba.gov.au Tables F9 and F10

REVIEW QUESTIONS

TRENDS IN AUSTRALIA'S FINANCIAL FLOWS

1. Distinguish between direct, portfolio and other types of foreign investment in Australia.
2. What types of Australian investment occur overseas? Refer to Table 4.5 and compare the values of the types of foreign investment in Australia and Australian investment overseas in 2016-17.
3. Discuss the advantages and disadvantages of foreign investment in Australia.
4. Which types of Australian companies invest overseas? Why do they invest overseas?
5. Refer to Table 4.7 and compare the growth in Australia's foreign assets and foreign liabilities between 2015-16 and 2016-17.
6. Explain the costs involved in Australia's large stock of net foreign debt and equity borrowings.
7. Discuss the reasons for the growth in Australia's foreign exchange turnover since 1983.

THE STRUCTURE OF AUSTRALIA'S BALANCE OF PAYMENTS

The balance of payments is a record of all financial transactions between Australian residents and the rest of the world. It is based on a double entry system of credits and debits in three ledger accounts known as the current account, the capital account and the financial account. The **current account** records all transactions of a current nature such as exports (credits) and imports (debits) of goods, services, net primary income (investment income) and net secondary income (personal transfers and workers' remittances). The **capital and financial accounts** record capital transactions which tend to be long term in nature such as foreign aid (capital account) and direct and portfolio investment (financial account).

The Current Account

The current format for the Australian balance of payments in **Table 4.9** was introduced by the ABS in August 2009, incorporating new international statistical standards and revisions of data. The current account shows all transactions involving money received (i.e. income or credits) and money spent (i.e. expenditure or debits) for exports and imports of goods, services, net primary income (investment income) and net secondary income (transfers). The **major items in the current account** are the following:

- **Goods** credits are exports, and goods debits are imports, of merchandise. Exports are divided into rural and non rural, whilst imports are classified as consumption, capital and intermediate goods.
- **Services** credits are exports of services, and services debits are imports of services. Services credits and debits include items such as tourism, travel, education, insurance, transport and finance.
- **Net primary income** refers to credits less debits of income received and paid, mainly to service direct, portfolio and other investment and includes dividends, interest and profits.
- **Net secondary income** refers to credits less debits associated with government transfers (such as foreign aid), personal transfers of migrants (such as pensions) and workers' remittances of wages.

The sum of the goods balance (i.e. goods credits less goods debits), net services (i.e. services credits less services debits), net primary income and net secondary income equals the current account balance. If total credits exceed total debits in the current account, there is a **current account surplus**. If total debits exceed total credits in the current account (as in Australia's case), there is a **current account deficit**.

Table 4.9: The Balance of Payments for 2014-15, 2015-16 and 2016-17 ($m)

	2014-15	*2015-16*	*2016-17*
Goods Credits	$256,281m	$243,934m	$292,009m
Goods Debits	-$269,510m	-$271,761m	-$278,190m
Goods Balance	-$13,229m	-$27,827m	$13,819m
Net Services	-$7,796m	-$9,071m	-$1,654m
Net Primary Income	-$34,034m	-$34,199m	-$39,811m
Net Secondary Income	-$1,920m	-$1,731m	-$1,823m
Balance on Current Account	**-$56,979m**	**-$72,828m**	**-$29,469m**
Capital Account	-$520m	-$531m	-$762m
Financial Account	$58,712m	$76,435m	$25,373m
Direct Investment	$48,510m	$55,242m	$70,827m
Portfolio Investment	$47,828m	-$4,322m	-$1,945m
Financial Derivatives	-$4,031m	-$12,248m	-$711m
Other Investment	-$35,717m	$35,368m	-$23,168m
Reserve Assets	$2,122m	$2,395m	-$19,630m
Balance on Financial Account	$58,712m	$76,435m	$25,373m
Balance on Capital and Financial Account	**$58,192m**	**$75,904m**	**$24,611m**
Net Errors and Omissions	-$1,213m	-$3,076m	$4,858m

Source: ABS (2017), *Balance of Payments and International Investment Position*, Catalogue 5302.0, June.
NB Figures are rounded and may not total

The Capital and Financial Accounts

The capital account and the financial account are the two other accounts which together with the current account make up the overall **balance of payments** for Australia. They are defined as follows:

- **The capital account** records credits and debits for the acquisition and/or disposal of non produced and non financial assets such as net capital transfers of foreign aid and net capital brought into Australia by migrants.
- **The financial account** records credits and debits for transactions associated with direct investment, portfolio investment, financial derivatives, other investment (e.g. loans) and changes in the value of Reserve Assets held by the Reserve Bank (such as trading in foreign currencies and the Australian government's SDR holdings with the IMF). The financial account basically records foreign investment in Australia and Australian investment abroad and is also broken into debt and equity.

The sum of the capital and financial account balances is known as the **balance on capital and financial account**. If total credits in the two accounts exceed total debits in the two accounts, there is a **surplus in the balance on capital and financial account** (as in Australia's case). If total debits in the two accounts exceed total credits in the two accounts, there is a **deficit in the capital and financial account**.

Net errors and omissions include statistical errors and revisions in calculations by the ABS, and allow a surplus (or deficit) in the capital and financial account balance to exactly offset a deficit (or surplus) in the current account balance. When the two account balances are added together, and net errors and omissions are included, the two accounts must total zero under a floating exchange rate.

Australia runs a large current account deficit and must finance this deficit with an equivalent surplus in the capital and financial account by borrowing capital overseas. Conversely, countries such as Japan, Germany and China record current account surpluses and offset these with capital and financial account deficits by lending capital overseas. Current account deficit countries like Australia borrow capital from current account surplus countries like Japan, Germany and China to finance their deficits. Formulae for calculating the current account, capital and financial account, and the balance of payments are:

(1) Current Account Balance = Goods Balance + Net Services + Net Primary Income + Net Secondary Income

(2) Capital and Financial Account Balance = Capital Account Balance + Financial Account Balance

(3) Balance of Payments = Current Account Balance + Capital and Financial Account Balance $\pm$ Net Errors and Omissions

Links Between Key Balance of Payments Categories

Table 4.9 shows Australian balance of payments data between 2014-15 and 2016-17. In 2014-15 slower growth in the global economy reduced export income to $256,281m, and with increased spending on imports of -$269,510m, led to a goods deficit of -$13,229m. The goods deficit (-$13,229m), plus deficits in net services (-$7,796m), net primary income (-$34,034m) and net secondary income (-$1,920m), led to a larger current account deficit of -$56,979m than in 2013-14 (-$47,056m). The current account deficit was financed by a surplus in the financial account of $58,712m.

In 2015-16 the balance of payments was influenced by slower global growth which led to lower commodity prices and the terms of trade for Australia. Export income fell to $243,934m as mining exports contracted due to slower growth in China. With import spending of -$271,761m, the goods balance was a very large deficit of -$27,827m. When combined with the net services deficit of -$9,071m, the goods and services deficit was -$36,898m. The net primary income deficit of -$34,199m, plus the net secondary income deficit of -$1,731m and the goods and services deficit (-$36,898m) led to a large current account deficit of -$72,828m. This was financed by a financial account surplus of $76,435m.

In 2016-17 stronger global growth led to increased demand for Australia's exports, especially mining exports. Commodity prices rose and Australia's terms of trade improved. Exports rose to a value of $292,009m and with slower growth in imports, there was a trade surplus of $13,819m. The net services deficit fell to -$1,654m because of improved competitiveness (due to a lower exchange rate) and there was a surplus in goods and services of $12,165m. This helped to reduce the current account deficit to -$29,469m which was largely financed by a surplus in the financial account of $25,373m.

Table 4.10 shows the main components of Australia's current account between 2008-09 and 2016-17:

- **Australia usually has a deficit in the current account of the balance of payments**. The size of the current account deficit is largely influenced by the size of the deficit or surplus in the goods and services balance and the size of the net primary income deficit.
- The **goods and services balance is usually in deficit but in 2008-09, 2010-11 and 2016-17 surpluses were achieved mainly because of strong mining exports**. The goods and services balance was in deficit in 2009-10 because the Global Financial Crisis reduced demand for Australia's commodity exports. Slower world growth led to larger goods and services deficits between 2014 and 2016.
- **The net primary income deficit** accounted for the majority of the current account deficit between 2008 and 2017 and represents the servicing cost of Australia's net foreign liabilities.
- The **net secondary income balance recorded small deficits** between -$1b and -$2.3b over 2008-17, reflecting income less expenditure on foreign aid, migrants' funds and workers' remittances.

Table 4.10: Components of Australia's Current Account 2008-09 to 2016-17 ($m)

Year	*Current Account*	*Goods and Services Balance*	*Primary Income*	*Secondary Income*
08-9	-$38,780m	$7,622m	-$45,407m	-$995m
09-10	-$56,018m	-$4,621m	-$50,327m	-$1,070m
10-11	-$34,384m	$21,308m	-$54,151m	-$1,541m
11-12	-$50,420m	-$3,072m	-$45,021m	-$2,327m
12-13	-$60,309m	-$20,031m	-$37,983m	-$2,295m
13-14	-$47,056m	-$6,230m	-$38,841m	-$1,985m
14-15	-$56,979m	-$21,025m	-$34,034m	-$1,920m
15-16	-$72,828m	-$36,898m	-$34,199m	-$1,731m
16-17	-$29,469m	$12,165m	-$39,811m	-$1,823m

Source: ABS (2017), *Balance of Payments and International Investment Position*, Catalogue 5302.0, June.

Table 4.11 shows the main components of the capital and financial accounts for Australia between 2008-09 and 2016-17. The main trends that emerged in this period were:

- The capital account balance usually recorded small deficits of between -$291m and -$762m.
- The financial account balance is always in surplus and mainly represents debt and equity borrowings (in the form of net direct and net portfolio investment) to finance some domestic investment and the current account deficit. The size of the financial account surplus was $25.3b in 2016-17.
- The balance on capital and financial account was always in surplus to finance the persistent current account deficit in Australia's balance of payments between 2008-09 and 2016-17.
- Reserve assets vary (e.g. a -$19.6b deficit in 2016-17) depending on the profitability and nature of the Reserve Bank's foreign exchange dealings and the value of Australia's SDRs held with the IMF.

Table 4.11: Components of Australia's Capital and Financial Account 2008-17 ($m)

Year	*Capital Account*	*Financial Account*	*Capital and Financial Account*	*Net Errors and Omissions*
08-9	-$611m	$40,484m	$39,873m	-$1,093m
09-10	-$291m	$55,054m	$54,763m	$1,255m
10-11	-$556m	$34,103m	$33,547m	$837m
11-12	-$408m	$50,702m	$50,294m	$126m
12-13	-$453m	$59,822m	$59,369m	$940m
13-14	-$395m	$47,366m	$46,971m	$85m
14-15	-$520m	$58,712m	$58,192m	-$1,213m
15-16	-$531m	$76,435m	$75,904m	-$3,076m
16-17	-$762m	$25,373m	$24,611m	$4,858m

Source: ABS (2017), *Balance of Payments and International Investment Position*, Catalogue 5302.0, June.

Trends in the Size and Composition of Australia's Balance of Payments

The size of the current account deficit is responsive to changes in both domestic and world economic growth. Generally the current account deficit tends to increase when world growth is weaker than domestic growth, leading to a decrease in export income relative to import spending. This may result in a larger goods and services deficit and current account deficit. Conversely when world growth exceeds domestic growth, export income tends to grow more quickly than import spending, leading to a goods and services surplus which can reduce the size of the current account deficit in the balance of payments.

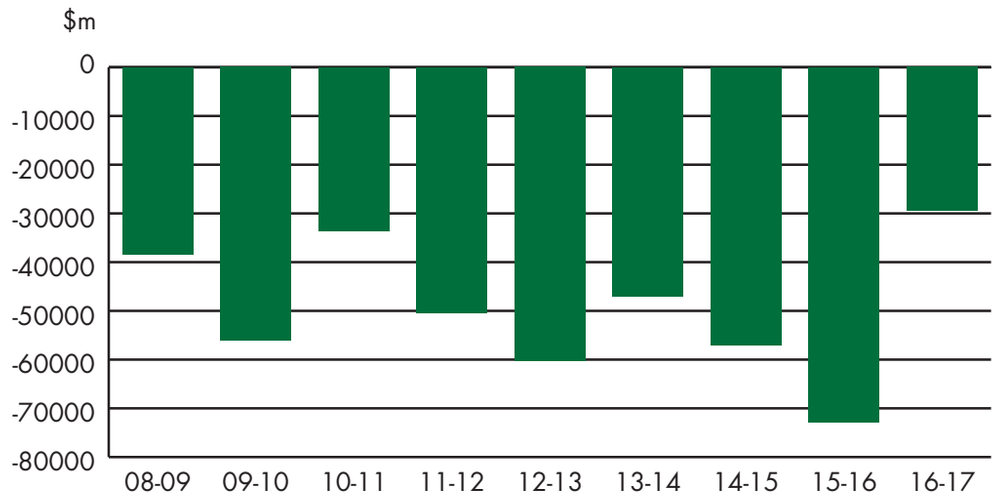
Figure 4.6 shows trends in the current account deficit between 2008-09 and 2016-17. The current account deficit was lower at -$38.7b (-3.1% of GDP) in 2008-09 compared to 2007-08 (-$73.9b or -6.3% of GDP) due to a surplus of $7.6b in the goods and services balance, and a lower net primary income deficit of -$45.4b. In 2009-10 the current account deficit was higher at -$56b or -4.3% of GDP, reflecting a goods and services deficit of -$4.6b and a larger net primary income deficit of -$50.3b.

A major structural change took place in the current account deficit in 2010-11 with Australia recording a large $28.2b surplus in the goods balance, as a result of strong mining exports and higher commodity prices. The balance on goods and services was a surplus of $21.3b, which offset some of the -$54.1b net primary income deficit. The current account deficit fell to -$34.3b (-2.3% of GDP), its lowest level since 2001-02. In 2011-12 the current account deficit increased to -$50.4b or -2.8% of GDP due to a small goods and services deficit of -$3b and a large net primary income deficit of -$45b.

Slower world growth in 2012-13 led to lower export income and a deficit in the goods balance of -$6.4b. The high value of the Australian dollar reduced the competitiveness of manufactured exports and service exports such as education and tourism. This resulted in a larger net services deficit in 2012-13 of -$13.5b, with the goods and services deficit reaching -$20b. Combined with a net primary income deficit of -$37.9b, the current account deficit rose to -$60.3b which represented -3.2% of GDP.

In 2013-14 the current account deficit fell to -$47.1b because of a smaller goods and services deficit of -$6.2b and a stable net primary income deficit of -$38.8b. This was due to the peak reached in mining investment which led to slower growth in capital imports and no real increase in the remittance of investment income (such as profits and dividends) to foreign investors. Slower world economic growth in 2014-15, especially in Australia's main trading partner, China, led to a 6.6% fall in export income which resulted in a goods deficit of -$13.2b. The net services deficit fell to -$7.8b in 2014-15 from -$14.3b in 2013-14. However, the overall goods and services deficit of -$21,025m was -$14,795m or 237% higher than the goods and services deficit of -$6,230m in 2013-14. The current account deficit

Figure 4.6: Australia's Current Account Deficit 2008-09 to 2016-17 ($m)



Source: ABS (2017), *Balance of Payments and International Investment Position*, Catalogue 5302.0, June.

in 2014-15 of -$56,979m was 21% higher than in 2013-14 and represented -3.6% of GDP. The current account deficit in 2014-15 was financed by a large surplus in the financial account of $58,712m.

In 2015-16 the current account deficit increased by 27.8% to -$72,828m (-3.8% of GDP) because of the impact of slower world growth on commodity prices, falling export demand and a lower terms of trade. Mining exports fell and the goods deficit rose to -$27,827m, and the goods and services deficit to -$36,898m. The net primary income deficit of -$34,199m also contributed to the current account deficit. The current account deficit was financed by a large surplus of $76,435m in the financial account.

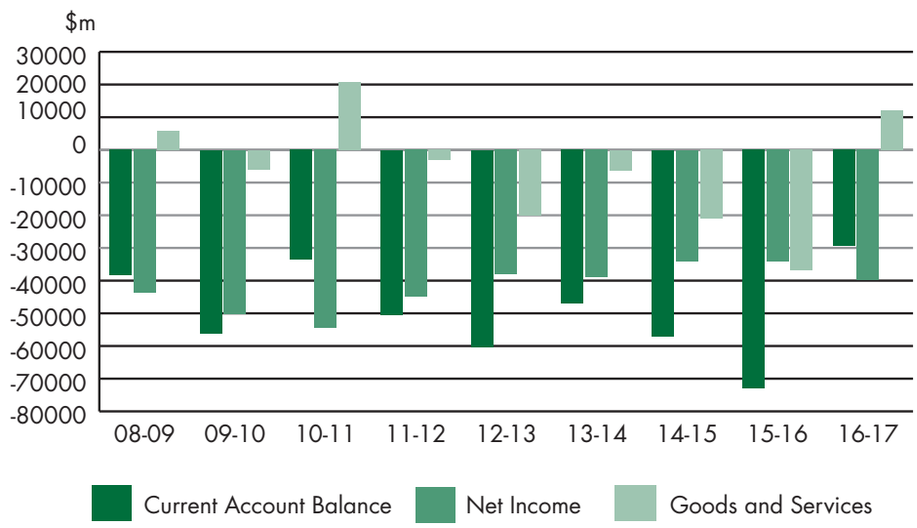
A major turnaround in the current account deficit occurred in 2016-17 with stronger world growth leading to higher commodity prices and Australia's terms of trade. This boosted export income and a surplus of $12,165m was achieved in the goods and services balance. Although the net income deficit was -$39,811m, the trade surplus helped to reduce the current account deficit to -$29,469m or -2.1% of GDP. The current account deficit was largely financed by a financial account surplus of $25,373m.

The Reasons for Trends in the Current Account Deficit

The causes of Australia's current account deficit are both cyclical and structural. In **cyclical terms**, when the Australian economy grows faster than the world economy, import demand tends to grow faster than export demand, causing the goods and services balance to go into deficit, leading to a higher current account deficit. Also if **world growth slows** as it did between 2014 and 2016, commodity prices for Australia's exports tend to fall, reducing the terms of trade and export income, leading to a larger goods deficit and current account deficit. Conversely, when world growth exceeds Australia's growth rate, export demand strengthens, leading to higher commodity export prices, a higher terms of trade and increased export income. This occurred in 2008-09 and 2010-11 because of **global resources booms** which increased commodity prices and the volume and value of commodity exports. Surpluses in goods and services were achieved in 2008-09, 2010-11 and 2016-17, reducing the current account deficit.

In **structural terms**, the underlying cause of the current account deficit is the size of the net primary income deficit, which is the servicing cost of Australia's overseas debt and equity borrowings (net external liabilities). For example, payments of interest, profits and dividends to foreign lenders and investors in 2015-16 led to the net primary income deficit being 46.9% of the current account deficit. The trend in **Figure 4.7** shows that between 2008-09 and 2016-17 the net primary income deficit accounted for 45% or more of the current account deficit. Between 2011 and 2016 deficits in the goods and services balance led to much larger current account deficits. In contrast, the surplus of $12.1b in the goods and services balance in 2016-17 reduced the size of the current account deficit from -$72b to -$29.4b.

Figure 4.7: Components of the Current Account Deficit 2008-09 to 2016-17 ($m)



Source: ABS (2017), *Balance of Payments and International Investment Position*, Catalogue 5302.0, June.

REVIEW QUESTIONS

THE STRUCTURE OF AUSTRALIA'S BALANCE OF PAYMENTS

1. Define the term 'balance of payments'. Discuss the three main accounts in Australia's balance of payments from the text and Table 4.9.
2. Describe in detail the main components of the current, capital and financial accounts. Explain why the sum of the two accounts total zero under a system of floating exchange rates.
3. Refer to Table 4.9 and the text and explain why the current account deficit decreased from -$72.8b to -$29.4b between 2015-16 and 2016-17.
4. Refer to Tables 4.10 and 4.11 and explain the main linkages between the components of the current, capital and financial accounts in the balance of payments.
5. Discuss the impact of the global resources boom (2004-07) on Australia's balance of payments.
6. Refer to Figure 4.6, Table 4.10 and the text and discuss the trends in the size of the current account deficit between 2008-09 and 2016-17.
7. Distinguish between the cyclical and structural factors affecting the size of the current account deficit in the 2000s.
8. Refer to Figure 4.7 and discuss the trends in the main components of the current account deficit between 2008-09 and 2016-17.

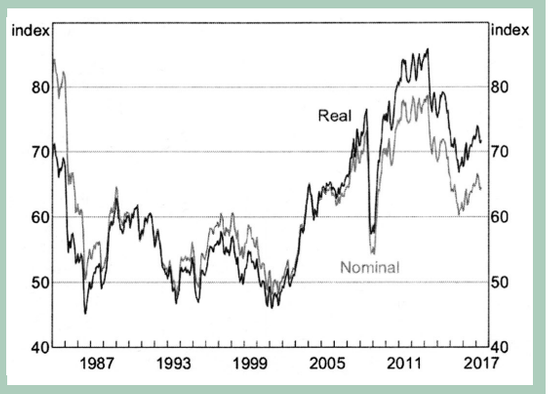
RECENT TRENDS IN AUSTRALIA'S BALANCE OF PAYMENTS

International Competitiveness

The international competitiveness of Australia's exports of agriculture, minerals, manufactured goods and services, has a significant effect on the volume of exports sold overseas. Of equal importance is the competitiveness of Australian import competing or import replacement industries, as this will impact on the volume of imports purchased. Changes in international competitiveness over time will affect the goods and services balance and therefore the current account outcome in the balance of payments. The competitiveness of Australia's exports and import competing goods and services can depend on a variety of factors, but relative prices have a major effect. Two statistical measures of international competitiveness are Australia's real unit labour costs (i.e. the pace of wage rises compared to the pace of productivity improvements and inflation) and the value of the Australian dollar relative to the currencies of Australia's trading partners. Two important influences on Australia's international competitiveness are therefore changes in relative inflation rates and the value of the Australian dollar exchange rate:

- Changes in domestic prices relative to the prices of competitor countries will influence competitiveness in export markets. Australia will become more competitive if its prices rise more slowly than those of its competitors in export markets. Conversely, Australia will become less internationally competitive in export markets if its prices rise more quickly than those of its competitors.
- Movements in the exchange rate of the Australian dollar against the currencies of Australia's trading partners will also influence international competitiveness. Australia will become more internationally competitive if the value of the Australian dollar falls (i.e. a depreciation) relative to the currencies of its competitors. Conversely, Australia will become less internationally competitive if the value of the Australian dollar rises (i.e. an appreciation) relative to the currencies of its competitors.

Figure 4.8: Measures of International Competitiveness
Real Unit Labour Costs (2013-14 = 100) **The Real Exchange Rate** (real TWI)



Sources: ABS (2016), *Australian National Accounts*, Catalogue 5206.0, March.
Reserve Bank of Australia (2017), *Chart Pack*, July.

Figure 4.8 shows two measures (using index numbers) of Australia's international competitiveness: **real unit labour costs** or RULC (i.e. labour costs adjusted for inflation) and the **real exchange rate** (i.e. the nominal Trade Weighted Index or TWI adjusted for inflation). A rise in either index implies a deterioration in Australia's international competitiveness relative to its major trading partners, whereas a fall in either index implies an improvement in Australia's international competitiveness.

In trend terms, real unit labour costs fell in Australia between 2001 and 2009 as inflation remained between 2% and 3% and nominal wages growth was contained to 4% per annum. This helped to maintain international competitiveness. Real unit labour costs also fell by 1.7% in 2016-17 as wages growth slowed to around 2%. However the real exchange rate appreciated strongly between 2003 and 2007, due to higher commodity prices and a rising terms of trade and reduced the competitiveness of Australia's manufactured and service exports. However the Global Financial Crisis in 2007-08 led to a depreciation in the real exchange rate, helping to lift competitiveness, but this was reversed between 2010 and 2012 with a 20% appreciation reducing competitiveness. There was a 20% depreciation of the real exchange rate between 2013 and 2016 as commodity prices and the terms of trade fell helping to increase competitiveness and exports as the economy transitioned to non mining sources of growth.

The Terms of Trade

The income received from the sale of exports depends on the prices received for exports and the volume of exports sold. The expenditure on imports depends on the prices paid for imports and the volume of imports purchased. The **terms of trade** refer to the relative prices a country receives for its exports and pays for its imports. Movements in export and import prices are measured using index numbers. The export price index and the import price index are then used to construct a terms of trade index. A base year is selected and given an index number of 100, against which price comparisons in other years can be made. The following formula is used to calculate the terms of trade index:

$$\text{Terms of Trade Index} = \frac{\text{Export Price Index}}{\text{Import Price Index}} \times \frac{100}{1}$$

For example, if the export price index for Year 1 was 100 and the import price index for Year 1 was also 100, the terms of trade would be 100, because there has been no change in either export or import prices or the terms of trade i.e.

$$\text{Terms of Trade for Year 1} = \frac{100}{100} \times \frac{100}{1} = 100$$

However if the export price index rose to 105 in Year 2 and the import price index rose to 110 in the same year, the terms of trade would have deteriorated or fallen to 95.4 since import prices have risen faster (by 10%) than export prices (by 5%) i.e.

$$\text{Terms of Trade for Year 2} = \frac{105}{110} \times \frac{100}{1} = 95.4$$

If in Year 3, the export price index rose from 105 to 115 and the import price index fell from 110 to 105, the terms of trade would have improved or recorded a favourable movement to 109.5:

$$\text{Terms of Trade for Year 3} = \frac{115}{105} \times \frac{100}{1} = 109.5$$

A favourable movement or an **improvement in the terms of trade** occurs when export prices rise faster than import prices or export prices fall less quickly than import prices. This means that a country can finance a greater volume of imports with an existing volume of exports. On the otherhand an unfavourable movement or a **deterioration in the terms of trade** occurs when export prices rise less quickly than import prices or export prices fall more quickly than import prices. This means that a country can finance a lower volume of imports with an existing volume of exports.

Historically Australia has experienced a deterioration in its terms of trade because of the reliance on agricultural and mineral exports for export income. The prices of these commodities in world markets are volatile and depend on world demand and supply conditions. On the otherhand, Australia is an importer of consumer, manufactured, intermediate and capital goods, whose prices tend to be less volatile in global markets. Australia therefore has tended to experience a long run decline in its export price index and a rise in its import price index, leading to an overall decline in the terms of trade.

However from 2001-02 there was a trend improvement in Australia's terms of trade as shown in **Table 4.12**. Note that the base years used in **Table 4.12** are different for the export and import price indexes (1989-90) and the terms of trade index (2003-04). Australia's terms of trade improved between 2004 and 2009 because of rising export prices due to the global resources boom, and the fall in the prices of some of Australia's imports of ICT and capital goods due to the impact of globalisation in reducing costs. The export price index rose from 116.4 in 2004-05 to a high of 196.5 in 2008-09, whilst the import price index rose far less, from 112.8 to 129.7. As a result, the terms of trade rose by 30% in this period, before declining by 20% in 2009-10 due to the impact of the Global Financial Crisis on commodity prices. A global recovery in 2010-11 led to a higher terms of trade, but between 2011-12 and 2015-16 the terms of trade deteriorated with slower world growth and lower commodity prices.

Table 4.12: Australian Export, Import Price and Terms of Trade Indexes 2001-2012

Year	*Export Price Index (1989-90 = 100)*	*Import Price Index (1989-90 = 100)*	*Terms of Trade Index (2003-04 = 100)*	
2001-02	116.7	132.3	88.2	improvement
2002-03	111.7	126.0	88.6	improvement
2003-04	102.5	112.3	100.0	base year
2004-05	116.4	112.8	103.2	improvement
2005-06	136.0	117.0	116.2	improvement
2006-07	146.8	115.7	126.8	improvement
2007-08	147.2	113.1	130.1	improvement
2008-09	196.5	129.7	151.5	improvement
2009-10	157.6	117.7	133.9	deterioration
2010-11	184.9	116.6	158.5	improvement
2011-12	187.7	118.6	158.2	deterioration

Sources: ABS (2012), *Australian Economic Indicators*, Cat. 1350.0 and RBA (2012), *Statistics*, www.rba.gov.au.

With world growth averaging 5% in 2010 and 4% in 2011, the global demand for commodities increased and this led to rising global commodity prices. Australia benefited from the rising prices for its rural, mineral and metal exports. Price rises in the year to May 2011 were large for rural commodities such as wheat and wool, coking coal (47%) and iron ore (33%) as shown in **Table 4.13**. As a result, Australia's export price index rose by 27.3% in 2010-11. Much of this strong global demand for commodities was sourced from China and other Asian countries which sustained higher rates of economic growth of between 7% and 10% in 2010-11, compared with 2% to 4% in the major advanced countries.

Table 4.13: Changes in Commodity Prices Year to May 2016 and (Year to May 2011)

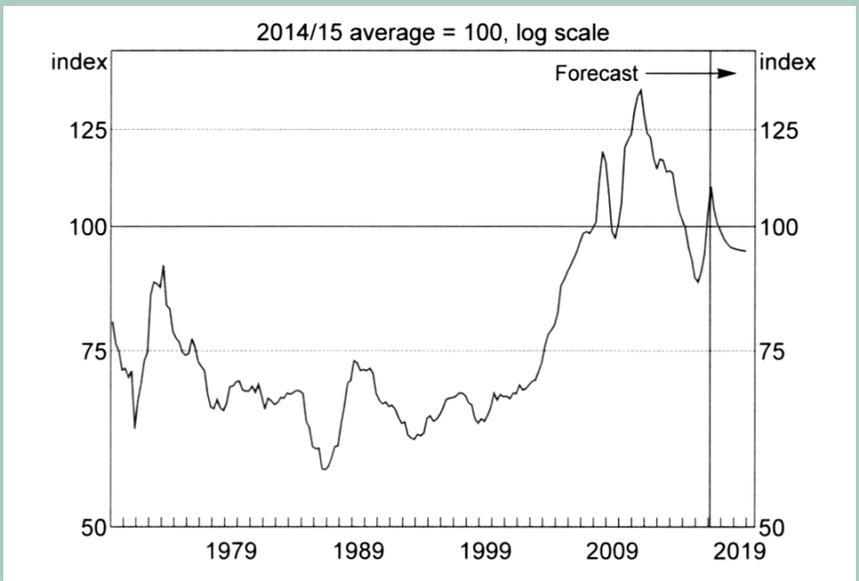
Bulk Commodities	-9% (35.3%)	Base metals	-17% (-12.6%)
- Iron ore	-1% (33%)	Gold	3% (20%)
- Coking coal	-19% (47%)	Brent oil	-33% (30%)
- Thermal coal	-17% (26%)		
Rural	-7% (48.6%)	Reserve Bank Index	-15% (27%)

Source: Reserve Bank of Australia (2011 and 2016), *Statements on Monetary Policy*, May.

The trend of the rising terms of trade changed dramatically between 2011 and 2016 with weaker world growth of 3% and lower global commodity prices due to the impact of the European Sovereign Debt Crisis, a slow economic recovery in the USA and a slower growth rate in China. The terms of trade declined by nearly 40% between their peak in late 2011 and mid 2016 as shown in **Figure 4.9**.

With lower levels of global economic activity in 2016, the demand for commodities weakened in the year to May 2016 with a fall of -19% in the price of coking coal, -17% for base metals and -33% for Brent oil as shown in **Table 4.13**. The Reserve Bank's Index of commodities was 15% lower in the year to May 2016 compared to a rise in the index of 27% in the year to May 2011 during the post GFC boom. From May 2016 to May 2017 there was a general increase in world commodity prices including coal, iron ore and oil which led to a rise in Australia's terms of trade. However the Reserve Bank forecast the terms of trade to decline in 2017-18 as shown in **Figure 4.9** because of falls in commodity prices

Figure 4.9: Trends in the Terms of Trade 1970 to 2019 (f)



Source: Reserve Bank of Australia (2017), *Statement on Monetary Policy*, May.

International Borrowing: Foreign Debt and Foreign Liabilities

A major effect of Australia's persistent current account deficit is that it must be financed by a surplus in the capital and financial account through debt and equity borrowings. Net external debt plus net equity borrowings represent Australia's **net foreign liabilities** which were $1,000,264m in 2016-17 as shown in **Table 4.14**. Net foreign liabilities are equal to total foreign liabilities less total foreign assets i.e.

Net Foreign Liabilities (net debt plus net equity)	=	Total Foreign Liabilities (gross debt plus gross equity)	_	Total Foreign Assets (gross debt plus gross equity)

Between 2012-13 and 2015-16 Australia's net foreign equity changed from a net liability of $54,764m to a net asset position of -$8,647m, but moved back into a net liability position of $9,665m in 2016-17. Most of Australia's net foreign liabilities are accounted for by the **net foreign debt** which is equal to total foreign debt liabilities less total foreign debt assets i.e.

Net Foreign Debt = Total Foreign Debt Liabilities - Total Foreign Debt Assets

Table 4.14: Australia's Net Foreign Liabilities, Net Foreign Debt and Net Foreign Equity

Year	*Net Foreign Liabilities*	*Net Foreign Debt*	*% of GDP*	*Net Foreign Equity*
2010-11	$802,412m	$685,909m	49.5	$116,503m
2011-12	$879,520m	$756,183m	52.2	$123,337m
2012-13	$816,937m	$762,173m	51.1	$54,764m
2013-14	$864,243m	$865,462m	55.1	-$1,219m
2014-15	$905,996m	$976,056m	61.3	-$70,060m
2015-16	$1,035,858m	$1,044,505m	63.8	-$8,647m
2016-17	$1,000,264m	$990,599m	58.9	$9,665m

Source: ABS (2017), *Balance of Payments and International Investment Position*, Catalogue 5302.0, June.

Net foreign debt was $990,599m or 58.9% of GDP in 2016-17 (see **Table 4.14**), with net foreign debt averaging 55.9% of Australia's GDP between 2010 and 2017. The growth in net foreign debt increases the amount of debt to be repaid in the future, plus the cost of servicing the debt in the form of interest payments. Interest payments represent a current outflow in the balance of payments, and add to the size of the net primary income deficit, and form the structural base of the current account deficit.

The **debt servicing ratio** is usually expressed as the percentage of export income that is paid in interest. This reached a peak of 20% in the late 1980s but fell to an average of 10% in the 1990s and 2000s as the growth in the net foreign debt slowed and world interest rates remained low. However in 2007-08 foreign debt accumulation and world interest rates rose, increasing the debt servicing ratio to about 12%. This ratio fell to -6.3% in 2016-17 because of lower world interest rates and the higher value of exports. A large net foreign debt, exposes Australia to numerous external risks that include the following:

- A rise in world interest rates raises the cost of the debt servicing ratio (interest/export income);
- A fall in export income raises the debt servicing ratio (interest/export income);
- A depreciation in the exchange rate increases the value of the net foreign debt, since 60% of the net foreign debt is denominated in foreign currencies and 40% is in Australian dollars;
- A large stock of net foreign debt may reduce Australia's AAA credit rating and raise the cost of borrowing funds for investment in overseas capital markets in the future; and
- A high net foreign debt to GDP ratio can lead to a debt sustainability problem for the economy.

Foreign Investment in Australia

Successive Australian governments have encouraged the inflow of foreign investment in order to improve Australia's economic performance through access to foreign exchange and foreign capital. Over the past two decades worldwide flows of foreign direct investment have been particularly strong. The growth in foreign direct investment reflects the general relaxation of trade and investment controls together with advancements in information and communications technologies and lower transport costs. Another major driving force of foreign investment has been the growth of global production chains by MNCs.

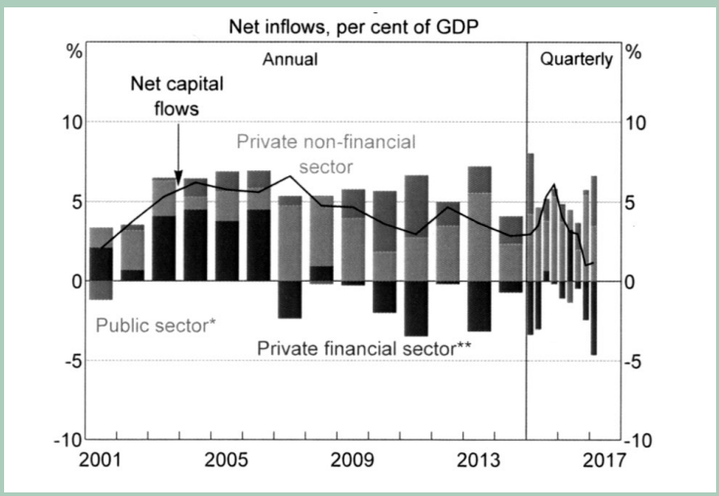
Australia has relied on inward foreign direct investment to meet the shortfall between domestic saving and the level of domestic investment. Foreign investment supplements domestic savings and supports higher rates of economic growth and employment levels, which in turn, improve the standard of living of the Australian community. Foreign investment also plays a key role in making Australian industry more internationally competitive, thereby helping to boost exports and access to new technologies. Inflows of foreign investment also contribute directly to the surplus in the capital and financial account of the balance of payments which finances the deficit in the current account.

The level or stock of foreign investment in Australia according to the ABS (Catalogue 5352.0, *International Investment Position, Australia* 2016) was $3,192.4b for the year ended 31st December 2016. Portfolio investment accounted for $1,659.8b (52%), direct investment for $796.1b (25%), other investment liabilities for $524b (16%) and financial derivatives for $212.5b (7%). Of the portfolio investment liabilities, debt securities accounted for $1,134b (36% of foreign investment in Australia) and equity securities for $525.8b (16% of foreign investment in Australia). The leading foreign investor countries in Australia in 2016 were:

- USA $860.9b or 27% of the total
- The United Kingdom $515.5b or 16% of the total
- Belgium $270.1b or 9% of the total
- Japan $213.5b or 7% of the total
- Hong Kong $100.9b or 3% of the total
- Singapore $98.9b or 3% of the total

The major cost of foreign investment is the repatriation of income in the form of profits, rent, dividends and interest to foreign investors. Total income debits of $83.3b were recorded in the net primary income section of the current account of the balance of payments for the year ending 31st December 2016. The main countries to which income accrued included the USA ($21.7b or 26%); Japan ($7.7b or 9%); the United Kingdom ($7.3b or 9%); Belgium ($4.9b or 6%); Singapore ($2.8b or 3%); and Hong Kong ($2.3b or 3 %). A further cost to Australia of foreign investment is loss of control over some resources and management decisions to foreign companies and individuals. The Foreign Investment Review Board (FIRB) reviews applications for foreign investment projects in Australia to ensure they are in the public interest. **Figure 4.10** shows trends in net private capital flows (i.e. inflows less outflows) in Australia between 2001 and 2017.

Figure 4.10: Net Capital Flows 2001-2017 (% of GDP)



Source: Reserve Bank of Australia (2017), *Statement on Monetary Policy, August.*

Structural Change in the Australian Economy

Structural change refers to changes in the economy's structure of production, employment and level of technological progress as economic development takes place. Structural change is linked to changes in the allocation of resources between primary (agriculture and mining), secondary and tertiary industries. As Australia's primary and secondary sectors have become more efficient and capital intensive, resources including labour have been released into the services sector, which has grown to provide more specialised services and employment in the economy. The industry shares of production, employment and exports accounted for by the agricultural, mining, manufacturing and service sectors changed between the 1980s and 2000s according to the data in **Table 4.15**. Between the 1980s and 2000s, the relative share of agriculture to GDP fell from 6% to 3%, employment from 6% to 4%, and exports from 33% to 18%. Much of this decline was due to the impact of drought in the 2000s. Rural production, employment and exports have recovered in recent years as normal seasonal conditions were experienced in the farm sector.

Table 4.15: Industry Shares of Australian GDP, Employment and Exports

Industry Sector	*% of Gross Domestic Product (GDP)*		*% of Total Employment*		*% of Exports of Goods and Services*	
	1980s	*2000s*	*1980s*	*2000s*	*1980s*	*2000s*
Agriculture	6.0	3.0	6.0	4.0	33.0	18.0
Mining	6.0	7.0	1.0	1.0	38.0	42.0
Manufacturing	19.0	12.0	17.0	11.0	10.0	17.0
Services	70.0	78.0	75.0	84.0	18.0	23.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Reserve Bank of Australia (2010), *Bulletin*, September Quarter. NB: Figures are rounded and do not total

Mining's share of GDP, (from 6% to 7%) and exports (from 38% to 42%) have risen substantially in recent years due to the impact of the **global resources boom** on production and export volumes. Manufacturing's share of GDP fell from 19% in the 1980s to 12% in the 2000s and employment from 17% to 11%. However manufacturing's share of exports rose from 10% to 17% during this time. Between the 1980s and 2000s the services sector expanded its share of GDP from 70% to 78%, employment from 75% to 84%, and exports from 18% in the 1980s to 23% in the 2000s.

Structural change has important implications for Australia's balance of payments outcome as a more efficient allocation of domestic resources (such as labour and capital) and the use of the latest technology can assist in the diversification of Australia's export base, and a rise in the competitiveness of export industries. Australia's export base has been broadened through increased exports of manufactured goods (i.e. simply transformed manufactured goods or STMs and elaborately transformed manufactured goods or ETMs) and services such as education and tourism. Manufactured exports and service exports now account for about 40% of total exports of goods and services. Mining exports increased between 2003 and 2012 due to the global resources boom, largely offsetting the decline in agricultural exports due to the impact of drought.

The major structural change in the Australian economy between 2003 and 2010 was the impact of the global resources boom, which led to rising commodity prices for mining exports and a higher terms of trade. This helped to increase the value and volume of mineral exports in the balance of payments. More labour and capital resources were allocated to the resource rich states of Western Australia and Queensland, and the mining sector's share of GDP, employment and exports rose. However the higher terms of trade also led to an appreciating exchange rate which reduced the competitiveness of manufactured and service exports in 2008-09 and 2010-11. After the mining investment boom ended in 2012 the economy began the slow transition to non mining sources of economic growth. This led to more resources being allocated to services production and a contraction in mining investment.

REVIEW QUESTIONS

RECENT TRENDS IN AUSTRALIA'S BALANCE OF PAYMENTS

1. What is meant by international competitiveness? How is it measured?
2. How does international competitiveness impact on Australia's trade performance? Refer to the changes in competitiveness in the 2000s in Figure 4.8 in your answer.
3. Define the 'terms of trade' and explain how the terms of trade index is measured and interpreted.
4. Distinguish between the implications of favourable and unfavourable movements in Australia's terms of trade on the current account deficit by referring to Table 4.12.
5. Define net foreign liabilities and distinguish between net foreign debt and net foreign equity.
6. How is Australia's current account deficit linked to Australia's growing stock of net foreign liabilities and net foreign debt? Refer to Table 4.14 in your answer.
7. How may the accumulation of a large net foreign debt impose economic costs on Australia?
8. Discuss the benefits and costs of foreign investment in Australia.
9. Which countries are the main sources of foreign investment in Australia?
10. What is meant by structural change? What are its causes and effects on Australian industry?
11. How is structural change occurring as the Australian economy transitions to non mining growth?
12. How have government policies and changes in the global business cycle caused the structure of Australian industry to change in terms of the industry shares of total GDP, employment and exports between the 1980s and 2000s? Refer to Table 4.15 in your answer.
13. Explain how the Australian economy began the transition to non mining sources of growth after the end of the mining investment boom in 2012. What impact may this transition to non mining sources of growth have on the balance of payments?
14. Define the following terms and add them to a glossary:

balance of payments
capital account
commodity prices
current account deficit
debt servicing ratio
direct investment
export diversification
export price index
financial account
financial derivatives
foreign debt
foreign equity
foreign exchange
foreign investment
goods balance
goods credits
goods debits
import price index
international competitiveness
manufacturing industry
net errors and omissions
net foreign debt
net foreign equity
net foreign liabilities
net primary income deficit
net secondary income
net services
nominal exchange rate
portfolio investment
primary industry
real exchange rate
real unit labour costs
Reserve assets
services industry
structural change
terms of trade

CHAPTER 4: SHORT ANSWER QUESTIONS

	Year 1	*Year 2*
Goods Credits	$101,500m	$105,000m
Goods Debits	$119,700m	$123,200m
Goods Balance		-$18,200m
Net Services	-$2,500m	-$2,500m
Net Primary Income	-$22,000m	
Net Secondary Income	-$1,000m	-$1,000m
Current Account Balance		-$46,750m
Capital Account Balance	$4,500m	$5,500m
Financial Account Balance	$38,800m	$41,050m
Net Errors and Omissions	$400m	$200m
Capital and Financial Account Balance		$46,550m

Refer to the balance of payments data for a hypothetical economy in the table above and answer the questions below. Marks

1. Calculate the current account balance for Year 1. (1)

2. What was the reason for the deterioration in the current account balance in Year 2? (1)

3. Explain TWO ways in which a current account deficit can be financed. (2)

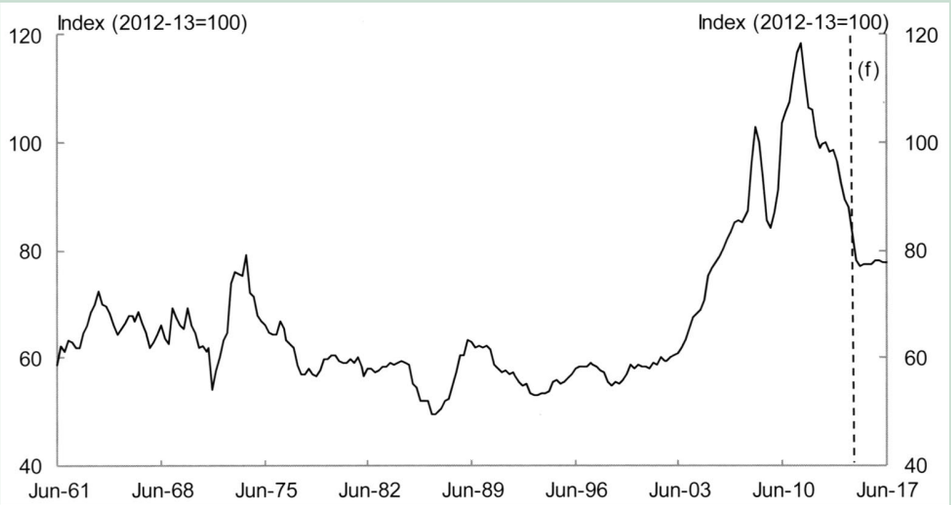
4. If this economy's terms of trade index improved in Year 3, discuss TWO possible effects on its balance of payments. (3)

5. Explain THREE possible effects of this economy's current account deficit on its economic and trade performance. (3)

CHAPTER FOCUS ON AUSTRALIA'S TRADE AND FINANCIAL FLOWS

"Overall commodity prices are weighing heavily on the terms of trade which are forecast to fall by 8.5% in 2015-16. The biggest falls have been in the prices for iron ore, coal and oil. Lower commodity prices overall reduce Australia's nominal GDP through weaker export prices and mining profits. The adjustment to the decline in the terms of trade and mining investment over recent years has resulted in a rise in the unemployment rate and a pronounced decline in wages growth in the economy."

Trends in the Terms of Trade - June 1961 to June 2017 (f)



Source: Commonwealth of Australia (2015), *Budget Strategy and Outlook 2015-16*.

Analyse the relationship between changes in global commodity prices and Australia's terms of trade and their impact on exports and domestic economic activity.

CHAPTER 4: EXTENDED RESPONSE QUESTION

Explain the main components of Australia's balance of payments and the reasons for the persistent current account deficit in the balance of payments.

CHAPTER SUMMARY

AUSTRALIA'S TRADE AND FINANCIAL FLOWS

1. International trade refers to the exchange of goods and services across national boundaries. International trade also involves financial flows such as debt and equity borrowings and foreign exchange transactions across national boundaries. The main types of international investment are portfolio and direct investment and trade in derivative products such as swaps and options.

2. The Australian economy became more internationalised in the 1980s with the floating of the exchange rate, financial deregulation and the reduction in industry assistance to manufacturing. In the 2000s this internationalisation has been supported by the signing of numerous bilateral trade agreements and regional trade agreements between Australia and its major trading partners.

3. Australia exports rural, mining and manufactured goods, and services such as tourism and education. Australia imports consumption, capital and intermediate goods, and services.

4. Australia's main trading partners include China, Japan, the European Union, the ASEAN countries, the United States of America, South Korea, India, New Zealand, Taiwan and Hong Kong.

5. Foreign investment in Australia consists of direct, portfolio, other investment, and financial derivatives. Australian investment abroad consists of direct, portfolio and other investment, financial derivatives and Reserve Assets held by the Reserve Bank of Australia.

6. Overseas debt borrowings by Australia increased in the 1980s, and overseas equity borrowings increased in the 1990s and 2000s. Australia has a large level of net foreign liabilities consisting of net foreign debt and net foreign equity borrowings.

7. Foreign exchange turnover increased in Australia after 1983 when the exchange rate was floated, foreign exchange and capital controls were removed, and financial markets were deregulated.

8 The balance of payments is a record of all financial transactions between Australian residents and the rest of the world. It consists of three main accounts:

   - The current account records items of a current nature such as goods, services, net primary income and net secondary income.
   - The capital account records net capital transfers of foreign aid, net capital brought into Australia by migrants and workers' remittances.
   - The financial account is divided into direct, portfolio and other investment, financial derivatives and Reserve Assets held by the Reserve Bank of Australia.

9. Australia records persistent current account deficits, which are financed through surpluses recorded in the financial account. The current account deficit is usually a result of deficits in the goods and services balance and the large net primary income deficit, which reflects the servicing cost of Australia's net foreign liabilities of net foreign debt and net foreign equity borrowings.

10. The current account deficit increased in size and as a percentage of GDP between 2011-12 and 2012-13 because of a larger goods and services deficit and a large net primary income deficit. The current account deficit was -$60.3b or -4% of GDP in 2012-13 but fell to -$47.1b or -3% of GDP in 2013-14 due to an improved export performance. The current account deficit fell to -$29.4b or -2.1% of GDP in 2016-17 mainly due to higher prices and volumes of mining exports.

11. Australia's international competitiveness is measured by movements in Real Unit Labour Costs (RULC) and the real exchange rate or real Trade Weighted Index (TWI).

12. The terms of trade is a measure of relative movements in export and import prices.

13. The Australian economy has undergone significant structural change in recent decades. The shares of GDP, employment and exports for the agriculture, mining, manufacturing and service sectors have altered as a result of this process of structural change in the allocation of resources. The most recent structural change was the economy's transition to non mining sources of growth.

Chapter 5

Exchange Rates

An exchange rate refers to the rate at which a unit of domestic currency (e.g. one Australian dollar) is exchanged for a given amount of a foreign currency (e.g. US dollars or euros). An exchange rate is the price of one currency quoted in terms of another and is a **measure of relative value or purchasing power**. Exchange rates provide the basis for the conversion of domestic and foreign currencies of nations, and for their exporters and importers who engage in international trade, investment and finance.

For example, Australian exporters of commodities to Japan want to be paid in Australian dollars (AUDs), so Japanese importers of Australian commodities have to convert Yen into the equivalent amount of Australian dollars for the transaction to take place. Similarly, an Australian importer of Japanese manufactured goods has to pay for the transaction in Japanese Yen and must convert the equivalent amount of Australian dollars into Japanese Yen to pay for the transaction. Such conversions take place in the foreign exchange market where currencies are traded. An **exchange rate is also an asset price** since international investors and speculators trade in various foreign currencies in attempting to make profits by selling currencies at a higher exchange rate than they may have purchased them for.

Foreign exchange transactions take place in both spot and forward markets. These markets consist of a network of banks, central banks and foreign exchange dealers in Australia and overseas for the purposes of conducting international trade, investment and speculation in international financial assets. **Spot markets** are cash markets for foreign exchange conversion, and **forward markets** involve trade in derivatives or futures contracts for the delivery of foreign exchange at a date in the future.

Reserve Bank data suggest that the average daily average foreign exchange turnover against Australian dollars was $15,290m in spot markets, $8,726m in forward markets and $52,599m in swaps in April 2017. This was higher than in 2016 due to higher commodity prices, less volatility in the foreign exchange market and an improved Australian trade performance. About 25% of the turnover in the foreign exchange market is conducted by dealers in Australia and 75% by dealers overseas. Daily average trade in foreign exchange (against Australian dollars and against other currencies) was $166.7b in April 2017. Exchange rates can be quoted in either of two ways:

- The **indirect method of quotation** refers to the number of units of foreign currency needed to purchase one unit of domestic currency e.g. US$0.75 = A$1.00 (August 1st, 2017); or
- The **direct method of quotation** refers to the number of units of domestic currency needed to purchase one unit of foreign currency e.g. A$1.33 = US$1.00 (August 1st, 2017).

The convention in Australia is for the exchange rate to be quoted by the Reserve Bank using the indirect method of the number of units of foreign currency needed to purchase one Australian dollar.

THE MEASUREMENT OF RELATIVE EXCHANGE RATES

Exchange rates can be determined either by the market forces of demand and supply (i.e. a floating or flexible exchange rate) in the foreign exchange market, or fixed by a government's central banking authority (i.e. a fixed or managed exchange rate). Australia adopted a floating exchange rate in December 1983, after previously using a flexible peg exchange rate regime, being pegged first to the British Pound in the 1950s, the US dollar in the 1960s and early 1970s, and to the Trade Weighted Index (TWI) in the late 1970s and early 1980s. Relative exchange rates can be measured in two ways:

1. **Bilateral or cross rates** measure the value of a unit of domestic currency relative to another currency, usually that of a major trading partner e.g. the Australian dollar relative to the US dollar, Japanese Yen (¥), Chinese Renminbi (RMB), euro (€) or UK pound sterling (£).

Table 5.1: Relative Exchange Rates for the Australian Dollar 2008-09 to 2016-17

Year	*US dollar*	*Japanese Yen*	*Euro*	*UK pound*	*TWI*	*SDRs*
2008-09	0.74	73.99	0.54	0.46	60.2	0.48
2009-10	0.88	80.77	0.63	0.55	68.9	0.57
2010-11	0.98	82.10	0.72	0.62	74.0	0.63
2011-12	1.03	81.14	0.77	0.65	76.0	0.66
2012-13	1.02	89.89	0.79	0.65	77.7	0.67
2013-14	0.93	94.78	0.67	0.55	71.3	0.60
2014-15	0.79	95.36	0.70	0.51	65.0	0.56
2015-16	0.73	79.70	0.64	0.50	61.8	0.51
2016-17	0.75	83.82	0.67	0.59	64.6	0.54

Source: ABS (2017), Catalogue 5368.0, *International Trade in Goods and Services*, July. Table 16

Table 5.1 shows relative exchange rates for the Australian dollar between 2008-09 and 2016-17 against the US dollar, Japanese Yen, euro, UK pound sterling, the Trade Weighted Index (TWI) and Australia's Special Drawing Rights (SDRs) with the IMF. Changes in bilateral exchange rates over time measure changes in the Australian dollar's relative purchasing power against other currencies.

A rise in the value or purchasing power of the Australian dollar is an **appreciation**, such as between 2008-09 and 2012-13, when the Australian dollar rose from US$0.74 to US$1.02, meaning that the Australian dollar could buy more US dollars. A fall in the value or purchasing power of the Australian dollar is a **depreciation**, such as between 2013-14 and 2015-16, when the Australian dollar fell from US$0.93 to US$0.73, meaning that the Australian dollar could buy less US dollars.

The general trend between 2010-11 and 2012-13 was for the Australian dollar to appreciate strongly against the US dollar, the Japanese Yen, the euro, the UK pound sterling, in TWI terms and against SDRs. The largest appreciations against all currencies was between 2004-05 and 2007-08, and 2009-10 and 2011-12, when global resources booms lifted commodity prices, which resulted in a large rise in Australia's terms of trade and the demand for Australian dollars. The most significant depreciation against all currencies occurred in 2008-09 as the Global Financial Crisis (GFC) and global recession led to significant falls in global commodity prices. There was also a steady depreciation in the Australian dollar against most currencies between 2013-14 and 2015-16 as commodity prices and the terms of trade weakened, and the Reserve Bank cut official interest rates. The Australian dollar appreciated against all currencies and in TWI and SDR terms in 2016-17 as commodity prices increased leading to a modest rise in the terms of trade.

2. **The Trade Weighted Index** (TWI) measures movements in the Australian dollar against a wide basket of currencies of Australia's major trading partners, weighted according to their importance in Australia's trade. The relative weights allocated to 19 of Australia's major trading partners in 2016-17 are listed in descending order in **Table 5.2**. The TWI includes 19 currencies of countries that accounted for 90% of Australia's merchandise and services trade in 2015-16. The TWI is a broader measure of the Australian dollar's purchasing power than bilateral or cross exchange rates, because it is trade weighted and across a range of currencies of Australia's major trading partners. The weights in the TWI were last revised in December 2016 by the Reserve Bank of Australia. The combined TWI weight of Asian-Pacific currencies was around 83% in 2016-17 reflecting Australia's important and strong trade links with the region. The Chinese renminbi had the highest weight (26.05), followed by the US dollar (11.53), the Japanese Yen (10.39) and European euro (10.30). The US dollar replaced the Japanese yen as the second ranked currency in 2016.

Table 5.2: Weights in the TWI in 2017 (last revised by the Reserve Bank in December 2016)

1. Chinese renminbi	26.05	11. Malaysian ringgit	2.98
2. US dollar	11.53	12. Hong Kong dollar	2.65
3. Japanese yen	10.39	13. Indonesian rupiah	2.56
4. European euro	10.30	14. New Taiwan dollar	2.08
5. South Korean won	5.77	15. Vietnamese dong	1.76
6. UK pound sterling	4.68	16. Canadian dollar	1.07
7. New Zealand dollar	4.24	17. Swiss franc	1.02
8. Singapore dollar	3.95	18. PNG kina	1.01
9. Thai baht	3.67	19. UAE dirham	0.86
10. Indian rupee	3.35		

Source: Reserve Bank of Australia (2016), website, www.rba.gov.au

The TWI tends to move in line with changes in Australia's commodity prices and the commodity price index calculated by the Reserve Bank. The TWI is calculated and published daily by the Reserve Bank.

Figure 5.1 shows the **trend appreciation of the Australian dollar** against the Yen, US dollar, Pound and on a TWI basis after the Global Financial Crisis and recession in 2008-09. This reflected Australia's rising terms of trade up until 2013, when there was a **trend depreciation** of the Australian dollar due to lower world growth. Weaker world growth and a lower terms of trade between 2013 and 2016 led to the Australian dollar depreciating against the US dollar, Yen, Euro and TWI before a recovery in 2017.

Figure 5.1: Relative Exchange Rates for the Australian Dollar 2007-2017

Source: Reserve Bank of Australia (2017), *Statement on Monetary Policy*, August.

The Australian dollar recorded a trend appreciation against the currencies of its major trading partners between 2009 and 2011 and reached a post float high of US$1.10 and 79 on a TWI basis in 2011. The strength of the Australian dollar between 2009 and 2011 was due to three main factors:

1. **Rising world commodity prices** were sourced from the global economy expanding by around 5% in 2010 and 4% in 2011. Growth was even higher in Australia's major trading partners and this resulted in strong demand for commodity exports such as iron ore and coal especially from China.
2. **Australia's favourable terms of trade** supported the rise in the exchange rate as commodity export prices lifted the terms of trade by 20% between 2010 and 2011. This meant that the terms of trade was 95% higher than the average experienced in the 1990s.
3. **Sustained direct and portfolio investment** into Australia by foreign investors reflected positive sentiment about Australia's export boom in the mining sector and the potential for rising profits. Higher interest rates between 2009 and 2010, also attracted foreign investment into Australia.

In contrast, the Australian dollar depreciated from US$0.93 to US$0.73 and from 71.3 to 61.8 on a TWI basis from mid 2013 to mid 2016. This was due to both international and domestic factors:

- **Global economic growth slowed** to 3%, with lower commodity prices and a lower terms of trade. This included lower growth in China and lower prices for Australian iron ore and coal exports;
- **The mining investment boom ended** in the resources sector and capital inflow contracted.
- **The Reserve Bank cut interest rates** between 2011 and 2016 from 4.75% to 1.50%, lowering the interest rate differential between Australia and overseas, which put downward pressure on the Australian dollar exchange rate in the foreign exchange market.

FACTORS AFFECTING THE DEMAND AND SUPPLY OF AUSTRALIAN DOLLARS

The demand for Australian dollars in the foreign exchange markets is called a **derived demand**. It is derived from the demand for Australia's exports of goods and services and domestic assets by foreigners. The supply of Australian dollars is derived from the demand by Australians for foreign goods and services and the purchase of foreign assets. With a floating exchange rate determined by market forces, demand and supply factors largely determine the equilibrium exchange rate. Changes in both demand and supply conditions can cause changes in the **equilibrium exchange rate**. Changes in the demand and supply of Australian dollars (AUDs) are influenced by transactions in the current and capital and financial accounts of Australia's balance of payments. Factors affecting the **demand for AUDs** include:

(i) The demand for Australian exports (e.g. commodities and tourism) by foreigners. Export income is recorded as goods and services credits in the current account of the balance of payments; and

(ii) The demand for Australian or domestic assets such as shares, real estate, Australian government bonds and currency by foreigners, which can lead to capital inflow from abroad (which are recorded as credits in the capital and financial account of the balance of payments).

Factors affecting the **supply of Australian dollars** (AUDs) in the foreign exchange market include:

(i) The demand for foreign imports (e.g. cars and tourism) by Australian residents. Import spending is recorded as goods and services debits in the current account of the balance of payments; and

(ii) The demand for foreign assets such as shares, real estate, government bonds and currency by Australian residents, which leads to capital outflow from Australia to overseas. Spending on foreign assets is recorded as debits in the capital and financial account of the balance of payments.

Current account influences on the demand for Australia's exports and imports include the following:

- Relative inflation rate differentials between Australia and its trading partners affect the relative prices or competitiveness of exports and imports (i.e. traded goods). This is measured by changes in the real exchange rate (i.e. the nominal exchange rate adjusted for Australia's inflation rate).

A rise in the relative inflation differential will reduce Australia's export competitiveness and the demand for its exports. It may also reduce the competitiveness of import substitutes and lead to an increase in the demand for imports. A fall in the relative inflation differential on the otherhand will raise Australia's export competitiveness and the demand for exports, and also reduce the demand for imports, as import substitutes become cheaper or more competitive relative to imported goods.

- Movements in Australia's terms of trade (i.e. the ratio of export prices to import prices) will affect the demand for exports. A rise in world economic growth and income usually result in higher commodity prices and export income, leading to an increase in the demand for Australian dollars and an appreciation. A fall in world economic growth and income can result in a decline in commodity prices and export income, less demand for Australian dollars, and a depreciation.
- Relative rates of domestic and world economic growth affect the demand for exports and the demand for imports. Strong world economic growth usually leads to increased demand for Australian exports and AUDs, whereas weaker world growth usually leads to a fall in the demand for Australian exports and AUDs. Conversely, high rates of Australian economic growth, lead to higher growth in the demand for imports and the supply of AUDs. Lower rates of Australian economic growth, can lead to a fall in the demand for imports and a fall in the supply of AUDs.

Capital and financial account influences on the demand for Australian and foreign assets include:

- Interest rate differentials and changes in investment expectations can affect capital flows and influence the exchange rate in the short term. A rise in Australian interest rates relative to those overseas may attract more foreign direct and portfolio investment into Australia and cause an increase in the demand for Australian assets and Australian dollars, leading to an appreciation. Conversely, a fall in Australian interest rates relative to those overseas may cause an outflow of capital, because of an increase in the demand for foreign assets. This could result in an increase in the supply of Australian dollars in the foreign exchange market and a currency depreciation.
- Exchange rate expectations about the future value of the exchange rate can influence the demand and supply of Australian dollars. If foreign speculators expect the Australian dollar to appreciate in the future they may buy Australian dollars and sell foreign exchange to make an expected capital gain and profit. This action would increase the demand for Australian dollars in the foreign exchange market. On the other hand, speculators may sell Australian dollars and buy foreign exchange if they expect the value of the Australian dollar to depreciate in the future. This action would cause an increase in the supply of Australian dollars in the foreign exchange market.

The Role of the Exchange Rate in the Balance of Payments

The equilibrium exchange rate (E) is established where the demand and supply of Australian dollars are equal (i.e. **Equation 1**). The demand for Australian dollars is equal to the sum of receipts associated with the sale of exports, net income credits and capital inflow in the balance of payments. The supply of Australian dollars is equal to the sum of payments associated with spending on imports, income debits and capital outflow in the balance of payments (i.e. **Equation 2**). By re-arranging **Equation 2**, we get **Equation 3**, which suggests that the current account balance must be equal (but opposite in sign) to the capital and financial account balance, under a system of floating exchange rates.

(1) Equilibrium occurs where: Demand for Australian Dollars = Supply of Australian Dollars

(2) Exports + Income Credits + Capital Inflow = Imports + Income Debits + Capital Outflow

(3) (Exports - Imports) + (Income Credits - Income Debits) = Capital Outflow - Capital Inflow
(Current Account Balance) (Capital & Financial Acct. Balance)

Table 5.3 shows the relationship between a country's balance of payments outcome and the likely trend in the value of its exchange rate. If countries have persistent current account deficits like Australia and the USA, they must finance their deficits with surpluses in the capital and financial account. Countries with persistent current account deficits tend to experience a currency depreciation over time.

A depreciation of the exchange rate raises the price competitiveness of exports and import substitutes, helping to contain a country's current account deficit (i.e. through higher exports and lower imports).

Countries with persistent current account surpluses like Japan, Germany and China, will offset their surpluses with deficits in the capital and financial account. The tendency for countries with persistent current account surpluses is for their currencies to appreciate over time. An appreciation reduces price competitiveness, helping to contain the size of the surplus through higher imports and lower exports.

Table 5.3: Relationship Between Balance of Payments Outcome and Exchange Rate

Current Account Outcome	*Capital and Financial Account Outcome*	*Exchange Rate*
1. Current Account Surplus →	Capital and Financial Account Deficit →	Appreciation
2. Current Account Deficit →	Capital and Financial Account Surplus →	Depreciation

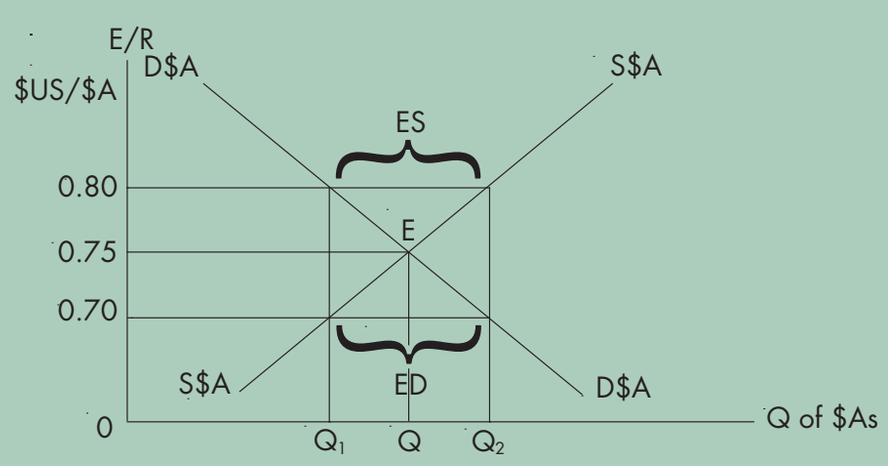
THE FLOATING OR FLEXIBLE EXCHANGE RATE SYSTEM

The Australian government floated the Australian dollar (AUD) on December 10th, 1983 for three main reasons: it was the most efficient exchange rate mechanism for determining the value of the currency; to expose the Australian economy to international competitive market pressures; and to pursue a more independent and effective monetary policy (to contain inflation) in a deregulated financial environment.

The demand for a country's currency is a derived demand. It is derived from the foreign demand for that country's goods, services and assets and the need for foreigners to convert foreign currency into the domestic medium of exchange. The demand for AUDs is therefore derived from the demand for Australian goods, services and assets by foreigners, whereas the supply of AUDs is derived from the domestic or Australian demand for foreign goods, services and assets.

Under a cleanly floating exchange rate (with no government intervention), the exchange rate is determined by the forces of demand and supply for the AUD. In **Figure 5.2** the equilibrium exchange rate for the AUD is determined by the intersection of the demand (DD) and supply (SS) curves for AUDs. The price of the AUD is quoted in terms of the equivalent amount of $US (the indirect method of quotation) on the vertical axis, and the quantity of AUDs traded is measured on the horizontal axis.

Figure 5.2: The Floating or Flexible Exchange Rate System



The demand curve (DD) for AUDs is negatively sloped, because as the exchange rate falls (rises) Australian products become cheaper (more expensive) relative to US products and so more (less) AUDs are demanded. The supply curve (SS) of AUDs is positively sloped since any rise (fall) in the exchange rate means that US products become cheaper (more expensive) relative to Australian products. The intersection of the demand and supply curves for the AUD determines the equilibrium exchange rate (E) and in **Figure 5.2** it is $US0.75 = $A1.00 with OQ AUDs being exchanged or traded.

At an exchange rate of $US0.80/$A1.00 (or $US0.70/$A1.00) in **Figure 5.2**, the market would have an excess supply or ES of AUDs (excess demand or ED of AUDs) and the exchange rate would be driven down to E (up to E). This assumes instantaneous adjustment in the foreign exchange market and no change in the domestic money supply. A downward movement in the equilibrium exchange rate is known as a **depreciation** which would make exports cheaper and imports dearer, increasing international competitiveness. An upward movement in the equilibrium exchange rate is known as an **appreciation**, which would make exports dearer and imports cheaper, reducing international competitiveness.

The Advantages of a Floating or Flexible Exchange Rate

- Firstly, the Australian government argued that floating the Australian dollar in 1983 would lead to a more market determined price for the currency, that reflected the fundamentals of the Australian economy (such as trends in economic growth, inflation, unemployment and the balance of payments outcome). Buyers and sellers would factor these fundamentals, as well as their exchange rate expectations about the future, into their transactions involving the Australian dollar.
- Secondly, the Australian government argued that a floating exchange rate would discourage destabilising speculation about the future value of the currency if it was not fixed by the government. Previously, the crawling peg system used between 1976 and 1983, resulted in excessive and destabilising speculation over the future value of the currency and this undermined confidence.
- Thirdly, the Australian government argued that it could pursue a more independent and effective monetary policy with a floating exchange rate, because balance of payments surpluses and deficits would not impact on the money supply, and cause the conduct of monetary policy to be less effective in controlling inflation. Changes in balance of payments outcomes would be absorbed by the exchange rate (e.g. a rising current account deficit would lead to a depreciation and a surplus would lead to an appreciation), helping to correct a disequilibrium in the balance of payments.
- Fourthly, it was argued that a floating exchange rate would provide some insulation properties for the Australian economy from external real and financial shocks (e.g. the 1986 terms of trade collapse, the 1997 Asian crisis and the Global Financial Crisis and recession in 2008-09) by moving to new equilibrium exchange rate positions. For example, changes in the value of the exchange rate such as a depreciation during an economic crisis or external shock would increase international competitiveness, helping to increase exports and lead to structural change in Australian industry.
- Finally, the adoption of a floating exchange rate was consistent with the floating exchange rate systems used by major trading partners in the 1970s (after abandoning the Bretton Woods system of fixed exchange rates to the US dollar in 1976), allowing for greater global capital market integration and capital mobility, and the co-ordination of domestic monetary policies to contain inflation.

The Disadvantages of a Floating Exchange Rate

The main disadvantage of a floating exchange rate system is that there can be an increase in volatility over time, caused by changes in exchange rate expectations, based on foreigners' perceptions of the domestic economy's fundamentals or their reaction to short term economic and political events. Firms can however use hedging and forward cover to minimise the risk of losses from adverse currency movements. But some economists argue that the additional risks from exchange rate volatility can lead to uncertainty in saving and investment decisions. Another disadvantage of a floating exchange rate is that it can be subject

REVIEW QUESTIONS

THE MEASUREMENT OF RELATIVE EXCHANGE RATES AND FACTORS AFFECTING THE EXCHANGE RATE

1. Define the term 'exchange rate'. Distinguish between the direct and indirect methods of quoting the exchange rate for the Australian dollar against the US dollar.
2. Discuss the factors that create the demand and supply of foreign exchange. Where and how is foreign exchange traded?
3. Explain the difference between the bilateral and Trade Weighted Index measures of the Australian dollar exchange rate. Refer to Tables 5.1 and 5.2 and Figure 5.1 in your answer.
4. Refer to Table 5.1 and analyse the trends in the Australian dollar against the US dollar, Japanese Yen, euro, UK pound sterling, the TWI and SDRs between 2008-09 and 2016-17.
5. Explain the main factors that affect the demand and supply of Australian dollars. Analyse the link between these factors and the main components in Australia's balance of payments.
6. Refer to Figure 5.2 and explain how the flexible or floating exchange rate system operates.
7. Discuss the reasons for the Australian government floating the Australian dollar in 1983. Discuss the advantages and disadvantages of Australia's floating exchange rate system.

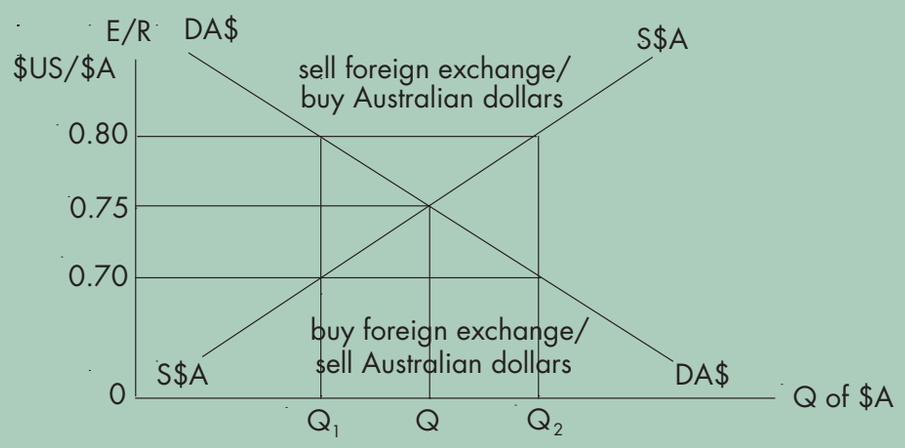
to sudden shifts in market sentiment, causing the exchange rate to deviate from its long run equilibrium path. This may lead to **exchange rate 'overshooting'**, where a currency can depreciate or appreciate in value by more than is anticipated (as suggested by the economy's fundamentals). Overshooting can lead to a misalignment of the exchange rate in relation to the TWI basket of currencies of Australia's trading partners and cause more uncertainty about the future direction of the exchange rate. Overshooting can be caused by '**bandwagon**' **effects** if speculators follow market trends, causing the exchange rate to become very volatile (i.e. losing or gaining value very quickly). '**Speculative bubbles**' can also occur when market participants expect the exchange rate to continue recent movements and such expectations may become self fulfilling. This may prompt Reserve Bank intervention to 'smooth' or 'test' the changes in market sentiment if they become destabilising, and the Reserve Bank wants to restore 'orderly foreign exchange markets'. Such 'overshooting' occurred in 2000 when the AUD fell in value below $US0.50.

THE FIXED EXCHANGE RATE SYSTEM

Under a fixed exchange rate system, a country's exchange rate is fixed by the Central Bank, usually on a daily basis to another currency (e.g. usually a reserve currency like the $US). Since the fixed rate is either above or below what the equilibrium exchange rate would be under free market conditions, the Central Bank has to buy or sell foreign currency or foreign exchange (fx) to keep the exchange rate at the pre-determined or fixed level. This involves having sufficient reserve assets (i.e. foreign currencies, gold and SDRs) to keep the exchange rate fixed. China and Hong Kong SAR are examples of countries that fixed their currencies to the US dollar before moving to managed exchange rate systems in 2005.

In **Figure 5.3** if the Reserve Bank fixed the exchange rate above market equilibrium ($US0.75) at $US0.80, it would have to buy the equivalent of Q_1Q_2 AUDs (and sell fx) to eliminate the excess supply of AUDs. Alternatively if the Reserve Bank fixed the exchange rate below equilibrium at $US0.70, it would have to sell the equivalent of Q_1Q_2 AUDs (and buy fx) to eliminate the excess demand for AUDs.

Figure 5.3: The Fixed Exchange Rate System



The advantages of a fixed exchange rate system are that there is certainty about the immediate short term value of the exchange rate, which assists exporters and importers in their decision making, and allows the Reserve Bank to conduct a monetary policy similar to that of the country to which it has pegged its currency i.e. the $US and the US Federal Reserve's monetary policy. However the disadvantages of a fixed exchange rate system are numerous and tend to outweigh the advantages:

- Speculation increases, since the exchange rate is not market determined. Speculators may buy AUDs if they believe it is undervalued, or sell AUDs if they believe it is overvalued, in order to make profits. This destabilises the exchange rate, causing the authorities (i.e. the Reserve Bank and the Australian government) to eventually revalue or devalue the currency in the future.
- The Reserve Bank must hold large foreign exchange reserves to keep the exchange rate at its pre-determined value. If foreign exchange reserves fall because the exchange rate is overvalued, the Reserve Bank may be forced to devalue the AUD, or revalue the AUD if it was undervalued.
- A country (such as Australia) does not react to external structural changes, as the exchange rate does not respond directly and quickly to changes in market forces or external real or financial shocks.
- The balance of payments outcome impacts on the domestic money supply. Current account surpluses increase the money supply and can cause inflation. Current account deficits on the otherhand can cause a fall in the money supply, lower economic growth and higher unemployment.
- Currency crises inevitably lead to devaluations or revaluations of the currency and adjustments in economic policy. A forced revaluation or devaluation involves policy readjustments to facilitate structural change. Such structural changes are costly in terms of reallocating the economy's resources.

Fixed Exchange Rates: The ERM, EMU and the Euro

According to economic theory, countries which are susceptible to external shocks to their nominal exchange rates can gain advantages by fixing their exchange rate to a country which historically has a low inflation rate. This scenario was the origin of the 11 countries of the former European Community (EC) which fixed their exchange rates to the German Deutschmark to share the German Bundesbank's low inflation record. This was known as the European Exchange Rate Mechanism (or ERM).

The EC countries accepted the monetary policy determined by the Bundesbank (i.e. the level and structure of interest rates), and for small countries like Holland and Austria, this was a successful policy strategy, but it meant giving up monetary independence and some fiscal independence. For larger countries which traded outside (as well as inside) the European Community, like Italy and Britain, the ERM was a failure in the 1980s, and they dropped out of the ERM in 1992.

In the 1990s the EC became the European Union (EU), and there was a movement towards Economic and Monetary Union (EMU) under the Maastricht Treaty, including the use of a single currency called the euro. The euro was launched on January 1st, 1999 in world financial markets and replaced the currencies of the 12 participating countries in 2002. Since 2002, Slovenia (2007), Cyprus and Malta (2008), Slovakia (2009), Estonia (2011), Latvia (2014) and Lithuania (2015) have joined the Euro Area, which has 19 member countries (see **Table 5.4**).

Table 5.4: Euro Conversion Rates in 2017

1. Germany	1 Euro = 1.95 marks
2. France	1 Euro = 6.55 francs
3. Luxembourg	1 Euro = 40.33 francs
4. Austria	1 Euro = 13.76 schillings
5. Italy	1 Euro = 1,936.27 lire
6. Spain	1 Euro = 166.38 pesetas
7. Holland	1 Euro = 2.20 guilders
8. Belgium	1 Euro = 40.33 francs
9. Finland	1 Euro = 5.94 markkaa
10. Portugal	1 Euro = 200.48 escudos
11. Ireland	1 Euro = 0.78 pounds
12. Greece	1 Euro = 340.75 drachma
13. Slovenia	1 Euro = 239.64 tolars
14. Cyprus	1 Euro = 0.58 pounds
15. Malta	1 Euro = 0.42 lira
16. Slovakia	1 Euro = 30.12 koruna
17. Estonia	1 Euro = 15.64 krooni
18. Latvia	1 Euro = 0.70 lats
19. Lithuania	1 Euro = 3.45 litas

.Source: IMF (2016), *World Economic Outlook*, April.

The euro is the second most important currency or reserve currency after the US dollar in global foreign exchange markets. The idea of the euro was based on the theory of an **optimal currency area**, which suggests that significant economies of scale can be gained from adopting a single currency amongst countries which have a high degree of economic and monetary integration like the EU. However the participating countries have to accept the monetary policy or interest rate set by the European Central Bank (ECB). Features of the Economic and Monetary Union include the following:

- Each of the 19 Euro Area countries has its domestic currency fixed or pegged to the euro (refer to **Table 5.4** for conversion rates in 2017).
- Commercial paper and electronic transactions involving trade in goods and services and financial assets are conducted in euros.
- The value of the euro is determined by demand and supply in financial markets, against other currencies such as the US dollar, Yen and Pound Sterling, through a floating rate mechanism.
- European businesses in Euro Area countries have conducted business in euros since 2002.
- In January 2002 euros became convertible into cash (i.e. notes and coin), and replaced members' currencies completely so that all transactions in the Euro Area countries are conducted in euros.

The introduction of the euro was the final stage in full European economic and monetary integration, with members accepting the interest rate structure and exchange rate policy set by the ECB, and giving up their monetary independence. Some of the advantages of the euro arrangement are the following:

- Reduced transaction costs for businesses in euro member countries known as the Eurozone;
- The opportunity for euro countries to increase their competitiveness in international trade if they can maintain low inflation and for the Euro Area bloc to increase its export competitiveness in relation to Japan, the Asian NIEs, China and the USA in global markets; and
- Increased international trade and investment through the process of globalisation, and improved European economic performance.

However there are a number of disadvantages of the Euro Area arrangement:

- Inflexibility, as member countries vary in economic size, importance and economic performance;
- Loss of monetary independence of members as they must accept the interest rate set by the ECB;
- Acceptance of the ECB's price stability target of 0% to 2% inflation over the economic cycle;

- The lack of democratic decision-making and accountability of the ECB to EU voters;
- The inflexibility of exchange rate adjustments and realignments for Euro member countries; and
- Each euro country must maintain inflation within the ECB's target band; national budget deficits must be below 3% of GDP; and public debt must not exceed 60% of GDP.

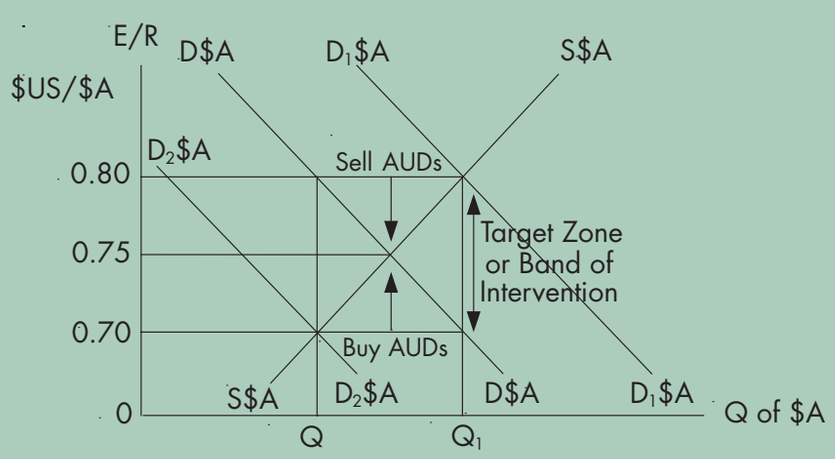
In 2010-11 the Euro Area experienced a major financial crisis caused by concerns over banking losses and a lack of fiscal sustainability in Greece, Ireland, Portugal and Spain. The Euro Area Sovereign Debt Crisis required strong policy responses from the ECB and IMF. The ECB provided liquidity support through the European Financial Stability Mechanism (€500b) and the European Financial Stability Facility (€440b) to affected countries in return for substantial fiscal austerity and financial reforms. A further financial crisis occurred in 2015 with Greece defaulting on debt repayments to the IMF.

THE MANAGED EXCHANGE RATE SYSTEM

A system of managed exchange rates is similar to a fixed exchange rate system as the currency is pegged or adjusted daily to variations in a major trading partner's currency e.g. China uses a managed exchange rate system by pegging the RMB to movements in a basket of currencies of its major trading partners.

The Australian exchange rate was pegged to the UK pound sterling in the 1950s as most of Australia's trade was with Britain. In the 1960s the Australian dollar was pegged to the $US as it was the international reserve currency. An adjustable or 'crawling peg' was used between 1978 and 1983, with the exchange rate pegged to the TWI. In a managed exchange rate system, the central bank sets the exchange rate daily, keeping it within a 'target band' or 'zone of intervention' as illustrated in **Figure 5.4**. The Reserve Bank would keep the exchange rate between $US0.80 and $US0.70 by buying or selling AUDs. It would buy AUDs if the AUD fell below $US0.70 and sell AUDs if the AUD rose above $US0.80.

Figure 5.4: The Managed Exchange Rate System



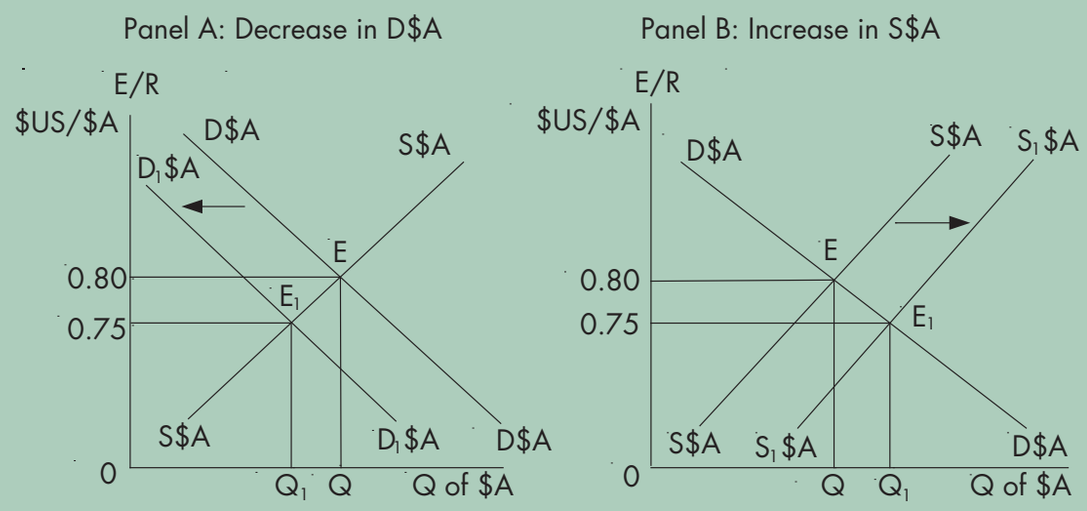
CHANGES IN EXCHANGE RATES: DEPRECIATION AND APPRECIATION

Under Australia's system of a floating or flexible exchange rate there are two main types of currency movements which can occur:

- A depreciation is when there is a loss in purchasing power as the exchange rate falls in value; and
- An appreciation is when there is a rise in purchasing power as the exchange rate rises in value;

These movements result in a change in the equilibrium exchange rate (E). For example, a depreciation involves a fall in the value or purchasing power of the exchange rate and may be caused by a fall in the demand for Australian dollars or an increase in the supply of Australian dollars.

Figure 5.5: A Depreciation of the Exchange Rate

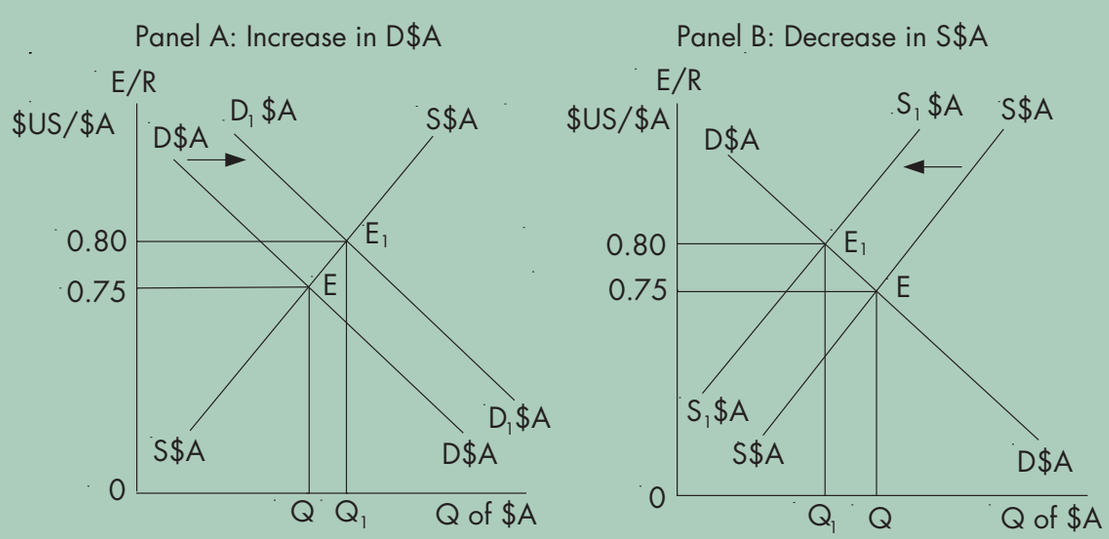


This is illustrated in **Figure 5.5**, where in **Panel A**, the shift to the left of the demand curve for Australian dollars from D$A to $D_1$$A leads to a fall in the value of the Australian dollar from $US0.80 to $US0.75. The quantity of Australian dollars traded falls from OQ to OQ_1. The decline in the demand for Australian dollars could have been caused by a fall in world growth leading to a decline in export demand.

Alternatively a depreciation could be caused by a shift to the right of the supply curve of Australian dollars, as shown in **Panel B** of **Figure 5.5**. This would also lead to a fall in the value of the exchange rate from $US0.80 to $US0.75. An increase in the supply of Australian dollars as shown in **Panel B** of **Figure 5.5** from S$A to $S_1$$A could be caused by an increase in the demand for imports, sourced from higher domestic economic growth, or a rise in domestic inflation, making imports cheaper than competing domestic goods.

An appreciation refers to a rise in the value or purchasing power of the exchange rate and may be caused by an increase in the demand for Australian dollars or a decrease in the supply of Australian dollars. This is illustrated in **Figure 5.6** where in **Panel A**, the shift to the right of the demand curve for Australian dollars from D$A to $D_1$$A leads to a rise in the value of the Australian dollar from $US0.75 to $US0.80.

Figure 5.6: An Appreciation of the Exchange Rate



The quantity of Australian dollars traded increases from OQ to OQ_1. The increase in the demand for Australian dollars could have been caused by a rise in world growth, leading to an increase in export demand. Alternatively an appreciation could be caused by a shift to the left of the supply curve of Australian dollars from S$A to $S_1$$A as shown in **Panel B** of **Figure 5.6**, leading to a rise in the exchange rate from $US0.75 to $US0.80, but a fall in the quantity of Australian dollars traded from OQ to OQ_1. A decrease in the supply of Australian dollars could be caused by a decrease in the demand for imports, sourced from lower domestic economic growth, or a fall in domestic inflation making competing domestic goods cheaper relative to imported goods.

RESERVE BANK INTERVENTION IN THE FOREIGN EXCHANGE MARKET

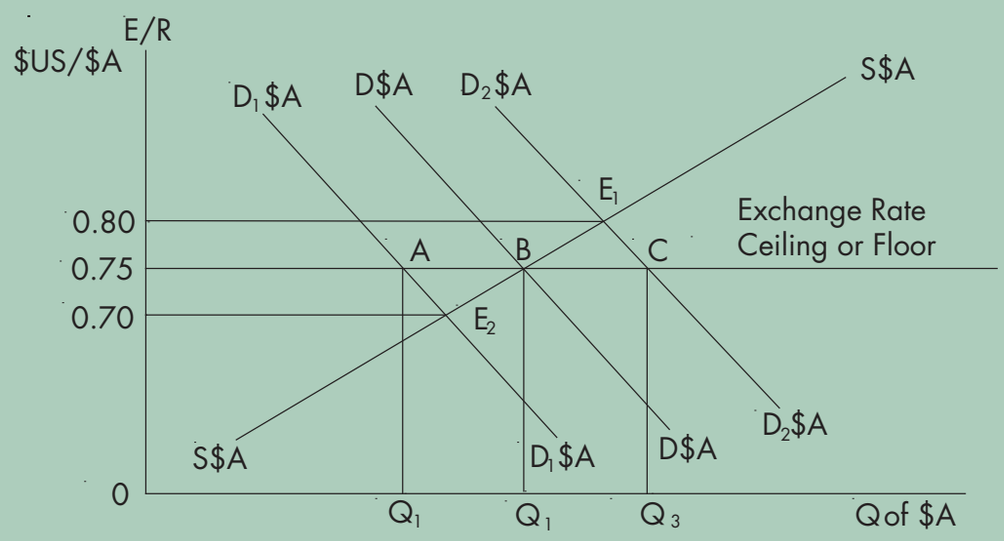
The value of the exchange rate is not specifically targeted by the Reserve Bank of Australia (RBA). The exchange rate is basically allowed to float 'cleanly' through its determination by the market forces of demand and supply in the foreign exchange market. However the RBA may intervene directly in the foreign exchange market periodically in an attempt to influence the value of the exchange rate and in so doing, 'dirty' the float arrangement. This intervention may take place for the following three reasons:

1. The exchange rate may deviate from its long run equilibrium path as suggested by the fundamentals in the economy, such as economic growth and the balance of payments. A serious misalignment of the exchange rate with other currencies may have adverse effects on macroeconomic variables such as inflation, employment and GDP. For example, the depreciation in the exchange rate by 40% in August 1986 due to a terms of trade crisis, caused a significant rise in the domestic inflation rate.
2. The RBA may view the foreign exchange market as inefficient if excessive speculation occurs, leading to greater exchange rate volatility or the exchange rate overshooting or undershooting its equilibrium path. In such cases the RBA may intervene as a buyer or seller of foreign exchange to 'smooth' or 'test' buyer/seller sentiment in the foreign exchange market and reduce this volatility.
3. The RBA may intervene to prevent an excessive depreciation of the exchange rate (which could lead to higher import prices and inflation) or an excessive appreciation of the exchange rate (leading to higher export prices, lower international competitiveness and GDP growth) and 'buy time' to re-evaluate the conduct of economic policy. This would represent heavy direct intervention by the RBA, using its foreign exchange reserves to influence the value of the exchange rate.

Essentially there are three policies that the Australian government (mainly through the Reserve Bank of Australia) can use to try and affect the value of the exchange rate under a floating exchange rate system:

- Firstly, the RBA can intervene directly in the foreign exchange market as a buyer or seller of foreign exchange. This form of **direct intervention** is usually carried out to 'smooth and test' the market to reduce what may be excessive volatility caused by misinformed speculation i.e. buying and selling of the AUD is not based on fundamental indicators of Australia's economic performance.
- Secondly, the RBA may use **indirect intervention** by changing the level of interest rates through its open market operations. This will alter the interest rate differential between Australia and the rest of the world. An increase in interest rates by the RBA relative to overseas will encourage capital inflow and increase the demand for Australian dollars. This action might be taken to prevent an excessive depreciation of the Australian dollar. A reduction in interest rates by the RBA on the otherhand, will encourage capital outflow and increase the supply of Australian dollars relative to the demand. This action would be taken to prevent an excessive appreciation of the AUD.
- Thirdly, the Australian government may change the **stance of macroeconomic policies** to increase or decrease the rate of economic growth in Australia relative to the rest of the world. Contractionary monetary policy (i.e. higher interest rates) and fiscal policy (e.g. a budget surplus) could be used to reduce aggregate demand, including the demand for imports, and lower the rate of economic growth. This action would be taken to raise the exchange rate by causing an appreciation.

Figure 5.7: Reserve Bank Intervention in the Foreign Exchange Market



Alternatively, the use of expansionary monetary policy (i.e. lower interest rates) and fiscal policy (e.g. a budget deficit) by the Australian government would be expected to boost aggregate demand, including the demand for imports relative to exports, raising economic growth, but lowering the exchange rate and causing a depreciation.

Intervention in the foreign exchange market normally takes place through the RBA buying or selling Australian dollars usually in exchange for US dollars or other currencies. The RBA can deal with banks in any foreign exchange market around the world 24 hours a day. **Figure 5.7** illustrates the mechanics of direct intervention by the RBA to stabilise the Australian dollar, in the hope of reducing volatility, which could lead to either an excessive depreciation or appreciation of the exchange rate.

If the demand for Australian dollars fluctuates between D_1D_1 and D_2D_2, the equilibrium exchange rate will vary from $US0.70 to $US0.80. If the demand for Australian dollars is D_1D_1 and the RBA wants to stabilise the exchange rate at $US0.75, it will have to purchase the equivalent of **AB** Australian dollars by selling foreign currency, thereby running down its stock of reserve assets such as foreign currencies.

If the demand for Australian dollars is D_2D_2 and the RBA wants to maintain the exchange rate at $US0.75, it will have to sell the equivalent of **BC** of Australian dollars by buying foreign exchange, adding to its stock of foreign exchange reserves or reserve assets.

Direct intervention by the RBA in the foreign exchange market has potential implications for domestic liquidity and the stance of monetary policy. Intervention by the RBA in the foreign exchange market can be 'sterilised' to offset its effects on domestic liquidity and interest rates, or left 'unsterilised', with the intervention allowed to affect domestic liquidity, interest rates and the stance of monetary policy:

- **Sterilised foreign exchange market intervention** occurs when the Reserve Bank offsets its transactions by buying or selling the equivalent amount of government securities, leaving the monetary liabilities of the Reserve Bank unchanged. For example, a sterilised sale of foreign currency involves the RBA selling foreign currency, which takes Australian dollars out of the financial system, but it then buys sufficient government securities to inject the same amount of Australian dollars back into the financial system. There is thus no change in the domestic money supply or domestic interest rates.
- **Unsterilised foreign exchange market intervention** on the other hand, involves no such offsetting purchase or sale of government securities. Therefore an unsterilised sale of foreign currency will lead to a fall in the money supply and a rise in interest rates. On the otherhand an unsterilised purchase of foreign currency will lead to a rise in the money supply and a fall in interest rates.

Table 5.5: Reserve Bank Foreign Exchange Transactions and Changes in Official Reserve Assets 2009-10 to 2016-17 ($AUDm) - Reserve assets valued at $US64.6b in 2017

Year	*RBA Net Foreign Exchange Transactions*	*Total Change in Reserve Assets*
2009-10	-$5,926m	$1,102m
2010-11	$3,408m	$781m
2011-12	$5,909m	$6,098m
2012-13	$824m	$5,453m
2013-14	$10,728m	$7,397m
2014-15	-$4,150m	$4,410m
2015-16	-$2,402m	$2,346m
2016-17	$8,348m	$3,965m

Source: Reserve Bank of Australia (2017), www.rba.gov.au, Statistics, Table A4, June.

The RBA has always tended to undertake sterilised intervention in its foreign exchange dealings. This means that after buying (selling) Australian dollars it would increase (reduce) the amount of cash in the banking system so that there is no effect on domestic interest rates or the stance of monetary policy. The RBA could do this by either of two means:

- Buying or selling Commonwealth Government Securities in its domestic market operations; or
- Arranging a foreign currency swap, by exchanging one currency for another in the present (in the spot market) and agreeing to reverse the transaction at a future date at an agreed price or exchange rate (in the forward or futures market).

Table 5.5 shows the level of the RBA's net foreign exchange transactions between 2009-10 and 2016-17 and changes in its official reserve assets of foreign currencies, gold and SDRs. Between 2002 and 2004 the AUD appreciated strongly against the US dollar as global commodity prices and Australia's terms of trade rose. The Reserve Bank purchased over $A5b of foreign exchange annually between 2002 and 2006 to prevent the AUD's appreciation from eroding the competitiveness of Australian industry. The Australian dollar continued to appreciate in 2006-07 reaching $US0.78, and the RBA increased its level of direct intervention by purchasing $20b in foreign exchange, increasing its reserve assets to $15.8b.

In 2007-08 the AUD reached a 24 year high of $US0.95, partly due to the weakness of the US dollar against major world currencies. In 2007-08 the RBA sold most of its foreign exchange swaps of -$44b to increase market liquidity in response to the Global Financial Crisis. 'Disorderly conditions' in the foreign exchange market in late 2008 and early 2009, led to the RBA intervening to restore stability with large scale sales of foreign exchange (and purchases of AUDs) to support the AUD. Between March and August 2009 the Australian dollar was less volatile as confidence returned to the market, with the AUD trading at around $US0.80. The AUD continued to appreciate in late 2009 and early 2010, before the European Sovereign Debt Crisis in May 2010 led to a falling exchange rate and RBA sales of foreign exchange with net sales of foreign exchange amounting to $5.9b in 2011-12.

The Australian dollar appreciated strongly to average $US1.05 between 2010-11 and 2011-12 due to strong export demand, rising commodity prices and the terms of trade. The RBA purchased foreign exchange and sold Australian dollars to limit the extent of the appreciation and loss in competitiveness. RBA purchases of foreign exchange were $3.4b in 2010-11 and $5.9b in 2011-12, helping to limit the Australian dollar's appreciation. The Reserve Bank cut interest rates between 2011 and 2016 to support economic growth in Australia and also to put downward pressure on the high value of the Australian dollar which had eroded export competitiveness. Falling commodity prices, a lower terms of trade and lower interest rates led to the AUD falling to around $US0.75 by August 2016. It traded at this level until early July 2017. The Reserve Bank's total reserve assets were valued at $US64.6b in June 2017.

REVIEW QUESTIONS

CHANGES IN EXCHANGE RATES

1. Explain how a fixed exchange rate system operates. Refer to Figure 5.3 in your answer.
2. Explain how the Economic and Monetary Union (EMU) operates in the Euro Area countries.
3. Discuss the advantages and disadvantages of the Euro Area exchange rate mechanism.
4. Research the causes and effects of the European Sovereign Debt Crisis between 2010 and 2013.
5. Explain how a managed exchange rate system operates. Refer to Figure 5.4 in your answer.
6. Use diagrams to distinguish between a depreciation and an appreciation of the bilateral USD/AUD exchange rate under a floating exchange rate mechanism.
7. Discuss the possible causes and effects of a depreciation and appreciation in the AUD.
8. Discuss the reasons for the Reserve Bank of Australia intervening in the foreign exchange market to affect the value of the exchange rate for the Australian dollar.
9. Distinguish between direct and indirect intervention in the foreign exchange market by the Reserve Bank of Australia. How did cuts in interest rates between 2011 and 2016 affect the value of the Australian dollar exchange rate?
10. Use a diagram to explain direct intervention by the Reserve Bank in the foreign exchange market.
11. Distinguish between sterilised and unsterilised intervention by the Reserve Bank in the foreign exchange market.

THE ECONOMIC EFFECTS OF EXCHANGE RATE MOVEMENTS

A **depreciation** of the exchange rate raises the domestic price of imports as well as reducing the foreign price of exports. A depreciation can have a number of potential positive and negative effects on the Australian economy. It is important to distinguish between the short run price effects and the potential long run volume effects of a depreciation. However, overall a depreciation of the exchange rate has an expansionary effect on economic growth by stimulating domestic output including exports and import competing goods. The **positive effects of a depreciation** could include the following:

- In the long run, a depreciation of the exchange rate enhances the competitiveness of the tradable goods sector (i.e. export and import competing industries) by making Australian goods and services more price competitive, relative to foreign produced goods and services. This can help to raise export income and reduce import expenditure in the long run, thereby improving the current account deficit in the balance of payments.
- A depreciation may induce higher levels of capital inflow into the Australian economy as domestic assets become cheaper relative to foreign assets. This may help to reduce the level of foreign debt (through less debt borrowings), and increase foreign direct and portfolio investment in Australia.
- A depreciation may lead to structural adjustment and greater competitiveness in industry. For example, the depreciation of the Australian dollar in the mid 1980s and early 1990s assisted the growth of manufactured and service exports (mainly ETMs, financial and business services) which rose by 25% between 1987 and 1993, particularly to the fast growing Asian region.

The **negative effects of a depreciation** can include the following:

- In the short run, a depreciation of the exchange rate raises the price of imports and reduces the price of exports. This can lead to lower export income from the sale of a given volume of exports and also raise the cost of a given volume of imports. Lower export income and higher import expenditure in the short run, will worsen the goods balance (i.e. a 'J curve' effect), and increase the size of the current account deficit in the balance of payments. This is illustrated in **Figure 5.8** on page 144.
- A depreciation may lead to higher domestic inflation, through higher import prices, if the Reserve Bank is unable to achieve its inflation target of 2% to 3% over the economic cycle. Changes to the operation of Australian monetary policy by using an inflation target in the 1990s and 2000s, helped to contain 'depreciation induced' imported inflation. Microeconomic policies such as enterprise bargaining and the national competition policy have also supported the anti-inflation focus of government economic policy in the face of periodic depreciations in the exchange rate. This has made the economy more flexible in dealing with currency shocks and their short run price effects.
- An immediate impact of a depreciation is to increase the value of that part of the net foreign debt denominated in foreign currencies (such as $US and Yen). About 60% of Australia's net foreign debt is denominated in foreign currencies, but most is hedged back into Australian dollars.
- A depreciation of the exchange rate will raise the debt servicing ratio (i.e. the interest payments on foreign debt as a percentage of export income). Higher interest payments overseas could lead to a higher net primary income deficit and current account deficit in the balance of payments.
- A large or dramatic depreciation in the exchange rate could lead to Reserve Bank indirect intervention to support the exchange rate through higher interest rates to reduce the demand for imports and encourage capital inflow. A higher interest rate structure could lead to lower economic growth and levels of private investment spending, causing the rate and level of unemployment to rise.

An **appreciation** of the exchange rate lowers the domestic price of imports and raises the foreign price of exports. An appreciation can have a number of potential positive and negative effects on the Australian economy. It is important to distinguish between the short run price effects and the potential long run volume effects of an appreciation. However, overall an appreciation of the exchange rate has a contractionary effect on the economy by reducing international competitiveness, domestic output and economic growth. The **positive effects of an appreciation** could include the following:

- In the short run, an appreciation of the exchange rate lowers the price of imports and increases the price of exports. This could lead to higher export income from the sale of a given volume of exports, and lower import expenditure for a given volume of imports. Higher export income (X) and lower import expenditure (M) in the short run will improve the goods balance (X - M) and reduce the size of the current account deficit in the balance of payments.
- An appreciation may lead to lower domestic inflation through lower import prices. This will raise the real incomes of consumers, who can improve their living standards through access to a greater volume and variety of cheaper imports compared to domestically produced goods and services.
- An immediate impact of an appreciation is to reduce the value of that part of the net foreign debt denominated in foreign currencies (e.g. $US and Yen) against which the Australian dollar has appreciated.
- An appreciation of the exchange rate will reduce the debt servicing ratio (i.e. interest payments as a percentage of export income). Lower interest payments on foreign debt could lead to a lower net primary income deficit and reduce the size of an existing current account deficit.

The **negative effects of an appreciation** can include the following:

- In the long run, an appreciation of the exchange rate reduces the competitiveness of the tradable goods sector (i.e. export and import competing industries) by making Australian goods and services less price competitive relative to foreign produced goods and services. This could reduce export income and increase import expenditure in the long run, and worsen the current account deficit.

- An appreciation may lead to higher levels of capital outflow from Australia as domestic assets (e.g. shares) become more expensive and less attractive relative to foreign assets. This may decrease foreign direct and portfolio investment in Australia and reduce the rate of economic growth.
- An appreciation may lead to higher unemployment in export and import competing industries as they restructure in an attempt to become more internationally competitive.
- A large appreciation could lead to Reserve Bank indirect intervention to reduce the exchange rate by lowering interest rates to reduce the demand for Australian dollars. A lower interest rate structure could lead to higher economic growth and investment, but also cause domestic inflation to rise.

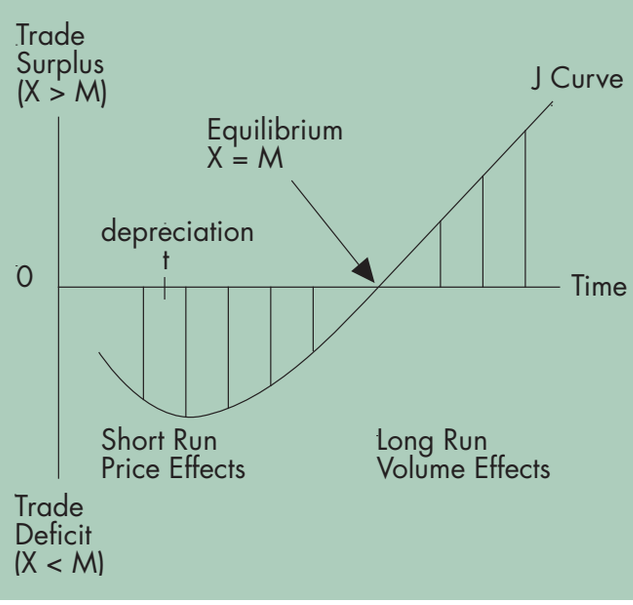
Flexible Exchange Rates and Structural Adjustment

Most OECD countries adopted floating exchange rates in the 1970s as the Bretton Woods system of fixed exchange rates based on the $US was abandoned. The reason for this was the argument that movements in floating exchange rates would allow for adjustments in competitiveness to be made more quickly and effectively. For example, countries like Australia and the USA, with current account deficits, would be encouraged to increase exports through the expansionary effect of a depreciation on their tradable goods sectors. Similarly, countries like Japan and Germany, with current account surpluses and appreciating currencies, would be encouraged to restructure industry to maintain competitiveness, and use their current account surpluses to purchase more imports from the rest of the world.

The **theory of the J Curve** suggests that a country with an existing current account deficit (like Australia), that has a currency depreciation (at time 't' in **Figure 5.8**) will experience a worsening in its trade balance in the short run as export prices fall and import prices rise. This will lead to a decline in export income and a rise in import expenditure, thus worsening the trade balance and the current account deficit. This short run deterioration in the trade balance is due to the initial **price effects of the depreciation**.

However in the long run, the depreciation improves the country's international competitiveness. It should sell a greater volume of exports and buy a reduced volume of imports in the long run, thereby reducing the size of its trade deficit as well its current account deficit. The changes in the size of the trade balance over time conform to a J Curve (as in **Figure 5.8**), as the trade deficit increases initially, reaches equilibrium (where X = M), and then goes into surplus (where X > M). The J Curve effect of a depreciation suggests that the trade balance gets worse in the short run due to the price effects of the depreciation, before improving in the long run because of the **volume effects of the depreciation**.

Figure 5.8: The J Curve Effect of Exchange Rate Depreciation on the Trade Balance



Since the floating of the exchange rate in 1983, the Australian dollar has tended to depreciate against the US dollar and in TWI terms. However, coinciding with global resources booms between 2003 and 2008, and 2010 to 2012, there was a trend appreciation of the Australian dollar. As a major commodity exporter, Australia benefited from rising global commodity prices and the terms of trade. Most notable were higher contract prices for Australian exports such as iron ore, coal, aluminium and other metals.

The higher returns for these commodities led to a boom in production, employment and investment in the Australian mining industry, particularly in the 'resource rich' states of Western Australia and Queensland. Resources such as labour and capital tended to shift out of non resource rich states to these resource rich states where factor returns were higher because of the strong demand for commodities.

However the Australian dollar's strong appreciation in this period also reduced the international competitiveness of manufactured exports such as ETMs (e.g. machinery) and service exports such as education and tourism. These industries found it increasingly difficult to compete in world export markets, especially against cheaper imports from low cost producers such as China, India and ASEAN.

After the end of the mining investment boom in 2012 the Australian economy began a structural transition to non mining sources of growth such as consumption, residential building and construction and net exports. Between 2013 and 2016 the Australian dollar depreciated by almost 25% from around $US0.93 in 2013-14 to $US0.73 in 2015-16. This depreciation helped to improve the competitiveness of exports (such as tourism and education) and import competing goods (such as manufactures). This improvement in competitiveness helped to support the rate of domestic economic growth and employment growth in the service sector of the Australian economy as the process of transitioning away from mining led growth led to resources flowing out of mining states to non mining states.

REVIEW QUESTIONS

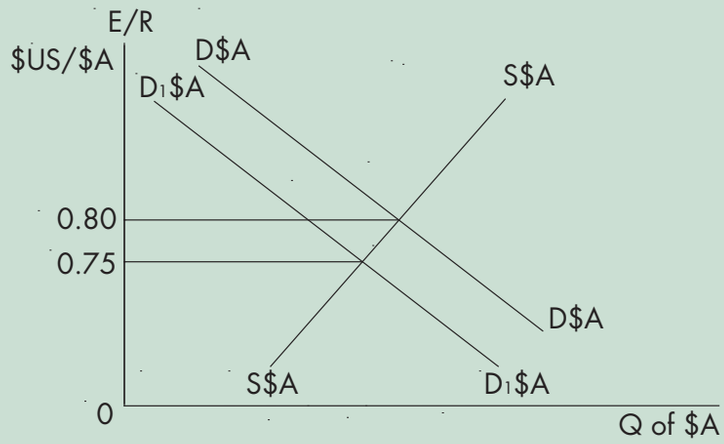
THE ECONOMIC EFFECTS OF EXCHANGE RATE MOVEMENTS

1. Explain the effects of a currency depreciation on import and export prices.
2. In the long run how can a depreciation increase international competitiveness and growth?
3. Discuss the negative and positive effects of a depreciation on an economy like Australia.
4. Explain the effects of a currency appreciation on import and export prices.
5. In the long run how can an appreciation reduce international competitiveness and growth?
6. Discuss the theory of the 'J curve' effect of a currency depreciation illustrated in Figure 5.8.
7. Explain how the Australian dollar's depreciation between 2013 and 2016 assisted the Australian economy's transition to non mining sources of growth.
8. Define the following terms and add them to a glossary:

appreciation
bilateral exchange rate
clean float
depreciation
derived demand
devaluation
direct quotation
dirty float
equilibrium exchange rate
exchange rate
exchange rate expectations
fixed exchange rate
floating exchange rate
foreign exchange market
indirect quotation
managed exchange rate
reserve assets
revaluation
structural adjustment
Trade Weighted Index

CHAPTER 5: SHORT ANSWER QUESTIONS

The following diagram shows the Australian dollar exchange rate in terms of US dollars.



Marks

1. What is the initial equilibrium exchange rate for the Australian dollar? (1)

2. What type of currency movement has resulted from the movement of the demand curve of Australian dollars from D$A to $D_1$$A? (1)

3. What effect will this currency movement have on the price of exports and imports? (1)

4. Explain TWO factors which could have caused the demand curve for Australian dollars to shift from D$A to $D_1$$A. (2)

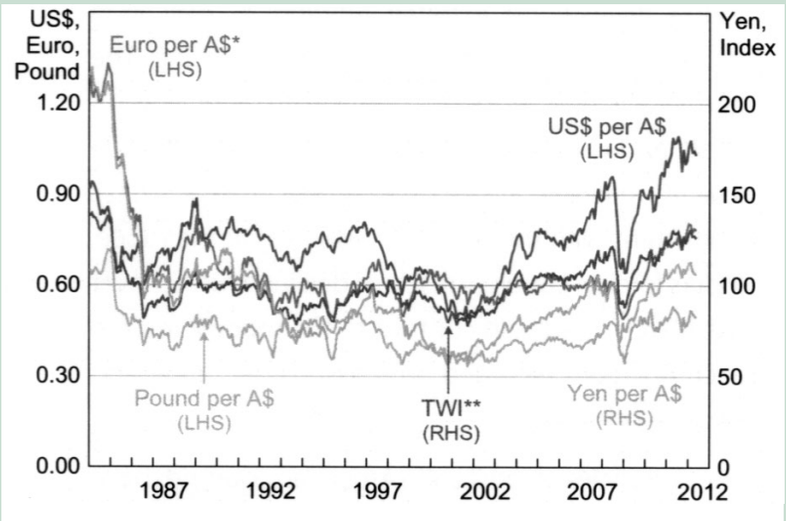
5. Explain TWO advantages of a floating exchange rate system. (2)

6. Explain why and how the Reserve Bank might intervene in the foreign exchange market to offset the currency movement illustrated in the diagram. (3)

CHAPTER FOCUS ON EXCHANGE RATES

"The strong terms of trade has been accompanied by a significant appreciation of the exchange rate. In trade weighted terms, the real exchange rate is at its highest level since the 1970s. The appreciation has significantly lowered the price of imported goods for Australian consumers and businesses but has also adversely affected the competitive position of many firms, particularly in the manufacturing and tourism industries."

Relative Exchange Rates for the Australian Dollar 1987-2012



Source: Reserve Bank of Australia (2012), *Statement on Monetary Policy*, May.

Analyse the reasons for the Australian dollar's appreciation between 2010 and 2012 and the effects of this appreciation on the Australian economy.

CHAPTER 5: EXTENDED RESPONSE QUESTION

Discuss the main factors that influence the value of the Australian dollar in the foreign exchange market and analyse the effects of a depreciation of the Australian dollar on the Australian economy.

CHAPTER SUMMARY

EXCHANGE RATES

1. An exchange rate refers to the price of one country's currency in terms of another country's currency. It is a measure of the relative value or purchasing power between two currencies. Exchange rates provide the basis for the conversion of domestic and foreign currencies of different countries. This enables international trade, investment and finance to take place in global markets.

2. Foreign exchange is traded in spot, forward and swap markets by foreign exchange dealers in Australia, and overseas banks and their customers. Daily trade in foreign exchange against Australian dollars and other currencies was $A166.7b in April 2017, higher than in 2009-10 when the Global Financial Crisis and recession impacted negatively on foreign exchange activity.

3. Exchange rates are largely determined by the demand and supply of currencies in foreign exchange markets. This reflects the use of floating exchange rate systems by most countries in the world.

4. The Australian dollar's relative value can be measured by using bilateral or cross rates, or movements in the Trade Weighted Index (TWI) of a basket of currencies of Australia's major trading partners.

5. Factors affecting the demand for Australian dollars include the demand for exports (goods and services) and assets (e.g. shares, government bonds and real estate) in Australia. Factors affecting the supply of Australian dollars include the demand for imports and foreign assets by Australians.

6. Movements in the exchange rate reflect changes in the current account balance and the balance on the capital and financial account in the balance of payments. Countries with persistent current account deficits tend to experience a depreciation of their currencies, whereas countries with persistent current account surpluses tend to experience an appreciation of their currencies.

7. Under a floating exchange rate system, the equilibrium value of the exchange rate is determined where the demand equals the supply of a currency. Other methods which can be used to determine the exchange rate include the fixed and managed exchange rate systems.

8. The two main movements in a currency's value or purchasing power under a floating exchange rate system are called depreciation and appreciation. A depreciation occurs when the exchange rate loses value or purchasing power relative to another currency. An appreciation occurs when the exchange rate gains value or purchasing power relative to another currency.

9. The Reserve Bank can intervene to affect the value of the Australian dollar either directly in the foreign exchange market (through the buying or selling of foreign currencies) or indirectly by changing interest rates and the stance of monetary policy in Australia.

10. The impacts of exchange rate movements are felt mainly by exporters and importers:

    A depreciation of the AUD will increase Australia's international competitiveness as export prices will fall and import prices will rise. A depreciation may worsen the current account deficit in the short run before it improves in the long run. However a depreciation can lead to higher inflation (through higher import prices) if the Reserve Bank is not able to meet its inflation target.

    An appreciation of the AUD will reduce Australia's international competitiveness as export prices will rise and import prices will fall. However an appreciation can lead to lower inflation through lower import prices. An appreciation may improve the current account deficit in the short run before it worsens in the long run due to the decline in international competitiveness.

Chapter 6

Australia's Trade Policy

Australia has a long history of protection in the manufacturing sector where tariffs and quotas have been used to shield domestic firms from direct import competition. Much of this protection was put in place after Federation in 1901 when Australian governments used a policy of protection from imports to develop the manufacturing sector through the creation of infant industries and domestic employment. A centralised wage fixing system was also adopted to set minimum or award wages for workers in this sector. Levels of protection were increased during the Great Depression in the 1930s to protect domestic employment levels, with the British Preferential Tariff reaching over 30%, and the General Tariff Rate for non Commonwealth countries rising to over 60%. These high levels of protection from import competition for manufacturing remained in force until the early 1970s, with the effect of raising the domestic cost structure and the price of domestic and imported manufactured goods in Australia.

AUSTRALIA'S POLICIES TOWARDS PROTECTION

In 1973 the Whitlam Labor government introduced a 25% 'across the board' cut in protection to stimulate greater industry efficiency and lower the prices of imported consumer, intermediate and capital goods. However protection was increased in the late 1970s and 1980s as domestic industries such as passenger motor vehicles (PMV), textiles, clothing and footwear (TCF), and steel were subjected to intensified import competition. These industries lobbied the government successfully for higher levels of protection. This lobbying was referred to as '**rent seeking**' behaviour as industries attempted to win favourable treatment from the federal government through the maintenance of protective assistance, or increased assistance, on the grounds of higher import penetration displacing jobs in manufacturing.

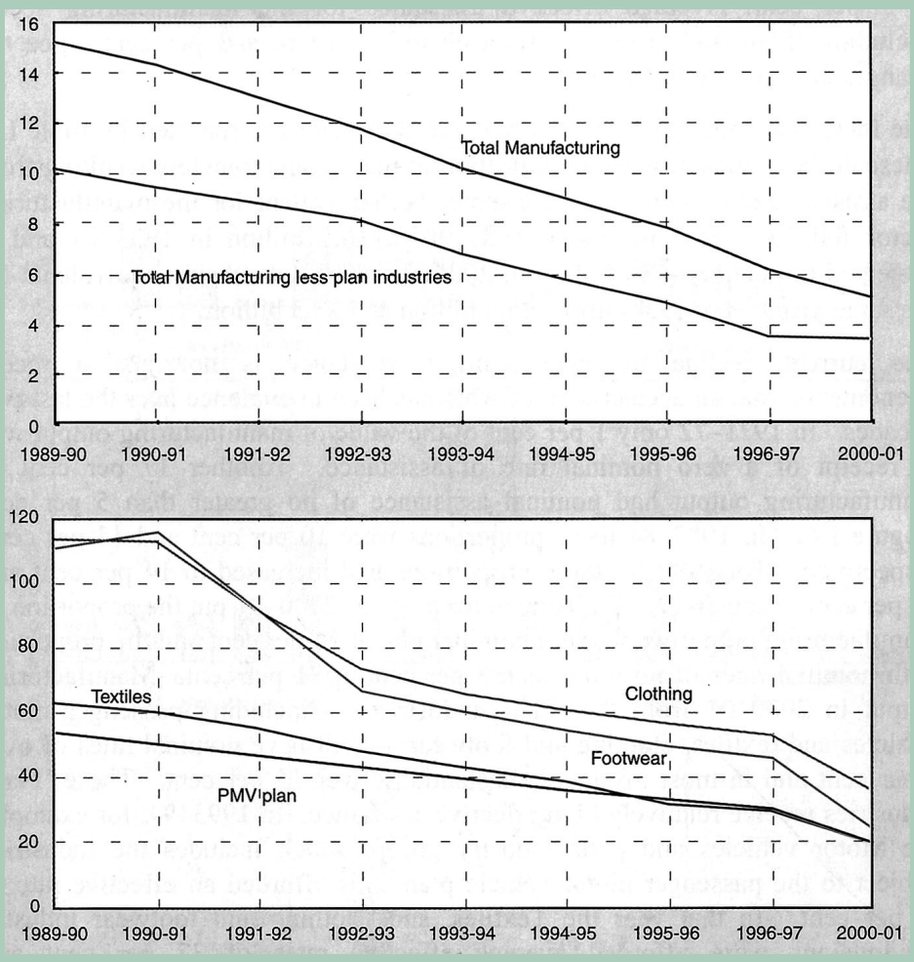
Table 6.1 shows that in 1989 nominal rates of assistance were as high as 65% in the clothing and footwear industry and the manufacturing sector had three times the average level of assistance as agriculture. As a result, export industries (such as mining and agriculture) were penalised by paying higher input costs. The high levels of protection of Australian industry led to low levels of efficiency, exports and innovation. They also restricted consumer choice and raised the price of imports for consumers and industry. The Industries Assistance Commission (IAC), later to become the Industry Commission (IC), argued that lower levels of protection would give firms a greater incentive to become more efficient and increase exports, helping to reduce the current account deficit in Australia's balance of payments.

Table 6.1: Nominal Rates of Assistance for Selected Australian Industries (%)

Industry	*1980-81*	*1989-90*	*2000-01*	*2005-06*	*2009-10*
Textiles	26	23	6	4.5	4.4
Clothing and footwear	63	65	19	15.2	12.7
Fabricated metals	20	13	4	3.5	4.4
Transport equipment	40	22	9	2.0	2.0
Manufacturing average	14	9	3	4.5	4.7
Agricultural average	3	3	3	5.1	4.7

Source: IAC (1981-92), *Annual Reports* and Productivity Commission (2000-10), *Annual Reports*.

Figure 6.1: Decline in the Average Rates of Effective Assistance 1989-2001 (%)



Source: Industry Commission (1994), *Annual Report.*

In 1983 the newly elected Hawke federal Labor government agreed with the IAC's view that the scaling back of protection would enable Australia to achieve the following potential gains from free trade:

- Increased specialisation and economies of scale in production would result in a lower cost structure for manufacturing and improve the overall efficiency of Australian industry.
- A greater mix of output (from both domestic and overseas sources) would increase the quality and quantity of goods available to Australian consumers and raise general living standards.
- Increased competition between firms in the tradable goods sector (exports and import substitutes) of the economy, and with international enterprises, would lead to lower prices and more exports.
- Incentives for firms to innovate would rise through the use of the latest cost reducing technology (including information and communications technology or ICT) to increase competitiveness.

The Hawke government (1983-1991) implemented a policy of dismantling industry protection on a large scale in the ***1988 Industry Statement***. This change in industry policy recognised the increasing internationalisation of the Australian economy, and the need for efficient export firms to maintain their competitiveness in overseas markets. The government argued that the reduction in protection would have both microeconomic benefits for the manufacturing industry as well as macroeconomic benefits for Australia. The ***1988 Industry Statement*** phased in cuts to protection over four years, with the protection of manufacturing falling from an average of 15% in 1989 to 10% by 1993-94 and then to 5% in 2000. The reduction in the rates of protection for manufacturing are shown in **Figure 6.1**.

Table 6.2: Retrenchments in Textiles, Clothing and Footwear Industries 1991

State	*Textiles*	*Clothing*	*Footwear*	*Total*
NSW	714	740	91	1,545
VIC	1,538	1,717	931	4,186
QLD	–	59	–	59
SA	97	333	–	430
WA	–	115	–	115
TAS	30	8	–	38
Total	2,379	2,972	1,022	6,373

Source: IAC (1981-92), various *Annual Reports*.

The textiles, clothing and footwear (TCF), passenger motor vehicle (PMV) and steel industries were exempted from these cuts in protection (see **Figure 6.1**). They were put on separate industry plans, designed by Senator John Button, to introduce a gradual 'phasedown' of tariff and quota protection, giving employees and management in manufacturing firms time to restructure and minimise transitional costs such as structural unemployment and the retraining of workers. These industries had three years to facilitate plans for **structural change** in order to receive continued support from the government. This allowed time for resources to be reallocated and a process of voluntary redundancies to be implemented as summarised in **Table 6.2**. Around 6,373 retrenchments were planned by 1991, reflecting a loss of jobs in major Australian industrial regions where the TCF, PMV and steel industries were located.

The ***1991 Industry Statement*** was introduced by the Hawke Labor government to accelerate the pace of tariff reform in Australia by announcing the following new measures:

- The reduction of the majority of tariffs to 5% by 1996;
- The abolition of import quotas for PMV and a reduction in tariffs for PMV to 15% by 2000;
- The abolition of import quotas for TCF in 1993, and a reduction in tariffs to a maximum of 25% by the year 2000; and
- The exemption from sales tax of a wider range of business inputs used by manufacturers, farmers and miners. The intention of this policy was to eliminate any taxes on export industries.

The Howard government, elected in 1996, was committed to Labor's previous tariff reforms. It cut tariffs for PMV products to 15% in 2000, and these tariffs were frozen until January 1st 2005, when they were cut to 10%. Automotive tariffs of 10% were reduced to 5% in January 2010, and would stay at this level until 2015. The Automotive Competitiveness and Investment Scheme (ACIS) was introduced in 2001 to provide transitional assistance to the automotive industry during the move to a lower tariff environment. However ACIS was scaled back after the decision by Ford, General Motors and Toyota to shut their car plants over 2016-17 and leave the industry. Tariff protection for the TCF and the PMV industries had been reduced to an average 6.7% for TCF and 7.9% for PMV by 2014-15. Australian tariffs were an average of 4.1% for manufacturing and 2.5% for agriculture in 2014-15.

The benefits from reduced protection were estimated by the Productivity Commission (PC) as a gain of $4b in GDP for Australia through additional export volumes and a higher rate of economic growth. **Figure 6.2** illustrates the significant reduction in tariffs for all manufacturing industries in the 1990s in terms of both nominal and effective rates of assistance compared to the levels that prevailed in the 1960s, 1970s and 1980s. Large disparities between certain industries were also removed such as those between the highly protected TCF and PMV industries, compared to manufacturing as a whole.

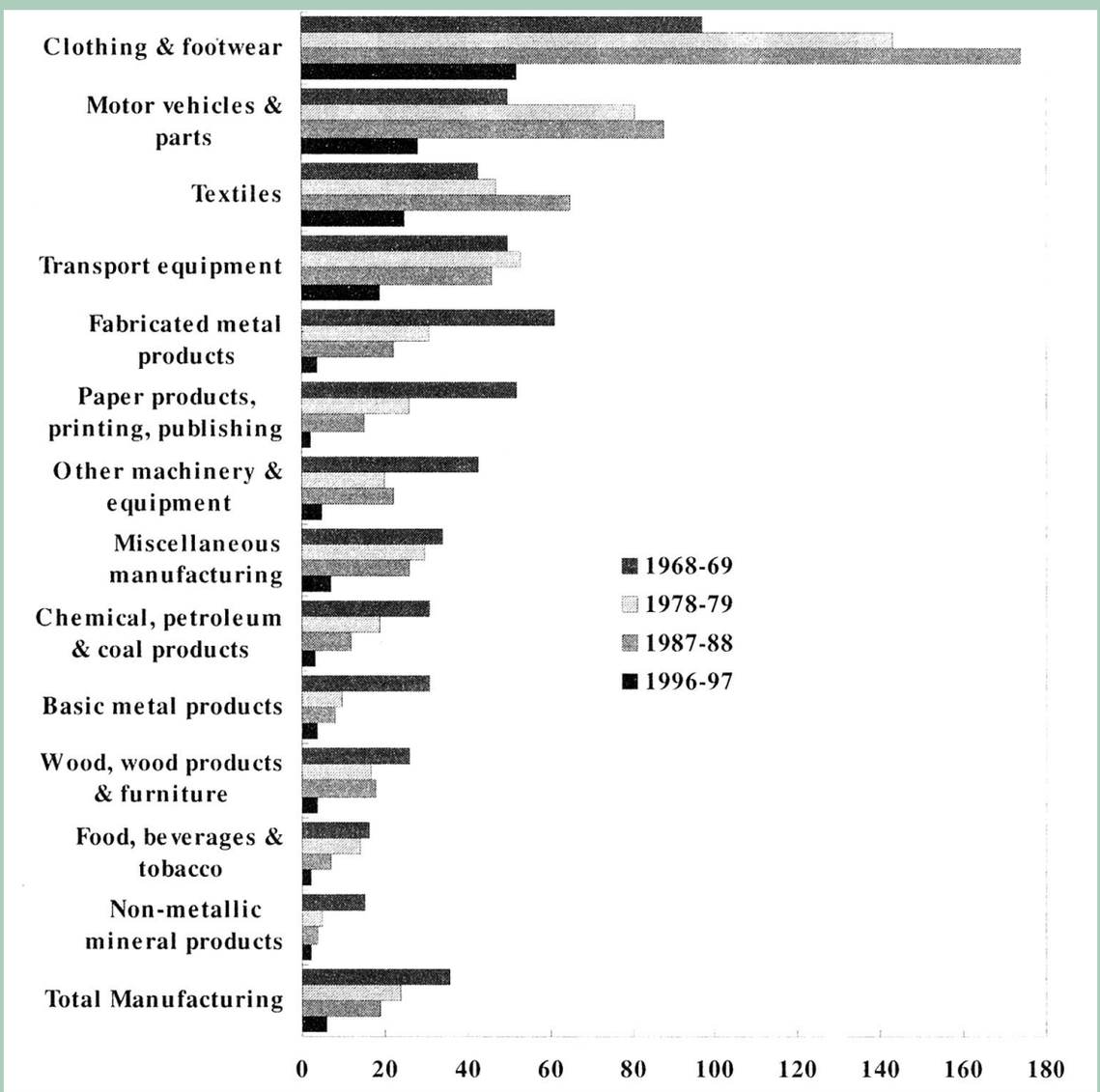
Two measures of industry assistance or protection include the nominal and effective rates of assistance:

1. The **nominal rate of assistance** is the percentage difference between the price the domestic producer receives with protection and the price the producer would receive in the absence of protection.
2. The **effective rate of assistance** is the amount of protection expressed as a percentage of the domestic value added to production. This is a more accurate measure of the protection of domestic industry from imports which is used by the Productivity Commission (PC) and is shown in **Figure 6.2**.

The reasons for the change in government industry assistance policy in the 1980s and 1990s were to:

- Raise the competitiveness and efficiency of Australian industry, especially the tradable goods sector;
- Increase the rate of economic growth through structural reform of industry. By reducing the cost structure of industry this would improve technical, allocative and dynamic efficiency; and
- Encourage higher levels of productivity and technology industries (i.e. 'sunrise industries') to increase their export shares, especially in the fast growing Asian market and other global markets.

Figure 6.2: Average Rates of Effective Assistance for Manufacturing Industries 1968-69 to 1996-97 (%)

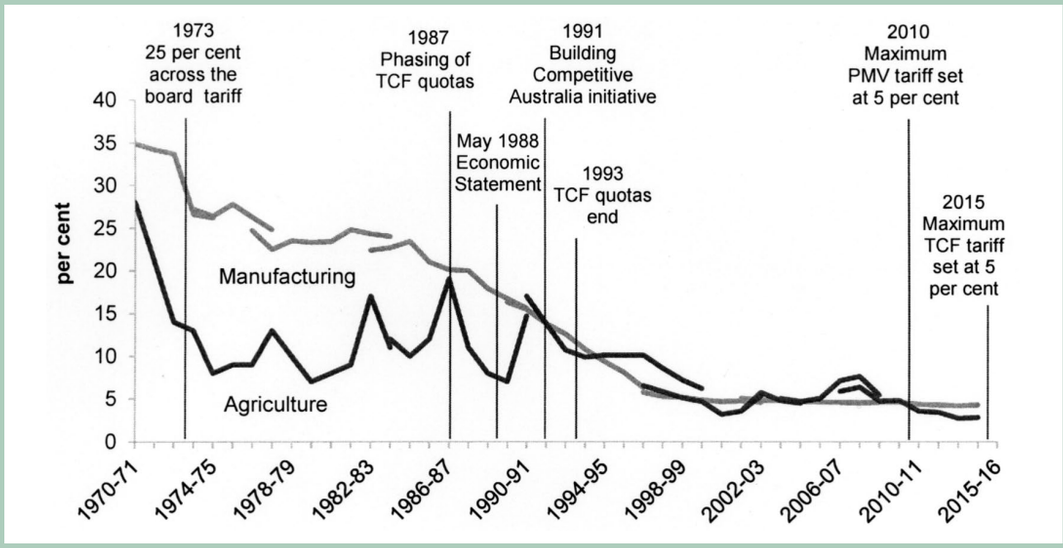


Source: IC (1996), *Annual Report 1995-96*.

Recent Australian Tariff Assistance

Estimates of protection by the Productivity Commission (which replaced the Industry Commission in 1996) indicate that there was a significant decline in measured assistance to the manufacturing and agricultural sectors between 1970-71 and 2015-16 as shown in **Figure 6.3**. For example, the estimated effective rate of assistance for manufacturing was around 35% in 1970-71, whereas in the 2000s it was around 5% and fell to 4.1% in 2014-15. This decline was driven in particular by the 25% across the board tariff cut of 1973, the abolition of tariff quotas, and the broad programmes of tariff reductions that commenced in the late 1980s. For agriculture, the estimated effective rate of assistance was over 25% in 1970-71, yet by 2006-07 it was around 5% and had fallen to 2.5% in 2014-15.

Figure 6.3: Effective Rates of Assistance to Manufacturing and Agriculture 1970-71 to 2015-16 (f) (%)



Source: Productivity Commission (2015), *Trade and Assistance Review 2013-14*, Melbourne

Tariffs have direct effects on the returns received by Australian producers. Tariffs on imported goods increase the price at which these goods are sold in the Australian market and allow scope for domestic producers of similar products to increase their prices. Tariffs also increase the price of goods that are used as inputs and penalise local industries. The Productivity Commission's revised series of tariff assistance on outputs was $6.7b in 2015-16 (see **Table 6.3**) compared to $7.1b in 2011-12. The fall in assistance on outputs reflects reductions in tariffs on motor vehicles and parts, and TCF products in 2015 to 5%, and lower output in tariff assisted activities such as metal products, food, beverages, tobacco, petroleum, coal, chemical and rubber products. The estimated cost penalties to user industries of tariffs was -$5.9b in 2015-16. After deducting the tariff input penalty from the output assistance, net tariff assistance was estimated to be $839.3m in 2015-16, a decline of 47% since 2011-12.

Table 6.3 Total Tariff Assistance 2011-12 to 2015-16 ($m)

	2011-12	*2012-13*	*2013-14*	*2014-15*	*2015-16*
Output assistance	$7,194.2m	$7,089.7m	$6,725.0m	$6,779.9m	6,763.5m
Input penalty	-$5,612.0m	-$5,657.8m	-$5,838.1m	-$5,888.0m	-$5,924.2m
Net tariff assistance	$1,582.2m	$1,431.9m	$886.9m	$891.9m	$839.3m

Source: Productivity Commission (2017), *Trade and Assistance Review 2015-16*, Melbourne.

AUSTRALIA'S POLICIES TOWARDS FREE TRADE

Since the *1988 Industry Statement*, the Australian government has continued the process of reducing the protection of manufacturing. This was a **unilateral policy decision** to open the Australian domestic market to international competition from imports, helping to promote free trade. The Australian government hoped to increase industry efficiency and export competitiveness, with the Productivity Commission (2017) estimating further economic gains if the 5% general tariff on about 50% of imported products (mainly manufactured goods) was eliminated.

In April 2011 the Australian government released a *Trade Policy Statement* outlining its commitment to free trade as a pathway to improved employment prospects and economic prosperity in Australia. In October 2012, the Australian Government issued the *Asian Century White Paper* with a commitment to lower tariffs and implement conditions in existing trade agreements especially with large Asian nations such as China and India. Recent developments in Australia's trade policy are illustrated in **Figure 6.4**.

At the **global multilateral level** Australia became a member of GATT in 1947 and the WTO in 1994. Australia helped to form the Cairns Group of agricultural free trading countries in 1986. This group of 17 countries (Argentina, Australia, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Guatemala, Indonesia, Malaysia, New Zealand, Paraguay, The Philippines, South Africa, Thailand and Uruguay) sought to achieve free trade in agriculture, by getting trade in agriculture on the agenda of the Uruguay Round of GATT talks in 1986. The Cairns Group sought the elimination of protectionist trade barriers in trade blocs such as the European Union, where agricultural subsidies distort world trade flows. The aims were to reduce agricultural subsidies and to improve access to global agricultural markets. The Uruguay Round was completed in 1994, and led to the first ever agreement on rules for trade in agriculture. At the 10th WTO Ministerial Conference in Kenya in 2015 the Doha Round of WTO talks (2001-15) a 'single undertaking' on all issues was not reached and the Productivity Commission (2017) concluded that although the Doha Round was unfinished it is effectively over.

However there was agreement to eliminate all agriculture subsidies and the entry into force of the **Trade Facilitation Agreement** to simplify and harmonise trade procedures to assist the movement of goods. Australia is also involved in ongoing negotiations over WTO agreements on environmental goods (2016), information technology (2015), trade in services (2016) and government procurement (2014).

At the **regional and multilateral level**, in 1989 Australia helped to establish the Asia Pacific Economic Co-operation (APEC) forum in response to the formation of trade blocs and agreements such as the EU and NAFTA. At the 1994 APEC meeting, the *Bogor Declaration* was signed, committing APEC nations to the elimination of all trade barriers by 2020. At the APEC Trade Ministers' meeting in China in May 2014, Ministers agreed to take steps towards APEC's goal of a Free Trade Area of the Asia Pacific (FTAAP). A further regional free trade initiative was the signing of the ASEAN-Australia-New Zealand Free Trade Area (AANZFTA) Agreement in Thailand in February 2009. Australia also signed the Trans Pacific Partnership (TPP) agreement with Brunei, Chile, New Zealand, Singapore, Peru, the USA and Vietnam in February 2016. It is also negotiating the Regional Comprehensive Economic Partnership (RCEP) which includes ASEAN, Australia, China, India, Japan, Korea and New Zealand. At the 17th round of RCEP negotiations in March 2017, there was recognition of the need to intensify negotiations in light of President Trump's protectionist trade rhetoric and the USA's withdrawal from the TPP.

The lack of progress in multilateral forums such as the WTO has accelerated agreement making at the bilateral and regional or plurilateral (between countries in other regions) level including by Australia. In 2014 Australia's bilateral agreements with Korea and Japan entered into force, the trade agreement with China came into force in 2015, and negotiations for bilateral agreements with India and Indonesia continued as shown in **Figure 6.4**. On a **bilateral basis** Australia has negotiated numerous trade agreements with its major trading partners to increase market access for Australian exports. The bilateral trade agreement known as ANZCERTA (1983), established a free trade zone between Australia and New Zealand in the 1990s, and has led to the growth in trans Tasman trade, a restructuring of manufacturing in both countries and promoted the free movement of labour and capital between the two countries.

Figure 6.4: Recent Developments in Australia's Trade Policy

May 2015 — June 2016

Multilateral forums

World Trade Organisation Doha Round
Negotiations began 2001
Negotiation Rounds 10
Latest: 10th Ministerial Conference Kenya December 2015

Plurilateral forums/agreements

APEC (21)
Negotiations began 1989
Negotiation Rounds Annual
Latest: November 2015

G20 (20)
Negotiations began 2008
Negotiation Rounds Annual
Latest: November 2015

Trade in Services Agreement (23)
Negotiations began 2013
Negotiation Rounds 18
Latest: June 2016

WTO Environmental Goods Agreement (18)
Negotiations began 2014
Negotiation Rounds 13
Latest: April 2016

WTO Information Technology Agreement (Expanded) (54)
Negotiations began 2012
Negotiation Rounds na
Concluded: December 2015

WTO Government Procurement Agreement (Revised) (18)
Negotiations began 2014
Negotiation Rounds na
Implemented: April 2014

Regional agreements

Regional Comprehensive Economic Partnership (16)
Negotiations began 2013
Negotiation Rounds 13
Latest: June 2016

Trans Pacific Partnership (12)
Negotiations began 2010
Negotiation Rounds 31
Concluded: October 2015
Signed: February 2016

Bilateral agreements

Came into force

China-Australia Trade Agreement
Negotiations began 2005
Negotiation Rounds 21
In force: December 2015

Negotiating

Australia-India Comprehensive Economic Cooperation Agreement
Negotiations began 2011
Negotiation Rounds 9
Latest: September 2015

Indonesia-Australia Comprehensive Economic Partnership Agreement
Negotiations began 2012
Negotiation Rounds 3
Latest: May 2016

Source: Productivity Commission (2016), *Trade and Assistance Review 2014-15*, Melbourne.
NB Plurilateral forums/agreements are between countries from different regions

Since 2003 Australia has signed bilateral trade agreements with Singapore (2003), Thailand (2005), the USA (2005), Chile (2009), ASEAN and New Zealand (2010), Malaysia (2013), Korea (2014), Japan (2014) and China (2015). Negotiations have continued with India and Indonesia. Australia and the EU agreed in November 2015 to start negotiations on a trade agreement. Despite the growth of bilateral trade agreements between Australia and its major trading partners, the Productivity Commission (2015) raised concerns over the lack of transparency of some of the provisions negotiated and whether such agreements would lead to trade creation because of the often complex rules of origin that can be applied to goods traded. Other criticisms of bilateral trade agreements include the costs of negotiations; the extent of coverage of the agreements; and the length of time taken to complete negotiations.

Australia's Multilateral Trade Agreements: The WTO and APEC

The benefits of trade liberalisation are greatest if the liberalisation is undertaken multilaterally, because reductions in trade barriers between large numbers of countries increase the extent of market access for exporters and the growth in trade and investment flows. The most important multilateral trade agreement to Australia is the World Trade Organisation (WTO) which is a forum for sovereign nations to negotiate and enforce agreements on the conduct of international trade. It evolved from the General Agreement on Tariffs and Trade (GATT), established in 1947 by 23 countries including Australia. The WTO replaced GATT in 1995, and in 2017 had 164 member nations. The WTO oversees approximately 60 agreements on trade matters (such as trade in goods, services, investment and intellectual property). In broad terms the agreements require all member governments to apply their trade rules in a consistent, transparent and non discriminatory manner. Key features of the agreements are detailed in **Extract 6.1**:

- The Most Favoured Nation Rule requires that WTO members must grant to all their trading partners the conditions they grant to their 'most favoured nation' trading partner.
- The National Treatment Rule requires that countries should set conditions for imported goods and services no less favourable than those for domestically produced goods.
- Countries must 'bind' their tariffs and other barriers, and the country is 'bound' by these levels.
- Transparency Rules require member countries to make their trade laws and regulations publicly available and notify the WTO of any changes.

Changes to trade rules governed by the WTO occur principally through 'rounds' of multilateral trade negotiations involving all members of the WTO. The Doha round is the ninth round of talks held since GATT was formed in 1947 (refer to **Table 6.4**) and agreement was reached to abolish agricultural subsidies at the 10th Ministerial Conference in Kenya in 2015. The negotiation and bargaining process involves members making 'concessions' (i.e. a commitment to reducing a trade barrier) in exchange for concessions made by other members. Decisions are made on a consensus basis with proposals for changes only adopted after all members agree (i.e. a 'single undertaking'). The average global tariff rate of 40% in the late 1940s had been reduced to around 5% in the mid 1990s as a result of GATT rounds.

Extract 6.1: The WTO, A Global Rules Based Trading System

The WTO provides a framework of rules for international trade and is based in Geneva. This multilateral framework was established in 1947 as GATT. Currently there are 164 member countries of the WTO.

The Key Trade Rules

WTO provisions require members to apply their trade rules in a transparent and non discriminatory manner. The key elements of the system are:

- The Most Favoured Nation (MFN) rule, which bars a member country from discriminating between 'like' products of other members or from favouring non WTO members over members.
- The National Treatment rule which prevents foreign products, having satisfied quarantine and customs requirements, from being treated less favourably than domestically produced goods.
- Rules to discipline protective measures (e.g. tariffs, subsidies and other non tariff barriers) and rules to discipline trade distorting subsidies at the export level.

Consensual Decision making

Agreements are negotiated through consensus, limiting the extent to which large trading nations can exploit their economic power, and in turn, providing opportunities and legal protections for small and medium sized trading nations such as Australia.

Dispute Resolution

Where a trade dispute occurs, WTO members are committed not to take unilateral action against perceived violations of their rights. If conciliation is unsuccessful, the parties in dispute must argue their case before an independent panel within the WTO with appeals to a separate body possible. The outcome is then confirmed by the WTO Dispute Settlement Body which is constituted by all the member governments of the WTO.

Source: Productivity Commission (2006), *Trade and Assistance Review 2005-06*, Melbourne.

Table 6.4: Coverage of Multilateral Trade Rounds by GATT and the WTO

Year	*Round*	*Coverage*	*Participating Countries*
1947	Geneva Round	Tariffs	23
1949	Annecy Round	Tariffs	13
1951	Torquay Round	Tariffs	38
1956	Geneva Round	Tariffs	26
1960-61	Dillon Round	Tariffs	26
1964-67	Kennedy Round	Tariffs and anti dumping measures	62
1973-79	Tokyo Round	Tariffs and non tariff measures	102
1986-94	Uruguay Round	Tariffs and non tariff measures	123
2001-15	Doha Round	Tariffs and non tariff measures	164

Source: Productivity Commission (2006), *Trade and Assistance Review 2005-06*, Melbourne.

The Uruguay round in 1994 led to the first ever reduction in agricultural protection and new agreements on trade in services, investment and intellectual property. Significant progress was made in advancing the long running Doha round of trade negotiations at the WTO Ministerial Meeting in Nairobi, Kenya in December 2015 where countries agreed to abolish all government subsidies to farmers, including export subsidies. This was to be effective immediately for developed nations, with developing nations to follow by 2018. Multilateral trade reform in the WTO is the most effective way to improve national and global welfare compared to preferential agreements which can discriminate against non parties to those agreements and lead to trade diversion rather than trade creation.

At a regional level Australia was a founding member of the Asia Pacific Economic Co-operation (APEC) forum in 1989 which is a **multilateral regional trade forum** (rather than a trade bloc or free trade area). APEC's 21 members include the advanced countries of the USA, Japan, Australia, New Zealand, Canada, Brunei and Chile; the NIEs of Singapore, South Korea, Taiwan and Hong Kong SAR; the developing nations of China, Indonesia, Thailand, Malaysia, Philippines, Vietnam, Mexico, Papua New Guinea and Peru; and the transition economy of Russia. APEC is a discussion forum on trade policy issues and has developed mechanisms for closer trade and investment links in the Asia Pacific region. APEC is a powerful forum representing 2.9b people, 59% of world GDP and 49% of world trade.

The APEC *Bogor Declaration* was an agreement signed by APEC leaders in 1994 in Indonesia to dismantle trade barriers by 2020. At the APEC meeting in 2009 in Singapore, leaders responded to the Global Financial Crisis by rejecting any moves towards increased protectionism, and strengthening trade and investment links within the APEC region (i.e. **regional economic integration**). Support was also given to finalising the WTO's Doha round of trade talks, and working towards a Free Trade Area of the Asia Pacific (FTAAP) with an expanded membership of countries. Average tariff levels across APEC members were estimated by the Productivity Commission to have fallen to 3% in 2004.

APEC's approach to economic integration and trade liberalisation is based on '**open regionalism**' where reductions in trade barriers take place on a non discriminatory basis by liberalising trade between members, but not discriminating against non APEC members. In this way APEC initiatives are consistent with the WTO's guiding principles for free trade. Recent APEC leaders' meetings were held in Beijing, China (2014), and Manila, the Philippines (2015), where the theme was *Building Inclusive Economies, Building a Better World*, with a renewed focus on achieving the Bogor Goals. In 2016 in Lima, Peru, the APEC leaders' theme of *Quality Growth and Human Development* supported free and open trade and investment, sustainable economic growth and shared prosperity in the APEC region

Australia's Bilateral Trade Agreements: ANZCERTA and AUSFTA

Australia has signed ten important bilateral trade agreements with major trading partners between 1983 and 2016 as shown in **Figure 6.5**. The first major bilateral trade agreement was between Australia and New Zealand in 1965 with the signing of the Australia-New Zealand Free Trade Agreement. This was a response to Britain's entry into the European Common Market in the 1960s, with both Australia and New Zealand experiencing the loss of an important export market. With limited progress made in forming a free trade area between the two countries, a new agreement known as the Australia New Zealand Closer Economic Relations Trade Agreement (ANZCERTA or CER) was signed in 1983. The main objectives of ANZCERTA are to achieve the following:

- Strengthen the broader economic relationship between Australia and New Zealand;
- Develop closer economic relations between the two countries through a mutually beneficial expansion of free trade;
- Eliminate barriers to trade and investment between Australia and New Zealand in a gradual and progressive manner and with a minimal level of disruption; and
- Develop trade between Australia and New Zealand under conditions of fair competition.

ANZCERTA has led to closer economic integration between Australia and New Zealand through a reduction of tariff and non tariff barriers on all goods. This has resulted in less protected and more efficient manufacturing industries in both countries. The ANZCERTA has also led to the free flow of labour and capital resources between the two countries. In 2009 Australia and New Zealand signed the **ASEAN-Australia-New Zealand Free Trade Area Agreement** (AANZFTA) to enhance trade with ASEAN. In 2011 the **Closer Economic Relations Investment Protocol** was signed by Australia and New Zealand to reduce restrictions on foreign investment in both countries.

The Australia-United States Free Trade Agreement (AUSFTA) was signed in 2004 with an agreement to reduce tariff and non tariff barriers to trade in agriculture, manufactured goods, services, investment and intellectual property. Both countries reduced most tariffs to zero upon entry to the agreement in 2005. This led to around 97% of tariff lines being duty free, with the remaining non tariff lines such as clothing and textiles to be phased to zero by 2015. For Australian agricultural exports to the USA the tariffs on two thirds of line items were reduced to zero in 2005 with further reductions to be phased in over 18 years. For beef and dairy exports, tariff quotas were increased in the USA to allow increased quantities of imports of Australian beef into the US market.

One of the major benefits of the AUSFTA was that firms surveyed by the Australian Industry Group (2009) reported an increase in manufactured exports to the USA. Estimates by the Productivity Commission (2005) suggested that the AUSFTA could increase Australia's GDP by between 0.4% and 0.7% within ten years of operation. Services trade was estimated to grow by 6% because of the reduction in regulations and rules over government procurement in Australia and the USA. However critics of the AUSFTA argued that changes to the Australian Pharmaceutical Benefits Scheme and access by US firms to Australian film and television markets would lead to higher prices and a loss of cultural sovereignty. The AUSFTA has benefited the USA through increased manufactured and service exports, whilst Australia's exports increased by a lesser margin, resulting in a trade deficit with the USA.

Figure 6.5: Australia's Bilateral Trade Agreements

Source: Productivity Commission (2014), *Trade and Assistance Review 2013-14*, Melbourne.

REVIEW QUESTIONS

AUSTRALIA'S POLICIES TOWARDS PROTECTION AND FREE TRADE

1. Why did the Australian government use a policy of industry protection for much of the twentieth century? Refer to Table 6.1 and Figure 6.1 and discuss the changes in the levels of protection in manufacturing from the 1980s to the 2000s as the Australian government reduced protection.
2. Why did the Australian government implement policies to reduce protection in 1988?
3. What measures were taken in the 1988 and 1991 *Industry Statements* to dismantle the protection of Australian manufacturing? Refer to Table 6.1 and Figures 6.1 and 6.2 in your answer.
4. What are the 'plan' industries? Why were they given more time to adjust to lower levels of protection? What adjustment costs did plan industries face? Refer to Table 6.2 in your answer. Discuss recent trends in reducing protection from the text, Figure 6.3 and Table 6.3.
5. Distinguish between Australia's unilateral, bilateral, regional and multilateral policies to promote free trade in the 1980s, 1990s and 2000s.
6. Explain the advantages and disadvantages of multilateral trade agreements (such as the WTO and APEC) and bilateral trade agreements (such as ANZCERTA and AUSFTA) to Australia.

THE IMPLICATIONS OF REDUCING AUSTRALIAN PROTECTION

The benefits to Australia in reducing protection have been experienced in the long run as the economy has become more efficient and competitive. These benefits will be permanent if Australia's economy is more internationalised and product and factor markets are flexible enough to allow resources to be allocated to the most efficient export and import competing industries. Reform of industry protection is part of the government's microeconomic reform agenda in achieving the following long run benefits:

- The reduction in protection has exposed previously protected industries and firms to more import competition. More effective import competition has reduced prices and costs and lessened inflationary pressures in the economy. More competition between firms in product markets has reinforced competition in factor markets such as the labour market and the capital market.
- Import competition has increased competitive pressure on workers and managers to review work practices and encouraged firms to become more competitive to maintain their profitability and market share. Firms are more likely to eliminate restrictive work and management practices in an effort to enhance productivity and efficiency in competing with imports for market share.
- The reduction in trade barriers has released resources, previously locked into inefficient and less competitive industries and firms (i.e. 'sunset industries'), to more efficient, productive and growing industries (i.e. 'sunrise industries'). This process of structural change has enhanced the economy's productive capacity and increased employment in the tradable goods sector of the economy.
- Lower levels of protection have redistributed income away from the government and inefficient industries to consumers and efficient export firms in the form of lower prices, taxes and costs.

Estimates of the long run gains from cuts in industry assistance in the Industry Commission's *Annual Report* in 1989-90 suggested a permanent gain in Australia's GDP of $4b. This increased output was sourced from exports (volumes were estimated to rise by 8.6%), including manufactured exports. Employment growth was estimated to increase by 0.1% in aggregate terms and the CPI to fall by 3.8%.

The costs to Australia of reducing its barriers to trade have been confined to the short run, with uncompetitive industries contracting and unviable firms going out of business. Lower employment levels have occurred in the TCF, PMV and steel industries which have experienced restructuring and rising levels of structural unemployment. Structural adjustment has also led firms to introducing the latest technology and they have tended to substitute more capital for less labour to achieve higher productivity, and this has resulted in redundancies and the retrenchment of many workers in plan industries. According to the Productivity Commission (2012), between 1996-97 and 2010-11, $22b in budgetary assistance was allocated for structural adjustment in industry. In addition, direct assistance has been given to displaced workers through the social security system and training programmes.

Other costs of reducing protection include the effects on regional economies dependent upon manufacturing industries for employment and support services. Cities such as Geelong, Newcastle, Whyalla, Elizabeth, Melbourne, Port Kembla and Wollongong have high levels of structural unemployment because of structural change in the PMV, TCF and steel industries. The Australian government is responsible for labour market adjustment and provides funds for the retraining and relocation of the structurally unemployed in the federal budget. This adds to federal government expenditure, but is an important means of retraining displaced labour, providing displaced workers with income support, and helping workers to find new employment. The Productivity Commission estimated that $140m had been spent on regional adjustment funds between 1996-97 and 2010-11.

The Global Financial Crisis and Australian Industry Assistance

The Global Financial Crisis in 2008-09 increased pressures on governments to protect local industries. Although governments committed to resist such pressures, trade restricting measures were introduced in many countries, including assistance to the car industry, guarantees of bank deposits and funding, and assistance for commercial property projects. In Australia, whilst tariffs and other protective assistance have declined in recent years, direct budgetary assistance to industry has risen. In 2007-08 Australian government budgetary assistance was $9.4b with new assistance measures announced for the rural sector, the automotive and TCF industries and research and development (R and D).

In response to the *Bracks Review* (2008) of the automotive industry, the Australian government announced a $6.2b assistance package between 2009 and 2021. Tariffs were cut from 10% to 5% on January 1st 2010, and the new $3.4b Automotive Transformation Scheme (ATS) was introduced. In the TCF industry most tariffs fell to 10% on January 1st 2010 and to 5% in 2015. Following the *Green Review* into TCF industries in 2008, the government announced a ***TCF Post 2005 Assistance Package*** which provided $747m in new spending to the TCF industry between 2005 and 2015, including a TCF Structural Adjustment Programme of $50m to support labour market adjustment.

The Australian Car Industry in 2013-14

In 2013 the major car producers Ford and Holden announced the closure of their plants by 2016, with Toyota announcing in early 2014 the closure of its plants by 2017. It is estimated that up to 50,000 jobs may be lost or 5% of the manufacturing workforce. The reasons given for the decisions included the high cost of manufacturing in Australia, competition from low cost overseas competitors and the high value of the exchange rate in reducing competitiveness relative to imported cars. The Australian government announced assistance in 2013 for the Melbourne, Geelong and Adelaide regions affected by the car plant closures. This included Innovation and Investment Funds for new job creation in Melbourne and Geelong, and a $155m Growth Fund, including a skills and training programme ($30m) to assist automotive workers to find new jobs. Other programmes included in the Innovation and Investment Funds, were an Automotive Diversification Programme ($20m) to assist automotive supply chain firms to diversify and enter new markets, and a Regional Infrastructure Programme ($30m) to support investment and employment in affected regions. The Productivity Commission (2013) estimated that $30b was provided in tariff and budget assistance to the car industry between 1997 and 2012.

Overall Australia has improved its economic performance by dismantling protection unilaterally and pursuing free trade objectives through multilateral trade forums such as the WTO and APEC. The long run economic gains from reducing industry protection more than outweigh the short term costs of adjustment borne by particular industries such as the car, steel and TCF industries. These benefits include increased exports, lower consumer prices, more employment in growing industries and higher domestic incomes. In addition, many of Australia's major trading partners (such as China and ASEAN) have also lowered their tariffs. The long term gains of reducing Australian protection are the following:

- An improvement in international competitiveness of export and import replacement industries;
- Improving the efficiency of the allocation of the economy's resources and lowering inflation;
- Diversifying the economy's export base, with less dependence on agricultural exports; and
- Supporting the microeconomic reform agenda which seeks to raise multifactor productivity.

THE IMPLICATIONS OF INTERNATIONAL PROTECTION

Australia is an active member and participant in multilateral and plurilateral trade organisations such as the World Trade Organisation (WTO) which replaced GATT in 1994; the Asia Pacific Economic Co-operation forum (APEC); the Cairns Group of countries of free trading primary exporters; the Organisation of Economic Co-operation and Development (OECD); and the Group of 20 (G20). Such international multilateral organisations and agreements assist in securing the gains from international trade by providing research, forums for discussion, and negotiations on ways to reduce tariff and non tariff barriers, thereby increasing market accessibility and international trade and investment flows.

GATT and the Uruguay Round (1994)

Through the General Agreement on Tariffs and Trade (GATT), tariffs on manufactured goods were cut from an average of 40% in 1947 to approximately 5% by 1985. Global tariff liberalisation through GATT promoted rapid growth in world trade, with the volume increasing by 500% in the 1950-1975 period, but the rate of expansion fell in the 1980s because of the absence of GATT rules for trade in agricultural products, and the proliferation of non tariff barriers such as domestic and export subsidies. These two factors were of particular importance to Australia's trade with the rest of the world:

- The absence of GATT codes for trade in agricultural commodities left Australia in a vulnerable position because US wheat subsidies through the Export Enhancement Programme (EEP) and EU wheat subsidies through the Common Agricultural Policy (CAP) denied market access for Australian wheat exports and depressed world wheat prices, cutting export returns to Australian farmers. Japanese and Korean rice subsidies also had a similar effect on Australian rice exports.
- New non tariff forms of protection such as 'voluntary export restraints', and a variety of anti-dumping measures impeded the growth of world trade according to the principle of comparative advantage, penalising efficient commodity producers like Australia, in favour of less efficient producers in the US and EU. Such measures led to trade diversion rather than trade creation.

Trade in services and intellectual property (e.g. copyright, patents and trademarks) were also not covered by a GATT code of trade rules. The Uruguay Round of GATT (1986 to 1994) led to the conclusion of agreements in the following categories of world trade which affect Australian trade:

- The GATT agreement on trade in agriculture provided for a 36% reduction in agricultural subsidies and a 21% reduction in the volume of production; all import quotas were to be converted to tariffs and reduced by 35%; and the Japanese and Korean rice and beef markets were to be opened up to import competition. These measures were to be implemented by 2000.
- The GATT agreement on trade in services (GATS) brought trade in services such as finance, insurance, banking, technology and entertainment under WTO rules for the first time.
- The GATT agreement on trade in intellectual property rights (TRIPS) led to a new framework being developed for trade in copyright, trademarks and patents.

- The GATT agreement on trade related investment measures (TRIMS) related to direct investment guidelines for industrial and emerging economies, and the relationship between multinational corporations (MNCs) and host governments.
- The GATT agreement on trade in manufactured goods led to tariffs being cut by 15%, and a further undertaking was made to review tariff levels at the Millennium Trade Talks in 2000.

In macroeconomic terms, the projected benefits to Australia of the Uruguay Round measures suggested increased output and faster growth in export volumes than import volumes for most sectors of the economy. Capital investment was also projected to rise in all sectors.

At a global level, Australia's commitment to internationalising its economy through tariff reform enabled it to play an important and credible role in promoting policies for free trade at the Uruguay Round of GATT. The main outcomes of the Uruguay Round for Australia were threefold:

1. The scaling down of agricultural subsidies in the EU and USA.
2. Governments that subsidised agriculture were forced to adhere to WTO rules on agriculture.
3. Increased market access for trade in services was a boost for Australia's service exports.

The Uruguay Round also led to the replacement of GATT by the WTO in 1995, as a permanent forum for trade negotiations. The WTO was given greater powers to monitor and control world trade:

- The WTO has powers extending to goods, services and intellectual property rights;
- The WTO has greater power to limit the use of anti-dumping actions;
- The WTO can use sanctions to resolve trade disputes; and
- The WTO can restrict government support for industry through control over subsidies.

The WTO and the Doha Round (2001)

A new round of WTO trade talks began in Doha, Qatar in 2001. The main objective of the Australian government at the WTO's Doha Round of trade talks was to achieve substantial improvements in market access for Australian exporters:

- In agriculture, Australia negotiated for the complete elimination of agricultural export subsidies (e.g. total subsidies for agriculture in OECD countries rose to US$327b in 2000).
- In manufacturing, Australian negotiators sought greater market access for exports than the average 15% cut in tariffs negotiated at the Uruguay Round.
- In services (which make up 20% of Australia's total exports), Australia sought improved access to overseas markets in priority areas such as business, finance and education.

The Australian government is committed to raising the net export share of GDP by increasing the efficiency of Australian industry, and through active participation in the WTO to gain multilateral support for free trade, especially in agricultural trade. Australia's main objectives at the Doha Round (which has been running for sixteen years - 2001-17) are set out in **Table 6.5.**

In September 2003 the fifth WTO Ministerial Conference of the Doha Round was held at Cancun in Mexico. The conference provided an opportunity to advance the Doha Development Agenda (DDA), but WTO members were unable to agree on the scope and pace of reform and the conference negotiations ended in deadlock. Following the breakdown of the Doha talks in Cancun, a framework package was agreed to by the WTO General Council in Geneva in July 2004. The package provided more detail on the reform measures and set a time line for their achievement. The key outcomes of the Geneva Framework Package in 2004 were suggested reforms (but limited agreement) covering trade in agricultural goods, manufactured goods, services, customs and border procedures.

Table 6.5: Australia's Objectives at the Doha Round of WTO Talks

- In agriculture, the elimination of agricultural export subsidies is on the WTO agenda for the first time ever. The negotiations will hopefully deliver major cuts in domestic subsidies and also open up agricultural markets where tariffs are much higher than for manufactured products.
- In manufacturing, improvements in market access for Australian exporters of industrial products (such as steel, pharmaceuticals, farm machinery, construction equipment, furniture, beer and wine) are sought through further reductions in tariffs that build on those in the Uruguay Round.
- In services, the negotiations will pursue more open conditions for trade in services such as professional services, transport, finance and communications.
- In pharmaceuticals, Australia supported the WTO Ministerial Declaration on access to pharmaceuticals (including generic drugs to fight AIDS) for developing countries.
- Australia is against the use of geographic indication protection currently given to wine and spirits, and which may be extended to food. This would prevent Australian exporters from using terms such as 'champagne' or 'kalamata' olives in export markets.
- Australia supports clarification of WTO rules and multilateral environmental agreements to protect environmental goods and eliminate harmful fisheries subsidies which could reduce fisheries stocks around the globe.

  Australia's unilateral reductions in protection have imposed short term costs on the economy but in the long term, Australia is well positioned to take advantage of world economic growth sourced from cuts in global tariff and non tariff barriers through the WTO process of more countries reciprocating by liberalising their trade regimes.

Source: Commonwealth of Australia (2002), *Australia's Trade*.

The next WTO Ministerial Conference was held in Hong Kong in December 2005 with agreement reached on an 'end date' for agricultural subsidies, the structure for reductions in trade barriers for agricultural and industrial goods, and an 'end date' for reducing regulations over trade in services. Further negotiations took place in Geneva in 2006 but the talks became deadlocked over 'loopholes' aimed at reforming world trade in agriculture.

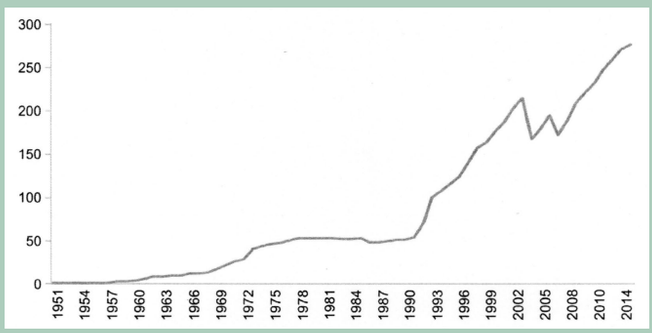
The July 2008, April 2011 and December 2011 Meetings in Geneva

Some progress was made towards concluding the Doha Round in 2007 and 2008 with ongoing negotiations between the Group of 6 (G6) of Australia, Brazil, the European Union, India, Japan and the United States. Progress needed to be made on the 'triangle' of trade issues:

- The US would have to agree to deeper cuts in its domestic farm support;
- The European Union would have to agree to increased agricultural market access through greater tariff cuts in agricultural products; and
- Developing countries such as China, Brazil and India would have to agree to lower tariffs on non agricultural goods.

In July 2008 another WTO Ministerial Council meeting was held in Geneva to work towards the conclusion of the Doha Round. The goal was to agree on the '**modalities**' (i.e. the formulas and methods) to be used to cut tariffs and agricultural subsidies. Agreement on modalities would determine the scale of reductions in tariffs and future levels of farm subsidies in WTO member countries. However the talks collapsed after nine days of negotiations eventhough 18 of the 20 topics discussed were agreed upon. Commentators argued that the increasing power of China and India had swayed the talks with their refusal to reduce their farm subsidies because of global food shortages and the threat of increased imports from other countries.

Figure 6.6: The Growth of Bilateral and Regional Trade Agreements



Source: Productivity Commission (2017), *Rising Protectionism: Challenges, Threats and Opportunities*, Melbourne.

The eighth Ministerial Conference of the Doha Round was cancelled in Geneva in December 2008 because of the Global Financial Crisis and a lack of agreement on 'modalities' for agriculture and industry market access. The Conference was later held in Geneva in December 2011 with leaders of the G20 and APEC calling for a 'fresh approach' to negotiations including the possibility of adopting the Doha drafts as they stood because they would be still be valuable to WTO members eventhough they were short of the 'end point' envisaged when the Round commenced in 2001.

The WTO Bali Meeting in 2013 and the Nairobi Meeting in 2015

The ninth WTO Ministerial Conference of the Doha Round was held in Bali in December 2013 where a package of measures such as the **Agreement on Trade Facilitation**, reforms to agricultural trade, and measures to assist the trade of developing countries were agreed upon. Following the breakthrough at the Bali Meeting the tenth WTO Ministerial meeting was held in Nairobi, Kenya, in December 2015. After days of negotiations agreement was reached in the following areas but there was no 'single undertaking' of members to agree on all measures and the Doha Round was declared over by DFAT:

- Agreement by developed countries to **eliminate all agricultural export subsidies** immediately and developing countries were given until 2018 to eliminate their subsidies;
- Entry into force of the **Trade Facilitation Agreement** in February 2017 to simplify and harmonise international trade procedures for goods (e.g. customs, licensing and transit procedures);
- Agreed tariff reductions under the **Expanded Information Technology Agreement** extended to 201 additional goods including consumer electronics, IT software and hardware;
- Progress with building on the 2012 **APEC Environmental Goods Agreement** to remove tariffs on a range of environmental goods such as solar panels, wind turbines and energy saving technology;
- The 2014 **Government Procurement Agreement** to open up government procurement markets based on competition, transparency and non discrimination; and
- Progress on the Trade in Services Agreement between the USA, EU and Australia.

Because of the slow progress in finalising the Doha Round, Australia has followed the global trend of negotiating and signing bilateral and regional trade agreements with many of its major trading partners. The number of Preferential Trade Agreements in the world grew dramatically from nine in the 1960s to around 300 in 2014 as shown in **Figure 6.6**, with around 40% of the total in the Asia Pacific region.

Since 2003 Australia has signed bilateral agreements with Singapore, Thailand, the USA, Chile, ASEAN, Malaysia, Korea, Japan and China. Negotiations have been held on future bilateral agreements with the UAE, India and Indonesia. If Australia concludes PTAs with all of these countries, it is estimated that over 60% of Australia's two way trade will be covered by preferential arrangements.

President Trump and Global Trade Protection

The most important trade policy issue concerning the global rules based trading system in 2016-17 was the trade policy prescriptions espoused by Donald Trump during the 2016 US election campaign and during the early months of his presidency. The USA withdrew from the Trans Pacific Partnership Agreement (TPP) and planned to re-negotiate the terms of the North American Free Trade Agreement (NAFTA) with Canada and Mexico. The Trump Administration has also canvassed increasing tariffs on imports from China and Mexico, two major trading partners with which the USA has a trade deficit.

The rise in protectionist sentiment in the USA but also in the EU is based on the perceived inequality of the distribution of benefits from globalisation. This includes the decline in manufacturing employment in developed countries such as the USA and the concentration of job losses in trade exposed industries and locations. The Productivity Commission (2017) argued in ***Rising Protectionism: Challenges, Threats and Opportunities*** for Australia to oppose protectionist sentiment and to support strong adjustment policies for displaced workers as a result of structural and technological change.

REVIEW QUESTIONS

THE BENEFITS AND COSTS OF REDUCING PROTECTION AND THE IMPLICATIONS OF INTERNATIONAL PROTECTION

1. Discuss the impact of Australia's unilateral reduction in protection on competition, productivity and efficiency for previously protected firms and industries.
2. Discuss the estimated macroeconomic benefits to Australia of the reform of industry assistance.
3. Explain the costs of reforms to industry assistance to firms and workers in industries and regions affected by tariff cuts and the abolition of quotas such as TCF, PMV and steel.
4. How does tariff reform affect consumers, firms and the government? What are the long run economic gains from the reform of industry assistance?
5. Why does Australia participate in the WTO? What are the effects of EU and US agricultural subsidies on Australian exporters?
6. What were the main positive outcomes of the Uruguay Round for Australia?
7. What were Australia's objectives at the Doha Round of WTO talks?
8. Discuss the outcomes of the Doha Round at the Nairobi meeting of the WTO in 2015.
9. Why has there been a rise in protectionist sentiment under the US Trump Administration?
10. How could rising protectionism undermine the potential for the growth in world trade?
11. Define the following terms and abbreviations and add them to a glossary:

bilateral trade agreement	APEC
Doha Round	ASEAN
effective rate of assistance	CAP
industry statement	DDA
international competitiveness	EEP
multilateral trade agreement	GATT
nominal rate of assistance	IC
protection	PC
regional trade agreement	PMV
structural change	PTAs
subsidies	TCF
tariffs	WTO

CHAPTER 6: SHORT ANSWER QUESTIONS

Net Tariff Assistance by Industry Sector, 2010-11 to 2015-16 ($ millions)

	2010-11	*2012-13*	*2014-15*	*2015-16*
Primary production	212.4	269.2	248.4	276.8
Mining	-220.4	-259.1	-296.7	-305.0
Manufacturing	4,996.0	5,012.3	4,690.8	4,660.6
Services	-3,186.5	-3,590.5	-3,750.5	-3,793.1
Total	1,801.5	1,431.9	892.0	839.3

The estimated value of net tariff assistance for the manufacturing sector has fallen by around 7% since 2010-11, largely reflecting reductions in tariff assistance to textiles, clothing and footwear and leather, and changing activity levels in tariff assisted activities.

At the same time, the net tariff penalty on the services sector has increased by 19% (to nearly $4b), reflecting growth in the use of tariff assisted manufactures as the services sector has expanded. Similarly, the net tariff penalty on the mining sector also increased over the period.

Source: Productivity Commission (2017), *Trade and Assistance Review 2015-16*.

Refer to the information above on net tariff assistance and answer the following questions. Marks

1. What is meant by the term 'protection'? (1)

2. How does the imposition of a tariff protect a domestic industry? (1)

3. Analyse the trends in net tariff assistance by industry sector between 2010-11 and 2015-16. (4)

4. Explain TWO costs and TWO benefits of reducing protection in the Australian economy. (4)

CHAPTER FOCUS ON AUSTRALIA'S TRADE POLICY

Conclusions on the Merits of Trade Agreements

"The Commission has previously raised questions about the merits of trade agreements. The overall conclusions are as follows:

- Multilateral trade reform offers potentially larger improvements in national and global welfare than a series of bilateral agreements. While the slow progress of the Doha Round of multilateral trade reform has accelerated preferential agreement making, the trade diverting effects of bilateral agreements should not be forgotten.
- Australia gains more from reducing its own tariff barriers than from the tariff reductions of a bilateral trade agreement partner.
- The benefits of increased merchandise trade emanating from bilateral trade agreements have been exaggerated.
- Different and complex rules of origin in Australia's preferential trade agreements are likely to impede competition and add to the costs of firms engaging in trade.
- The nature and scope of negotiating concessions should be assessed from a national structural reform perspective before entry into negotiations, rather than primarily for export opportunities. The text of proposed trade agreements should be made public and a rigorous analysis independent of the negotiating agency published with the final text."

Source: Productivity Commission (2016), *Trade and Assistance Review 2014-15*, Melbourne.

Discuss the main elements of the Australian government's trade policy and evaluate the costs and benefits of Australia pursuing bilateral free trade agreements at the expense of multilateral trade agreements through the WTO.

CHAPTER 6: EXTENDED RESPONSE QUESTION

Discuss the costs and benefits of protection and the reasons why the Australian government has reduced the protection of Australian industry and pursued a policy of free trade.

CHAPTER SUMMARY

AUSTRALIA'S TRADE POLICY

1. Australia has a long history of protection in the manufacturing sector where tariffs and quotas have been used to shield domestic firms from import competition.

2. Since the early 1970s both nominal and effective rates of assistance given to manufacturing have been cut by the Australian government. Cuts in protection were undertaken in the *1988 Industry Statement*, followed by the *1991 Industry Statement*, which accelerated the pace of tariff reform. Further cuts in tariffs were made by the Australian government in 2005, 2010 and 2015.

3. The main reasons for the change in government policy towards reducing protection were to increase the efficiency and international competitiveness of Australian industry, and to increase economic growth through a process of structural reform in industry.

4. The short term costs of the reduction in protection for Australian manufacturing are an increase in structural unemployment in plan industries (such as textiles, clothing and footwear, passenger motor vehicles and steel) and the resources needed to finance retraining, relocation and redundancy schemes for displaced workers in these industries and industrial regions of Australia.

5. Australia's policies towards free trade include the following:

   - A unilateral decision was taken in the 1980s, 1990s and 2000s to dismantle protection and open up the Australian economy to import competition, especially in manufactured goods.

   - On a bilateral basis, Australia has negotiated a number of free trade agreements with countries such as New Zealand, Thailand, Singapore, the USA, Chile, ASEAN, Korea, Japan & China.

   - On a regional basis Australia has signed the ASEAN-Australia-New Zealand Free Trade Area Agreement or AANZFTA (2009) and the Trans Pacific Partnership Agreement or TPP (2015).

   - On a multilateral basis, Australia is a vocal proponent of free trade in the World Trade Organisation (WTO) rounds of trade talks (such as the Uruguay and Doha Rounds), and forums such as Asia Pacific Economic Co-operation (APEC), ASEAN and the G20.

6. The major benefits of the reduction in protection in Australia include a more competitive and efficient manufacturing sector which exports to the world market and contributes over 20% to Australia's merchandise exports. Other positive outcomes include employment gains in efficient industries, and at the macroeconomic level, a higher rate of economic growth has been achieved.

   The major short term costs of the reduction in protection in Australia have been a rise in structural unemployment and structural change in affected industries. Many regional economies have also been affected through the contraction of previously protected industries. The Australian government has also financed the cost of retraining and the relocation of displaced workers.

7. The extent of international protection has an adverse impact on Australian exporters. This is especially the case for agricultural exporters who compete with subsidised wheat, dairy, beef, sugar and rice in European, American and some Asian markets such as Japan and South Korea. Australia has played an active role in the Cairns Group of countries and the WTO forum to achieve reductions in agricultural subsidies which distort world agricultural prices, deny market access to efficient exporters like Australia, and reduce export income for Australian farmers. The Doha Round of WTO talks was largely concluded in Nairobi in 2015 with a decision to abolish agricultural subsidies by 2018. Other outcomes included a Trade Facilitation Agreement, an Expanded Information Technology Agreement, an Environmental Goods Agreement and a Government Procurement Agreement.

ECONOMIC ISSUES

3

TOPIC FOCUS

This topic focuses on the nature, causes and consequences of the economic issues and problems that can confront contemporary economies as applied to the Australian economy. The issues examined include economic growth; unemployment; inflation; external stability; the distribution of income and wealth; and environmental sustainability. Students should learn to examine the following economic issues and apply the following economic skills in Topic 3 of the HSC course:

ECONOMIC ISSUES

- Examine the arguments for and against increasing economic growth rates;
- Investigate the economic and social problems created by unemployment;
- Analyse the effects of inflation on an economy;
- Discuss the effect of a continued current account deficit on an economy;
- Investigate recent trends in the distribution of income in Australia and identify the impact of specific economic policies on this distribution;
- Analyse the economic and social costs and benefits of inequality in the distribution of income; and
- Examine the economic issues associated with the goal of ecologically sustainable development.

ECONOMIC SKILLS

- Identify and analyse problems facing contemporary and hypothetical economies;
- Calculate an equilibrium position for an economy using leakages and injections;
- Determine the impact of the (simple) multiplier effect on national income;
- Explain the implications of the multiplier for fluctuations in the level of economic activity in an economy;
- Calculate the unemployment rate and the participation rate using labour force statistics;
- Interpret a Lorenz curve and a Gini co-efficient for the distribution of income in an economy;
- Use economic concepts to analyse a contemporary environmental issue; and
- Assess the key problems and issues facing the Australian economy.

The major economic issues in Australia involve Australia's economic performance in terms of outcomes for the rate of economic growth, the unemployment rate, the inflation rate, the balance of payments and the exchange rate. Other important issues include trends in the distribution of income and wealth in Australian society, and Australia's approach to the management of the environment and its commitment to a policy of ecologically sustainable development (ESD).

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Chapter 7

Economic Growth

Economic growth refers to an increase in a country's productive capacity as measured by changes in its real GDP over time. Real GDP refers to the national output of goods and services adjusted for changes in inflation over time. Increases in the rate of economic growth provide the means by which a country can raise its level of income and standard of living. Macroeconomic theory involves the study of aggregate economic behaviour (or economic activity in the economy as a whole), and is used to analyse the main components of economic growth and GDP. Changes in the rate of economic growth are measured by changes in real GDP, which can produce business or trade cycles in market economies.

The Equilibrium Level of National Income

The modern theory of macroeconomics was developed by John Maynard Keynes in *The General Theory of Employment, Interest and Money* which was published in 1936. According to Keynes, the level of economic activity or total output (O) is determined by the total expenditure (E) of consumers, firms, the government and net exports. Keynes developed the concept of **equilibrium income** (Y) which is the level of income in an economy from which there is no tendency for change. Using the circular flow of income model, the three flows of Y, E, and O are separate ways of measuring the value of GDP, with total expenditure (E) equalling the total value of output (O), which in turn equals the total value of incomes (Y) received by the owners of productive resources in the economy. The basic accounting identity for the equilibrium level of national income is where total income equals total expenditure, which in turn equals the total value of output as shown in equation (1).

The equilibrium level of national income is where:

(1) $Y = E = O$

Income (Y) consists of consumption (C) plus saving (S) as shown in equation (2):

(2) $Y = C + S$

Expenditure (E) consists of consumption (C) by households, and investment (I) by firms as shown in equation (3):

(3) $E = C + I$

Output (O) consists of consumer goods (C) and capital or investment goods (I) as shown in equation (4):

(4) $O = C + I$

The equilibrium condition in an economy can be derived from where $Y = O$ or $Y = E$ i.e.
If $Y = O = E$, then $C + S = C + I$ and therefore saving (S) equals investment (I)

The two equilibrium conditions for determining national income are shown in equations (5) and (6). Either of these two approaches can be used to determine the equilibrium level of national income:

(5) S (Saving) = I (Investment) or (6) Aggregate Demand (C + I) = Aggregate Supply (C + S)

The **first equilibrium condition** is where saving (S) equals investment (I) and is known as the leakage/injection or saving (S)/investment (I) approach to determining the equilibrium level of national income.

The **second equilibrium condition** is where aggregate demand (AD) equals aggregate supply (AS) and is known as the aggregate demand/aggregate supply or AD/AS approach to determining the equilibrium level of national income.

THE COMPONENTS OF AGGREGATE DEMAND

The equilibrium condition in the five sector circular flow of income model of an economy is where the total leakages of saving, taxation and imports (S + T + M) are equal to the total injections of investment, government spending and exports (I + G + X) as shown in equation (7):

(7) $S + T + M = I + G + X$

If we substitute (Y - C) for S, and re-arrange equation (7) we get equation (8) for aggregate demand:

$(Y - C) + T + M = I + G + X$ Therefore: (8) $Y = C + I + (G - T) + (X - M)$

Aggregate demand (AD) refers to the sum of expenditure on domestic output by households, firms, the government and the foreign sector in an open economy. If we assume a five sector circular flow of income model of the economy, aggregate demand represents the sum of aggregate consumption spending by households (C), investment spending by firms (I), net government spending (G - T) and net exports (X - M) as shown in equation (8). In equilibrium, a nation's output, income and employment are determined by the level of aggregate demand (AD) or expenditure as shown in equation (9):

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

where C = consumption expenditure by the household sector
I = investment expenditure by the firms sector
G = net government expenditure (government spending less taxation)
X = export expenditure by foreigners on domestic output
M = import expenditure by residents on foreign output

Let us now analyse each of the components of aggregate demand (i.e. C + I + G + X - M).

The Consumption Function

The consumption function was developed by J. M. Keynes in *The General Theory* and is shown in equation (1) below. The consumption function has two components, one autonomous or independent of changes in income (C_0), and the other induced or dependent on changes in income (c).

(1) $C = C_0 + cY$

where Y = income
C = total consumption expenditure
C_0 = autonomous consumption expenditure (consumption independent of income)
c = the marginal propensity to consume (MPC) $= \frac{\Delta C}{\Delta Y}$
(changes in consumption due to changes in income)

NB: Since C + S = Y, saving (S) is equal to Y - C. Therefore the savings function is $S = -C_0 + sY$ (where S = total saving; $-C_0$ = dissaving; s = the marginal propensity to save (MPS); and Y = income)

The Investment Function

Investment (as shown in equation 2) is spending by business firms on new capital goods used to increase productive capacity. Investment spending is assumed to be autonomous, since factors other than income, such as the cost of capital (the rate of interest), returns on capital, profits, business expectations, taxation rates, government policies and changes in technology, will influence investment spending by firms.

(2) $I = I_0$

where I = the total level of investment expenditure by firms
I_0 = the level of autonomous investment expenditure by firms

Government Expenditure

Government spending (as shown in equation 3) consists of total expenditure on current items by local, state and federal governments, plus expenditure by government trading enterprises on capital items. Government spending is assumed to be autonomous (or independent) of changes in national income.

(3) $G = G_0$

where G = total government expenditure
G_0 = autonomous government expenditure

Net Foreign Demand

Exports represent expenditure by foreigners on domestically produced goods and services and are independent or autonomous of changes in domestic national income as shown in equation (4).

(4) $X = X_0$

where X = total export expenditure
X_0 = autonomous export expenditure

Imports are a leakage of funds from the circular flow of income, since they represent domestic demand for foreign produced goods and services. Import expenditure consists of both autonomous and induced components as shown in equation (5).

(5) $M = M_0 + mY$

where M = total import expenditure
M_0 = autonomous import expenditure
m = the marginal propensity to import (changes in import spending due to changes in income) $= \frac{\Delta M}{\Delta Y}$

The Equilibrium Level of National Income in the Three Sector Model

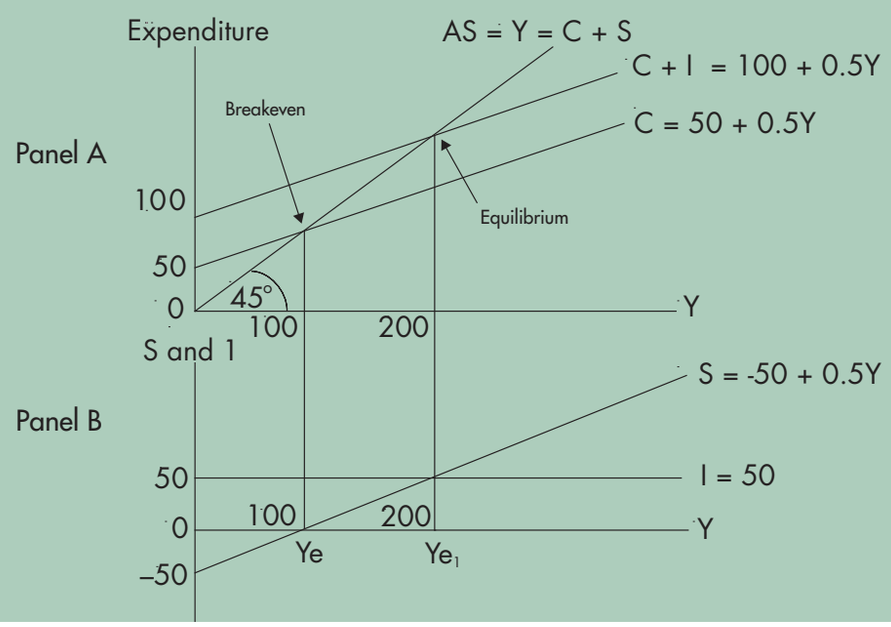
In the three sector model of the circular flow of income, consisting of households, firms and the finance sector, equilibrium is determined where savings equals investment (S = I) or aggregate demand (C + I) equals aggregate supply (C + S). **Table 7.1** shows hypothetical values or schedules for income, consumption, savings and investment, with autonomous components of spending for both C and I.

The consumption function is C = 50 + 0.5Y (autonomous C is 50 and the MPC is 0.5)
The savings function is S = -50 + 0.5Y (autonomous S is -50 and the MPS is 0.5)
The investment function is a constant I = 50 (all investment is autonomous of changes in income)

Table 7.1: The Consumption, Savings and Investment Schedules

Y	*C*	*S*	*I*	*MPC*	*MPS*
0	50	-50	50	—	—
50	75	-25	50	0.5	0.5
100	100	0	50	0.5	0.5
150	125	25	50	0.5	0.5
200	150	50	50	0.5	0.5

Figure 7.1: The Equilibrium Level of National Income in the Three Sector Model



The aggregate demand function (AD) in a three sector model is represented graphically in **Figure 7.1** by adding the consumption (C) and investment (I) functions together. The aggregate supply function (AS) is represented by the 45˚ line in **Figure 7.1**, which is a locus of points where Y = E = O. The equilibrium level of income (Ye) using the AD/AS approach in **Panel A** is where:

AD = AS or C + I = Y i.e.

AD = C + I = 50 + 0.5Y + 50 = AS = Y
(AD) = 100 + 0.5Y = (AS) = Y (subtract 0.5Y from each side of the equation)
100 = 0.5Y (now multiply both sides of the equation by 2 to solve for Y):

Therefore the equilibrium level of income or Ye_1 = 200

Alternatively, the equilibrium level of national income can also be determined by using the leakages and injections approach in **Panel B** where savings (S) equals investment (I), which coincides with the point where AD = AS in **Figure 7.1**:

(S) -50 + 0.5Y = (I) 50
(S) 0.5Y = (I) 100 (now multiply both sides of the equation by 2 to solve for Y)
Therefore the equilibrium level of income or Ye_1 = 200

Without the addition of the finance sector (and the injection of investment to offset the leakage of saving), equilibrium income in **Figure 7.1** would be determined where C = Y = 100, or S = 0:

(C) 50 + 0.5Y = Y, with Ye = 100 or (S) -50 + 0.5Y = 0, with Ye = 100 (the **breakeven point** where C = Y)

The Simple Expenditure Multiplier

Changes in any or all of the autonomous (independent) components of aggregate demand or C + I + G + (X - M) will cause a change in the equilibrium level of income through the effect of the simple expenditure multiplier. The simple expenditure multiplier refers to the extent to which an initial change in autonomous expenditure (such as autonomous consumption or investment expenditure) is multiplied to give a larger change in the equilibrium level of national income.

In the three sector model of the circular flow of income, the multiplier can be derived by substituting the consumption and investment equations into the national income identity as shown in equation (1).

(1) $Y = C + I$

$Y = C_0 + cY + I_0$

$Y - cY = C_0 + I_0$

$Y(1 - c) = C_0 + I_0$

(divide by 1 - c to derive equation 2)

(2) $Y = \frac{1}{1 - c} \times \frac{C_0 + 1_0}{1}$

Equation (2) suggests that any change (Δ) in autonomous consumption (ΔC_0) or autonomous investment (ΔI_0) has a multiplied effect on the equilibrium level of national income equal to the size of the multiplier (k), multiplied by the initial change in autonomous consumption (ΔC) or investment spending (ΔI). The value of the simple expenditure multiplier (k) in equation (3) is equal to one over one minus the MPC (c), or one over the MPS (s). The MPC plus the MPS always equals one.

(3) Multiplier (k) = $\frac{1}{1 - c}$ or $\frac{1}{s}$ (NB: MPC + MPS = 1) $\frac{\Delta C}{\Delta Y} + \frac{\Delta S}{\Delta Y} = \frac{\Delta Y}{\Delta Y} = 1$

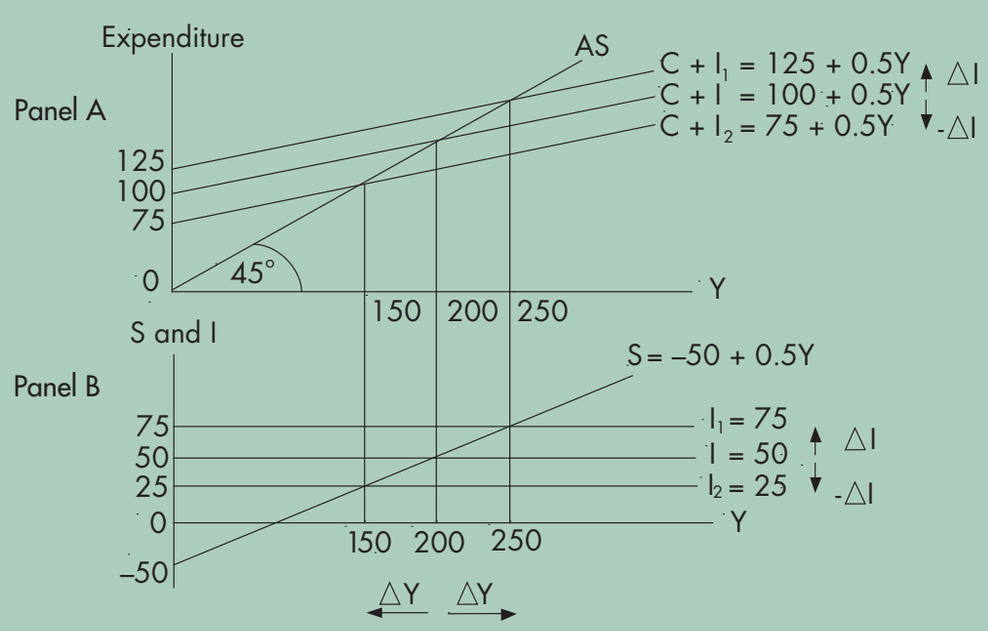
In **Figure 7.2** the initial equilibrium level of national income is 200, since this is the point where S (-50 + 0.5Y) equals I (50), and aggregate demand (C + I = 100 + 0.5Y), is equal to aggregate supply (Y = C + S). If autonomous investment (I) increases by 25 from 50 to 75 (an upward shift in the investment function from I to I_1 in **Panel B** of **Figure 7.2**), the aggregate demand function increases from C + I (100+ 0.5Y) to C + I_1 (125 + 0.5Y) in **Panel A**. The new equilibrium level of national income is where:

$C + I_1 = 125 + 0.5Y = Y$ (subtract 0.5Y from both sides of the equation)

$125 = 0.5Y$ (now multiply each side by 2 to solve for Y)

Therefore $Ye_1 = 250$

Figure 7.2: The Multiplier Effect of a Change in Investment on National Income



The value of the simple multiplier (k) is 2, with the increase in autonomous investment of 25 being multiplied by 2 to give a larger change in income of 50 i.e.

$$k = \frac{\Delta Y}{\Delta I} = \frac{1}{1 - c} \qquad \Delta Y = \frac{1}{1 - c} \times \Delta I_1 = \frac{1}{0.5} \times 25 = 2 \times 25 = 50$$

A fall in aggregate demand (from C + I to C + I_2) in **Panel A** of **Figure 7.2** caused by a decline in autonomous investment from 50 to 25 (I to I_2 in **Panel B**), leads to a greater than proportionate decline in national income. With the simple multiplier being 2, the fall in autonomous investment of -25 is multiplied by 2, to give a fall in income of -50. The new equilibrium level of national income is lower at 150, determined where aggregate demand equals aggregate supply or savings equals investment i.e.

$$k = \frac{-\Delta Y}{-\Delta I} = \frac{1}{1 - c} \qquad \Delta Y = \frac{1}{1 - c} \times -\Delta I_2 = \frac{1}{0.5} \times -25 = 2 \times -25 = -50$$

The size of the simple multiplier co-efficient is influenced by the relative sizes of the MPC and MPS. The larger the MPC or the smaller the MPS, the larger the value of the multiplier. The smaller the MPC or the larger the MPS, the smaller the value of the multiplier (see **Table 7.2**). This is because consumption is an injection into the circular flow of income whereas saving is a leakage from income.

Table 7.2: The Relationship Between the MPC, MPS and the Multiplier

MPC	larger	smaller
MPS	smaller	larger
Value of the Multiplier	larger	smaller

REVIEW QUESTIONS

THE COMPONENTS OF AGGREGATE DEMAND

1. Explain how the value of GDP can be measured in terms of total output (O), total expenditure (E) and total incomes received (Y) in the circular flow of income model.
2. What are the two equilibrium conditions for the determination of national income?
3. Distinguish between the autonomous and induced components of expenditure.
4. What is the equation for aggregate demand? How is it derived?
5. Explain the main components of aggregate demand: AD = C + I + G + (X - M)
6. Graph the consumption and savings functions C = 100 + 0.6Y and S = -100 + 0.4Y.

   (i) What is the equilibrium level of national income?

   (ii) If autonomous investment of 150 occurred, graph the new C + I function of AD = 250 + 0.6Y.

   (iii) What is the new equilibrium level of national income?

   (iv) What is the value of the investment multiplier?
7. What determines the value of the simple expenditure multiplier (k)?

THE MEASUREMENT OF ECONOMIC GROWTH

Economic growth is usually measured in terms of changes in **real Gross Domestic Product** (GDP). This is a calculation of the total value of all goods and services produced in Australia over a period of time, adjusted for changes in the price level or inflation rate. GDP also measures the total incomes generated by production taking place in Australia's domestic territory. It is a gross measure since it does not make an allowance for the depreciation of the existing capital stock. Annual changes in real GDP are referred to as the rate of economic growth, and can be used for comparisons between time periods, and between countries for similar time periods. Real GDP or GDP at constant prices is calculated as follows:

$$\text{Real GDP} = \frac{\text{Nominal GDP}}{1} \times \frac{100}{\text{CPI}} \quad \text{e.g.} \quad \frac{\$1{,}200\text{m}}{1} \times \frac{100}{105} = \$1{,}143\text{m}$$

In the example used above, nominal GDP or GDP at current prices is $1,200m. However the CPI has increased by 5% from 100 to 105, so real GDP or GDP at constant prices is $1,142.8m.

Economic growth leads to increasing productive capacity and the production of more goods and services. Rising levels of real output help to satisfy more needs and wants in society. In terms of the circular flow of income model, GDP is a measure of total production or output (P or O), total expenditure (E) and total incomes (Y or I) received, leading to the basic national income identity of Y = E = O in equilibrium. Economic growth is measured by the Australian Bureau of Statistics (ABS) in four ways, at average 1989-90 prices (real GDP) and GDP statistics are released each quarter as well as annually:

1. GDP (P) is a production measure which calculates the value added by each stage of production in the production of goods and services;
2. GDP (E) is an expenditure measure which calculates GDP according to the total expenditure by consumers, businesses and governments on final output (i.e. sales receipts of final goods and services);
3. GDP (I) is the total value of incomes received by the owners of productive resources who contribute resources to the production of those goods and services (i.e. wages, salaries, supplements and gross operating surplus); and
4. GDP (A) is an average of the GDP (P), GDP (E) and GDP (I) measures of GDP, and is used to achieve a standard average measure of the rate of economic growth in Australia.

Table 7.3 shows the value of Australian GDP and other aggregates using chain volume measures (with 2014-15 used as the reference year). Real GDP reached a value of $1,660,145m in 2015-16, an increase of $43,129m or 2.7% from the 2014-15 figure of $1,617,016m. The **rate of growth in real GDP** of 2.7% for Australia in 2015-16 was below the historical average (3.25%) and can be calculated as follows:

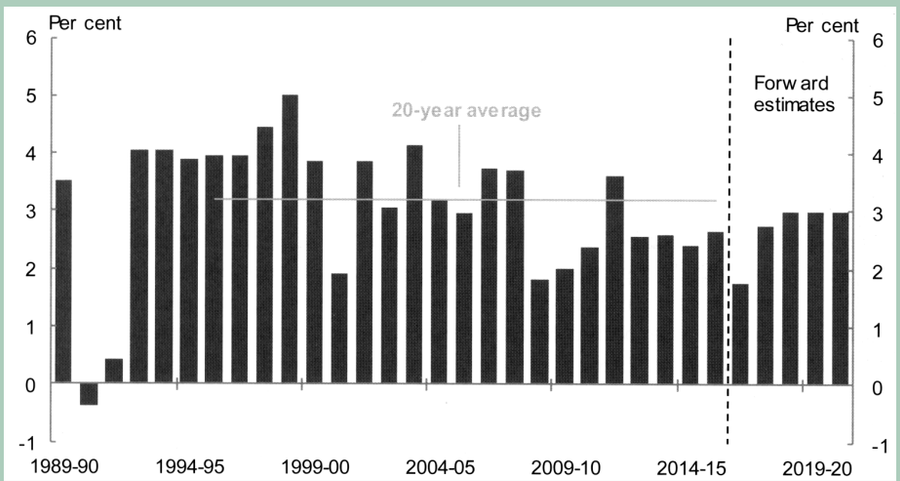
$$\text{Growth Rate of Real GDP} = \frac{\text{Current GDP - Previous GDP}}{\text{Previous GDP}} \times \frac{100}{1} = \frac{\$1{,}660{,}145\text{m} - \$1{,}617{,}016\text{m}}{\$1{,}617{,}016\text{m}} \times \frac{100}{1} = 2.7\%$$

Table 7.3: Measures of GDP and other Selected Aggregates for Australia 2013-16 ($m)

Year	*GDP (P)*	*Real Gross Domestic Income (Y)*	*Domestic Final Demand*	*Gross Non Farm Product*	*Gross National Expenditure (E)*
2013-14	$1,578,784m	$1,573,165m	$1,621,796m	$1,540,518m	$1,619,792m
2014-15	$1,617,016m	$1,583,478m	$1,639,041m	$1,578,438m	$1,640,401m
2015-16	$1,660,145m	$1,589,907m	$1,662,626m	$1,624,027m	$1,662,569m

Source: ABS (2017), *Australian National Accounts*, Catalogue 5206.0, March. Tables 3, 40, 42 and 45

Figure 7.3: Real GDP Growth in Australia 1989-90 to 2019-20 (f)



Sources: Budget Strategy and Outlook 2017-18, Budget Paper No. 1.

Recent Trends in Australian Economic Growth

Rates of real GDP growth in Australia between 1989-90 and 2014-15 (with forward estimates between 2016-17 and 2019-20) are shown in **Figure 7.3**. In 2017 the Australian economy recorded its 26th consecutive year of positive economic growth. The 20 year average for Australia's real GDP growth was about 3.25% between 1994 and 2015, helped by the external stimulus of the global resources boom and the rising terms of trade between 2003 and 2007 and the mining investment boom over 2010-2012:

- In 2003-04 economic growth was strong at 4.1% due to a housing boom, global economic recovery and the start of the mining resources boom.
- Higher interest rates in 2003 led to lower spending and the end of the housing boom, slowing real GDP growth to 2.8% in 2004-05. Capacity constraints, higher inflation, a rural drought and interest rate rises led to modest growth of real GDP of 3% in 2005-06.
- The strength of the terms of trade (through rising export prices) and domestic demand underpinned real GDP growth of 3.3% in 2006-07. Real GDP growth remained firm at 3.7% in 2007-08.
- Higher domestic interest rates, the global credit crisis and the **Global Financial Crisis** (GFC) and recession in late 2008 caused the economy to slow dramatically. Real GDP grew by just 1.4% in 2008-09 largely due to the impact of the government's use of fiscal and monetary stimulus.
- A global recovery after the GFC led to 2.3% growth in Australian real GDP in 2009-10. However the European Sovereign Debt Crisis in 2010-11 led to slower world growth, including slower growth in China, which impacted on Australia's exports and restricted growth to 1.9% in 2010-11.

In 2011-12, the high value of the Australian dollar reduced competitiveness, and with slower growth in household spending, led to an uneven pattern of growth in the Australian economy. There was strong investment in mining and increased commodity exports to China and Asia, but other sectors such as manufacturing, retailing, building and construction, education and tourism recorded below average growth. However growth in real GDP in 2011-12 was still about the historical trend at 3.4%.

In 2012-13 growth slowed to 3% with weaker global growth, falling commodity prices and the terms of trade. The Reserve Bank cuts interest rates between 2011 and 2013 to support growth as the economy began transitioning from growth led by mining investment to non mining sources of growth. The economy grew by 2.6% in 2013-14 and 2.4% in 2014-15. Lower commodity prices and a lower terms of trade in 2015-16 restricted growth to 2.7%. The Reserve Bank cut interest rates between 2014 and 2016 to support growth as deflationary pressures began to emerge in the economy. Economic growth was forecast to fall to 1.75% in 2016-17 before strengthening to 2.75% in 2017-18.

THE SOURCES OF ECONOMIC GROWTH

The main sources of economic growth in Australia include positive growth in the major individual components of aggregate demand or spending in the economy (C + I + G + X - M) such as the following:

- **Consumption spending** by households (C): Consumption spending by households is mainly influenced by the level of household disposable income and consumer confidence. These factors are influenced by the general state of the economy, the level of taxation and interest rates.
- **Investment spending** by firms (I): Private business investment is influenced by the level of business profits, interest rates, taxation and business expectations about the state of the economy.
- **Government spending** (G): The level of government spending is largely influenced by the amount of taxation revenue collected, the government's budget priorities and the state of the economy.
- **Net exports** (X-M): This refers to the income from exports of goods and services (X) minus the expenditure on imports of goods and services (M). If net exports are negative they will detract from economic growth, but if net exports are positive they will add to economic growth.

The **rate of technological change** is also an important driver of economic growth as it can lead to improvements in **labour and capital productivity** (i.e. the rate of increase in output per unit of inputs used in production). Higher productivity was one of the main reasons for Australia sustaining higher rates of economic growth in the 1990s and early to mid 2000s compared to the 1980s. Other drivers of economic growth include **population growth** and increased **labour force participation rates**. According to Treasury the three 'Ps' of productivity and population growth and participation 'drive growth'.

Australia is a major importer of information and communications technology (ICT) and other types of specialised capital equipment used in the mining, agriculture, manufacturing and service industries. This capital has helped to raise both single factor (e.g. labour and capital productivity) and multifactor productivity, which in turn increases the rate of sustainable economic growth. The major contributions to Australian economic growth or GDP between 2013-14 and 2015-16 are listed in **Table 7.4**:

- Household consumption spending (C) represented 56.7% of expenditure on GDP in 2015-16. Household consumption grew by 2.6% in 2014-15 and 2.9% in 2015-16, assisted by lower interest rates as the Reserve Bank cut interest rates to support non mining sources of economic growth.
- Private investment (I) by firms accounted for 20.6% of GDP in 2015-16, falling by -4.6% between 2014-15 and 2015-16 mainly due to a continuing contraction in investment in the mining industry.
- Government spending (G) was 22.8% of GDP in 2015-16, expanding by 3.8% between 2014-15 and 2015-16 as the government increased expenditure on infrastructure projects.
- Net exports of goods and services (X - M) was a deficit of -$1,065m (detracting -0.1% from GDP growth) in 2015-16. This resulted from falls in commodity prices and slower world growth which reduced the demand for exports. However net exports were expected to add to growth in 2016-17.

Table 7.4: Expenditure on Australian Gross Domestic Product 2013-2016 ($m)

	Household Consumption (C)	*Private Investment (I)*	*Government Spending (G)*	*Change in Inventories*	*Net Exports (X-M)*	*Statistical Discrepancy*	*GDP*
2013-14	891,265	367,960	362,694	-3,367	-39,395	-373	1,578,784
2014-15	914,653	359,098	365,290	1,360	-23,385	——	1,617,016
2015-16	940,822	342,420	379,384	-57	-1,065	-1,359	1,660,145

Source: ABS (2017), *Australian National Accounts*, Catalogue 5206.0, March. Table 42
The reference year is 2014-15. Note: Figures are rounded and may not total. Total GDP = C + I + G + (X - M)

THE EFFECTS OF ECONOMIC GROWTH

Economic growth can lead to a number of important benefits for the Australian economy, including:

- **Higher real per capita incomes** and living standards can be achieved from increases in productivity and resource use. Higher real incomes allow individuals to have greater purchasing power in raising their material standard of living through purchases of more goods and services to improve their material wellbeing. This may include better standards of nutrition, housing, clothing, education, health care, transport and recreation. Australia had a high per capita gross national income (GNI) of US$42,822 in PPP terms in 2015 according to the World Bank's *Human Development Report*.
- Higher levels of economic growth in Australia can also encourage **higher levels of saving** from increases in income in both the private and public sectors. In the private sector, increases in real income can lead to a rise in the household saving ratio (which had risen to over 10% in 2014), with households able to reduce their levels of debt and save for retirement. The introduction of compulsory superannuation in 1991 has led to households accumulating more retirement savings which has been assisted by rising real incomes and the returns on savings vehicles. Businesses can also increase their saving rates because of higher levels of economic growth. This comes from the retention of business profits, which provide funds for future investment in productive capacity.
- Higher levels of economic growth tend to lead to higher rates of **productivity growth** and **technological progress**. This arises from more efficient resource use, as producers are able to use cost reducing technology and innovations in keeping pace with the rising demand for goods and services. Higher productivity, especially labour productivity, can lead to increased demand for labour by employers, helping to reduce the level and rate of unemployment in the labour market.
- Higher rates of economic growth which result in **employment creation**, can lead to new entrants to the workforce (through a higher participation rate) and higher levels of employment. Economic growth may also create jobs for previously unemployed workers, and underemployed workers, who may switch from part time or casual jobs to full time jobs to raise their real incomes, whilst those in full time employment may work overtime or second jobs to increase their real incomes.
- Economic growth which leads to higher real GDP, can **increase taxation revenue** for the government (known as the 'growth dividend'). The Australian government can use this additional taxation revenue to provide social and economic infrastructure, and to fund the social security and welfare system to provide income support for the aged, sick, low income families and the unemployed.
- Higher levels of economic growth can also contribute to **new business investment** as higher consumption spending can have an 'acceleration effect' on net investment (i.e. new investment in addition to the replacement of depreciated capital). Investment opportunities in new resource projects and in new plant and equipment may result from higher sustained economic growth.
- Economic growth necessarily involves increases in real output, some of which may be exported to other countries. **Export income** can then be used to finance imports of consumer, capital and intermediate goods produced more cheaply overseas. The gains from international trade include lower prices, higher output, employment, economies of specialisation and living standards.
- Economic growth may allow some resources to be released from current production for the **protection of the environment**. Increased leisure time and higher incomes may lead to more concern for the environmental protection of natural resources, including endangered species and rainforests, and the minimisation of pollution and the rate of climate change through the use of pollution abatement schemes (e.g. cleaner technologies and a system of tradeable emission permits), and government legislation to limit negative externalities caused by private production activities.
- Another benefit of economic growth is the **additional leisure time** that workers may 'trade off' for extra work as real incomes rise. This enables Australians to use leisure time to travel, play sport, or enjoy entertainment, literature, the arts, music, hobbies and to participate in voluntary community organisations. These interests have developed into growing service industries which offer new employment opportunities in areas such as sport, recreation, travel, tourism and entertainment.

The benefits of economic growth for Australia must be balanced against the **costs of structural change** which occur in the economy as it grows in real terms over time. Economic growth should not be pursued as an end in itself but as a process of assisting the Australian economy to achieve higher living standards and improvements in the physical and human quality of life and level of human development. A number of problems can result from the pursuit of economic growth as an end or goal in itself:

- A problem experienced by both advanced and developing economies in pursuing high rates of economic growth is the **damage caused to the natural environment** through pollution, deforestation and land degradation. More natural resources are needed to sustain higher rates of economic growth and this may lead to the depletion of non renewable and renewable resources, pollution of the environment, land degradation, and a consequent decline in environmental quality.
- Economic growth is a vehicle for great technological and structural changes in production, which can lead to some **structural unemployment** of labour. Governments need to fund retraining schemes to re-skill the structurally unemployed for future employment in other industries.
- Economic growth can often lead to an overemphasis on **materialism** and **consumerism** in society. Some loss of traditional cultural and family values is an inevitable outcome, but economic growth should not be pursued at the expense of a decline in traditional cultural or family values.
- Economic growth may lead to a widening in **inequality of the distribution of income** and wealth in a society, if the benefits of growth do not 'trickle down' to low and middle income groups, but are concentrated in high income groups. Progressive taxation can be used by governments to reduce income inequality by financing social security and welfare payments to lower income earners.
- Excessive rates of economic growth can lead to **demand pull** and **cost push inflation** as resources become scarce in relation to the increased demand for goods and services. Economic growth might therefore conflict with the objective of price stability. It can also conflict with full employment as technical progress may lead to **structural unemployment**. The other conflict that can arise is with the goal of external balance. As the economy increases its demand for imported goods, this can lead to an **increase in the current account deficit** and the level of net foreign debt to finance the deficit.

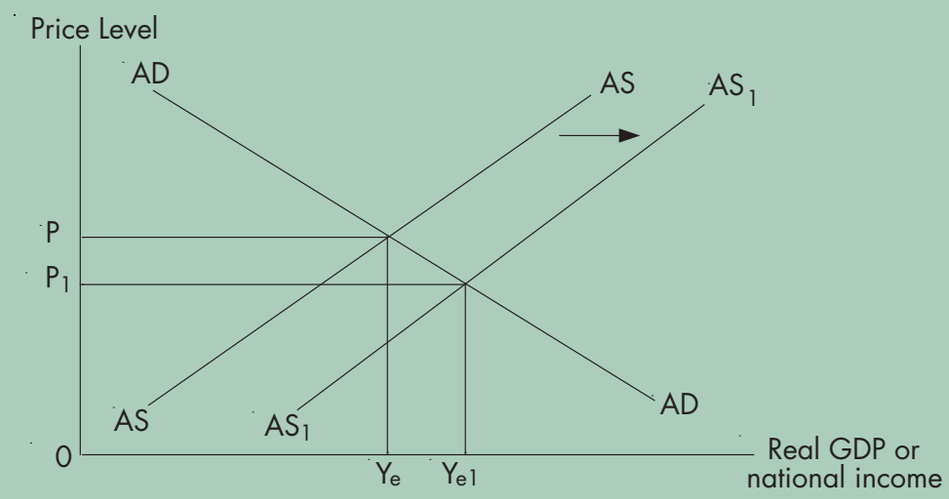
INCREASES IN AGGREGATE SUPPLY AND ECONOMIC GROWTH

In the long run, the rate of economic growth is heavily influenced by the Australian economy's productive capacity. The economy's productive capacity refers to the quantity and quality of resources needed to sustain the rate of increase in real output or economic growth in the future. The main resources used to sustain economic growth are land, labour, capital and enterprise. Improvements in the quantity and quality of these resources can help to raise the production of goods and services and living standards.

Aggregate supply represents the total volume of the economy's output. The aggregate supply curve (AS) is shown in **Figure 7.4** and represents the total volume of the economy's output at various price levels. It slopes upwards to the right as producers will have an incentive to increase output at higher prices in order to maximise profits. A shift to the right (AS to AS_1) or increase in the **long run aggregate supply curve** (AS) or productive capacity is shown in **Figure 7.4**. This results in a higher rate of economic growth. In this model used by supply side economists, the price level is flexible unlike the Keynesian model which assumes a fixed price level. The aggregate demand curve is downward sloping from left to right as consumers may be willing to buy more output but only at lower prices or a lower price level.

The intersection of the aggregate demand (AD) and aggregate supply (AS) curves represents the economy's equilibrium level of income and output at Y_e and at price level P. Any increase in aggregate demand without a corresponding increase in aggregate supply will lead to a higher price level and inflation. This represents a constraint on the economy's future growth and more resources or an increase in the productivity of existing resources is needed to increase economic growth by increasing aggregate supply. This capacity constraint occurred in the Australian economy between 2005 and 2008 as full employment was reached in the labour market, and economic and social infrastructure was fully utilised.

Figure 7.4: The Effect of an Increase in Aggregate Supply on Economic Growth



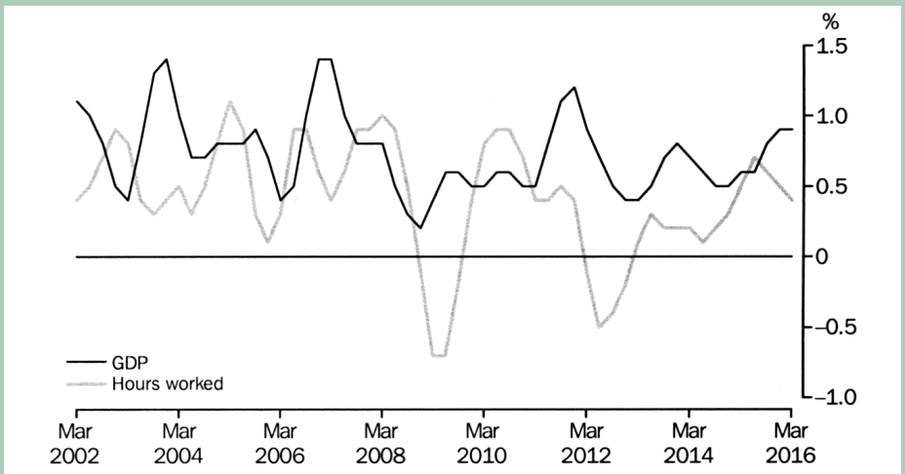
In **Figure 7.4** the shift in the economy's aggregate supply curve to the right from AS to AS_1 leads to more economic growth (Y_e to Y_{e_1}) and a lower price level (P to P_1), since more output is available at a lower price level. An increase in aggregate supply could be sourced from **higher productivity** (i.e. more output being produced from a given level of inputs) or from **more resources** being used to increase output. This could come about from business firms using more efficient work practices and the latest technology to raise labour and capital productivity. Education and training of labour could also increase skills and raise labour productivity. It could also come about from the use of more resources such as higher rates of immigration of skilled labour to increase the size of the workforce and more investment in resource projects (such as oil, gas, coal and iron ore) to increase the resources available for export.

Government policies called microeconomic reforms are important mechanisms for improving the **efficiency of resource allocation** in the economy in the long term. These policies include the reduction in tariffs and other barriers to international trade; the relaxation of barriers to international investment; changes to the structure and rates of taxation; domestic competition policy reforms; and reforms in financial, labour and product markets. These reforms along with changes in technology and markets, have led to changes in the structure of the economy (i.e. structural change) to make it more productive, efficient and competitive. The three types of potential efficiency gains from microeconomic reform policies and market induced structural change are the following:

- **Technical or productive efficiency** refers to firms producing output using the least cost combination of resources. This means producing the maximum output at the minimum average cost. In microeconomic theory this is known as achieving **technical optimum** in production.
- **Allocative efficiency** involves firms charging prices which reflect the marginal cost of production so that resources are allocated in such a way as to reflect consumer preferences for goods and services.
- **Dynamic efficiency** refers to firms adapting to changing economic circumstances (such as changes in demand and technology) by using the latest cost reducing technology to meet changing consumer preferences. This is also known as inter-temporal efficiency as firms respond to changes in domestic and global markets over time by producing output at the minimum cost.

One of the main sources of the growth in GDP per capita in Australia between 1990 and 2001 was the improvement in labour productivity. Australia's annual labour productivity growth was 2.2% between 1990 and 2001, which was higher than in most other OECD countries. However annual productivity growth fell to 0.5%-1% between 2001 and 2016 as capacity constraints emerged. These included a shortage of some forms of skilled labour (such as professionals and tradespersons) and the need for increased investment in infrastructure such as transport, health, communications and education.

Figure 7.5: Australian Productivity 2002-2016 (Quarterly % change)



Source: ABS (2016), *Australian National Accounts*, Catalogue 5206.0, March.

Figure 7.5 shows the trend in Australian labour productivity (as measured by GDP per hour worked) between 2002 and 2016. Key influences on labour productivity include technological advances, improvements in labour skills, and the quality of management practices and work arrangements:

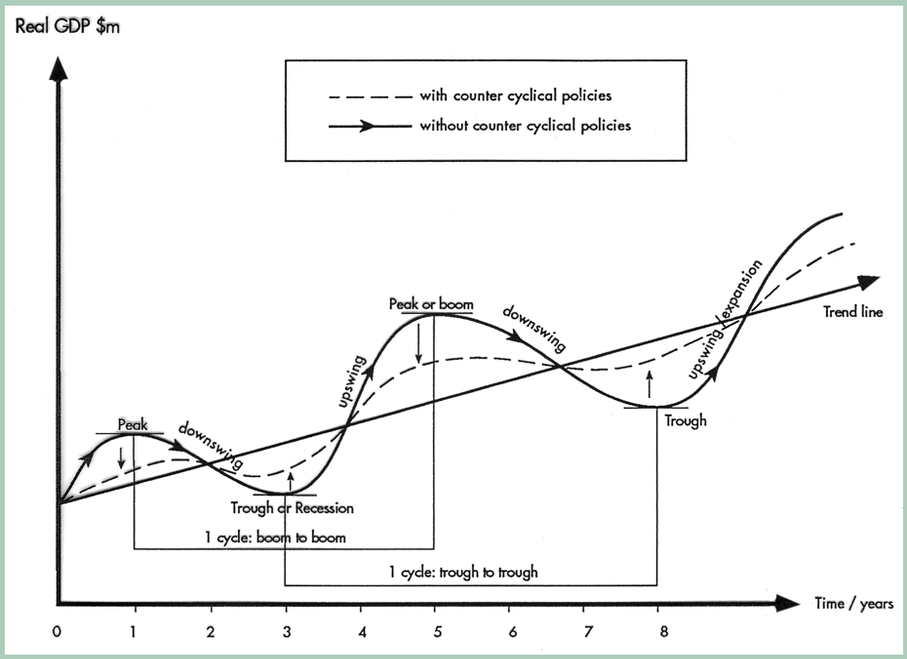
- Knowledge and innovation are closely linked to the adoption of new technologies and their application in industry. Australian businesses have a high 'take up' rate of new technologies.
- Expenditure on research and development (R & D) in Australia is important for encouraging innovation in industry. However Australia only spends 1.6% of its GDP on R & D compared to an average 3% of GDP in other OECD countries.
- Business use of the Internet (through the expansion of broadband services and new computer software) in Australia is a major means of innovation and the conduct of modern business, including electronic commerce, the use of social media for advertising and accessing global markets.
- Labour quality is linked strongly to the levels of education and training at school, as well as vocational and tertiary levels of education. Improvements in education and training have become a major focus of government policy as a means of raising the quality of the Australian labourforce.

TRENDS IN THE AUSTRALIAN BUSINESS CYCLE

The business cycle refers to fluctuations in the level of real GDP over time in market economies like Australia. **Figure 7.6** shows the main phases of the business cycle as economic activity can deviate from the general long term upward trend in the rate of economic growth over time. One complete business cycle is measured from trough to trough, or peak to peak. In Australia one cycle is estimated to average about seven years. The four phases of the business cycle in **Figure 7.6** are the following:

- The **trough** of the cycle is where output and employment 'bottom out' to their lowest levels. It is the lower turning point of the business cycle. Income is at its lowest level, whereas unemployment is at its highest e.g. the 1990-91 recession in Australia was characterised by negative economic growth of -0.2% in real GDP and the unemployment rate rose to 11% of the workforce. The 1990-91 recession was caused by excessive monetary tightening which reduced growth and raised the unemployment rate. A **recession** in economic activity is defined as two consecutive quarters of negative economic growth. The Australian economy recorded below average growth of 1.3% in 2008-09 due to the **Global Financial Crisis** but did not experience a 'technical' recession.
- The **recovery or upswing** of the business cycle is a phase between the trough and peak, characterised by an expansion of the economy's level of output and employment towards full employment.

Figure 7.6: The Phases of the Business Cycle



Unemployment falls because higher spending creates new job opportunities e.g. an economic upswing occurred in 2009-10, with real GDP rising by 2.3% and the unemployment rate falling from 5.8% to 5.1%, due to a recovery in domestic and global economic activity after the Global Financial Crisis. This recovery continued in 2010-11 (despite the impact of natural disasters) with economic growth of 2.25% and a fall in the unemployment rate to 4.9% of the workforce.

- The **peak or boom** of the business cycle is the upper turning point, where the economy has grown to its capacity and income, employment and output are at a maximum. Aggregate demand exceeds aggregate supply causing over full employment of resources. Inflation may arise because resources are scarce and their prices are bid up by competing users. Between 2003 and 2004, the Australian economy boomed with real GDP growth averaging over 4%, and the unemployment rate fell to below 5%, but inflation increased, with the CPI rising to 3.2% in 2005. These boom conditions continued between 2006 and 2008 as Australian growth was supported by the expansionary effect of a rising terms of trade and strong growth in domestic demand. Real GDP growth averaged over 3% between 2006 and 2008 and the levels of capacity utilisation in the economy peaked.
- The **downswing** of the business cycle is characterised by falling output and employment and the emergence of excess capacity. Spending falls in a downswing and unemployment of labour rises, as aggregate demand is insufficient to generate full employment. A downswing occurred in Australia between 2013-14 and 2015-16, as growth slowed to 2.5%, largely because of lower commodity prices, a lower terms of trade and the decline in mining investment. Spare capacity emerged in the labour market with the unemployment rate rising to 6.2% in 2015 before falling to 5.7% in 2016.

  The downswing in Australian economic growth that occurred after the peak in mining investment in 2012 was a direct result of the subsequently large fall in mining investment and the beginning of slower global growth including in China, Australia's major trading partner.

In **Figure 7.6** government intervention in the business cycle is shown by the dotted line. This represents the government's use of **counter cyclical or stabilisation policies** to 'smooth out' fluctuations in the business cycle, and is known as 'lopping the peaks and filling the troughs'. In a trough or recession the government could use expansionary monetary and/or fiscal policies to support growth in aggregate demand and reduce unemployment. In a peak or boom the government could use contractionary monetary and/or fiscal policies to reduce the growth of aggregate demand and inflation pressures.

POLICIES TO PROMOTE ECONOMIC GROWTH

The Australian economy has performed remarkably well since the 1991 recession, recording twenty six years of consecutive economic growth from 1991 to 2017. The rate of economic growth averaged between 3% and 4% in real terms in this period due to a combination of positive world economic growth (including the resources booms between 2003 and 2008; and 2010 and 2012) and the benefits of major macroeconomic and microeconomic reforms in Australia. These reforms included the **more effective conduct of macroeconomic policy** in keeping inflation and interest rates low, which has led to greater certainty and underpinned consumer and business confidence in their spending decisions. However the Global Financial Crisis in 2008-09 led to below average growth, rising unemployment and the use of expansionary monetary and fiscal policies to support economic growth and employment. Below trend growth and rising unemployment was also experienced between 2013 and 2016 as the Australian economy transitioned to non mining sources of growth after the mining investment boom. Global growth also slowed leading to lower commodity prices and a lower terms of trade. This reduced the growth in national income and deflationary pressures emerged in 2016-17.

The main macroeconomic policy instruments used by the Australian government include monetary and fiscal policies. **Monetary policy** refers to the Australian government's use of changes in the official cash rate by the Reserve Bank of Australia to achieve the government's economic objectives of economic growth, price stability, full employment and external balance. Since 1996 the Reserve Bank has set an inflation target of 2% to 3% consumer price inflation over the economic cycle for conducting monetary policy. The achievement of the inflation target on average has been important in containing inflationary expectations, sustaining economic growth and supporting Australia's international competitiveness.

Fiscal policy refers to changes in taxation and government spending in the annual federal budget to affect economic activity, resource allocation and income distribution. The Australian government adopted the *Charter of Budget Honesty Act* in 1998 as a formal commitment to keep the budget in balance over the economic cycle. It also committed to not increasing the tax burden and retiring public debt by accumulating budget surpluses when economic growth was positive. The Australian government achieved budget surpluses between 1996 and 2007 and paid off Australia's public debt in 2005-06. However the impact of the Global Financial Crisis in 2008-09 reduced taxation revenue and increased government expenditure, leading to larger budget deficits and public debt. The Australian government adopted a contractionary stance of fiscal policy in the 2014, 2015, 2016 and 2017 budgets to reduce the budget deficit from-$39.6b in 2015-16 to -$29.4b in 2017-18, and return to balance by 2020-21.

Macroeconomic policies can be used to promote and sustain economic growth in the short to medium term through demand management. **Microeconomic policies** can be used in the longer term to address specific structural problems on the supply side of the economy which may limit future growth. Many of the microeconomic policies undertaken have the objectives of increasing efficiency and productivity:

- Cuts to Australian protection such as tariffs and quotas have increased import competition, and encouraged greater efficiency in industry and the export of more manufactured goods;
- Reforms to competition policy through the implementation of a national competition policy in 1995 has strengthened competition in Australia's product and factor markets;
- Labour market reforms such as the adoption of enterprise or workplace bargaining in linking wage outcomes to changes in labour productivity has increased workplace efficiency and productivity;
- Reforms to infrastructure such as electricity, air transport, gas, water and telecommunications have made these product markets more efficient and competitive; and
- Taxation reform including the introduction of a broad based consumption tax (the GST) in 2000 has secured more taxation revenue for state governments to fund their spending on goods and services, infrastructure, health and education. By broadening the tax base and placing more emphasis on indirect taxes, the Australian government has been able to cut marginal rates of income tax and increased income tax thresholds to reduce the tax burden on income earners.

Fiscal Stimulus to Support Economic Growth During the GFC

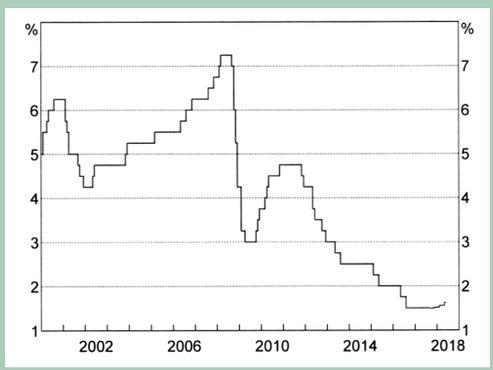
The Global Financial Crisis and world recession impacted on Australia's rate of economic growth in the second half of 2008, with the Australian economy recording -0.5% growth in the December quarter 2008 and 0.4% growth in the March quarter 2009. The Australian government used discretionary fiscal policy to introduce fiscal stimulus measures to support aggregate demand, employment and growth in real GDP. This included short term cash transfers to low and middle income households in November 2008 and February 2009, and spending on new infrastructure projects in the 2009-10 budget. These measures were estimated to boost real GDP by 2.75% in 2009-10 and 1.5% in 2010-11. Treasury estimated that without these fiscal measures, the impact of the global recession on Australia would have resulted in the unemployment rate reaching 10% of the workforce, whereas it reached a peak of 5.9% of the workforce in 2009 and fell to 4.9% with an economic recovery in 2011.

Monetary Stimulus to Support the Transition to Non Mining Sources of Growth

The Reserve Bank eased the stance of monetary policy between November 2011 and August 2016 by lowering the cash rate from 4.75% to 1.5% as shown in **Figure 7.7**. The easing in the stance of monetary policy supported the Australian economy's transition (after the mining investment boom) to non mining sources of economic growth such as consumption, housing, non mining investment and net exports.

Lower interest rates helped to support increased borrowing and spending; limited the rise in the unemployment rate; and also put downward pressure on the exchange rate which increased the competitiveness of Australian exports such as resources, manufactures, tourism and education.

Figure 7.7: Changes in the Cash Rate 2000 to 2016



Source: Reserve Bank of Australia (2017), *Statement on Monetary Policy*, August.

Population Ageing and Economic Growth

The first *Intergenerational Report* (2002) noted that population ageing will have major effects on future growth prospects in the Australian economy because of the following impacts:

- Declining labour force participation rates especially amongst older workers;
- Slower overall employment growth due to declining participation rates; and
- Lower growth in real GDP.

Government policies to address the effects of population ageing on economic growth were detailed in the fourth *Intergenerational Report* (2015) and included the following:

- Encouraging higher workforce participation by females, mature aged workers and young people;
- Investing more resources in education and training to boost skills formation and productivity; and
- Balancing the federal budget and retiring public debt to achieve fiscal discipline.

These measures were seen as critical in ensuring that labour force participation and productivity continued to grow over the next 40 years. By encouraging higher workforce participation and boosting productivity the *Intergenerational Report* (2015) argued that real incomes and living standards would continue to rise in the future despite the impact of population ageing on economic growth and the federal budget through increased spending on healthcare and welfare benefits such as pensions.

REVIEW QUESTIONS

THE MEASUREMENT, SOURCES AND EFFECTS OF ECONOMIC GROWTH

1. Explain how real GDP is calculated. How does the ABS measure GDP in Australia?

2. Calculate the value of real GDP in year 2 for an economy from the data in the following table:

Year	Nominal GDP	Consumer Price Index (CPI)
1	$1,000m	100
2	$1,200m	104

3. Distinguish between the value added, expenditure and incomes received methods of calculating the value of total production.

4. Refer to Table 7.3 and describe the trends in measures of Australian GDP between 2014-15 and 2015-16. How is the rate of growth in real GDP measured?

5. Refer to Figure 7.3 and describe the trends in Australia's rate of economic growth between 2004-05 and 2016-17. Why did growth fall below trend between 2012 and 2017?

6. Outline the main sources of economic growth in Australia. Refer to the data in Table 7.4 in your answer.

7. Discuss the main benefits to Australia of sustaining high rates of economic growth.

8. Discuss the main costs associated with sustaining high rates of economic growth in Australia.

9. Explain how improvements in efficiency, productivity and technology can increase aggregate supply and economic growth in the long run.

10. Explain the main features of each stage of the business cycle. Refer to Figure 7.6 in your answer.

11. Explain how the government can use counter cyclical or stabilisation policies to smooth out fluctuations in the business cycle.

12. Discuss the main trends in the Australian business cycle between 2008-09 and 2016-17.

13. Discuss the main government policies used to promote economic growth in Australia.

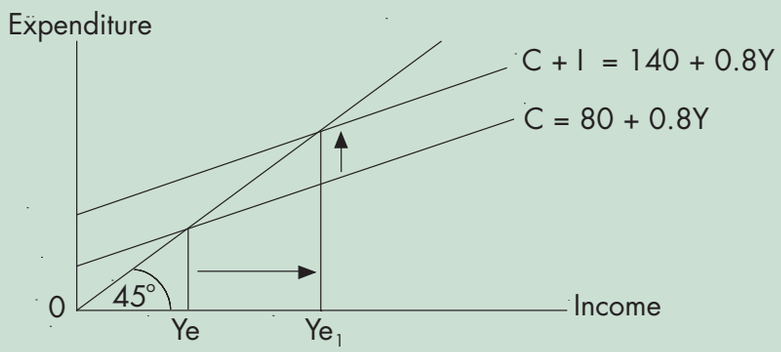
14. Discuss the Australian government's use of fiscal stimulus to support economic growth during the GFC in 2008-09 and monetary stimulus to support economic growth between 2011 and 2017.

15. Discuss the potential effects of population ageing on Australia's future growth performance.

16. Define the following terms and add them to a glossary:

aggregate demand	counter cyclical policies	per capita income
aggregate supply	downswing	population ageing
boom	fiscal stimulus	productivity
budget deficit	investment spending	rate of economic growth
budget surplus	microeconomic reform	real GDP
business cycle	monetary stimulus	recession
consumption spending	net exports	upswing

CHAPTER 7: SHORT ANSWER QUESTIONS



Refer to diagram above of the determination of the equilibrium level of national income in a hypothetical economy and answer the questions below. Marks

1. What is the equilibrium level of income at Ye? (1)

2. What is meant by autonomous investment? (1)

3. State the formula for the multiplier and calculate the value of the multiplier if the MPC is 0.8. (2)

4. What is the change in the equilibrium level of national income from Ye to Ye_1? (2)

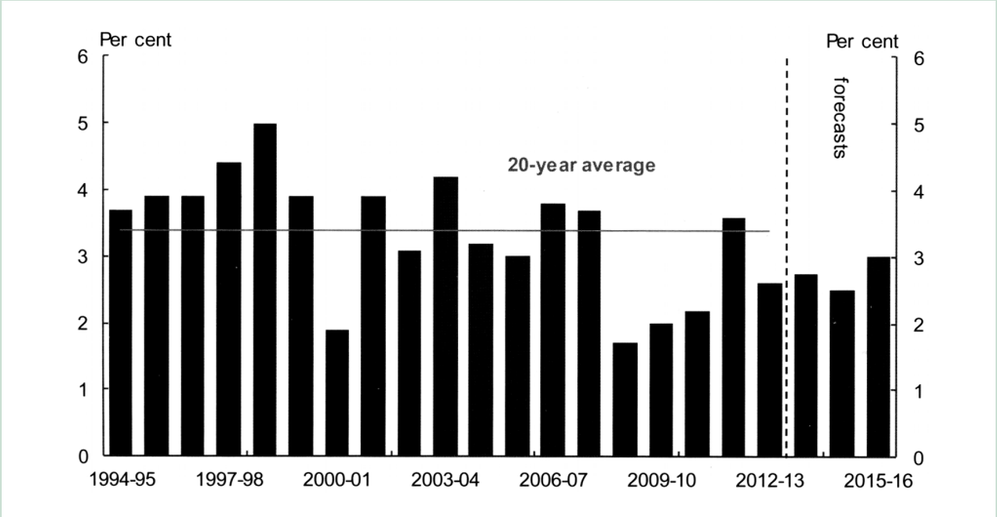
5. Explain TWO costs and TWO benefits for this economy in achieving a higher rate of economic growth. (4)

CHAPTER FOCUS ON ECONOMIC GROWTH

"The Australian economy is in the midst of a major transformation, moving from growth led by investment in resources projects to broader based drivers of activity in non resources sectors (such as housing and non mining investment) of the economy. This is occurring when the economy has generally been growing below its trend rate and the unemployment rate has been rising.

Real GDP growth is forecast to remain weak, growing by 2.5% in 2014-15 and 3% in 2015-16. This weakness reflects the sharp fall in the prices for Australia's key commodity exports and a further decline in Australia's terms of trade. The Australian economy is also facing the medium term challenge of population ageing which will lead to lower labourforce participation, further limiting per capita income growth. Confronting these challenges will require faster productivity growth."

Australia's Real GDP Growth 1994-95 to 2015-16 (f)



Source: Commonwealth of Australia (2014), *Budget Strategy and Outlook 2014-15*.

Explain the main challenges faced by the Australian economy in achieving a higher rate of economic growth after the end of the mining investment boom.

CHAPTER 7: EXTENDED RESPONSE QUESTION

Examine the arguments for and against increasing the rate of economic growth in Australia and the macroeconomic and microeconomic policies that the federal government can use to sustain economic growth in the medium term.

CHAPTER SUMMARY

ECONOMIC GROWTH

1. Economic growth refers to an increase in a country's productive capacity as measured by changes in its real GDP over time. Economic growth results from using more resources or increasing the productivity of existing resource use in production.

2. The equilibrium level of national income is the level of income towards which an economy moves. Equilibrium is a situation in which there is no tendency for the level of national income to change. The equilibrium level of national income can be determined by using the saving/investment (leakage-injection) approach or the aggregate demand/aggregate supply (AD/AS) approach:

   In equilibrium S = I or AD = AS.

3. Aggregate demand is the sum of the main components of spending in the economy including consumption spending by households (C), investment spending by firms (I), net government spending (G) and net exports (X - M).

4. The simple expenditure multiplier (k) in a three sector model of the economy is the extent to which an initial change in autonomous consumption or autonomous investment spending is multiplied to give a larger change in the equilibrium level of national income.

5. Economic growth is measured by changes in real GDP over time. Real GDP is nominal GDP or GDP at current prices adjusted for changes in the price level or rate of inflation. In 2015-16 real GDP in Australia was valued at $1,660,145m and the Australian economy grew by 2.7% in real terms between 2014-15 and 2015-16 which was below the historical average of 3.25%.

6. The main sources of economic growth in Australia in 2015-16 were consumption spending (C) accounting for 56.7% of GDP; private investment spending (I) which accounted for around 20.6% of GDP; and government spending which accounted for 22.8% of GDP. Net exports (exports of goods and services minus imports of goods and services) detracted 0.1% from economic growth. Inventories (or unsold stocks) neither added to or subtracted from economic growth.

7. Some of the main benefits of economic growth include rising real incomes and living standards as well as employment creation, and the ability to export goods and services to overseas markets. Economic growth may also result in higher tax collections to the government which can be used to finance social welfare to alleviate poverty, as well as developing infrastructure in the economy.

8. Some of the costs associated with unsustainable economic growth may include a deterioration in the natural environment due to higher pollution and over exploitation of natural resources. Economic growth can also cause inflation if the rate of growth exceeds productive capacity. A widening in the inequality of the distribution of income can also be associated with the process of economic growth as not all members of society may share equally in the 'growth dividend'.

9. Economic growth can be sourced from increases in productivity, efficiency and technological advancements. These can increase aggregate supply or productive capacity in an economy in the long term and sustain higher rates of economic growth without adding to inflationary pressures.

10. The business cycle refers to changes in the level of real economic activity over time. The phases of the business cycle are the trough or recession; the upswing or upper turning point; the peak or boom; and the downswing of the cycle. The government can use counter cyclical policies such as monetary and fiscal policies to stabilise fluctuations in the business cycle. If used successfully, these stabilisation policies will minimise inflation during inflationary booms of the cycle, and the rate of unemployment during recessions or deflationary periods of the cycle. Microeconomic policies can be used in the longer term to improve the efficiency of the economy's allocation of resources.

Chapter 8

Unemployment

THE MEASUREMENT OF UNEMPLOYMENT

Achieving full employment in the labour market is a major macroeconomic objective of the Australian government. After the 1990-91 recession the unemployment rate peaked at 11.2% in 1992. However by 2007-08 it had fallen to an historic low of 4.2%, after seventeen years (from 1991 to 2008) of consecutive economic growth. In 2008-09 the impact of the Global Financial Crisis led to the unemployment rate rising to 5.8% but economic recovery in 2010-11 helped to lower unemployment to 5.2% by 2012. However in 2014-15 the unemployment rate rose to 6.1% due to lower growth as the economy transitioned from the peak in mining investment in 2013 to non mining sources of growth. The unemployment rate stabilised at between 5.6% and 5.8% of the workforce in 2016-17.

Unemployment is measured as the percentage of the Australian labour force classified as unemployed. The **Australian labour force** refers to all persons of working age (i.e. between 15 and 64 years old) who are either employed in full time, part time or casual work, or are unemployed, but registered as actively looking for work (refer to **Table 8.1**). The labour force is calculated by using the following equation:

Total Australian Labour Force = Employed (full time + part time) + Unemployed

The Australian Bureau of Statistics (ABS) uses the following definitions to determine the persons who are counted as part of the Australian labour force or workforce during its monthly labour force survey:

- The employed include persons aged 15 years and over who during the ABS reference week worked for at least one hour per week for pay, profit, commission or payment in kind in a job or business or on a farm; or worked for one hour or more without pay in a family business or on a farm; or were employees who had a job but were not at work because they were on paid leave, on a shift arrangement, on strike or locked out, or on workers' compensation.
- Employers or own account workers (i.e. the self employed) who had a job, business or farm.
- The unemployed include persons 15 years and over who were not employed during the reference week, but had actively looked for full time or part time work and were available for work, or were waiting to start a new job at any time in the four weeks up to the end of the reference week.

Table 8.1: The Australian Labour Force 2011-12 to 2016-17

	Full Time Employed Persons	*Part Time Employed Persons*	*Unemployed Persons*	*Labour Force*
2011-12	8,065,500	3,435,000	631,300	12,131,800
2012-13	8,139,900	3,520,100	706,900	12,366,900
2013-14	8,076,200	3,506,100	756,700	12,339,000
2014-15	8,164,500	3,632,700	772,300	12,569,500
2015-16	8,172,200	3,761,200	725,900	12,659,300
2016-17	8,318,700	3,841,300	726,800	12,886,800

Source: ABS (2017), *Labour Force*, Catalogue 6202.0, June. NB: The statistics used are trend estimates in June in each year.

Table 8.2: Australian Labour Force Participation Rates 2008-09 to 2016-17

Year	*Persons*	*Males*	*Females*	*Labour force*	*Civilian Population Aged 15+ years*
2008-09	65.3	72.1	58.7	11,425,300	17,504,400
2009-10	65.4	72.4	58.6	11,840,100	18,099,700
2010-11	65.6	72.2	59.1	12,046,100	18,370,900
2011-12	65.2	71.8	58.9	12,131,800	18,595,500
2012-13	65.2	71.7	58.8	12,366,900	18,976,200
2013-14	64.7	71.0	58.6	12,339,000	19,069,200
2014-15	64.9	71.1	59.0	12,569,500	19,364,500
2015-16	64.8	70.4	59.3	12,659,300	19,540,100
2016-17	64.9	70.5	59.5	12,886,800	19,852,200

Source: ABS (2017), *Labour Force*, Catalogue 6202.0, June & *Australian Demographic Statistics*, Cat. 3101, Dec.

Those persons who are not classified as part of the Australian workforce include the following categories:

- Children under 15 years of age, those who are retired, unable to work or do voluntary work.
- Full time non working students above 15 years of age who are engaged in full time study.
- Unemployed persons who are not actively seeking either full time or part time employment.

As shown in **Table 8.1**, in June 2017, the Australian labour force totalled 12,886,800 persons, of which 8,318,700 or 64.6% were employed full time; 3,841,300 or 29.8% were employed part time; and 726,800 or 5.6% were classified as unemployed. The size of Australia's labour force is determined by the following four specific factors: the size and growth rate of the population; net migration; the age distribution of the population; and the participation rate of the working age population:

1. The **size of the Australian population** in 2016-17 was approximately 24,385,600 persons. The civilian population over 15 years of age was 19,852,200 in 2016-17, but only 12,886,800 were counted as part of the labour force (refer to **Table 8.2**). This meant that the participation rate in 2016-17 was 64.9%. Population growth (361,600 in 2016-17) is influenced by the rate of natural increase and net migration. The population growth rate (1.5% in 2016-17) is equal to the sum of the rate of natural increase (152,600 in 2016-17) plus net migration (209,000 in 2016-17) i.e.

$$\text{Population Growth Rate } (\%\Delta) = \text{Natural Increase } (\%\Delta) + \text{Net Migration } (\%\Delta)$$

2. The **level of net migration** adds to the skills base and size of the Australian labour force. The level of net migration in 2010-11 was 108,100, less than half the migrant intake in 2008-09. This was due to a reduction in the migration intake by the Australian government after the Global Financial Crisis in 2008-09 which led to higher unemployment in the Australian economy. However the migrant intake had increased to 209,000 by 2016-17 as economic recovery occurred after the GFC.
3. The **age distribution of the population** has an effect on the potential size of the labour force because more people in the 15 years to 64 years age group, as a proportion of the total population, will increase the potential pool of workers. In 2016-17, there were 15,964,383 people in the 15 to 64 year age group, representing some 65.4% of the total Australian population of 24,385,600.
4. The **participation rate of the working age population** (15 to 64 years) refers to the percentage of the working age population actually in the labour force (i.e. full time and part time employees plus the unemployed). The participation rate for 2016-17 is calculated by using the following equation:

$$\text{Participation Rate} = \frac{\text{Work Force}}{\text{Working Age Population}} \times \frac{100}{1} = \frac{12{,}886{,}800}{19{,}852{,}200} \times \frac{100}{1} = 64.9\%$$

In 2016-17 the participation rate was 64.9% down from 65.2% in 2012-13 (see **Table 8.2**). The participation rate varies with the level of economic activity, rising during booms (e.g. from 63.5% in 2003-04 to 65.3% in 2007-08 and 2008-09) when more jobs are available. It tends to fall during recessions or periods of lower growth when unemployment rises and job vacancies fall (e.g. from 65.6% in 2010-11 to 64.7% in 2013-14). Two groups that have an impact on the participation rate are young people looking for their first job (such as graduating students and school leavers) and women with young children returning to the labour force. The participation rate for males is higher than for females but the participation rate for females has tended to increase over time (e.g. from 55.6% in 2003-04 to 59.5% in 2016-17) whereas the participation rate for males has tended to decline slightly from 72.4% in 2009-10 to 70.5% in 2016-17. Participation rates for males, females and persons were relatively stable during the period of weaker labour demand during the Global Financial Crisis in 2008-09, but declined between 2012-13 and 2013-14 due to slower growth in the Australian economy.

Unemployment refers to people who are willing and able to work, actively seeking work, but are unable to find suitable employment. In Australia, unemployment is measured by a monthly Australian Bureau of Statistics (ABS) telephone survey of the labour force. To be counted as unemployed by the ABS labour force survey, a person must be available for work and fall into one of the two following categories:

1. Had actively looked for full time or part time work at any time in the four weeks up to the end of the reference week and were available for work in the reference week; or
2. Were waiting to start a new job within four weeks from the end of the reference week and could have started in the reference week if the job had been available then.

The **unemployment rate** is calculated as a percentage of the labour force, which includes all persons employed (i.e. full time plus part time workers), plus all unemployed persons i.e.

$$\text{Unemployment Rate} = \frac{\text{Total Number Unemployed}}{\text{Labour force (Employed + Unemployed)}} \times \frac{100}{1}$$

In 2016-17 there were 8,318,700 persons employed full time and 3,841,300 persons employed part time, with 726,800 persons classified as unemployed. This gave a total labour force of 12,886,800 persons. The trend unemployment rate calculated by the ABS in June 2017 was therefore 5.6% i.e.

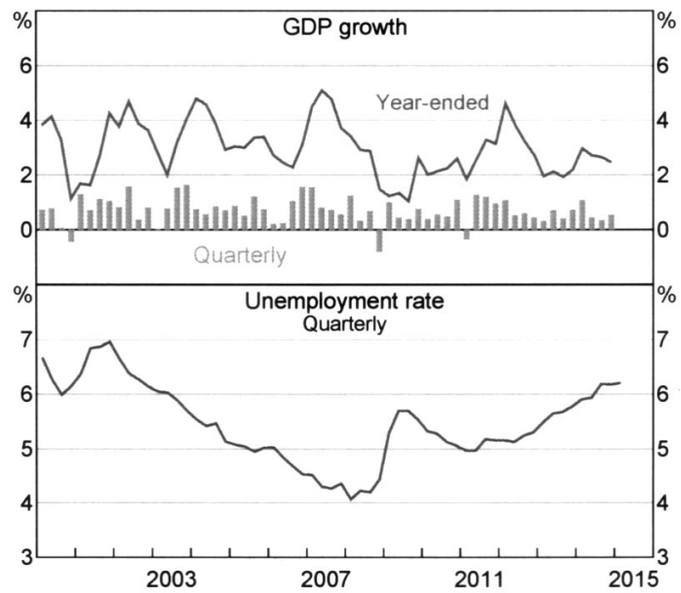
$$\text{Unemployment Rate for June 2017} = \frac{726{,}800}{12{,}886{,}800} \times \frac{100}{1} = 5.6\%$$

RECENT TRENDS IN UNEMPLOYMENT

The level and rate of unemployment remained high in Australia after the 1970s, when stagflation (simultaneous high rates of inflation and unemployment with low economic growth) caused by the 'energy crisis' led to a rise in the unemployment rate from 2% in the 1960s to over 6% by the end of the 1970s. In the 1980s unemployment rose to 8% of the labour force and after the recession in the early 1990s, it reached 11% of the Australian labour force, with much of the rise in unemployment accounted for by the rise in the unemployment rate for male full time workers in manufacturing.

The unemployment rate peaked at 11% in 1992 and then fell slowly, reaching 7.4% in 1998-99. In 2007-08 the unemployment rate had fallen to 4.2%, its lowest level in over 30 years. Much of the fall in the unemployment rate between 1999 and 2008 was due to high rates of sustainable economic growth, averaging over 3% per annum in this period. **Figure 8.1** shows the gradual fall in the unemployment rate between 2001-02 and 2007-08, mainly because of consistently high rates of sustainable economic growth in Australia and structural reforms in the labour market and the economy.

Figure 8.1: Australia's GDP Growth and the Unemployment Rate 2000 to 2015



Source: RBA (2015), *Statement on Monetary Policy*, May.

In 2008-09 the Global Financial Crisis and recession had a major impact on the Australian labour market, with unemployment rising from 4.2% in 2007-08 to 5.8% in 2008-09 due to the low rate of economic growth of 1.3%. There were major retrenchments in industries affected by the GFC such as mining, manufacturing and finance. In 2009-10 higher economic growth of 2.3% reduced the unemployment rate to 5.1%, and then to 4.9% in 2010-11 (refer to **Table 8.3**). An uneven pattern of growth and structural change in 2011-12 led to retrenchments in industries such as car and steel manufacturing, and the unemployment rate rose to 5.2%. In 2012-13 a lower rate of economic growth of 2.6% led to the unemployment rate increasing to 5.7%. This pattern of below trend growth continued in both 2013-14 and 2014-15 as the mining investment boom ended, commodity prices fell and the terms of trade declined. The unemployment rate rose to 6.1% in 2015 before falling to 5.6% in June 2017.

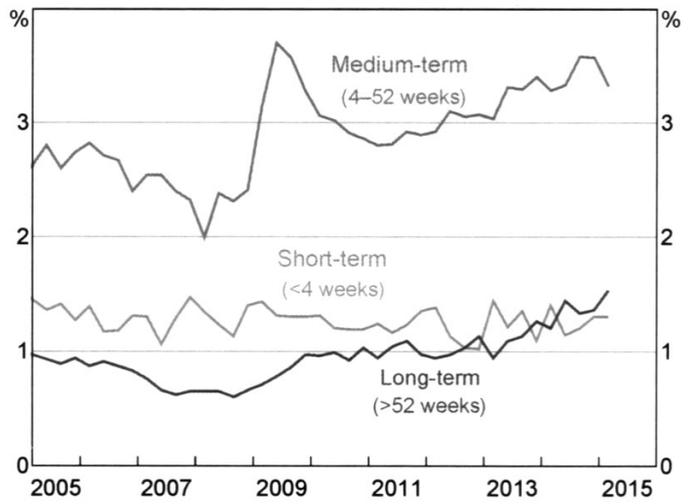
Much of the increase in the unemployment rate between 2011 and 2015 was due to a rise in the medium term unemployed (those who have been unemployed for between 4 and 52 weeks) as shown in **Figure 8.2**. However the rate of **long term unemployment** or those unemployed for over 52 weeks also rose which was consistent with a protracted period of subdued labour market conditions. In June 2017 there were 163,500 persons classified as long term unemployed which was 22.5% of the total number unemployed or 1.3% of the labour force. Long term unemployment rose from 19.5% in 2010-11 to 24.2% in 2014-15. It began to fall slightly in 2015-16 to 23.4% but in 2016-17 some 22.5% of the workforce was classified as long term unemployed as shown in **Table 8.3**.

Table 8.3: The Australian Unemployment Rate 2009-10 to 2016-17

	Labour Force Persons	*Unemployed Persons*	*Unemployment Rate (%)*	*Long Term Unemployed (% of Total Unemployed)*	*Real GDP %△ pa*
2009-10	11,840,100	607,000	5.1%	18.7%	2.3%
2010-11	12,046,100	591,000	4.9%	19.5%	1.9%
2011-12	12,131,800	631,300	5.2%	18.7%	3.4%
2012-13	12,366,900	706,900	5.7%	18.6%	2.6%
2013-14	12,339,000	756,700	6.1%	23.6%	2.5%
2014-15	12,569,500	772,300	6.1%	24.2%	2.5%
2015-16	12,659,300	725,900	5.7%	23.4%	2.5%
2016-17	12,886,800	726,800	5.6%	22.5%	1.7%

Source: ABS (2017), *Labour Force*, Catalogue 6202.0, June and Catalogue 6291.0.55.001, Table 14b.

Figure 8.2: Unemployment by Duration in Australia 2005-2015



Source: RBA (2015), *Statement on Monetary Policy*, May.

There was an increase in the percentage of job losers between 2007-08 and 2008-09 because of the impact of the Global Financial Crisis. However the percentage of job leavers fell as workers placed more emphasis on job security. The percentages of first time workers and former workers fell in 2008-09 as some workers gave up looking for jobs as the labour market weakened due to the GFC. Jobs growth occurred between 2009-10 and 2010-11 due to economic recovery, and there was a decline in job losses. In 2011-12 an increase in job losses occurred due to the uneven pattern of growth in the Australian economy and the negative impact of the high value of the Australian dollar on the competitiveness of manufacturing firms such as Toyota, Holden, Ford and Blue Scope Steel which retrenched workers. In 2013-14 the major car makers announced plans to shut their Australian plants by 2016-17.

Unemployment rates according to sex and age between 2014 and 2017 are shown in **Table 8.4**. The unemployment rate for young (15 to 24 years) males and females looking for full time work was between two and three times the rate for males and females over fifteen years of age in the labour force in this period. Young males (15-24 years) had an unemployment rate of 13.6% in 2017 compared to 5.5% for males 15 years and over. The corresponding unemployment rates for females were 12.1% and 5.7%. Young people therefore experience more difficulty in securing employment because of a lack of skills, training and experience. This leads to high rates of **youth unemployment** for 15-24 year olds seeking their first job, including school leavers, potential apprentices, tradespersons and tertiary graduates.

The distribution of unemployment between Australian states changed between 2006 and 2008 as the labour market reached full employment. Most states recorded falls in their unemployment rates in 2008, with the lowest unemployment rates in the resource rich states of Western Australia (3%) and Queensland (3.8%) which had strong labour demand due to the global resources boom. All states had strong employment growth in 2008 and the national unemployment rate fell to 4.3%. The global resources boom and rising terms of trade led to a reallocation of the economy's resources (such as labour and capital), away from the non resource rich states of NSW, Victoria and South Australia,

Table 8.4: Unemployment Rates by Sex and Age Group 2014-2017 (annual average %)

	Males Looking for Full Time Work		*Females Looking for Full Time Work*	
	15-24 years	*15+ years*	*15-24 years*	*15+ years*
2014	14.7	6.1	12.4	6.2
2015	14.5	6.1	12.4	6.2
2016	13.3	5.7	11.0	5.7
2017	13.6	5.5	12.1	5.7

Source: ABS (2017), *Labour Force*, Catalogue 6202.0, June.

Table 8.5: Unemployment Rates by State 2011 to 2017

	NSW	*VIC*	*QLD*	*SA*	*WA*	*TAS*	*Australia*
- July 2011	5.2%	4.9%	5.4%	5.2%	4.1%	5.3%	4.9%
- June 2012	5.1%	5.3%	5.1%	5.9%	3.6%	7.0%	5.2%
- July 2014	5.8%	6.6%	6.5%	7.1%	5.0%	7.5%	6.1%
- July 2015	5.8%	6.2%	6.3%	7.9%	6.0%	6.7%	6.1%
- July 2016	5.2%	5.7%	6.5%	6.9%	5.5%	6.5%	5.7%
- June 2017	4.8%	6.0%	6.3%	7.0%	5.6%	5.8%	5.6%

Source: ABS (2017), *Labour Force, Australia*, Catalogue 6202.0, June.

to the resource rich states of Western Australia and Queensland, where mining accounts for a large proportion of their state product. They recorded higher economic and employment growth and lower unemployment rates than the non resource rich states between 2003 and 2008.

The impact of the **Global Financial Crisis and recession** in 2008 led to negative employment growth and rising unemployment rates in all states in 2009, with the national unemployment rate increasing from 4.3% in 2008 to 5.8% in 2009. Large rises in unemployment in Western Australia and Queensland reflected a contraction in mining output, whilst in the larger states of NSW and Victoria employment fell in the manufacturing industry and the financial sector.

Similarly, after the end of the mining investment boom in 2012 unemployment rates rose in Western Australia and Queensland, but began to fall in NSW and Victoria with higher economic growth in these states and a re-balancing of growth away from the resources sector and resource rich states. In June 2017 the unemployment rate in Queensland (6.3%) and Western Australia (5.6%) had stabilised, whilst the unemployment rate had fallen in NSW to 4.8%, which was well below the national average of 5.6% due to higher economic growth in NSW relative to other states (see **Table 8.5**).

REVIEW QUESTIONS

MEASUREMENT AND RECENT TRENDS IN UNEMPLOYMENT

1. What is meant by the labour force? How is the size of the labour force measured by the ABS? Which groups are included and not included in the Australian labour force?
2. Refer to Table 8.1 and discuss the changes in the composition of the Australian labour force between 2011-12 and 2016-17.
3. Discuss the four main factors that influence the size of the Australian labour force.
4. What is the participation rate and how is it measured? What factors influence the participation rate? Refer to Table 8.2 and compare the trends for male and female participation rates between 2008-09 and 2016-17.
5. What is unemployment? How is it defined and measured by the ABS? What has been the trend in the Australian unemployment rate in the 1970s, 1980s, 1990s and 2000s?
6. Discuss trends in medium term and long term unemployment between 2005 and 2015.
7. Discuss the reasons for the higher rates of unemployment experienced by young people (15-24).
8. Account for the trends in the unemployment rates of the states between 2008 and 2017. Discuss the impact of the transition to non mining growth on the labour market over 2013-17.

THE TYPES OF UNEMPLOYMENT

1. **Cyclical unemployment** is caused by a contraction in economic activity or aggregate demand. A fall in aggregate demand reduces the derived demand for labour. Cyclical unemployment is also known as involuntary unemployment as workers are laid off as a result of a fall in the demand for labour, not because they lose the incentive to work. Cyclical unemployment rises in a recession as spending and GDP growth fall, causing employers to lay off some existing workers and cease hiring new workers. Cyclical unemployment rose in 2008-09 in Australia because of the GFC and the lower rate of growth.

2. **Structural unemployment** results from a mismatch between the labour skills of employees and the job vacancies offered by employers. Structural change in manufacturing for example, may lead to the introduction of new technology making some jobs obsolete, whilst new jobs may be created in expanding industries such as mining and services. It takes time for workers to acquire new skills and relocate before they can fill the vacancies offered by employers. Another factor leading to structural unemployment in Australia are microeconomic reforms in industry such as tariff cuts in manufacturing and reforms to Public Trading Enterprises in the 1990s and 2000s, which led to the restructuring of workforces in these industries. Between 2010 and 2014 the high value of the Australian dollar led to structural unemployment in manufacturing (e.g. the car industry) because of a loss of competitiveness.

3. **Frictional unemployment** is caused by people moving between jobs or experiencing changing economic circumstances. Examples of frictional unemployment include young people leaving school to find their first job; people searching for higher paid career jobs; women re-entering the workforce after rearing children; or people leaving a failed business to join a new industry. Frictional unemployment is caused by the search times needed for workers to find new jobs and for firms to find employees. There is often an imperfect flow of information between job seekers and employers in the labour market.

4. **Seasonal unemployment** can occur in specific industries or occupations which are characterised by seasonal work which may lead to unemployment. Examples might include workers employed during farm harvest times or people working Summer jobs such as in Christmas retailing or as beach lifeguards, or Winter jobs in the snowfields such as ski lift operators, instructors and hospitality staff.

5. **Underemployment** refers to persons working part time or casually who want to work more hours or switch to full time employment, and persons employed full time who have been switched to part time hours. The ABS calculated the **underemployment rate** (i.e. the number of underemployed workers as a percentage of the labour force) in 2016-17 as 8.8%. The ABS also calculated the **labour underutilisation rate** (the unemployment rate of 5.6% plus the underemployment rate of 8.8%) as 14.4% in 2016-17.

6. **Hidden or disguised unemployment** refers to people who may not be counted as part of ABS unemployment statistics because they have given up looking for work or receive income support from a spouse, partner or parent and are not eligible for Job Search Allowance. The hidden unemployed refer to persons such as married women with children, who would work if suitable jobs were available and they could find affordable child care facilities. Some of the hidden unemployed may also be **discouraged workers** who have given up looking for work because there is a shortage of suitable job vacancies.

7. **Long term unemployment** refers to those persons who are unemployed for over 52 weeks. This may be due to a lack of skills, training, education or the motivation to find and secure suitable employment opportunities in the labour market. **Hard core unemployment** is a term used to refer to those people in the labour force who experience prolonged periods of unemployment or long term unemployment. These workers may face particular personal difficulties (such as physical, mental or emotional problems; a criminal record; health problems such as drug or alcohol abuse; or attitude problems based on a poor motivation to seek work or a poor physical appearance) in finding and holding suitable jobs.

8. **Regional unemployment** occurs when a major industry such as steel, TCF or PMV in a particular geographic region reduces its demand for labour causing widespread unemployment. This is the case in manufacturing regions undergoing large scale structural change and loss of jobs such as industrial regions in Melbourne, Sydney, Adelaide, Port Kembla, Wollongong, Newcastle, Whyalla and Geelong.

THE CAUSES OF UNEMPLOYMENT

The major cause of cyclical unemployment is a **deficiency in aggregate demand** (AD = C + I + G + X – M). Cyclical changes in domestic and international economic activity may lead to changes in the demand for labour. Since the demand for labour is derived from the demand for final output, any decline in aggregate demand may lead to a rise in cyclical unemployment. For example, the Global Financial Crisis and recession in late 2008 led to a fall in aggregate spending and economic activity in Australia in 2008-09. After a lag of some six months, following negative growth in GDP of -0.5% in the December quarter 2008, unemployment rose from 4.2% to 5.8% of the labour force by mid 2009.

Similarly, as the Australian economy made the slow transition from mining led growth to non mining sources of growth between 2012 and 2017 the slower growth in aggregate demand led to lower rates of economic growth. Spare capacity emerged in the labour market with the unemployment rate rising from 5.2% in 2012 to 6.1% in 2015 as the number of medium and long term unemployed increased.

A theoretical explanation for **cyclical or involuntary unemployment** was put forward by John Maynard Keynes in his *General Theory of Employment, Interest and Money* in 1936. In **Figure 8.3**, the equilibrium level of national income is Y_e, determined by the intersection of the aggregate demand (AD) and aggregate supply (AS) curves. Keynes argued that the equilibrium level of national income in an economy may not necessarily coincide with the full employment level of income, denoted by Y_f in **Figure 8.3**. If total spending was insufficient to guarantee full employment of the economy's resources, a **deflationary gap** or **unemployment gap** of **ab** would arise, causing cyclical unemployment to increase in the economy.

Another model used to show how cyclical unemployment arises is the aggregate demand and aggregate supply model. In **Figure 8.4**, the economy's price level is measured on the vertical axis and real GDP on the horizontal axis. Aggregate demand (AD) slopes downwards to the right as more output is demanded at lower price levels, whereas the aggregate supply curve slopes upwards to the right until it reaches the full employment level of GDP at real GDP_1, where supply or capacity constraints are encountered and the aggregate supply curve becomes vertical. If the initial equilibrium level of income is at real GDP_1 where AD equals AS, there is full employment of the economy's resources. If AD shifts to the left to AD_1, a new equilibrium level of real GDP is established below full employment at real GDP_2. A **deflationary gap** or **unemployment gap** of **ab** results, causing unemployment to rise in the economy.

Structural changes in consumption and production can cause the level of structural unemployment to rise. For example, the introduction of new labour saving technology in primary and secondary industries has led to a fall in employment in these industries. Uncompetitive industries such as textiles,

Figure 8.3: The Keynesian Deflationary or Unemployment Gap

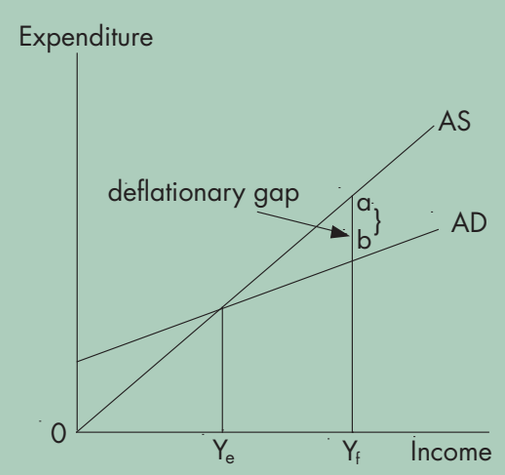


Figure 8.4: The AD/AS Deflationary or Unemployment Gap

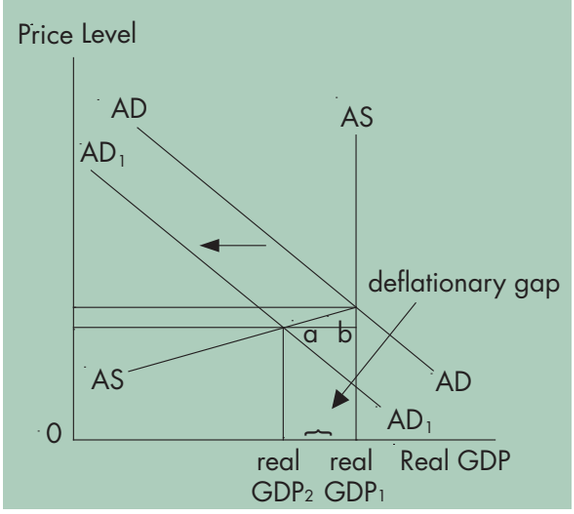
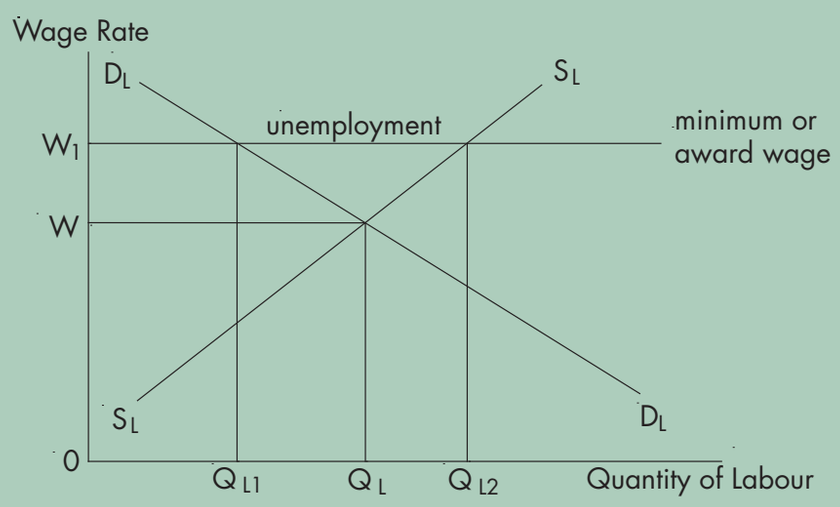


Figure 8.5: The Effect of Wage Expectations on Employment



clothing and footwear, steel and passenger motor vehicles have also reduced their workforces because of tariff and quota cuts introduced by the government in 1988, 1991, 2000, 2005, 2010 and 2015. Although some industries have contracted in manufacturing, new industries have been established and others have expanded, creating new employment opportunities in the services sector. In the 1990s there was also widespread reform of Public Trading Enterprises through deregulation and privatisation, which led to an increase in workforce downsizing and the retrenchment of some labour in affected industries.

An important factor that may cause unemployment is the **role of wage expectations** in pushing up the price of labour relative to capital. Rapid rises in real wage costs will reduce the demand for labour and provide employers with the incentive to substitute capital for labour, causing a rise in what is known as **voluntary unemployment** or **wage induced unemployment**. For example, if trade unions have large collective bargaining power and win large wage increases, which may be inconsistent with industry's capacity to pay or productivity levels, businesses may cut wage costs by making some labour redundant.

This is illustrated in **Figure 8.5** where the demand for labour (D_L) in a competitive labour market is a negative function of the wage rate and slopes downwards from left to right. The supply of labour (S_L) is a positive function of the wage rate and slopes upwards from left to right. If a minimum Modern Award wage of W_1 is established above the market equilibrium wage rate of W by the Fair Work Commission or trade union bargaining power raising wages above equilibrium, unemployment of QL_1QL_2 will occur since the demand for labour (QL_1) is less than the supply of labour (QL_2) at wage rate W_1.

Australian governments have tried to control wages growth through a system of **enterprise wage bargaining** in the labour market. This has led to less reliance by workers on adjustments to the safety net of the National Minimum Wage and Modern Awards set by the Fair Work Commission and state industrial tribunals for wage increases. With the introduction of enterprise bargaining in 1991 as a wage fixing principle, and the spread of enterprise agreements in the labour market in the 1990s and 2000s, the percentage of workers reliant on arbitrated awards for pay rises fell from 67% of employees in 1990 to around 22.7% by 2016. This has helped to **link wage increases to improvements in productivity** that reflect individual enterprise and industry conditions. As a result, employers' demand for labour increased and this is one factor that led to a permanent lowering of unemployment in Australia in the late 1990s and early to mid 2000s. The Howard government's labour market reforms in the *Workplace Relations Amendment Act* (WorkChoices) in 2006 sought to shift more workers away from awards to individual agreements, arguing that this would stimulate employment and reduce unemployment.

The labour market is very dynamic with many factors influencing the flow of information between job seekers and potential employers. A lack of efficiency in the labour market in matching labour skills with the jobs available can influence the level of frictional unemployment. **Rigidities in the labour market** like government regulations (e.g. superannuation, taxation, workers' compensation, unfair dismissals legislation and award conditions) can also reduce the hiring intentions (through higher 'on costs' of labour) of employers, causing unemployment. Also if workers do not have access to education and training they will be less skilled and in lower demand by employers for the jobs available. Unemployment can therefore be caused by the high 'on costs' of labour and a lack of skills, education and training.

Successive Australian governments have addressed the issue of improving the education, training and skills of the labour force by implementing labour market programmes such as *Building Australia's Future Workforce* (2011), the Job Compact, the Job Network, the National Education Framework and *A Plan for Australian Jobs* (2013). The Youth Jobs Path programme was introduced in the 2016-17 budget to assist up to 120,000 young Australians to acquire skills, training and placement in jobs.

The Non Accelerating Inflation Rate of Unemployment (NAIRU)

Full employment is where the quantity of labour demanded equals the quantity of labour supplied. The unemployment rate at full employment is called the **natural rate of unemployment**. The natural rate of unemployment fluctuates because of changes in the levels of frictional and structural unemployment in the labour market. Some workers will be unemployed because they are in between jobs, and others because they lack the skills necessary for the jobs available. In Australia, empirical research by Treasury (2011) estimated the natural rate of unemployment at between 5% and 6% of the Australian workforce.

Figure 8.6 illustrates the concept of the natural rate of unemployment. The real wage rate is measured on the vertical axis and the quantity of labour on the horizontal axis. The demand for labour (D_L) is a negative function of the real wage rate and the supply of labour (S_L) is a positive function of the real wage rate. The labour force is denoted by the vertical line LF. Full employment is where equilibrium (E) occurs in the labour market at real wage W and labour quantity Q_L. The distance EU (Q_N - Q_L) is equivalent to the natural rate of unemployment. Some workers are unemployed (due to frictional and structural factors) because they are unable to find work at the equilibrium real wage rate of W.

Monetarist economists such as Milton Friedman used the natural rate of unemployment in the 1970s to develop a concept called the **non accelerating inflation rate of unemployment** (NAIRU). This refers to a rate of unemployment that is consistent with a constant inflation rate or no change in the inflation rate. **Figure 8.7** illustrates the **Short Run Phillips' Curve** (SRPC) which shows the short run tradeoff between the rates of inflation and unemployment. For example an economy may have 6% inflation and

Figure 8.6: The Natural Rate of Unemployment

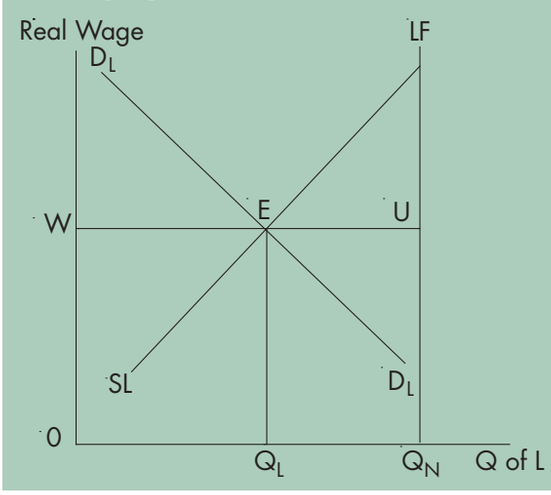
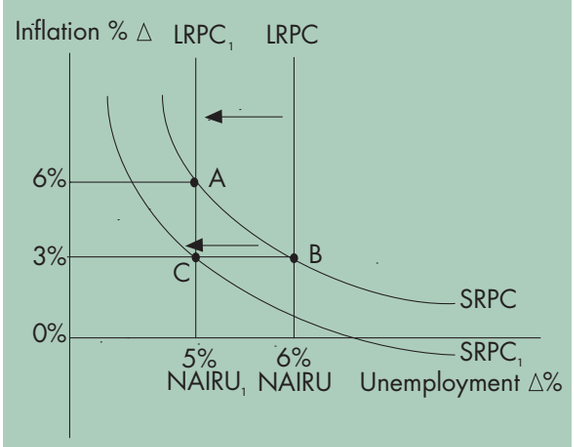


Figure 8.7: The LRPC and the NAIRU



5% unemployment in the short run (point A) or 3% inflation and 6% unemployment (point B) on SRPC. At point A it may be possible for the government to reduce inflation to 3% but at the cost of a rise in the unemployment rate from 5% to 6%. At point B it may be possible for the government to reduce unemployment from 6% to 5% but at the cost of a rise in the inflation rate from 3% to 6%.

The **Long Run Phillips' Curve** (LRPC) shows that there is no tradeoff between inflation and unemployment in the long run, with the economy's NAIRU equal to the natural rate of unemployment of 6%. **The NAIRU is the lowest unemployment rate which can be sustained without an increase in inflation**. Reducing the NAIRU from LRPC (6%) to $LRPC_1$ (5%) involves the use of supply side policies by the government such as labour market reforms and improvements in productivity. If these policies are successful in the short run, the SRPC would shift from SRPC to $SRPC_1$. In the long run the LRPC would shift from LRPC to $LRPC_1$ and lower the NAIRU from 6% to 5% at point C, without any change in the inflation rate at 3%. The Reserve Bank estimated a NAIRU of 5% in Australia in 2017 and argued that there was an unemployment gap of 0.6% since unemployment was 5.6% and therefore 0.6% above the estimated NAIRU of 5% of the labour force.

The Main Groups Affected by Unemployment

The **incidence of unemployment** varies between demographic and skill groups in the labour force. Young and less educated labour force participants, recent immigrants and persons whose last job was in a 'blue collar' occupation account for disproportionately high shares of unemployment. However all groups (i.e. males and females aged 15 to 64 years) experienced increases in their rates of unemployment over the period from the 1970s to 1990s. However this trend reversed in the 2000s with strong employment growth and a reduction in the level and rate of unemployment up to mid 2008 before the GFC.

Young people (15-24 years) experience the highest rates of unemployment. For males in 2016-17 the rate was 13.6% and for females it was 12.1% (see **Table 8.4** on page 195). Young people experience difficulty in securing their first job because of a lack of experience, education, training and skills. For workers over 15 years, the average rate of unemployment in 2017 for males was 5.5% and 5.7% for females. For workers between 25 and 34 years, the rate of unemployment was 5.9% in 2017. For workers between 45 and 54 years, the unemployment rate was lower at 4.1% in 2017, reflecting the strength of employer demand for more mature workers with higher levels of skill, education and experience.

Workers with low levels of educational attainment tend to experience higher rates of unemployment than those with higher levels of educational qualifications. For males and females who had not completed high school, the rates of unemployment were around 16.3% and 14.6% respectively in the 1990s and 2000s. In contrast, for workers who had degrees, diplomas, a vocational qualification or had completed high school, the rate of unemployment varied between 6% and 8.5% in the 1990s and 2000s. Unemployment also affects workers according to their occupation. Workers in semi-skilled or unskilled occupations (e.g. labourers and factory workers) had unemployment rates of 7% to 10% in the 1990s and 2000s, compared to rates of 1% to 5% for managers, professionals and trades persons.

Unemployment rates tend to be higher in industries affected by structural change like manufacturing, building and construction and trades. These industries had the highest rates of unemployment in the 1990s and also the highest percentage of long term unemployed. However these rates fell when labour demand rose during the housing and resource booms in the 2000s. Migrants can also experience high rates of unemployment according to their time of arrival. For migrants arriving between 1986 and 1995, their unemployment rate was around 12% in the 1990s and 2000s. This was lower than for migrants arriving after 1995, who experienced a higher unemployment rate of 17%.

Aborigines and Torres Strait Islanders also experience high rates of unemployment and long term unemployment due to low levels of literacy and high rates of welfare dependency. Family status can also impact on rates of unemployment, with sole parents, dependent students and non dependent children having rates of unemployment between 16% and 18% in the 1990s. Unemployment rates also tend to be higher in country areas compared to metropolitan areas where there are more job opportunities.

THE EFFECTS OF UNEMPLOYMENT

The primary economic cost of unemployment is the **opportunity cost of lost output and income**. Real GDP will be lower (as it is below full employment) and national income will be reduced, along with living standards. The unemployed and their families and dependants will suffer economic and social hardship due to a loss of market income and the social stigma attached to being unemployed. Their levels of consumption will necessarily fall and their satisfaction from life will be less than for the employed, as opportunities and choices for spending, saving, education, healthcare and recreation are reduced for the unemployed and their dependants. Unemployment may also cause **poverty traps** and become intergenerational because of **welfare dependency** (a reliance on welfare payments for income).

Unemployment also causes a **loss of human capital** as the unemployed will not be contributing their skills and experience to the workforce and will need to undergo re-training to become 'job ready' in their search for new employment opportunities. There is therefore a depreciation in the human capital of the unemployed, and increased duration of unemployment will increase this rate of depreciation.

The most negative feature of the higher unemployment rate resulting from the 1990-91 recession was the rising percentage of **long term unemployed**, reaching nearly 40% of the total number of unemployed. The longer a person is unemployed, the more difficult it is for them to secure a job because they are less preferred to new workforce entrants by employers for the jobs available. The unemployed are also likely to experience a **loss of self esteem and dignity**, which reduces their motivation to search for jobs or to undergo re-training and education to increase their skills.

Other economic costs of unemployment include the **increasing taxation burden** placed on employed persons in the workforce to finance increased social security spending from the taxation payments they make to the government. The federal government will experience an erosion of its tax base due to unemployment and a rise in cyclical expenditure on social security payments. This could lead to a rise in a budget deficit or a fall in a budget surplus. Unemployment can also lead to a **less equal distribution of income** as the unemployed will be reliant on income support from government welfare payments, and be concentrated disproportionately in the lowest quintile of the distribution of household income.

The **social costs of unemployment** are difficult to quantify but researchers have linked increasing rates and duration of unemployment to undesirable social trends such as rising crime rates; increased drug and alcohol dependency; health problems for the unemployed; higher suicide rates; the breakdown of family and personal relationships and increased domestic violence; and a loss of self esteem and human dignity for the unemployed. These social problems may be linked to particular groups of unemployed people such as young people, sole parents, middle aged men from professional or trades backgrounds, workers with ethnic or indigenous backgrounds, migrants and single women.

If the productivity of the workforce is rising over time because of the more efficient use of capital and labour in the workplace, fewer workers will be needed to produce the same output. The American economist, Arthur Okun, formulated a relationship between economic growth, unemployment and productivity which has become known as **Okun's Law**. Okun's Law suggests that for a government to reduce unemployment, the rate of economic growth needs to exceed the growth in labour productivity plus the growth in the labour force through new entrants. In Australia higher average sustainable economic growth of around 4% between 1996 and 2008 resulted in unemployment falling to 4.2%. However the lower rate of economic growth of 1.3% in 2008-09 due to the Global Financial Crisis and recession led to a rise in the unemployment rate from 4.2% in 2007-08 to 5.8% in 2008-09.

Since 1996 inflation in Australia has been well contained, with annual inflation averaging 2.5%. At the same time the unemployment rate fell steadily and the economy reached full employment in 2008, with widespread labour shortages and rising inflation and wage pressures. However this situation changed in 2008-09 because of the impact of the Global Financial Crisis and recession, with declining rates of economic growth, rising unemployment and lower inflation. The Australian government used a combination of monetary stimulus (through cuts to interest rates) and fiscal stimulus packages throughout 2008-09 to support aggregate demand and employment in the Australian economy.

POLICIES TO REDUCE UNEMPLOYMENT

The main policies available to the Australian government to reduce unemployment are as follows:

- Stimulatory monetary policy through cuts to interest rates by the Reserve Bank of Australia;
- Expansionary fiscal policy through an increase in government spending and/or cuts in taxes;
- Industrial relations policy or wages policy to contain the growth in aggregate wages; and
- Microeconomic reform policies to improve the economy's resource allocation and productivity.

Promoting Higher Sustainable Economic Growth

In order to reduce cyclical unemployment, monetary and fiscal policies can be used to offset cyclical downturns in the economy and increasing levels of unemployment that accompany periods of slower economic activity. Fiscal stimulus (i.e. expansionary fiscal policy) and the easing of monetary policy have the potential to stimulate aggregate demand or spending (C+ I + G + X - M), and increase the output of goods and services in the economy. Given that the demand for labour is derived from the demand for goods and services that it is used to produce, higher levels of output will require increased levels of employment, which in turn should lead to a lowering of the level and rate of unemployment.

In 2008-09 as the Global Financial Crisis and recession impacted on major advanced, developing and emerging economies, national governments used a combination of expansionary monetary policy (through cuts to official interest rates) and fiscal stimulus packages (through increased budget deficits) to support aggregate demand and employment. In Australia the cash rate was cut by -4.25% by the Reserve Bank between September 2008 and April 2009, and the Australian government increased the size of the budget deficit to -$53b (or -4.5% of GDP) with new discretionary spending on cash payments to households ($10.4b) and infrastructure projects through the *Nation Building and Jobs Plan* ($42b). In the 2016 and 2017 budgets the Australian government announced a plan to boost jobs, growth and productivity through a *Ten Year Enterprise Tax Plan* and the Youth Jobs PaTH Programme.

Experience in economies such as Australia over recent decades has shown that monetary and fiscal policies are relatively ineffective in reducing structural unemployment. Therefore greater emphasis has been placed on labour market reform policies such as government employment, education and training programmes to help workers to adjust to structural changes in the workplace.

Labour Market Reforms

Labour market reform policies are designed to make labour markets more flexible, encourage more efficient work practices and higher levels of labour productivity. This can lead to higher levels of employment as employers have a greater incentive to hire additional workers. Labour market deregulation and the movement towards decentralised wage determination, where firms and employees are able to negotiate wage increases based on improved levels of productivity, has been the central component of Australia's recent labour market reform agenda. The process of Awards Modernisation and more reliance on individual and collective agreements are also part of the labour market reform agenda.

Labour market reform legislation such as the *Workplace Relations Act 1996*, incorporated measures designed to curb union powers and weaken unfair dismissal laws. This was viewed by the Howard government as a means of direct intervention in labour markets in order to reduce unemployment. The WorkChoices legislation introduced in March 2006 extended this reform process by further reducing the reliance on awards and placing more emphasis on individual workplace bargaining through:

- Creation of the Australian Fair Pay Commission (AFPC) and the Australian Fair Pay and Conditions Standard (AFPCS) which contained only five minimum standards for award adjustments;
- Abolition of the No Disadvantage Test applicable to AWAs and Union Collective Agreements;
- Reduction of the 20 allowable matters in the award safety net to 16; and
- Exemption of businesses with less than 100 employees from unfair dismissals legislation.

These changes further deregulated the industrial relations system, with the government arguing that the new reforms would lead to further gains in employment and productivity, and a reduction in the unemployment rate because of greater flexibility in wage and employment setting procedures.

With the election of the Rudd Labor government in 2007, the *Workplace Relations Amendment (Transition to Fairness) Act 2008* and the *Fair Work Act 2009* were passed to strengthen the safety net of the workplace relations system. This included the introduction of ten National Employment Standards, Modern Awards and annual adjustments to the National Minimum Wage by the Fair Work Commission. Emphasis was also placed on collective bargaining, with individual workplace agreements such as AWAs phased out. The negotiation of collective enterprise agreements was subject to a Better Off Overall Test (BOOT) to ensure that workers under enterprise agreements received better than minimum conditions of employment, and had an incentive to raise productivity to receive higher wages.

Education and Training

A major reason for unemployment is the lack of education, training and skills of some workers (especially young workers aged 15 to 24 years) demanded by employers for the jobs available. Some of the key Australian government policies for increasing workforce training and education have been the following:

- New Apprenticeship Centres to promote the skills formation of apprentices by employers.
- Expansion of school based apprenticeship systems to develop apprenticeship skills in schools.
- Funding for vocational and school education including the National Education Framework for Schools to raise literacy and numeracy standards.
- The Australian National Training Authority was established to improve the skill development of Australian workers through ongoing education, training and development.

Labour market assistance to job seekers is based on the Australian government's **Job Services Australia**, a national network of private, community and government organisations contracted to assist the unemployed to find jobs and **Australian Job Search**, an online job noticeboard.

In the 2008-09 budget the Rudd government established an **Education Investment Fund** with an initial allocation of $11b to be spent on higher education, vocational education and training facilities. The government also introduced a $5.9b new programme called the ***Education Revolution***, which involved long term reform plans to boost the quality of Australian education and training. This was to be achieved by improving access to high quality early childhood education and care; improving the educational outcomes of students; and by creating a flexible and competitive national vocational training system through expenditure of $1.9b over five years to create 630,000 additional training places.

In the 2009-10 budget the government introduced the **Jobs and Training Compact** at a cost of $1.5b over five years in response to the higher unemployment rate caused by the impact of the Global Financial Crisis. Major measures included a Training Supplement Scheme to eligible job seekers to undertake training; training places for persons under 25 to upskill; employment assistance to workers who became unemployed; and assistance to regions and communities directly affected by the global recession.

In the 2011-12 and 2012-13 budgets, the *Building Australia's Future Workforce* package included $3b of Australian government funding for new skills measures such as apprenticeships, reform of the VET system, and measures to boost the workforce participation of disadvantaged groups. In the 2013-14 budget the government established a $68m *Alternative Pathways Program* to address skills shortages. In the 2014-15 budget the Abbott government introduced a 'Learn or Earn' policy requiring job seekers up to 30 years of age to participate in job search and employment activities. In the 2015-16 budget $5.5b was allocated to a *Jobs and Small Business* package to stimulate investment and employment.

In the 2016-17 budget the Australian government announced a Youth Employment Package to assist more than 100,000 young people on a pathway to work. This included the $752m Youth Jobs PaTH programme with pre-employment skills training; internship placement; and wage subsidies to employers.

Tax and Welfare Reforms

A major change in federal government policy has been to reform the welfare and tax systems to strengthen the incentives and obligations of welfare recipients to seek paid casual, part time or full time work:

- The *Australians Working Together* package (2001), included reforms to help people out of work to return to the labour force through a system of working and training credits. It targeted parents, mature aged people, indigenous people and people with disabilities to seek paid work or training.
- In the 2004-05 budget, the government announced its *More Help for Families* package, tax cuts and incentives for saving for retirement. These measures targeted poverty traps where high effective marginal taxation rates (EMTRs) can reduce the incentive for welfare recipients to seek paid work.
- In the 2006-07 budget the federal government committed $60.2m to provide an additional 25,000 child care places to encourage more parents to seek paid work in the labour market.
- The federal government has reduced marginal rates of income tax and increased income tax thresholds for low income earners in successive budgets to reduce the incidence of poverty traps.
- In the 2008-09 budget the federal government announced cuts in personal income tax designed to provide incentives for individuals, including part time workers to participate in the workforce.
- In the 2011-12 budget, as part of the *Building Australia's Future Workforce* package, the Australian government announced measures to encourage participation and incentives for paid work (such as the Low Income Tax Offset) for disadvantaged groups such as young people, single parents, people with a disability, the long term unemployed and people in disadvantaged locations.
- In the 2012-13 budget, the *Building Australia's Future Workforce* skills package contained funding for 50,000 new training places; a National Partnership Agreement on Skills Reform was signed with the states to strengthen the VET system; funding was allocated to help mature age workers to up-skill and re-skill; and greater child care assistance to increase parents' workforce participation.
- In the 2013-14 budget support was given to job seekers in the transition to work through an increase in the income free area for Newstart Allowance, and more funding for child care.
- In the 2016 and 2017 budgets the Turnbull government introduced the *Ten Year Enterprise Tax Plan* to cut the company tax rate to 25% by 2026-27 and introduced a new *Job Seeker Compliance Framework* to impose greater financial penalties on non compliant job seekers.

The Skills Shortage

The skills shortage in Australia is largely a reflection of shortages in the supply of labour in certain occupations (such as trades) and industries (such as mining, building and construction) in relation to the demand for these labour skills. The skills shortage arose in 2006 because of a mismatch between the skills demanded by employers in job vacancies and the skills possessed by job seekers. This was particularly the case in Western Australia and Queensland during the height of the mining boom. The Australian government increased skilled migration between 2001 and 2009 but capped the skilled stream at 115,000 in March 2009 because of the impact of the Global Financial Crisis on the labour market. Over the medium term the Australian government has addressed the skills shortage and the impact of population ageing on the labour market by using the following policies:

1. Increasing labour force participation by retaining older workers with specific skills, and encouraging other groups such as younger workers and females to acquire higher levels of education and training.
2. Increasing the supply of skilled labour through an intake of skilled migrants in specific occupations and industries.

Temporary Skilled Work visas (457 visas) were introduced in 2012 to allow skilled workers from overseas to work in Australia in areas of skills shortages. These visas were abolished in the 2017 budget and replaced with a new Temporary Skill Shortage visa. Employers who nominate workers under this visa will be required to pay a levy, with the revenue used to finance a new *Skilling Australia Fund*.

Programmes to Develop Labour Skills

The skills shortage in the Australian economy is most evident in trades occupations and the Australian government has addressed this shortage by increasing the funding of vocational education and training (VET). The *Skills for the Future* package in October 2006 committed $837m in new funding to support skills creation in the VET sector, with a COAG agreement for a national approach to apprenticeships, training and skills recognition. The *Realising Our Potential* package in the 2007 budget increased funding for university, vocational and school education. In the 2010-11 budget the government invested $661.2m in a new *Skills for Sustainable Growth* programme. In the 2011-12 and 2012-13 budgets, the *Building Australia's Future Workforce* package included $3b of Australian government funding for new skills measures such as apprenticeships, reform of the VET system, and measures to boost the workforce participation of disadvantaged groups.

In the 2017-18 budget the government announced a suite of reforms to help disadvantaged groups to access employment. This included the *Parent Next* programme to provide services such as childcare, pre-employment training, financial management and literacy and numeracy classes.

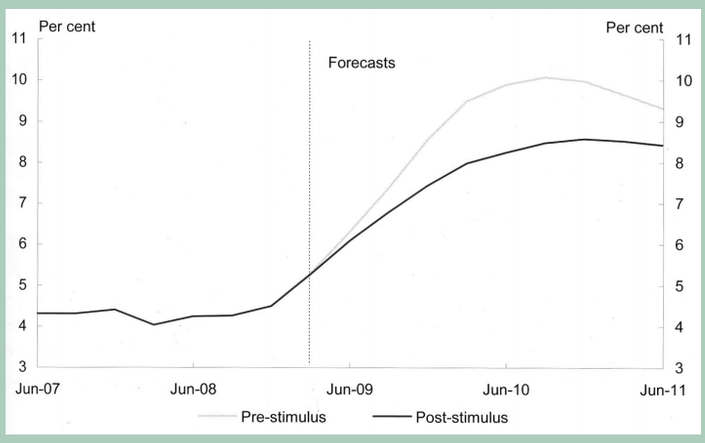
The Jobs and Training Compact

The Australian government allocated $1.5b in the 2009-10 budget to assist workers whose job prospects were adversely affected by the GFC. Redundant workers were expected to maintain, update or learn new skills to improve their job prospects. The government's *Jobs and Training Compact* was designed to support young Australians, retrenched workers and local communities to secure future employment, add to their skills or learn new skills required to obtain jobs as the labour market recovered:

- A temporary $83m Training Supplement Scheme was introduced to eligible job seekers who undertake training. This would provide a payment of $41.60 per fortnight to eligible job seekers on Newstart Allowance or Parenting Payment who undertake approved training;
- A $277m Compact with Young Australians which guaranteed an education or training place for persons under 25 who wanted to upskill or required additional training;
- A $438m Compact with Retrenched Workers provided immediate employment assistance through Job Services Australia to workers who became unemployed and were disadvantaged job seekers; and
- A Compact with Local Communities provided assistance through a $650m Jobs Fund to regions and communities directly affected by the global recession by funding local job projects.

The government's fiscal and employment stimulus packages were expected to support labour demand and raise the level of GDP in 2009-10. The stimulus measures were estimated by Treasury to reduce the forecast peak unemployment rate by 1.5% in 2010 from 10% to 8.5% as shown in **Figure 8.8**.

Figure 8.8: The Unemployment Rate Pre-Stimulus and Post Stimulus



Source: Commonwealth of Australia (2009), *Budget Strategy and Outlook 2009-10*.

REVIEW QUESTIONS

THE TYPES, CAUSES AND EFFECTS OF UNEMPLOYMENT

1. Using examples, distinguish between cyclical, structural, frictional and seasonal unemployment.
2. What is long term unemployment? How does it differ from underemployment and hidden unemployment? How does the ABS calculate the labour force underutilisation rate?
3. Refer to Figures 8.3 and 8.4 and the text and explain how a deficiency in aggregate demand can cause cyclical or involuntary unemployment to occur in the economy.
4. Using examples, explain how structural change in the economy can lead to structural unemployment.
5. Refer to Figure 8.5 and explain how excessive wage expectations might affect unemployment.
6. What is meant by the natural rate of unemployment? Refer to Figure 8.6 and explain how unemployment can arise in the labour market when labour demand equals labour supply.
7. Refer to Figure 8.7 and explain the Non Accelerating Inflation Rate of Unemployment (NAIRU). How can the government try to reduce the Non Accelerating Inflation Rate of Unemployment?
8. Discuss the main groups in society affected by high rates of unemployment and long term unemployment. Why are certain groups more likely to experience unemployment than others?
9. Discuss the economic and social costs of unemployment in the Australian economy.
10. Discuss government policies that can be used to reduce the incidence of cyclical unemployment.
11. Discuss government policies to reduce the incidence of structural and long term unemployment.
12. Discuss the reasons for the skills shortage in Australia and the policies used by the Australian government to address the skills shortage.
13. Discuss the government's use of the Jobs and Training Compact to address the problem of rising unemployment due to the impact of the Global Financial Crisis and recession on the Australian labour market in 2009-10.
14. Define the following terms and add them to a glossary:

apprenticeships
cyclical unemployment
education and training
enterprise bargaining
frictional unemployment
full time employment
hard core unemployment
hidden unemployment
human capital
incidence of unemployment
labour demand
labour force
labour force underutilisation rate
labour market reform
labour skills
long term unemployment
LRPC
NAIRU
natural rate of unemployment
net migration
Okun's Law
part time employment
participation rate
poverty trap
productivity
regional unemployment
retrenchments
seasonal unemployment
skills shortage
SRPC
structural change
structural unemployment
tax and welfare reform
underemployment
unemployment
unemployment gap
VET
wage expectations
welfare dependency

CHAPTER 8: SHORT ANSWER QUESTIONS

Year	*Full Time Employed Persons*	*Part Time Employed Persons*	*Unemployed Persons*	*Civilian Population Aged 15+ years*	*Real GDP %△ pa*
2012-13	8,139,900	3,520,100	706,900	18,976,200	2.6
2013-14	8,076,200	3,506,100	756,700	19,069,200	2.5
2014-15	8,164,500	3,632,700	772,300	19,364,500	2.5
2015-16	8,172,200	3,761,200	725,900	19,540,100	2.5
2016-17	8,318,700	3,841,300	726,800	19,852,200	1.7

Refer to the table above of selected data for the Australian labour force between 2012-13 and 2016-17 and answer the questions below. Marks

1. Calculate the size of the labour force in 2016-17. (1)

2. Calculate the participation rate in 2016-17. (1)

3. Calculate the change in the unemployment rate between 2015-16 and 2016-17. (2)

4. Explain TWO causes of unemployment in the Australian labour market. (2)

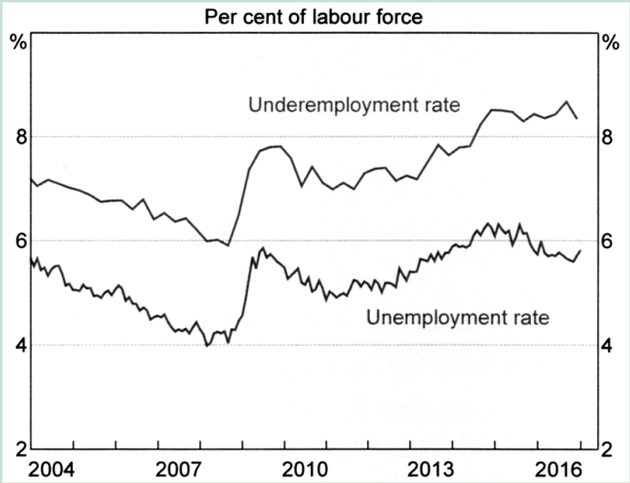
5. Explain TWO government policies that can be used to reduce unemployment in Australia. (4)

CHAPTER FOCUS ON UNEMPLOYMENT

"The unemployment rate is the most commonly used measure of spare capacity in the labour market. A complementary measure is the underemployment rate which measures the number of employed people who would like and are available to work additional hours, expressed as a share of the labour force.

The upward trend in the underemployment rate since the early 1980s is consistent with the rise in the share of part time employment. Underemployment rates are higher among groups that have a higher share of part time employment such as females, younger workers and older workers. Underemployment is also more prevalent in industries with a higher share of part time workers such as the accommodation and food service industry which has a part time employment share of 60% and the highest rate of underemployment."

The Unemployment Rate and Underemployment Rate 2004-2016



Source: Reserve Bank of Australia (2017), *Statement on Monetary Policy*, February.

Explain how the unemployment rate and underemployment rate are measured and the possible reasons for the rise in the underemployment rate between 2011 and 2016.

CHAPTER 8: EXTENDED RESPONSE QUESTION

Explain the main causes of unemployment in Australia and discuss the use of government macroeconomic and microeconomic policies to reduce the rate of unemployment.

CHAPTER SUMMARY

UNEMPLOYMENT

1. Full employment of the labour force is a major goal of Australian government economic policy.
2. The labour force consists of all persons employed (i.e. both full time and part time employees) plus unemployed persons registered as actively seeking work and available for work.
3. According to the Australian Bureau of Statistics (ABS), persons over 15 years who are currently employed for at least one hour per week, plus self employed persons and those unemployed but actively seeking work are included in the Australian labour force.
4. The size of the labour force is determined by factors such as the size and growth of the population; the age distribution of the population; and the participation rate of the working age population.
5. The unemployment rate is calculated as the percentage of the total labour force classified as unemployed. In 2016-17 the unemployment rate in Australia was 5.6% of the labour force.
6. The unemployment rate peaked in the recession of the early 1990s when it was 11% of the labour force. It fell from 11% in 1992 to an historic low of 4.2% in 2007-08, before rising to 5.8% in 2008-09 due to the impact of the Global Financial Crisis and recession.

   Unemployment rates tend to be higher for young people (15 to 24 years) because they may lack the education, training and experience required by employers compared to older workers. Unemployment rates have tended to fall in non mining states such as NSW and Victoria and rise in mining states such as Queensland and Western Australia since the end of the mining boom.
7. The main types of unemployment are classified as cyclical, structural, frictional, seasonal, long term, hidden (or disguised) and regional. Underemployment is a situation where people who are working part time or switched from full time to part time hours want to work more hours.
8. Some of the main causes of unemployment in the Australian economy include the following:
   - A deficiency in aggregate demand leading to a deflationary/unemployment gap in the economy;
   - Structural changes in production and technology may make some labour redundant because of a mismatch between the labour skills demanded and the skills supplied by the labour force; and
   - Excessive wage expectations may lead to rising wage costs for employers and a lower demand for labour, causing employers to substitute capital for labour in production.
9. The natural rate of unemployment is where some workers remain unemployed due to frictional and structural factors in the labour market, eventhough the demand and supply of labour are in equilibrium in the labour market. The Non Accelerating Inflation Rate of Unemployment (NAIRU) is the rate of unemployment that is consistent with a constant or non accelerating inflation rate.
10. Some of the main groups affected by unemployment include young people; workers with low levels of education, skills and training; blue collar workers in manufacturing; migrants from non English speaking backgrounds; and Aborigines and Torres Strait Islanders.
11. The economic effects of unemployment include the opportunity cost of lost output and income of the unemployed and the depreciation of human capital as labour skills are lost. The unemployed also suffer from lower incomes and a loss of self esteem the longer they are unemployed. Other costs may include an increased tax burden on the employed to fund unemployment benefits and a rise in cyclical expenditure by the government on welfare payments to the unemployed.
12. Unemployment also results in social costs to the community as the unemployed may experience health problems; alcohol or drug dependency; and a breakdown in their family relationships. Unemployment has also been linked to rising crime rates and anti-social behaviour by the unemployed as they may become marginalised and detached from mainstream society.

Chapter 9

Inflation

THE MEASUREMENT OF INFLATION

Inflation refers to a sustained increase in the general price level over time. In contrast, deflation is where there is a sustained decline in the general price level over time. For the Australian government to achieve the goal of **price stability**, consumer price inflation must be kept in the target band of 2% to 3% set by the Reserve Bank for the conduct of monetary policy. The price level is the average level of prices in the economy and is measured by calculating a price index. In Australia, the most widely quoted price index is the **Consumer Price Index** (CPI), which measures changes in the prices of a selected regimen of consumer goods and services over time by using price index numbers. With reference to the CPI the annual rate of inflation can be measured by using the following formula in equation (1):

$$(1)\quad \text{Inflation Rate} = \frac{\text{Current Inflation - Previous Inflation}}{\text{Previous Inflation}} \times \frac{100}{1}$$

To calculate the inflation rate in the Australian economy between Year 1 with a CPI of 120 and Year 2 with a CPI of 129 we need to find the percentage change in the price level between these two years i.e.

$$\text{Inflation Rate} = \frac{129 - 120}{120} \times \frac{100}{1} = 7.5\%$$

This result can be interpreted as Australia having an inflation rate of 7.5% between Years 1 and 2.

Headline Inflation

The quarterly rate of change in the CPI is called the **headline rate of inflation**. It measures price movements in a selected regimen of household expenditure. Changes in the quarterly CPI are widely reported by the media and this is why it is known as the headline rate of inflation. The CPI has eleven categories, each with different weights: food (16.8%), clothing and footwear (4%), housing (22.3%), household equipment (9.1%), transport (11.6%), alcohol and tobacco (7.1%), health (5.3%), recreation (12.6%), education (3.2%), communication (3.1%) and insurance and financial services (5.1%).

Table 9.1 shows changes in index numbers for eight of the eleven CPI categories of expenditure between 2012-13 and 2016-17. The CPI series is a weighted average of price movements in Australia's eight capital cities. Each regimen item is weighted by its importance in average household expenditure and the rate of change in all groups is used to construct the CPI. Expenditure is compared with a base year (with an index number of 100 - 2011-12), and an index number series is constructed for CPI inflation.

Table 9.1: Consumer Price Index by Group 2012-13 to 2016-17 (2011-12 = 100)

Year	*Food*	*Clothing & Footwear*	*Housing*	*Household Equipment*	*Transport*	*Alcohol & Tobacco*	*Health*	*Recreation*	*All Groups (11 in total)*
2012-13	100.5	99.5	104.9	100.8	101.1	103.9	106.9	99.1	102.3
2013-14	101.8	99.3	109.0	101.5	103.5	110.0	111.6	101.4	105.9
2014-15	103.9	97.9	112.7	102.5	100.8	116.7	116.5	102.8	107.5
2015-16	104.1	97.5	113.9	104.3	99.1	123.5	122.1	103.7	108.3
2016-17	105.9	97.2	116.4	104.9	99.6	130.8	126.7	126.8	110.2

Source: ABS (2017), *Consumer Price Index*, Catalogue 6401.0, June. Table 3

Each quarter (March, June, September and December) the ABS releases quarterly and annual changes in the CPI. In the June quarter 2017, CPI inflation rose by 0.2%. The annual percentage change in the CPI from the June quarter 2016 to the June quarter 2017 was 1.8%. This was calculated by finding the percentage change in the CPI (all groups) from the June quarter 2016 to the June quarter 2017:

$$\text{Headline Inflation Rate in 2016-17} = \frac{110.2 - 108.3}{108.3} \times \frac{100}{1} = 1.8\%$$

The CPI is one measure of inflation monitored by the Reserve Bank of Australia (RBA) for achieving its **inflation target of 2% to 3%** average consumer price inflation over the economic cycle. This target is used to conduct monetary policy in achieving the goal of price stability. The advantages of using the CPI measure of inflation as the RBA's inflation target are its simplicity, and widespread public recognition and understanding of the CPI as a measure of quarterly and annual inflation in the Australian economy.

Underlying Inflation

The **underlying rate of inflation** or '**core**' **inflation** is a calculation of inflation that removes 'one off' and seasonal or volatile factors (such as higher food prices due to droughts, floods or cyclones; changes in oil prices; or government induced tax changes) from the CPI series. Underlying inflation is a better indicator of trend or core inflation in the economy than CPI inflation because quarterly CPI statistics can be volatile if distortions are caused by large price movements in one or two groups or categories of expenditure. Underlying inflation is calculated by the ABS, Reserve Bank and Treasury and is used in economic forecasting. Three measures of underlying inflation are calculated by the Reserve Bank:

1. The trimmed mean is an expenditure weighted average of the middle 70% of CPI price changes.
2. The weighted median is the price change in the middle of the ordered CPI distribution, also taking expenditure weights into account.
3. The CPI excluding volatile items, removes seasonal price rises or falls, such as fruit and vegetables.

RECENT TRENDS IN INFLATION

Historically Australia has been a high inflation country. In the 1970s and 1980s inflation averaged between 6% and 10%, but after the 1990-91 recession inflation fell to below 5%. It stayed below 3% in both CPI and underlying terms for most of the 1990s and 2000s (see **Figure 9.1**). Australia's inflation rate averaged 2.7% between 1994 and 2017, slightly above the OECD average of 2%. This improved Australian inflation performance was due to a number of factors which reduced demand and cost pressures, and eliminated the wage-price spiral which eroded Australia's competitiveness in the 1980s:

- The adoption by the Reserve Bank of an inflation target in 1993 for the operation of monetary policy, provided an anchor for inflationary expectations, and made the conduct of monetary policy more transparent, credible and effective in controlling inflation in the Australian economy;
- The exposure of the Australian economy to increased levels of competition in product and factor markets through cuts in protection (1988 to 2015) and the implementation of the national competition policy in 1995 put downward pressure on the price level in product markets;
- The adoption of productivity based collective enterprise bargaining in 1991 as a principle in wage negotiations helped to contain wage cost pressures in the Australian labour market;
- The permanent lowering of inflationary expectations through the successful conduct of macroeconomic policy helped to improve economic performance and slow price growth; and
- The impact of technological change and globalisation helped to reduce production costs (through economies of scale) and increased competitive pressure on all firms to contain price rises.

There was however an upsurge in inflation between 2006 and 2008 due to the resources boom and increased wage pressures, with the CPI rising by 4.5% and underlying inflation by 4.3% in 2007-08. Trends in CPI and underlying inflation between 1993 and 2017 are shown in **Figures 9.1** and **9.2**.

Figure 9.1: Consumer Price Inflation

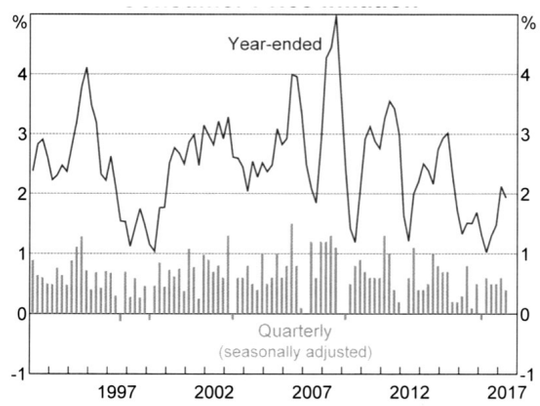
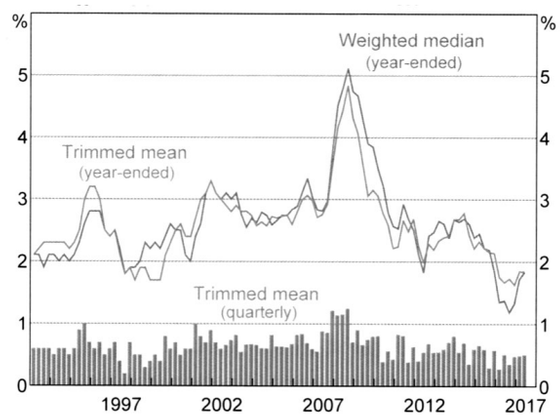


Figure 9.2: Measures of Underlying Inflation



Source: Reserve Bank of Australia (2017), *Statement on Monetary Policy*, August.

The higher inflation rate in 2007-08 changed with the impact of the Global Financial Crisis and recession in 2008-09. This led to lower global commodity prices such as oil and food, and declining global inflation. Inflation also moderated in the Australian economy, with the CPI rising by 1.5% in 2009. The low CPI outcome was driven by lower prices for fuel and deposit and loan facilities. However a strong economic recovery in 2009-10 and the impact of floods and Cyclone Yasi in late 2010 and early 2011 led to higher fruit and vegetable prices which lifted the CPI inflation rate to 3.6% in the year ended the June quarter 2011, with measures of underlying inflation rising to 2.7% in 2011.

In the years ended the June quarter 2012 and the June quarter 2013 headline inflation eased to around 2.4% and underlying inflation to around 2.6%. This was due to lower food prices, weaker demand for some goods and services, and the effect of exchange rate appreciation putting downward pressure on the prices of many imported goods. Between 2013 and 2017 economic conditions changed with slower economic growth, a lower exchange rate and cuts in official interest rates. CPI inflation fell to 1.9% and underlying inflation to 1.5%-1.8% in the year ended the June quarter 2017 as shown in **Table 9.2**.

Lower CPI inflation in 2016-17 was partly driven by lower world oil prices which flowed through to lower petrol and fuel prices in the Australian economy. Price inflation for volatile items such as fuel, fruit and vegetables also remained lower in 2016-17. Wage cost pressures were also lower with historically low growth in wages of 1.9%. However there were increases in utility prices such as electricity and gas, tobacco excise and building and construction costs associated with the boom in apartment construction.

Table 9.2: Measures of Consumer Price Inflation in 2016-17 (%△)

Measure	*Year Ended June Quarter 2016*	*Year Ended June Quarter 2017*
Consumer Price Index (CPI)	1.0%	1.9%
– Tradables	0.1%	0.4%
– Non Tradables	1.6%	2.7%
Underlying Inflation Measures		
– Trimmed mean	1.7%	1.8%
– Weighted median	1.3%	1.8%
– CPI excluding fruit, vegetables and automotive fuel	1.6%	1.5%

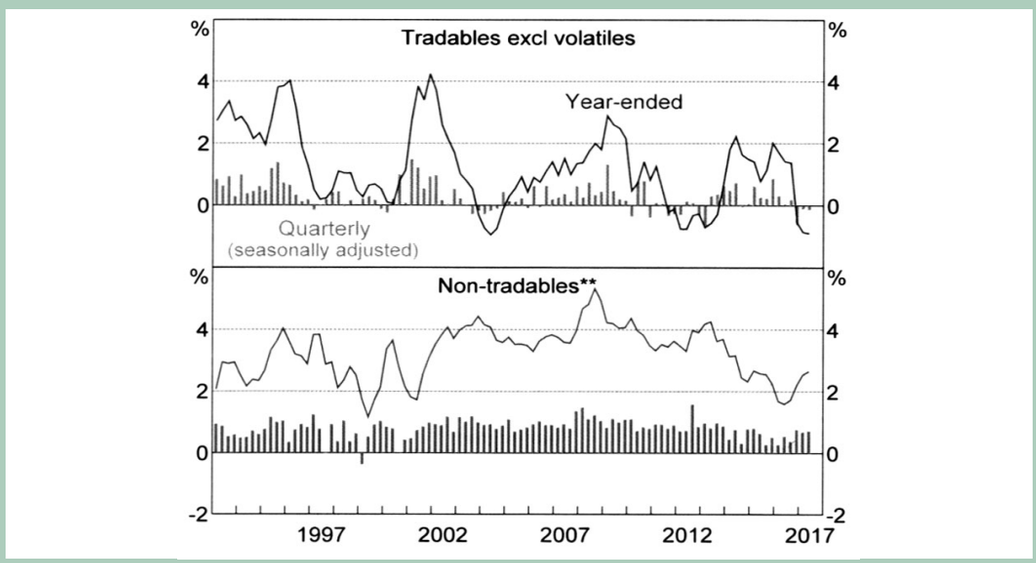
Source: Reserve Bank of Australia (2016 and 2017), *Statements on Monetary Policy*, August.

The general easing in inflation pressures between 2013 and 2017 was due to a number factors:

- **Tradables price inflation**, or the extent of price rises for imported goods and services, rose by only 0.4% in the year ended the June quarter 2017 as world oil prices fell, leading to lower domestic fuel prices. Other factors included lower tradables prices due to competition from new foreign retailers.
- **Non tradables inflation**, or price rises for domestically produced goods and services, rose by 2.7% in the year ended the June quarter 2017, about 0.5% lower than in 2014. Lower non tradables inflation was mainly due to lower wage costs. However utilities prices increased in 2016-17.
- A moderation in wages growth with the Wage Price Index (WPI) increasing by 0.5% in the March quarter 2017 and by 1.9% over the year. This reflected spare capacity in the labour market such as lower labour demand, and higher than average unemployment and underemployment rates.

Figure 9.3 shows trends in tradable and non tradable inflation in Australia between 1993 and 2017. Tradable inflation has tended to rise during booms in the business cycle when there is an upsurge in the demand for imported goods and services such as during the resources boom. However tradables inflation has declined in recent years with a stronger exchange rate containing imported price pressures. Non tradables inflation has also tended to decline with lower wages growth and easing demand pressures. This is largely due to below trend growth since the end of mining investment boom in Australia in 2012.

Figure 9.3: Trends in Tradable and Non Tradable Inflation 1993 to 2017



Source: Reserve Bank of Australia (2017), *Statement on Monetary Policy*, August.

THE CAUSES OF INFLATION: DEMAND AND COST PRESSURES

The major causes of inflation are pressures that can come from both the demand and supply sides of the economy. Inflation may arise from excessive growth in total expenditure or aggregate demand. If the economy's level of aggregate spending exceeds aggregate output or GDP, there will be pressure for the price level to rise to ration the available output amongst competing consumers. This is known as **demand pull inflation**, since excess aggregate demand is said to 'pull prices up'. This occurred in Australia in 2007-08 as full employment was reached, and demand pressures led to higher inflation.

In **Figure 9.4**, the equilibrium level of national income is Y_e, determined by the intersection of the aggregate demand (AD) and aggregate supply (AS) curves. J. M. Keynes argued that the equilibrium level of income may not coincide with the full employment level of income of Y_f in **Figure 9.4**. If total spending exceeded the full employment level of the economy's income, an inflationary gap of **cd** would arise, causing inflation to rise, leading to a higher price level and a fall in consumers' purchasing power.

Figure 9.4: Keynesian Inflationary Gap

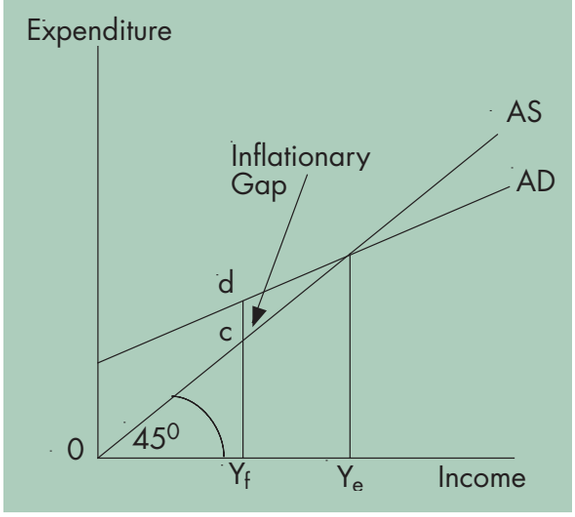


Figure 9.5: The AD/AS Inflationary Gap

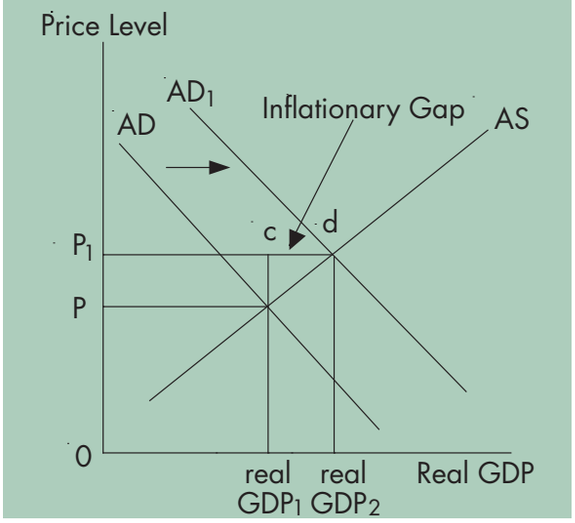


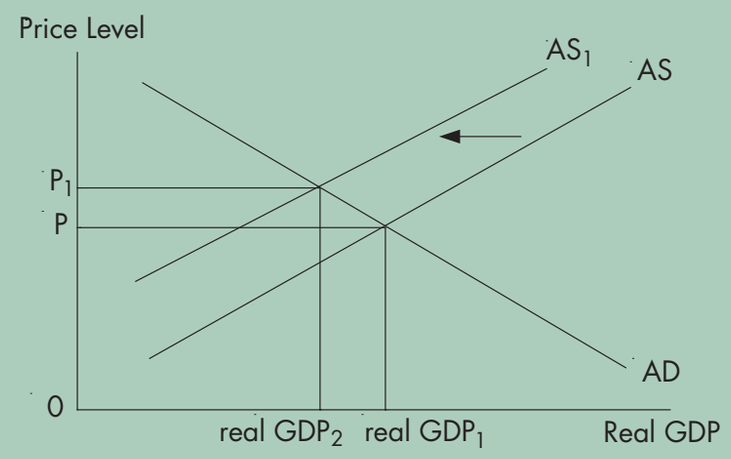
Figure 9.5 illustrates how demand pull inflation may occur using the AD/AS model of the economy. The economy's price level is measured on the vertical axis, whilst real GDP is measured on the horizontal axis. Aggregate demand (AD) is the sum of spending on consumption (C), investment (I), net government spending (G), and net exports (X-M). Aggregate demand is negatively sloped since the economy will only buy more output at a lower price level. Aggregate supply (AS) is equivalent to the economy's real GDP and is positively sloped since more output is supplied by firms at higher price levels.

The economy's equilibrium price and output level is found where AD and AS intersect at price level P and real GDP_1, which is the full employment level of real GDP or national income. If aggregate demand increases from AD to AD_1 because of a rise in a budget deficit, growth in export income, or growth in consumer or investment spending, the price level will rise to P_1, and real GDP will increase to real GDP_2, resulting in an inflationary gap of **cd**. The main causes of demand pull inflation are excessive growth in any of the major components of aggregate demand (AD = C + I + G + X - M) such as:

- Increases in consumption expenditure (C) caused by higher consumer confidence, wage increases, increased perceptions of wealth (through higher asset prices), tax cuts or falls in interest rates;
- Increases in investment spending (I) caused by higher profits, higher business confidence, tax cuts, increased depreciation allowances or falls in interest rates;
- Increases in the money supply (Ms) caused by Reserve Bank action (such as interest rate cuts) to stimulate the demand for credit, which can lead to increased consumer and business spending;
- Increases in net government expenditure (G) caused by a rise in government consumption or investment, or tax cuts, which lead to a larger budget deficit or a lower budget surplus; or
- Increases in export income (X) sourced from higher commodity prices and the terms of trade, causing growth in incomes and consumption and investment expenditure in the domestic economy.

The other major type and cause of inflation operates from the supply side of the economy and is known as **cost push inflation**. Cost push inflation results from a decrease in aggregate supply and may be caused by a rise in wage rates or a rise in the cost of raw materials such as higher oil and energy prices, or other inputs into the production process. **Figure 9.6** shows how cost push inflation can arise. The initial equilibrium for the economy is at price level P and real GDP_1. A decrease in aggregate supply from AS (e.g. caused by an 'across the board' wage increase not based on higher productivity, or an increase in oil prices) will shift the aggregate supply curve to the left to AS_1. This will cause a new equilibrium to be established at a higher price level of P_1 and a lower level of output at real GDP_2. The economy experiences both a contraction in real GDP (i.e. lower economic growth) and a rise in inflation as the price level has increased. The contraction in real GDP may also lead to a higher rate of unemployment.

Figure 9.6: Cost Push Inflation



This phenomenon is known as **stagflation** (i.e. lower growth, higher inflation and rising unemployment) which first arose in the global economy in the 1970s. The major causes of cost push inflation are increases in the costs of production such as wage costs and raw materials such as oil and energy resources. Since wages and other input prices are determined in factor markets, any rise in the prices of the factors of production may lead to a fall in aggregate supply and a rise in the economy's price level. Some common sources of cost push inflation (i.e increases in costs are said to 'push prices up') are as follows:

- Across the board wage increases for workers not reflecting improvements in labour productivity;
- A rise in the price of domestic or imported raw materials such as oil and energy, manufactured components or intermediate goods which raise production costs for businesses in the economy;
- A depreciation of the exchange rate which may raise the cost of imports such as consumer goods, capital equipment, intermediate goods and raw materials;
- A rise in government charges including taxes (e.g. the GST, excise and customs duties), freight rates, royalties or workers' compensation premiums which raise production costs for firms; or
- A rise in the general level of interest rates caused by a tightening of monetary policy which raises the cost of borrowing and debt servicing and therefore reduces firms' cash flows and profits.

A major cause of inflation in the world economy which affected Australia in 1973-74 and in 1979-80 was **imported inflation**. For example, the price of imported oil rose in 1973-74 and in 1979-80 due to OPEC restrictions on world oil supplies. As a result energy prices rose, and also the final prices of goods and services dependent on oil inputs such as the price of petrol and transport services in distributing final goods and services to consumers. These were the '**second round**' **effects** of higher oil prices. A large depreciation of the Australian exchange rate in 1986 had a similar effect on the domestic prices of imports. Importers passed on the impact of higher import costs to consumers through higher prices.

An example of how stagflation could have arisen in the global economy was the impact of a permanent US$5 a barrel increase in the price of oil on world GDP after the invasion of Iraq in 2003 by the USA and its allies. The IMF in 2003 undertook a study to estimate the effects of rising oil prices on world GDP, and on industrial and developing countries, with the following results:

- World real GDP would contract by -0.3%;
- The real GDP of industrial and developing countries would contract by -0.2% to -0.3%; and
- Trade balances would deteriorate, and price levels would increase by 2% to 3%.

This contrasts with the 40% fall in world oil prices in 2014-15, with Brent crude oil trading at US$50 per barrel in early 2015. This positive supply shock was expected to increase global economic growth.

REVIEW QUESTIONS

THE MEASUREMENT, TRENDS AND CAUSES OF INFLATION

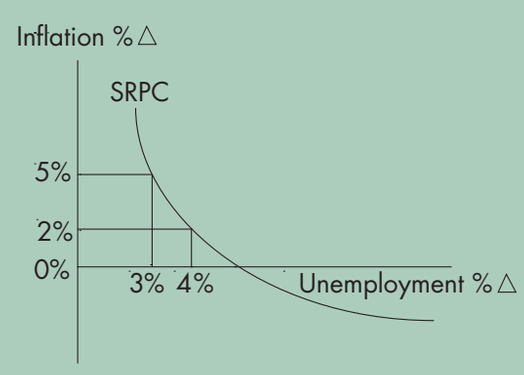
1. What is meant by inflation? How are inflation and the inflation rate measured in Australia?
2. What is the CPI? Refer to Table 9.1 and explain how the CPI is constructed.
3. Distinguish between the headline and underlying rates of inflation in Australia.
4. Refer to Figures 9.1 and 9.2 and the text and discuss Australia's inflation performance in the 2000s. Why did Australia record relatively low rates of inflation in the 1990s and 2000s?
5. Explain why Australia experienced rising inflation after reaching full employment in 2007-08.
6. Explain why inflationary pressures fell in Australia in 2008-09 but rose in 2010 and 2011.
7. Refer to the data in Table 9.2 and describe and account for trends in headline, tradable, non tradable and underlying inflation between 2016 and 2017. Why did deflation occur in 2016?
8. Refer to Figures 9.4 and 9.5 and the text and explain the main causes of demand pull inflation.
9. Refer to Figures 9.6 and 9.7 and the text and explain the main causes of cost push inflation.
10. Discuss the main causes and effects of stagflation and imported inflation.

Inflationary Expectations and the Phillips' Curve

In analysing the causes of inflation it is important to note that the economy can experience demand pull and cost push inflation simultaneously through a **wage-price inflation spiral**. If excess aggregate demand leads to demand pull inflation, wage earners may anticipate a rise in the price level and seek higher nominal wages to maintain their real wages. If they are successful in gaining a wage increase, this may lead to a fall in aggregate supply and further rises in prices. If aggregate demand continues to increase, further price and wage increases may occur, leading to an acceleration in inflation. This is known as runaway or galloping inflation and may lead to **hyper-inflation** such as that experienced in the German Weimar Republic in the early 1930s when inflation was in excess of 1000% per annum. A recent example of hyperinflation occurred in Zimbabwe after the collapse of its economy in 2004-05.

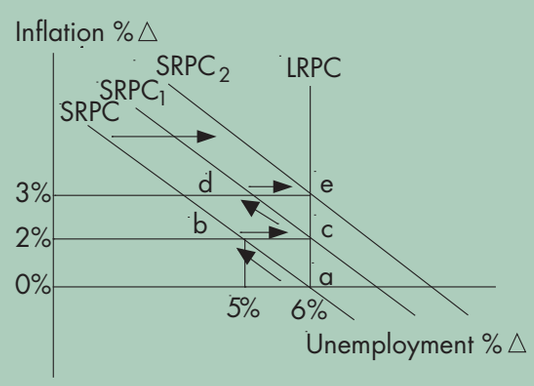
Higher inflation that results from a wage-price spiral may be caused by an increase in inflationary expectations. **Inflationary expectations** refer to people's perceptions of future inflation based on past and current rates of inflation. The New Zealand economist, A. W. Phillips, observed a tradeoff or inverse relationship between inflation and unemployment in the short run in Britain in the 1950s. This short run tradeoff is shown in **Figure 9.7**. A government in attempting to reduce unemployment below 4%, by increasing government spending, could trade off more inflation (2% to 5%) for less unemployment (4% to 3%). Alternatively a government might cut government spending to trade off less inflation (5% to 2%) for more unemployment (3% to 4%).

Figure 9.7: The Short Run Phillips Curve



This short run tradeoff tended to disappear in the 1970s as **stagflation** (i.e. high inflation, high unemployment and low growth) was experienced by industrial countries (due to higher oil prices) and governments had problems in attempting to trade off inflation with unemployment.

Figure 9.8: The Long Run Phillips Curve



The explanation for the lack of this tradeoff in the long run was put forward by Friedman and Phelps in their expectations augmented Phillips' Curve illustrated in **Figure 9.8**, where three short run Phillips' curves (SRPC, $SRPC_1$ and $SRPC_2$) represent an increase in inflationary expectations over time. The **Long Run Phillips' Curve** (LRPC) represents the **natural rate of unemployment**. If the economy was operating at point (a) with 6% unemployment and zero inflation, and the government increased spending to reduce unemployment, this would cause a rise in inflationary expectations to 2% and a fall in unemployment to 5% in the short run at point (b). However workers would increase their wage demands as prices have risen, reducing their real wages. Firms would cut back their demand for labour and unemployment would move back to its natural rate of 6%, and the economy would operate at point (c) on $SRPC_1$. Further use of expansionary policies to reduce unemployment will only lead to higher inflation and no change in unemployment i.e. the economy will move from point (c) to point (d), and to point (e) on $SRPC_2$, where inflation is 3%, but unemployment is unchanged at 6%. Hence Friedman and Phelps argued that there was no trade off between inflation and unemployment in the long run, as an economy would always return to its natural rate of unemployment. They argued that governments' attempts to reduce unemployment by using expansionary macroeconomic policies would only lead to higher inflation, and the way to reduce unemployment was to cut inflation and increase the flexibility of the labour market.

THE NEGATIVE AND POSITIVE EFFECTS OF INFLATION

Inflation is considered to be a macroeconomic problem because persistently high levels of inflation lead to **higher inflationary expectations**. When people expect higher inflation in the future (based on their past and present experience of inflation) they will build these expectations into their price and wage negotiations. Thus inflation may become part of the 'culture of doing business', and countries may suffer permanently high levels of inflation, leading to lower purchasing power, international competitiveness and a misallocation of resources. The major negative effects of inflation impact on various groups in the economy such as consumers, workers, producers, exporters, savers, investors and governments:

- **Consumers** suffer a loss in purchasing power and real income. Unless consumer incomes keep pace with inflation, the cost of living continues to rise, reducing real incomes and living standards;
- **Workers** or wage earners suffer a fall in real wages if their money wages do not rise by the same percentage as the increase in the rate of inflation and cost of living over time;
- **Producers** or businesses react to higher costs or excess demand by putting up prices. This may lead to higher 'menu costs' as they adjust their prices. Producers may also react to higher costs by reducing their work forces to cut labour costs, which may lead to higher unemployment;
- **Exporters** and import competitors (in the tradable goods sector of the economy) may find it difficult to pass on higher production costs in the form of higher prices in markets, and may suffer a temporary or permanent loss of international competitiveness in global markets;
- **Savers** will find that the real value of their savings will decline if nominal interest rates do not keep pace with inflation. Lenders will charge higher nominal interest rates to compensate for the loss in their purchasing power caused by inflation, which reduces the real returns on their loans;

- **Investors** will find the higher costs of borrowing will make some investment projects less profitable and will reduce their demand for investment funds. Some investment decisions will be distorted if asset prices (such as shares, real estate, bonds and derivatives) are rising faster than the prices of other goods and services, leading to more speculative rather than productive investment; and
- **Governments** will find that the costs of providing goods and services will rise, causing an increase in government expenditure. However, taxation revenue will also rise as taxpayers pay more tax on higher priced consumer goods and services, and wage earners are pushed into higher tax brackets (i.e. 'bracket creep'). Government revenue will tend to rise because of 'fiscal drag' (i.e. higher tax revenue due to higher prices and incomes), but spending will also rise due to the higher costs of providing infrastructure, welfare payments and collective goods and services to the public.

If the Australian government is not able to achieve the objective of price stability in the medium term by containing inflation, there will be major macroeconomic costs of higher inflation as follows:

- A reduction in the purchasing power of consumers and producers and a fall in real incomes;
- A redistribution of income away from wage earners and fixed income earners (such as welfare recipients such as pensioners and the unemployed) to those receiving profit and dividend income;
- A misallocation of resources caused by distortions in the price level and the economy's cost structure;
- A loss in international competitiveness as export prices rise (relative to foreign competition) and import prices fall relative to the prices of competing domestically produced goods and services;
- A reduction in real savings and real investment which reduces the rate of capital accumulation;
- A rise in unemployment if firms substitute capital for labour because of rising wage inflation; and
- A deterioration in government budget outcomes and higher debt interest in the future.

The positive effects of inflation result from the impact of rising prices on asset prices such as shares and real estate. If there is a speculative boom in the share market or real estate market, driven by excessive levels of confidence and demand, this can lead to **asset price inflation**. Speculators can gain from asset price inflation if they sell their financial or real assets at inflated prices before the inevitable collapse of the speculative boom. Asset price inflation can lead to a distortion in resource allocation such as the growth in borrowings by investors to purchase real estate in 2014-15 in the booming Sydney market. This led to higher property prices and capital gains for investors, but at the expense of shutting many first home buyers out of the market and increasing the risk of a collapse in the property market.

POLICIES TO REDUCE INFLATION

The Australian government uses macroeconomic and microeconomic policies to achieve sustainable economic growth, which will allow real incomes to be increased whilst inflation is minimised. There are two main instruments of macroeconomic policy which can be used to reduce the rate of inflation:

- **Contractionary monetary policy**, through an increase in the official cash rate, leading to a rise in term structure of interest rates in the economy, to contain the growth in aggregate demand; and
- **Contractionary fiscal policy**, through an increase in taxation and/or reduced government expenditure, or a combination of the two measures, to contain the growth in aggregate demand.

A tightening in the stance of monetary policy involves the Reserve Bank of Australia raising the cash rate, leading to an increase in other short term and long term interest rates. This increase in interest rates will lead to reduced borrowing and spending by consumers and businesses. There will also be a greater incentive for households and businesses to save and retire debt. This will result in lower growth of aggregate demand and demand pull inflation. An example of a more restrictive stance of monetary policy to reduce inflation was the Reserve Bank's seven increases in the cash rate of 0.25% from October 2009 (3%) to November 2010 (4.75%). Higher official interest rates led to rising market interest rates and tighter monetary conditions in Australia. The effects of higher interest rates, were slower growth in retail spending, a reduction in levels of debt, and reduced demand for credit from financial institutions.

Alternatively, contractionary fiscal policy involves an increase in the structural surplus or a reduction in the structural deficit of the budget outcome. Regardless of whether a reduction in the level of government expenditure and/or an increase in the level of taxation is used to achieve the new and tighter fiscal policy stance, the effect will be a reduction in the net injection of funds from the government sector (i.e. net public demand) into the economy and a reduction in demand pull inflationary pressures.

An example of a more restrictive stance of fiscal policy specifically used to reduce inflationary pressures was the Gillard government's 2013-14 budget which aimed to reduce the growth of public demand and the fiscal stimulus used to support the economy during the Global Financial Crisis in 2008-09. Total government expenditure was forecast to increase from $367.3b in 2012-13 to $391.2b in 2013-14. However as a percentage of GDP, government expenditure was forecast to fall from 25.2% to 24.5%. Furthermore, the automatic stabilisers in the budgetary framework were expected to result in revenue growing from $350.4b (23% of GDP) in 2012-13 to $376.b in 2013-14 (23.5% of GDP). Overall the fiscal balance was forecast to fall from a deficit of -$20.3b (-1.3% of GDP) in 2012-13 to a smaller deficit of -$13.5b (-0.8% of GDP) in 2013-14. The underlying cash balance was also forecast to fall from a deficit of -$19.4b (-1.3% of GDP) in 2012-13 to -$18b (-1.1% of GDP) in 2013-14.

The 2013-14 budget strategy was based on returning the budget to balance and reducing public debt. The more contractionary stance of fiscal policy adopted from 2010-11 onwards was supportive of the contractionary stance of monetary policy to reduce inflationary pressures in 2011. The government argued that the large degree of fiscal stimulus applied to the economy in 2008-09 (to support aggregate demand and employment) should be gradually withdrawn, as economic recovery was well underway in 2011, with private demand rather than public demand being the main driver of future growth.

In terms of the longer term government policy framework (5 to 10 years), **microeconomic policies** can be used to help achieve price stability in the economy. Microeconomic policies are designed to induce structural changes in product and factor markets that lead to higher levels of productivity, efficiency and competitiveness, all of which can contribute to greater price stability and lower inflationary expectations.

Microeconomic policies are most effective in containing cost inflationary pressures such as rises in wages not based on productivity improvements, or rises in the price of raw materials and other productive inputs due to a lack of competition and efficiency in product markets. Examples of microeconomic policies used to support the objective of price stability in Australia include the following:

- The national competition policy to promote rules for competitive conduct in product markets;
- Tariff reform to increase competition from imports in domestic markets, leading to lower prices;
- Taxation reform to remove indirect taxes such as sales tax which distorted prices and raised cost structures for firms;
- The reform of public utilities and trading enterprises to increase their efficiency and lower prices;
- The deregulation of markets to increase the levels of competition and lower prices; and
- The introduction of the principle of workplace or productivity bargaining (through enterprise agreements) in the labour market to contain wage pressures not based on productivity improvements.

In the 2009-10 budget the government introduced specific microeconomic measures to increase the productive capacity of the Australian economy and the skills and education of the labour force. These measures targeted supply bottlenecks to ease inflationary pressures in the future when the economy returned to full employment. Investment of $22b in nation building infrastructure (such as transport, communications, energy, education and health) was the centrepiece of the 2009-10 budget.

In the labour market, industrial relations policy has been used by successive governments to encourage the spread of productivity based enterprise or workplace agreements, with less reliance on Modern Awards and adjustments to the National Minimum Wage for wage increases linked to changes in the cost of living. The principle of enterprise or productivity bargaining was introduced in 1991 and linked wage increases in enterprise agreements to improvements in productivity at the workplace level.

In 1996 the Howard government enacted the *Workplace Relations Act 1996* which set out new rules for the adjustment of wages in awards and workplace agreements. Greater reliance on productivity bargaining (and less on award adjustments) was legislated through the *Workplace Relations Amendment Act* (WorkChoices) in 2006 which also allowed the negotiation of individual Australian Workplace Agreements (AWAs). The Rudd Labor government strengthened the safety net in the *Fair Work Act 2009* by legislating ten minimum National Employment Standards; creating streamlined Modern Awards; annual adjustments to the National Minimum Wage by the Fair Work Commission; and the spread of collective bargaining between employers and employees through enterprise agreements.

REVIEW QUESTIONS

INFLATIONARY EXPECTATIONS AND THE EFFECTS OF INFLATION

1. What is meant by inflationary expectations? How can a wage-price spiral emerge in an economy?

2. Refer to Figure 9.7 and explain how a trade-off may exist between inflation and unemployment in the short run as shown by the Short Run Phillips' Curve (SRPC).

3. Refer to Figure 9.8 of the Long Run Phillips Curve (LRPC) and explain how an increase in inflationary expectations can lead to higher inflation but no change in the unemployment rate in the long run.

4. Discuss the effects of inflation on consumers, workers, businesses, exporters, savers, investors and governments.

5. How does inflation affect saving, investment, resource allocation and international competitiveness in an economy?

6. Why does the government need to target inflation and achieve price stability in the economy?

7. Discuss how a more restrictive stance of monetary policy can be used to control inflation in the Australian economy.

8. Discuss how a more restrictive stance of fiscal policy can be used to control inflation in the Australian economy.

9. Discuss the use of more restrictive stances of monetary and fiscal policies to reduce inflation in the Australian economy in 2010-11.

10. Explain how microeconomic policies can be used in the long run to assist macroeconomic policies to control inflation in the Australian economy.

11. Define the following terms and add them to a glossary:

asset price inflation	inflation rate	Phillips Curve
Consumer Price Index	inflation target	productivity bargaining
cost push inflation	inflationary expectations	purchasing power
demand pull inflation	inflationary gap	real income
fiscal policy	international competitiveness	real wage
full employment	Long Run Phillips Curve	Short Run Phillips Curve
headline inflation	microeconomic policy	stagflation
imported inflation	monetary policy	tradables inflation
inflation	non tradables inflation	underlying inflation

CHAPTER 9: SHORT ANSWER QUESTIONS

Relative Inflation Rates 2009-10 to 2016-17 (CPI – all Items, annual percentage change)

Year	*Australia*	*Japan*	*United States*	*OECD Major 7*
2009-10	3.1	-1.2	2.3	1.7
2010-11	3.6	0.1	1.6	1.5
2011-12	2.3	0.1	3.3	2.7
2012-13	2.4	-0.5	2.1	1.8
2013-14	3.0	-0.4	1.4	1.0
2014-15	1.5	2.3	0.8	1.1
2015-16	1.4	0.8	0.1	0.3
2016-17	1.9	-0.1	1.3	0.5

Refer to the table above of data on relative CPI inflation rates between 2009-10 and 2016-17 for selected countries and answer the questions below. Marks

1. Define the term 'inflation'. (1)

2. Outline ONE negative effect of inflation on an economy. (1)

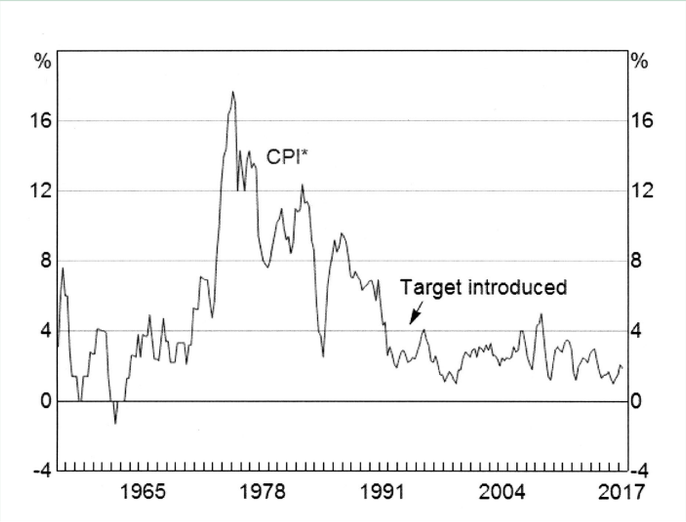
3. Distinguish between the headline (CPI) rate and underlying rate of inflation. (2)

4. Why did CPI inflation rates generally fall in Australia and the OECD Major 7 between 2013-14 and 2015-16? (2)

5. Explain TWO causes of demand pull inflation and cost push inflation. (4)

CHAPTER FOCUS ON INFLATION

Inflation over the Long Run



"The Governor and the Treasurer have agreed that the appropriate target for monetary policy in Australia is to achieve an inflation rate of 2–3 per cent, on average, over the cycle. This is a rate of inflation sufficiently low that it does not materially distort economic decisions in the community. Seeking to achieve this rate, on average, provides discipline for monetary policy decision-making, and serves as an anchor for private sector inflation expectations."

Source: Reserve Bank (2017), *Inflation Target*, www.rba.gov.au

Explain the use of inflation targeting by the Reserve Bank in conducting monetary policy to achieve price stability in the Australian economy.

CHAPTER 9: EXTENDED RESPONSE QUESTION

Explain the main causes and effects of inflation and discuss the policies that can be used by the Australian government to control inflation and achieve the goal of price stability in the economy.

CHAPTER SUMMARY

INFLATION

1. Inflation refers to a sustained rise in the price level over time. Inflation results in a reduction in the purchasing power of money and can reduce living standards and distort resource allocation. Therefore the government uses its economic policies to try and achieve the goal of price stability.

2. The inflation rate is calculated by measuring the percentage change in prices over time. In Australia the Consumer Price Index (CPI) is used to measure quarterly and annual changes in the prices of a selected regimen of eleven categories of goods and services purchased by Australian households.

3. Australia has moved from being a high inflation country in the 1970s and 1980s to achieving inflation rates consistent with the OECD average in the 1990s and 2000s. This is primarily a result of the Reserve Bank using monetary policy successfully to achieve an inflation target of 2% to 3% consumer price inflation over the economic cycle. Long term policies such as microeconomic reform measures (including labour market reforms), as well as the impact of globalisation and technological change in reducing costs and prices have also assisted in achieving improved inflation outcomes in Australia.

4. In 2007-08 CPI inflation increased to 4.5% and underlying inflation to 4.3%, mainly because of strong growth in domestic demand, wage pressures and rising oil and food prices. Higher interest rates were used by the Reserve Bank to curb this rise in inflation. The Global Financial Crisis and recession in 2008-09 led to lower CPI and underlying inflation. However in 2010-11 CPI inflation rose due to the impact of natural disasters on food prices and a range of other domestic price rises.

5. The two main causes of inflation are demand and cost pressures in the economy. Demand pull inflation occurs when there is an excess level of aggregate demand in the economy which leads to an inflationary gap. Cost push inflation occurs when the costs of production rise and push up prices. This occurs if producers pass on cost increases to consumers in the form of higher prices.

6. The level of inflationary expectations is also an important influence on future inflation. A rise in the inflationary expectations of wage earners and price setters can lead to further wage and price increases, which may develop into a wage-price spiral and higher inflation in an economy.

7. The short run Phillips' curve (SRPC) shows the inverse relationship between the inflation rate and the unemployment rate in the short run. There is a trade-off between inflation and unemployment in the short run, with higher inflation associated with lower levels of unemployment, and alternatively, higher levels of unemployment associated with lower levels of inflation.

8. In the long run, the Phillips' curve is vertical since there is no trade off between inflation and unemployment, as there is a natural rate of unemployment (due to structural and frictional factors) in the economy. Therefore attempts by the government to reduce unemployment will only lead to higher inflation and no change in the rate of unemployment. When inflation is not accelerating, the level of unemployment that remains in the economy is called the Non Accelerating Inflation Rate of Unemployment (NAIRU) which is due to frictional and structural factors in the labour market.

9. There are a number of negative effects of inflation on an economy:
   - Consumers suffer a loss of purchasing power, a fall in real incomes and living standards;
   - Saving and investment decisions become distorted because of changes in real returns;
   - Exporters and import competitors suffer a loss of international competitiveness;
   - There is a reduction in allocative efficiency, as resources are diverted away from productive economic activities to speculative investment activities; and
   - Governments are faced with increased expenditure in meeting the rising cost of providing collective goods and services (such as welfare, health and education) to the community.

Chapter 10

External Stability

MEASUREMENT OF THE CURRENT ACCOUNT DEFICIT

A key goal of the Australian government's macroeconomic policy is to achieve the objective of external stability or external balance. **External stability** is achieved when export income is sufficient to finance import expenditure, the servicing costs of Australia's foreign liabilities are met and the exchange rate is relatively stable over time. Exports represent expenditure by foreigners on domestically produced goods and services and are independent (or autonomous) of changes in domestic national income. In the five sector model of the circular flow of income in the economy, equation (1) is used to determine exports:

(1) $X = X_0$

where X = total export expenditure

X_0 = autonomous export expenditure

Exports are an injection of funds into the circular flow of income. Export demand is determined by decisions made in the rest of the world and is influenced by four main factors:

- Real GDP growth in the rest of the world: the higher (lower) the level of real GDP growth in the rest of the world, the greater (lower) will be the foreign demand for Australian goods and services.
- The extent of international specialisation and factor endowments: since Australia has a comparative advantage in the production of agricultural and mineral commodities, some manufactured goods, and services (e.g. tourism and education), this creates a foreign demand for these goods and services.
- The prices of Australian made goods and services relative to the prices of similar goods and services made in other countries: the cheaper (dearer) Australian goods and services are relative to competing foreign goods and services, the greater (lower) the demand for Australian exports.
- The lower (higher) the value of the Australian dollar, the greater (lower) will be the demand for Australian exports, since they are cheaper (dearer) in foreign currency terms relative to competing domestic goods in foreign countries or markets.

Imports are a leakage of funds from the circular flow of income as they represent domestic demand for foreign produced goods and services. Import expenditure consists of both autonomous (i.e. independent of changes in income) and induced (i.e. dependent on changes in income) components. In the five sector model of the circular flow of income in the economy, equation (2) is used to determine imports:

(2) $M = M_0 + mY$

where M = total import expenditure

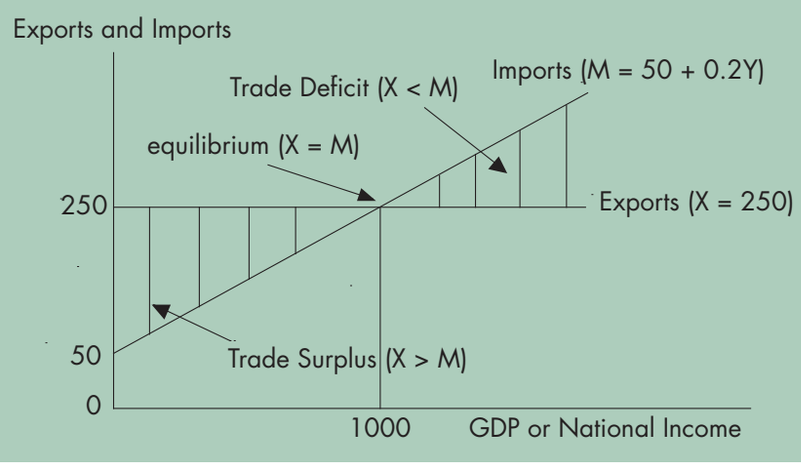
M_0 = autonomous import expenditure

m = the marginal propensity to import (changes in import spending due to changes in income) $= \frac{\Delta M}{\Delta Y}$

Import demand is determined by decisions made in Australia and is influenced by four main factors:

- Real GDP growth in Australia: The higher (lower) the level of real GDP growth in Australia, the greater (lower) the demand for foreign produced goods and services or imports.
- The extent of international specialisation and factor endowments: since other countries have a comparative advantage in the production of consumer, capital and intermediate goods, and services (such as travel and tourism) this creates an Australian demand for these goods and services.
- The prices of foreign made goods and services relative to the prices of domestic goods and services in Australia: the cheaper (dearer) foreign goods and services are in Australian dollar terms relative to Australian goods and services, the greater (lower) the demand for foreign imports.

Figure 10.1: Exports and Imports in the Five Sector Circular Flow of Income Model



- The higher (lower) the value of the Australian dollar, the greater (lower) the demand for foreign imports, since they are cheaper (dearer) relative to domestically produced goods and services.

In **Figure 10.1** autonomous exports are equal to 250, and import spending is equal to 50 + 0.2Y. Net exports (X - M) will be zero when X = M. In **Figure 10.1** this occurs when income (Y) is 1000 (i.e. 250 = 50 + 0.2Y, therefore Y = 1000). If we assume that other things remain equal *(ceteris paribus),* an increase in national income above 1000 will lead to a trade deficit (where X < M), whereas at income levels below 1000, trade surpluses are recorded since X > M. When net services, net primary income and net secondary income (net income) are taken into account, the equilibrium condition for the current account in the balance payments is denoted in equation (3):

(3) Export Credits (goods + services + net income) = Import Debits (goods + services + net income)

The Current Account Deficit as a Percentage of GDP

Since Australia's total import debits exceed total export credits, persistent current account deficits are recorded. The current account deficit as a percentage of GDP (see equation 4 below) is a key measure of how sustainable the current account deficit is over time. Since the current account deficit has averaged -4.5% of Australia's GDP since the 1980s, and economic growth has averaged 3% per annum, the current account deficit is considered to be unsustainable if it exceeds the growth rate of the economy. This is because the servicing cost of external liabilities is equivalent to the growth in income or output. In 2016-17 the current account deficit of -$29,469m was -2.1% of GDP as shown in **Table 10.1**.

$$\text{(4) Current Account Deficit/GDP Ratio} = \frac{\text{Current Account Deficit}}{\text{Gross Domestic Product}} \times \frac{100}{1}$$

Net Foreign Liabilities as a Percentage of GDP

Successive current account deficits must be financed by either debt or equity borrowings or a combination of the two. **Net foreign liabilities** refer to the difference between Australia's total foreign assets (i.e. debt plus equity lending overseas) and Australia's total foreign liabilities (i.e. debt plus equity borrowings from overseas). Net foreign liabilities as a percentage of GDP are an indication of Australia's total debt and equity servicing costs of accumulated current account deficits, as illustrated in equation (5). In 2016-17 net foreign liabilities of $1,000,264m represented 59.5% of GDP as shown in **Table 10.1**.

$$\text{(5) Net Foreign Liabilities/GDP Ratio} = \frac{\text{Net Foreign Liabilities (debt + equity)}}{\text{Gross Domestic Product}} \times \frac{100}{1}$$

Table 10.1: Australia's Current Account Deficit, Net Foreign Liabilities and Net Foreign Debt ($m) and as a Percentage of GDP 2007-08 to 2016-17

Year	*Current Account Deficit ($m)*	*% of GDP*	*Net Foreign Liabilities ($m)*	*% of GDP*	*Net Foreign Debt ($m)*	*% of GDP*
2007-08	-$73,980m	-6.3%	$658,560m	55.7%	$600,441m	50.8%
2008-09	-$38,780m	-3.1%	$703,667m	56.0%	$624,274m	49.7%
2009-10	-$56,018m	-4.3%	$777,864m	60.2%	$686,084m	53.3%
2010-11	-$34,384m	-2.4%	$802,412m	57.2%	$685,909m	49.5%
2011-12	-$50,420m	-3.4%	$879,520m	60.8%	$756,183m	52.2%
2012-13	-$60,309m	-4.0%	$816,937m	54.8%	$762,173m	51.1%
2013-14	-$47,056m	-3.0%	$864,243m	55.0%	$865,462m	55.1%
2014-15	-$56,979m	-3.6%	$905,996m	56.9%	$976,056m	61.3%
2015-16	-$72,828m	-3.8%	$1,035,858m	63.3%	$1,044,505m	63.8%
2016-17	-$29,469m	-2.1%	$1,000,264m	59.5%	$990,599m	58.9%

Source: ABS (2017), *Balance of Payments and International Investment Position*, Catalogue 5302.0, June.

Net Foreign Debt as a Percentage of GDP

Net foreign debt refers to foreign debt assets (or Australian debt lending overseas) minus foreign debt liabilities (or overseas debt lending to Australia). Debt is a stock concept and the percentage of GDP accounted for by net foreign debt (see equation 6) is a measure of total debt to total output or GDP. In 2016-17 the net foreign debt of $990,599m represented 58.9% of GDP as shown in **Table 10.1**.

$$\text{(6) Net Foreign Debt/GDP Ratio} = \frac{\text{Net Foreign Debt}}{\text{Gross Domestic Product}} \times \frac{100}{1}$$

Table 10.1 shows the nominal dollar value of Australia's current account deficit, net foreign liabilities and net foreign debt between 2007-08 and 2016-17. In addition it shows each indicator as a percentage of Australia's GDP or national output for the same period:

- The current account deficit varied from a low of -2.1% of GDP in 2016-17 and -3% in 2013-14 to a high of -6.3% in 2007-08. Overall the current account deficit averaged around -3.6% of GDP between 2007-08 and 2016-17 and fell from -3.8% of GDP in 2015-16 to -2.1% in 2016-17.
- Net foreign liabilities reached a high of 63.3% of GDP in 2015-16, but averaged 57.9% of GDP between 2007-08 and 2016-17. They fell from 63.3% of GDP in 2015-16 to 59.5% in 2016-17.
- The net foreign debt reached a high of 63.8% of GDP in 2015-16 but averaged 54.6% of GDP between 2007-08 and 2016-17 and fell from 63.8% in 2015-16 to 58.9% of GDP in 2016-17.

Other international ratios compiled by the Australian Bureau of Statistics (ABS) include net investment income which is the ratio of net income paid on foreign equity and foreign debt borrowings, to goods and services credits, or income received in the current account of the balance of payments. These are measures of the cost of servicing net foreign equity and net foreign debt borrowings from export income:

- In 2016-17 the net income to foreign equity ratio was -5.3%;
- In 2016-17 the net income to foreign debt ratio was -6.3%; and
- The net investment income ratio for foreign equity and foreign debt in 2016-17 was -11.6%.

The Terms of Trade

As discussed in Chapter 4 there has been a general trend improvement in Australia's terms of trade since 1999 which coincided with stronger world growth and the demand for commodities, particularly from China. The terms of trade measure the relative prices of Australia's exports and imports. A rise or favourable movement in the terms of trade occurs when export prices rise faster than import prices. This means that a greater volume of imports can be financed with a given volume of exports.

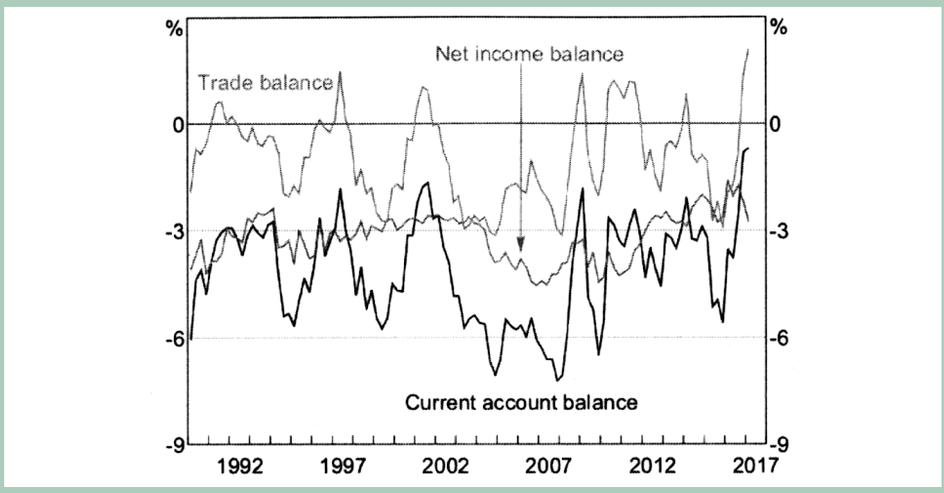
The most dramatic improvement in Australia's terms of trade occurred between 2004 and 2009, and 2010 and 2011, reflecting rising commodity export prices due to global resources booms. Another factor was the fall in some of Australia's import prices, such as ICT and capital goods due to the impact of globalisation in reducing production costs in low cost countries such as China, India and the NIEs.

With world economic growth averaging 5% between 2004 and 2007, the Reserve Bank of Australia's index of commodity prices increased by 17% in the year to July 2006. This followed an increase in the index by 23.6% in the year to July 2005. This was the highest level in the 23 history of the index and was mainly due to higher US dollar contract prices negotiated for iron ore and coking coal. Strong global demand, especially from China, led to surging prices for base metals and other resources in 2006, with the largest rises being for copper, nickel, gold and aluminium.

This trend changed dramatically in 2008-09 with weaker world economic growth and lower global commodity prices due to the impact of the Global Financial Crisis. Contract prices for coal, iron ore and other commodities fell by 40% in 2009, with a significant decline of 18% in Australia's terms of trade in 2008-09. However with global recovery, strong commodity demand from China, and rising contract prices for coal and iron ore, the terms of trade began to rise again in 2009-10 and 2010-11, but fell between 2012 and 2016 with slower world growth and substantial falls in commodity prices.

The main effect of the rising terms of trade on Australia has been the increase in export income in the balance of payments due to the higher prices of mineral exports. This reduced the goods deficit and led to surpluses in net goods in 2008-09, 2010-12, 2013-14 and 2016-17. The rise in the terms of trade provided stimulus to aggregate demand through rising incomes, increased investment and government taxation revenue. **Figure 10.2** shows the trends in the current account balance between 1990 and 2017. The trade balance moved into surplus in 2008-09 and 2010-11 because of rising commodity prices and increased exports of minerals, metals, LNG and oil. The terms of trade peaked in 2011, and the current account deficit widened from -3.4% of GDP in 2011-12 to -3.8% of GDP in 2015-16, mainly due to a large goods and services deficit of -$36.9b. This changed in 2016-17 with a trade surplus of $13.8b.

Figure 10.2: Australia's Current Account Balance 1990 to 2017 (% of nominal GDP)



Source: Reserve Bank of Australia (2017), Chart Pack, www.rba.gov.au.

The Exchange Rate

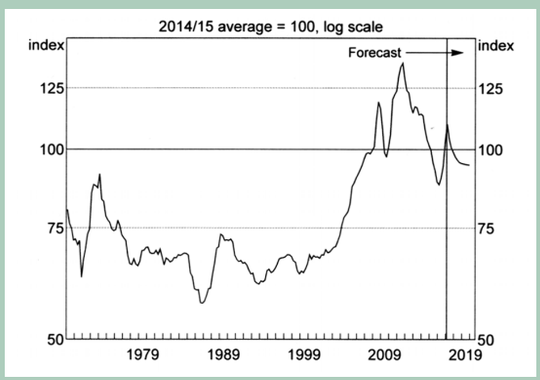
One of the major impacts of the resources boom and Australia's rising terms of trade was on the exchange rate. The Australian dollar appreciated against all major currencies such as the Yen, US dollar and Euro between 2000-01 and 2007-08 and in 2010-11 as global resources booms lifted commodity prices, resulting in a large rise in Australia's terms of trade and the demand for Australian dollars. The Australian dollar also appreciated in Trade Weighted Index terms. Sustained portfolio and direct investment also increased the demand for Australian dollars as foreign investors purchased shares and equity in the mining sector in search of high returns in terms of increased dividend and profit income.

Figure 10.3 shows the trend appreciation of the real exchange rate relative to the rise in the terms of trade between 2002 and during 2008, before a sharp depreciation in October 2008, due to the Global Financial Crisis and global recession. However the terms of trade rose again in 2010-11 with global economic recovery, and the exchange rate continued to appreciate. This led to a reduction in Australia's international competitiveness in manufactured, tourism and education exports. Between 2012 and 2016 the terms of trade fell by 35% and the exchange depreciated helping to restore competitiveness.

Figure 10.3: The Real Exchange Rate and the Terms of Trade

The Real Exchange Rate (real TWI)

The Terms of Trade



Source: Reserve Bank of Australia (2017), Chart Pack, www.rba.gov.au.

International Competitiveness

Movements in the exchange rate for the Australian dollar against the currencies of Australia's trading partners influence international competitiveness. Australia became less internationally competitive between 2003 and 2007 and in 2010-11 because of the appreciation of the real exchange rate as shown in **Figure 10.3**. Manufactured export volumes fell as did service exports such as travel, tourism and education. These export categories showed little growth due to a lack of price competitiveness in export markets. However the appreciation of the exchange rate did not impact adversely on resource exports of minerals, metals and energy products. Strong demand from China and other fast growing emerging economies underpinned higher resource export prices as well as export volumes. This was particularly the case for coal, iron ore, gold and LNG exports and led to a continuation of high levels of investment in resource projects to boost production capacity in the mining and energy sector of the economy.

The impact of the Global Financial Crisis in 2007-08 led to a depreciation in the real exchange rate, helping to lift competitiveness through a lower exchange rate. Another depreciation occurred between May 2010 and July 2010 because of the impact of the European Sovereign Debt Crisis (on foreign exchange and financial markets), and the proposed Resource Super Profits Tax (RSPT) on mining companies' profits which weakened investor sentiment. However the Australian dollar recovered value in late 2010 and during 2011, traded at around US$1.05, well above its post 1983 average of US$0.75. However in 2015-16 the Australian dollar depreciated to US$0.75 due to slower world growth, lower world commodity prices, a lower terms of trade and cuts to official interest rates by the Reserve Bank.

TRENDS IN THE CURRENT ACCOUNT DEFICIT, NET FOREIGN DEBT AND NET FOREIGN LIABILITIES

Table 10.2 shows the growth in the current account deficit, net foreign liabilities and net foreign debt between 1989-90 and 2016-17. The current account deficit was -$22.3b or -6% of GDP in 1989-90, and grew to -$29.4b in 2016-17 but fell to -2.1% of GDP. To finance the growth in successive current account deficits, net foreign liabilities (i.e. net foreign equity plus net foreign debt borrowings) grew from $170b (46% of GDP) in 1989-90, to $1,000.2b (59.5% of GDP) by 2016-17. Net foreign debt grew from $117b (32.9% of GDP) in 1989-90, to $990.5b or 58.9% of GDP by 2016-17.

Table 10.2: Recent Trends in the Current Account Deficit, Net Foreign Debt and Net Foreign Liabilities 1989-90 to 2016-17

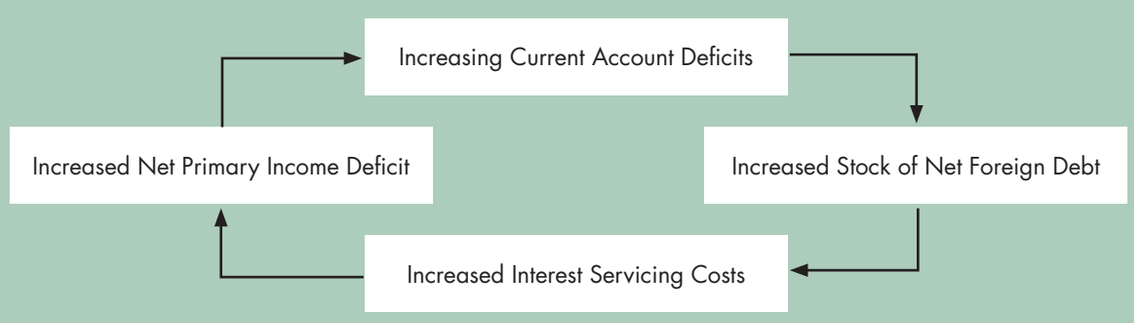
	1989-90	*2016-17*
Current Account Deficit -	$22.3b (-6% of GDP)	-$29.4b (-2.1% of GDP)
Net Foreign Liabilities	$170b (46% of GDP)	$1,000.2b (59.5% of GDP)
Net Foreign Debt	$117b (32.9% of GDP)	$990.5b (58.9% of GDP)

The **servicing cost of net foreign debt** requires interest payments abroad which are recorded as net primary income debits in the current account. Since the 1980s, Australia's private foreign debt has risen substantially, with the accumulation of debt accentuated by the 'debt for equity swap' that prevailed in the 1980s, when private sector businesses preferred to borrow overseas (because of lower interest rates and tax deductions for interest payments) rather than by using equity borrowings. The increase in net primary income payments overseas was a reflection of this rising debt servicing burden on Australia.

The financing of successive current account deficits by borrowing debt overseas sets up a requirement for continued interest payments to overseas creditors. At the end of the 1970s interest payments abroad stood at 2.5% of export earnings, but peaked in 1989-90 at around 20% of export earnings. This debt servicing cost can in turn lead to a further deterioration in the current account balance. If the current account deficit continues to grow, more overseas borrowing may be required, and a **current account deficit-foreign debt cycle** may become self perpetuating as illustrated in **Figure 10.4**.

Only successive reductions in/or stabilisation of the current account deficit and the retirement (repayment) of foreign debt obligations can correct this cycle. This is why Australia cannot sustain a rate of economic growth in excess of 5% if the current account deficit rises to over -5% of GDP, since the debt servicing obligation becomes greater than the capacity of the economy to increase its income, without leading to a rise in import spending, and a further deterioration in the current account deficit. The current account deficit was sustainable at -2.1% of GDP in 2016-17 as exports of goods and services rose due to stronger world growth and commodity prices, which also resulted in a higher terms of trade and export income.

Figure 10.4: The Current Account Deficit – Net Foreign Debt Cycle



The Pitchford Thesis: The Financial Account 'Drives' the Current Account

In the 1990s an alternative analysis of the current account deficit by Professor John Pitchford from ANU was that the current account deficit was a result of the capital and financial account surplus. This surplus sets up a high servicing cost in terms of interest, profit and dividend payments remitted overseas which increases the size of the net primary income deficit and the current account deficit. Rising current account deficits increase the need for foreign borrowings which increases the size of the net foreign debt. Professor Pitchford argued that this was not necessarily a problem if the funds borrowed were invested in export industries, which would increase export income in the future. Successive Australian governments have largely accepted the '**Pitchford thesis**' that the current account deficit reflects private saving and investment decisions and that the current account deficit is sustainable if borrowings are invested in income earning exports (such as mining) rather than being spent on domestic consumption.

THE CAUSES OF THE CURRENT ACCOUNT DEFICIT

The growth in the size of Australia's current account deficit in both nominal dollar terms and as a percentage of GDP can be attributed to a number of factors operating in the 1980s, 1990s and 2000s:

- The growth in foreign borrowings (both private and public) during the 1980s: Foreign debt replaced equity investment as the main source of foreign capital in the 1980s, raising the size of the net income deficit through higher interest payments overseas. However in the 1990s there was a switch from the reliance on foreign debt to foreign equity borrowings as a source of foreign capital.
- The higher public sector borrowing requirement (PSBR), or the public sector underlying deficit (PSUD) of the early 1980s and 1990s: this led to higher foreign borrowing by Public Trading Enterprises (PTEs), which increased the net income deficit through higher interest payments.
- High inflation and lower international competitiveness in the 1980s reduced Australia's export income relative to import spending, leading to deficits in the goods balance in the current account.
- The collapse in Australia's terms of trade during the mid 1980s and late 1990s resulted in falling commodity prices, which reduced Australia's export earnings and raised the cost of imports.
- The saving/investment gap and spending/output gap: the current account deficit is associated with domestic savings being unable to finance all of domestic investment, requiring a reliance on foreign saving through foreign borrowing. Gross national expenditure (GNE or C + I + G) also exceeds Gross Domestic Product or output (C + I + G + X - M). The difference between GNE and GDP is net exports (X - M), which is equivalent to the size of the current account deficit.
- The lowering of protective barriers to trade (e.g. tariffs and quotas) in the 1980s, 1990s and 2000s, coupled with the growth of domestic demand, led to increased import volumes and import penetration in the Australian economy. This led to increased import spending relative to the growth in export earnings, worsening the deficit in the goods balance in the current account.
- The deteriorating state of the global economy: widespread recession in the Asian region reduced Australia's commodity and service exports in 1997-98, and led to a large increase in the goods deficit, increasing the size of the current account deficit as a percentage of GDP. The US and global slow downs between 2001 and 2003 also led to a rise in the goods and services deficit to -$46b.
- The depreciation of the Australian dollar (particularly against the US dollar) between 2000 and 2002 led to increased debt servicing costs, with about 40% of Australia's net foreign debt denominated in foreign currency loans (e.g. $US and Yen). This led to increased interest payments and a higher net primary income deficit. To minimise exchange rate risk most foreign currency denominated borrowings are now hedged back into Australian dollars.
- The impact of the drought in 2002-03 reduced farm exports, as did the slowdown in world economic growth. The goods and services balance recorded a deficit of -$22b in 2003-04 and led to a rise in the current account deficit from -$37.8b in 2002-03 to -$57b in 2004-05. The global resources boom in 2004-08 led to higher mineral exports, helping to halt the rise in the deficit.

THE CAUSES OF THE NET FOREIGN DEBT

Factors contributing to the growth in the net foreign debt in the 1980s, 1990s and 2000s included:

- Persistent and increasing current account deficits throughout the 1980s, 1990s and 2000s, required financing through higher levels of overseas debt and equity borrowings;
- The shift from equity financing to debt financing during the 1980s (after deregulation of the financial system which made it easier and cheaper to borrow overseas) led to a build up in net foreign debt. The private sector now accounts for around 60% of Australia's net foreign debt;
- The outflow of equity investment from Australia to overseas economies during the 1980s was largely financed through overseas debt borrowings, which accelerated the private sector's share of Australia's total net foreign debt;
- The long term depreciation of the Australian dollar against other OECD currencies increased the size of the net foreign debt, since 40% of the net foreign debt is denominated in foreign currencies. This is the valuation effect of currency depreciation on the net foreign debt;
- The decline in domestic saving, both private and public, in the 1980s led to increased reliance on foreign saving (mainly through overseas debt borrowings) to finance domestic investment; and
- Federal budget deficits in the 1980s, early 1990s, and after the GFC in 2008, and other public sector borrowings, led to the public sector accounting for up to 40% of the total net foreign debt.

REVIEW QUESTIONS

MEASUREMENT AND TRENDS IN THE CURRENT ACCOUNT DEFICIT, NET FOREIGN LIABILITIES AND NET FOREIGN DEBT

1. Explain the main components of exports and imports in the five sector circular flow of income model.
2. Discuss the factors influencing Australia's export and import demand.
3. Refer to Figure 10.1 and explain how external stability or external balance is achieved in the five sector circular flow of income model.
4. How are the relative size of the current account deficit, net foreign liabilities and net foreign debt measured in terms of national output or GDP?
5. Discuss the trends in the size of the current account deficit, net foreign liabilities and net foreign debt (in nominal dollar terms and as a percentage of GDP) between 2007-08 and 2016-17 by referring to the data in Table 10.1.
6. Discuss the impact of Australia's rising terms of trade on the current account deficit during the resources booms between 2003 and 2008 and in 2010-11.
7. Discuss the impact of the rising terms of trade during the resources boom on the exchange rate.
8. Discuss the impact of the appreciation in the Australian dollar during the resources boom on Australia's international competitiveness.
9. Refer to Table 10.2 and Figure 10.4 and explain the relationship between the growth in the current account deficit, net foreign liabilities and net foreign debt between 1989-90 and 2016-17.
10. Discuss the causes of the growth in the current account deficit in the 1980s, 1990s and 2000s.
11. Discuss the causes of the growth in the net foreign debt in the 1980s, 1990s and 2000s.

The Structural Problem of Low National Saving

The structural problem in the Australian economy causing the persistent current account deficit is the **shortfall of national savings in relation to domestic investment**. National saving is equivalent to private saving (households and corporations) plus public saving (governments). National saving declined from 30% of GDP in the 1960s to around 20% of GDP by the late 1990s and mid 2000s, whilst national investment fluctuated between 30% and 25% of GDP in the same period (refer to **Figure 10.5**). This led to the increasing reliance on foreign saving to finance that part of national investment not financed by national saving. Public saving deteriorated in the recession of the early 1990s to less than 5% of GDP, whilst private saving fell from 20% of GDP in the 1970s to 15% by the late 1990s.

The Australian government tried to achieve budget surpluses in the late 1980s because many economists argued that a rise in public sector saving could help to reduce the current account deficit and foreign debt. This was based on the '**twin deficits**' **hypothesis** as illustrated in equations (1), (2) and (3):

(1) $Y = C + I + G + (X - M)$ (i.e. the sources of national income or GDP)
(2) $Y = C + S + T$ (i.e. the uses of national income or GNE)

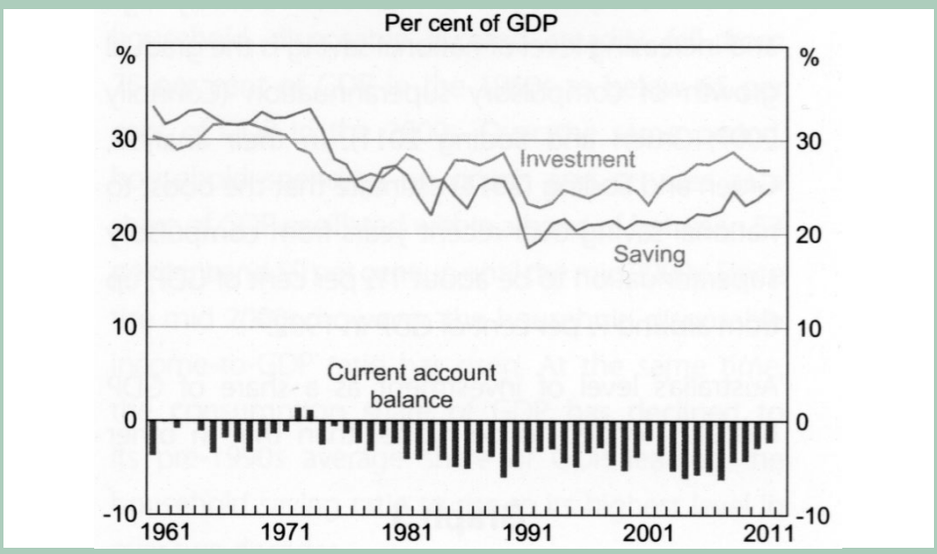
If we subtract equation (2) from equation (1) and rearrange terms, we get equation (3):

$$Y - Y = C - C + (I - S) + (G - T) + (X - M)$$
$$0 = (I - S) + (G - T) + (X - M)$$

(3) $S - I = (G - T) + (X - M)$
i.e. Saving - Investment = Budget Deficit + Current Account Deficit

Equation (3) suggests that the difference between saving and investment is equivalent to the sum of the difference between government spending and revenue (i.e. the budget deficit) plus the difference between exports and imports (i.e. the current account deficit). It was argued that a means of reducing the current account deficit was to reduce the size of the budget deficit. The federal government achieved budget surpluses in the late 1990s and throughout the 2000s up until the Global Financial Crisis in 2008. At the same time the national saving rate has trended higher in recent years (refer to **Figure 10.5**) as households and the corporate sector have increased their saving, offsetting the decline in public saving due to budget deficits after the GFC. The higher rate of national saving funded much of the increase in mining investment and led to lower current account deficits between 2009-10 and 2011-12.

Figure 10.5: Trends in National Saving and Investment 1961-2011



Source: Reserve Bank of Australia (2012), *Bulletin*, March Quarter.

The ***FitzGerald Report on National Saving*** (1993) recommended that the government eliminate its budget deficit, and reform the tax system as a means of boosting national savings, through greater incentives for private saving. The Hawke government introduced the **Superannuation Guarantee Levy** (SGL) in 1991 to encourage the spread of compulsory superannuation to help raise private saving. The compulsory levy of 9.5% of gross earnings of employees paid into superannuation accounts had led to the accumulation of over $2,100b in superannuation funds for retirement as of June 30th 2016. The Howard government, elected in 1996, implemented a number of the *FitzGerald Report's* other recommendations, designed to raise national saving such as the following:

- Eliminating the Commonwealth budget deficit and returning the budget to surplus. Budget surpluses lifted public savings and reduced the public sector's call on private savings.
- Reducing the Commonwealth's general government net debt to GDP ratio from 20% in 1995-96 to 1.3% by 2004-05 through the proceeds or revenue gained from the privatisation of a number of Public Trading Enterprises (PTEs) as well as accumulated budget surpluses.
- Introducing measures to increase private saving such as tax rebates for private savings; an extensive retirement incomes policy; taxation reform measures in budgets between 2000 and 2007, such as introducing the GST and cutting marginal tax rates (MTRs) to boost private saving; and the elimination of taxation on superannuation in the 2006 budget for retirees reaching 60.

Australia also has a relatively high level of investment as a share of GDP compared with other advanced economies. Private business investment accounts for over half of national investment on average and in the resources boom private business investment reached historic highs of 15%-20% of GDP, with public investment in infrastructure accounting for an average of 5% of GDP. The growth in Australian private and public investment has been driven by strong investment in the mining sector in terms of new projects for LNG and an expansion of existing iron ore and coal projects. Mining investment was estimated to account for 8% of GDP in 2012, more than double its share in previous mining booms.

The Current Account Balance and National Saving and Investment

Between 2005-06 and 2008-09 the current account deficit was affected positively by Australia's rising terms of trade. The trade balance improved because of the increased volume and value of mineral and resource exports, although the net primary income deficit continued to widen, reflecting robust growth in the remittance of mining profits and rising net interest payments because of the rising stock of net foreign debt. Overall the current account deficit was relatively stable at or under -5% of GDP, reflecting some improvement in the trade balance but continued growth in the net primary income deficit.

In terms of Australia's net lending position (i.e. the difference between national gross saving and investment), recent changes have occurred in the net lending position of various sectors in the economy:

- Households have historically been net lenders, but between the 1980s and 2000s shifted to a net borrowing position, particularly in 2002-03 to fund spending on housing. Higher interest rates led households to reduce their borrowings between 2003 and 2014 and increase their saving ratio to 11% by 2013-14. This was partly a response to the GFC in 2008-09 as households reduced their levels of debt and increased their level of precautionary saving. However this behaviour changed in 2016-17 as households increased borrowing for housing and the saving ratio declined to 5%.
- The government sector has increasingly become a net lender, with rising general government saving due to the accumulation of budget surpluses, more than offsetting government investment. However the return to budget deficits between 2008-09 and 2010-11 due to the impact of the Global Financial Crisis on taxation revenue and government expenditure reversed this trend, and the government sector has become a net borrower of funds in financial markets between 2008 and 2017 because of rising budget deficits and levels of public debt.
- The business sector has remained a net borrower of funds reflecting high rates of investment, particularly in the mining and energy sectors as well as investment in ICT goods.

THE EFFECTS OF THE CURRENT ACCOUNT DEFICIT AND NET FOREIGN DEBT

Australia had the third highest current account deficit as a percentage of GDP (-2.7%) compared to the OECD Major 7 countries in 2015-16 (see **Table 10.3** on page 236). The economic effects of Australia's large current account deficit and net foreign debt include the following:

- Persistent current account deficits which are financed by foreign debt and foreign equity borrowings increase the size and servicing cost of net foreign liabilities (i.e. debt plus equity borrowings) in the future, leading to a larger net primary income deficit in the current account. This leads to an ongoing current account deficit problem, especially if borrowings are used for consumption rather than investment in exports. If there is a bias towards foreign debt borrowings, Australia runs the risk of a current account deficit-foreign debt accumulation cycle as depicted in **Figure 10.4** (page 230), with a larger stock of net foreign debt needed to finance persistent current account deficits.
- A persistent current account deficit and large foreign debt increase the exposure of the Australian economy to external shocks such as terms of trade collapses (e.g. those in 1986, 1997 and 2015), which may reduce export income and increase the servicing cost of the foreign debt out of current export income. It also increases the possibility of capital outflows if foreign investors or lenders lose confidence in the Australian economy and the government's ability to manage the current account deficit. Foreign investors may withdraw part or all of their investment in Australia or raise interest rates on foreign loans to minimise the risks of lower investment returns and a potential depreciation in the exchange rate. If this happens, Australian businesses may pay a higher interest rate and therefore a higher cost of capital if they borrow overseas to finance investment projects.
- Australia is more susceptible to exchange rate fluctuations, which may lead to valuation effects on the foreign debt. If a depreciation occurs because of a higher current account deficit, there is a valuation effect on that part of the net foreign debt denominated in foreign currencies, with more Australian dollars having to be paid back to foreign lenders. Depreciation can also lead to higher domestic inflation as import prices will rise. Since imports account for around 40% of the goods and services in the CPI basket, higher import prices may raise headline and underlying inflation.
- Exposure to a high level of net foreign debt liabilities could lead to a downgrading of Australia's AAA credit rating by international ratings agencies such as Moody's, and Standard and Poors, making future foreign borrowings more costly. This occurred in the late 1980s after Australia's current account deficit and level of foreign borrowings increased dramatically. It became more difficult and costly for Australian firms to borrow funds in overseas financial markets. The response to this was a shift to more equity financing in the 1990s, from the trend towards debt financing in the 1980s. Foreign equity investment was encouraged in Australia by governments in the 1990s and 2000s and led to an upgrading of Australia's international credit rating by ratings agencies.
- Tighter monetary policy in the form of higher interest rates may be needed to slow down economic growth in Australia to reduce the demand for imports if GNE (spending) growth exceeds the growth in GDP (output). Higher interest rates may lead to falling output and investment, and also cause higher unemployment. A larger current account deficit can be an external constraint to domestic economic growth, if the economy's 'speed limit' to growth is determined by external factors rather than resource availability and productivity within the Australian economy.
- The settings of Australian macroeconomic and microeconomic policies had to be changed in the 1980s and 1990s to promote structural adjustment in response to growing external imbalances. Fiscal policy was directed at raising national saving through balancing the federal budget and retiring public debt. Monetary policy was conducted through the use of an inflation target to maintain Australia's international competitiveness. Various microeconomic reforms were also implemented to promote competitiveness, such as tariff reform and the introduction of enterprise agreements in the labour market to link wage outcomes to improvements in labour productivity.

Table 10.3: Selected Current Account Balances 2007-08 to 2015-16 (% of GDP)

	07-08	*08-09*	*09-10*	*10-11*	*11-12*	*12-13*	*13-14*	*14-15*	*15-16*
USA	-5.0	-4.2	-2.9	-3.0	-3.0	-2.7	-2.2	-2.2	-2.4
Japan	+4.7	+3.1	+3.0	+3.7	+2.0	+1.1	+0.5	+0.8	+3.7
Germany	+7.7	+6.2	+5.6	+6.2	+6.8	+7.5	+7.0	+7.2	+8.3
France	-1.2	-2.3	-1.4	-1.3	-1.8	-2.2	-1.0	-0.9	-0.9
Italy	-2.6	-3.6	-2.4	-3.4	-3.0	-0.3	+2.0	+1.8	+2.6
UK	-2.4	-1.6	-2.0	-2.7	-1.5	-3.8	-5.4	-4.6	-4.4
Canada	+1.0	-0.1	-3.0	-3.5	-2.8	-3.4	-3.0	-2.3	-3.3
Australia	-6.1	-4.0	-4.2	-3.5	-2.8	-4.2	-3.0	-3.6	-2.7

Source ABS (2017), *OECD Statistics*, www.oecd.org

Table 10.3 shows the current account balances for Australia and the Group of Seven (G7) major industrial economies between 2007-08 and 2015-16. Japan, Germany and Italy tend to record current account surpluses whilst Australia, the USA, France, the UK and Canada generally record current account deficits. Australia's current account deficit was -6.1% of GDP in 2007-08 because the net primary income deficit widened due to increased remittances of profits, dividends and interest. This reflected an increase in overseas borrowings of debt and equity finance, to finance much of the mining boom. This in turn led to a build up in Australia's net foreign liabilities and net foreign debt and increased the servicing costs of external liabilities. Australia's current account deficit tended to fall between 2008-09 and 2015-16 due to an improved trade performance through increased mineral and resource exports.

The current account deficit was more sustainable between 2008-09 and 2013-14 due to increased exports to China and other emerging economies after the Global Financial Crisis. Between 2010-11 and 2012-13 the current account deficit was sustainable at between -3.5% and -4.2% of GDP because of a large goods and services surplus of $21.3b in 2010-11. A trade surplus of $8b helped to keep the current account deficit to -3% of GDP in 2013-14 but it rose to -3.6% of GDP in 2014-15 as exports fell due to lower world growth, but then fell to -2.7% of GDP in 2015-16 as export growth recovered.

POLICIES TO REDUCE THE CURRENT ACCOUNT DEFICIT

The Australian government has used a combination of macroeconomic (i.e. monetary and fiscal policies) and microeconomic policies to try to reduce the size of the current account deficit to under -5% of GDP. This is the condition for achieving sustainability in the growth of the current account deficit.

Monetary policy is conducted by the Reserve Bank of Australia and is used to control CPI inflation and to provide an anchor for inflationary expectations. This is achieved through the use of an inflation target of 2% to 3% consumer price inflation over the economic cycle. Keeping inflation within the target band is important for maintaining the competitiveness of Australia's export and import competing industries, which are vital for reducing the size of the current account deficit. Contractionary monetary policy can also be used to reduce the growth in import spending if the current account deficit becomes unsustainable (> -5% of GDP). Higher interest rates would reduce import spending and stabilise the current account deficit but could be at the cost of lower economic growth and higher unemployment.

The Australian government has tended to mainly use fiscal policy to reduce the size of the current account deficit. Fiscal policy had a medium term focus of raising public saving through the accumulation of underlying budget surpluses between 1998 and 2008. Budget surpluses helped to eliminate the public sector's call on national saving through the retirement of public debt. This helped to reduce that part of the net foreign debt owed by the Australian government. However the return to budget deficits during and after the GFC has led to increased government overseas borrowing to fund accumulated deficits.

In terms of microeconomic policies the Australian government has used various microeconomic reforms in the longer term to improve the economy's level of allocative efficiency and productivity. For example, industrial relations policy is important in linking wage movements to improvements in productivity at the workplace. This helps to contain wage expectations and encourages firms to adopt competitive labour and management practices which are essential for firms exporting to the global market. Labour market reforms such as the *Workplace Relations Act 1996*, the *Workplace Relations Amendment Act 2006* and the *Fair Work Act 2009* have all placed an emphasis on productivity based wage bargaining.

Microeconomic reforms in infrastructure industries such as electricity, transport, water, gas and telecommunications have also been critical in reducing input costs for Australian industry and assisting in the improvement of international competitiveness, export growth and productive capacity over time.

Other important microeconomic reforms include the national competition policy and the cuts to industry protection, which have increased the level of competition in the Australian economy. More competitive domestic industries help to boost exports as a share of GDP, thereby reducing the trade deficit and the size of the current account deficit. Industry policy also has a role to play in encouraging innovation, risk taking and investment in research and development, which the Australian government believes are essential for building world competitive firms and increasing Australia's exports.

REVIEW QUESTIONS

LOW NATIONAL SAVING AND THE EFFECTS OF THE CURRENT ACCOUNT DEFICIT AND NET FOREIGN DEBT

1. What is meant by national saving? Refer to Figure 10.5 and discuss the trends in national saving and investment between 1961 and 2011.
2. Explain what is meant by the Twin Deficits hypothesis.
3. How does the Twin Deficits hypothesis suggest that the current account deficit can be reduced?
4. How did Australian governments use macroeconomic policy to reduce the current account deficit in the 1990s when it became unsustainable?
5. What measures did the Australian government take to raise national saving as suggested by the *FitzGerald Report* in 1993?
6. Discuss the economic effects of the current account deficit and the net foreign debt in terms of debt servicing costs, the stability of the exchange rate and the conduct of government economic policy.
7. Refer to Table 10.3 and compare the size of Australia's current account balance with other major industrial countries between 2007 and 2016. Discuss the policies that have been used by the Australian government to reduce the size of the current account deficit.
8. Define the following terms and add them to a glossary:

budget deficit	national investment	private saving
budget surplus	national saving	public saving
current account deficit	net foreign debt	saving-investment balance
exports	net foreign debt cycle	saving ratio
external balance	net foreign equity	spending-output gap
foreign saving	net foreign liabilities	superannuation
imports	Pitchford thesis	twin deficits hypothesis

CHAPTER 10: SHORT ANSWER QUESTIONS

Year	*Real GDP ($m)*	*Current Account Deficit ($m)*	*Net Foreign Liabilities ($m)*	*Net Foreign Debt ($m)*
2009-10	$1,293,380m	-$56,018m	$777,864m	$686,084m
2010-11	$1,399,071m	-$34,384m	$802,412m	$685,909m
2011-12	$1,486,071m	-$50,420m	$879,520m	$756,183m
2012-13	$1,523,691m	-$60,309m	$816,937m	$762,173m
2013-14	$1,568,533m	-$47,056m	$864,243m	$865,462m
2014-15	$1,595,851m	-$56,979m	$905,996m	$976,056m
2015-16	$1,660,145m	-$72,828m	$1,035,858m	$1,044,505m

Source: ABS (2016), *Balance of Payments and International Investment Position*, Catalogue 5302.0, June.

Refer to the table of data above for real GDP, the current account deficit, net foreign liabilities and net foreign debt for Australia between 2009-10 and 2015-16 and answer the questions below. Marks

1. Define the term 'current account deficit'. (1)

2. Calculate the current account deficit as a percentage of real GDP in 2015-16. (1)

3. Explain the relationship between the current account deficit and net foreign liabilities. (1)

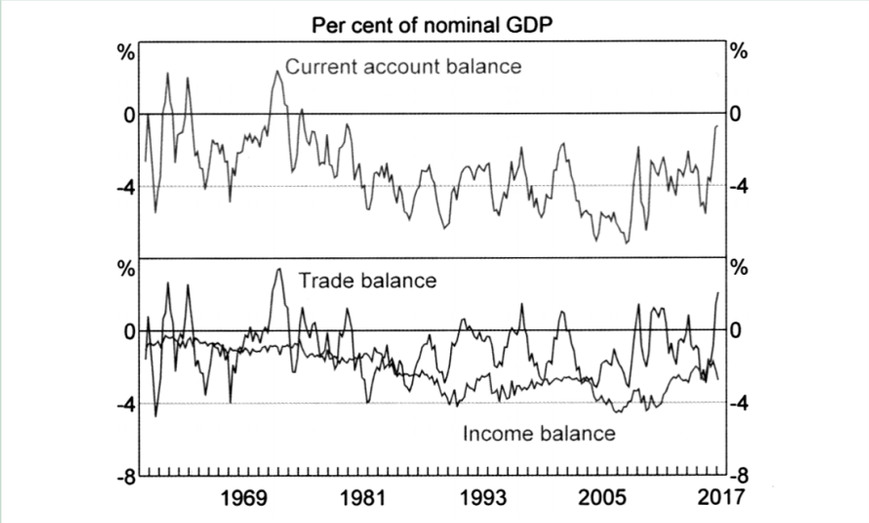
4. Outline the TWO components of net foreign liabilities. (2)

5. Explain TWO reasons for the growth in the net foreign debt between 2009 and 2016. (2)

6. Discuss THREE effects of the current account deficit on the Australian economy. (3)

CHAPTER FOCUS ON EXTERNAL STABILITY

Australia's Current Account Balance 1960 to 2017



"The difference between Australia's saving and investment rates has narrowed markedly in recent years, such that the current account deficit (as a ratio to GDP) is around its lowest level since 1980. The trade surplus increased further in the March quarter owing to higher export revenues from the increase in commodity prices in late 2016 and early 2017. This was partly offset by a widening in the net income deficit which comprises payments made on Australia's net foreign liabilities."

Source: Reserve Bank of Australia (2017), *Statement on Monetary Policy*, August.

Explain the main components of Australia's current account deficit. How is the size of the current account deficit linked to the difference between Australia's saving and investment?

CHAPTER 10: EXTENDED RESPONSE QUESTION

Explain the main causes of Australia's current account deficit and net foreign debt and analyse government policies to reduce the current account deficit as a percentage of GDP.

CHAPTER SUMMARY

EXTERNAL STABILITY

1. External stability is a major objective of macroeconomic policy. External stability is achieved when a country such as Australia is able to finance its import expenditure with its export income. Other aspects of external stability are containing the current account deficit to under -5% of GDP, ensuring the servicing cost of net foreign liabilities is met, and the exchange rate is relatively stable over time.

2. Measures of external stability include the following:
   - Current account deficit/GDP ratio — This was -2.1% of GDP in 2016-17
   - Net foreign liabilities/GDP ratio — This was 59.5% of GDP in 2016-17
   - Net foreign debt/GDP ratio — This was 58.9% of GDP in 2016-17

3. Historically Australia has recorded persistent current account deficits in the balance of payments. Since the 1980s there has also been an accompanying increase in net foreign liabilities and the level of net foreign debt which involve a servicing cost (interest) out of current export income.

4. The major causes of Australia's persistent current account deficit are both cyclical and structural. In cyclical terms Australia's export income is on average not sufficient to finance import expenditure. The balance on goods is usually in deficit and this deficit increases if world growth slows and/or drought impacts on farm exports. The major structural factor influencing the current account deficit is the large net primary income deficit, which is a reflection of the servicing cost of Australia's large level of net foreign liabilities which include debt and equity borrowings from overseas.

5. Trends in Australia's terms of trade, the exchange rate and international competitiveness can exert a strong influence on the size of the current account deficit over time.

6. Australia's large level of net foreign debt is a result of past and present borrowings to finance persistent current account deficits. Since national saving is insufficient to finance all of national investment, some funds must be borrowed from overseas to meet this savings-investment gap.

7. The structural problem of low national savings in Australia is a reflection of both low private and public savings. *The FitzGerald Report* in 1993 recommended that the government eliminate its budget deficit and increase the incentives for private saving to boost national saving.

8. Under the Howard government from 1996 to 2007, the level of fiscal responsibility was increased through the *Charter of Budget Honesty Act* which set an objective of balancing the federal budget over the economic cycle. Consecutive budget surpluses were used to eliminate public debt and boost public savings. The government also increased the incentives for private saving through changes to superannuation and cuts to personal income tax in federal budgets over 2000-08.

9. The effects of the current account deficit and net foreign debt on the economy are numerous:
   - The economy has a large net primary income deficit in the balance of payments, which reflects the servicing cost of past borrowings and adds to the size of the current account deficit;
   - The economy is more exposed to external shocks such as a slowdown in world growth, or a collapse in the terms of trade, which can reduce export income and increase the size of the current account deficit and level or stock of net foreign debt;
   - The exchange rate is subject to depreciation if foreigners holding debt lose confidence in Australia's ability to service the debt and may withdraw their capital from Australia; and
   - The government may need to tighten monetary policy by raising interest rates to reduce economic growth and import demand if the current account deficit becomes unsustainable. This could cause the rate of economic growth to fall and the rate of unemployment to rise.

Chapter 11

Distribution of Income and Wealth

THE MEASUREMENT OF THE DISTRIBUTION OF INCOME

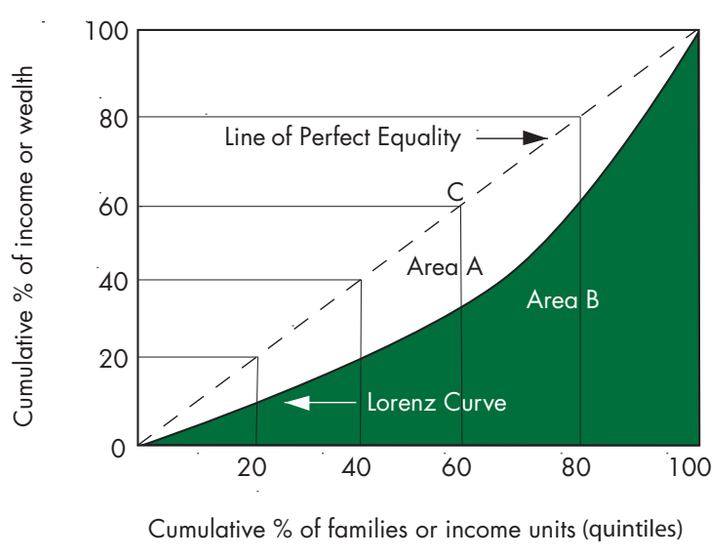
Economists measure the distribution of income and wealth by constructing a **Lorenz Curve** (Max Lorenz, USA, 1905) which graphs the income shares for equal groupings of the population or income units (such as 20% quintiles) as shown in **Figure 11.1**. The Lorenz Curve has four important properties:

1. It begins at zero, with zero families earning no income or wealth (refer to the bottom left hand corner of **Figure 11.1**).
2. It ends where 100% of families earn 100% of all income or wealth (refer to the top right hand corner of **Figure 11.1**);
3. The line of perfect equality is a diagonal line showing that the bottom 20% of families account for 20% of all income; the next 20% of families receive 20% of all income; 60% of all families receive 60% of total income (i.e. point C in **Figure 11.1**) and so on.
4. In reality there are significant differences in the market distribution of income and wealth in economies, so the Lorenz Curve will lie below the line of perfect equality (see **Figure 11.1**).

The size of the area between the line of perfect equality and the Lorenz Curve (Area A) is used as a measure of inequality. Any change in the distribution of income or wealth causing the Lorenz Curve to shift inwards (to the left) would indicate reduced inequality. An outward shift (to the right) of the existing Lorenz Curve would represent increased inequality. The **Gini co-efficient** (Corrado Gini, Italy, 1912) is a mathematical expression of the degree of income or wealth inequality. It is calculated by comparing Area A in **Figure 11.1** with the total area of the triangle bounded by the line of perfect equality and the income and wealth, and income units axes (Area A + Area B) as follows:

$$\text{Gini co-efficient} = \frac{\text{Area A}}{\text{Area A + Area B}}$$

Figure 11.1: The Lorenz Curve



If there was **perfect equality**, Area A would not exist and the Gini co-efficient (GC) would be zero i.e.

$$\text{Gini co-efficient} = \frac{0}{0 + B} = 0 \quad \text{(i.e. if the GC is equal to 0 there is perfect equality)}$$

If there was **perfect inequality**, the whole right side triangle would be equal to Area A, and the value of the Gini co-efficient would be equal to one i.e.

$$\text{Gini co-efficient} = \frac{A}{A + B} = \frac{1}{1 + 0} = 1 \quad \text{(i.e. if the GC is equal to 1 there is perfect inequality)}$$

Therefore the Gini co-efficient has a value ranging between zero (perfect equality) and one (perfect inequality). An increasing Gini co-efficient (0 to 1) indicates increasing inequality or decreasing equality, whereas a decreasing Gini co-efficient (1 to 0) denotes increasing equality or decreasing inequality.

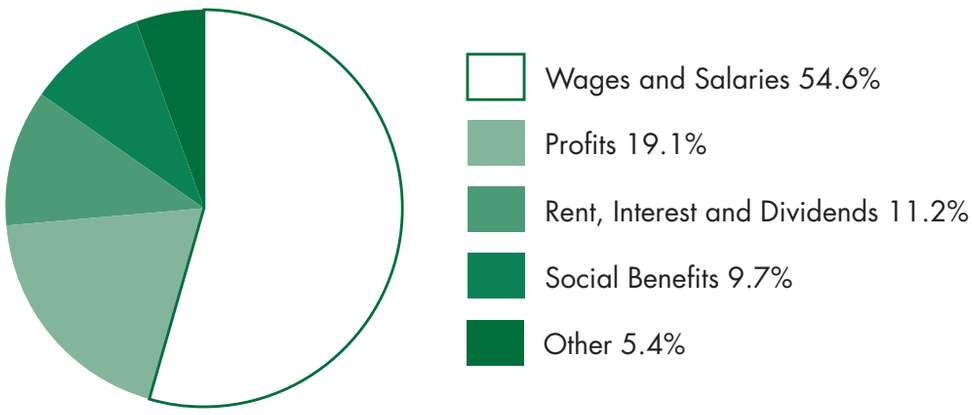
THE SOURCES OF INCOME

Personal income refers to the money and the value of benefits in kind received by individuals during a period of time, in return for their factors of production (i.e. land, labour, capital and enterprise), or as government transfer payments such as pensions, job search allowances and other forms of welfare. The main forms of **earned personal income** include wages and salaries from the contribution of labour to production. The main forms of **unearned personal income** include rent from the use of land, interest on capital, and profit from business enterprises. Income is a **flow concept** in economics, as it can vary over time according to a person's contribution to production and changes in personal circumstances.

Figure 11.2 shows that the main sources of household income in Australia in 2015-16 were wages and salaries (54.6%), profits (19.1%), property income (11.2%) and social benefits (9.7%). **Table 11.1** lists the dollar values of all the main sources of income from the household income account compiled by the ABS for 2015-16, with total gross income increasing by 3.7% between 2014-15 and 2015-16.

Wages and salaries and supplements (e.g. allowances and superannuation), termed as 'compensation of employees', accounted for 54.6% of total gross income in 2015-16. Gross operating surplus and mixed income is the income from the profits generated by private incorporated and unincorporated trading enterprises and was 19.1% of total gross income in 2015-16. Property income is the rent, interest and dividends received by households (e.g. landlords, lenders and shareholders) and was 11.2% of total gross income in 2015-16. A majority of rental, interest and dividend income is received by self funded retirees, not reliant on government social benefits for income. The mains trend in the sources of income in 2015-16 was very moderate growth in wages and salaries of 3.2% whilst profits grew by 7.5%. The wages and salaries share has declined relative to the profit share of national income in recent years.

Figure 11.2: Sources of Household Income in Australia 2015-16



Source: ABS (2017), *Australian National Accounts*, Catalogue 5206.0, March, Table 35.

Table 11.1: The Sources of Household Income in Australia 2015-16

	Annual $m	*% of Total Gross Income*	*%△ from 2014-15*
Compensation of employees (wages and salaries)	803,218	54.6	3.2
Gross operating surplus and mixed income (profits)	280,488	19.1	7.5
Property Income (rent, interest and dividends)	165,773	11.2	1.0
Social Benefits Receivable (social welfare)	142,083	9.7	0.9
Non Life Insurance Claims	39,036	2.7	8.7
Current Transfers to Non Profit Institutions	35,480	2.4	3.2
Other Current Transfers	4,996	0.3	16.8
Total Gross Income	1,471,074	100.0	3.7

Source: ABS (2017), *Australian National Accounts*, Catalogue 5206.0, March. Table 35.

Social benefits accounted for 9.7% of total gross income in 2015-16 and includes pensions and other means tested government allowances (e.g. family benefits), paid mainly to households unable to earn sufficient market income to sustain a minimum standard of living. Social benefits receivable grew by only 0.9% in 2015-16 as the unemployment rate stabilised and the Australian government pursued policies to contain welfare expenditure. Non life insurance claims (2.7% of the total) are net payments to households from non life insurance policies. Current transfers to non profit institutions (2.4% of the total) include non capital transfers from government to charitable institutions. Other current transfers (0.3% of the total) include government transfers to households not elsewhere classified.

Taxation, Transfer Payments and Other Assistance

The Australian government's welfare or social policy is based on the redistribution of income from high income earners to low income earners through the systems of progressive taxation and means tested welfare payments. The three main elements of the government's tax-transfer system are the following:

1. The system of progressive taxation is where the proportion of tax and the rate at which tax is paid on personal income, increases as gross income increases. From July 1st 2012 all taxpayers were given a tax free threshold of $18,200. From July 1st 2016 the government raised the 37% tax bracket to $87,001. The four income tax thresholds attract higher marginal tax rates (MTRs), as gross income increases, ranging from the lowest of 19% to the highest of 45%:

$0–$18,200	Nil	MTR	$87,001–$180,000	37%	MTR
$18,201–$37,000	19%	MTR	$180,001 and over	45%	MTR
$37,001–$87,000	32.5%	MTR			

2. Around 35.3% of the revenue raised by the progressive taxation system is spent by the government on transfer payments such as pensions, allowances and tax benefits or tax expenditures. The main recipients of transfer payments are the aged, veterans and their dependants, people with disabilities, low income families with children, the unemployed, the sick, youth, Aborigines and Torres Strait Islanders and other welfare beneficiaries such as carers. These payments are income and assets tested to ensure that only the most needy are in receipt of government social welfare payments.
3. Other assistance by governments to disadvantaged and low income individuals and families includes expenditure on the social wage. This refers to public spending on health, education, transport, housing, childcare and community services, which provides a safety net for low income earners and low income families with children. These benefits are in the form of direct government provision such as the federal Medicare system for health, or state government provision through subsidies and rebates for public health, education, housing, rates, utilities, transport and community services.

THE SOURCES OF WEALTH

Personal wealth is the net value of real and financial assets owned by individuals at a particular point in time. Real or non financial assets include property (e.g. owner occupied houses, land, home units, and investment properties) and consumer durables (e.g. cars and household contents). Financial assets include bank deposits, shares, trusts, debentures, bonds and superannuation. The net value of assets or **net worth** is calculated by subtracting any debts (i.e. financial liabilities such as mortgage loans) owed by an individual from the gross value of total non financial and financial assets owned by that individual. Wealth is a **stock concept**, since it is the amount of a person's net assets at any one point in time:

Net Value of Assets or Net Worth = Total Non Financial and Financial Assets - Total Financial Liabilities

There is a strong correlation between income and wealth. People with little wealth usually have low incomes, while people with substantial wealth usually have high incomes. This is because wealth generates income, and in most cases, high incomes can generate increasing levels of wealth. High income earners usually have high saving ratios, which allows them to accumulate wealth such as property and financial assets, which in turn generates unearned forms of income such as profit, rent, interest and dividends. Persons with a substantial stock of wealth therefore have the ability to derive unearned income such as rent, interest, profits and dividends, in addition to earned sources of income such as wages and salaries.

Most of the wealth owned in Australia is private wealth consisting of domestic and foreign assets. The main component of private sector wealth (according to the ABS Survey in 2011-12) in Australia is owner occupied dwellings (i.e. houses and home units) and other property (such as investment properties and businesses) which accounted for 58.5% of total household assets in 2011-12 as shown in **Table 11.2**. Other major forms of wealth in 2011-12 included superannuation (15.4% of total household assets) and the value of household contents (7.3% of total household assets). The rest of household wealth consisted of shares, trusts, debentures and bonds (6.4%); the value of own incorporated and unincorporated businesses (5.6%); savings with financial institutions (4.3%); and motor vehicles (2.5%).

In 2011-12 the value of total household assets was estimated by the ABS to be $8,582b, increasing by 21.7% from $7,050b in 2009-10. Total household liabilities (consisting mainly of mortgage, personal and other loans) were estimated by the ABS at $1,301b in 2011-12. Subtracting total household liabilities (-$1,301b) from total household assets ($8,582b), gave households an aggregate net worth or net wealth of $7,281b in 2011-12. Net wealth in 2011-12 of $7,281b represented about five times Australia's annual GDP in 2011-12, and had increased by $1,237b or 20.4% since 2009-10.

Table 11.2: Main Components of Household Assets in Australia 2011-12 (% of total)

Type of Household Asset	*2011-12*	*% of Total*
Value of accounts held with financial institutions	$370b	4.3%
Value of shares, trusts, debentures and bonds	$551b	6.4%
Value of own incorporated and unincorporated businesses	$482b	5.6%
Value of superannuation	$1,323b	15.4%
Value of owner occupied housing and other property	$5,018	58.5%
Value of contents of dwellings	$626b	7.3%
Value of motor vehicles	$212b	2.5%
Total Household Assets	$8,582b	100.0%

Source: ABS (2013), *Household Wealth and Wealth Distribution 2011-12*, Catalogue 6554.0, page 22.

TRENDS IN THE DISTRIBUTION OF INCOME AND WEALTH

The distribution of income is measured by the ABS from data in the *Survey of Income and Housing*. The Australian population is divided into quintiles or equal 20% groupings of the population, and the ABS calculates the percentage of total equivalised disposable household income received by each quintile, starting from the lowest quintile and proceeding to the second, third, fourth and highest quintiles. **Equivalised disposable household income** adjusts disposable income (gross income less taxes) for the different needs of households arising from the different numbers of people and proportions of adults and children in households. An equivalence scale is applied to make the needs of households equivalent.

In **Table 11.3** income shares are shown for the five quintiles of the Australian population between 2007-08 and 2013-14. They indicate that there is a high degree of income inequality in Australia as in most market economies in the OECD. For example, the lowest quintile or 20% of households received 7.5% of total equivalised disposable household income in 2013-14, whereas the highest quintile or 20% received 40.8% of total equivalised disposable household income. The middle three quintiles (60% of the population) received 51.6% of total equivalised disposable household income in 2013-14.

Table 11.3: Percentage Income Shares for Income Quintiles, Australia - 2007 to 2014

Equiv. Disp. Income Quintile	*2007-08*	*2009-10*	*2011-12*	*2013-14*	*Income pw 13-14*
Lowest	7.3%	7.4%	7.5%	7.5%	($375)
Second	12.3%	12.4%	12.6%	12.3%	($615)
Third	16.9%	17.0%	17.3%	16.9%	($843)
Fourth	22.6%	23.0%	23.0%	22.4%	($1,119)
Highest	41.0%	40.2%	39.5%	40.8%	($2,037)
All Income Units	100.0%	100.0%	100.0%	100.0%	(av. $998)
Gini co-efficient	0.336	0.329	0.320	0.333	

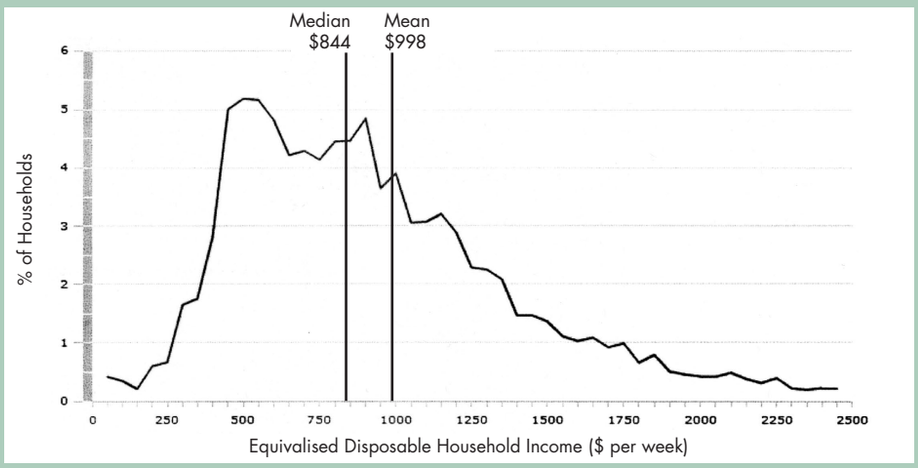
Source: ABS (2015), *Household Income and Wealth, Australia, 2013-14**, Catalogue 6523.0, September.
NB: figures are rounded and do not total * The *Household Income and Wealth, Australia, 2013-14* is the latest ABS survey

The ABS survey of the distribution of equivalised disposable household income in **Table 11.3** indicates changes in the shares of income for the five quintile groups between 2007-08 and 2013-14. The lowest quintile's income share rose by 0.2%, the second quintile's share stayed the same at 12.3%, the third quintile's share stayed the same at 16.9%, the fourth quintile's share fell by 0.2% to 22.4%, and the highest quintile's share fell by 0.2% to 40.8%. The Gini co-efficient of 0.336 in 2007-08 fell to 0.333 in 2013-14, indicating a marginal fall in income inequality of 0.9% between 2007-08 and 20013-14. This was probably due to steady increases in the National Minimum Wage and Modern Awards and an increase in the tax free threshold to $18,200 in July 2012 for low income earners. However the Gini co-efficient rose from 0.320 in 2011-12 to 0.333 in 2013-14, which was an increase in inequality of 4.1% probably because of high income households benefiting from increases in unearned forms of income.

The mean or average equivalised disposable household income in 2013-14 for all households was $998 per week (refer to **Figure 11.3**). The median income (i.e. the midpoint where all people are ranked in ascending order of income) in 2013-14 for all households was lower at $844 per week. This difference reflects the typically asymmetric distribution of Australian incomes which is illustrated in **Figure 11.3**:

- A relatively small number of people have relatively high household incomes; and
- A large number of people have relatively lower household incomes.

Figure 11.3: Distribution of Equivalised Disposable Household Income in 2013-14

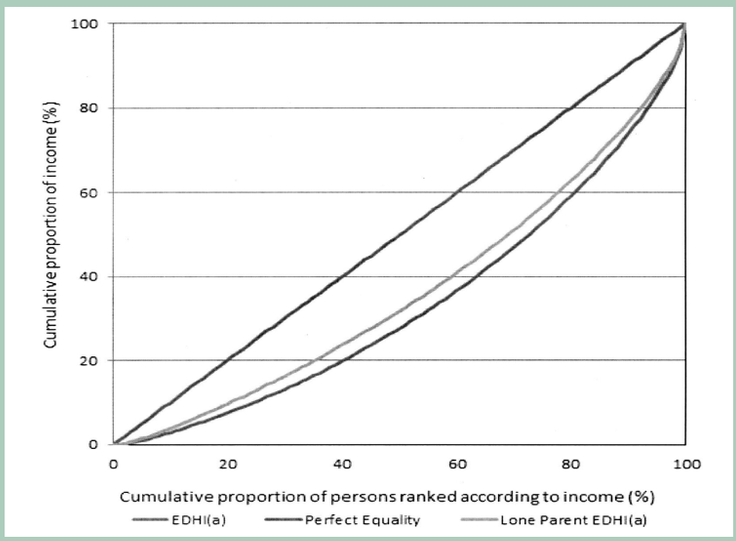


Source: ABS (2015), *Household Income and Wealth, Australia, 2013-14*, Catalogue 6523.0,September.

Real average equivalised disposable household income for all persons living in private dwellings (22.6m) in 2013-14, was $998 per week. According to the ABS real average equivalised disposable household income increased by 3.5% from $964 per week in 2011-12 to $998 per week in 2013-14. According to the ABS average equivalised disposable household income increased by 3% for low income households, about 4% for middle income households and 7% for high income households (due to rising earned and unearned sources of income) between 2011-12 and 2013-14.

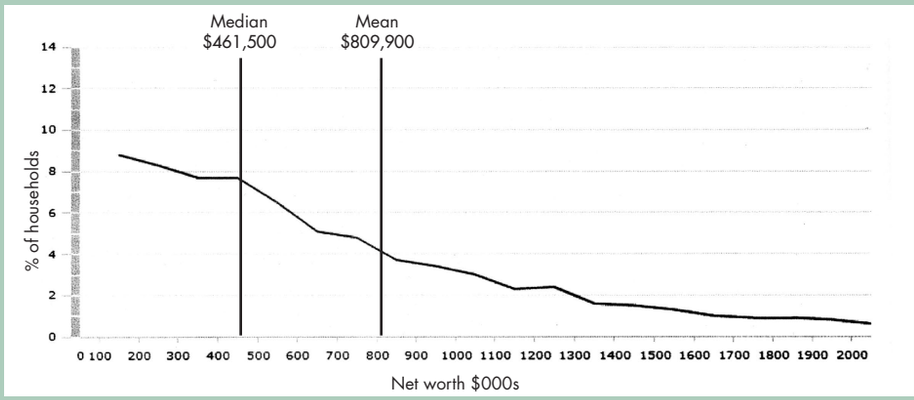
Normally the degree of inequality is greater for the population as a whole than for a subgroup within the population, because sub populations are usually more homogeneous than full populations. This is illustrated in **Figure 11.4** which shows two Lorenz curves from the ABS 2013-14 *Survey of Income and Housing*. The Lorenz curve for the whole population of the survey showing the distribution of equivalised disposable household income (EDHI), is further away from the diagonal line of perfect equality than the Lorenz curve for persons living in lone parent households. Correspondingly the Gini co-efficient for all persons was higher at 0.333 while the Gini co-efficient for persons in lone parent households was lower at 0.307.

Figure 11.4: Lorenz Curves for Australia 2013-14



Source: ABS (2015), *Survey of Income and Housing, Australia*, Catalogue 6553.0, September.

Figure 11.5: Distribution of Household Net Worth 2013-14



Source: ABS (2015), *Household Income and Wealth, Australia, 2013-14*, Catalogue 6523.0, September.

The ABS measures wealth as the **net worth** of households by subtracting the value of household liabilities (e.g. loans) from household assets (e.g. cash, bank deposits, homes, superannuation and value of businesses). The ABS survey of *Household Income and Wealth 2013-14* calculated the mean value of household assets at $954,800, and the mean value of household liabilities (e.g. mortgage loans and other debts) at $144,900, resulting in average household wealth or net worth of $809,900, with median household wealth substantially lower at $461,500. The distribution of Australian household wealth in 2013-14 is shown in **Figure 11.5** and reflects the asymmetric distribution of wealth between households:

- A relatively small proportion of households had relatively high net worth in 2013-14; and
- A large number of households had relatively low net worth in 2013-14.

The distribution of wealth is more unequal in Australia than the distribution of income, mainly due to home ownership rates, with a Gini co-efficient of 0.605 in 2013-14. **Table 11.4** shows the quintile shares of household net worth, gross household income and equivalised disposable income per week in 2013-14. The 20% of households in the lowest quintile had 0.9% of total household net worth, but 4.2% of total gross income. In contrast the 20% of households in the highest quintile accounted for 62.1% of total household net worth, but had a lower share of gross household income of 48.5%.

Differences in the distribution of wealth and income partly reflect that wealth is accumulated during a person's working life and then is utilised during retirement. Therefore many households with low wealth have relatively high incomes, such as younger 'twin income' households. Conversely older households tend to accumulate relatively high net worth over their lifetimes but have relatively low income in their retirement, accounting for the top quintile's high share of net worth but lower share of gross income.

Table 11.4: Shares of Household Net Worth and Income in 2013-14

Quintile	*Household Net Worth*	*Gross Household Income Per Week*	*Equivalised Disposable Household Income Per Week*
Lowest quintile	0.9%	4.2%	7.5%
Second quintile	5.1%	8.9%	12.3%
Third quintile	11.4%	15.0%	16.9%
Fourth quintile	20.5%	23.3%	22.4%
Highest quintile	62.1%	48.5%	40.8%
All households	100.0%	100.0%	100.0%
Gini Co-efficient	0.605	0.446	0.333

Source: ABS (2015), *Household Income and Wealth*, Australia, Catalogue 6523.0. NB: figures are rounded & do not total

REVIEW QUESTIONS

MEASUREMENT, SOURCES AND TRENDS IN THE DISTRIBUTION OF INCOME AND WEALTH

1. Refer to Figure 11.1 and the text and explain how the distribution of income is measured using the Lorenz curve and the Gini co-efficient.
2. Distinguish between income as a flow concept and wealth as a stock concept in economics.
3. List the main sources of household income in 2015-16 and wealth in 2011-12 in Australia. Refer to Table 11.1, Table 11.2 and Figure 11.2 in your answer.
4. Discuss the relationship between income and wealth.
5. Describe the trends in the distribution of equivalised disposable household income between 2007-08 and 2013-14 by referring to the data in Table 11.3.
6. Discuss the main features of the distribution of equivalised household disposable income in 2013-14 from Figure 11.3.
7. Discuss the distribution of household net worth or wealth in 2013-14 with reference to the text and the trends in Figure 11.5.
8. Contrast the distributions of wealth and income in 2013-14 in Australia by using the data in Table 11.4. Why is the distribution of wealth more unequal than the distribution of income?

DIMENSIONS IN THE DISTRIBUTION OF INCOME

The distribution of income in Australia is also analysed in terms of socio-economic characteristics such as gender, age, occupation, ethnicity and family structure. In terms of gender, males on average earn considerably more than females. In 2016, average weekly earnings (AWE) for males were $1,631 compared to $1,370 for females. For males and females in the same occupational category, male earnings were also considerably higher than average female earnings. The distribution of income according to occupation also reveals large variations in incomes between highly skilled and lower skilled occupations. Managers and professionals earnt an average of between $1,631 and $2,298 per week in 2016 compared to labourers, clerks and tradespersons who earnt an average of between $817 and $1,339 per week.

In terms of age, young males and females earn less income than older adult male and female workers. For example, in 2016 the average weekly earnings (AWE) for young males and females (21-34 years) was $941 compared to AWE of $1,457 for adult males and $1,010 for adult females (ABS, *Catalogue 6306.0*, 2016). Income for males and females is at a maximum in the 35 to 54 year age group. Employment status also impacts on AWE with casual and part time workers earning less than full time employees.

In terms of ethnicity, persons born overseas earn higher incomes than those born in Australia and persons from non English speaking backgrounds earn less than those from English speaking backgrounds. The period of residence of migrants also impacts on the level of income, with migrants residing in Australia for longer periods of time earning higher incomes than migrants residing for less time. Also the country of origin of migrants is correlated with income. Migrants from countries such as Britain, the USA, New Zealand and South Africa earn higher incomes than more recent migrants from countries such as China, Vietnam, Iraq and Lebanon. Indigenous Australians (i.e. Aborigines and Torres Strait Islanders) earn considerably less income than non indigenous Australians, and are amongst the lowest income earners in the Australian community, with many being reliant on government welfare payments for income.

In terms of family structure, it is common to analyse the distribution of income in terms of households at different stages of the **life cycle**. A typical life cycle covers early adulthood, and the formation, maturation and dissolution of nuclear families. Households range from young single people just out of school, to couples with dependent children, couples without children, single parents with children, elderly couples and elderly single people. **Table 11.5** shows selected characteristics of four household types by equivalised disposable household income quintiles and their mean weekly incomes in 2013-14. Households in the lowest quintile were mainly lone persons (either young or elderly), single parents with children and elderly couples without dependent children. In comparison, households in the highest quintile tended to be couples with or without dependent children. Most of these couple households had two income earners, with the principal source of income being wages and salaries.

Table 11.5: Selected Characteristics of Households, by Equivalised Disposable Household Income Quintiles in 2013-14

Household Characteristics	*Lowest 20%*	*Second quintile*	*Third quintile*	*Fourth quintile*	*Highest 20%*	*Mean Weekly Income ($)*
Couple with dependent children	14.4	20.1	24.8	21.4	19.3	$1,011
Couple without dependent children	22.9	17.2	14.0	17.9	28.0	$1,113
One parent family	39.4	31.9	16.7	8.3	3.7	$687
Lone person	42.0	17.0	13.4	14.3	13.3	$807

Source: ABS (2015), *Household Income and Wealth, Australia, 2013-14*, Catalogue 6523.0, September.

ECONOMIC AND SOCIAL BENEFITS AND COSTS OF INEQUALITY

Increasing inequality in the distribution of income and wealth in Australia was the subject of wide debate by Opposition leader Bill Shorten and Philip Lowe, Governor of the Reserve Bank in 2017. They argued that low wages growth, and increased inequality was leading to slower growth in consumption spending and economic growth. Many economists believe that the market economy is the most efficient mechanism for resource allocation, and argue that some inequality in the distribution of income is an inevitable outcome of the market economic system that rewards people for risk taking and hard work.

Other economists (such as Professor Bob Gregory, 1993 and Dr Andrew Leigh MP, 2017) argue that growing inequality can lead to social divisiveness and the marginalisation of groups in society such as the unemployed, low income earners, migrants and Indigenous people. Therefore the debate about inequality centres on the benefits of increasing economic efficiency and growth (leading to rising income inequality), versus lower economic efficiency, but greater income equality and social cohesion.

A perceived economic benefit of income inequality is the '**incentive effect**' on workers and entrepreneurs. Employees will work harder to achieve higher wages and salaries and other rewards if these can be attained through higher levels of education, training, skill acquisition and productivity. People may therefore be willing to work longer hours and sacrifice less leisure time for additional income. The economy will benefit from higher labour productivity and labour mobility if there is relative wage flexibility, which helps to allocate labour more efficiently. Entrepreneurs may also be willing to take more risks if the potential profit rewards are higher. In Australia increased inequality in the distribution of income has been characterised in 2016-17 by a rising share of GDP going to capital in the form of profits, rent, interest and dividends, relative to the share of GDP going to labour in the form of wages.

This trend also emerged in Australia in the latter stages of the resources boom when the profit, rent, dividend and interest share of household income rose from 30% in 2006-07 to 31% in 2007-08, whilst the wages share of household income fell from 56.3% in 2006-07 to 55.3% in 2007-08.

Higher incomes in the economy may **boost national saving and investment** and create more positive conditions for economic and employment growth. This may be sourced from higher levels of capital accumulation and a greater rate of technological progress, leading to an increase in the economy's productive capacity. More businesses may be established or existing businesses expanded as a result of higher economic growth. A growing market economy like Australia may also be able to create more job opportunities for unskilled, skilled and professional labour, and generate higher tax revenue (i.e. the 'growth dividend') which the government can use to fund targeted welfare assistance to alleviate poverty.

The major social benefits of inequality accrue to high income households and individuals whose material standard of living and access to lifestyle and personal opportunities is greater than for other groups in society. Australia has been characterised as a very middle class society, with the majority of the population earning comparable incomes and enjoying similar standards of living. A result of this is less discrete social divisions according to differences in income and wealth in Australia, compared to other countries (such as the USA and UK), where inequality is greater, and can be based on ethnic groups and social classes. Inequality in Australia may be the result of social and economic disadvantage faced by certain groups in the labour market, relative to the greater opportunities of high income earners to succeed in the economic system, because of the inheritance of wealth or greater access to educational and business opportunities.

The economic costs of inequality are put forward by economists who argue for improvements in the social welfare system and greater opportunities for low income earners to achieve higher market incomes. The opportunity cost of income inequality in Australia is reflected in **lower consumption** and utility levels for low income earners, compared to high and middle income earners. In macroeconomic terms, J. M. Keynes (1936) argued that deficient aggregate demand, could be corrected by government redistributive policies. Greater income inequality in Australia may lead to **higher spending on social welfare payments** by the Australian government in supporting the unemployed, low income families, and the aged, if they have insufficient market income to be placed above the poverty line. However increased government spending on welfare can lead to a higher tax burden on taxpayers, and a deterioration in the federal government's fiscal position, through a higher budget deficit or a smaller budget surplus.

There are also social costs of inequality such as the emergence of **social divisions** based upon differences in income. Social tensions can be raised when particular groups in Australian society such as Aborigines and Torres Strait Islanders, the unemployed, migrants, single parents, large low income families and aged pensioners are the main recipients of welfare. These groups may feel alienated from market opportunities, and some taxpayers may resent contributing taxes to support welfare recipients. However the major social cost of income inequality in Australia is the **relative poverty** of various minority groups.

Research by R. Gregory (1993) revealed evidence of a '**working poor**' section of the workforce unable to earn high incomes because of low skills and a reliance on annual adjustments to Modern Awards and the National Minimum Wage to increase their income and living standards. There is also evidence in Australia of an underclass of young and middle aged workers who are marginalised in the labour market because of changes to the structure of industry, and the increased casualisation of employment. The decentralisation of the industrial relations system has also forced many low paid workers to rely on annual safety net adjustments to the National Minimum Wage for wage annual increases. In addition, social security spending on the unemployed and welfare beneficiaries has also become more targeted with strict eligibility criteria such as income and assets tests applied to the recipients of income support.

The interaction between the social security and personal taxation systems can lead to **poverty traps** where welfare dependency rises, which may become intergenerational. A person's motivation to seek and retain paid work is influenced by a series of complex interactions, including the rate at which income support is withdrawn once work is found; the eligibility for other concessions such as rent assistance; and the marginal taxation rate (MTR). Such interactions can create high effective marginal taxation rates (EMTRs) and reduce the incentive to gain paid work. The Australian government cut MTRs for low income earners in federal budgets between 2000 and 2009, raised tax thresholds and reformed the welfare system to strengthen the incentives for those on welfare to obtain more paid work.

POLICIES TO REDUCE INCOME AND WEALTH INEQUALITY

The main Australian government policy used to reduce inequality in the distribution of income and wealth is known as social policy, which is based on the **tax-transfer system**. This is the government's use of the progressive system of income taxation and expenditure on welfare, which provides income support to low income earners, the aged, veterans and their dependants, families with children, the unemployed, the sick, Aborigines and Torres Strait Islanders, carers and the disabled.

The system of **progressive taxation** of personal income in Australia means that the more income a person earns, the more tax they pay as a percentage of their gross income. The progressive tax system provides revenue to the government, enabling it to **redistribute income** from high income earners to low income earners, through transfer payments such as old age and disability pensions, job search allowances, youth allowances and family benefits. This helps to create a more even distribution of income and wealth.

Tax policy can also be used to lower marginal taxation rates for low income earners and to raise the tax thresholds for low and lower middle income earners, as was undertaken in numerous federal budgets in the 2000s. In 2012, the tax free threshold was raised from $6,000 to $18,200 to encourage those on welfare to seek paid work, and in each budget between 2003 and 2016, other tax thresholds were raised to take into account the growth in incomes over time and the effect of 'bracket creep' (where taxpayers pay more tax as they move into higher tax thresholds). These tax changes reduced the tax burden (i.e the percentage of income paid in tax) on low and middle income earners relative to high income earners.

The use of fringe benefits tax on fringe benefits such as company cars, and capital gains tax on the real gains from the sale of shares and real estate are taxes on wealth. They assist in redistributing income, since they tax fringe benefits and capital gains on a progressive scale through rising marginal taxation rates. In Australia there is an absence of death duties, inheritance taxes or a specific tax on wealth so the government has to rely on progressive taxes to tax wealth. However there is debate about the possible abolition of capital gains tax discounts and negative gearing to reduce income and wealth inequality.

In the 2012-13 budget the Australian government raised the tax free threshold from $6,000 to $18,200; the second tax bracket from $6,001-$37,000 to $18,201-$37,000 and the MTR from 15% to 19%; and the MTR from 30% to 32.5% in the third tax threshold. These tax changes are shown in **Table 11.6** and were designed to give tax relief to low and middle income earners. In the 2016-17 budget the Australian government raised the third and fourth tax thresholds from $80,00 to $87,000.

Table 11.6: Changes to the Personal Income Tax System in the 2016-17 Budget

Previous Tax Thresholds (from July 1st 2011) Income Range	*Tax Rate (%) MTR*	*New Tax Thresholds (from July 1st 2012 and 2016) Income Range*	*Tax Rate (%) MTR*
0 – $6,000	0%	**0 – $18,200**	0%
$6,001–$37,000	15%	**$18,201–$37,000**	**19%**
$37,001–$80,000	30%	$37,001**–$87,000**	**32.5%**
$80,001–$180,000	37%	**$87,001**–$180,000	37%
$180,001 +	45%	$180,001 +	45%

Source: Commonwealth of Australia (2012 and 2016), *Budget Strategy and Outlook 2012-13 and 2015-16.*

Expenditure on social security by the Australian government represents around 35.3% of total budgetary expenditure. In the 2017-18 budget, $164.1b was allocated for expenditure on social security and welfare. The main areas of social security assistance are listed in **Table 11.7**. Targeted and means tested welfare assistance in the form of pensions, family benefits and job search allowances provide income support for disadvantaged groups such as the aged, veterans, the disabled, low income families with children, the unemployed, the sick and Indigenous Australians to raise their of standard of living.

Table 11.7: Expenditure on Social Security and Welfare in the 2017-18 Budget

Type of Assistance	2016-17	2017-18 Budget (f)	%△
Assistance to the Aged	$62,270m	$64,279m	3.2
Assistance to Veterans and Dependants	$6,475m	$6,272m	-3.1
Assistance to People with Disabilities	$31,721m	$38,538m	21.5
Assistance to Families with Children	$36,404m	$36,936m	1.5
Assistance to the Unemployed and Sick	$10,994m	$10,038m	-8.7
Other Welfare Programmes	$1,745m	$1,737m	-0.5
Assistance for Indigenous Australians	$2,210m	$2,153m	-2.5
General Administration	$3,879m	$4,105m	5.8
Total Social Security and Welfare	$155,698m	$164,058m	5.4

Source: Commonwealth of Australia (2017), *Budget Strategy and Outlook 2017-18*, page 6-24.

The continuing demographic shift to an older Australian population as outlined in the *2015 Intergenerational Report* continues to contribute to increased government spending on social security and welfare. This is because more Australians are becoming eligible for the age pension and are entering residential and community care facilities. The government also announced the $3.7b *Living Longer, Living Better* aged care reform package in the 2012 budget to improve access to aged care services over the period from 2012-13 to 2017-18. Expenses are also being driven by implementation of the National Disability Insurance Scheme (NDIS) and child care fee assistance measures in the 2015-16 budget.

In 2009-10 as the Global Financial Crisis impacted on the Australian economy, the government implemented an ***Economic Security Strategy*** which provided stimulus payments to low and middle income earners to support household incomes. A ***Nation Building and Jobs Plan*** in the 2009-10 budget directed $30b in spending to public schools, housing, community infrastructure and roads. The government also announced a ***Jobs and Training Compact*** to provide assistance to the unemployed.

The ***Spreading the Benefits of the Boom*** package was introduced in the 2012 budget to ease cost of living pressures on families and the unemployed. Families benefited from an increase in Family Tax Benefit Part A ($1.8b over four years) and a new income support supplement ($1.1b over four years) was announced for those receiving Youth Allowance, Newstart Allowance and Parenting Payments. In the 2013-14 budget the government introduced the first stage of a National Disability Insurance Scheme called Disability Care Australia to provide personalised care for people with permanent disabilities.

In the 2014 budget the Abbott government introduced many unpopular measures to reform the transfer payments system such as raising the pension age, freezing the indexation of welfare payments and tightening the eligibility for Family Tax Benefit B but these were rejected by the Senate. In the 2015-16 budget the Australian government announced the removal of 'double dipping' in the Parental Leave Pay (PLP) scheme from July 1st 2016 and tightened the assets test for pensions from 2017. The Turnbull government announced a 'Ten Year Enterprise Tax Plan' in the 2016-17 budget to boost jobs, economic growth and productivity, including reforms to superannuation and Family Tax Benefits (FTB) to give more targeted assistance to families and encourage workforce participation. In the 2017-18 budget the Turnbull government committed more funding to Medicare and proposed to raise the Medicare levy to 2.5% from 2019 to help with the funding of the National Disability Insurance Scheme (NDIS).

Elements of the **social wage** such as the safety net of Modern Awards, the ten National Employment Standards and annual adjustments to the National Minimum Wage provide minimum levels of income and working conditions to workers with low wages, skills and bargaining power in the labour market.

The Fair Work Act 2009 introduced ten National Employment Standards and a new Better Off Overall Test for negotiated enterprise agreements. The Fair Work Commission is responsible for making annual adjustments to the National Minimum Wage which helps to maintain the real wages of low paid workers.

Other elements of the social wage include government spending on public health, education, housing, transport and community services which provide a safety net for low income earners and their families. These benefits may be in the form of direct federal government provision such as the safety net of the Medicare system for health care, and state government provision through subsidised goods and services such as public health, education, housing, utilities, transport and community services.

In terms of general macroeconomic management, the government used expansionary settings of monetary and fiscal policies in 2008-09 to support aggregate demand as the Global Financial Crisis and recession impacted adversely on the Australian economy. Declining tax revenue and increased stimulus spending in the 2009 budget led to significant growth in the budget deficit and level of public debt.

After the election of the Abbott government in 2013, fiscal policy was tightened in the 2014 budget as a Budget Repair Strategy was adopted. The medium term fiscal strategy in the 2017-18 budget forecast the budget deficit to fall from -$37.6b in 2016-17 to -$29.4b in 2017-18 and return to surplus by 2020.

In summary, the effective conduct of macroeconomic policy, together with the tax-transfer system, the safety net of minimum wages and employment conditions, and the social wage elements of government spending are important policies for creating a more equal distribution of income and wealth in Australia.

REVIEW QUESTIONS

DIMENSIONS IN THE DISTRIBUTION OF INCOME AND THE ECONOMIC AND SOCIAL BENEFITS COSTS OF INEQUALITY

1. Explain how the distribution of income from wages can vary according to gender, age, occupation and ethnicity.
2. What is meant by the income life cycle?
3. How does the income life cycle affect the income earning capacity of different household groups?
4. Refer to Table 11.5 and contrast the distribution of income in Australia in 2013-14 according to the four types of households listed.
5. Discuss the economic benefits and costs of inequality in the distribution of income in Australia.
6. Discuss the social benefits and costs of inequality in the distribution of income in Australia.
7. How can unemployment affect the distribution of income in Australia?
8. Discuss the range of government policies used to reduce inequality in the distribution of income and wealth and the incidence of poverty traps. Refer to Tables 11.6 and 11.7 in your answer.
9. Define the following terms and add them to a glossary:

disposable income	income inequality	poverty trap
distribution of income	income quintile	progressive taxation
equivalised household income	income tax threshold	social security and welfare
Gini co-efficient	Lorenz Curve	social wage
household disposable income	marginal tax rate (MTR)	wages
income	net worth	wealth

CHAPTER 11: SHORT ANSWER QUESTIONS

Type of Income Unit	Equivalised Disposable Household Income Quintiles					
	Lowest	Second	Third	Fourth	Highest	Gini co-efficient
Couples with dependent children	14.4	20.1	24.8	21.4	19.3	0.306
Couples without dependent children	22.9	17.2	14.0	17.9	28.0	0.376
Single parent family with children	39.4	31.9	16.7	8.3	3.7	0.307
Lone persons (15 - 65+ years)	42.0	17.0	13.4	14.3	13.3	0.287

Refer to the table above of income shares for four types of income units from the ABS *Household Income and Wealth* survey for 2013-14 and answer the questions below. Marks

1. Define disposable weekly income. (1)

2. List TWO separate sources of income that are included in disposable weekly income. (2)

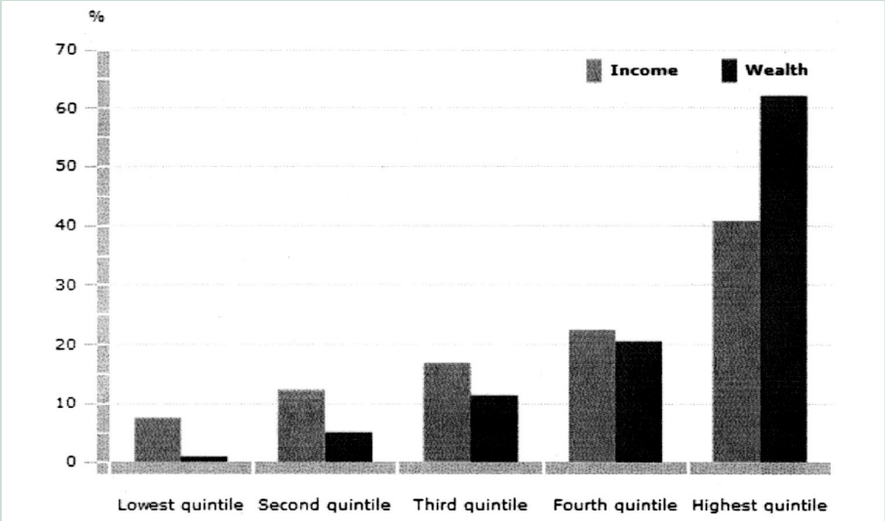
3. Explain what the Gini co-efficient measures. (2)

4. Which type of income unit had the highest level of income inequality in 2013-14? Suggest a possible reason for the high level of inequality in this income unit's distribution of equivalised disposable household income in 2013-14. (2)

5. Discuss ONE cost and ONE benefit of inequality in the distribution of income in Australia. (3)

CHAPTER FOCUS ON THE DISTRIBUTION OF INCOME AND WEALTH

Shares of Income and Wealth in Australia in 2013-14



"As shown in the graph households in the highest income quintile received over 40% of total income in 2013-14. By comparison households in the lowest quintile received 7.5% of total income. This pattern has remained relatively stable over the past 20 years.

The distribution of wealth is more unequal than for income. The graph shows that the top 20% of households when ranked by their level of wealth owned 62% of household wealth in 2013-14. By comparison the bottom 20% of households owned less than 1% of all household wealth."

Source: ABS (2015), *Household Income and Wealth, Australia, 2013-14*, Catalogue 6523.0.

Explain why the distribution of wealth is more unequal than the distribution of income in Australia.

CHAPTER 11: EXTENDED RESPONSE QUESTION

Discuss the extent of inequality in the distribution of income and wealth in Australia and explain the use of Australian government policies to reduce income and wealth inequality.

CHAPTER SUMMARY

DISTRIBUTION OF INCOME AND WEALTH

1. The distribution of income and wealth is a reflection of how the benefits of economic growth are shared amongst the population as a whole. Most democratic societies have in place policies to ensure that inequality is minimised and a social safety net exists to protect those on minimum incomes. Redistributive policies are also aimed at reducing the extent of poverty in society.

2. The distribution of income and wealth is measured by economists through the construction of a Lorenz Curve showing shares of income or wealth for equal groupings of the population such as 20% quintiles. A Gini co-efficient can then be calculated, which measures the extent of inequality in the distribution of income or wealth over time. The Gini co-efficient varies in value from zero to one. A rise in the value (towards unity) of the Gini co-efficient implies an increase in inequality, whereas a fall in the value (towards zero) of the Gini co-efficient implies a reduction in inequality.

3. The main sources of income in Australia include compensation of employees (wages and salaries); gross operating surplus and mixed income (profits from business enterprises); property income (rent, interest and dividends); and social benefits receivable (pensions, allowances and other transfer payments) paid by the government to households with zero or low levels of income.

4. The main sources of wealth or net worth in Australia include owner occupied dwellings and other property; the value of businesses; superannuation; financial accounts; shares and trusts; the value of household contents; and motor vehicles.

5. Statistical data from the ABS and other research sources indicate that there is a high degree of income inequality in Australia. This is especially the case in the distribution of wages and salaries. However the distribution of equivalised disposable household income is less unequal than the distribution of gross income because of the impact of government redistributive policies such as the progressive taxation system and system of government transfer or welfare payments.

6. ABS surveys and other research studies suggest that the distribution of wealth in Australia is more unequal than the distribution of income. There is a link between the distribution of income and wealth in that those earning high incomes are more likely to accumulate wealth and receive non wage forms of income which helps to boost their personal income relative to low income earners.

7. Dimensions in the distribution of income include an analysis of the distribution in terms of age, gender, occupation, ethnicity and family structure. For example, twin income households tend to have higher incomes than households with a sole person, one parent or only one income earner.

8. There are various economic and social benefits and costs of income and wealth inequality. Some economists argue that income inequality is a natural consequence of a market economy where the highly skilled and educated are rewarded for their contribution to production with high incomes. Also differences in income have an incentive effect on workers and entrepreneurs to raise productivity or to take more risks in establishing and operating business enterprises. Higher incomes may also boost savings and investment and promote economic and employment growth and capital accumulation. The social benefits of inequality flow mainly to high income households who experience a higher standard of living relative to low and middle income households.

9. The major economic costs of income inequality include lower consumption and utility by those on low incomes, which reduces potential aggregate demand. Increased income inequality may also lead to greater welfare spending by the government and a deterioration in the budget balance.

10. The major social costs of inequality include the emergence of social divisions in the community and the alienation of marginalised groups. This can lead to a greater incidence of absolute and relative poverty amongst low income groups, who may become dependent on welfare and experience poverty traps, because they face high effective marginal taxation rates (EMTRs).

Chapter 12

Environmental Sustainability

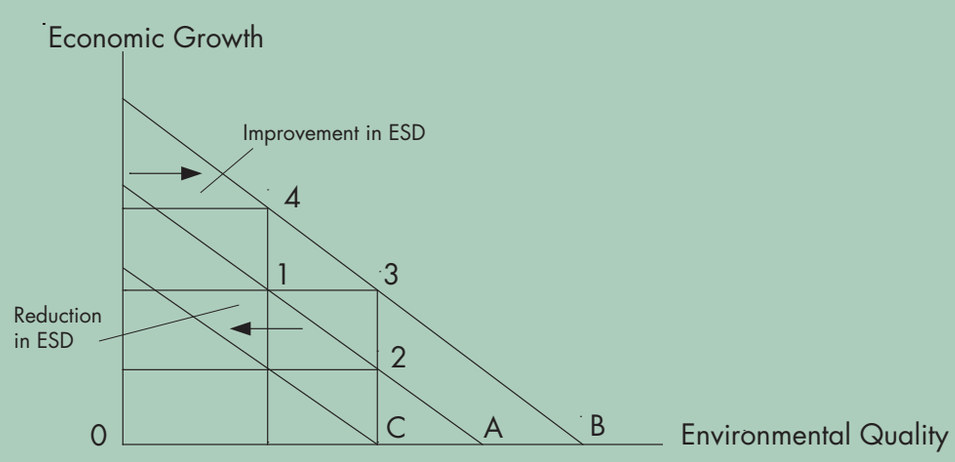
Environmental sustainability is an important economic, social and political issue in many countries, and also at a global level, because of global environmental problems such as greenhouse gas emissions causing **climate change**, the loss of biodiversity, pollution of the atmosphere, illegal logging and land clearing, coral bleaching, and the release of chlorofluorocarbons (CFCs) causing depletion of the earth's ozone layer. The natural environment is a source of natural resources for private production and the receptacle for waste for many industries and households in advanced, emerging and developing economies. The management of environmental problems is important for ensuring that the quality of life is not reduced through the over exploitation of both **renewable and non renewable environmental resources**, and the pollution of the natural environment by unsustainable rates of economic growth.

ECOLOGICALLY SUSTAINABLE DEVELOPMENT

The concept of ecologically sustainable development (ESD) gained prominence following the publication of the findings of the World Commission on Environment and Development in 1987. The Commission was chaired by Gro Harlem Brundtland, the Prime Minister of Norway, and comprised 22 representatives from countries as diverse as Japan, Nigeria, the former USSR and Saudi Arabia. The findings of the Commission were tabled in a report entitled *Our Common Future* which was known as the *Brundtland Report*. The ***Brundtland Report*** defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." This definition implied that current rates and methods of economic growth and development around the world should not threaten the world's natural and cultural environments for the enjoyment or use by both current and future generations. Ecologically sustainable development is now a major global environmental issue because of the rapid advance of climate change and its effects on people.

Figure 12.1 illustrates how a tradeoff may arise between economic growth and environmental quality in a hypothetical economy, by using a model of production possibility curves A and B, showing various combinations of economic growth and environmental quality. Points 1 and 2 are attainable on Curve A, with Point 1 yielding a higher rate of economic growth (and current living standards) than Point 2, but at the expense or opportunity cost of less environmental quality at Point 1 than at Point 2.

Figure 12.1: The Tradeoff Between Economic Growth and Environmental Quality



If instead the economy chose Point 2 rather than Point 1 on curve A, it would involve an opportunity cost of lower economic growth and living standards in the present, but the enjoyment of higher levels of environmental quality in the present. If there was an improvement in technology or higher productivity of existing resource use, the production possibility curve would shift outwards from curve A to curve B, resulting in new combinations of economic growth and environmental quality.

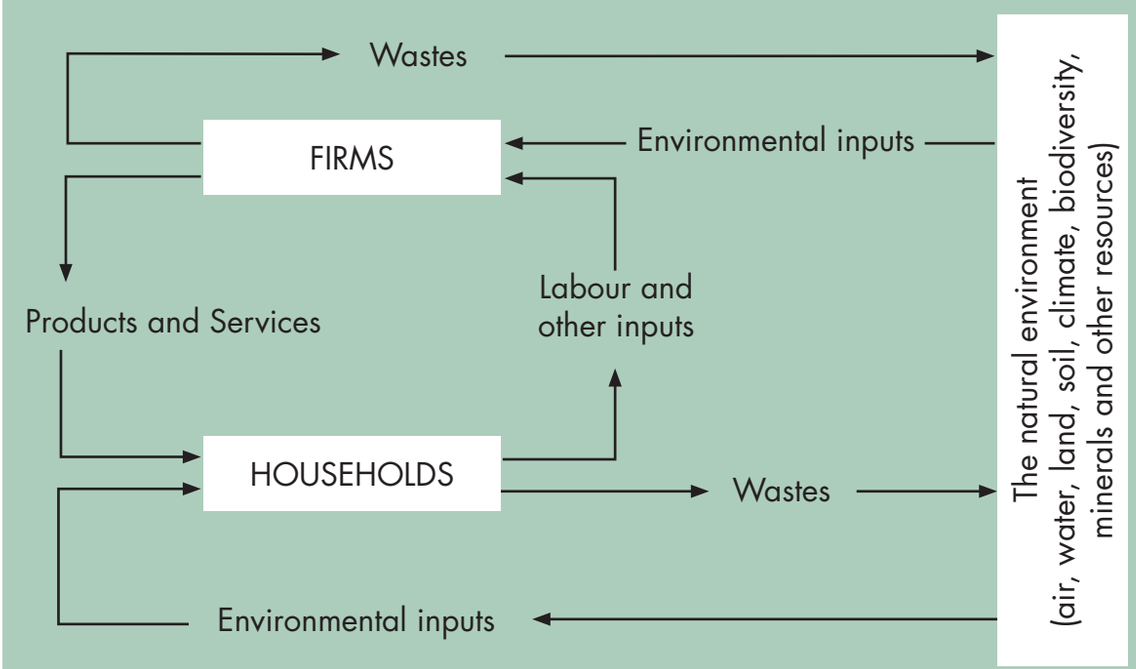
For example, if the economy moved from Point 1 to Point 3, the same level of economic growth and living standards could be achieved, but with more environmental quality (e.g. by preserving biodiversity and reducing pollution). This would represent more ecologically sustainable development without a reduction in the rate of economic growth. Alternatively, if the economy moved from Point 1 to Point 4, a higher rate of economic growth could be achieved, but there would be no change in environmental quality. If the environment became more degraded because less resources were being devoted to environmental protection, the production possibility curve A would shift to the left to curve C, as more natural resources are degraded and this would represent ecologically unsustainable development.

The Economic Role of The Environment

In **Figure 12.2** a simple interaction of households and firms with the natural environment is shown. Households and firms are two of the main sectors in an economic system which interact with the environment. There are three main flows between an economic system and the natural environment:

1. The natural environment is a **source of raw materials** or environmental inputs such as air, water, land, soil, forests, climate, minerals, fish and other biodiversity (such as plants, flowers, trees, animals, birds and insects) used by humans for production, consumption and recreational utility.
2. The natural environment is a **receptacle for both biodegradable and non biodegradable waste** products from households and firms. Some of this waste may cause pollution and the degradation of the natural environment such as oil spills in the ocean or the dumping of toxic wastes into rivers.
3. The natural environment **provides environmental amenities** or **renewable resource flows** such as beautiful landscapes, beaches, harbours, mountains, forests, lakes and rivers which can be used for recreational and leisure activities by humans such as sport, travel and tourism.

Figure 12.2: The Economic Uses of the Natural Environment



One of the major problems of an economy's use of the natural environment is that it is usually always viewed in an **anthropocentric** way (i.e. how humans can use or exploit its resources or resource flows). This has led to the over exploitation of many environmental resources and the pollution of the natural environment, since it is not protected by a system of private property rights which might lead to a more optimal or efficient allocation of environmental resources in a system of markets and market prices.

PRIVATE AND SOCIAL COSTS AND BENEFITS

At the microeconomic level of activity, the allocation of resources by markets solves the problem of scarcity in market economies. However, the price mechanism rarely allocates environmental goods in an optimal manner because prices do not always reflect the real costs of using environmental resources (e.g. the cost of a car does not reflect the cost of the pollution it causes). A distinction can be drawn between private costs and benefits, and social costs and benefits of production and consumption.

Private costs refer to the expenditure by producers on resources to produce output, and the costs incurred by consumers in spending part of their income to buy goods and services. **Private benefits** include the profits made by producers in selling goods and services in markets, and the utility or satisfaction gained by consumers from the consumption of goods and services to satisfy their needs and wants.

Social costs on the otherhand refer to the costs imposed on or borne by society as a result of private actions. For example, the negative externality of pollution caused by private industrial output is a social cost borne by the community. Also excessive private consumption of fast foods, tobacco, alcohol, drugs and gambling may impose social costs on the community. **Social benefits** on the otherhand include positive spillover effects of private production on the community such as shopping centres and carparks.

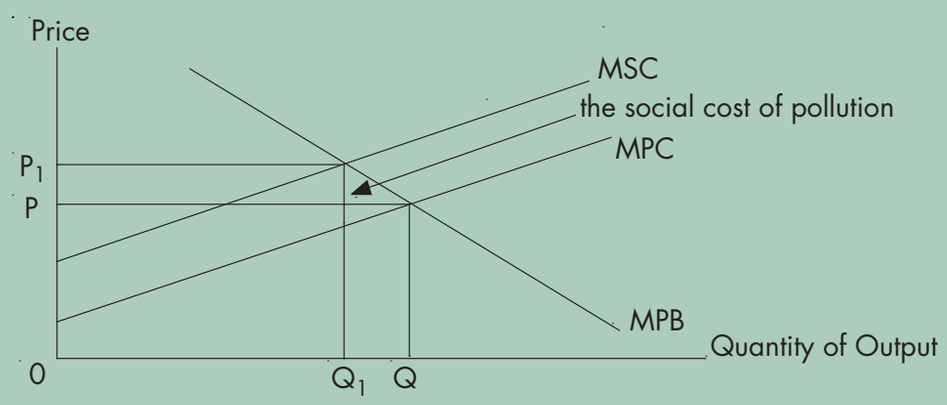
Market Failure and Externalities

In the case of many environmental resources such as clean air and water and biodiversity, markets may not exist for trade and exchange in these resources, or if they do exist, natural resources may not be allocated efficiently. This situation is known as **market failure**. The occurrence of market failure in the use of environmental resources is commonly linked with **negative externalities**. The price mechanism only takes into account the private costs and benefits falling upon individuals entering into exchange, and not the social costs and benefits of the actions of individuals in affecting others not directly involved in the market. For example, a person driving a car around the neighbourhood may contribute to noise and air pollution levels. These impacts were not included in the original purchase price of the car and therefore were not part of the original market transaction. However, the community may endure a loss of amenity through lower air quality and noise pollution, as a result of the person's consumption.

The effects which fall outside the parties to a market exchange, are called external or **spillover effects**. As the market only takes into account the private costs and benefits, the existence of externalities means that the total cost or gain accruing to society from a particular activity may not be registered. This will usually result in a misallocation of resources. Externalities can be either harmful or beneficial and may affect either the consumption or the production of goods and services. If the external effect is beneficial it is called an **external economy**, while if it is detrimental, it is known as an **external diseconomy**.

An example of an external diseconomy is illustrated in **Figure 12.3**, where the marginal private benefit curve (MPB) for a polluting good such as leaded petrol intersects the marginal private cost (MPC) curve at price P and quantity Q. Air pollution that results from the production of leaded petrol leads to a marginal social cost (MSC) which is not reflected by the marginal private cost curve. A more efficient allocation is where the MSC equals the MPB. To optimise society's welfare, less unleaded petrol should be produced (Q_1) and the higher price of P_1 should be paid, which would reflect most of the marginal social cost of the negative externality caused by using leaded petrol as a fuel. The higher price of leaded petrol in the past relative to unleaded petrol reflected the MSC of air pollution caused by leaded petrol.

Figure 12.3: The Effect of the Externality of Pollution on Production



Market Failure and Property Rights

Market failure in the allocation of some environmental resources such as clean air or water, may be due to a poorly defined or absent system of **property rights** for the use of environmental goods. The price mechanism cannot function efficiently without the use of a system of property rights. Private property rights give individuals, groups of individuals or private companies or public utilities the exclusive right of usage and/or ownership over certain resources such as land or water. Property rights enable market exchange to occur because they exhibit three important features:

1. **Excludability**: the owner of a property right has the right to exclude others from enjoying the benefits of using the property. This means that non paying users or 'free riders' are excluded from the use of the goods and services or resources in the market.
2. **Transferability**: property rights are marketable and can be bought and sold or traded in a market. The owner of a property right therefore has an incentive to maintain and improve the property in order to realise its increasing value through future sale in a market.
3. **Enforceability**: property rights are legally binding and courts can settle legal disputes and award damages or impose penalties on those who violate other people's property rights.

The problem that arises with many environmental goods, especially common property, is the lack of well defined property rights. This is known in economics as '**the problem of the commons**'. Unrestricted access to common or public property (e.g. beaches, waterways and parklands) may lead to over exploitation, congestion and depletion of resources. Since the number of users of resources is large, and resources are difficult to divide into smaller units, it is costly to devise resource management policies.

For example, over exploitation of marine resources such as whales and fish in the world's oceans and seas has led to a reduction in biodiversity and in some cases the extinction of some species. The difficulties experienced in drafting the United Nations Law of the Sea convention, served to illustrate the complexity of devising property rights for marine resources used by large groups or countries. Most countries operate and enforce their property rights through Economic Exclusion Zones to protect their marine resources and territorial integrity. However this can involve very large costs of enforcement.

In some instances, an exchange of property rights gives only temporary or restricted ownership. For example, mining companies or timber millers may be granted leasehold entitlements to certain sections of national parkland. Whilst such arrangements allow the developer to use the national park for extracting raw materials, they are usually restricted by the terms of the lease, and ultimately the parkland remains publicly owned. However the difficulty in providing for the needs of all interested parties such as developers and recreational users, may mean that the resource is managed in the interest of sustainable exploitation, rather than in the interest of long term preservation of the resource.

Private and Public Goods

Property rights provide the basis for the exchange of private goods and services in markets. In the case of **private goods**, the market functions as an auction system: those who are willing and able to pay the market price can obtain the goods and services, whilst those who are unwilling or unable to pay for the goods and services are excluded from the market. This means that private goods are **excludable** as individuals who are unwilling or unable to pay for goods and services in markets are excluded from enjoying the benefits of the goods or services by consuming them and deriving utility or satisfaction.

The consumption of private goods or services in addition to being excludable, is also said to be **rival**. If a good is consumed by one person in a market, it is no longer available for consumption by anyone else in the market. For example, if a loaf of bread is purchased in a supermarket or shop and eaten by one person or a family it cannot be consumed by another. Its consumption is therefore said to be rival.

Goods and services also exist where one person's consumption does not preclude others from using them. Furthermore, some goods and services cannot be withheld from consumption due to the nature of their supply. These goods and services are **public goods** and have the features of being **non excludable** and **non rival** in consumption. For example, if a government implements policies to reduce air pollution, people cannot be prevented from enjoying the benefits of cleaner air, whether they are willing or not to pay for cleaner air through higher taxes or licence fees to pollute. Furthermore, if one person consumes some of the clean air, it will not mean that there is less clean air available for others to consume.

Since public goods are non rival, no matter how many people consume them, the benefits available to others will not be reduced. Since the same benefits are available to others, and the fact that one person receives a benefit does not mean that there is less benefit for someone else to enjoy. As public goods are non excludable they are not suitable for supply in private markets. Private producers will only have the incentive to provide a good or service, where they are able to prevent people who are unwilling or unable to pay for the good or service from consuming it. Examples of **pure public goods** include national defence, the police force, emergency services and flood control schemes. The efficient supply of these services will require collective action, usually by the government or a public authority. Not all goods and services provided by governments are pure public goods. For example, education, health, electricity, roads and transport services, whilst mainly provided by the government or a public authority, may still be excludable and rival. They are not pure public goods as there may be some private provision of these goods and services in markets such as private schools, hospitals, transport and tollways.

Most environmental commodities can be viewed as **impure public goods**. Their use is usually subject to congestion as only a limited number of consumers can enjoy the commodity before consumption possibilities begin to deteriorate. Wilderness areas, beaches and national parkland are prime examples of public goods. Their use by large numbers of people tends to reduce the amenity an individual user obtains from visiting such areas, because of potential congestion, littering, pollution and vandalism.

The Problem of Free Riding

Another problem which constrains the price mechanism's efficiency in allocating environmental resources involves people who are '**free-riders**' or non paying users. In the case of public goods, individuals can obtain the benefit from the good or service whether or not they choose to pay for it. Consequently, many consumers will prefer not to contribute towards the cost of providing the good or service, thereby becoming free riders. The potential for free riding makes it difficult to obtain an adequate provision of public goods if there is a reliance on voluntary contributions. Eventhough the provision of a public good may create **net social benefits** for the community as a whole, if consumers fail to reveal their true preferences in the market, little of the good or service will be supplied. The free rider problem either prevents a market from developing, or in the case of an existing market, leads to a less than optimal or efficient level of supply. Both of these cases can be regarded as market failure, since free riding can prevent allocative efficiency from being achieved with environmental resources, amenities and services.

Non Use Values of the Environment

In more recent times economists have identified some less tangible causes of market failure. Economists tend to view environmental resources in an **anthropocentric** sense, that is, the natural environment is viewed strictly in terms of the value it provides to human beings. For example, people are able to go to a national park and consume the recreational properties of the park. Failure to recognise this potential user benefit when devising a management plan for the park could lead to the park's resources being used in a less than socially optimal manner. The existence of **non use values** has also been acknowledged by environmental economists. **Existence value** is the benefit obtained simply from the knowledge that a resource is in existence. For example, people may realise that they may never get to see the whales of the Southern Ocean, but still desire for whales to be protected from commercial or scientific harvesting.

Alternatively, one may obtain a benefit by having the option to use an environmental resource in the future. A consumer may obtain **option value** by avoiding the depletion of an environmental asset like the Amazon rainforest in the current period, thereby keeping the option to utilise or preserve it for the future. **Bequest value** is the benefit that the current generation is perceived to enjoy, by preserving the environment (e.g. Antarctica) for use by future generations. This is called **intergenerational value** and recognises that the benefits of preservation can accrue to future as well as current generations. These 'non use values' cannot be determined through market prices that reflect consumer preferences, because such markets do not exist. However, the decision to exploit environmental resources in the present without the recognition of such non use values, can be viewed as another source of market failure.

ENVIRONMENTAL ISSUES

The Preservation of Natural Environments

Economic growth and development involve the use of natural as well as labour, capital and entrepreneurial resources. Through activities such as agriculture, mining, manufacturing and commercial and residential development, many natural environments and ecosystems are altered, sometimes permanently. Land transformation which involves changes in the natural state of ecosystems such as rainforests, coasts, lakes, mountains, bushland and wetlands may lead to land degradation and the loss of flora and fauna, which represents a decline in the extent of biodiversity. In Australia a number of unique ecosystems or natural environments (mainly wilderness areas) exist which are worthy of preservation for their intrinsic natural beauty, recreational value, and contribution to scientific research.

Natural environments such as the Great Barrier Reef and Daintree Rainforest in Queensland; the wilderness areas (lakes, forests, rivers and mountains) of south west Tasmania; and Kakadu National Park and Uluru in the Northern Territory are so unique and valuable that they have been classified as World Heritage Areas by the United Nations and are part of the world's natural heritage to be preserved for use by both current and future generations. The campaign by conservationists to have these areas placed on the World Heritage List was partially motivated by the desire to achieve **intergenerational equity** through preservation, as well as environmental sustainability. A number of specific problems threaten the current and future preservation of many of Australia's natural environments:

- **Land and soil degradation** have occurred particularly in farming areas which have been subject to overuse or misuse such as the overuse of water irrigation systems in the Murray-Darling Basin. This has caused environmental problems such as soil erosion, acidity and salinity. In the Murray Darling Basin water flows have been reduced to such an extent by agriculture and drought that the entire catchment has been under constant threat for use by current as well as future generations.

  Land transformation has taken place in coastal as well as inland areas in Australia, through inappropriate development which has threatened the stability of coastal, wetland and forest ecosystems. This is particularly the case with high rise development along Australia's eastern coastal areas which are threatened by climate change, storm activity, rising sea levels and coastal erosion.

- **Over exploitation of resources** such as logging in native forests and mining in national parks by commercial development has led to a decline in some renewable and non renewable resource stocks and environmental quality. This is known as resource depletion, which can cause a reduction in the extent of biodiversity in some ecosystems and in extreme cases, the destruction of an ecosystem (e.g. copper mining in the Queenstown area of Tasmania has led to widespread desertification).
- **Pollution of the environment** is prevalent in Australia's largest urban areas (e.g. Sydney and Melbourne) where large populations, producing high levels of industrial, commercial and residential waste has led to a decline in water and air quality. Air pollution in Australia's capital cities is caused by carbon and other emissions from industry, households and the use of transport. There is also widespread concern over the expansion of coal seam gas projects in rural areas which may lead to the contamination of underground water and negative impacts on farming communities.

The Control of Pollution

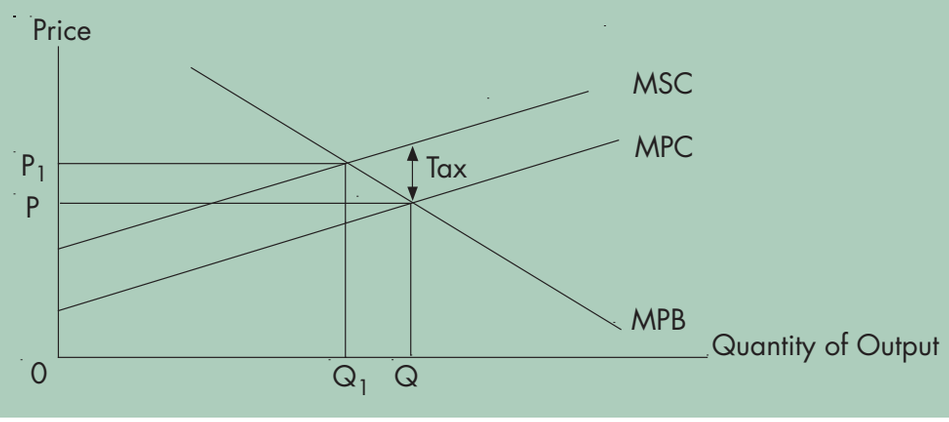
In the case of **external diseconomies**, the parties involved in the direct exchange of goods or services in markets impose an unwanted cost on a non consenting third party. When an action by one individual imposes a cost on another individual who is unable to avoid the cost, and who does not receive compensation through the market, a harmful spillover effect has taken place. Examples of external diseconomies include pollution, noise and traffic congestion. In the case of air, land and water pollution, society has allowed people to avoid certain social costs associated with their private activities. Essentially, firms pollute because by polluting, they are able to pass on some of their production costs to others. If a chemical plant disposes of its waste products by dumping them into a river, the firm is in effect transferring part of its costs of production onto others, who bear the ill effects of the pollution.

In a sense, negative externalities arise because of society's willingness to give away some of its natural resources for free or at **zero cost**. Property owners who allow their land holdings to deteriorate, use up the quality of the neighbourhood, just like timber millers use up forestry resources. Resources such as clean air and water, and the attractiveness of natural and cultural environments are therefore at risk of overexploitation. As a zero price is usually attached to such resources, the user is invited to waste the resources for which they may be entitled to pay a zero cost. The problem of negative externalities can also be attributed to the absence of well defined property rights. Since no one owns our clean air or water, no price is attached to them. Eventhough the supply of these resources is limited or finite, the price mechanism is not used to apportion their use or allocation in an optimal manner.

Negative externalities extend to virtually every sector of the economy. They are an unavoidable element of the production process and their consequences tend to grow disproportionately with the expansion of economic activity, development and population. Every manufacturing or consumption process inevitably creates waste. Wastes take numerous forms: household garbage, chemical residuals, plastic and paper packaging, mining tailings and greenhouse gas emissions from coal fired electricity generation plants. The laws of conservation of energy and mass (thermodynamics) provide a scientific basis for the inevitability of negative externalities arising from industrial production. They show that wastes cannot be made to vanish and that any input must become a waste product the moment that no further use can be found for it. Technical processes can be developed to transform waste products into reusable substances through recycling, but there can be no process that completely eliminates industrial waste.

If the cost of waste removal does not reflect its full social costs, external diseconomies will occur and be borne by the community. Society can influence the form taken by waste products in order to reduce the damage they cause. It can also influence the quantity of waste recycled instead of dumping it into the environment. Pricing has a major role to play in this process. If producers are made to pay the full social cost of waste disposal they are more likely to be encouraged to reduce their waste levels. If firms receive a tax advantage or benefit for recycling waste, the re-use of waste products will be encouraged. Other methods of putting a price on waste include reducing waste by fining illegal dumpers of waste and creating markets for the recycling of waste products like paper, glass, plastics, wood and metals.

Figure 12.4: The Effect of a Tax on Pollution



One method of reducing pollution is the use of a **tax on pollution** which was advocated by the English economist Arthur Pigou (1877-1959). He argued that the divergence between social and private costs could be corrected by a tax on pollution, to achieve an optimum allocation of resources and maximise society's welfare. The Pigouvian tax (e.g. a carbon tax) is shown in **Figure 12.4**. If a tax is imposed on a polluting firm, equal to the vertical distance between the MPC and MSC curves, the firm's costs of production will rise and lead to a higher equilibrium price (P_1) and a lower quantity of output (Q_1). Therefore a lower output will lead to a reduction in pollution and the impact of a negative externality.

The Stern Report and Climate Change

One of the most influential reports on the potential impacts of climate change on the global economy was the *Stern Report* released by the UK government in 2006. The *Stern Report* argued that drastic action was needed to reduce global warming to avoid more violent storms, rising sea levels, crippling droughts and economic dislocation. The *Stern Report* was divided into the following six parts:

1. The Evidence of Climate Change: there is overwhelming evidence that climate change is a serious issue that has been created by man's actions. It has implications for access to water resources; food security; production and employment; health care; and the use of environmental resources. Global temperatures are expected to rise by between two and five degrees Celsius by 2100, although the increase could be as high as ten degrees by 2100 if greenhouse gas emissions are not reduced.

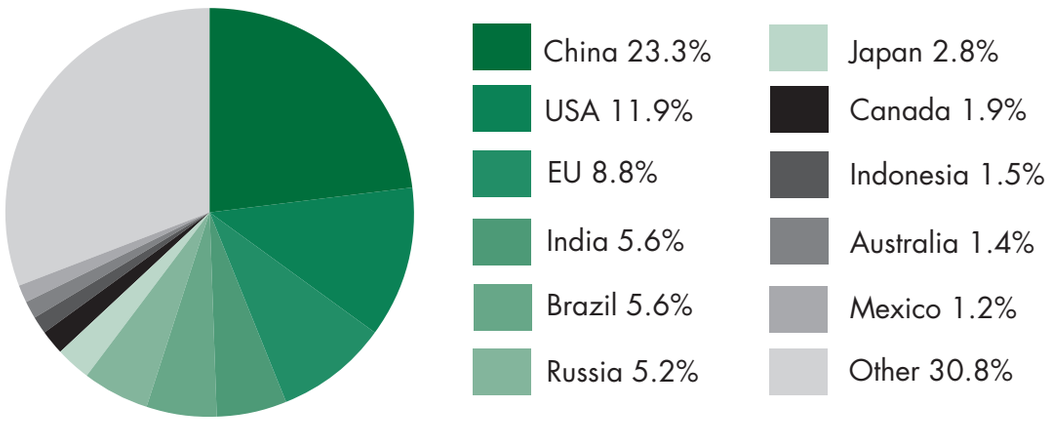
   The areas affected by extreme drought will probably rise from 1% of the world's land mass to about 30%. In other areas there will be widespread flooding and more intense storm activity. The risk of abrupt and large scale changes in the global climate system will rise. Sea levels may rise by up to 12 metres over the next few centuries. The severity of these impacts requires strong and urgent global action to reduce greenhouse gas emissions.

2. The Impact on Growth and Development: by 2100 an extra 250,000 children a year will die in the poorest countries as a result of climate change, and up to 220 million more may fall below the World Bank's US$2 a day poverty line. A rise of between just one and two degrees may lead to the extinction of between 15% and 40% of all species of biodiversity in the world.

   Rising sea levels will threaten countries such as Bangladesh, and cities such as London, New York, Tokyo and Shanghai. Ocean acidification could destroy fish stocks; crop failure will leave hundreds of millions at risk of starvation; and as many as 200 million people will be displaced by rising sea levels, floods and droughts. According to the *Stern Report* strong and early migration of people was the only way to avoid some of the more severe impacts of climate change.

3. The Cost of Stabilising Greenhouse Gases: greenhouse gas levels have increased steadily since the industrial revolution from 280 parts per million (ppm) of carbon dioxide equivalent, to 430 ppm. In 2012 the world produced 53.5b tonnes of carbon dioxide emissions with China (23.3%), the USA (11.9%) and the EU (8.8%) accounting for 44% of the global total as shown in **Figure 12.5**.

Figure 12.5: Largest Global Emitters by Country in 2012



Source: World Bank (2017), *World Development Indicators 2017*, World Bank, Washington DC. Table 3.9

Very strong reductions in carbon dioxide emissions are needed to ensure that they are cut by 25% by 2050 and ultimately to less than one fifth of today's levels. The goal is to stabilise levels at 550 ppm, although existing fossil fuel stocks could take carbon dioxide emissions to beyond 750 ppm. The *Stern Report* argued that early action was vital to stabilise greenhouse gas levels. This required moves to ensure that the price of goods and services reflect their full costs to the environment, and the greater use of low carbon technologies in production and consumption.

4. Policies to Reduce Emissions: **carbon pricing** must be at the core of any policy to reduce emissions. Governments must put an appropriate price on carbon, through taxes, carbon trading or regulation of industry, and encourage people to buy low carbon goods and services. There must be an expansion of carbon trading schemes to give industry and businesses the financial incentives to reduce carbon dioxide emissions. At the same time, governments and the private sector need to increase their investment in new technology to reduce greenhouse gas emissions. The *Stern Report* called for a five fold increase in incentives for low emission technologies, involving alternative ways to produce electricity, new forms of transport and other low carbon energy sources.

5. Policies to Manage Existing Climate Change: increases in greenhouse gases mean that countries must adapt to and cope with the impacts of climate change to which the world is already committed. This could include farmers switching to more climate resistant crops. However this type of adaptation will only have a limited effect and mute the impacts of global warming. It must also exist alongside strong and ambitious policies to reduce emissions in both industry and the residential civilian populations of advanced, emerging and developing countries.

   These measures would be expensive according to the *Stern Report*. It may cost the high income countries or rich up to $US150b a year or 0.5% of their GDP to construct new buildings and infrastructure that can cope with climate change. Governments can help by investing in more accurate climate forecasting; regulations to encourage better use of land and higher quality buildings; more coastal protection; and help for the poorest families who cannot afford insurance.

6. International Action: the *Stern Report* called for stronger and more co-ordinated international action on climate change, although this requires greater political and public support. Such a strategy will require a broadly similar price for carbon across the globe and the close involvement of the private sector in participating in global carbon trading schemes. Upper middle income countries must also adopt low carbon technologies as their demand for energy and transport grows (see **Figure 12.5**). This applies especially to the fast growing and large emerging economies of China and India.

The *Stern Report's* main message was that the future economic cost of global warming is far greater than the economic cost of reducing greenhouse gas emissions in the present. *The Stern Report* advanced four arguments in favour of advanced countries adopting policies to reduce their carbon dioxide emissions:

1. The advanced countries of the world account for over 50% of global greenhouse gas emissions and have the resources to implement immediate strategies to reduce greenhouse gas emissions.
2. By implementing a system of carbon trading, the advanced countries can build global support especially amongst emerging and developing countries for similar measures to be adopted elsewhere.
3. Advanced countries account for over 50% of greenhouse gas emissions (see **Figure 12.5**), and have an economic, ethical and moral obligation to reduce the problem. If they do this they will be taken seriously by the emerging countries such as China, India and other developing countries and gain more support for a global effort to reduce greenhouse gas emissions.
4. By developing low carbon technologies, advanced countries can export such technologies to developing economies and help them to reduce their greenhouse gas emissions in the future.

The **Paris Agreement** in December 2015 under the UNFCCC committed 195 countries (including the USA, China and India) to curb greenhouse gas emissions to stabilise global warming to below 2^0C.

Depletion of Renewable and Non Renewable Resources

Renewable resources are resources that can be sustained despite usage, and usually encompass all biological resources in the environment such as plants, trees and animals. The main issue that arises with the exploitation of renewable resources is that of **sustainability**, because although the resources are capable of renewal, they may become exhausted, degraded or even extinct through over exploitation. Therefore **sustainable yields** must be achieved to preserve a stock of renewable resources such as fish stocks, so that resources are preserved for future use despite current rates of exploitation or usage.

Non renewable resources include reserves of coal, crude oil, iron ore and uranium which cannot be sustained with increasing usage, as their supply is finite and may be exhausted. Non renewable resources may have the capacity for **recycling** (such as metals, glass and plastics), and advances in technology may increase the productivity of such resources or lead to the development of alternatives which may extend the life of the resource. For example, solar, wind, wave and tidal power are being used to reduce the reliance on fossil fuels such as coal and oil as major sources of energy. Another feature of non renewable resources is that known reserves of some resources (such as minerals, gas and oil) could be supplemented by potential (i.e. undiscovered or unexploited) reserves and increase known supplies such as coal seam gas. As non renewable resources are not capable of reproduction, improvements in technology may lead to more efficient usage, or the development of cheaper substitutes in production and consumption.

A final feature of many non renewable resources is that they may yield renewable resource flows such as crops from farmland or eco-tourism activities on the Barrier Reef or Daintree River in North Queensland's World Heritage areas. These renewable resource flows can generate market income, some of which can be invested in research and the preservation of the resource for use by future generations.

ENVIRONMENTAL POLICIES

The Australian federal, state and territory governments use a combination of regulatory (or command and control) and market based instruments (i.e. economic incentives) to manage the environment:

- **Regulatory or command and control regimes** include clean air and water legislation; landuse zoning and licensing; pollution laws; maintaining national parks and state forests; and the use of environmental regulations and standards for firms, households and individuals to comply with.
- **Market based economic instruments** include pollution charges or taxes; tradable pollution permits; tradable fishing quotas; incentives for recycling; private management of public nature reserves; incentives for eco-tourism; pricing policies for the use of environmental resources; public education campaigns; and taxation incentives for the use of 'green' technologies and 'green' products.

The Australian government is a signatory to global environmental conventions such as the Montreal Protocol to limit CFC emissions, the World Heritage Convention and the Antarctic Treaty. The Rudd Labor government ratified the **Kyoto Protocol** to limit CO_2 emissions at the UN Framework Convention on Climate Change (UNFCCC) in Bali in December 2007. The Bali Road Map agreed to in 2007 by advanced and developing countries was the basis for a new Kyoto Agreement to reduce global greenhouse gas emissions and develop a global market for clean technologies. These measures were seen as essential in slowing the rate of global warming. In Doha, Qatar, on December 8th 2012, the 'Doha Amendment to the Kyoto Protocol' was adopted, with 37 advanced countries (including Australia) agreeing to take on a second commitment period to reduce greenhouse gas emissions by at least 18% below 1990 levels in the period between 2013 and 2020. The **Paris Agreement** under the UNFCCC in 2015 committed 195 countries to targeted cuts in greenhouse gas emissions from 2020.

Environmental Protection

In federal budgets between 1997-98 and 2016-17 more funds were allocated to environmental protection in Australia to address a number of significant national environmental problems such as land degradation, resource depletion, environmental pollution, preserving biodiversity and wetlands, water conservation and cutting greenhouse gas emissions. Measures to protect the environment are administered by the federal Department of Environment and Energy. A number of environmental policies were introduced by the former Howard government (1996-2007) and included the following:

- In the 1997-98 budget the government established the Natural Heritage Trust (NHT) to fund environmental protection activities for the conservation of Australia's land, water, vegetation, biodiversity, coasts and oceans. Major programmes included Bushcare (vegetation cover), Coasts and Clean Seas (waterways and the marine environment), and the Ocean Policy.
- Funding was provided for the ongoing management and protection of national parks and world heritage areas in Australia such as Uluru, Kakadu and the Great Barrier Reef.
- The National Water Initiative was introduced in 2005 to establish national water markets, and the Murray-Darling Basin Commission was established in 2006 to improve water quality and the management of water resources in the Murray-Darling Basin.

The Rudd government was elected in 2007 with a strong policy commitment to environmental protection, including measures to address climate change, water security and the development of alternative sources of energy to fossil fuels. Expenditure of $1.2b on environmental protection in the 2009-10 budget included establishing the Climate Change Action Fund under the Carbon Pollution Reduction Scheme (CPRS), to compensate businesses and communities making the transition to an operating environment that included a price on carbon emissions (details of the CPRS are discussed on pages 269-270). In addition, $344m was allocated to the management and protection of national parks and other World Heritage Areas in the 2009-10 budget. The government also announced a range of new measures in the $4.5b Clean Energy Initiative to address the issue of climate change.

Climate Change Initiatives in the 2008-09 Budget

The Rudd government committed $2.3b in spending over five years from 2007-08 to reduce Australia's greenhouse gas emissions. Whilst the central component of this framework was the introduction of an emissions trading scheme by 2010, a **Renewable Energy Target** was also announced in the 2008 budget. This target was to ensure that 20% of Australia's electricity supply was generated from renewable energy sources by 2020. Measures announced in the 2008 budget to reach this target included:

- The National Clean Coal Fund to encourage clean coal output and low emission technologies.
- A Renewable Energy Fund to accelerate the commercialisation of renewable technologies.
- A Green Car Innovation Fund to develop and manufacture low emissions vehicles.
- An Energy Innovation Fund to support the development of clean energy technologies.
- The Clean Business Australia Programme to support the move to a low carbon economy.

Protection of Australia's Water Resources

The Rudd government's new ten year $12.9b national water policy framework in the 2008-09 budget, *Water for the Future*, recognised the significant urban and rural water challenges facing Australia:

- A National Urban Water and Desalination Plan to invest in desalination and water recycling.
- A National Water Security Plan for Cities and Towns, investing in efficient water infrastructure.
- A National Rainwater and Greywater Initiative to encourage household water saving measures.

In the 2008-09 budget $2.2b was allocated to the *Caring for our Country Programme*, to rehabilitate and conserve Australian environments, and $3.5b to the Murray-Darling Basin Plan in the 2013-14 budget.

The Clean Energy Initiative in the 2009-10 Budget

In the 2009-10 budget the government committed $4.5b to the Clean Energy Initiative to encourage innovation in low emissions and renewable technologies to reduce greenhouse gas emissions:

- An investment of $2b over nine years in carbon capture and storage (CCS) projects under a CCS flagship programme to capture carbon dioxide from coal fired power stations.
- An investment of $1.5b over six years in a Solar Flagships programme to develop large scale solar, thermal and solar photovoltaic technologies.
- A new independent renewable energy innovation body, Renewables Australia, to support renewable technology research, and the commercialisation and deployment of renewable technologies.

The Carbon Tax in the 2012 Budget and the Transition to an ETS by 2014

In the 2012-13 budget the Gillard government introduced a carbon tax of $23 per tonne on businesses emitting over 25,000 tonnes of CO_2 annually, who were required to buy emissions permits. This was based on moving Australia to a 'clean energy future' by cutting carbon emissions, providing incentives for investment in clean energy technologies, and helping to avoid the increased costs of delaying action on climate change. The Carbon Pricing Mechanism (CPM) was expected to raise $24.7b in revenue over three years and used to fund tax cuts and increases in family payments and pensions under the *Clean Energy Future* package to compensate households for higher energy costs. The policy of carbon pricing aimed to reduce Australia's emissions by at least 5% on 2000 levels by 2020.

Repeal of the Carbon Tax, the Emissions Reduction Fund and Finkel Review

The Abbott government elected in 2013 repealed the carbon tax on July 17th, 2014. The government argued that the carbon tax raised the cost of living for families and had a negative impact on economic and employment growth. Instead it adopted a policy of Direct Action in 2014 (to reduce Australia's emissions by at least 5% on 2000 levels by 2020) based on two main elements:

1. Funding of $2.55b in the 2014-15 budget was used to establish the Emissions Reduction Fund to pay companies and farmers to reduce their carbon emissions with eligible projects selected by 'reverse auction' where bidders sell proposed emissions reductions and the government buys the cheapest first, then the next cheapest, and so on, until the emissions reduction target of 5% below 2000 levels by 2020 is met. A new Emissions Reduction Target of 26%-28% on 2005 levels by 2030 was set by the Abbott government in 2015 and offered by Australia under the Paris Agreement.
2. The government was to set an emissions baseline for each major polluter based on their historical rates of pollution. If a company pollutes over these levels they will face some kind of penalty.

Criticism of the Direct Action plan is that it is not the cheapest or most efficient way to reduce carbon emissions as it is not based on a market mechanism which establishes a carbon price in the economy. By 2017 the Clean Energy Regulator had purchased 178 million tonnes in emissions reductions. In 2017 the *Finkel Review* argued for the adoption of a Clean Energy Target to increase the amount of electricity generated in the future from renewable sources of energy such as solar, wind, hydro and tidal power.

The Carbon Pollution Reduction Scheme (CPRS)

One of the first policy initiatives of the Rudd Labor government was to ratify the **Kyoto Protocol** in December 2007. Following this was the *Garnaut Climate Change Review* and the release of a *Green Paper* on a Carbon Pollution Reduction Scheme (CPRS) by the Department of Climate Change in July 2008. It contained preliminary details for the scheme to be implemented by 2010, based on a system of emissions trading. The Australian government's climate change policy was built on three pillars:

1. Reducing Australia's greenhouse gas emissions by 60% below 2000 levels by 2050.
2. Adapting to climate change through initiatives such as the Great Barrier Reef Rescue Plan (to mitigate the against the effects of coral bleaching) and the Water for the Future Plan.
3. Helping to shape a global solution to climate change through multilateral efforts in a post 2012 Kyoto Protocol involving both developed and developing nations.

Emissions trading would be the key mechanism for achieving a reduction in carbon emissions in a flexible and least cost way. The government argued that a **cap and trade scheme** (based on a market for trading pollution permits) would provide a strong incentive for businesses to cut carbon pollution by internalising the cost of carbon pollution. The details of such a scheme are outlined in **Table 12.1**.

The *Green Paper* in July 2008 argued that all of the revenue received by the government from the sale of 'carbon pollution permits' would be used for investment in clean technologies and pollution abatement. Another important feature was linking the Australian scheme with those overseas such as the one operating in the European Union. An international carbon market already exists under the Kyoto Protocol as many signatories have developed or are developing emissions trading schemes.

In December 2008 the government released a *White Paper* which contained the final details on the CPRS, including measures to smooth the transition to a low carbon economy where the CPRS would put a price on carbon throughout the economy. The CPRS was seen as the most efficient mechanism for reducing carbon emissions, as alternative non market based approaches, such as regulation or 'command and control' policies to reduce emissions, would impose higher costs on the community because they would not utilise market mechanisms to encourage low cost technologies to reduce carbon pollution.

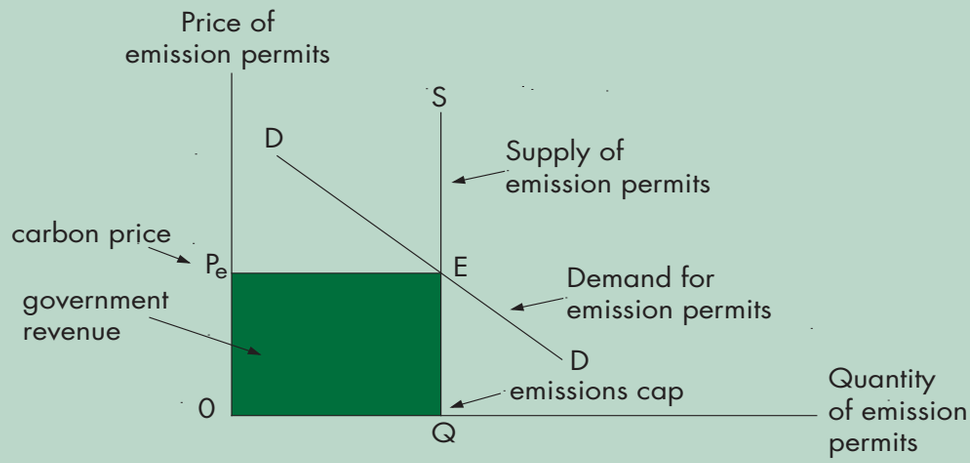
A model of how a market for tradable emission permits might work is shown in **Figure 12.6** where the supply of permits is denoted by the vertical supply curve S. The supply of permits is vertical as the number of permits or licences is fixed by the government and is equivalent to the number of licences needed to meet the annual emissions target. For example, if the cap was set at 100m tonnes of carbon

Table 12.1: The Mechanics of a Cap and Trade Emissions Trading Scheme

1. Significant emitters of greenhouse gases need to acquire a carbon pollution permit for every tonne of greenhouse gases they emit.
2. The quantity of emissions produced by firms will be monitored, reported and audited.
3. At the end of each year, each liable firm would need to surrender a carbon pollution permit for every tonne of emissions they produced that year.
4. The number of carbon pollution permits issued by the government in each year will be limited to the total carbon cap for the economy.
5. Firms compete to purchase the carbon pollution permits they require. Firms that value carbon permits most highly will be prepared to pay most for them, either at auction or in a secondary trading market. For other firms it will be cheaper to reduce emissions than to buy permits.
6. Energy intensive, export or import competing firms will receive some permits for free as a transitional assistance measure. These firms could use the permits or sell them in a market.

Source: Australian Government (2008), *Carbon Pollution Reduction Scheme, White Paper*, December.

Figure 12.6: The Market for Tradable Emissions Permits



dioxide emissions for a particular year, 100m emissions permits would be issued for that year. Entities responsible for sources of carbon emissions covered by the CPRS would be obliged to surrender a permit for each tonne of carbon dioxide they have emitted during the compliance period. The demand curve DD for permits is downward sloping, as demand rises when the permit price falls, and falls when the permit price rises. The equilibrium price (P_e) of permits is where the two curves intersect, with the demand for permits equalling the supply of permits at point E in the market for tradable emission permits. Companies are likely to be willing to pay for permits if their internal costs of pollution abatement are higher than the price of permits. Other companies may directly reduce their emissions if their internal costs of abatement are lower than the price of permits.

The amount of government revenue generated from the sale of permits (OP_eEQ) is equal to the number of permits sold (Q), multiplied by the price of permits (P_e). If the price of permits was set higher than P_e permits would remain unsold and pollution will be less than the target. This will impose a higher cost on the polluting firm and the emissions target will not be met. A permit price which is below P_e will result in excess demand for permits and a shortage of permits and the government will not maximise the revenue from the sale of permits.

The advantage of a market for tradable emission permits is that once the government sets the emission target, the market sets the price of permits and there is less need for government regulation in policing firms to meet their targets. However the government revenue gained from the sale of permits should be used to compensate those adversely affected by carbon emissions; develop cleaner technologies; and encourage the use of renewable sources of energy such as solar, wind, thermal, wave and tidal power.

The government's CPRS legislation was passed by the House of Representatives in mid 2009 but was defeated in the Senate in August 2009 because of opposition from the Greens, Independents and the Liberal-National Party Coalition. However in a political compromise the government separated its Renewable Energy Target legislation from the CPRS in an effort to persuade the Senate to pass the CPRS in November 2009. However this strategy failed and the CPRS was postponed until after 2012.

The CPRS legislation was timed to coincide with the United Nations Framework Convention on Climate Change (UNFCCC) meeting on a new Kyoto Protocol in Copenhagen, Denmark, in December 2009. Under the current Kyoto Protocol an international carbon market already exists, but a new expanded agreement would have allowed the CPRS and similar schemes to be linked globally. With the EU, some US states, Japan and Australia developing carbon trading schemes, this would encourage China, India and other countries to be involved in a new Kyoto protocol agreement to reduce global carbon emissions. In 2015 at the UNFCCC meeting in Paris, 187 developed and developing countries offered targets to cut their carbon emissions from 2020 to slow global warming to 2^0C by 2100.

REVIEW QUESTIONS

ENVIRONMENTAL SUSTAINABILITY

1. Why is environmental sustainability an important national and global issue?
2. How do economic systems use the environment? Refer to Figure 12.2 in your answer.
3. What is meant by ecologically sustainable development? Refer to Figure 12.1 and explain how a tradeoff may arise between economic growth and environmental quality. How can a society achieve more economic growth and improved environmental quality?
4. Distinguish between private and social costs and benefits in market exchange.
5. What are externalities? How are negative externalities an example of market failure? Refer to Figure 12.3 and explain how pollution can cause a divergence between private and social costs. How can a tax on pollution reduce the extent of pollution as shown in Figure 12.4 on page 264?
6. What are property rights? How does market failure arise in the allocation of environmental resources because of a weak or absent system of property rights?
7. Using examples, distinguish between the features of private and public goods. Why are many environmental resources considered to have the qualities of a public good? What is meant by free riding? How can it lead to over exploitation of environmental resources?
8. Using examples, explain the problems and issues that threaten the conservation and preservation of natural environments in Australia.
9. How does pollution arise in economies such as Australia? Why is pollution an environmental problem and an example of market failure? How can pollution be reduced?
10. Discuss the implications of climate change for the Australian economy and the global economy.
11. Using examples, distinguish between renewable and non renewable resources. What problems may arise in the use and management of renewable and non renewable resources?
12. Discuss the range of policies implemented by the Australian government to preserve natural environments. Evaluate the use of a carbon tax to reduce carbon pollution in Australia.
13. Contrast the Turnbull government's Direct Action Plan and Emissions Reduction Fund with the CPRS or an Emissions Trading Scheme to reduce carbon pollution. Refer to Figure 12.6 in your answer.
14. How could an Australian Emissions Trading Scheme be linked to the Kyoto Protocol and a global market for carbon trading? What was the outcome of the UNFCCC's Paris Agreement in 2015?
15. Define the following terms and abbreviations and add them to a glossary:

carbon tax	Kyoto Protocol	CPRS
climate change	market failure	CCS
Direct Action	non renewable resources	CPM
ecologically sustainable development	pollution	ESD
emissions trading scheme	private costs	ETS
environmental degradation	private goods	MPB
environmental management	property rights	MPC
environmental quality	public goods	MSB
externalities	renewable energy target	MSC
free riding	renewable resources	NHT
greenhouse gases	social costs	UNFCCC

CHAPTER 12: SHORT ANSWER QUESTIONS

Environmental Indicators for Australia

Carbon dioxide emissions (2013)	345 million metric tonnes (1.4% of the world's total)
Carbon dioxide emissions per capita (2013)	16.3 metric tonnes
Total energy production (2013)	344.6 million metric tonnes (93.7% from fossil fuels)
Clean energy production (2013)	4.0% (percentage of total energy use)
Mammal and bird species threatened (2016)	113
Nationally protected land areas (2014)	14.6% of total land area

Source: World Bank (2017), *World Development Indicators 2017*, World Bank, Washington DC. Tables 3.6, 3.8.

Refer to the table above of environmental indicators for Australia and answer the questions below. Marks

1. Explain TWO ways in which Australia contributes to global environmental problems. (2)

2. Explain TWO reasons for Australia's high level of carbon dioxide emissions. (2)

3. Explain why many environmental resources are considered to be public goods. (2)

4. Explain TWO causes of market failure in the allocation of environmental resources. (4)

CHAPTER FOCUS ON ENVIRONMENTAL SUSTAINABILITY

The Australian Government's Policies on Climate Change

"The Government's policies reduce emissions by boosting energy productivity, reducing waste, rehabilitating degraded land, increasing renewable energy and driving innovation. The Government's policies are addressing climate change while helping to reduce costs for households and businesses. Australia has a good track record of addressing climate change through strong targets and effective policies:

- By 2020 Australia will reduce its emissions to 5% below 2000 levels.
- By 2030 Australia will reduce its emissions to 26% to 28% below 2005 levels.

At the recent Paris Climate Change Conference all 197 UN countries agreed to take strong action to reduce emissions. It is important that all countries, and especially major emitters, work together to reduce emissions. Australia is responsible for around 1.4% of global emissions but our 2030 target will see Australia's emissions per capita fall by 50% to 52%."

Source: Department of the Environment and Energy (2016), www.environment.gov.au.

Explain how climate change may be regarded as an example of market failure and discuss the Australian government's policies to reduce greenhouse gas emissions in achieving environmental sustainability.

CHAPTER 12: EXTENDED RESPONSE QUESTION

Explain the causes of market failure in the allocation of environmental resources and Australian government policies that could be used to achieve environmental sustainability.

CHAPTER SUMMARY

ENVIRONMENTAL SUSTAINABILITY

1. Environmental management is important in preserving natural environments and resources for use by current as well as future generations. This is known as intergenerational equity.

2. Ecologically sustainable development is development that meets the needs of present generations without compromising the ability of future generations to meet their own needs. This definition came from the *Brundtland Report* in 1987.

3. There can be a tradeoff in the short term between economic growth and environmental quality, as faster rates of economic growth and development may require the use of more renewable and non renewable resources and therefore lead to a fall in environmental quality in a society.

4. Market failure can arise in the allocation of environmental resources since there may be an absence of markets for environmental goods as well as a system of property rights to regulate their usage.

5. Many environmental resources may have the qualities of a public good in being non rival and non excludable in exchange. This means that no matter how many people consume these resources, the benefits to others may not be reduced (non rivalry). Also private producers may not have an incentive to provide environmental goods because they may be unable to prevent people who are unwilling to pay for them (known as free riders) from consuming the good (non excludability).

6. The problem of free riding arises in the allocation of environmental goods since non paying users of the goods may not be prevented from consuming the goods and contributing to their provision.

7. In the allocation of environmental resources, market failure is commonly linked with the occurrence of negative externalities in production and consumption, such as pollution and the degradation of environmental resources, leading to increased greenhouse gas emissions and loss of biodiversity.

8. Renewable resources are resources that can be sustained despite usage and include biological resources in the environment. Non renewable resources can be recycled but cannot be replenished once produced or consumed. Examples include fossil fuels such as coal, oil and natural gas.

9. In the case of pollution, a zero cost is attached to the dumping of wastes in the environment. Businesses that pollute are externalising a cost and imposing a cost on society, which should be internalised to reflect the cost to the business. Governments can reduce pollution by enforcing emission standards, taxing polluting firms, offering incentives for recycling and the use of clean non polluting technologies, and fining polluters for the damage that they cause to the environment.

10. The preservation of natural environments is important to ensure sustainable economic growth and environmental quality in the future. In Australia the unique variety of flora, fauna and natural ecosystems is protected by national parks and World Heritage areas. However there are major environmental problems being addressed by governments such as land and soil degradation; over exploitation of resources; water quality and security; and the pollution of the natural environment from motor vehicle emissions, manufacturing, commercial, agricultural and mining activities.

11. The Australian government ratified the Kyoto Protocol at the UNFCCC Bali Conference in 2007. It planned to establish a Carbon Pollution Reduction Scheme (CPRS) in 2010-11 based on emissions trading but failed to get its legislation passed by the Senate in 2009 and delayed the introduction of the CPRS until global support for emissions targets was achieved through the UNFCCC and negotiation of a new Kyoto Protocol after 2012. The Australian government instead introduced a carbon tax of $23 per tonne on the emissions of large polluters on July 1st 2012. The Abbott government repealed the carbon tax in 2014 and announced a policy of Direct Action based on an Emissions Reduction Fund to reduce carbon emissions by 5% on 2000 levels by 2020.

ECONOMIC POLICIES AND MANAGEMENT

4

TOPIC FOCUS

This topic focuses on the aims and operation of economic policies in the Australian economy and hypothetical situations.

Students should learn to examine the following economic issues and apply the following economic skills in Topic 4 of the HSC course:

ECONOMIC ISSUES

- Analyse the opportunity cost of government decisions in addressing specific economic problems or issues;
- Investigate structural changes in the Australian economy resulting from microeconomic policies;
- Apply economic theory to explain how a government could address an economic problem or issue in hypothetical situations; and
- Analyse alternative ways to finance a budget deficit.

ECONOMIC SKILLS

- Explain how governments are restricted in their ability to simultaneously achieve economic objectives;
- Use simple multiplier analysis to explain how governments can solve economic problems;
- Identify limitations of the effectiveness of economic policies;
- Explain the impact of key economic policies on the economy;
- Propose and evaluate alternative policies to address an economic problem in hypothetical and the contemporary Australian contexts;
- Explain, using economic theory, the general effects of macroeconomic and microeconomic policies on an economy; and
- Select an appropriate policy mix to address a specific economic problem.

The Australian government has three key economic objectives it attempts to achieve. Firstly, it tries to sustain a rate of economic growth which leads to permanent employment creation, rising incomes and living standards. Secondly, the internal balance objective consists of trying to achieve price stability and full employment. Thirdly, external balance is the objective of achieving a sustainable current account balance, level of net foreign debt, and a stable exchange rate.

The three main policy instruments used by the Australian government to achieve these objectives are monetary policy, fiscal policy and microeconomic policy. Monetary and fiscal policies can be used for the stabilisation of aggregate demand and microeconomic policies (including industrial relations policy) for long term improvements in resource allocation and productivity in the economy.

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Chapter 13

Economic Objectives and Policies

A major rationale for government macroeconomic intervention is to stabilise fluctuations in the business cycle. This is called the conduct of counter cyclical or **stabilisation policy**. Fluctuations in the business cycle occur when economic activity (or real output as measured by changes in real GDP) deviates from its long run trend, causing excessive levels of inflation in booms, or excessive levels of unemployment in recessions. The government also uses macroeconomic and microeconomic policies to target long term economic growth which can lead to the achievement of rising living standards and economic prosperity for Australian residents over time. The three major objectives of government economic policy are:

1. **Economic growth** or growth in real GDP which is at a sustainable rate in terms of resulting in employment growth and rising real incomes, whilst minimising inflationary pressures and the current account deficit as a percentage of GDP;
2. **Internal balance**, which refers to the achievement of full employment of resources (including labour) and price stability where the inflation rate is kept within a target band of 2% to 3%; and
3. **External balance**, which involves financing import expenditure with export income, stability of the exchange rate, and the levels of net foreign liabilities and net foreign debt as percentages of GDP.

Other objectives of economic policy include the achievement of a fairer or more equitable distribution of income and wealth, and economic growth that is ecologically sustainable in terms of environmental quality being maintained for current as well as future generations (i.e. intergenerational equity).

ECONOMIC GROWTH AND THE QUALITY OF LIFE

Economic growth involves increasing the economy's production of goods and services over time and is measured by changes in real GDP. Sustaining economic growth is important for a number of reasons:

- Increases in the rate of economic growth lead to rising real per capita incomes, employment creation and higher standards of living for the Australian people.
- Economic growth is accompanied by an expansion in the economy's productive capacity, and the creation of employment opportunities to accommodate increases in the size of the potential workforce. This helps to reduce existing levels of unemployment and the rate of unemployment.
- Economic growth is consistent with more opportunities for investment in private infrastructure (such as new plant and equipment), and public infrastructure (such as transport, health and education), as well as advances in the rate of technological progress, which can all add to the economy's productive capacity and improve the quality of life over time.
- Economic growth leads to more opportunities to realise the gains from international trade and investment through the specialisation of production according to comparative advantage. Higher rates of economic growth should be accompanied by increased exports and imports and more opportunities for employment in export industries.

Successive Australian governments between 1996 and 2017 have sought to achieve a target of 3%-4% real GDP growth per annum for the Australian economy. This represents a higher growth rate than the historical average of 3% annual growth in GDP achieved by Australia between the 1960s and 1980s. Economic growth averaged 3% to 4% per annum between 1996 and mid 2008 which helped to reduce the unemployment rate from 7% in 1996 to 4.2% by mid 2008. However the Global Financial Crisis in 2008-09 led to lower growth and a rise in the unemployment rate to 5.8%. An economic recovery occurred in 2010 supported by strong mining investment which peaked in 2012. Between 2012 and 2017 economic growth slowed to 2.4% as the economy transitioned to non mining sources of growth.

FULL EMPLOYMENT

Full employment refers to achieving the objective of full employment of the economy's resources of land, labour, capital and enterprise. In policy terms, full employment is taken to mean the **full employment of the labour force**. If the labour force is fully employed, it is assumed that the other factors of production will also be fully employed. Full employment is defined as that level of employment where the demand for labour is equal to the supply of labour. However this does not mean that unemployment will be zero in the labour market as some unemployment will still exist due to frictional and structural unemployment. This is known as the natural rate of unemployment.

The **non accelerating inflation rate of unemployment** (NAIRU) is the rate of unemployment that is consistent with a constant or non accelerating inflation rate. The NAIRU is estimated at 5% of the workforce in Australia (Reserve Bank, 2017). This means that if inflation is not increasing (i.e. not accelerating), structural and frictional factors in the economy would still lead to an unemployment rate of around 5%. The government attempts to keep unemployment at the NAIRU by containing inflation and using reforms in the labour market (such as enterprise bargaining) to reduce the natural rate of unemployment over time by increasing the flexibility of the labour market and labour productivity.

The important relationship that exists between economic growth and the rate of unemployment is known as **Okun's Law** (developed by the American economist Arthur Okun). Okun's Law states that the rate of economic growth (e.g. 4%) must exceed the sum of productivity growth (e.g. 2%) and the growth in the workforce (e.g. 1%), for the unemployment rate to fall (e.g. by -1%) i.e.

Economic Growth (e.g. 4%)	>	Productivity Growth (e.g. 2%)	+	Labour force Growth (e.g. 1%)

Okun's Law provides the theoretical basis for the Australian government wanting to achieve a growth rate of around 4% in real GDP in order to reduce the rate of unemployment. If economic growth exceeds productivity growth plus labour force growth, there should be a fall in the rate of unemployment. The main benefits of reducing the rate of unemployment include increasing the economy's productive capacity and living standards, and minimising the economic and social costs of unemployment. For example, during the Global Financial Crisis in 2008-09 the Australian government used expansionary macroeconomic policies to support economic growth and minimise the rise in the unemployment rate.

PRICE STABILITY

Price stability or low inflation is a major objective of government economic policy because rising inflation reduces real incomes and living standards. Rising inflation can also cause distortions in the economy such as a misallocation of resources and a loss in international competitiveness. Rising inflation can also lead to higher inflationary expectations (i.e. excessive wage and price demands), which can cause a wage-price spiral to develop in the economy, leading to an acceleration in the rate of inflation.

In the first *Statement on the Conduct of Monetary Policy* signed by the former Reserve Bank Governor Ian Macfarlane and Treasurer Peter Costello in 1996, a target was set for underlying inflation of 2% to 3% over the economic cycle. The underlying rate of inflation is a calculation of inflation that removes 'one off', seasonal or volatile factors from the headline or CPI calculation of inflation. This was formalised as a key operating objective for the conduct of Australia's monetary policy.

Between 1996 and 2008 inflation was contained by the Reserve Bank and averaged about 2.6% per annum. The second *Statement on the Conduct of Monetary Policy* on July 29th 2003 reaffirmed the Reserve Bank's independence in conducting monetary policy and the use of an inflation targeting regime for the conduct of monetary policy. The third *Statement on the Conduct of Monetary Policy* was released in 2006 by the former Treasurer, Peter Costello, with Glenn Stevens appointed the new Governor of the Reserve Bank. Inflationary pressures rose between 2006 and 2008 as the economy reached full employment and capacity constraints emerged, prompting a tightening in monetary policy.

However in 2008-09 lower aggregate demand and low cost pressures due to the Global Financial Crisis (GFC) led to lower inflation and an easing in the stance of monetary policy to support economic growth and reduce unemployment. With economic recovery in the second half of 2009 and early 2010 inflationary pressures rose and the Reserve Bank tightened monetary policy to reduce inflation.

The fourth *Statement on the Conduct of Monetary Policy* (30th September, 2010) reaffirmed the Reserve Bank's use of inflation targeting to conduct monetary policy in a transparent and accountable manner. A new section in the Statement outlined the Reserve Bank's role in using its powers where appropriate to promote the stability of the Australian financial system, in the aftermath of the GFC.

The fifth *Statement on the Conduct of Monetary Policy* (24th October, 2013) was signed by Glenn Stevens and the Treasurer, Joe Hockey. It was updated to reflect the enhanced transparency of the Reserve Bank's policy decisions and to record the Bank's responsibility for financial system stability. Dr Philip Lowe, Deputy Governor, was appointed as the new Governor from September 18th 2016 for a period of seven years, coinciding with the sixth *Statement on the Conduct of Monetary Policy* (19th September, 2016).

EXTERNAL STABILITY

External stability refers to the goal of Australia meeting its short term and long term financial obligations with the rest of the world. External stability has three main dimensions or elements:

1. Ensuring that the current account in the balance of payments is in equilibrium. This means that the income received from exports of goods and services, Australia's assets abroad, and transfers, finances expenditure on imports of goods and services, Australia's external liabilities, and transfers.
2. Maintaining stability of the exchange rate in currency markets through international confidence in the Australian economy's performance and the conduct of the government's economic policy.
3. Ensuring that the levels of net foreign liabilities and net external debt are sustainable as percentages of GDP. The sustainability condition for the current account deficit is that it should be kept to under -5% of GDP to stabilise net external liabilities and the level of net foreign debt over time.

ENVIRONMENTAL SUSTAINABILITY

Environmental sustainability as an objective of government policy means that current levels of economic growth and development should meet the needs of the present generation without compromising the ability of future generations to meet their own needs. This reflects the principle of ecologically sustainable development (ESD) by maintaining environmental quality such as clean air and water, and access to other environmental resources. This can be achieved by meeting environmental standards and preserving and conserving both renewable and non renewable natural resources. It also commits the Australian government to meeting its obligations under the Montreal Protocol to reduce CFC emissions; the Kyoto Protocol to reduce greenhouse gas emissions; various UN environmental treaties (such as the Antarctic Treaty and the Law of the Sea Treaty), and the World Heritage, Climate Change, Protection of the Ozone Layer and Biological Diversity global conventions to preserve natural environments.

EQUITABLE DISTRIBUTION OF INCOME

There is not perfect equality in the distribution of income in market economies like Australia because of differences in the quality and quantity of resources and their factor income returns. However the government has a social responsibility to redistribute income from high to low income earners to make the distribution of income more equitable, and to alleviate absolute and relative poverty. The government's policy objective of achieving a more equitable distribution of income is supported by:

- Providing transfer/welfare payments to disadvantaged social groups unable to earn market income;
- Making the taxation system progressive to redistribute income from high to low income earners;
- Expenditure on public education, health, transport, housing and community services; and
- Reducing the incidence of poverty traps through the selective targeting of welfare assistance.

POTENTIAL CONFLICTS AMONG ECONOMIC OBJECTIVES

In seeking to achieve its economic objectives simultaneously, the Australian government may experience conflicts or tradeoffs between the main goals of economic policy in both the short and long runs:

- Price stability and full employment may conflict with each other in the short run because if the government pursues policies to promote economic growth and full employment (such as budget deficits or cuts in interest rates), economic growth may become unsustainable and lead to inflationary pressures and a lack of price stability. Alternatively, government policies (e.g. budget surpluses or higher interest rates) designed to reduce the rate of economic growth and inflation, may lead to rising unemployment and the government's inability to achieve the objective of full employment.
- Economic growth and full employment may conflict with external balance in the short run if an unsustainable rate of economic growth leads to rising import spending (because of excess aggregate demand) and a deterioration in the current account of the balance of payments. An unsustainable current account deficit imposes an external constraint on domestic economic growth and may also lead to a depreciation in the exchange rate which can raise inflation through higher import prices.
- The pursuit of microeconomic efficiency to raise domestic economic growth may conflict in the long term with full employment as some structural unemployment will result from the structural changes induced by various microeconomic reform measures. These measures may also conflict with achieving a more equal distribution of income if displaced workers suffer a loss of income.
- Economic growth may conflict with environmental quality in the long run if economic growth is ecologically unsustainable. This may lead to a depletion of renewable and non renewable resources, increasing levels of pollution, rising rates of land degradation and a reduction in biodiversity.

MACROECONOMIC POLICIES AND THE STABILISATION OF AGGREGATE DEMAND

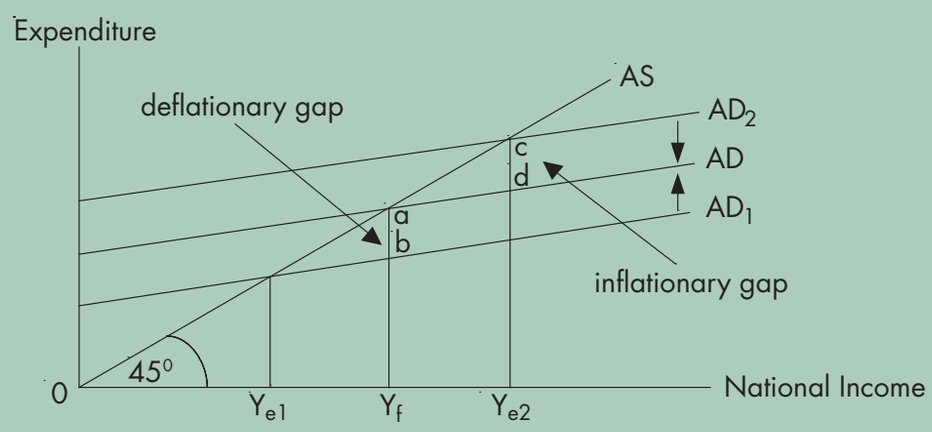
Macroeconomic policies refer to policies directed at stabilising the aggregate level of economic activity or aggregate demand. The two main tools or instruments of macroeconomic management are fiscal policy and monetary policy. **Fiscal policy** refers to the government's use of the federal budget to affect the level of economic activity, income distribution and resource allocation in the economy. These fiscal objectives can be achieved through the government's control of the two budgetary instruments of taxation and government spending. **Monetary policy** on the otherhand refers to the government's ability, through its monetary authority, the Reserve Bank of Australia, to affect the level of interest rates in the economy. Changes in interest rates will indirectly affect the growth and cost of credit, thereby influencing spending, output, prices and employment in the economy. Monetary policy is generally used for counter cyclical stabilisation in the economy as it is quicker to implement than fiscal policy.

Macroeconomic policies operate on the **demand side of the economy** since changes in the settings or stances of fiscal and monetary policies will impact on the growth of aggregate demand, which is total spending in the economy (i.e. C + I + G + X - M). Changes in the growth of aggregate demand will then impact on the growth of output (real GDP), employment and prices. The Australian government may change the settings of macroeconomic policies if the economy's equilibrium level of income does not coincide with the full employment level of income in the following situations:

- If aggregate demand is less than aggregate supply at the full employment level of income, a deflationary gap may occur in the economy and result in a rise in the rate of unemployment.
- If aggregate demand exceeds aggregate supply at the full employment level of income, an inflationary gap may emerge in the economy and result in a rising price level and inflation.

Both of these situations are illustrated in **Figure 13.1**. The full employment level of national income is Y_f, where all of the economy's resources including labour are fully employed. If the economy's equilibrium level of income is Ye_1, aggregate demand (AD_1) would be less than the level of spending or aggregate demand (AD) necessary to achieve the full employment level of income at Y_f.

Figure 13.1: Macroeconomic Stabilisation of Aggregate Demand



A deflationary or unemployment gap of **ab** would arise causing unemployment to increase. The size of the **deflationary gap** is measured by the shortfall in aggregate spending between AD_1 and AD. This could occur if there was a recession such as the Global Financial Crisis in the business cycle in 2008-09. The government could try to close the deflationary gap of **ab** by easing the stances of monetary and fiscal policies to encourage more spending. This would increase aggregate demand from AD_1 to AD in **Figure 13.1** and could be achieved by using more expansionary settings of monetary and/or fiscal policies:

- The government could ease the stance of monetary policy by cutting interest rates in the economy to encourage consumption and investment spending and the growth in aggregate demand to close the deflationary gap. Lower interest rates would encourage more borrowing and spending.
- The government could adopt a more expansionary stance of fiscal policy (e.g. through a larger budget deficit or a smaller budget surplus) by cutting taxes and/or increasing government spending to stimulate aggregate demand. For example, if the economy's equilibrium level of income at Ye_1 was $1,000m, and the full employment level of income at Y_f was $1,200m, the government could increase its level of spending by $100m to close the deflationary gap. Any change in autonomous government spending (ΔG) will have a multiplier effect (k) on national income (Y). Assuming a fiscal multiplier of k = 2, an increase in autonomous government spending (ΔG) of $100m will increase national income (ΔY) by $200m to the full employment level of income of $1,200m:

  $\Delta G \times k = \Delta Y$

  $100m (ΔG) x 2 (k) = $200m (ΔY)

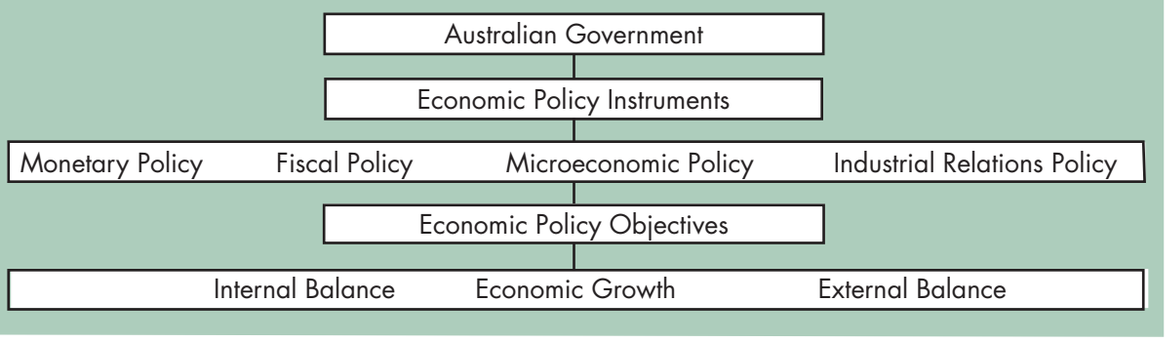
Alternatively if the economy's equilibrium level of income was Ye_2, aggregate demand (AD_2) would exceed the level of spending (AD) needed to achieve the full employment level of income of Y_f. An inflationary gap of **cd** would arise causing inflation to increase. The size of the **inflationary gap** is measured by the excess of spending between AD_2 and AD. This situation could arise if there was a boom in the business cycle (e.g. the resources boom between 2006 and 2008; and the mining investment boom between 2010 and 2012) leading to over full employment and inflation. The government could try to close the inflationary gap of **cd** by tightening the settings of monetary and fiscal policies to discourage spending and growth. This would lead to a decrease in aggregate demand from AD_2 to AD in **Figure 13.1** and could be achieved by using more contractionary settings or stances of monetary and/or fiscal policies:

- The government could raise interest rates in the economy, to discourage consumption and investment spending and the growth in aggregate demand, to close the inflationary gap.
- The government could adopt a more contractionary stance of fiscal policy by raising taxes and/or decreasing government spending to reduce the growth of aggregate demand. This may result in a larger budget surplus (i.e. G < T) or a reduction in the size of an existing budget deficit (i.e. G > T).

ECONOMIC POLICY INSTRUMENTS AND OBJECTIVES

Macroeconomic theory suggests that a government should have at least as many policy instruments as the number of objectives it is trying to achieve. This is known as the **targets and instruments approach** to policy design. If this is the case the government has greater policy flexibility and does not need to achieve more policy objectives than it has policy instruments. Furthermore, for each instrument there should be a short term policy target so that the medium or long term objective can be achieved.

Figure 13.2: Economic Policy Instruments and Objectives



The Australian government uses a combination of two macroeconomic policy instruments (monetary and fiscal policies) in the medium term, and one microeconomic policy instrument (in the longer term) to achieve its three main policy objectives as illustrated in **Figure 13.2**. These objectives include economic growth, internal balance and external balance. The Australian government therefore attempts to achieve three policy objectives with three policy instruments. The next step is to assign each policy instrument to an objective the government is trying to achieve. This is known as **policy assignment**. The Howard, Rudd, Gillard, Abbott and Turnbull governments used the following policy assignment:

1. Monetary policy is assigned the role of counter cyclical stabilisation through the use of an inflation target for the conduct of monetary policy by the Reserve Bank of Australia. The inflation target is explicitly stated as 2% to 3% consumer price inflation on average over the economic cycle. The achievement of the inflation target set by the Reserve Bank and the Treasurer (i.e. the *Statement on the Conduct of Monetary Policy 2016*) is a pre-condition for achieving price stability and the other two macroeconomic objectives of economic growth and full employment.
2. Fiscal policy is largely assigned the role of achieving external balance by ensuring that the budget is kept in balance over the medium term and that higher public saving (through accumulated fiscal surpluses) can be used to reduce Australia's call on foreign saving. The key relationship is that the difference between domestic saving and investment is equal to the size of the current account deficit. Aside from balancing the budget over the medium term, the main fiscal policy target is to keep the current account deficit to under -5% of GDP over time.

   Despite fiscal policy having a more medium term focus in achieving external balance, it can also be used for counter cyclical stabilisation if economic conditions change. This would involve a more contractionary fiscal stance if inflationary pressures arose in the economy as they did between 2006 and 2008 due to the resources boom and capacity constraints. Conversely a more expansionary fiscal stance would be adopted if the rate of economic growth fell and the rate of unemployment rose which occurred in 2008-09 because of the impact of the Global Financial Crisis and recession.
3. Microeconomic policies have a longer term focus by changing the allocation of resources in the economy. Microeconomic policies are more effective in promoting structural change or reform in product and factor markets to make markets more competitive, efficient and productive. Examples include major reforms in factor markets such as labour market reform and financial deregulation; and reforms in product markets, such as the reform of tariffs and quotas, and the use of the national competition policy to maintain competitive conduct by businesses in Australian markets.

REVIEW QUESTIONS

ECONOMIC OBJECTIVES AND POLICIES

1. Why does the government use macroeconomic policies to intervene in the economy?
2. Explain the difference between the economic objectives of internal and external balance.
3. Why does the government pursue economic growth as an objective of economic policy?
4. What is meant by full employment? Why does the government pursue the objective of full employment? What is meant by the NAIRU?
5. What does Okun's Law suggest about the relationship between the rate of economic growth and the rate of unemployment? What implications does Okun's Law have for the conduct of Australian economic policy?
6. How and why does the Australian government pursue the objective of price stability?
7. Which three elements are involved in the Australian government achieving external stability?
8. Briefly explain the economic objectives of a more equitable distribution of income and ecologically sustainable development (ESD).
9. Discuss the conflicts or tradeoffs that may arise in the short and long runs in the simultaneous achievement of the Australian government's main economic objectives.
10. Explain how deflationary and inflationary gaps may arise in the economy.
11. How can changes in the settings of macroeconomic policies be used to close deflationary and inflationary gaps by shifting aggregate demand? Refer to Figure 13.1 in your answer.
12. Discuss the targets and instruments approach to economic policy design in Australia.
13. How are macroeconomic and microeconomic policies assigned to economic objectives by the Australian government?
14. Define the following terms and add them to a glossary:

aggregate demand
aggregate supply
deflationary gap
ecologically sustainable development
economic growth
economic objectives
economic policies
efficiency
equilibrium income
equitable distribution of income
external balance
fiscal policy
full employment
inflationary gap
internal balance
macroeconomic policies
microeconomic policies
monetary policy
natural rate of unemployment
non accelerating inflation rate of unemployment
Okun's Law
policy assignment
price stability
productivity
resource allocation
stabilisation policy

CHAPTER 13: SHORT ANSWER QUESTIONS

Year	*Real GDP (%△)*	*CPI Inflation (%△)*	*Unemployment Rate (% of workforce)*	*Current Account Deficit (% of GDP)*
1	3.5	2.0	5.0	-4.5
2	4.2	3.5	4.0	-6.0
3	2.5	2.0	6.0	-4.0
4	2.1	1.8	6.5	-3.5
5	1.5	1.6	7.0	-2.8

Refer to the table above of selected economic indicators for a hypothetical economy and answer the questions below. Marks

1. What stage of the business cycle did this economy experience in Year 2? (1)

2. Explain TWO examples of evidence from the table that suggest Year 5 was a period of low or below trend economic activity in this economy. (2)

3. Describe and account for the relationship between inflation and unemployment between Years 2 and 5. (3)

4. Explain how the government of this economy could use a combination of macroeconomic and microeconomic policies to increase economic activity in Year 5. (4)

CHAPTER FOCUS ON ECONOMIC OBJECTIVES AND POLICIES

The Objectives, Targets and Instruments of Australian Economic Policy

Objective	*Target*	*Instruments*
Price Stability	2% to 3% consumer price inflation over the economic cycle	Monetary and fiscal policies
Full Employment	NAIRU of 5% of the workforce	Monetary and fiscal policies
Economic Growth	Sustainable growth of 3% to 4% in real GDP	Monetary and fiscal policies
External Balance	Sustainable current account deficit of less than -5% of GDP	Monetary and fiscal policies

"The Australian economy is in the midst of a major transformation, moving from growth led by investment in resources projects to broader based drivers of activity in the non resources sectors. This is occurring at a time when the economy has generally been growing below its trend rate and the unemployment rate has been rising. In this environment the Government is focused on implementing measures to support growth and jobs while putting in place lasting structural reforms to restore the nation's finances to a sustainable footing."

Source: Commonwealth of Australia (2014), *Budget Strategy and Outlook 2014-15*.

Explain how conflicts or tradeoffs can arise in the Australian government's attempts to achieve its economic objectives simultaneously.

CHAPTER 13: EXTENDED RESPONSE QUESTION

Discuss the main economic objectives of the Australian government and explain how it can use macroeconomic and microeconomic policies to achieve these objectives.

CHAPTER SUMMARY

ECONOMIC OBJECTIVES AND POLICIES

1. The major rationale for the use of government counter cyclical or stabilisation policies is to counteract adverse fluctuations in the business cycle such as higher inflation during booms and higher unemployment during recessions.

2. The major objectives of Australian government economic policy are to:

   - Achieve a sustainable rate of economic growth to raise living standards and the quality of life;
   - Achieve internal balance by securing price stability and full employment of resources; and
   - Achieve external balance by ensuring export income finances import expenditure, and there is stability in the level of net foreign liabilities, net foreign debt and the exchange rate.

3. Achieving sustainable economic growth means increasing Australia's productive capacity without adding to inflationary pressures or the current account deficit as a percentage of GDP.

4. Achieving full employment involves minimising the unemployment rate to the NAIRU which is estimated at 5% of the labour force in Australia.

5. Achieving price stability involves the Reserve Bank of Australia meeting its inflation target of 2% to 3% average consumer price inflation over the economic cycle.

6. Achieving external balance involves the current account being in equilibrium in the balance of payments; ensuring that the levels of net foreign liabilities and net foreign debt are sustainable as a percentage of GDP; and the exchange rate is also stable in financial markets over time.

7. Other economic objectives of the Australian government are achieving a more equitable distribution of income, and environmental sustainability or ecologically sustainable development (ESD).

8. Conflicts can arise between the simultaneous achievement of the Australian government's economic objectives. For example, the achievement of sustainable economic growth and full employment may be compatible in the short run, but could conflict with achieving price stability and external balance in the long run.

9. Macroeconomic policies such as monetary and fiscal policies are directed at stabilising the growth of aggregate demand. For example, if an inflationary gap arises in the economy, it can be closed by the government using a tighter stance of monetary policy to raise interest rates, and fiscal policy to raise taxes and reduce government spending, to reduce the growth of aggregate demand.

   Conversely, if a deflationary gap arises in the economy, it can be closed by the government using a more expansionary stance of monetary policy to reduce interest rates, and fiscal policy to reduce taxes and increase government spending, to increase the level of aggregate demand.

10. Microeconomic policies such as tariff reform, the national competition policy and labour market reform are used by the government to raise productivity, efficiency and international competitiveness in the economy. Microeconomic policies are directed at the supply side of the economy and have a long term focus on improving resource allocation and productivity in markets.

11. The use of long run microeconomic policies complements the use of macroeconomic policies by improving competition and efficiency, thereby helping the government to achieve its macroeconomic objectives of sustainable economic growth, price stability, full employment and external balance.

12. A major problem that emerged in the Australian economy between 2005 and 2008 was higher inflation, whereas in 2008-09 the GFC led to lower economic growth and higher unemployment.

Chapter 14

Fiscal Policy

Fiscal policy is the Australian government's use of its annual budget (usually 'handed down' in federal Parliament in May each calendar year) to affect the level of economic activity, resource allocation and income distribution. The budget strategy and stance of fiscal policy can influence the achievement of the government's objectives of economic growth, internal and external balance. The two main instruments of fiscal policy are government spending (G) and taxation (T). Changes in the level and composition of taxation and government spending can impact on the following variables in the economy:

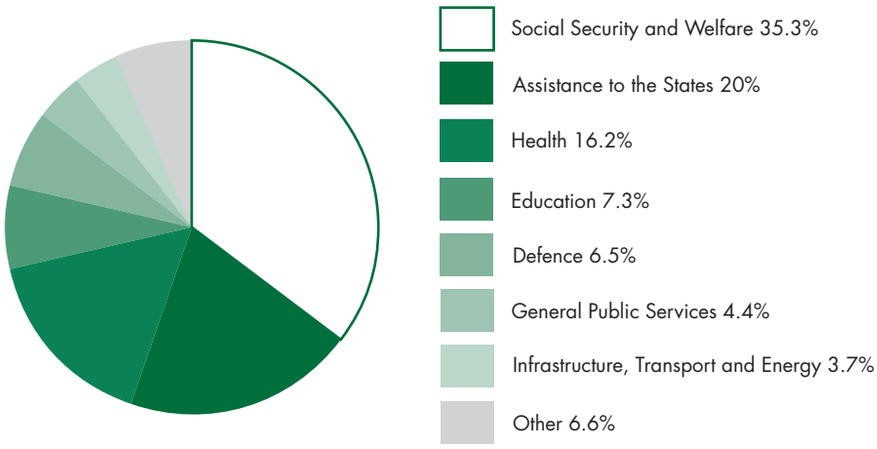
- Aggregate demand (i.e. C + I + G + X - M) and the overall level of economic activity;
- The pattern of resource allocation between the public and private sectors; and
- The distribution of income between high, middle and low income earners.

The budget is an annual statement of expected government revenue and expenditure for the forthcoming financial year (i.e. July 1st to June 30th). However the budget estimates may change as economic conditions change. Therefore the actual budget outcomes for expenditure and revenue may vary from the original estimates. This is why the Australian government issues a Mid Year Economic and Fiscal Outlook (MYEFO) statement in December or January each year, with updated forecasts. There is also a Pre Election Economic and Fiscal Outlook (PEFO) statement issued before each federal election.

THE FEDERAL GOVERNMENT BUDGET

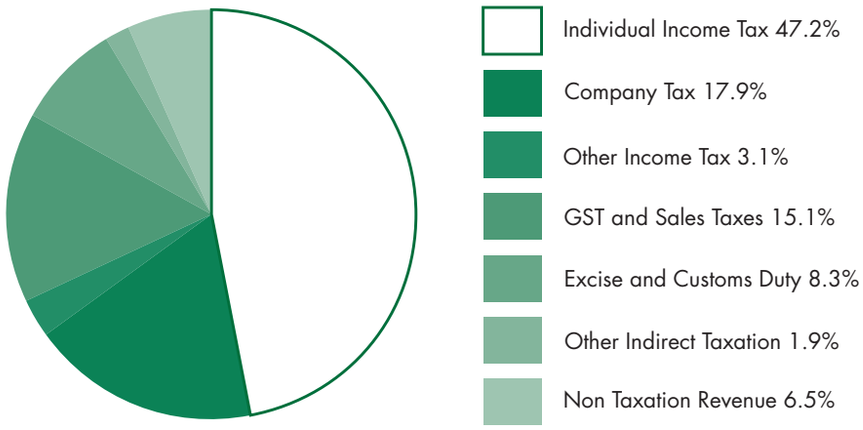
Figure 14.1 shows the allocation of total expenditure of $464.3b by function in the federal government's 2017-18 budget. Spending on social security and welfare (35.3%), health (16.2%) and education (7.3%) represented 58.8% of total estimated expenditure. The *New Tax System* in 2000-01 introduced a 10% Goods and Services Tax (GST) to replace some indirect taxes. The federal government gives assistance to the state governments, in the form of the revenue raised by the GST and this represented 20% of estimated expenditure in the 2017-18 budget. Other major expenses by function included defence (6.5%) and general public services (4.4%). In the 2017-18 budget, spending increased on social security and welfare (by $8.3b), to implement the National Disability Insurance Scheme (NDIS), but the government restrained overall spending growth in real terms in an effort to achieve a budget surplus by 2020-21.

Figure 14.1: Commonwealth General Government Expenses by Function 2017-18 (estimates)



Source: Commonwealth of Australia (2017), *Budget Strategy and Outlook 2017-18*, Table 3, page 6-7.

Figure 14.2: Commonwealth General Government Revenue 2017-18 (estimates)



Source: Commonwealth of Australia (2017), *Budget Strategy and Outlook 2017-18*.

Total revenue in the 2017-18 budget was estimated at $444.4b. Individual income tax at 47.2% (refer to **Figure 14.2**), was the largest share of government revenue. The company tax share was estimated at 17.9%, and total **direct income tax revenue** in 2016-17 (individual, company and other) was estimated at 68.2% of total revenue. The level of **indirect tax revenue** was estimated at 25.3% of total revenue in 2017-18 (GST and sales taxes 15.1%, excise and customs duty 8.3% and other indirect taxation 1.9%). Non tax revenue (such as fees, charges and fines) was estimated at 6.5% of total revenue in 2017-18.

POSSIBLE BUDGET OUTCOMES

The budget outcome is the net government budgetary position in terms of revenue and spending. **Figure 14.3** is a macroeconomic model used to show autonomous government spending (G) which is independent of the level of income, and taxation revenue (T) which is dependent on the level of income (i.e. taxation x changes in income). Three possible budgetary outcomes are illustrated in **Figure 14.3**:

- A **balanced budget** is where G = T (i.e. government revenue finances all of government spending and the budget balance is zero)
- A **budget deficit** is where G > T (i.e. government spending exceeds government revenue and the budget balance is negative or in deficit)
- A **budget surplus** is where G < T (i.e. government spending is less than government revenue and the budget balance is positive or in surplus)

Figure 14.3: Three Possible Budget Outcomes

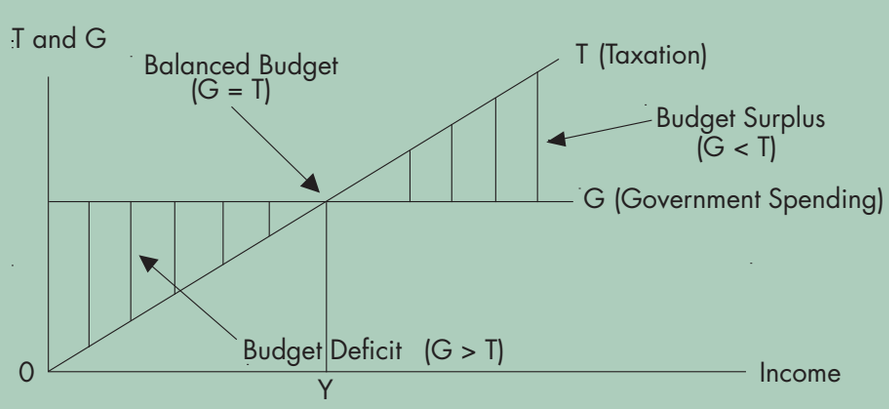


Table 14.1: Australian Government Underlying Cash Balance & Net Debt 2009-18 (f)

Year	*Revenue ($m)*	*Outlays ($m)*	*Cash Balance ($m)*	*Net Debt ($m)*
2009-10	284,662	336,900	*-54,494	49,020
2010-11	302,024	346,102	*-47,463	91,651
2011-12	329,874	371,032	*-43,360	154,713
2012-13	351,052	367,204	*-18,834	161,088
2013-14	360,322	406,430	*-48,456	211,104
2014-15	378,301	412,079	*-37,867	247,753
2015-16	386,924	423,328	*-39,606	305,454
2016-17 (f)	405,724	440,540	*-37,600	325,091
2017-18 (f)	433,494	459,684	*-29,396	354,931

Source: Commonwealth of Australia (2017), *Budget Strategy and Outlook 2017-18*. Tables 4 and 9. (f) forecast
NB: * The underlying cash balance from 2005-06 is revenue less outlays, less expected Future Fund earnings.

If we assume that government spending does not change (because it is independent of changes in national income) the budget outcome may change because of changes in the level of taxation revenue. If national income or economic activity rises (e.g. in an upswing or boom of the business cycle), more taxation revenue is collected, since the incomes of the employed increase, and they pay more income tax. There is also less unemployment and therefore more people employed, who contribute to tax revenue. There is also higher spending and profits so that more direct and indirect tax revenue is collected. In such situations the budget is likely to be in surplus. The opposite occurs if national income falls (e.g. in a downswing or a recession in the business cycle). Taxation revenue will fall as incomes, profits and spending fall, and unemployment rises. The budget outcome is therefore likely to move into deficit.

Table 14.1 shows trends in the cash outcomes for Australian government revenue, outlays, the underlying cash balance and government net debt between 2009-10 and 2017-18 (f). With positive economic growth between 2004-05 and 2007-08, revenue growth exceeded the growth in outlays, leading to larger underlying cash budget surpluses which were used to reduce the Australian government's net debt, and increase deposits and financial assets in the Future Fund (see page 306). However this changed between 2008-09 and 2012-13, when the budget moved into deficit, because revenue fell and spending increased as a result of the Global Financial Crisis. Growth in tax revenue was revised down between 2013 and 2016 as commodity prices fell, which reduced the growth in company and individual income tax revenue. This led to continued budget deficits and higher net debt between 2013-14 and 2017-18.

The Stances of Fiscal Policy

The stance of fiscal policy refers to the overall effect of the budget outcome on economic activity. The three possible stances of fiscal policy are neutral, expansionary and contractionary:

- A **neutral stance** of fiscal policy implies a balanced budget where G = T. Government spending is fully funded by taxation revenue and the overall budget outcome has a neutral effect on the level of economic activity as the budget balance is zero.
- An **expansionary stance** of fiscal policy involves a net increase in government spending (as G > T) through a rise in government spending or a fall in taxation revenue or a combination of the two. This will lead to a larger budget deficit or a smaller budget surplus, or a budget deficit if the government previously had a balanced budget. Expansionary fiscal policy will lead to an increase in aggregate demand and economic activity as the budget balance is negative.

Expansionary fiscal policy is usually associated with a budget deficit. Its use was advocated by J.M. Keynes (1883-1946) to boost aggregate demand to close a deflationary or unemployment gap, where equilibrium income was below the full employment level of income in an economy.

- A **contractionary stance** of fiscal policy (G < T) occurs when net government spending is reduced, either through higher taxation revenue or reduced government spending, or a combination of the two. This would lead to a lower budget deficit or a larger budget surplus or a budget surplus if the government previously had a balanced budget. Contractionary fiscal policy is usually associated with a budget surplus. Its use was advocated by J. M. Keynes to reduce aggregate demand to close an inflationary gap, where equilibrium income was above the full employment level of income, resulting in inflationary pressures in an economy.

The Structural and Cyclical Components of the Budget Outcome

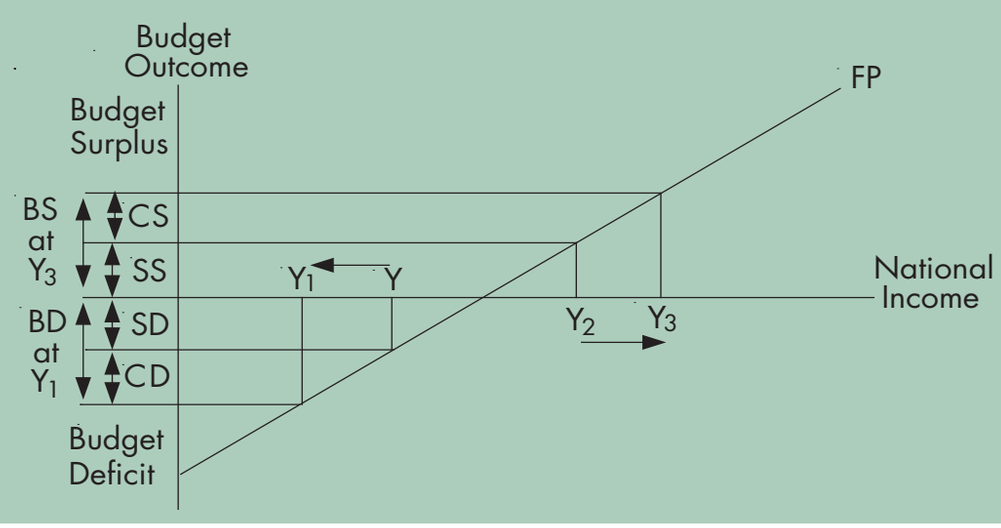
The two main components of the budget outcome are the structural or discretionary component and the cyclical or non discretionary component. The **structural component** refers to deliberate changes in government spending and/or taxation policies that affect the budget outcome. The **cyclical or non discretionary component** refers to changes in government spending and/or revenue which are caused by changes in the level of economic activity or national income that affect the budget outcome. For example, during the 2007-10 business cycle, government taxation revenue decreased due to lower economic activity, but spending rose in real terms due to higher discretionary government spending. Both cyclical and structural components caused the budget to move from a cash surplus of $19.7b in 2007-08 to cash deficits of -$27b in 2008-09, -$54.4b in 2009-10, -$47.4b in 2010-11 and -$43.3b in 2011-12. The cash deficit in the 2012-13 budget fell as tax revenue began to recover (see **Table 14.1**).

The macroeconomic model in **Figure 14.4** shows the determination of the size of the structural and cyclical components of a budget deficit or a budget surplus with changes in the level of national income. The size of a budget deficit (BD) or a budget surplus (BS) equals the sum of the structural (or discretionary) and cyclical (or non-discretionary) components of the budget i.e.

BD	=	SD + CD where:	BS	=	SS + CS where:
BD	=	budget deficit	BS	=	budget surplus
SD	=	structural deficit	SS	=	structural surplus
CD	=	cyclical deficit	CS	=	cyclical surplus

The line FP in **Figure 14.4** represents a stance of fiscal policy. If the government was budgeting for a deficit and the level of national income was Y, fiscal policy yields a budget deficit that is entirely

Figure 14.4: Fiscal Policy and Possible Budget Outcomes



structural and equal to SD. If national income fell to Y_1, the budget deficit will rise, due to an increase in the cyclical deficit or CD. The budget deficit is now larger and equal to SD + CD. On the otherhand, if the government was budgeting for a surplus and the level of national income was Y_2, the surplus would be entirely structural and equivalent to SS. If economic activity expanded and national income increased from Y_2 to Y_3, the budget surplus would grow due to an increase in the cyclical surplus of CS. The budget surplus is now larger and equal to SS + CS. The structural component of a budget deficit will rise if the government adopts a more expansionary fiscal policy, and fall if it adopts a more contractionary fiscal policy. The cyclical component of a budget deficit will fall if income rises, and rise if income falls. The structural component of a budget surplus will rise if the government adopts a more contractionary fiscal policy, and fall if it adopts a more expansionary fiscal policy. The cyclical component of a budget surplus will fall if income falls, and rise if income rises. Therefore both the structural and cyclical components of the budget process can influence the overall budget outcome.

Table 14.2 shows the effect of expected changes in the budget's structural and cyclical components on the net operating balance in 2016-17 and 2017-18. In the 2017-18 budget the **net operating balance** (revenue - expenses) was given more prominence as the main measure of how closely the government is meeting its recurrent obligations from its annual revenues. Net capital investment (e.g. spending on infrastructure) is excluded from the net operating balance measure of the budget outcome.

Table 14.2: Changes in the Net Operating Balance 2016-17 to 2017-18 (f)

	2016-17	*2017-18 (f)*
Estimated Net Operating Balance	-$33,691m	-$15,287m
Effect of Changes in Policy Decisions (Structural Component)	-$1,255m	-$895m
Effect of Changes in Parameter Variations (Cyclical Component)	-$3,720m	-$3,666m
Net Operating Balance (estimates)	-$38,666m	-$19,848m

Source: Commonwealth of Australia (2017), *Budget Strategy and Outlook 2017-18*, Canberra, page 3-34. Table 8

Automatic or Inbuilt Stabilisers

Part of the budgetary framework involves automatic changes to revenue collections and outlays which occur when the level of economic activity changes. These are known as automatic or inbuilt stabilisers, which help to offset the extremes of the business cycle, without the government needing to change the stance of fiscal policy. The two main automatic stabilisers are the systems of progressive taxation and government spending on transfer payments through the social security and welfare system:

- **Progressive taxation** means that taxpayers pay an increasing proportion of their income in tax as incomes rise in a boom, and a lower proportion of their income in tax as incomes fall in a recession. Taxation revenue rises as economic activity expands through a boom or upswing, helping to contain the growth in aggregate demand and possible inflationary pressures in the economy. Conversely, taxation revenue tends to fall as economic activity contracts through a recession or downswing, helping to maintain spending and aggregate demand, thus offsetting the trend towards lower economic activity and higher levels of unemployment during a recession.
- **Expenditure on welfare payments** such as unemployment benefits or Job Search Allowances to the unemployed rises when the rate of unemployment increases in a recession. This happens automatically as eligible persons register for the receipt of welfare benefits. This increases government expenditure which helps to raise aggregate demand. In a period of increasing economic activity, unemployment tends to fall as more jobs are created, and government expenditure on unemployment benefits falls, helping to contain the growth in aggregate demand and potential inflationary pressures.

Whilst automatic stabilisers help to offset changes in the business cycle (through changes to the cyclical component of the budget outcome), the government may need to use **discretionary fiscal policy** or structural changes in the stance of fiscal policy to stabilise the economy in the medium term.

REVIEW QUESTIONS

FEDERAL GOVERNMENT BUDGETS AND BUDGET OUTCOMES

1. Define fiscal policy and discuss the two main instruments of fiscal policy.
2. What is meant by the federal budget? Explain why the actual budget outcome may differ from the estimated or forecast budget outcome.
3. Refer to Figures 14.1 and 14.2 and describe the main areas of expenditure and sources of government revenue forecast in the 2017–18 federal budget.
4. How did the introduction of *The New Tax System* and the GST in 2001 affect the budgetary framework in relation to Australian government payments to the states?
5. Refer to Figure 14.3 and the text and explain the three main possible budget outcomes.
6. Distinguish between neutral, expansionary and contractionary stances of fiscal policy.
7. Refer to Table 14.1 and describe the changes in the Australian government's underlying cash balance and net debt between 2009-10 and the estimates for 2017-18.
8. Distinguish between the structural (discretionary) and cyclical (non discretionary) components of the budget outcome. Refer to Figure 14.4 and Table 14.2 in your answer.
9. What is meant by automatic stabilisers? Explain how automatic changes in the levels of taxation revenue and government expenditure can help to offset extremes in the business cycle and stabilise the level of aggregate demand in the economy.

THE ECONOMIC EFFECTS OF THE BUDGET

The main economic effects of the government's budgetary changes to expenditure and revenue are on the overall level of economic activity; resource allocation; and income distribution.

Economic Activity

Changes in the stance of fiscal policy can impact on the level of economic activity through changes in the budget outcome. The stance of fiscal policy is best measured by changes in the structural component of the budget outcome. In general terms, expansionary fiscal policy can lead to a larger budget deficit or a lower budget surplus. This will increase the growth in aggregate demand and economic activity. Contractionary fiscal policy on the otherhand, can lead to a smaller budget deficit or a larger budget surplus. This will reduce the growth of aggregate demand and economic activity.

Between 1996 and 2007 the stance of fiscal policy was largely contractionary, because the Howard government was committed to achieving a balanced budget over the course of the economic cycle. Fiscal policy was tightened in the 1996-97, 1997-98 and 1998-99 budgets through the use of a **fiscal consolidation strategy**. A cash budget surplus of $1,171m was achieved in 1997-98, because of cuts in discretionary spending and a cyclical rise in revenue. A large cash budget surplus was recorded in 1998-99 ($4,337m), growing to $13,059m by 1999-00. In the 2000-01 budget, *The New Tax System* was introduced which included the new tax of the GST. This led to a fall in the cash surplus to $5,971m because of cuts in income tax (leading to a fall in revenue) to compensate households for the price rises caused by the GST, and an increase in government spending on welfare payments for low income earners to compensate them for the price rises caused by the introduction of the GST.

The cash balance went into deficit in the 2001-02 budget by -$1,067m as the government raised spending and used a more expansionary fiscal stance to support domestic growth as global growth slowed. A cash surplus of $7.4b was achieved in 2002-03 because of stronger economic growth, with the surplus rising to $8b in 2003-04 eventhough the government increased spending and cut taxes. The rise in the cash surplus was largely due to a cyclical rise in taxation revenue because of stronger economic growth.

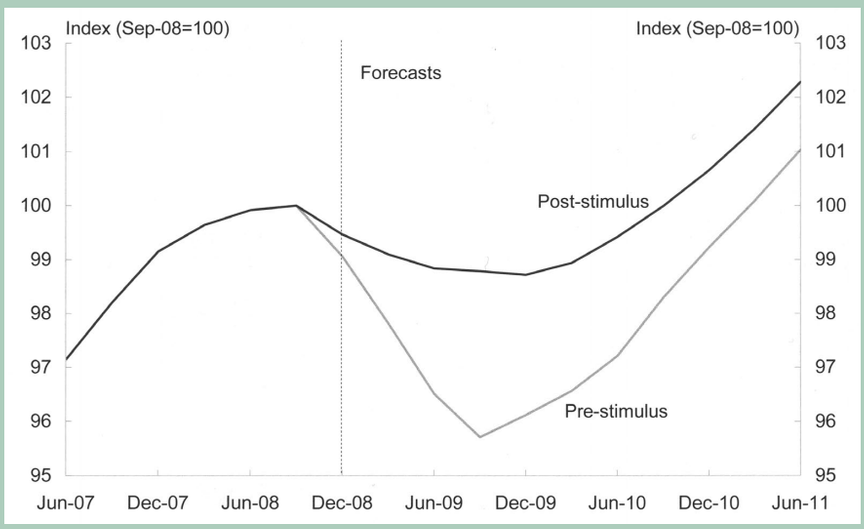
The budget surplus rose to $13.6b in the 2004-05 budget, eventhough the government cut taxes and raised spending. In the 2005-06 budget the cash surplus was higher at $15.8b, a rise of $2.2b on the 2004-05 surplus mainly because of a large rise in tax collections associated with higher corporate profits (due to the global resources boom) and strong employment growth. The cash surplus of $17.2b in 2006-07 resulted from rising taxation revenue, although this was partially offset by government policy decisions to cut income taxes and increase spending in priority areas. The cash surplus of $19.7b in the 2007-08 budget reflected higher tax revenue associated with the impact of the rising terms of trade on the Australian economy in boosting individual and company tax collections.

The Global Financial Crisis (GFC) and recession in 2008-09 dramatically changed the budget cash balance, through a decline in government taxation revenue, and an increase in discretionary government spending to support aggregate demand and employment. This led to the movement from a cash surplus of $19.7b in 2007-08 to a cash deficit of -$27b in 2008-09, and a cash deficit of -$54.4b in 2009-10. The automatic stabilisers of lower tax collections and higher government spending on unemployment benefits supported the level of aggregate demand during the GFC. The Rudd government also used an **expansionary fiscal policy stance** in the 2008-09 and 2009-10 budgets to support aggregate demand and employment by implementing a number of discretionary fiscal stimulus measures:

- The *Economic Security Strategy* package of $10b in spending on short term cash transfers to low and middle income households in November 2008 and February 2009 to support spending;
- The COAG reform package of $15.2b in new spending on state infrastructure;
- The *Nation Building* package on education, health and infrastructure in the 2008-09 budget; and
- The $42b *Nation Building and Jobs Plan* in the 2009-10 budget to support infrastructure investment and employment.

These stimulus measures were estimated to boost Australia's real GDP by 2.75% in 2009-10 and 1.5% in 2010-11 as shown in **Figure 14.5**.

Figure 14.5: The Effect of Fiscal Stimulus on Real GDP



Source: Commonwealth Government (2009), *Budget Strategy and Outlook 2009-10.*

In the 2010-11 budget the Australian government's fiscal strategy was based on returning the budget to surplus by 2012-13. The underlying cash deficit fell from -$54.4b in 2009-10 to -$18.8b in 2012-13, a tightening in the fiscal stance of 1.5% of GDP per year, based on the withdrawal of fiscal stimulus, limiting government spending growth to 2% per year, and a recovery in taxation receipts.

The newly elected Abbott Government in 2013 implemented a **Budget Repair Strategy** in the 2014 budget to reduce the budget deficit (through cuts to spending and increases in revenue) and achieve a budget surplus by 2017-18. Treasury estimated that the tightening in the stance of fiscal policy would detract from economic growth by between 0.3% and 0.5% over the forward estimates period. The 2015 budget outcome was an underlying cash deficit of -$39.6b which was higher than forecast because of

Table 14.3: Budget Aggregates for Australia 2015-16 to 2017-18 (f)

	2015-16	*2016-17 (f)*	2017-18 (f)
Underlying Cash Balance	–$39.6b	-$37.6b	-$29.4b
Fiscal Balance	–$37.5b	-$40.7b	-$20.3b
Net Debt	$305.4b	$325.1b	$354.9b

Source: Commonwealth of Australia (2017), *Budget Strategy and Outlook 2017-18*, Canberra.

lower commodity prices and slower growth in wages and profits which reduced tax collections. The **contractionary stance of fiscal policy** was designed to reduce the government's share of the economy over time and pay down net debt which had reached $305.4b in 2015-16 (**Table 14.3**). The Turnbull government's 2016-17 budget forecast a modest fall in the budget deficit to -$37.6b in underlying cash terms. Net debt was forecast to rise by 6.4% from $305.4b in 2015-16 to $325.9b in 2016-17, the result of increased public borrowing and higher debt interest payments. The 2017-18 budget forecast a reduction in the underlying cash deficit to -$29.4b (-1.6% of GDP) as economic recovery boosted tax receipts and expenditure was restrained. The budget was not expected to be in surplus until 2020-21.

Resource Allocation

Fiscal policy can also influence resource allocation, through changes to the taxation system and changes in government spending decisions. Changes in tax rates and/or the types of taxes levied will impact on how resources are allocated between various types of production. In the 2000-01 budget, the Howard government introduced *The New Tax System* which abolished the indirect wholesale sales tax, replacing it with a 10% Goods and Services Tax (GST) on the retail price of most goods and services.

Previous indirect taxes such as sales tax tended to penalise the production of certain categories of goods (e.g. electrical appliances, new cars and business inputs), and distorted resource allocation because it was applied at different rates but left services untaxed, eventhough services contributed up to 80% of GDP. This biased resource allocation in favour of service production. The GST removed this inefficiency by applying a **broad based indirect tax** at a uniform rate to most goods and services, helping to raise sufficient revenue to meet the government's future spending commitments and to increase allocative efficiency. In the 2001-02 budget the company tax rate was cut to 30% to improve resource allocation.

In the 2002-03 budget, changes were made to the taxation of superannuation to encourage resources to flow into superannuation contributions to raise private saving. This included co-contributions for low income earners, tax deductions for the self employed and a cut in the tax surcharge for the superannuation contributions of high income earners. In the 2006-07 budget, taxation was abolished from July 1st 2007 on superannuation for people aged over 60. In the 2008-09 budget the Rudd government increased the Child Care Tax Rebate from 30% to 50%; provided eligible parents with an Education Tax Rebate; and announced a major tax reform plan to be implemented by 2013-14. In the 2009-10 budget a major reform was the planned Paid Parental Leave Scheme in 2011 to support workforce participation by parents. Tax measures in the 2011-12 budget were phasing out of the

Dependant Spouse Tax Offset and reform of the Low Income Tax Offset to encourage workforce participation by disadvantaged groups. In the 2012-13 budget the Gillard government introduced the **Minerals Resource Rent Tax** (MRRT) and the **Carbon Pricing Mechanism** (i.e the carbon tax), with revenue from the MRRT to be used to fund the *Spreading the Benefits of the Boom* package for low income households. In the 2013-14 budget, changes were announced to superannuation, by raising the SGL to 12% by 2019. The Abbott government announced a **Temporary Budget Repair Levy** of 2% on high income earners (incomes above $180,000) in the 2014 budget to help reduce the budget deficit. In the 2015 budget, tax relief for small businesses was announced in the $5.5b *Jobs and Small Business Package*. In the 2016-17 budget the Turnbull government introduced a 'Ten Year Enterprise Tax Plan' to reduce the company tax rate for small businesses from 28.5% to 27.5%. In the 2017-18 budget the government announced plans to cut the company tax rate for all companies to 25% by 2026-27 and introduce a major bank levy on banks with over $100b in liabilities to assist with budget repair.

Changes in the level and direction of government expenditure can also affect resource allocation in the economy e.g. in the 2000-01 budget a families assistance package ($2.4b) was announced to compensate families for the higher cost of living associated with the GST. New spending in the 2001-02 budget included defence, welfare, employment and training. In the 2002-03 budget, $3.4b in new spending was allocated to defence, health, aged care and the Baby Bonus. In the 2003-04 budget new spending was announced in the priority areas of defence, domestic security, higher education and health.

In the 2004-05 budget resources were directed to family welfare, health, aged care, superannuation, science and innovation, defence, infrastructure and the environment. In the 2005-06 budget new spending included an increase in the Family Tax Benefit Part B by $430m and $170m on the *Welfare to Work* package to increase workforce participation and reduce welfare dependency. Resources in the 2006-07 budget were allocated to defence, family assistance, child care, health and infrastructure. In the 2007-08 budget, there was new spending on the *Realising Our Potential* education package, child care, welfare for older Australians and road and rail infrastructure.

In the 2008-09 budget the Rudd government announced major new areas of spending: the *Education Revolution* ($5.9b); the *National Health and Hospitals Reform Plan* ($3.2b); infrastructure investment (Building Australia Fund - $2.7b); and Climate Change ($2.3b). In the 2009-10 budget the $22b *Nation Building and Jobs Plan* directed resources to transport, communications, energy, education and health infrastructure. The *Clean Energy Initiative* ($4.5b) was directed to increasing the use of renewable energy and $43b was allocated to the government's *National Broadband Network* over eight years.

In the 2010-11 budget the Rudd government allocated new spending to skills and infrastructure ($661.2m on the *Skills for Sustainable Growth* strategy, and $1b on new infrastructure); health and hospitals (the $2.2b *National Health and Hospitals Network*); and investment in renewable energy (the $652.5m *Renewable Energy Future Fund*). In the 2011-12 budget major areas of new spending were the *Building Australia's Future Workforce* package ($3b), new infrastructure programmes ($6b), mental health reform ($523m) and $6.6b on natural disaster relief. Major spending measures in the 2012-13 budget included the first stage of a National Disability Insurance Scheme or NDIS ($1b); the *Spreading the Benefits of the Boom* package to increase incomes for families with children, young people and the unemployed; and the *Clean Energy Future* package. In the 2013-14 budget new spending included $24b on infrastructure; a National Plan for School Improvement ($9.8b); and $14.3b for the NDIS.

In the 2014-15 and 2015-16 budgets the Abbott government's fiscal strategy was based on reducing government spending as a percentage of GDP in order to free up resources for private investment. The major new spending measures in the 2014 budget were an *Infrastructure Growth Package* ($50b) and a Medical Research Future Fund ($20b) and in the 2015 budget, the *Jobs and Small Business Package*. In the 2016-17 budget the Turnbull government committed $1.1b to a *National Innovation and Science Agenda*, $50b to further infrastructure investment and $840m to a *Youth Employment Package*. In the 2017-18 budget the Turnbull government committed $70b between 2013-14 and 2020-21 to a National Infrastructure Plan, $18.6b to needs based schools funding (the Gonski reforms) and extra funding to finance a Medicare Guarantee Fund, the Pharmaceutical Benefits Scheme and the NDIS.

Table 14.4: Changes to Income Tax Thresholds and MTRs in the 2012 & 2016 Budgets

Previous Tax Thresholds (from July 1st 2010) Income Range	*Tax Rate (%)*	*New Tax Thresholds (from July 1st 2012 and 2016) Income Range*	*Tax Rate (%)*
0–$6,000	0%	0 – **$18,200**	0%
$6,001–$37,000	15%	**$18,201**–$37,000	**19%**
$37,001–$80,000	30%	$37,001–**$87,000**	**32.5%**
$80,001–$180,000	37%	**$87,001**–$180,000	37%
$180,001+	45%	$180,001 +	45%

Sources: Commonwealth of Australia (2012), *Budget Strategy and Outlook 2012–13.*
Commonwealth of Australia (2016), *Budget Strategy and Outlook 2016–17.*

Income Distribution

Income distribution is affected by the budget through changes to the taxation and social security and welfare systems. The Australian government can use the taxation and social security and welfare systems to make the distribution of income more equitable. For example, the government's commitment to a **progressive taxation system** means that marginal and average rates of taxation both rise as income rises, leading to a redistribution of income from high to low income earners. The social security system also impacts on the distribution of income through **means tested and assets tested spending on transfer payments** such as family allowances, job search allowances and pensions. These transfer payments are directed at low income earners such as the aged, the unemployed and families with dependent children.

The structure of the progressive system of personal income taxation in 2017-18 is shown in **Table 14.4**. All taxpayers receive a tax free threshold of $18,200. Thereafter as taxable or gross income increases, taxpayers pay a higher marginal tax rate (MTR) as they move into the four higher tax brackets or thresholds. These MTRs are 19%, 32.5%, 37% and 45% and are designed to increase the tax burden on taxpayers as income increases, thereby helping to raise revenue to redistribute income to low income earners in the form of transfer payments. The tax thresholds can also be changed to offset the effect of '**bracket creep**' where taxpayers are forced into higher tax brackets over time and pay more tax. For example, the Australian government raised the 32.5% tax bracket to $87,000 in the 2016-17 budget to offset the impact of bracket creep. Reform of the Australian taxation system since the 1980s has included the following measures:

- **Broadening the tax base** by taxing consumption (through the introduction of the GST in 2000) as well as personal income, company profits, superannuation, capital gains and fringe benefits.
- **Changing the tax mix** by placing more emphasis on indirect taxes such as the GST to raise revenue and reduce the tax burden (i.e. the percentage of gross income paid in tax) imposed by direct taxes such as income tax through periodic tax cuts. These tax cuts have mainly been implemented by raising tax thresholds and reducing the MTRs in the low and middle income tax thresholds.
- **Simplifying the tax system** by making it easier to comply with tax law and lodging annual tax returns electronically with the Australian Taxation Office.

In the 2012-13 budget the government announced a modest tax cut for taxpayers with incomes up to $80,000 to assist with the cost of living impact of the carbon price. From July 1st 2012 the tax free threshold was increased from $6,000 to $18,200 as shown in **Table 14.4**. However the MTR for the second tax threshold was raised from 15% to 19% and from 30% to 32.5% for the third tax threshold to offset the increase in the tax free threshold. In the 2013-14 budget new tax measures included closing loopholes in the corporate tax base; raising the Superannuation Guarantee Levy to 9.5%; indexing tobacco excise to AWE; and raising the Medicare Levy from 1.5% to 2% of taxable income.

In the 2014-15 budget the Abbott government proposed changes to social security and welfare which were widely criticised by welfare groups as being unfair. These included a $7 co-payment for visiting a GP and the withdrawal of unemployment benefits for persons under 30 years of age until a six month waiting period was served. Other measures were the pausing of indexation for many welfare benefits; indexation of the aged pension to the CPI instead of AWE; raising eligibility requirements for Family Tax Benefit B; increasing the pension age to 67 by 2023; and cutting $80b in state funding for schools and hospitals over the next decade. It was estimated that low income earners and families could lose between 10% and 15% of their income through lower benefits, leading to greater income inequality. Most of these measures were reversed in the 2017-18 budget as they failed to pass the Senate.

In the 2015 budget 'double dipping' was removed from the Parental Leave Pay Scheme from July 2016; welfare eligibility was tightened and targeted at those in need; a new Child Care Subsidy was to operate from July 2017; and new measures announced to reduce tax avoidance by multinational corporations. In the 2016-17 budget the Turnbull government announced a *Ten Year Enterprise Tax Plan* to reduce the company tax rate from 28.5% to 27.5% for small businesses. Other measures targeted tax avoidance by multinational corporations through a Diverted Profits Tax and establishment of a Tax Avoidance Taskforce. The government also announced numerous measures to better target tax concessions in the superannuation system such as raising the tax rate from 15% to 30% for concessional contributions for people on incomes over $250,000 and a lifetime cap of $500,000 for non concessional contributions. The main tax measures in the 2017-18 budget were a planned increase in the Medicare Levy from 2% to 2.5% in 2019 to help fund the NDIS and a strengthening of the Multinational Tax Avoidance Law.

The Henry Tax Review (2010) and the Tax White Paper Taskforce (2015)

The *Henry Review* (2010) made over 100 recommendations to make the tax system simpler, fairer and more efficient. However only a few of these recommendations were implemented:

- A tax on the super normal profits of large mining companies from 2012-13;
- An increase in the rate of excise duty on tobacco by 25% in the 2010-11 budget;
- The tax rate on small business was cut by 1.5% in the 2015-16 budget.

A Tax Reform Road Map presented with the 2012-13 budget contained plans for an increase in the Superannuation Guarantee Levy from 9% to 12% and tax concessions for small businesses. The Abbott government announced a White Paper on the *Reform of Australia's Tax System* in the 2014 budget and a White Paper on the *Reform of the Federation* involving changes to federal-state financial relations. Continuing debate over tax reform in 2016-17 focused on removing negative gearing tax concessions for investors and cutting the discount on capital gains tax to improve housing affordability. However neither of these measures was adopted by the Turnbull government which instead introduced measures in the 2017-18 budget to assist first home buyers and to increase the supply of affordable housing.

The Minerals Resource Rent Tax (MRRT) and Carbon Pricing Mechanism (CPM)

The Minerals Resource Rent Tax (MRRT) was introduced in 2012 and imposed on the profits made by companies from the use of non renewable resources such as iron ore, coal and natural gas. It was levied at a rate of 30% on the super profits of companies exceeding $75m in value. The revenue from the MRRT was used to fund regional infrastructure programmes and tax concessions for low income families in the *Spreading the Benefits of the Boom* package. The Abbott Coalition government elected in 2013 repealed the Minerals Resource Rent Tax in early September 2014.

A Carbon Pricing Mechanism was introduced in the 2012-13 budget, with a fixed price of $23 per tonne of carbon emissions for the 500 largest polluting businesses in the economy. The CPM was designed to reduce carbon emissions and encourage the use of more efficient and less polluting sources of energy. The Abbott Coalition government repealed the carbon tax on July 17th 2014 and adopted a policy of Direct Action in 2015 to reduce emissions by 5% on 2000 levels by 2020. This policy of Direct Action based on an Emissions Reduction Fund was maintained by the Turnbull government.

Table 14.5: Expenditure on Social Security and Welfare in the 2017-18 Budget

Type of Assistance	2016-17	2017-18 Budget (f)	%△
Assistance to the Aged	$62,270m	$64,279m	3.2
Assistance to Veterans and Dependants	$6,475m	$6,272m	-3.1
Assistance to People with Disabilities	$31,721m	$38,538m	21.5
Assistance to Families with Children	$36,404m	$36,936m	1.5
Assistance to the Unemployed and Sick	$10,994m	$10,038m	-8.7
Other Welfare Programmes	$1,745m	$1,737m	-0.5
Assistance for Indigenous Australians	$2,210m	$2,153m	-2.5
General Administration	$3,879m	$4,105m	5.8
Total Social Security and Welfare	$155,698m	$164,058m	5.4

NB: Most welfare payments are indexed to inflation with pensions set at 27.7% of Male Total Average Weekly Earnings in the 2010-11 budget.

Source: Commonwealth of Australia (2017), *Budget Strategy and Outlook 2017-18*, page 6-24.

Social Security and Welfare

Much of the revenue raised by the taxation system is spent on transfer payments provided through the social security and welfare system. This includes pensions, allowances and assistance to the aged; veterans and their dependants; people with disabilities; families with children; the unemployed and sick; and Indigenous Australians. In the 2017-18 budget $164.1b (refer to **Table 14.5**) was allocated for income support, assistance and services to people eligible for welfare payments in various categories.

Expenditure in the social security and welfare function was estimated to grow by 5.4% in 2017-18 with most growth occurring in assistance to the aged, assistance to people with disabilities and general administration. The continuing demographic shift to an older population as outlined in the *2015 Intergenerational Report*, continues to contribute to increased social security and welfare expenses as more Australians become eligible for the age pension and begin to enter residential and community care facilities. Expenses are also being driven by the implementation of the **National Disability Insurance Scheme** (NDIS) and child care assistance (Child Care Subsidy) measures announced in the 2015-16 budget. Trends in the 2017-18 budget estimates for expenditure on social security and welfare were:

- Assistance to the aged is estimated to grow by 1.2% in real terms between 2016-17 and 2017-18 and by 8.7% in real terms between 2017-18 and 2020-21 due to the continuing demographic trend of an ageing population.
- Assistance to people with disabilities is estimated to grow by 19.1% in real terms between 2016-17 and 2017-18 and by 23% in real terms between 2017-18 and 2020-21 reflecting the implementation of the National Disability Insurance Scheme (NDIS) which will be funded by a rise in the Medicare Levy by 0.5% from 2% to 2.5% from July 1st 2019.
- Assistance to families with children including family tax benefit payments are estimated to increase by 1.7% in real terms between 2017-18 and 2020-21.
- Assistance to veterans and dependants is estimated to fall as the number of beneficiaries declines.
- Assistance to the unemployed and sick is expected to increase by 16.8% in real terms between 2017-18 and 2020-21 as the unemployment rate remains high due to lower economic growth.
- Assistance for Indigenous Australians is forecast to fall by 4.4% in real terms between 2016-17 and 2017-18 and then decline by 7.3% between 2017-18 and 2020-21 as some programmes conclude.

Methods of Financing Budget Deficits

If the government plans to record a budget deficit (i.e. where G > T) it has three options for financing the shortfall in budget revenue (T) to meet its spending commitments (G):

1. It can borrow funds from the private sector by selling new Commonwealth government securities (CGS) in domestic financial markets. This is known as **deficit, bond or debt financing** and requires the government to pay the money back in the future with interest. Deficit financing is undertaken by the federal government selling Treasury bonds through a tender system. This involves the government determining the total value of bonds to be sold according to the size of the budget deficit, and potential buyers or tenders put in bids to buy a certain quantity of bonds at a certain interest rate. The government accepts the lowest tenders first (i.e. offers to pay the lowest rate of interest) and then accepts higher tenders (i.e. higher rates of interest) until all the bonds are sold and the deficit is fully financed. The advantage of debt financing is that there is no change in the money supply, as the money borrowed from the private sector causes a fall in bank deposits, but the money returns to the private sector as the government spends the money through its budget, increasing bank deposits to their previous level. Another advantage is that there is no increase in the net foreign debt as the government has not borrowed funds from overseas to finance the budget deficit.

   A disadvantage of debt financing is that it may cause a rise in interest rates and '**crowding out**' of private investment (i.e. '**financial crowding out**'). This means that selling CGS will only be successful if the interest rate offered is competitive with prevailing market interest rates on other securities. Higher interest rates will raise the cost of borrowing for businesses undertaking investment. Therefore deficit financing may lead to extra government expenditure at the expense of private spending, especially investment spending (i.e. '**real crowding out**'). Another disadvantage is that higher interest rates may increase capital inflow, causing the exchange rate to appreciate which can reduce the competitiveness of exports and import substitutes. This may lead to a rise in imports at the expense of exports and is known as '**international crowding out**'. A second disadvantage is that deficit financing leads to the accumulation of public debt by the government and sets up future financial obligations through payments of principal and interest.
2. It can borrow from the Reserve Bank of Australia (RBA) by instructing the RBA to simply 'print money' to cover the shortfall in budget revenue. This is known as **monetary financing** or 'printing money'. The government sells new government securities to the RBA, which the RBA is obliged to buy, and then credits the government's account with the cash, which in turn is spent in financing the budget deficit. The advantage of this method of financing is that there is no change in interest rates and no accumulation of public debt. But the disadvantages are that there is an increase in the money supply and a risk of rising inflation if the economy is at full employment. Also if monetary financing is used frequently, it may cause a reduction in business and consumer confidence in the government's economic management of the budget process, especially its control over spending.
3. It can **borrow funds in overseas financial markets** by getting the RBA to sell new CGS in return for foreign currencies. The RBA holds the foreign currency in its reserves and credits the Australian dollar equivalent of the loan to the government's account. The government then makes payments from its account to meet its expenditure commitments in the budget. The advantage of this method of financing is that there is no increase in domestic interest rates. The main disadvantages of this method of financing are that the government accumulates foreign debt, and this adds to the size of the current account deficit in future years, because the interest payments on the borrowings increase the net primary income component of the current account deficit.

The budget moved from a cash surplus of $19.7b in 2007-08 to cash deficits of -$27b in 2008-09, -$54.4b in 2009-10, -$47.4b in 2010-11, -$43.3b in 2011-12, -$18.8b in 2012-13, -$48.4b in 2013-14, -$37.8b in 2014-15, -$39.9b in 2015-16 and -$37.6b in 2016-17. There has been a large rise in Commonwealth net debt financed by sales of CGS. The total stock of CGS (i.e. Treasury Bonds, Treasury Indexed Bonds and Treasury Notes) was forecast at $537b in 2017-18.

The government's higher borrowing requirement due to successive budget deficits will be met by the issuance of Treasury Bonds, Notes and Indexed Bonds. In 2017-18 Treasury stated that 45% of CGS on issue were held by residents and 55% by non residents. **Table 14.6** shows the federal government's net debt and net interest payments position between 2012-13 and the estimate for 2017-18. Net debt was forecast at $354.9b (19.5% of GDP) in 2017-18, and net interest payments at $13.3b (0.7% of GDP).

Table 14.6: Australian General Government Net Debt and Net Interest Payments

	Net Debt	*% of GDP*	*Net Interest Payments*	*% of GDP*
2012-13	$161,088m	10.5%	$8,285m	0.5%
2013-14	$211,104m	13.3%	$10,843m	0.7%
2014-15	$247,753m	15.3%	$10,868m	0.7%
2015-16	$305,454m	18.5%	$12,041m	0.7%
2016-17 (e)	$325,091m	18.6%	$12,248m	0.7%
2017-18 (e)	$354,931m	19.5%	$13,355m	0.7%

Source: Commonwealth of Australia (2017), *Budget Strategy and Outlook 2017-18*. Table 4 NB (e) estimate

Methods of Using Budget Surpluses

Budget surpluses occur when government revenue exceeds government expenditure (i.e. where G < T). But unlike the case of a budget deficit, when the government must finance the budget deficit in some way, a budget surplus allows the government three choices on how to dispose of, or spend the surplus:

1. The government can reduce debt incurred with the private sector by **retiring public debt**. This is the most preferred method of using a budget surplus because it means that debts accumulated from past borrowings are repaid, reducing future debt obligations. It involves the purchase of old government securities previously sold to the private sector. Another advantage of reducing domestic debt is that the government's debt interest is reduced which is a significant item of recurrent expenditure in the budget. The Howard government eliminated Commonwealth general government net debt from a peak of $96,281m or 17.6% of GDP in 1996-97, to -$4,531m of net lending or -0.5% of GDP by 2005-06. Part of the accumulated budget surpluses in 2006-07 and 2007-08 were deposited in the Future Fund. The Future Fund is being used to pay for the Australian government's large stock of superannuation liabilities of public servants (see page 306).
2. The government can accumulate the surplus, and use it to **finance future expenditure** or to **fund tax cuts in the present** (e.g. tax cuts were made in federal budgets between 2000-01 and 2010-11). In addition, the government can increase its spending on productive assets such as infrastructure, which was done in the 2007-08 budget, when the Howard government committed $22.3b for road and rail infrastructure over five years, and $5b in setting up a Higher Education Endowment Fund. Similarly in the 2008-09 budget, the Rudd government announced a commitment to make initial contributions to three nation building funds from the 2007-08 budget surplus: the Education Endowment Fund ($11b); the Building Australia Fund ($20b) and the Health and Hospitals Fund ($10b). This practice ended in 2009-10 when the Global Financial Crisis led to a budget deficit.
3. The government could use the budget surplus to **repay debt accumulated overseas**. This would occur if the RBA used its foreign currency reserves on behalf of the Australian government and debited the equivalent amount of Australian dollars from the government's account with the RBA. The advantage of disposing of the budget surplus in this way is the reduction in the part of the net external or foreign debt owed by the Australian government. This reduces interest payable overseas and the size of the net primary income deficit in the current account of the balance of payments.

RECENT TRENDS IN AUSTRALIAN FISCAL POLICY

Underlying cash budget deficits for the Australian government are expected over the forward estimates period (2017-2020), with an underlying cash budget deficit of -$29.4b in 2017-18 (refer to **Table 14.7**), expected to fall to a smaller deficit of -$21.4b by 2018-19. The accrual measure of the budget outcome or the **fiscal balance**, is forecast to fall from -$40.7b in 2016-17 to -$20.3b in 2017-18 (refer to **Table 14.7**). This represents a tightening of fiscal policy in the 2017-18 budget by around 0.5% of GDP as part of the government's **Budget Repair Strategy**. The budget is expected to return to an underlying cash surplus of $7.4b in 2020-21. The fiscal consolidation strategy in the 2017-18 budget maintained a steady trajectory towards eventual budget surplus by cutting the real growth in government spending and relying on improvements in the automatic stabilisers of increased tax revenue and less spending on unemployment benefits as economic growth strengthens over the period of the forward estimates.

Treasury uses both the cash and accrual methods of accounting in forecasting the budget outcome. **Accrual accounting** is where items are brought to account as they are earned or incurred i.e. as economic value changes. **Cash accounting** is where items are brought to account only when cash is received or paid. Accrual accounting was adopted in 1999 to bring Australia in line with international accounting standards. The government also adopted the ***Charter of Budget Honesty Act*** (refer to **Extract 14.1**) in 1998 to raise fiscal responsibility, accountability and transparency. The government's aim was to make public finances sustainable in the medium term, so that government spending was not financed by the accumulation of net liabilities or debt over time. The Australian government also established the **Parliamentary Budget Office** in 2012 to provide advice to political parties about the fiscal implications of their policies, especially election commitments. The three main measures of the budget outcome are:

1. The **fiscal balance** is the accrual accounting counterpart of the underlying cash balance. The fiscal strategy is stated in terms of the fiscal balance. The fiscal balance or net lending/borrowing is the net operating balance less net capital investment and measures the government's saving-investment balance and contribution to the current account balance. A fiscal deficit of -$20.3b (-1.1% of GDP) is forecast for 2017-18, improving on the -$40.7b deficit (-2.3% of GDP) in 2016-17.
2. The **underlying cash balance**, plus expected Future Fund earnings, is the cash counterpart of the fiscal balance reflecting the Australian government's saving-investment balance. The estimated -$29.4b cash deficit (-1.6% of GDP) in 2017-18, is $8.2b less than the -$37.6b deficit in 2016-17.
3. The **headline cash balance** is calculated by adding government net cash flows from investments in financial assets (e.g. equities, the proceeds from privatisation and net loans) for policy purposes, and Future Fund earnings to the underlying cash balance. The estimated headline cash deficit of -$48.4b for 2017-18 is $2.7b lower than the -$51.1b headline cash deficit in 2016-17.

Extract 14.1: The Charter of Budget Honesty Act 1998

The Charter states that fiscal policy should be directed at maintaining the economic prosperity and welfare of the people of Australia and therefore should be set in a sustainable medium term framework. It does not stipulate specific rules or objectives for fiscal policy but requires that the fiscal strategy be framed in accordance with the following principles of sound fiscal management:

- Managing financial risks faced by the Australian government prudently, having regard to economic circumstances, including maintaining Australian general government debt at prudent levels;
- Ensuring that fiscal policy contributes to achieving adequate national saving and moderates cyclical fluctuations in economic activity by taking into account the economic risks the nation faces and their impact on the Australian government's fiscal position;
- Pursuing spending and taxing policies that are consistent with a reasonable degree of stability and predictability in the level of the tax burden;
- Maintaining the integrity of the tax system; and
- Ensuring that consideration is given to the financial effect of policy decisions on future generations.

Source: Commonwealth of Australia (2004), *Budget Strategy and Outlook 2004-05*.

Table 14.7: Commonwealth General Government Budget Aggregates 2015–2019 (f)

	Actual 2015-16	*Estimate 2016-17*	*Estimate 2017-18*	*Forecast 2018-19*
Revenue ($b)	395.1	412.1	444.4	476.1
% of GDP	23.9	23.5	24.4	25.2
Expenses ($b)	428.7	450.8	464.3	486.9
% of GDP	25.9	25.7	25.5	25.7
****Net Operating Balance** ($b)	**-33.6**	**-38.7**	**-19.8**	**-10.8**
Net Capital Investment ($b)	3.8	2.0	0.5	4.8
Fiscal Balance ($b)	**-37.5**	**-40.7**	**-20.3**	**-15.5**
% of GDP	-2.3	-2.3	-1.1	-0.8
***Underlying Cash Balance** ($b)	**-39.6**	**-37.6**	**-29.4**	**-21.4**
% of GDP	-2.4	-2.1	-1.6	-1.1
Headline Cash Balance ($b)	**-49.1**	**-51.1**	**-48.4**	**-37.1**

Source: Commonwealth of Australia (2017), *Budget Strategy and Outlook 2017-18*, Canberra.
NB: Figures are rounded and do not total. * The underlying cash balance excludes net Future Fund earnings
** The net operating balance excludes net capital investment (e.g. spending on infrastructure) and is a measure of the government's ability to meet its recurrent expenditure

The Government's Medium Term Fiscal Strategy

The Turnbull Coalition government's medium term fiscal strategy is to achieve budget surpluses on average over the course of the economic cycle. Its strategy is underpinned by four main policy elements:

1. Investing in a stronger economy by redirecting government spending to quality investment to boost productivity and workforce participation.
2. Maintaining strong fiscal discipline by controlling expenditure to reduce the government's share of the economy over time in order to free up resources for private investment to 'drive jobs and economic growth', with the payments to GDP ratio falling, and reducing net debt over time.
3. Supporting revenue growth by supporting policies that 'drive earnings and economic growth'.
4. Strengthening the government's balance sheet by improving net financial worth over time.

Through cuts in government spending and a recovery in tax receipts the fiscal balance is expected to fall to -$20.3b by 2017-18 (refer to **Table 14.7**) and be a small surplus of $2.7b by 2019-20, with expenditure as a percentage of GDP falling slightly from 25.7% in 2016-17 to 25.5% in 2017-18.

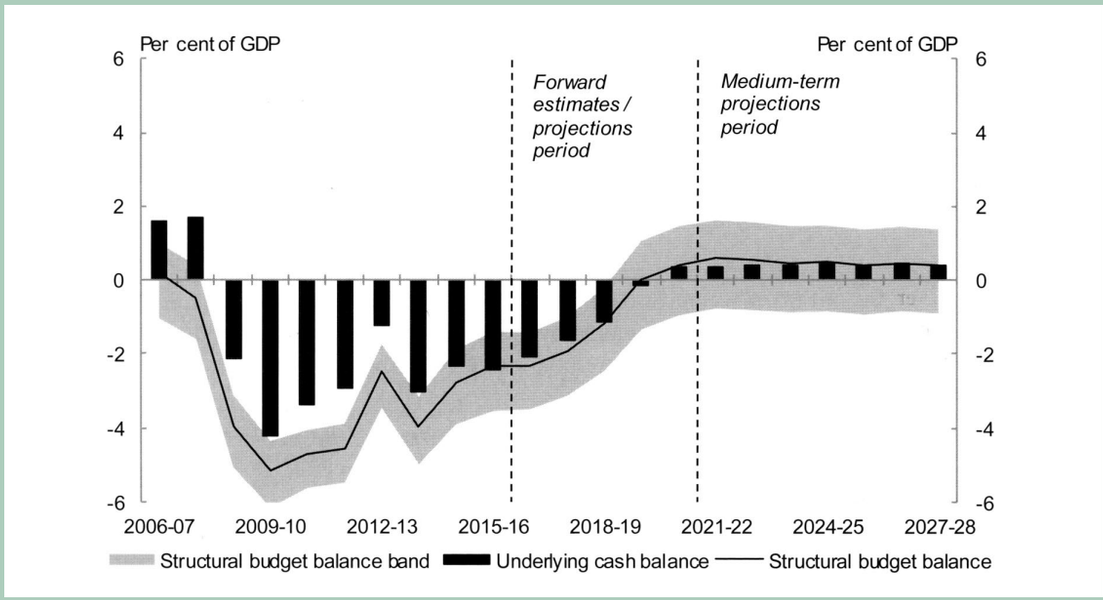
The Budget Repair Strategy

"The Budget Repair Strategy is designed to deliver sustainable budget surpluses building to at least 1% of GDP as soon as possible, consistent with the medium term fiscal strategy:

- New spending measures will be more than offset by reductions in spending elsewhere in the budget;
- The overall impact of shifts in receipts and payments due to changes in the economy will be 'banked' as an improvement to the budget bottom line, if this impact is positive; and
- A clear path back to surplus is underpinned by decisions that build over time.

The Budget Repair Strategy will stay in place until a strong and sustainable surplus is achieved and so long as economic growth prospects are sound and unemployment remains low." (Source: Commonwealth of Australia (2017), *Budget Strategy and Outlook 2017-18*, Budget Paper No. 1.)

Figure 14.6: Estimates of the Structural Budget Balance 2006-07 to 2027-28 (f)

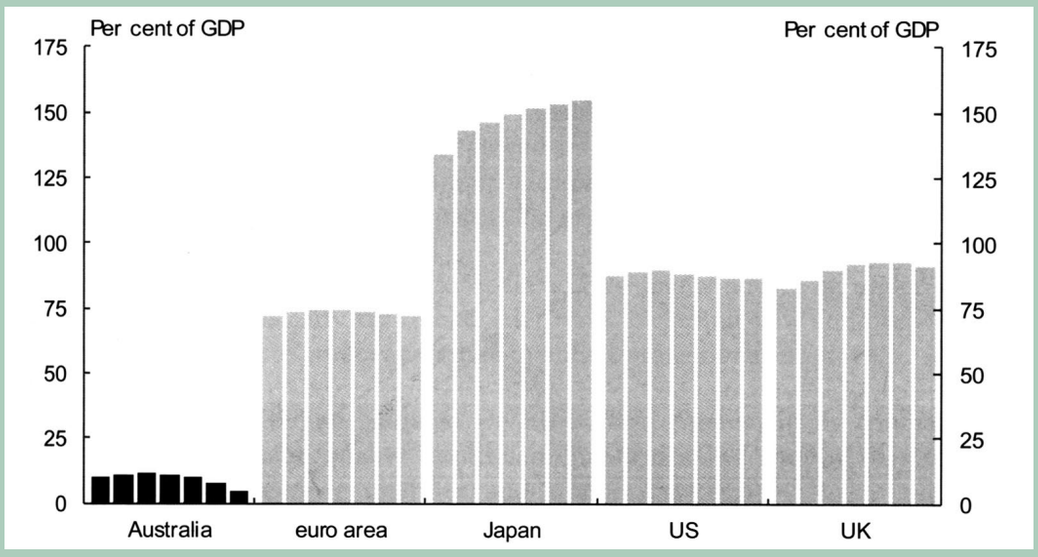


Source: Commonwealth of Australia (2017), *Budget Strategy and Outlook 2017-18*, Canberra.

Figure 14.6 shows estimates by Treasury of the structural budget balance for the Australian government between 2006-07 and 2027-28. The structural budget balance is estimated to improve from a deficit of around 2% of GDP in 2015-16 to a series of small surpluses from 2020-21 onwards based on a steady fiscal consolidation strategy. Australia was in a sounder fiscal position than other advanced economies in 2017-18 with a budget deficit of -1.1% of GDP compared to an average deficit of -8% of GDP for the major advanced economies whose budget deficits will not be under -4% of GDP until 2018.

With fiscal deficits between 2008 and 2019, the Australian government's net debt was forecast to peak at $375.1b (or 19.8% of GDP) in 2018-19, compared to average levels of net debt in major advanced economies of 80% of GDP in 2018 (see **Figure 14.7**). The government's **net financial worth** (assets less liabilities) was forecast at -$457.8b or -25.1% of GDP in 2017-18, increasing through rising liabilities.

Figure 14.7: Net Debt for Australia and Selected Economies 2012-18 (f)



Source: Commonwealth of Australia (2013), *Budget Strategy and Outlook 2013-14*, Canberra.

The First Intergenerational Report 2002

The first *Intergenerational Report* (2002, IGR) was presented with the 2002-03 budget to assess the financial implications of the ageing of the Australian population on government policy in the future. It concluded that Australia was well positioned to meet this challenge through current policies such as:

- The system of compulsory superannuation in place, which promotes private saving for retirement;
- A targeted and means tested aged pension and welfare system;
- A broadly based taxation system which includes taxes on consumption, income, capital gains and fringe benefits; and
- Low levels of government debt relative to other industrialised countries.

However the *Report* concluded that advances in medical technology, and the demands for better health care and pensions will impose financial pressure on the government and its budgetary position in the future. These pressures were expected to emerge in 2017, and by 2041-42, the gap between government spending and revenue would amount to around -5% of GDP. The *Intergenerational Report* also projected population ageing would lead to zero growth in the labour force participation rate. Together these projections could put future budgets into larger deficit and slow Australia's rate of economic growth.

Major initiatives were taken in the 2004-05 budget to address some of these problems: providing assistance to families to raise children and support population growth; reducing welfare or poverty traps by providing greater work incentives for those on welfare to seek paid work, helping to raise labour force participation rates and reduce welfare spending; and cutting taxes to increase the incentives to work, save and raise productivity, particularly for older and younger Australians.

The Second Intergenerational Report 2007

The second *Intergenerational Report* (2007, IGR) found that long term fiscal sustainability had improved since the first *Intergenerational Report* in 2002, but the ageing of the population and other factors continued to pose challenges for Australia's economic growth and long term fiscal sustainability. The *Intergenerational Report 2007* projected that by 2047, a quarter of the population will be aged 65 and over, nearly double the current proportion. The ageing of the population was projected to result in a slow down in the rate of average economic growth per capita, with real GDP per capita projected to rise by 1.6% per year on average over the next 40 years, compared with 2.1% over the past 40 years.

Fiscal spending pressures in health, age pensions and aged care were projected to rise due to population ageing and other factors. Australian government spending per capita was projected to increase by 2% a year on average over the next 40 years and overall Australian government spending by around 4.75% of GDP by 2046-47. In the absence of policy changes these pressures were projected to lead to a '**fiscal gap**' (i.e. the amount by which government spending is projected to exceed government revenue) of around 3.5% of GDP by 2046-47. This fiscal gap is illustrated in **Figure 14.8**.

In response to this fiscal gap, the government implemented further measures in the 2007-08 budget to improve Australia's long term economic growth by enhancing productivity and labour force participation:

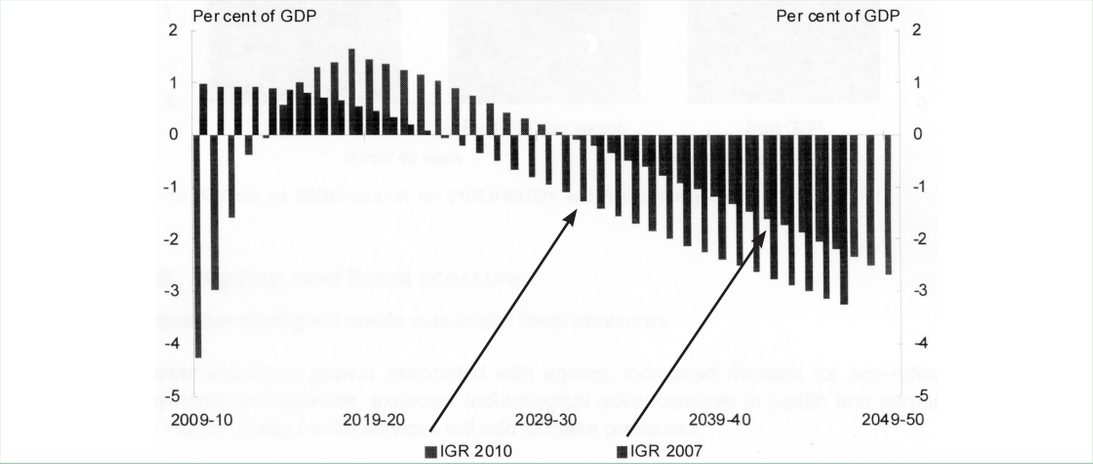
- Increased spending on university, vocational and school education, including the new Higher Education Endowment Fund, with an initial investment of $5b from the 2006-07 budget surplus.
- Cuts to personal taxation by increasing the 30%, 40% and 45% tax thresholds and the Low Income Tax Offset. These changes were designed to strengthen work incentives and increase productivity.
- New investment in transport infrastructure through AusLink and the industry policy statement, *Global Integration: Changing Markets, New Opportunities*. These measures were designed to improve infrastructure and strengthen the competitiveness of Australian industry.

The Third Intergenerational Report 2010

The third *Intergenerational Report* (2010, IGR) showed different projections for the fiscal gap from the second *Intergenerational Report* in 2007 as shown in **Figure 14.8**. The fiscal gap was estimated at 2.75% of GDP instead of 3.25% by 2049-50. This improved projected result was due to a more gradual pace of population ageing and an improved fiscal strategy on the part of the government in returning the budget to surplus sooner than expected after the impact of Global Financial Crisis in 2008-09.

However the third *Intergenerational Report 2010* discussed new pressures on the government's fiscal position in the future such as an ageing yet growing population, and the potential impact of climate change on the environment and the national economy. It argued that these pressures were faced by other advanced countries and policies were needed to increase productivity by investing in skills and innovation to underpin future growth. The *Intergenerational Report 2010* also argued for the adoption of an emissions trading scheme to reduce carbon emissions and protect jobs and growth in the future.

Figure 14.8: Projected Fiscal Gap Due to Population Ageing



Source: Commonwealth of Australia (2010), *Intergenerational Report 2010*, Canberra.

The Fourth Intergenerational Report 2015

The fourth *Intergenerational Report* (2015, IGR) acknowledged the need for government policies to strengthen incentives to raise productivity to underpin future growth in real incomes and living standards as population ageing impacts on Australian economic performance and society:

- Returning the budget to surplus and placing fiscal policy on a more sustainable footing.
- Completing new free trade agreements with South Korea, Japan and China, and negotiating other trade agreements, including negotiations with India and the Gulf States;
- Reducing the compliance burden of government regulation on business;
- Establishing the Digital Transformation Office with the objective of delivering government services digitally to better serve the needs of citizens and businesses;
- Undertaking a comprehensive review of Australia's workplace relations framework to ensure that existing laws are contributing to productive and competitive workplaces;
- Considering further reforms (based on the Murray Inquiry) to improve the performance of the Australian financial system and a review of competition policy (based on the Harper Inquiry); and
- Making and facilitating investments in critical aspects of Australia's infrastructure such as transport.

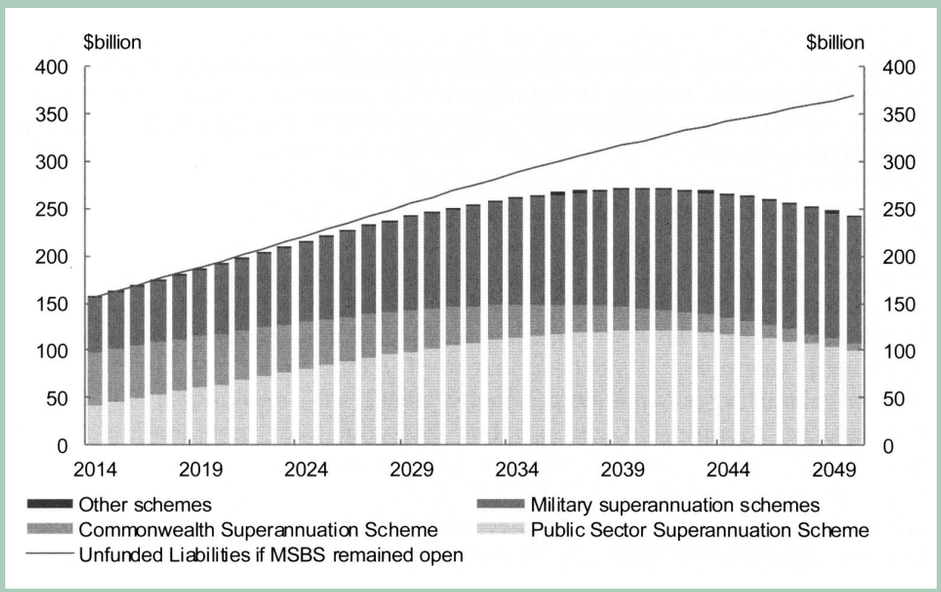
The Future Fund

The Australian government established the Future Fund in 2005-06 with seed capital of $18b. The aim of the Future Fund is to fully offset the government's unfunded public sector superannuation liabilities by around 2020, thereby allowing the budget to finance the increased fiscal pressures arising from the ageing of the population, such as increased spending on health and social security. Four features of the operation of the Future Fund are worth noting:

1. The Future Fund is invested in a broad range of financial assets, such as cash, property, infrastructure, debt and equity securities, in order to earn a market rate of return on the capital invested.
2. The Future Fund is managed by an independent statutory agency governed by a qualified Board known as the Future Fund Board of Guardians.
3. Further contributions to the Future Fund were made in 2006-07 from the 2005-06 budget surplus ($13.6b) and $17.6b from the Telstra sale proceeds in 2006-07. Together with the seed capital of $18b in 2005-06, the balance in the Future Fund was around $49.2b in June 2007.
4. In the 2008-09 budget a further $3.9b was deposited in the Future Fund from the 2006-07 budget surplus as well as $6.6b received from the Telstra 3 sale process. As at March 31st 2017 the Future Fund had a balance of $129.6b, consisting of $37.6b in global and Australian equities, $21.5b in private equity and property, $26.5b in cash, $9.9b in infrastructure bonds and $34.1b in debt and other securities. The Future Fund's annual average return since 2006 has been 7.7%.

Public sector employee superannuation entitlements are the largest financial liability of the government's balance sheet, being valued at around $175b in 2017 and estimated to grow to $271b by 2050. This trend is illustrated in **Figure 14.9**. The Australian government has not fully funded its superannuation liability, but in 2005 it closed the main civilian superannuation schemes to new members. From 2005 the government began paying the superannuation liability for new civilians employed as they accrue, rather than allowing the superannuation liability to grow further. Similarly the government announced in the 2014 budget that the Military Superannuation and Benefits Scheme (MSBS) was closed to new entrants from July 1st 2016. As shown in **Figure 14.9** without the closure of the MSBS to new entrants the government's projected unfunded superannuation liability would be $369b by 2050. Closure of the scheme will reduce the government's unfunded liability by $126b to $243b by 2050.

Figure 14.9: Public Sector Superannuation Liabilities



Source: Commonwealth of Australia (2014), *Budget Strategy and Outlook 2014-15*, Canberra.

REVIEW QUESTIONS

THE ECONOMIC EFFECTS OF THE BUDGET AND RECENT TRENDS IN FISCAL POLICY

1. Explain how the budget outcome can affect economic activity. How and why did the government use the 2009-10 budget to support aggregate demand?
2. Refer to Figure 14.5 and discuss the use of the expansionary fiscal policy to support aggregate demand during the Global Financial Crisis in 2009-10.
3. How can the budget be used by the government to affect resource allocation and income distribution? Refer to changes in the 2017-18 budget in your answer.
4. Discuss the three ways in which a government can finance a budget deficit. How did the Australian government finance budget deficits between 2008 and 2017?
5. How can the government use the proceeds of a budget surplus?
6. What is the difference between cash and accrual accounting?
7. Distinguish between the underlying cash balance and the fiscal balance measures of the budget.
8. Why did the government adopt the *Charter of Budget Honesty* and accrual accounting in 1998?
9. Refer to Table 14.7 and the text and explain the government's fiscal strategy and objectives in the 2017-18 budget. Discuss the main elements of the government's Budget Repair Strategy.
10. Refer to Figure 14.6 and discuss the projected trends in the structural budget balance. Compare net debt for Australia with major advanced economies between 2012 and 2018 in Figure 14.7.
11. Discuss the implications of the *Intergenerational Reports* released in 2002, 2007, 2010 and 2015 for future budget outcomes and the conduct of fiscal policy.
12. Discuss the measures taken in the 2004 and 2007 budgets to address some of the issues raised in the 2002 and 2007 *Intergenerational Reports*.
13. What government policy recommendations were made in the *Intergenerational Report 2015?*
14. Explain why the federal government established the Future Fund in 2005. Discuss how the Future Fund operates and could help to reduce present and future government superannuation liabilities.
15. Define the following terms and add them to a glossary:

aggregate demand
automatic stabilisers
balanced budget
budget aggregates
budget balance
budget deficit
budget surplus
Charter of Budget Honesty Act
crowding out
cyclical budget component
economic activity
federal budget
fiscal balance
fiscal gap
fiscal policy
fiscal policy stance
Future Fund
income distribution
income tax threshold
Intergenerational Report
marginal taxation rate
net financial worth
net operating balance
resource allocation
structural budget component
superannuation liabilities
taxation reform
underlying cash balance

CHAPTER 14: SHORT ANSWER QUESTIONS

	Actual 2015-16	*Estimate 2016-17*	*Estimate 2017-18*	*Projection 2018-19*
Fiscal Balance ($b)	-37.5	-40.7	-20.3	-15.5
% of GDP	-2.3	-2.3	-1.1	-0.8
Underlying Cash Balance ($b)	-39.6	-37.6	-29.4	-21.4
% of GDP	-2.4	-2.1	-1.6	-1.1

Refer to the table above of Commonwealth government fiscal and underlying cash balances for 2015-16 and the estimates for 2016-17 and 2017-18, and answer the questions below. Marks

1. Distinguish between a budget deficit and a budget surplus. (2)

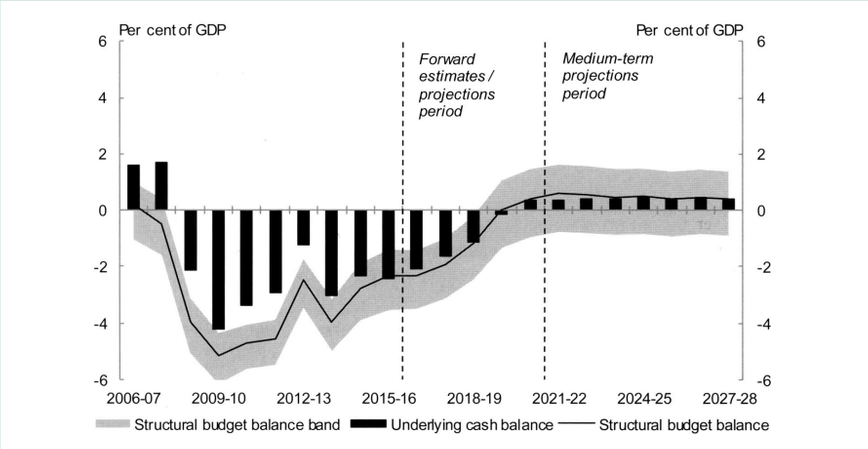
2. What is the difference between the structural and cyclical components of the budget outcome? (2)

3. Explain the Australian government's fiscal strategy in 2017-18. (2)

4. Explain how the Australian government can finance a budget deficit. (4)

CHAPTER FOCUS ON FISCAL POLICY

Estimates of the Structural Budget Balance



"The Budget Repair Strategy is designed to deliver budget surpluses building to at least 1% of GDP as soon as possible, consistent with the medium-term fiscal strategy. The government's strategy sets out the following commitments:

- New spending measures will be more than offset by reductions in spending elsewhere in the budget;
- The overall impact of shifts in receipts and payments due to changes in the economy will be 'banked' as an improvement to the budget bottom line, if this impact is positive; and
- A clear path back to surplus is underpinned by decisions that build over time.

The Budget Repair Strategy will stay in place until a strong surplus is achieved and so long as economic growth prospects are sound and unemployment remains low."

Source: Commonwealth of Australia (2017), *Budget Overview 2017-18*.

Discuss the main features of the Australian government's Budget Repair Strategy.

CHAPTER 14: EXTENDED RESPONSE QUESTION

Discuss the main instruments of fiscal policy and explain how the Australian government can use fiscal policy to influence economic activity, resource allocation and income distribution.

CHAPTER SUMMARY

FISCAL POLICY

1. Fiscal policy refers to the Australian government's use of its annual budget to affect the level of economic activity, resource allocation and income distribution. The two main instruments of fiscal policy are government spending (G) and government taxation (T).

2. The budget is an annual estimate of government expenditure and revenue. Changes in the level and composition of government expenditure and revenue will affect economic activity, resource allocation and income distribution.

3. The three possible budget outcomes include a balanced budget (where G = T); a budget deficit (where G > T); and a budget surplus (where G < T).

4. There are three possible stances of fiscal policy:

   - A neutral fiscal stance implies a balanced budget where G = T
   - An expansionary fiscal stance implies a net increase in government spending where G > T
   - A contractionary fiscal stance implies a net fall in government spending where G < T

5. The two main components of the budget outcome are structural and cyclical. The structural component refers to deliberate policy changes in government spending and/or taxation to achieve the government's objectives. The cyclical component of the budget outcome refers to changes in government spending and/or revenue as a result of changes in the level of economic activity.

6. In the budgetary framework there are automatic or inbuilt stabilisers such as the system of progressive taxation, and expenditure on welfare payments, which help to offset changes and extremes in the business cycle such as booms and recessions.

7. The budget outcome can affect the level of economic activity by adding to or subtracting from the growth in aggregate demand (C + I + G + X - M). It can also affect income distribution through changes to the taxation system and expenditure on welfare payments. The budget outcome can also affect resource allocation through changes in the priorities of government spending and taxation.

8. Budget deficits can be financed by borrowing from the private sector through bond sales; borrowing from the Reserve Bank of Australia; or by borrowing funds in overseas financial markets.

9. Budget surpluses can be used to reduce or retire government debt; finance future government spending; cut taxes in the present; or increase government net financial worth.

10. Recent trends in Australian fiscal policy include the adoption of the *Charter of Budget Honesty Act* in 1998 which made fiscal policy more transparent and accountable to the public. Between 1996 and 2008 the government was committed to achieving budget balance on average over the course of the economic cycle. It used accumulated budget surpluses to retire public debt; reformed the taxation system by introducing a broad based indirect tax on consumption called the Goods and Services Tax (GST); and delivered ongoing cuts in personal income tax. However in 2009-10 the impact of the Global Financial Crisis sent the budget into deficit because of falling tax revenue and the government's use of fiscal stimulus to support aggregate demand and employment. The issue of the budget deficit was addressed by the Australian government in the 2014, 2015, 2016 and 2017 budgets through a Budget Repair Strategy.

11. In 2002, 2007, 2010 and 2015 the government released *Intergenerational Reports* which projected increased government spending and lower tax revenue in the future due to population ageing and lower labour force participation. Budget measures have been introduced to encourage population growth, greater labour force participation and increased private saving. In the 2005 budget the Future Fund was established to help finance unfunded public sector superannuation liabilities.

Chapter 15

Monetary Policy

Monetary policy refers to actions by the Reserve Bank of Australia (RBA), the federal government's principal monetary authority, to influence the supply and cost of credit in the economy. The main tool of monetary policy is the Reserve Bank's use of **open market operations** (i.e. the buying and selling of Commonwealth Government Securities or CGS and Repurchase Agreements or RPAs) to influence the cash rate or interest rate paid on overnight loans from the cash market or short term money market.

Manipulation of the **cash rate** is the Reserve Bank's main instrument for changing the stance of monetary policy. By influencing the cash rate, the Reserve Bank is able to indirectly affect the term structure of interest rates (i.e. the range of short, medium and long term market interest rates) in the financial system. Changes in interest rates will affect the levels of borrowing, spending, output, employment and inflation in the Australian economy. Monetary policy is used by the federal government as a '**swing instrument**' or **counter cyclical policy** to maintain a sustainable rate of economic growth in relation to changes in the business cycle. For example, the Reserve Bank attempts to prevent the economy from experiencing the negative effects of excessive inflation during booms, and higher rates of unemployment during recessions. The successful conduct of monetary policy will help to achieve sustainable growth.

THE GOALS OR OBJECTIVES OF MONETARY POLICY

The goals or objectives of monetary policy are set out in the Reserve Bank's Charter and most recent *Statement on the Conduct of Monetary Policy* on September 19th, 2016 (see page 323) which coincided with Dr Philip Lowe becoming the new Governor. The main objectives of monetary policy are to contain inflation; maintain full employment of the labour force; and to sustain long term economic growth to improve living standards. These objectives are in the **Reserve Bank Act of 1959** which states:

"It is the duty of the Board, within the limits of its powers, to ensure that the monetary and banking policy of the Bank is directed towards the greatest advantage of the people of Australia, and that the powers of the Bank are exercised in such a manner as, in the opinion of the Board, will best contribute to the stability of the currency of Australia; the maintenance of full employment in Australia; and the economic welfare and prosperity of the people of Australia."

Inflation Targeting by the Reserve Bank of Australia

Since 1993, the Reserve Bank has conducted monetary policy by using an **inflation target** to achieve **price stability**. It adopted a target band of 2% to 3% for underlying inflation in the early 1990s. The underlying rate of inflation is a calculation of inflation that removes 'one off' seasonal or volatile factors such as higher food prices due to drought, volatile oil prices or changes in government taxes and charges. The first *Statement on the Conduct of Monetary Policy* was signed by the Reserve Bank Governor, Ian Macfarlane, and the Treasurer Peter Costello in 1996, with a target for underlying inflation formalised as a key operational objective for the conduct of monetary policy by the Reserve Bank. The underlying inflation measure was used as the inflation target to avoid the distortions and the volatility associated with the Consumer Price Index (CPI) measure of inflation, which included changes in interest rates.

The subsequent improvement in the accuracy of the CPI measure of inflation by the ABS, together with the public's familiarity with the CPI, led the RBA to adopt the CPI measure of inflation in 1998 as its inflation target of 2% to 3% over the economic cycle. However the Reserve Bank analyses a variety of measures of consumer price inflation when framing its monetary policy decisions. These measures of inflation include the CPI, tradables inflation, non tradables inflation, various underlying measures of inflation, surveys of inflationary expectations, and movements in the Wage Price Index (WPI).

Table 15.1: The Objectives of Monetary Policy

Policy Objective	*Intermediate Target*	*Policy Instrument*
1. Price Stability	Consumer price inflation of 2% to 3% on average over the economic cycle	Manipulation of the cash rate through open market operations
2. Full Employment	NAIRU of 5% of the labourforce	Changes in the Cash Rate
3. Economic Growth	Sustainable economic growth of 3% to 4% over the economic cycle	Changes in the Cash Rate

Many central banks in OECD countries use inflation targets to conduct their monetary policies to achieve price stability. This assists with monetary policy co-ordination between countries, and helps to stabilise global economic activity in relation to the world business cycle. The Reserve Bank believes that there are a number of **advantages of inflation targeting** in conducting monetary policy in Australia:

- The target provides an 'anchor point' for people's inflationary expectations in the future;
- The target makes the conduct of monetary policy more credible if the target is achieved over time;
- The target provides an operational basis for the conduct of Australian monetary policy; and
- Inflation targeting enables policy co-ordination between countries to control global inflation.

The Reserve Bank's objective of **full employment** is based on the goal of minimising the rate of unemployment close to the non accelerating inflation rate of unemployment (the NAIRU), which was estimated by the Reserve Bank in 2017 to be around 5% of the workforce in Australia. The RBA believes that continuing falls in the unemployment rate to at least the NAIRU, will achieve the goal of full employment of labour. The unemployment rate fell from 11% in 1992 to 4.2% in 2007-08, because of sustained economic growth and various successful microeconomic reform measures. Much of this reduction in the unemployment rate was also due to the effective conduct of monetary policy in containing inflation, which helped to sustain economic and employment growth.

Sustainable **economic growth** refers to achieving a rate of growth that is consistent with rising real incomes and employment opportunities, without accompanying increases in inflationary pressures or a deterioration in the current account of the balance of payments and a higher level of foreign debt. The Reserve Bank conducts monetary policy with a view to keeping Australia's growth rate close to its long term annual average of around 3.25%. But if inflation or current account pressures arise, the Reserve Bank may tighten monetary policy to reduce spending and ease inflation or current account pressures, which may threaten continued sustainable growth. Conversely, monetary policy may be eased if growth is below trend of 3.25% and the unemployment rate is rising and reducing living standards. The objectives, intermediate targets and the instrument of monetary policy are summarised in **Table 15.1**.

Monetary policy attempts to create an economic environment which leads to **non inflationary growth**. The use of an inflation target makes the achievement of price stability a major precondition for economic and employment growth. However conflicts between the simultaneous achievement of all these economic objectives may arise. For example, if the inflation rate rises outside the target band, the Reserve Bank may tighten monetary policy to reduce spending and growth. This may cause unemployment to rise and reduce living standards. Conversely, if growth is below trend and the unemployment rate is rising above the NAIRU, the Reserve Bank may ease monetary policy to encourage spending and higher economic growth. Higher economic growth may lead to lower unemployment, but at the cost of higher inflation and import spending, resulting in less price stability and a larger current account deficit.

Monetary policy is conducted in a transparent and accountable way by the Reserve Bank, with monthly Board meetings, the release of minutes of Board meetings, media releases, quarterly *Statements on Monetary Policy* and the *Reserve Bank Bulletin*, updates and resources on its website, and the Governor (Dr Philip Lowe) of the Reserve Bank reporting to the Australian federal parliament every six months.

THE IMPLEMENTATION OF MONETARY POLICY

Monetary policy is implemented by the Reserve Bank through the use of domestic open market operations in the cash market. The Reserve Bank can influence the daily target it sets for the cash rate through the buying or selling of Commonwealth Government Securities (e.g. Treasury Notes and Bonds) and Repurchase Agreements or 'Repos'. The cash rate is the interest rate paid on funds lent overnight in the cash market. The **cash rate** is the principal instrument of monetary policy. If the Reserve Bank wants to alter the stance of monetary policy it will act in the cash market to change the target for the cash rate. The Reserve Bank uses monetary policy in a **pre-emptive manner** to avoid the problems of excessive inflation in booms or rising unemployment in recessions, before they become worse, and have negative effects on the Australian economy. There are three possible stances of monetary policy:

- A **tight or contractionary stance** of monetary policy is adopted when the cash rate is raised in order to slow down economic activity and reduce inflation and inflationary expectations. For example, monetary policy was tightened to reduce inflation between October 2009 and November 2010.
- A **neutral stance** of monetary policy is when there is no change in the cash rate (i.e a 'neutral cash rate') and the Reserve Bank is neither tightening nor easing monetary policy. For example the cash rate was unchanged at 4.75% between December 2010 and October 2011.
- An **easier, looser or expansionary stance** of monetary policy is adopted when the cash rate is cut to stimulate economic activity and raise employment prospects to reduce the rate of unemployment. For example, monetary policy was eased during the Global Financial Crisis between September 2008 and April 2009 to support economic and employment growth in Australia. Monetary policy was also eased between November 2011 and August 2016 to support growth and employment.

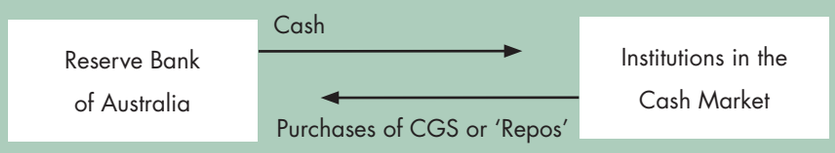
The Reserve Bank announces its intention to alter the cash rate target through a media release by the Governor on the day of a Board meeting, before implementing any change in the stance of monetary policy in the cash market. This sends a clear signal (or **transparency**) to financial markets and the community of the change in the stance of monetary policy. This influences price and wage expectations in the future and is known as the '**announcement effect**' of changes in the stance of monetary policy. Changes in the official cash rate then flow through to market interest rates such as business lending rates, housing mortgage rates and credit card rates. Changes in interest rates at the short end of the yield curve are affected by changes in the cash rate and those at the long end of the yield curve such as government bond rates are more influenced by inflationary expectations.

Open Market Operations

Open market operations are conducted directly between the RBA and counter parties in the **cash market**, which is a market for the deposit and lending of funds overnight. Banks, financial institutions and large companies will deposit any surplus cash in the cash market in order to earn interest. Conversely, institutions with a deficit in cash can borrow funds from the cash market. The interest rate on these funds is called the '**cash rate**' which is determined by the demand and supply for funds or cash. The RBA sets a cash rate target each day and attempts to ensure sufficient liquidity or a supply of cash to meet the demand for cash, so that the cash rate does not change. This is known as **liquidity management**. Major changes in the cash rate only occur when the Reserve Bank wishes to alter the stance of monetary policy. Around 50 banks and other financial institutions have access to **Exchange Settlement Accounts** (ESAs) held with the Reserve Bank to settle debts between themselves in the cash market.

The **demand for cash** is determined by the reserves of cash (i.e. Exchange Settlement funds) held by banks in their ESAs with the Reserve Bank. These funds are used on a daily basis by banks in settling debts between themselves. The Reserve Bank stipulates that ESAs must not be overdrawn, so banks keep surplus balances in their ESAs to meet any unexpected requirements for cash. They also receive a nominal rate of interest (0.25% less than the cash rate) on their ESAs. The **supply of cash** in the short term money market is determined by the Reserve Bank. Settlement of debts between commercial banks does not change the supply of cash, only the banks' ESA balances. The supply of cash will only change

Figure 15.1: An Easing of Monetary Policy through Open Market Operations



Effects
1. An increase in cash or liquidity in the cash market through increased deposits in ESAs
2. A lower cash rate and other interest rates that make up the yield curve

when the Reserve Bank makes a payment into a commercial bank's ESA or a commercial bank makes a payment to the Reserve Bank. For example, payments of taxation to the Commonwealth government by the banks will lead to a rundown in ESA balances, and the supply of cash will decrease unless the Reserve Bank injects more cash into the system to maintain the cash rate at its target level. Similarly, payments of pensions and other social security allowances by the Commonwealth government to banks will increase the supply of available cash in the banks' ESAs. The Reserve Bank must withdraw the equivalent amount of cash to maintain the cash rate at its target level. These are examples of the daily **liquidity management operations** by the Reserve Bank of Australia. According to the Reserve Bank (2016) the daily turnover in the cash market is around $4b with an average of around 30 transactions.

The Reserve Bank controls the volume of cash through its daily open market operations. Purchases of existing Commonwealth Government Securities (CGS) and Repurchase Agreements ('Repos') by the Reserve Bank will lead to a rise in the supply of cash when payments are made into banks' ESAs. When the Reserve Bank sells new CGS or 'Repos', commercial banks will withdraw funds from their ESAs and make payments to the Reserve Bank, reducing the supply of cash in the cash market.

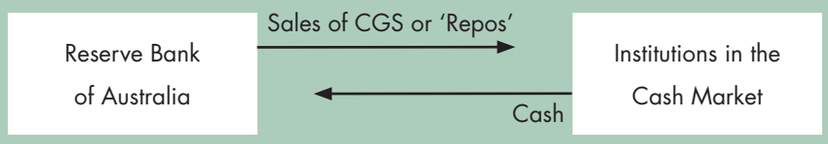
The 170 members of the Reserve Bank Information and Transfer System (RITS) in 2016 are eligible to deal with the RBA. They include banks, investment houses, pension and superannuation funds. Settlement of debts in the cash market is on a **Real Gross Time Settlement** (RGTS) basis, which means that payments are settled immediately and adjustments are made to ESA balances. The Reserve Bank can control the volume of cash through its open market operations, as long as the Commonwealth government's budget is balanced or fully financed by bond sales if it has a budget deficit.

After the adoption of the floating exchange rate mechanism in 1983, and the deregulation of the financial system, the Reserve Bank began to use open market operations to conduct monetary policy. Monetary policy is more effective in this environment because the balance of payments outcome does not impact on the money supply, nor does the government's budget outcome. If there is a budget deficit, it is fully financed through the issue of bonds, so that there is no need for the Reserve Bank to 'print money', which would increase the money supply, lower the cash rate and put upward pressure on inflation.

Figure 15.1 illustrates how the RBA would **ease the stance of monetary policy** by changing the cash rate by using open market operations. The Reserve Bank would announce its intention to lower the target for the cash rate after a decision by the Reserve Bank Board and the issue of a media release by the Governor. It would buy existing Commonwealth Government Securities (CGS) or Repurchase Agreements (Repos) from banks and other institutions in the cash market the next day to achieve a lower cash rate target. This would increase the supply of cash, because payments for the existing CGS and Repos are deposited into banks' Exchange Settlement Accounts, creating an excess supply of cash or liquidity. This puts downward pressure on the cash rate, as banks will lend their excess liquidity rather than keeping it in their ESAs, because they can earn higher market rates of interest through the commercial lending of funds to their customers such as households and businesses.

A lower cash rate would lower the cost of borrowing and put downward pressure on other short term interest rates, which in turn would lower other medium and long term interest rates that make up the yield curve (i.e. the relationship between short and long term interest rates). The yield curve would then become steeper and more upward sloping as short term interest rates would be lower than long term interest rates. This is a direct result of a **more expansionary stance of monetary policy** by the RBA.

Figure 15.2: A Tightening of Monetary Policy through Open Market Operations



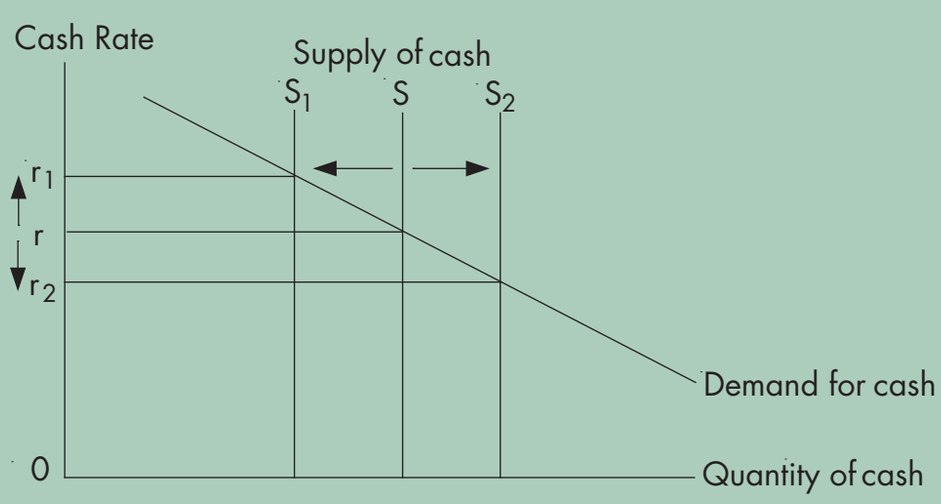
Effects
1. A decrease in cash or liquidity in the cash market through withdrawals from ESAs
2. A higher cash rate and other interest rates that make up the yield curve

Figure 15.2 illustrates how the RBA would **tighten the stance of monetary policy** by changing the cash rate by using open market operations. The Reserve Bank would announce its intention to raise the target cash rate after a decision by the Reserve Bank Board and the issue of a media release by the Governor. It would sell new Commonwealth Government Securities (CGS) or Repurchase Agreements (Repos) to banks and other institutions in the cash market the next day to achieve a higher cash rate target. This would decrease the supply of cash because payments for the newly issued CGS or Repos would be withdrawn from banks' Exchange Settlement Accounts, creating a deficit of cash or liquidity. This would put upward pressure on the cash rate, as banks would have to borrow liquidity to keep their ESAs in surplus as required by the RBA. A higher cash rate would raise the cost of borrowing, and put upward pressure on other short term interest rates, which in turn, would raise other medium and long term market interest rates that make up the yield curve. The yield curve would then become flatter and more downward sloping as short term interest rates would be higher than long term interest rates, a direct result of a **more contractionary stance of monetary policy**.

If there is a neutral stance of monetary policy, then there is no need for the RBA to alter the cash rate target. An excess demand for cash will be met by Reserve Bank open market operations to increase the supply of cash through purchases of CGS, and an excess supply of cash will most likely be met with Reserve Bank actions to reduce the supply of cash through sales of CGS. Such actions by the Reserve Bank are designed to create a stable cash rate and are part of its **daily liquidity management operations**.

Another way of analysing the conduct of open market operations by the RBA to influence the cash rate is shown in **Figure 15.3**. An increase in the supply of cash from S to S_2 through open market purchases of existing CGS or Repos would lead to a lower cash rate from r to r_2, and an easing of monetary policy. On the otherhand, a decrease in the supply of cash from S to S_1 through open market sales of new CGS or Repos would lead to a rise in the cash rate from r to r_1, and a tightening of monetary policy.

Figure 15.3: Changes in the Cash Rate Caused by Changes in Monetary Policy

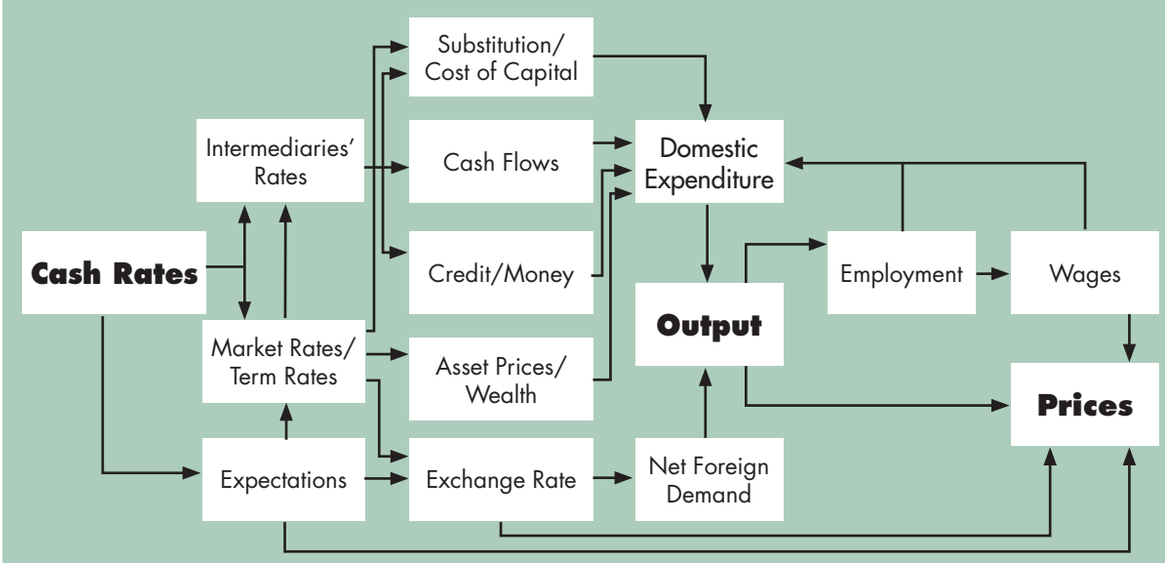


THE ECONOMIC IMPACT OF CHANGES IN INTEREST RATES

The impact of changes in interest rates on the economy is known as the **transmission mechanism** or **channels of monetary policy**. The transmission channels of monetary policy are shown in **Figure 15.4**. Changes in the cash rate will impact initially on short term interest rates, then on medium to long term interest rates, and ultimately alter the cost of borrowing and the returns for lending funds. According to the Reserve Bank there are six channels through which changes in interest rates operate on the economy:

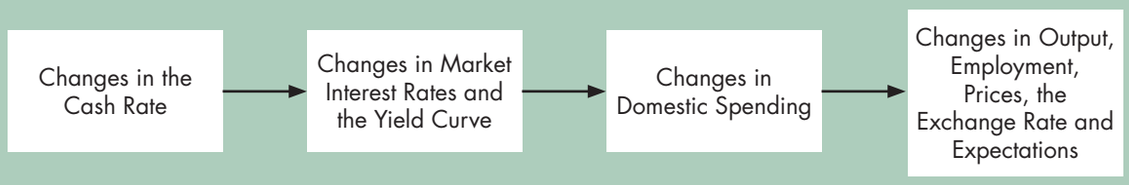
1. The effects on **consumption, investment and savings** decisions: Higher interest rates will discourage borrowing and spending on consumption and investment, but encourage saving. Lower interest rates will encourage borrowing and spending on consumption and investment, but discourage saving.
2. Alterations in the **cash flows** between borrowers and lenders: Higher interest rates will reduce cash flows for households, businesses and governments as more cash has to be paid to service existing debt. Lower interest rates will increase cash flows as less money has to be paid to service existing debt.
3. Alterations to the **cost of credit** and the effects on money flows: Higher interest rates will raise the cost of credit borrowings and purchases made on credit, whereas lower interest rates will lower the cost of credit borrowings and purchases made on credit.
4. The effects on **asset prices** such as home units, houses, land, shares and bonds, which may alter the distribution of wealth: Higher interest rates will discourage borrowing and spending on the acquisition of financial assets, and lead to a fall in asset prices such as house and share prices. Lower interest rates will encourage borrowing to purchase financial assets, and lead to higher asset prices.
5. The effects on the **exchange rate** and the relative prices of exports and imports: Higher interest rates will encourage capital inflow, increasing the demand for Australian dollars, and lead to exchange rate appreciation. An appreciation will reduce competitiveness by lowering the price of imports and raising the price of exports. Higher interest rates will therefore have a contractionary effect on trade, economic growth and inflation. Lower interest rates will lead to capital outflow, increasing the supply of Australian dollars and lead to exchange rate depreciation. A depreciation will increase competitiveness by reducing the price of exports and raising the price of imports. Lower interest rates will therefore have an expansionary effect on trade, economic growth and employment.
6. The effects on **inflationary expectations** and economic behaviour: Higher interest rates will reduce inflationary expectations by reducing wage and price demands. Lower interest rates on the otherhand will raise inflationary expectations by increasing wage and price demands.

Figure 15.4: The Transmission Channels of Monetary Policy



Source: Reserve Bank of Australia (1995), *Seminar for Teachers*.

Figure 15.5: The Transmission Mechanism of Monetary Policy



The monetary policy transmission mechanism is illustrated in **Figure 15.5**, with changes in interest rates ultimately affecting domestic expenditure. For example, higher interest rates used to contain inflation will reduce consumption, investment, government and import expenditure. Lower domestic spending will in turn reduce output and economic growth. If output growth slows, so will employment growth and inflationary expectations. The exchange rate will also appreciate, causing a loss of export competitiveness. So overall, higher interest rates have a contractionary effect on the economy, and this would help to reduce inflation and assist the Reserve Bank in achieving the objective of price stability.

Conversely, lower interest rates used to stimulate economic growth will increase consumption, investment, government and import expenditure. Higher domestic spending will increase output and economic growth. If output growth rises, so will employment growth and inflationary expectations. The exchange rate will depreciate, causing a rise in export competitiveness. So overall, lower interest rates have an expansionary effect on the economy, helping the RBA to reduce the rate of unemployment.

REVIEW QUESTIONS

THE OBJECTIVES, IMPLEMENTATION AND IMPACT OF MONETARY POLICY

1. Define monetary policy and explain how is it conducted by the Reserve Bank of Australia.
2. What are the objectives of monetary policy? Refer to Table 15.1 and discuss the objectives, intermediate targets and the main instrument of monetary policy.
3. Why does the Reserve Bank use an inflation target in conducting monetary policy?
4. What are the advantages of using an inflation target for the conduct of monetary policy?
5. Distinguish between contractionary, neutral and expansionary stances of monetary policy.
6. What is meant by the Reserve Bank's open market operations? What is meant by the cash market? What are the main determinants of the demand for cash and the supply of cash?
7. Refer to Figures 15.1 and 15.3 and the text, and explain how and why the RBA would lower the cash rate and ease the stance of monetary policy. What would be the economic effects of this policy stance?
8. Refer to Figures 15.2 and 15.3 and the text, and explain how and why the RBA could raise the cash rate and tighten the stance of monetary policy. What would be the economic effects of this policy stance?
9. Discuss the transmission channels of monetary policy in Figure 15.4 and explain how an easing or a tightening of monetary policy could affect economic activity and the exchange rate.
10. Refer to Figure 15.5 and explain how changes in the stance of monetary policy can help the RBA to achieve its objectives. Discuss recent trends in monetary policy by reading pages 318-21.

RECENT TRENDS IN MONETARY POLICY

Australia has experienced three contrasting **interest rate cycles** between 2008 and 2017 as illustrated in **Figure 15.6** because global and domestic economic conditions changed. These changes in economic conditions were monitored closely by the Reserve Bank through an analysis of global and domestic economic data. Decisions were made by the Reserve Bank Board at its monthly meetings whether or not to adjust the stance of monetary policy by changing the cash rate to affect borrowing conditions in the economy. Changes in the cash rate would be expected to affect aggregate spending, output, employment and prices. Changes in these macroeconomic variables would in turn help the Reserve Bank to achieve its objectives of price stability, full employment and sustainable economic growth:

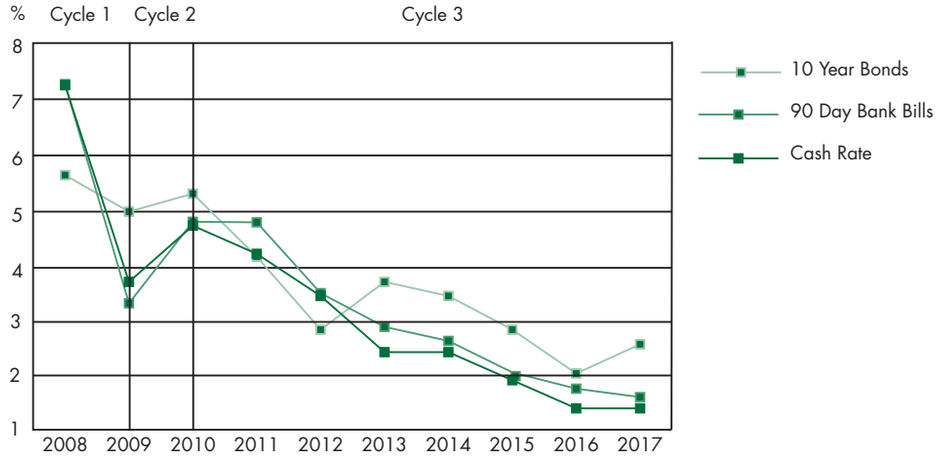
1. **Low interest rate or easing cycle (September 2008 to April 2009)**: The global economy deteriorated in the second half of 2008 as the sub prime mortgage crisis in the US housing market led to a global credit crisis. The Reserve Bank cut the cash rate by -0.25% in September 2008 to support confidence and economic activity as shown in **Table 15.2**. This was followed by a very large easing in the stance of monetary policy, with cuts in the cash rate of -1% in October and -0.75% in November 2008, followed by -1% in December 2008 and February 2009, and 0.25% in April 2009. These cuts in the cash rate were used to support confidence and reduce costs to borrowers as the global contraction in output, trade and capital flows continued in early 2009 and inflationary pressures eased. The Reserve Bank cut the cash rate by -4.25% (from 7.25% to 3%) between September 2008 and April 2009, which represented a significant amount of monetary stimulus.

Table 15.2: Changes in Monetary Policy - Movements in the Cash Rate 2008-2016

Date of Decision	*Previous Cash Rate*	*New Cash Rate*	*MP Stance*	*%△*
1. Easing cycle due to the Global Financial Crisis: total cut of 4.25% in the cash rate				
September 3rd 2008	7.25%	7.00%	Easing	-0.25%
October 8th 2008	7.00%	6.00%	Easing	-1.00%
November 5th 2008	6.00%	5.25%	Easing	-0.75%
December 3rd 2008	5.25%	4.25%	Easing	-1.00%
February 4th 2009	4.25%	3.25%	Easing	-1.00%
April 8th 2009	3.25%	3.00%	Easing	-0.25%
2. Tightening cycle due to higher inflation: total increase in the cash rate of 1.75%				
October 7th 2009	3.00%	3.25%	Tightening	+0.25%
November 4th 2009	3.25%	3.50%	Tightening	+0.25%
December 2nd 2009	3.50%	3.75%	Tightening	+0.25%
March 3rd 2010	3.75%	4.00%	Tightening	+0.25%
April 7th 2010	4.00%	4.25%	Tightening	+0.25%
May 5th 2010	4.25%	4.50%	Tightening	+0.25%
November 2nd 2010	4.50%	4.75%	Tightening	+0.25%
3. Easing cycle due to weaker global and domestic growth: total cut of 3.25% in the cash rate				
November 2nd 2011	4.75%	4.50%	Easing	-0.25%
December 7th 2011	4.50%	4.25%	Easing	-0.25%
May 2nd 2012	4.25%	3.75%	Easing	-0.50%
June 6th 2012	3.75%	3.50%	Easing	-0.25%
October 3rd 2012	3.50%	3.25%	Easing	-0.25%
December 5th 2012	3.25%	3.00%	Easing	-0.25%
May 8th 2013	3.00%	2.75%	Easing	-0.25%
August 7th 2013	2.75%	2.50%	Easing	-0.25%
February 4th 2015	2.50%	2.25%	Easing	-0.25%
May 6th 2015	2.25%	2.00%	Easing	-0.25%
May 4th 2016	2.00%	1.75%	Easing	-0.25%
August 3rd 2016	1.75%	1.50%	Easing	-0.25%

Source: Reserve Bank of Australia (2016), *Statement on Monetary Policy*, August and Statistical Table A2.

Figure 15.6: Movements in Australian Interest Rates - 2008 to 2017 (%)



2. **High interest rate or tightening cycle (October 2009 to November 2010)**: The Reserve Bank tightened monetary policy between October 2009 and November 2010, with seven rises in the cash rate, each of 0.25% (refer to **Table 15.2**). This increased the cash rate from 3% to 4.75%, as the Reserve Bank tightened credit conditions to prevent a rise in inflation and inflationary expectations associated with a stronger than expected economic recovery and rising house prices. However further rate rises did not occur after November 2010, as debt crises in Europe and the USA led to increased financial market volatility in 2011, and floods and Cyclone Yasi in Australia reduced economic growth in 2011. The cash rate was left at 4.75% between November 2010 and November 2011 as more data became available about the strength of global recovery, the worsening European Sovereign Debt Crisis and the uneven pattern of growth in Australia due to the high exchange rate.
3. **Low interest rate or easing cycle (November 2011 to August 2016)**: The uncertain outlook for global growth and an uneven pace of economic recovery in Australia led the Reserve Bank to ease monetary policy by cutting the cash rate by 0.25% in November and December 2011 (refer to **Table 15.2**). This provided support to borrowers and helped to maintain consumer confidence. In May 2012 the Reserve Bank Board lowered the cash rate by 0.5% as the European Sovereign Debt Crisis reduced the prospects for world growth and caused volatility in financial markets. The Australian economy transitioned to non mining sources of growth in 2012 as the mining investment boom ended. However the high value of the Australian dollar had reduced competitiveness in the manufacturing, tourism and education sectors. The Reserve Bank lowered the cash rate by 0.25% in June, October and December 2012, giving further support to borrowers and putting downward pressure on the exchange rate. This was followed by further falls of 0.25% in the cash rate in May and August 2013, February and May 2015, and May and August 2016. The reduction in the cash rate of 3.25% between 2011 and 2016 led to an historic low cash rate of 1.5% in 2016-17.

Figure 15.6 shows the trends in the cash rate, 90 day bank bill rate and the 10 year bond rate for the three interest rate cycles between 2008 and 2017. These cycles reflected changes in economic conditions over time, and the pre-emptive use of monetary policy for counter cyclical stabilisation of the economy:

- A more expansionary stance of monetary policy was used between September 2008 and April 2009 to support confidence, domestic demand and employment because of the Global Financial Crisis.
- A more contractionary stance of monetary policy was used between October 2009 and November 2010 as economic recovery firmed and inflationary pressures rose including higher house prices.
- A more expansionary stance of monetary policy was used between November 2011 and August 2016 as global growth weakened because of the European Sovereign Debt Crisis, fiscal consolidation in OECD countries and slower growth in China. Australia recorded below trend growth as the economy transitioned to non mining sources of growth. This transition was supported by lower interest rates which encouraged borrowing and spending and also led to a lower exchange rate.

Monetary Policy and the Global Financial Crisis and Recession in 2008-09

The stance of Australian monetary policy changed in September 2008, with the first cut in the official cash rate of 0.25% since December 2001. This was a response by the Reserve Bank to the deteriorating outlook for the global economy and the prospects for much weaker growth in the Australian economy due to the initial sub prime mortgage crisis in the USA and then the Global Financial Crisis (GFC).

The tightness in global and domestic credit markets, together with higher fuel costs and falling house prices, exerted a restraint on domestic spending and this led to a softening in Australian business activity. The Reserve Bank believed that these factors, together with slower global activity would lead to inflation falling below 3% by 2010. At the October 2008 Reserve Bank Board meeting, the decision was taken to lower the cash rate by 1% to 6%, because of deteriorating international economic conditions, with large contractions in industrial output in the USA, the Euro Area countries, Japan and major emerging economies such as China, India and ASEAN. In addition, financial markets were very turbulent as the supply of credit was restricted in wholesale markets and the share prices of major companies remained extremely volatile. Further large easings in the cash rate of 0.75% in November 2008, and 1% in December 2008, were made by the Reserve Bank because of the following factors:

- Continuing turbulence in world financial markets with extreme volatility in equity prices.
- Significant weakness in global output and trade leading to falling commodity prices.
- Fragile consumer and business confidence because of evidence of weak economic conditions.
- A moderation in domestic demand in Australia despite recent reductions in interest rates, the depreciation of the exchange rate and the government's use of a fiscal stimulus package.
- A weakening labour market with a lower demand for labour and rising levels of unemployment.

In the December 2008 decision to ease the cash rate the Reserve Bank Governor, Glenn Stevens, said:

"Weighing up the international and domestic developments of recent months the Board judged that a further significant reduction in the cash rate was warranted now, to take monetary policy to an expansionary setting. As a result of today's decision the cash rate will be at its previous cyclical low point. Given trends in money market yields, most lending rates should fall significantly and will also reach below average levels."

Further cuts in the cash rate of 1% in February 2009 and 0.25% in April 2009 continued the downward trend in the cash rate to 3% (refer to **Figure 15.7**). The large easing in monetary policy helped to put downward pressure on household mortgage interest rates, and interest rates on business lending such as overdrafts and term loans (see **Figure 15.8**), helping to provide lower costs to borrowers.

Figure 15.7: Cash Rate Target

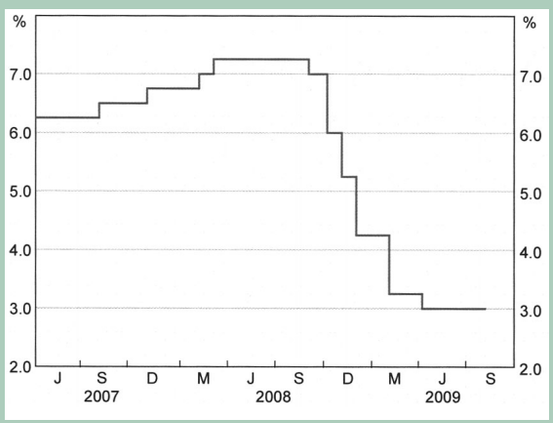
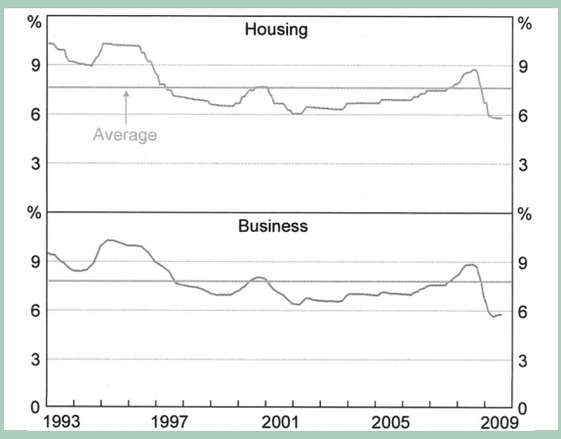


Figure 15.8: Housing and Lending Rates



Source: Reserve Bank of Australia (2009), *Statement on Monetary Policy*, August.

Monetary Policy and Higher Inflation between 2009 and 2010

In contrast to the dramatic easing of monetary policy by the Reserve Bank during the Global Financial Crisis in 2008-09, a tightening cycle began in October 2009. The cash rate was raised by 0.25% as inflation pressures rose with economic recovery, and the start of a second resources boom, leading to a higher terms of trade. This added stimulus to national income, and together with stronger final demand during the economic recovery in 2009, headline and underlying inflation pressures started to emerge.

CPI inflation rose to 3.1% in June 2010 and measures of underlying inflation were also higher at 2.7%, near the top of the Reserve Bank's target band for inflation over the cycle. The Reserve Bank increased the cash rate seven times by 0.25% between October 7th 2009 and November 2nd 2010 to sustain the economic recovery in Australia by containing inflationary pressures. The increases in the cash rate totalled 1.75% and led to the cash rate rising from 3% to 4.75%. At the end of 2010 and in early 2011 widespread flooding in Queensland and Victoria as well the impact of Cyclone Yasi on food production, led to higher fruit and vegetable prices, which kept the CPI at elevated levels for much of 2011.

Monetary Policy, Global Uncertainty and Below Trend Growth - 2011-16

The European Sovereign Debt Crisis worsened in 2011 with countries such as Greece, Spain, Portugal and Ireland receiving IMF and ECB bailout packages to pay their debt obligations in return for implementing fiscal austerity measures. The Euro crisis led to significant uncertainty and volatility in global financial markets and reduced the prospects for global growth to 3.5% in 2011-12. The uncertain global economic outlook reduced consumer confidence in Australia and evidence of an uneven pace of recovery also began to emerge because of the impact of the high Australian dollar on some industries.

The Reserve Bank responded to these developments by easing monetary policy through cuts to the cash rate of 0.25% in November and December 2011. Inflation pressures began to moderate in 2012 and the recession in the Euro Area led to lower growth in China, Australia's major trading partner. In addition, structural change in the economy was being induced by changing consumer spending patterns impacting on retailing, and the high Australian dollar impacting on trade exposed industries such as manufacturing and tourism. In response to these developments the Reserve Bank cut the cash rate in May 2012 by 0.5% to 3.75% in line with the easing of interest rates in other advanced economies. This was followed by further cuts of 0.25% in the cash rate in June, October and December 2012 which helped to lower mortgage rates for borrowers (refer to **Figure 15.9**). Below trend growth, rising unemployment (refer to **Figure 15.10**) and lower inflation led the Reserve Bank to cut the cash rate by 0.25% in May and August 2013 and February and May 2015 to support growth and employment. In 2016 deflation emerged and the Reserve Bank cut the cash rate by 0.25% in May and August to 1.5%.

Figure 15.9: Interest Rates

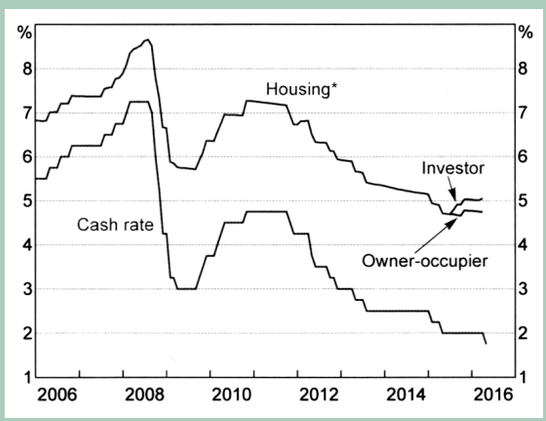
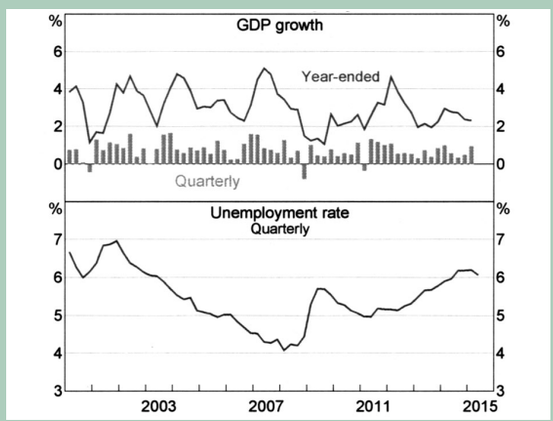


Figure 15.10: GDP and Unemployment



Source: Reserve Bank of Australia (2015 and 2016), *Statements on Monetary Policy*, August.

TRANSPARENCY AND ACCOUNTABILITY OF MONETARY POLICY

Since 1993, the Reserve Bank has moved to ensure that the conduct of monetary policy is more transparent and accountable. The Reserve Bank Board meets on the first Tuesday of each month (except in January) to discuss Australian and international economic conditions, and if any changes to the setting of monetary policy and the cash rate are needed because of changing economic conditions.

Decisions about the future course of monetary policy are made after briefings by the Reserve Bank's research staff to the Reserve Bank Board. Any change in monetary policy and the reasons for the change are clearly announced and explained in a media release by the Governor the same day (by 2.30pm eastern standard time), through electronic services and on the Reserve Bank's website. The Reserve Bank publishes a quarterly report on the economy and monetary policy called the *Statement on Monetary Policy* containing a detailed analysis of the economy and financial markets, and the policy stance adopted by the Reserve Bank. The new Governor, Dr Philip Lowe, was appointed in September 2016, and reports twice a year to the House of Representatives Standing Committee on Economics to answer questions on the economy and the Reserve Bank's conduct of monetary policy. These initiatives and the decision in 2008 to publish the minutes of Reserve Bank Board meetings, have enhanced the **transparency and accountability of monetary policy decisions**.

The *Reserve Bank Act* empowers the Reserve Bank to determine monetary policy in Australia. The Australian government recognises the **independence of the Reserve Bank** and its responsibility for monetary policy matters. Any decisions about changes to the cash rate are made separately from the political process. However there is close consultation between the Reserve Bank Governor and the Treasurer. In the first *Statement on the Conduct of Monetary Policy* in 1996 the underlying inflation target was formalised as a key operating objective in the conduct of monetary policy. The second *Statement on the Conduct of Monetary Policy* was signed in July 2003 and confirmed the reappointment of Governor Ian Macfarlane for a further three years. The third *Statement on the Conduct of Monetary Policy* was released on September 18th 2006 when Mr Glenn Stevens (2006-16) was appointed the new Governor of the Reserve Bank. The fourth *Statement* was released on December 6th 2007 and the fifth *Statement on the Conduct of Monetary Policy* was released on September 30th 2010 and included a section on the Reserve Bank's role in financial stability in the aftermath of the GFC in 2008-09. The sixth *Statement on the Conduct of Monetary Policy* was released on October 24th 2013 and the seventh *Statement* on September 19th 2016 when Dr Philip Lowe was appointed Governor. (see **Extract 15.1**).

THE EFFECTIVENESS OF MONETARY POLICY

In operational terms monetary policy is a more effective instrument of macroeconomic management now than in the past when Australia had a fixed exchange rate and a regulated financial system. Since the floating of the exchange rate in 1983, balance of payments outcomes do not impact on the domestic money supply, giving the Reserve Bank greater control over domestic activity and inflation. The use of open market operations in a deregulated financial system is an effective tool for influencing interest rates, and allows monetary policy to be used as a 'counter cyclical instrument' of macroeconomic policy and with the adoption of inflation targeting in 1993, inflation has been lower, averaging 2.7% annually.

A problem with using monetary policy as a 'swing arm instrument' of economic management is that it acts with a '**long and variable lag**'. This means that once the official cash rate is changed by the Reserve Bank, it takes time to flow through to other short and long term market interest rates that make up the yield curve. As the interest rate structure changes permanently, it will take between six to nine months for real economic activity (i.e. domestic demand, real GDP and employment) and inflation and exchange rate expectations to be affected. In this way monetary policy acts with a long lag. The lagged effect of monetary policy is also variable, as different sectors of the economy will be affected to different degrees, depending on their interest rate sensitivity or interest rate elasticity. For example, housing and investment spending are more interest elastic or sensitive, and react more quickly to interest rate changes than consumer and import spending, which take more time to adjust to a new interest rate structure.

Extract 15.1: Seventh Statement on the Conduct of Monetary Policy 19th Sept. 2016

The Treasurer and the Governor of the Reserve Bank

"The Statement on the Conduct of Monetary Policy has recorded the common understanding of the Governor, as Chair of the Reserve Bank Board, and the Government on key aspects of Australia's monetary and central banking policy framework since 1996. The Statement seeks to foster a sound understanding of the nature of the relationship between the Reserve Bank and the Government, the objectives of monetary policy, the mechanisms for ensuring transparency and accountability in the way policy is conducted, and the independence of the Reserve Bank. The centrepiece of the Statement is the inflation targeting framework, which has formed the basis of Australia's monetary policy framework since the early 1990s. The Statement has also been updated over time to reflect enhanced transparency of the Reserve Bank's policy decisions and to record the Bank's longstanding responsibility for financial system stability. Building on this foundation, the current Statement reiterates the core understandings that allow the Bank to best discharge its duty to direct monetary policy and protect financial system stability for the betterment of the people of Australia.

Relationship between the Reserve Bank and the Government

The Reserve Bank Governor, its Board and its employees have a duty to serve the people of Australia to the best of their ability. In carrying out their statutory obligations, through public discourse and in domestic and international forums, representatives of the Bank will continue to serve the best interests of the people of Australia with honesty and integrity. The Governor and members of the Reserve Bank Board are appointed by the Government of the day, but are afforded substantial independence under the *Reserve Bank Act 1959* to conduct the monetary and banking policies of the Bank, so as to best achieve the objectives of the Bank as set out in the Act. The Government recognises and will continue to respect the Reserve Bank's independence, as provided by the Act. The Government also recognises the importance of the Reserve Bank having a strong balance sheet and the Treasurer will pay due regard to that when deciding each year on the distribution of the Reserve Bank's earnings under the Act. New appointments to the Reserve Bank Board will be made by the Treasurer from a register of eminent candidates of the highest integrity maintained by the Secretary to the Treasury and the Governor. This procedure ensures only the best qualified candidates are appointed to the Reserve Bank Board.

Objectives of Monetary Policy

The goals of monetary policy are set out in the Act, which requires the Reserve Bank Board to conduct monetary policy in a way that, in the Reserve Bank Board's opinion, will best contribute to:

- The stability of the currency of Australia;
- The maintenance of full employment in Australia; and
- The economic prosperity and welfare of the people of Australia.

These objectives allow the Reserve Bank Board to focus on price (currency) stability, which is a crucial precondition for long-term economic growth and employment, while taking account of the implications of monetary policy for activity and levels of employment in the short term. Both the Reserve Bank and the Government agree on the importance of low and stable inflation. Effective management of inflation to provide greater certainty and to guide expectations assists business and households in making sound investment decisions. Low and stable inflation underpins the creation of jobs, protects the savings of Australians and preserves the value of the currency. Both the Reserve Bank and the Government agree that a flexible medium-term inflation target is the appropriate framework for achieving medium-term price stability. They agree that an appropriate goal is to keep consumer price inflation between 2 and 3 per cent, on average, over time. This formulation allows for the natural short-run variation in inflation over the economic cycle and the medium-term focus provides the flexibility for the Reserve Bank so as to achieve its broad objectives, including financial stability. The 2 to 3 per cent medium term goal provides a clearly identifiable performance benchmark over time. The Governor expresses his continuing commitment to the inflation objective, consistent with his duties under the Act. For its part the Government endorses the inflation objective and emphasises the role that disciplined fiscal policy must play in achieving medium term price stability. Consistent with its responsibilities for economic policy as a whole, the Government reserves the right to comment on monetary policy from time to time.

Transparency and Accountability

Transparency in the Reserve Bank's views on economic developments and their implications for policy are crucial to shaping inflation expectations. The Reserve Bank takes a number of steps to ensure the conduct of monetary policy is transparent. These steps include statements announcing and explaining each monetary policy decision, the release of minutes providing background to the Board's policy deliberations, and commentary and analysis on the economic outlook provided through public addresses and publications such as the *Statement on Monetary Policy* and *Bulletin*. The Reserve Bank will continue to promote public understanding in this way. In addition, the Governor will continue to report twice a year to the House of Representatives Standing Committee on Economics, and to other Parliamentary committees as appropriate. The Treasurer expresses support for the continuation of these arrangements, which reflect international best practice and enhance the public's confidence in the independence and integrity of the monetary policy process.

Financial Stability

Financial stability which is critical to a stable macroeconomic environment, is a longstanding responsibility of the Reserve Bank and its Board. The Reserve Bank promotes the stability of the Australian financial system through managing and providing liquidity to the system, and chairing the Council of Financial Regulators (comprising the Reserve Bank, Australian Prudential Regulation Authority, the Australian Securities and Investments Commission and the Treasury). The Payments System Board has explicit regulatory authority for payments system stability. In fulfilling these obligations, the Reserve Bank will continue to publish its analysis of financial stability matters through its half yearly *Financial Stability Review*. The Reserve Bank's mandate to uphold financial system stability does not equate to a guarantee of solvency for financial institutions and the Bank does not see its balance sheet as being available to support insolvent financial institutions. However, the Reserve Bank's central position in the financial system, and its position of the ultimate provider of liquidity to the system, gives it a key role in financial crisis management."

Source: Adapted from Reserve Bank of Australia (2016), *Statement on the Conduct of Monetary Policy*.

From historical experience tightenings of monetary policy have more effect on gross national expenditure than do easings of monetary policy. For example, the easings in monetary policy after the 1991 recession took two to three years to stimulate domestic demand and economic growth and it was not until 1994 that an upsurge in economic activity finally led to a fall in the unemployment rate. In contrast, the two interest rate rises at the end of 2003 had a fairly immediate impact in reducing the growth of housing related spending, which eventually led to a slowing in the rate of increase in house prices across Australia.

Monetary policy is often referred to as a '**blunt instrument**' since an increase in interest rates may impact adversely on all types of spending (e.g. consumption, imports, investment and housing) even if the initial problem is excessive spending of one type, such as spending on housing, leading to speculative activity and higher house and apartment prices. Using higher interest rates to contain spending on housing, could also reduce business investment and cause a rise in the level and rate of unemployment.

Monetary policy is said to be both an **art and a science**, requiring correct knowledge of the monetary transmission mechanism: when and by how much to change the stance of policy to achieve the desired objectives. The science of monetary policy has improved (i.e. knowledge of the transmission mechanism or transmission channels), but the art of monetary policy (i.e. knowing when to ease or tighten and by how much) is still dependent on the interpretation of a wide range of often conflicting data and the accuracy of forecasts made by the Reserve Bank of Australia, Treasury and other government agencies.

Monetary policy has also assumed the key role of **containing wages growth** by dampening inflationary expectations which may be built into wage negotiations. The Australian government therefore relies on monetary policy to a large extent to control wage or cost inflation. However monetary policy cannot be used to reform the labour market, and in the absence of a prices and incomes policy, monetary policy at best can only be used to contain wage expectations. The Reserve Bank monitors wages growth carefully through changes in the Wage Price Index or WPI. Wages growth is an important factor in the setting of monetary policy in relation to the inflation target. Unofficially the Reserve Bank would be concerned about achieving its inflation target if wages growth exceeded 4% per annum on average in Australia.

Discretionary fiscal policy was used up to 2007 to achieve budget surpluses, retire public debt and increase the government's net financial worth position. This policy of fiscal sustainability provided greater scope for interest rates to be cut by the Reserve Bank (if its inflation target was being achieved) to promote sustainable economic growth. If the Australian government is accumulating budget surpluses, this helps to raise national saving, making more funds available for private sector borrowing.

If the government does not compete for existing funds in financial markets to fund a budget deficit, this also relieves pressure on interest rates. Therefore **some degree of co-ordination between monetary and fiscal policy is necessary for each to be effective**. This occurred in 2008 and 2011 when a more restrictive fiscal stance was adopted to reduce the growth in public demand, helping to ease inflationary pressures. Therefore the tighter stance of fiscal policy in the 2008-09 and 2011-12 budgets was supportive of the more restrictive stance of monetary policy adopted by the Reserve Bank in 2007-08 and 2009-10. In contrast, the settings of both monetary and fiscal policies were eased in 2008-09 as the Global Financial Crisis and recession threatened to restrict Australia's rate of economic growth and increase unemployment. The use of large easings in monetary policy, and fiscal stimulus packages in 2008-09, led to more expansionary settings of both macroeconomic policies to support economic growth.

A final difficulty in framing domestic monetary policy is that it must take into account developments in the global economy, over which the Reserve Bank has little to no control. **External real and financial shocks** transmitted to the Australian economy such as the following have made the conduct of monetary policy and the achievement of monetary policy objectives more difficult in Australia in the last decade:

- The Asian economic crisis in 1997-98 and the US recession in 2001
- The global resources boom, rising oil prices and higher terms of trade between 2005 and 2007
- The US sub prime mortgage crisis, and the Global Financial Crisis and recession in 2008-09
- The European Sovereign Debt Crisis and slow US economic recovery between 2010 and 2013

The first two shocks necessitated a more expansionary stance of monetary policy to support domestic growth, whereas the third shock necessitated a more contractionary stance of monetary policy to restrain domestic growth and inflation. The fourth shock of the US sub prime crisis and Global Financial Crisis and recession in 2008-09 were transmitted to Australia in the form of a higher cost of credit, and a fall in world output and trade. The Reserve Bank supported financial markets with injections of liquidity and then began using a very expansionary stance of monetary policy to support activity and employment.

The International Monetary Fund (IMF) undertook a comprehensive study in 2003 to compare the performance of inflation targeting countries with non inflation targeting countries in the 1980s and 1990s. It found substantial empirical evidence to support the effectiveness of inflation targeting regimes. The comparative Reserve Bank data in **Table 15.3** on Australia's inflation and growth performance between 1980-92 (no inflation target) and 1993-2003 (inflation target) supported the IMF's conclusion:

Table 15.3: Australian Inflation and Real GDP Growth (average % change)

Period	*Annual Average Inflation*	*Variability in Inflation*	*Real GDP Growth*	*Variability in Growth*
1980-1992	7.2%	2.4%	2.8%	2.7%
1993-2003	2.3%	0.6%	3.9%	1.1%

Source: Reserve Bank of Australia (2003), *Bulletin*, April.

- Annual average inflation fell from 7.2% to 2.3% in the inflation target period;
- The variability in inflation fell from 2.4% to 0.6% in the inflation target period;
- Real GDP growth increased from an average of 2.8% to 3.9% in the inflation target period; and
- The variability in GDP growth fell from 2.7% to 1.1% in the inflation target period.

REVIEW QUESTIONS

RECENT TRENDS IN MONETARY POLICY

1. Describe the main features of the three interest rate cycles in Australia between 2008 and 2017.
2. Explain the reasons for the Reserve Bank easing the stance of monetary policy in 2008-09 and between 2011 and 2016.
3. Explain how the conduct of monetary policy has been made more transparent and accountable. Refer to Extract 15.1 on the *Statement on Monetary Policy* (2016) in your answer.
4. Discuss the effectiveness of monetary policy as an instrument of counter cyclical stabilisation in the Australian economy.
5. Define the following terms and add them to a glossary:

accountability of monetary policy	inflation target	Reserve Bank independence
announcement effect	inflationary expectations	Reserve Bank of Australia
cash market	interest rates	stance of monetary policy
cash rate	liquidity management	swing instrument of policy
CGS	long and variable lag	transmission mechanism
Exchange Settlement Accounts	monetary policy	transparency of mon. policy
inflation	objectives of mon. policy	yield curve

CHAPTER 15: SHORT ANSWER QUESTIONS

Year	*Cash Rate (%)*	*CPI Inflation (% pa)*	*Unemployment (%)*	*Real GDP (% pa)*
2011	4.25	2.4	5.2	3.6
2012	3.00	2.3	5.7	2.4
2013	2.50	2.6	6.0	2.5
2015	2.00	1.7	6.1	2.3
2016	1.50	1.4	5.7	2.3
2017	1.50	2.1	5.7	1.7

"Under the inflation targeting framework, the objective of monetary policy remains to contain inflation in the medium term, thereby ensuring one of the factors for the economy to achieve its maximum sustainable growth potential."

Source: Reserve Bank of Australia (2009), *Bulletin*, August.

Refer to the table above of selected economic indicators for Australia between 2011 and 2017 and the commentary on monetary policy, and answer the questions below. Marks

1. What is meant by the cash rate? (1)

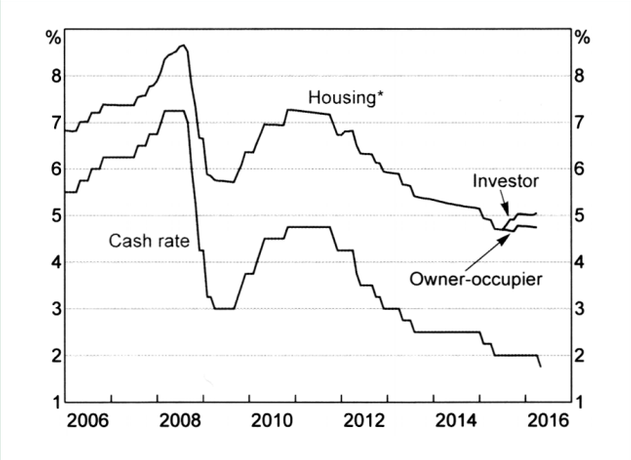
2. Explain TWO reasons why the Reserve Bank uses an inflation target to conduct monetary policy. (2)

3. Explain how the Reserve Bank can influence interest rates in Australia. (3)

4. Discuss TWO reasons why the Reserve Bank cut the cash rate between 2011 and 2016. (4)

CHAPTER FOCUS ON MONETARY POLICY

Interest Rates 2006 to 2016



"At its meeting today, the Board decided to lower the cash rate by 25 basis points to 1.50 per cent, effective 3 August 2016. The global economy is continuing to grow, but at a lower than average pace. Australia's terms of trade remain much lower than they had been in recent years. In Australia, growth is continuing at a moderate pace, despite a very large decline in business investment. Other areas of domestic demand, as well as exports, have been expanding at a pace at or above trend. Labour market indicators are consistent with a modest pace of expansion in employment in the near term. Recent data confirm that inflation remains quite low.

Low interest rates have been supporting domestic demand, and the lower exchange rate since 2013 is helping to support the traded goods sector. Taking these considerations into account, the Board judged that the prospects for sustainable growth in the economy, with inflation returning to target over time, would be improved by easing monetary policy at this meeting."

Source: Adapted from Reserve Bank of Australia (2016), *Statement on Monetary Policy*, August.

Analyse the impact of a more expansionary stance of monetary policy to support economic activity and employment in the Australian economy in 2016-17.

CHAPTER 15: EXTENDED RESPONSE QUESTION

Discuss the main objectives of monetary policy and explain how changes by the Reserve Bank in the stance of monetary policy can affect economic activity in Australia.

CHAPTER SUMMARY

MONETARY POLICY

1. Monetary policy refers to actions by the Reserve Bank of Australia through changes in the cash rate to influence the supply and cost of credit in the economy.
2. The main instrument of monetary policy is the use of open market operations to influence the cash rate. The cash rate is the official rate of interest paid on overnight loans from the cash market. Changes in the cash rate will eventually alter other market interest rates in the financial sector.
3. The main objectives of monetary policy include price stability, full employment and economic growth. These are set out in the *Reserve Bank Act 1959* and the *Statement on Monetary Policy*.
4. The centrepiece of the operation of monetary policy is the Reserve Bank's use of an inflation target of 2% to 3% consumer price inflation on average over the economic cycle. The inflation target provides an anchor point for inflationary expectations in the Australian economy and an operational target for the conduct of monetary policy.
5. There are three possible stances of monetary policy:
   - A contractionary stance is when the cash rate is raised by the Reserve Bank;
   - A neutral stance is when the cash rate is left unchanged by the Reserve Bank; and
   - An expansionary stance is when the cash rate is lowered by the Reserve Bank.
6. Monetary policy is implemented by the Reserve Bank through the use of open market operations. This involves the buying or selling of Commonwealth Government Securities (CGS) and Repurchase Agreements (Repos) by the Reserve Bank with counter parties (e.g. banks) in the cash market.
7. To ease the stance of monetary policy the Reserve Bank would buy CGS and Repurchase Agreements, adding to the cash balances in banks' Exchange Settlement Accounts. This would lead to a surplus in cash and a fall in the cash rate. To tighten the stance of monetary policy the Reserve Bank would sell CGS and Repurchase Agreements, reducing the cash balances in banks' Exchange Settlement Accounts. This would lead to a deficit in cash and a rise in the cash rate.
8. Changes in the cash rate and the stance of monetary policy flow through to other market interest rates and affect the cost of credit in the economy. This in turn affects the growth of domestic spending, which ultimately brings about changes in domestic output, employment, prices, the exchange rate and inflationary expectations. Through this transmission mechanism the Reserve Bank attempts to achieve its objectives of price stability, full employment and economic growth.
9. Between September 2008 and April 2009 the Reserve Bank eased the stance of monetary policy by reducing the cash rate from 7.25% to 3% because of the impact of the Global Financial Crisis and recession in slowing economic activity and employment growth in the Australian economy. The cumulative fall in the cash rate of 4.25% had the effect of reducing costs to borrowers.
10. Between October 2009 and November 2010 the Reserve Bank tightened the stance of monetary policy by increasing the cash rate by 1.75% to contain inflationary pressures accompanying the Australian economic recovery and the resources boom after the Global Financial Crisis.
11. The stance of monetary policy was eased between November 2011 and August 2016 because the European Sovereign Debt Crisis reduced the prospects for global growth and trade, and the high value of the Australian dollar reduced competitiveness in some trade exposed industries. The Australian economy also recorded below trend growth and higher unemployment in its transition to non mining sources of growth after the end of the mining investment boom.
12. Monetary policy acts with a long and variable lag, but has generally been effective in containing inflation, sustaining growth and employment in the Australian economy since the adoption of inflation targeting in 1993. These outcomes are supported by IMF research on the use of inflation targeting by countries to conduct their monetary policies more effectively.

Chapter 16

Microeconomic Policy

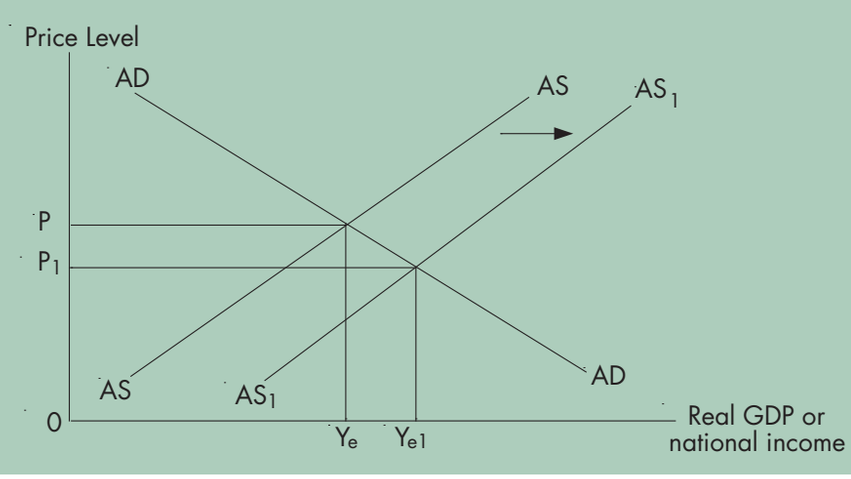
THE RATIONALE FOR MICROECONOMIC POLICIES

Microeconomic policies refer to government policies designed to raise the economy's level of efficiency, productivity and international competitiveness. At the microeconomic level of activity, firms, markets and governments produce and distribute goods and services to the community. Microeconomic reform policies aim to improve the efficiency of production, distribution and exchange by strengthening market competition and the use of the latest technology. They are supply side policies used to increase the economy's **long run aggregate supply curve** (AS) or productive capacity. Microeconomic reform policies are used to address specific structural problems in markets (such as labour market reform) which cannot be addressed through the use of macroeconomic policies such as monetary and fiscal policies.

The major objective of microeconomic policies is to shift the economy's aggregate supply curve (AS) to the right as shown in **Figure 16.1**. In this model used by supply side economists, the price level is flexible unlike the Keynesian model which uses a fixed price level. The aggregate supply curve represents the total volume of the economy's output at various price levels. The aggregate demand curve represents total spending in the economy at various price levels. The intersection of the aggregate demand (AD) and aggregate supply (AS) curves represents the economy's equilibrium level of income and output at Y_e and at price level P. Any increase in aggregate demand without an increase in aggregate supply will lead to a higher price level and inflation. This represents a constraint on the economy's growth as more resources or an increase in the productivity of existing resource use are needed to increase economic growth by increasing aggregate supply. This capacity constraint arose in the Australian mining boom between 2005 and 2008 with full employment in the labour market and high levels of capacity utilisation.

The aim of microeconomic policies is to shift the economy's aggregate supply curve to the right from AS to AS_1. This would lead to more economic growth (Y_e to Y_{e_1}) and a lower price level (P to P_1), as more output is available at a lower price level. An increase in aggregate supply could be sourced from **higher productivity** of resource use or **more resources** being used to increase output. Microeconomic policies include raising labour and capital productivity by encouraging firms to use the latest technology and more efficient work practices. They also involve less government regulation of markets (i.e. deregulation) and the use of competition policy to promote price competition and greater efficiency in markets.

Figure 16.1: The Effect of Microeconomic Policies on Aggregate Supply



Microeconomic policies are complementary to the government's use of macroeconomic policies. If the government can achieve economic growth, internal and external balance in the short to medium term by using macroeconomic policies, microeconomic policies can operate simultaneously to improve the **efficiency of resource allocation** in the economy in the long term or long run. This involves changing the structure of the economy (i.e. structural change) to make it more productive, efficient and competitive. If successful, microeconomic policies can also improve international competitiveness and access to global markets through increased exports. The three main types of efficiency gains from successful microeconomic reform policies are the following:

1. **Technical or productive efficiency** refers to firms producing output by using the least cost combination of resources. This means producing the maximum output at the minimum average cost. This is known as the point of technical optimum for firms in microeconomic theory.
2. **Allocative efficiency** involves firms charging prices which reflect the marginal cost of production so that resources are allocated in such a way as to reflect consumer preferences for goods and services.
3. **Dynamic efficiency** refers to firms adapting to changing economic circumstances by using the latest cost reducing technology to meet changing consumer preferences. This is also known as inter-temporal efficiency as firms respond to changes in demand in domestic and global markets over time by producing output at the minimum cost.

Efficiency gains should lead to a rise in national income and living standards, and the Australian economy's ability to absorb adverse shocks transmitted from the global economy such as the fall in the terms of trade in 1986; the 1997 Asian crisis; the US and global slowdowns between 2001 and 2003; and the Global Financial Crisis in 2008-09. Efficiency is linked to labour productivity growth as this was the major source of growth in GDP per capita in Australia between 1973 and 2014 as it averaged 2.3% annually in this period, higher than in most other OECD countries (refer to **Table 16.1**).

The improvement in Australia's productivity performance between 1973 and 2014 can be attributed to the adoption of more flexible labour market practices including enterprise bargaining; the range of microeconomic reform measures introduced to make markets more competitive; and the increasing absorption of new technologies which led to capital deepening in the Australian labour force. Treasury estimated in the 2014 budget that productivity growth in the 1990s accounted for 96% of annual income growth in the decade in comparison to 90% in the past four decades.

However between 2003 and 2007 labour productivity growth slowed to 1.6% per annum and contributed only 60% of the growth in average incomes between 2000 and 2013. This slowdown in productivity was partly due to the high investment in capital resources during the mining boom. Labour productivity began to rise again to 2.4% between 2007 and 2014 as the capital to labour ratio increased.

Table 16.1: Australian Annual Productivity Growth 1973-74 to 2013-14

	1973 to 2014	*2003 to 2007*	*2007 to 2014*
Output	3.0%	4.0%	2.4%
Total Inputs	2.3%	4.0%	2.5%
Labour Input	0.7%	2.4%	0.0%
Capital Input	4.4%	5.9%	5.3%
Multifactor Productivity	0.8%	0.0%	-0.1%
Capital Deepening	1.6%	1.6%	2.5%
Labour Productivity	2.3%	1.6%	2.4%
Capital/Labour Ratio	3.7%	3.5%	5.2%

Source: Productivity Commission (2015), *Productivity Update*, July.

Microeconomic Policy and Productivity

Microeconomic policy focuses on the microeconomic level of activity by attempting to improve the **allocation of resources** in product and factor markets and between various sectors of the economy such as the primary, secondary and service industries. This can be achieved by raising the technical, allocative and dynamic efficiency of the Australian economy's use of natural, capital and human resources.

Higher levels of efficiency can be achieved by raising Australia's rates of labour, capital and multifactor productivity, which lagged behind the OECD average in the 1980s but rose in the 1990s as shown in **Figure 16.2**. Productivity gains are the key goal of successful microeconomic policies. **Productivity** refers to output per unit of input over time, and can be measured in the following three ways:

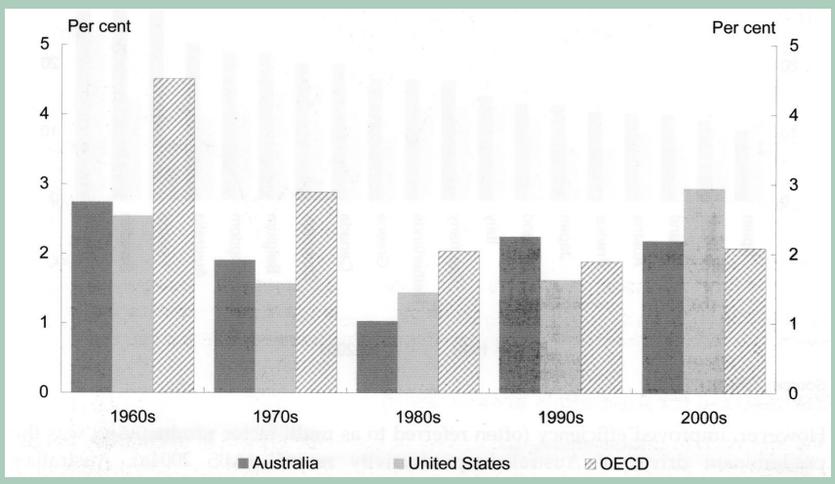
1. Labour Productivity $= \dfrac{\text{Output}}{\text{Labour Inputs/Time}}$
2. Capital Productivity $= \dfrac{\text{Output}}{\text{Capital Inputs/Time}}$
3. Multifactor Productivity (MFP) $= \dfrac{\text{Output}}{\text{All Factor Inputs/Time}}$

Australia's average annual rates of growth in labour, capital and multifactor productivity were at their highest in the 1960s and early 1970s. However they declined in the 1980s, before recovering in the 1990s and early 2000s. Labour productivity grew more rapidly during the 1990s than in any other comparable period in the past forty years, outperforming the 'New Economy' of the United States and the OECD countries (refer to **Figure 16.2**). Annual labour productivity growth averaged 2.2% in the 1990s, capital productivity grew by 0.3% and multifactor productivity by about 1.5% in this period. Strong growth in Australian labour productivity in the 1990s and 2000s reflected the following factors:

- Increases in capital per worker, which is known as capital deepening;
- Improvements in the quality of labour through education and training; and
- Improvements in the efficiency with which labour and capital are used together in production.

All measures of productivity slowed to around 0.5% to 1% between 2004 and 2007 as the economy reached full employment and labour shortages and capacity constraints emerged. The Global Financial Crisis in 2008-09 also led to lower productivity growth as employers cut employees' working hours.

Figure 16.2: Labour Productivity Growth 1960s to 2000s



Source: Commonwealth of Australia (2005), *Budget Strategy and Outlook 2005-06*.

Microeconomic policies are complementary to the government's use of macroeconomic policies. If the government can use its macroeconomic policies to achieve economic growth, internal and external balance in the short to medium term, microeconomic policies can operate simultaneously to improve the efficiency of resource allocation and raise productivity in the economy in the long term.

The government's microeconomic policies are characterised by the following five important features:

1. They are directed at the aggregate supply or output side of the economy.
2. They attempt to improve the economy's allocation of resources in the long run.
3. They are directed at **product markets**, where final goods and services are sold, and **factor markets**, where productive inputs such as land, labour, capital and enterprise are bought and sold.
4. They impact on both the **tradable goods sector** (i.e. export and import competing firms) and the **non-tradable goods sector** (mainly domestic public trading enterprises or PTEs) of the economy.
5. They target both government owned and operated business enterprises, as well as privately owned and operated business enterprises such as small and medium sized businesses and companies.

STRUCTURAL CHANGE AND MICROECONOMIC POLICIES

Microeconomic policies can induce and lead to **structural changes in the Australian economy** to make it more productive, efficient and competitive. Major structural changes occurred in the Australian economy in the 1980s, 1990s and 2000s. These changes were sourced from changes in markets and technology, and changes in government policy. The main **market induced structural changes** were:

- The increasing importance of the services sector as a contributor to 80% of GDP and employment;
- The impact of technological change and use of ICT goods in reducing production costs and prices;
- The increasing integration of the Australian economy into the global economy, with exports and imports each rising from 12% of GDP in 1990 to account for more than 20% of GDP in 2017;
- The growth of the East Asian market (especially China) in influencing Australian trade patterns;
- The changing composition and distribution of the Australian workforce with more jobs in services;
- Changes in Australian consumption patterns with more expenditure (as a proportion of household income) on services relative to goods, and increased electronic commerce and online shopping; and
- The impact of the resources boom in the 2000s on mining, investment, trade and employment.

Some of the **key government microeconomic reform policies** designed to induce structural change in Australian product and factor markets in the 1980s, 1990s and 2000s included the following:

- The application of national competition policy principles in 1995 to strengthen competitive pressure in markets in order to raise technical and allocative efficiency and lower consumer prices;
- Reductions in the levels of industry assistance in 1988, 1991, 2005, 2010 and 2015, mainly through tariff reform, to increase the competitiveness of Australian industry and the volume of exports;
- Increased efficiency of public trading enterprises (or PTEs) which provide infrastructure, through the policies of privatisation, deregulation, commercialisation and corporatisation;
- Increased productivity of labour and capital through reforms to capital and labour markets such as financial deregulation and the productivity based system of enterprise bargaining; and
- Improvements in the tax system, such as the broadening of the tax base and reducing the tax burden by cutting marginal tax rates and increasing income tax thresholds in various federal budgets.

The objectives of microeconomic reform are also linked to macroeconomic objectives. If microeconomic reforms are successful, they will contribute to an improved Australian macroeconomic performance by helping to overcome the structural constraints to sustaining higher rates of economic growth. The potential macroeconomic gains from successful microeconomic reforms include the following:

- Lower inflation outcomes through a system of more competitive domestic markets.
- Lower rates of unemployment through reforms in the labour market, including more efficient work and management practices and greater flexibility in the allocation and mobility of labour.
- Higher levels of national saving through the introduction of compulsory superannuation in 1991 and *The New Tax System* in 2000, which included stronger incentives for private saving (e.g. tax cuts), and the reform of Commonwealth-state financial relations to raise public saving.
- A reduction in the current account deficit through measures such as tariff reform, which help to raise export competitiveness and improve Australia's trade performance through increased exports.
- Increased levels of labour, capital and multifactor productivity (e.g. through labour market reforms) which help to support a rise in Australia's long term sustainable rate of economic growth.

The Productivity Commission (PC) was formed in 1996 to co-ordinate microeconomic reform policies. It combined the functions of former government bodies such as the Industry Commission (IC); the Economic Planning and Advisory Council (EPAC); and the Bureau of Industry Economics (BIE). The Productivity Commission released a report called *A Stocktake of Progress on Microeconomic Reform* in March 1996. The nine areas examined in the stocktake included labour markets and industrial relations; trade and industry assistance; competition policy; economic infrastructure; education, health and community services; taxation reform; resources and the environment; regulatory reform; and the performance of governments. Major microeconomic reforms in Australia's product and factor markets are discussed in the following sections.

REFORMS IN PRODUCT MARKETS

The National Competition Policy

The national competition policy was implemented by the Commonwealth (which passed the *Competition Policy Reform Act* in 1995), and state and territory governments in 1995 after the release of the *Hilmer Report*. It is a key element of ongoing microeconomic reform in Australia and underpins reforms to public trading enterprises (PTEs) and infrastructure industries. The national competition policy allows for reforms to state and territory PTEs, as well as a unified national reform process rather than reform on a sector by sector basis which occurred prior to 1995. **Table 16.2** lists the main elements of the national competition policy. The *Trade Practices Act 1974*, including its anti-competitive conduct rules, applied to all Australian private and public enterprises, and all small, medium and large businesses.

Table 16.2: The Main Elements of the National Competition Policy

National Competition Policy Elements	*Examples of Application*
1. Limiting the anti-competitive conduct of firms in product and factor markets	Competitive conduct rules of Part IV of the *Trade Practices Act 1974* apply to all businesses
2. Reforming regulation which unjustifiably restricts competition	Deregulation of the domestic aviation, egg marketing and telecommunications industries
3. Reforming the structure of public monopolies to facilitate competition	Restructuring of energy utilities such as electricity and gas in most states
4. Providing third party access to certain facilities that are essential for competition	Access arrangements for the electricity grid and telecommunications network
5. Restraining monopoly pricing behaviour in markets	Price surveillance of PTEs and private monopoly prices by the ACCC
6. Fostering 'competitive neutrality' between private and government businesses when they compete in markets	Requirements for government businesses to pay taxes and dividends to their government owners, thereby generating rates of return

Natural monopolies have been reformed and are subject to price surveillance by the ACCC. Markets such as electricity and telecommunications have been opened up to competition through third party access. Competitive neutrality between PTEs and private sector firms has been promoted by making PTEs pay taxes; market interest rates on capital borrowings; and dividends to their government owners.

The bodies responsible for the application and enforcement of the national competition policy are the Australian Competition and Consumer Commission (ACCC) which enforces the *Competition and Consumer Act 2010*; the Australian Competition Tribunal (ACT) which reviews appeals; and the National Competition Council (NCC) which co-ordinates policy initiatives.

On January 1st 2011 the *Trade Practices Act 1974* was renamed the *Competition and Consumer Act 2010*. This name change was brought about by two legislative amendments known as the *Australian Consumer Law Act* Nos 1 and 2 (ACL). The new ACL is a single national law introduced by the Commonwealth government to protect consumers and ensure fair trading in Australia. Key changes introduced by the ACL include new consumer protection provisions and a national product safety system (see page 339).

In 2014 a ***Competition Policy Review*** was undertaken by Professor Ian Harper and the final report was released in March 2015. It made over 50 recommendations to strengthen competition policy, including the use of an '**effects test**' to prohibit big businesses with substantial market power from behaving in such a way that has the 'purpose, effect or likely effect' of substantially reducing competition in markets.

Trade and Industry Policy

The major policy initiative to promote exports and trade intensity was the reform of industry assistance announced in the *1988 and 1991 Industry Statements*. The dismantling of industry protection in the form of tariffs and quotas occurred on a large scale to promote import competition; raise industry efficiency; and increase the volume of exports by Australian industry. The key unilateral government measures undertaken in the *1988 and 1991 Industry Statements* and *The New Tax System* (2000) included:

- The reduction of the majority of tariffs for manufacturing to 5% by 1996.
- The abolition of quotas and the reduction of tariffs for the PMV industry to 15% by 2000.
- Abolition of quotas for TCF in 1993, and a reduction in tariffs to a maximum of 25% by 2000.
- Zero rating for GST of exporters under *The New Tax System* in 2000 which meant tax credits could be claimed on inputs but exports were GST exempt, helping to lower export production costs.

Under the Howard government tariffs fell to 15% in 2000, but were frozen until January 1st 2005, when they fell to 10%. The estimated benefits from reduced protection by the Productivity Commission were a gain of $4b in GDP for Australia through additional export volumes and a higher rate of economic growth. Direct policies to promote Australian trade include direct assistance given to exporters by AUSTRADE, such as the Export Market Development Grants Scheme (EMDGS) and the global network of AUSTRADE offices in Australia's major trading partners. In April 2011 the Australian government released a *Trade Policy Statement* which reaffirmed its commitment to free trade through participation in multilateral, regional and bilateral trade agreements and negotiations such as:

- The Uruguay Round of GATT (1994), and the WTO's Doha Round of Trade Talks (2001-15);
- Annual APEC meetings, the signing of the *Bogor Declaration* in 1994, and a commitment in 2011 to work towards a Free Trade Area for the Asia Pacific (FTAAP); and
- Bilateral trade agreements such as ANZCERTA and AUSFTA to promote bilateral trade.

Numerous bilateral and regional trade agreements have been recently negotiated by Australia with major trading partners: New Zealand (1983), Singapore (2003), Thailand, (2005), Chile (2009), ASEAN (2010), Malaysia (2013), Korea (2014), Japan (2015), China (2015) and the Trans Pacific Partnership (TPP) in 2016. In terms of **industry policy**, the government released its industry statement, *Investing for Growth* in 1997. It contained an extensive reform agenda and $1.3b in new spending on business

research and development (R & D); encouraging more foreign investment in Australia; strengthening Australia's position as a regional financial centre; and increasing business access to the global ICT revolution. The government's *Innovation Statement* in 2001 committed $4.5b to ongoing R & D activity and in the 2007-08 budget the government committed $1.4b in the industry statement, *Global Integration: Changing Markets, New Opportunities,* to assist Australian firms to increase productivity and exports. In the 2009-10 budget the government committed $2.4b to increase innovation, public sector research and infrastructure. In the 2013-14 budget the government invested $1b in its Industry and Innovation Statement, *A Plan for Australian Jobs*, to support industry and create new employment.

In the 2014 budget the Abbott government introduced a new Entrepreneurs' Infrastructure Programme to commercialise good ideas, enhance job creation and assist small business. In late 2015 the Turnbull government launched the $1.1b *National Innovation and Science Agenda* to support business innovation.

Taxation Reform to Increase Incentives

Reform of the Australian taxation system is important for achieving a more efficient and equitable tax system. This should strengthen the incentives to work and raise productivity, and to save and invest. *The New Tax System* introduced on July 1st 2000 involved six major reforms to the existing tax system:

1. A range of narrowly based and distorting indirect taxes and some state taxes were abolished. They were replaced by a broad based Goods and Services Tax (GST) of 10% on most goods and services.
2. The abolition of sales tax led to cost reductions for many businesses and exports of goods and services were given a zero rating under the GST system helping to increase competitiveness.
3. The states and territories were to receive all of the GST revenue, enabling them to have a secure and stable source of revenue, in return for the abolition of other state taxes and charges.
4. Cuts in marginal tax rates (MTRs) and increases in family assistance payments for low income earners were made to raise incentives to work and save and to offset the initial impact of the GST.
5. Lower income tax compliance costs with the Pay As You Go (PAYG) system.
6. The company tax rate was lowered from 36% to 30% between 2000 and 2002, as was the capital gains tax. This was part of *The New Business Tax System* (based on the Ralph Report's findings).

Tax reform measures implemented between 2001 and 2012, included cuts to personal income tax; reform of superannuation taxation; reduction in tax compliance costs for business; and an increase in the Low Income Tax Offset (LITO) to boost work incentives for disadvantaged groups. After the ***Henry Review*** in 2010 the government introduced a Minerals Resource Rent Tax (MRRT) of 30% in the 2012 budget on the super profits of mining companies (subsequently repealed in 2014); and increased the tax free threshold from $6,000 to $18,200 for personal income tax. In the 2014 budget the Abbott government announced a *White Paper on the Reform of Australia's Tax System* to provide a long term approach to tax reform. In the *Jobs and Small Business Package* in the 2015 budget there was a 1.5% cut in tax for small corporations and in the 2016 budget the Turnbull government announced a *Ten Year Enterprise Tax Plan* to lower the tax rate for small businesses and reform superannuation concessions.

REFORMS IN FACTOR MARKETS

Labour Market and Industrial Relations Reform

Labour market reforms began in Australia in 1985, with a productivity based bargaining stream under the Prices and Incomes Accord, called the Two Tier Wage System. In 1991 the principle of enterprise bargaining was introduced to promote labour productivity by linking wage outcomes to productivity improvements. The *Industrial Relations Reform Act* in 1993 encouraged greater labour market flexibility by promoting enterprise level wage bargaining through union Certified Agreements and Enterprise Flexibility Agreements. The *Workplace Relations Act* in 1996 continued wage decentralisation through the enterprise bargaining stream, but further deregulated the system of industrial relations in Australia by reducing the power of trade unions and the AIRC in regulating the industrial relations system.

The key reforms in the *Workplace Relations Act 1996* were:

- Provision of greater choice on how enterprise agreements were reached by introducing Australian Workplace Agreements (AWAs) administered by the Office of Employment Advocate;
- Limiting the award system to the role of a social safety net administered by the AIRC, with award coverage restricted to only 20 minimum allowable matters;
- Ending compulsory unionism and allowing the choice of bargaining agents for workers by encouraging competitive unionism and the disamalgamation of unions;
- Placing restrictions on unions in the negotiation of Certified Agreements such as limitations on the use of industrial action only during the negotiation period (protected period) for new agreements;
- Relaxing the Unfair Dismissal Rules to encourage more employer flexibility in hiring labour; and
- Reducing the regulatory power of the AIRC, and the power of trade unions to oversee AWAs.

Reforms in the *Workplace Relations Amendment Act 2006* (WorkChoices) were designed to create a **unified national industrial relations system**. They included the Australian Fair Pay Commission (AFPC) to review minimum wages; an emphasis on individual agreements (AWAs) and non union collective agreements in wage bargaining; and the award system was simplified to five minimum conditions under the Australian Fair Pay and Conditions Standard (AFPCS). The *Workplace Relations Amendment (A Stronger Safety Net) Act 2007* introduced a Fairness Test applying to all agreements as a safety net, and the Workplace Authority to administer AWAs. Major reforms to workplace relations were contained in the Rudd government's *Fair Work Act 2009* which strengthened the safety net system and placed renewed emphasis on collective enterprise bargaining and agreements:

- Ten National Employment Standards were introduced to provide a safety net of working conditions to employees in the national system, and annual adjustments to the National Minimum Wage;
- Fair Work Australia and the Fair Work Ombudsman were established to regulate and enforce the national workplace relations system;
- Modern Awards were introduced to rationalise over 4,000 federal awards to 122 Modern Awards which included basic rates of pay and conditions for various occupations and types of work; and
- Emphasis on collective enterprise bargaining was based on good faith bargaining and the application of a Better Off Overall Test (BOOT) to single enterprise, multi enterprise and greenfields agreements.

The *Fair Work Amendment Act 2012* changed the name of Fair Work Australia to the Fair Work Commission, and made superannuation payments compulsory by employers for employees under a Modern Award. Also the National Minimum Wage Panel was renamed the Expert Panel.

The former Howard government introduced other labour market reforms in the 1990s and 2000s which were linked to the reform of the social security and welfare system. Centrelink was established to improve the efficiency, equity and targeting of social security payments. The Work for the Dole Scheme was introduced to make the receipt of Job Search Allowance conditional upon participation in community projects for up to three days per week. The *Welfare to Work* reforms in 2004-05 encouraged welfare recipients to increase their workforce participation by securing part time paid employment.

In response to the Global Financial Crisis in 2008-09 the Australian government allocated $1.5b in the 2009-10 budget to a *Jobs and Training Compact* to help young Australians, retrenched workers and local communities to secure employment by improving their skills through education and training. The *Building Australia's Future Workforce* package in the 2011-12 budget included investment of $3b in new skills and training measures to boost workforce participation. In the 2013-14 budget the government committed $68.8m to address skills shortages through additional vocational education and training. In the 2015-16 budget part of the *Jobs and Small Business Package* included wage subsidies to employers.

In the 2016-17 budget the Turnbull government introduced a Youth Employment Package including a $752m Youth Jobs PaTH Programme for job seekers under 25. This included pre-employment skills training, internship placement and wage subsidies to eligible employers who provided ongoing jobs.

Reform of the Australian Financial System

The Australian financial system, which includes domestic capital markets, is a key factor market in the economy. Reform of the financial system was important to ensure the efficient allocation of capital resources and the minimisation of costs through the processes of financial and technological innovation. Following recommendations made by the *Campbell Report* (1981) and the *Martin Report* (1983), the government deregulated the financial system in 1983. This involved the removal of direct controls over interest rates and lending policies in the banking system, to improve efficiency and competition in the allocation of funds between banks and non ban financial intermediaries (NBFIs) such as building societies and credit unions. The main measures introduced with financial deregulation in 1983 were:

- The abolition of all direct Reserve Bank controls over interest rates and the volume and direction of bank lending;
- The use of open market operations by the Reserve Bank to conduct monetary policy;
- The floating of the exchange rate and the abandonment of the crawling peg system; and
- The entry of 16 new foreign banks, which were granted banking licences, and allowed to compete (mainly in wholesale and merchant banking) with other institutions in the financial market.

These changes resulted in a more efficient allocation of capital resources according to market forces, and greater levels of competition between institutions in the Australian financial system. Other benefits for the economy included greater access to, and integration with overseas capital markets, and a more effective conduct of monetary policy by the Reserve Bank through the use of open market operations.

In 1998, the major recommendations of the *Wallis Report* (1997) were implemented by the former Howard government to alter the system of prudential supervision of the financial system. The Reserve Bank of Australia (RBA) has responsibility for the conduct of monetary policy and the maintenance of financial system stability. The Australian Prudential Regulation Authority (APRA) was established to supervise all deposit taking institutions (DTIs). The Australian Securities and Investments Commission (ASIC) was given the responsibility for market integrity, consumer protection and dispute resolution across the financial system including transactions involving investment, futures, insurance and superannuation products. Together the RBA, APRA, ASIC and Treasury form the Council of Financial Regulators which oversees and regulates the Australian financial system to ensure the stability of the financial system and the protection of consumers in their financial dealings. In 2013 a new financial system inquiry, the *Murray Inquiry*, was commissioned by the Australian government to provide recommendations to improve competition and efficiency in the Australian financial system. A major reform implemented in 2015 was an increase in the capital adequacy of banks against financial shocks.

REGULATION, DEREGULATION AND COMPETITION POLICY

The regulation of economic activity and markets in Australia began in the early 1900s, with the establishment of a centralised system of wage determination and the protection of domestic manufacturing through tariffs and quotas. In the 1950s, a number of public trading enterprises or PTEs (such as TAA) were established to compete with private sector enterprises (such as Ansett), and public monopolies (such as Telecom) were set up in the public interest in many infrastructure industries considered to be **natural monopolies,** where one firm with an efficient and large scale of operations could supply a whole market. These high levels of **government regulation** were a response to '**market failure**' and justified by the Australian government on economic, political, strategic and social grounds:

- The regulation of wages and imports were seen as necessary to guarantee living standards through income and employment protection for Australian workers and their families.
- Public monopolies were seen as preferable to private monopolies, as they could be operated in the national interest by governments to achieve broad economic, social and strategic goals.
- The regulation of key markets would prevent high levels of foreign ownership and control.

The current rationale for **deregulation** is largely based on George Stigler's (Nobel Laureate in economics in 1982) economic theory of regulation, which provided a critique of regulation or '**regulatory failure**'. Stigler argued that a policy of government regulation of markets was inefficient on several grounds:

- Regulatory policies involved large administrative and compliance costs to the government and taxpayers. These costs resulted in the growth of government bureaucracy and budgetary spending;
- There was an ever present danger of the regulators being '**captured**' by the regulated industry or enterprises through '**rent seeking**' behaviour, and manipulated by the regulated industry for favourable treatment by the regulators - known as the '**theory of capture and rent seeking**'; and
- There was a high opportunity cost of regulation in terms of the inefficient use or waste of resources, higher prices to consumers, a lack of innovation and less competition in markets.

The global push for the deregulation of markets is also based on '**contestability theory**' developed by William Baumol. He argued for the elimination of entry barriers to markets to raise the threat of actual or potential entry by new firms. This would promote competition by making markets 'contestable'. The theories of Stigler and Baumol influenced governments in Britain, the USA, Chile, France, New Zealand and Australia in the 1980s and 1990s to embark on the large scale deregulation of markets and the privatisation of PTEs. The goals of these policies were to raise competition and efficiency, and to reduce consumer prices in markets. The policy of deregulation began in Australia in 1983 with the deregulation of the financial system. It accelerated in the 1990s with the deregulation of other industries such as air transport, telecommunications and some agricultural markets such as dairying and eggs.

Deregulation refers to the removal of government restrictions on the operation of markets. Deregulation can involve the removal of regulations affecting entry into an industry; pricing arrangements; or other controls on businesses, to promote competition and efficiency, lower prices, and strengthen incentives for technological innovation. Between 1983 and 2000 a number of Australian industries were deregulated:

- The financial system was deregulated in 1983 with controls over interest rates, bank lending and deposits lifted, and 16 new foreign banks were granted licences to operate in Australia. In addition, the exchange rate was floated by allowing its value to be determined by the market forces of demand and supply instead of its value being fixed or adjusted to the TWI by the Reserve Bank of Australia.
- The domestic airline industry was deregulated in 1991, with the ending of the Two Airlines Policy (i.e. the two airlines of Ansett and TAA). Qantas and Australian Airlines (formerly TAA) were merged, and Compass entered as a third airline carrier. Airline cabotage was abandoned in 1994, allowing Qantas to fly domestic routes and Ansett to fly overseas routes.

  The deregulation of the industry resulted in lower air fares and a large increase in the volume of air passengers, as airlines developed new routes and engaged in vigorous product differentiation. However airlines such as Compass, Freedom, Impulse and Ansett could not compete and exited the industry in the 1990s and 2000s, but carriers such as Virgin Airlines, Qantas and Jetstar, and Tiger Airlines remained in competition in the domestic airline industry in 2017.
- Telecommunications was partially deregulated in 1992, with the entry of Optus to compete with Telecom on STD phone calls and in the mobile phone market. Telecom was subsequently merged with OTC to become Telstra, and competed with Optus over pay television rights, with Vodafone entering the market in 1993 to compete in the digital mobile telephone market. Other major carriers such as AAPT, Primus, Dodo and Orange (now Vodafone) entered the market in 1997 after full deregulation of the industry. With deregulation, the telecommunications market and industry grew quickly, prices fell, and growth in services increased with higher Internet and mobile usage.
- In agriculture, the federal government lifted the import embargo on sugar, tobacco, dried and citrus fruits in 1995. Wheat marketing was deregulated in 1989 and milk marketing support removed in 2000. Egg marketing was also deregulated in NSW, South Australia and Victoria.

Reform of Public Trading Enterprises (PTEs)

Major reforms have taken place in Australia's economic infrastructure sector which is 90% government owned, through control of PTEs, accounting for around 13% of Australia's GDP. A number of former state and federal PTEs (such as GIO, the State Bank of NSW, Queensland Insurance, Telstra, Qantas, the Commonwealth Bank and Medibank Private) have been totally privatised through sale by public float to the private sector. The policy of **privatisation** is based on the view that privately owned enterprises are likely to be more efficient, because they are subject to capital and product market discipline in competitive markets unlike former PTEs. The main reforms to PTEs have included the following:

- The privatisation of many public trading enterprises (PTEs) including the partial sale of Telstra in 1997 (the first instalment) and 1998 (the second instalment) by public float which raised $14.3b. Other major privatisations were the sale of the Commonwealth Bank, the Australian Industrial Development Corporation (AIDC) and the Sydney Airport Corporation. In 2006 the sale of the remaining 51% government share of Telstra (the third instalment) was completed. In 2014 the Abbott government privatised Medibank Private by public float on the ASX.
- Corporatisation of state and federal PTEs through the creation of more efficient management structures such as establishing clear managerial objectives and accountability for performance.
- Commercialisation of some PTEs such as Energy Australia and other state energy utilities to provide more incentives to improve efficiency through the payment of dividends to government owners.
- Principles of competitive neutrality applied to PTEs such as payment of taxes, charges, and interest on loans, to ensure that PTEs operate in an equivalent competitive private sector environment.

Competition Policy

The Australian Competition and Consumer Commission (ACCC) is an independent statutory authority which administers the *Competition and Consumer Act 2010* which came into force on January 1st 2011 (formerly the *Trade Practices Act 1974*). The ACCC also regulates national infrastructure industries and has primary responsibility for ensuring compliance with Commonwealth competition, fair trading and consumer protection laws. The *Australian Consumer Law Act* (ACL) is a national law introduced by the Commonwealth government in 2011 to protect consumers and ensure fair trading.

The purpose of the *Competition and Consumer Act 2010* is to enhance the welfare of Australians by promoting competition, fair trading and consumer protection. The Act deals with the relationships between suppliers, wholesalers, retailers, competitors and customers in markets. The Act covers unfair market practices, industry codes of conduct, mergers and acquisitions of companies, product safety, product labelling, price monitoring, and the regulation of industries such as telecommunications, gas, electricity and airports. The major parts of the *Competition and Consumer Act 2010* are the following:

- Part IIIA: third party access to nationally significant and essential facilities
- Part IV: anti-competitive practices
- Part IVA: unconscionable conduct in commercial and consumer transactions
- Part V: unfair practices, product safety and information, country of origin representations, conditions and warranties, misleading and deceptive conduct
- Part VA: liability of manufacturers and importers for defective goods
- Part VC: criminal conduct in fair trading and consumer protection
- Part VII: authorisations and notifications
  Part VIIA: price monitoring and surveillance of various 'declared' industries or businesses
- Parts XIB and XIC: anti-competitive conduct and access to services in telecommunications

A White Paper called the *Competition Policy Review* (the Harper Review) made 56 recommendations to the Australian government to strengthen competition policy (including an 'effects test') in March 2015. **Table 16.3** provides a very comprehensive summary of the overall microeconomic reform agenda in Australian factor and product markets in the 1980s, 1990s and 2000s.

Table 16.3: The Microeconomic Reform Agenda in Product and Factor Markets

The Labour Market and Industrial Relations

Labour market reform began in 1985 under the Prices and Incomes Accord, with enterprise bargaining introduced in 1991 which encouraged enterprise agreements to promote labour productivity. The *Workplace Relations Act 1996* encouraged greater labour market flexibility and continued the previous process of wage decentralisation and deregulation, with a number of key reforms such as:

- Introducing individual workplace agreements called Australian Workplace Agreements (AWAs)
- Reducing awards to only 20 allowable matters and limiting them to the role of a social safety net
- Reducing the power of unions by ending compulsory unionism and limiting the use of industrial action
- Relaxing the Unfair Dismissal Laws to promote more flexibility for employers in hiring labour
- Reducing the regulatory power of the Australian Industrial Relations Commission (AIRC)

Other reforms introduced in the labour market by the former Howard government in 1998 were:

- The Work for the Dole Scheme based on the principle of mutual obligation
- The establishment of Centrelink to streamline and simplify social security payments
- The creation of a competitive job placement market known as the Job Network

The *Workplace Relations Amendment Act 2006* (WorkChoices) further deregulated the labour market:

- Creation of a unified national industrial relations system
- Simplification of awards by reducing the allowable matters in the award safety net from 20 to 16
- The creation of the Australian Fair Pay Commission (AFPC) to set minimum wages and use of the Australian Fair Pay and Conditions Standard (AFPCS) as a safety net for wage adjustments
- An emphasis on AWAs and common law contracts in employment rather than awards
- The No Disadvantage Test was no longer applicable to AWAs and Union Collective Agreements
- A reduced role for the AIRC in industrial relations, largely confined to award simplification
- The unfair dismissals laws were no longer applicable to businesses with less than 100 employees

The *Workplace Relations Amendment (A Stronger Safety Net) Act 2007* introduced a Fairness Test applying to all agreements as a safety net, with the Workplace Authority overseeing the administration of AWAs and applying the new Fairness Test. After the election of the Rudd Labor government in 2007 the new *Workplace Relations Amendment (Transition to Fairness) Act 2008* strengthened the safety net of minimum wages and employment conditions and the *Fair Work Act 2009* began the Rudd government's 'Forward with Fairness' industrial relations policy with five major elements:

1. Prevention of the making of new AWAs and annual National Minimum Wage hearings
2. Introduction of ten National Employment Standards (NES) to underpin a strong safety net
3. Introduction of streamlined Modern Awards containing minimum wages and conditions
4. An emphasis on collective enterprise agreements and 'good faith bargaining'
5. Regulation of the national system by Fair Work Australia and the Fair Work Ombudsman

The *Fair Work Amendment Act 2012* changed the name of Fair Work Australia to the Fair Work Commission; made superannuation payments compulsory by employers for employees under Modern Awards; and changed the name of the Minimum Wage Panel to the Expert Panel. In August 2015 the Productivity Commission released a draft report on *Australia's Workplace Relations Framework* which found that wage and employment arrangements were generally working well, but that there was a case for reviewing penalty rates to promote employment growth and business profitability. In February 2017 the Fair Work Commission handed down a decision to phase in cuts to Sunday penalty rates between 2017 and 2020 paid in the retail, fast food, hospitality and pharmacy industries.

National Competition Policy

Based on the recommendations of the *Hilmer Report* in the early 1990s, the *National Competition Policy Reform Act* was passed in 1995. This implemented reforms to public trading enterprises (PTEs) and infrastructure industries, and ensured a unified national reform process. This policy included extension of the *Trade Practices Act 1974* (TPA) to all businesses, with the main elements being:

- Limiting the anti-competitive conduct of firms in markets
- Reforming government regulation which unduly restricts competition
- Reforming the structure of public monopolies to facilitate competition such as third party access
- Providing third party access to essential economic infrastructure needed for competition
- Limiting the monopoly pricing behaviour of firms with monopoly power
- Creating competitive neutrality between firms in the private and public sectors

The National Competition Council (NCC) formulates competition policy initiatives; the Australian Competition and Consumer Commission (ACCC) enforced the former *Trade Practices Act 1974*; and the Australian Competition Tribunal (ACT) reviews appeals against ACCC decisions.

In 2008 the ACCC conducted enquiries into the retail grocery and petrol industries to monitor prices and ensure these markets were competitive. The government also eased restrictions to encourage the entry of foreign supermarket chains into the Australian market to increase the level of competition. On January 1st 2011 the *Trade Practices Act 1974* was renamed the *Competition and Consumer Act 2010* through an amendment known as the *Australian Consumer Law Act* (ACL). The ACL is a single national law to protect consumers and ensure fair trading and is enforced by the ACCC. In 2015 the *Competition Policy Review* made 56 recommendations for strengthening competition policy.

Economic Infrastructure

Economic infrastructure consists of transport (roads, rail, aviation, ports, the waterfront and shipping), water and sewerage, electricity and gas, postal services and telecommunications. The reform agenda for infrastructure is very important, as the government owns 90% of all economic infrastructure in Australia. The main reforms to economic infrastructure include the following:

- Privatisation: many government businesses have been privatised such as the Commonwealth Bank, Qantas, Telstra and Medibank Private. Telstra was fully privatised in 2006-07 when the remaining 51% of Telstra was sold by public float. In 2014 the Abbott government privatised Medibank Private and canvassed the prospect of privatising Australia Post in the future.
- Corporatisation and commercialisation: These policies apply a more efficient management structure to government businesses and a rate of return on capital to their government owners. This includes dividends paid to the Australian government by PTEs such as Australia Post.
- Application of the principle of competitive neutrality to government businesses so that they pay taxes, and interest on any loans, to ensure a 'level playing field' with any private sector companies in the same industry or market.

Microeconomic reforms have been successful in industries dominated by public sector monopolies with multifactor productivity increasing by 60% in the electricity, gas and water industries during the 1980s, and doubling in the transport and communications industries in the 1990s.

Due to capacity constraints and bottlenecks in transport and export infrastructure (which limit productivity growth) the federal government increased spending on the land transport network in 2004 with a further $2.3b announced in the 2006 budget on rail and road infrastructure. Total spending under the AusLink 1 programme was $15b between 2004-05 and 2008-09. The Rudd government in the 2007-08 budget, committed $22.3b to AusLink 2 for five years from 2009-10. In the 2008-09 budget major new spending initiatives on infrastructure were announced by the Rudd government to expand productive capacity and support future economic growth in Australia:

- Infrastructure Australia was established to co-ordinate and lead infrastructure development;
- The Building Australia Fund was established to finance shortfalls in critical infrastructure such as transport and communications (including road, rail and port facilities) to ease urban traffic congestion, enable growth in overseas trade and develop the broadband network; and
- Increased spending of $22.3b over five years on road and rail infrastructure through AusLink 2.

In the 2009-10 budget the government committed $22b in funds to a Nation Building Infrastructure package on roads, rail, ports, energy, communications, education and health to provide short term economic stimulus during the GFC, and increase long term productive capacity in the economy.

In the 2010-11 budget the Australian government committed $1b to a new Infrastructure Fund and equity investment in the Australian Rail Track Corporation to upgrade major rail networks. Also Infrastructure Australia and the National Transport Commission were to develop a National Ports Strategy to co-ordinate freight logistics with port capacity and improve Australia's export supply chain capabilities. In the 2011-12 budget new measures included tax incentives for private investment in infrastructure; more funding for Infrastructure Australia; and $6b between 2011 and 2021 for a new Regional Infrastructure Fund to finance regional infrastructure projects. A further $24b was committed to rail, roads and ports in the 2013-14 budget. In the 2014-15 budget the Abbott government committed $50b to an Infrastructure Growth Package by 2019-20. This was followed by a $5b Northern Australia Infrastructure Facility in the 2015-16 budget. In the 2016 and 2017 budgets the Turnbull government committed $70b to a National Infrastructure Plan (Building Australia) to increase transport infrastructure (road, rail and airports) between 2013-14 and 2020-21.

Telecommunications

The federal government announced plans in July 2006 to partially deregulate the telecommunications and media industry by relaxing rules on cross media and foreign ownership and introducing new digital channels into the market. These plans were designed to increase competition and start Australians switching over from analog to digital broadcasting by 2010. In the 2009-10 budget the government established a company to invest up to $43b in a National Broadband Network (NBN) to provide 'super fast' broadband services to Australian homes and businesses, especially in regional areas. In the 2013-14 budget the government committed $30.4b in equity in NBN Co. to fund the rollout of the National Broadband Network with construction commenced or completed for over 4.8m premises nationwide by June 2016, helping to increase Australia's future productivity. Definitive Agreements were signed between Telstra and NBN Co Limited in 2012 to support the NBN rollout. In 2017 the Turnbull government planned to change the cross media ownership laws.

Education, Health and Community Services

Reforms in social infrastructure mainly affect the education and health industries and include:

- Review of the funding arrangements for all levels of education, including linking HECS to the real cost of tertiary courses, and allowing more full fee paying students at universities.
- Review of the Pharmaceutical Benefits Scheme (PBS) due to rising costs. Increased investment in health and medical research was announced in the 2006-07 budget as well as the training of more doctors and nurses to meet the health care demands of an ageing population.
- Increased spending on university, vocational and school education in the *Realising Our Potential* package in the 2007-08 budget, including $5b on a new Higher Education Endowment Fund.

In the 2008-09 budget major funding commitments were made by the government to the Education Investment Fund ($11b) and the Health and Hospitals Fund ($10b) for capital investment. Also $5.9b over five years was committed to the *Education Revolution* package to improve educational outcomes and skills across the pre-school, school, vocational and university education systems. During the Global Financial Crisis the Australian government allocated $1.5b in the 2009-10 budget to a *Jobs and Training Compact* to support employment, education and training. In the 2010-11 budget the government allocated $661.2m for a new *Skills for Sustainable Growth* strategy

to boost workforce skills, including skills to respond to capacity constraints; a training system for the future (supporting participation in training); and foundation skills (measures to improve language, literacy and numeracy). In the 2011-12 budget the $3b *Building Australia's Workforce* package raised investment in VET skills and workforce participation. In the 2012-13 budget further funding under the *Building Australia's Workforce* programme supported the re-skilling of mature age workers. In the 2013-14 budget $9.8b was allocated over six years for a new National Plan for School Improvement to provide a more equitable funding model to schools and to improve educational outcomes.

In the 2010-11 budget the government announced funding of $2.2b in the National Health and Hospitals Network, a result of a COAG agreement for the states and territories to receive a greater share of GST revenue in return for federal administration of the health system. In the 2011-12 budget a further $1.8b was allocated to the Health and Hospitals Fund and $2.2b to mental health. Reforms in the 2012-13 budget included the first stage of a National Disability Insurance Scheme (NDIS) and increased funding for aged care facilities and services. In the 2013-14 budget $14.3b was allocated over seven years to implement *Disability Care Australia*. In the 2015-16 budget a new Child Care Subsidy (CCS) was announced, reforms to the Pharmaceutical Benefits Scheme (PBS) and funding of $400m for a Medical Research Future Fund. In the 2016-17 budget the government announced a new COAG agreement for funding public hospitals by an additional $2.9b over three years. In the 2017-18 the Turnbull government committed an additional $18.6b over the period to 2027 for a needs based funding model for schools (Gonski 2.0) and planned to raise the Medicare levy from 2% to 2.5% from July 1st 2019 to help fund the NDIS.

Taxation Reform

Major reforms of the taxation system were undertaken in *The New Tax System*, introduced in 2000:

- The introduction of a Goods and Services Tax (GST) of 10% on most goods and services.
- A reduction in marginal taxation rates (MTRs) so that the majority of Australians pay no more than 30% of their incomes in tax.
- Lower compliance costs of taxation through the simplified pay as you go (PAYG) system.
- The states and territories to receive all of the GST revenue to finance some of their spending.
- A reduction in the company tax rate from 36% to 30% and lower rates of capital gains tax.

Reform of the taxation system helps to improve resource allocation and the incentives to work, save and invest. In various budgets between 2000 and 2010 marginal tax rates (MTRs) were cut for all income earners and tax thresholds increased to take into account the effect of 'bracket creep', where taxpayers pay more tax as their incomes rise, forcing them into higher tax brackets.

Also plans to abolish the tax on superannuation for persons retiring at 60 were announced in the 2006-07 budget, as an incentive for increased saving and continued workforce participation by older Australians. A 'one off' $1,500 government co-contribution payment into the superannuation accounts of eligible low income earners was also announced in the 2007-08 budget.

In the 2008-09 budget the government announced the *Henry Review* of the tax system to make it simpler, fairer and more efficient. The government announced major reforms to the taxation of pensions and retirement incomes in the 2009-10 budget, and closed various loopholes to prevent tax avoidance. Some of the *Henry Review's* recommendations were implemented in the 2012-13 budget such as the tax free threshold being raised from $6,000 to $18,200 to encourage greater workforce participation by low income earners and welfare beneficiaries capable of working.

The Australian government announced an increase in the Superannuation Guarantee Levy (SGL) from 9% to 12% (between 2013 and 2019) in the 2013-14 budget. In the 2014 budget a *White Paper on the Reform of Australia's Tax System* was announced. In the 2015 and 2017 budgets measures were announced to reduce multinational tax avoidance through profit shifting and transfer pricing. In the 2016-17 budget a *Ten Year Enterprise Tax Plan* was announced to cut the company tax rate to 27.5% for small businesses; and proposed reforms to superannuation concessions for high income earners.

Trade and Industry Assistance

Reforms to industry assistance began with the 1988 and 1991 *Industry Statements*, which were designed to dismantle industry protection and lower the barriers to trade on a large scale:

- Tariffs on most imported goods and services are now less than 5% (since 1996).
- Quotas on passenger motor vehicle (PMV) and textile, clothing and footwear (TCF) industries were abolished. For PMV the tariff rate was reduced from 15% to 10% on January 1st 2005 and cut to 5% in 2010. For TCF products, tariffs were reduced by between 2.5% and 7.5% on January 1st 2005. Tariff rates for TCF products were reduced to an average 5% in 2010.
- Elimination of protection of the milk market; the ending of regulations for the sugar and rice markets; and a review of the monopoly in the wheat market after the AWB scandal in 2006.
- The *Trade Policy Statement* in 2011 reaffirmed the government's commitment to free trade through participation and negotiations in multilateral, regional and bilateral agreements.

Australia signed major bilateral trade agreements with Korea, Japan and China in 2014-15. Australia also continued negotiations in the Doha Round of the WTO and APEC to promote free trade. Australia also signed the Trans Pacific Partnership agreement in 2016 to strengthen regional trade. Industry policy has focused on increasing research and development (R & D), and Australia's position as a regional financial centre and destination for foreign investment. In the 2014-15 budget the Abbott government announced a new Entrepreneurs' Infrastructure Programme to help commercialise R & D. In the 2015-16 budget measures were announced to strengthen the foreign investment framework by enforcing rules on foreign ownership. In the 2016-17 budget the Turnbull government announced the $1.1b *National Innovation and Science Agenda*. In the 2017 budget the $20,000 tax deductability allowance for depreciation for small businesses was extended to June 30th 2018.

Resources and the Environment

Microeconomic reforms in the use of natural resources and the quality of the environment include land management, forestry and fishing policies. The Natural Heritage Trust (NHT) in 1997 provided funding for the conservation of land, vegetation, biodiversity, coasts and oceans. In 2004 the Murray-Darling Basin Commission to improve water quality, and the National Water Initiative (NWI) to create effective water markets in Australia were established. In the 2007-08 budget new policies were the National Plan for Water Security, reducing greenhouse gases and dealing with climate change.

The Rudd Labor government ratified the Kyoto Protocol in December 2007 and announced major new environmental policies in the 2008-09 and 2009-10 budgets. These included the introduction of an emissions trading scheme (the Carbon Pollution Reduction Scheme) by 2010-11 to reduce greenhouse gas emissions by 60% on 2000 levels, by 2050; a Renewable Energy Target of 20% of electricity generated by renewable sources by 2020; a ten year $12.9b national water policy called *Water for the Future*; and a $4.5b Clean Energy Initiative to develop renewable sources of energy in Australia. However the CPRS legislation was not passed because of a lack of political support in federal parliament. In the 2010-11 budget a new measure introduced by the government to reduce reliance on fossil fuels was the Renewable Energy Future Fund ($652m). This was part of the Clean Energy Initiative to support renewable energy projects including wind, solar and biomass.

In the 2012-13 budget the Gillard government introduced a $23 per tonne carbon tax on the 500 biggest emitters in industry, rising by 5% per year until Australia switched to an emissions trading scheme on July 1st 2015. The carbon tax was repealed by the Abbott government in July 2014 and replaced by a policy of Direct Action based on a $2.5b Emissions Reduction Fund. In August 2015 the Australian government announced an emissions reduction target of 26%-28% by 2030 based on 2005 levels and in December 2015 Australia signed the Paris Agreement under the UNFCCC which committed 195 developed and developing countries to cut greenhouse gas emissions. In 2017 the *Finkel Review* argued for the adoption of a Clean Energy Target to increase the use of clean energy.

Regulatory Reform

The reform of government regulation which restricts competition and reduces efficiency is an essential part of the microeconomic reform process. This includes deregulating certain industries, and reviewing the regulation process. The Review of Regulation is part of the brief of the Productivity Commission which conducts public enquiries into various industries and makes recommendations for policy reform to the Australian government. In the 2017-18 budget the Australian government allocated $300m to the National Partnership on Regulatory Reform to reduce small business regulation.

National COAG Reform Agenda

In 2006 the federal government announced an 'in principle' agreement with the states for new reforms in electricity, transport and infrastructure, and a reduction in regulations to increase efficiency and productivity. In the 2008-09 budget the federal government established a new COAG Reform Fund to channel finance to the states for expenditure in areas of COAG national reform. A new COAG framework agreement in 2009 provided $15.2b in funding for the states' delivery of services in health, education, workforce skills and public housing. Recent COAG agreements are the National Health and Hospitals Network (2010) and the National Disability Insurance Scheme (2012).

Performance of Governments

All aspects of government businesses have been reviewed by the Productivity Commission. The performance of PTEs is monitored to ensure that they are operating efficiently and there has been a reduction in state reliance on tied grants from the Commonwealth. There is increased transparency of the Council of Australian Governments' (COAG) activities. In 2007 COAG agreed to adopt national standards for trades skills, to assist labour mobility in response to the national skills shortage.

Financial Deregulation

The financial system was deregulated in 1983 to ensure that capital resources were allocated efficiently and there was increased competition in the financial system. The main reforms were the following:

- Removal of Reserve Bank controls over interest rates and domestic bank lending.
- Granting of bank licences to 16 foreign banks to increase competition in the domestic market.
- The exchange rate was floated in December 1983, so that market forces determined its value according to economic fundamentals in Australia such as the balance of payments outcome.
- The use of open market operations by the Reserve Bank to conduct monetary policy.

The *Wallis Inquiry* in 1997 led to further deregulation of the banking industry by allowing more competition, with the entry of mortgage originators into the mortgage market. The prudential supervision of the Australian financial system was reformed in 1998 with the formation of APRA, ASIC and the Council of Financial Regulators (APRA, ASIC, the Reserve Bank and Treasury). In 2013 the *Murray Inquiry* into the financial system commenced and resulted in the implementation of higher capital adequacy standards on banks to reduce their exposure to future financial shocks.

Social Security and Welfare

Major changes to the social security and welfare systems in 2000 were based on the *McClure Report's* recommendations, such as tax cuts and higher social security payments for low income earners in *The New Tax System*, to offset the price effects of the GST and to encourage greater workforce participation. This followed the application of the principle of 'mutual obligation' to the receipt of income support, and the targeting of income support payments to disadvantaged groups. The Rudd government's *Working Families Support Package* in the 2008-09 budget helped working families with the rising cost of living. In the 2009-10 budget major reforms were undertaken to pensions and family payments and a Paid Parental Leave scheme was introduced in 2011. In the 2011-12 budget, the *Building Australia's Future Workforce* package included welfare reforms to increase the participation of low income earners in the workforce. The Abbott government in the 2014-15 budget introduced new measures to reform the transfer payments system by tightening eligibility rules. In the 2016-17 budget the government committed $40b over four years to the *Jobs For Families* Child Care package.

THE COSTS AND BENEFITS OF MICROECONOMIC REFORM

Microeconomic reform involves many difficult areas for policy makers, including the costs of structural adjustment for firms and workers affected by the reforms; community perceptions about equity in income distribution; and gaining political support for the microeconomic reform process itself.

At the **microeconomic level**, some of the obvious benefits of greater competition and a more 'consumer driven' society will result in technical, allocative and dynamic efficiency gains, as firms and workers raise productivity levels and use their competitive advantage to export to the global market. The non traded goods sector (e.g. government infrastructure) should also improve its efficiency and assist the traded goods sector (i.e. export and import competing industries) to become more internationally competitive.

At the **macroeconomic level**, some of the benefits of successful microeconomic reforms include:

- Raising national productivity by improving the productivity and efficiency of labour and capital;
- Lowering inflation outcomes through more competitive product and factor markets;
- Helping to reduce the current account deficit by increasing exports and competitiveness;
- Achieving a higher sustainable rate of economic growth through rising levels of productivity;
- Helping to reduce unemployment through job creation in expanding industries;
- Helping to overcome structural problems such as low national saving; and
- Achieving higher living standards through rising real incomes in the community.

The expected gains from microeconomic reform must be balanced against the costs of adjustment to the structural changes that they involve. Changes in work and management practices may cause dislocation, especially if the reforms are implemented too quickly and without adequate consultation. The distributional impact of microeconomic reforms will also vary from industry to industry. Monopoly suppliers will tend to lose profits, but consumers will gain from lower prices. However in some cases such as the PTEs providing utilities such as gas, water and electricity, prices may rise as subsidies are removed and prices reflect the marginal costs of production (this is known as allocative efficiency).

Although employment will tend to rise in aggregate in the long run, some workers will become structurally unemployed as their industry contracts due to greater competition. Improvements in efficiency caused by higher labour and capital productivity may also lead to 'labour shedding' as workers with redundant or low skills are no longer needed. Structural unemployment will rise (such as the decision by Ford, Holden and Toyota to cease car manufacturing by 2016-17 is estimated to lead to 50,000 job losses), as will unemployment in the public sector, where the most wide reaching reforms have been implemented, including the loss of 27,000 jobs in the federal public service, due to budget cuts and the outsourcing of work to the private sector. The continuing decline in manufacturing employment (now only 9% of the total workforce) represents a major structural adjustment for the workforce over time, especially for male blue collar full time workers. However offsetting this, is the creation of more jobs in the expanding services sector of the economy, although many of these may be part time and casual jobs.

The costs of re-training and the relocation of displaced workers due to structural change caused by microeconomic reform policies must be paid for by governments from the expected dividends (in the form of higher tax collections) from microeconomic reforms. The federal government may incur higher expenditure on Job Search Allowances and labour market adjustment programmes as a result of rising unemployment rates of workers from state or territory PTEs and industries affected by tariff reforms such as the steel, PMV and TCF industries. Microeconomic reform may therefore lead to cost shifting from state governments to the federal government because the Australian government bears the cost and responsibility for displaced workers. Other implications of microeconomic reform include how the benefits of the reforms are shared between the federal, state and territory governments, and consumers, workers and producers. The greatest improvements in productivity, efficiency and profitability have come from PTEs, whose dividend payments to government owners have tended to increase over time.

REVIEW QUESTIONS

MICROECONOMIC POLICY

1. Discuss the rationale for microeconomic policies including shifts in aggregate supply and improvements in efficiency. Refer to Figure 16.1 in your answer.
2. Explain how labour, capital and multifactor productivity are measured. How does microeconomic policy attempt to raise the level of productivity in Australia?
3. Refer to Figure 16.2 and the text and compare Australia's labour productivity performance with the United States and the OECD countries between the 1960s and 2000s.
4. Discuss the distinguishing features of microeconomic reform policies.
5. What types of market and government induced structural changes have taken place recently in the Australian economy?
6. How can microeconomic policies assist in improving Australia's macroeconomic performance?
7. Using examples, explain the main difference between product and factor markets.
8. What are the main elements of the national competition policy (refer to Table 16.2)?
9. How can reforms to trade and industry policies assist in raising economic efficiency and exports?
10. How has *The New Tax System* affected the operation of product markets?
11. How and why have microeconomic reforms been implemented in the labour market?
12. How and why was the financial system deregulated in 1983? What have been the effects of this policy on Australia's capital markets?
13. What are the disadvantages of economic regulation by governments?
14. Which Australian markets have been deregulated?
15. What have been the effects of the deregulation of some Australian factor and product markets?
16. How and why have public trading enterprises been reformed?
17. Why is the reform of infrastructure important to Australia's economic performance?
18. Discuss the costs and benefits of microeconomic reform.
19. Define the following terms and add them to a glossary:

aggregate supply	enterprise bargaining	product markets
capital deepening	factor markets	public trading enterprises
capital productivity	financial deregulation	regulation
capital widening	industry policy	regulatory failure
commercialisation	labour market reform	regulatory reform
competition policy	labour productivity	rent seeking
corporatisation	market failure	resource allocation
deregulation	microeconomic policy	single factor productivity
economic infrastructure	multifactor productivity	structural change
efficiency	privatisation	taxation reform

CHAPTER 16: SHORT ANSWER QUESTIONS

The Increase in Australian Productivity in the 1990s

"The increase in productivity growth rates seen in the 1990s was the payoff from the significant microeconomic policy reforms of that decade and in the 1980s. These included removing industry protection and opening up the economy to overseas trade; reducing controls over labour, capital and product markets; reforms to improve the efficiency of markets providing essential services such as electricity; and taxation reforms. Reforms were also made to macroeconomic policy settings including letting market forces determine the exchange rate, introducing the independent setting of interest rates and placing fiscal policy in a medium term framework."

Source: Commonwealth of Australia (2014), *Budget Strategy and Outlook 2014-15*.

Refer to the Extract above on the increase in productivity in the 1990s in Australia and answer the questions below. Marks

1. Define the term *productivity*. (1)

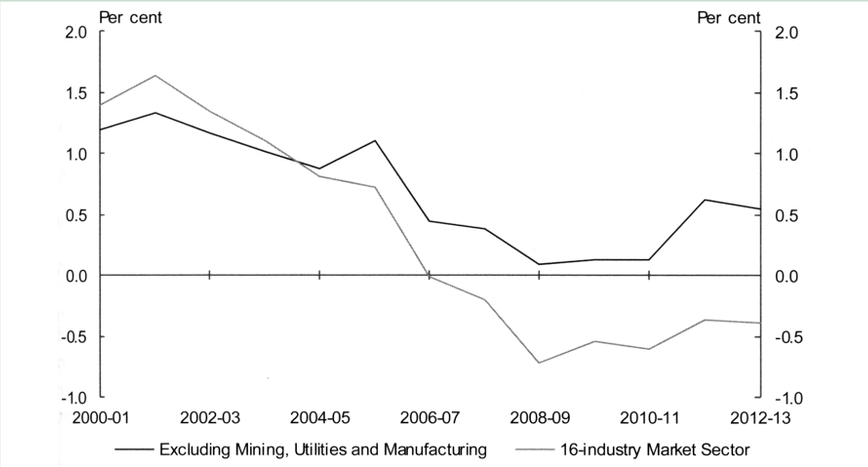
2. Explain what is meant by microeconomic reform. (2)

3. Explain THREE separate microeconomic reform policies in Australia. (3)

4. Analyse ONE benefit and ONE cost of a specific microeconomic reform policy. (4)

CHAPTER FOCUS ON MICROECONOMIC POLICY

Multifactor Productivity Growth 2000-2013



Source: Commonwealth of Australia (2014), *Budget Strategy and Outlook 2014-15*.

"Australia's growth in multifactor productivity (MFP) has been extremely weak on average over the last decade. In contrast to labour productivity MFP is a more comprehensive measure of productivity as it captures how efficiently producers use both the key inputs of labour and capital.

The slowdown in productivity growth since the early 2000s has partly reflected the high investment activity in the resources and utilities sectors. This investment of capital and labour has long lead times before increased output occurs. Part of the slowdown may also reflect the fading impact of past microeconomic reforms and that there have been fewer policy reforms since the early 2000s."

Source: Commonwealth of Australia (2014), *Budget Strategy and Outlook 2014-15*.

Explain the role of government microeconomic reform policies in raising productivity to promote sustainable economic growth and higher living standards in Australia.

CHAPTER 16: EXTENDED RESPONSE QUESTION

Discuss the main objectives of microeconomic policies and explain how they can contribute to improved macroeconomic performance in Australia.

CHAPTER SUMMARY

MICROECONOMIC POLICY

1. The rationale for microeconomic policies or microeconomic reforms is based on increasing aggregate supply and expanding the economy's productive capacity. The main objective of microeconomic policy is to raise economic efficiency through improvements in productivity.

2. Productivity is a measure of the output produced from a given level of inputs over time. Measurements of productivity include labour productivity, capital productivity and multifactor productivity. Australia has generally been able to raise its level of productivity in the 1990s and 2000s due to improvements in allocative efficiency in markets. However capacity constraints between 2005 and 2008 reduced labour productivity growth to around 1.4% compared to over 2% in the 1990s.

3. Microeconomic policies are closely linked with the promotion of structural change in industry to achieve improvements in productivity, efficiency and international competitiveness.

4. Some of the key microeconomic reform measures undertaken in Australia since 1983 include:

   - The deregulation of financial markets and the floating of the exchange rate in 1983;
   - The deregulation of markets such as aviation and telecommunications, and the privatisation of some PTEs such as the Commonwealth Bank of Australia, Qantas, Telstra and Medibank;
   - Reductions in the levels of industry assistance in the 1988 and 1991 Industry Statements;
   - The introduction of a national competition policy in 1995;
   - Improvements in the efficiency of public trading enterprises (PTEs);
   - Improvements in the productivity of labour and capital through reforms to capital and labour markets, including the use of enterprise bargaining in wage negotiations; and
   - Reforms to the taxation system through the introduction of *The New Tax System* in 2000.

5. Microeconomic reforms have taken place in both product markets (where final goods and services are sold) and factor markets (where the factors of production are bought and sold).

6. The regulation by government of economic activity and markets has been reduced as part of the microeconomic reform process. A number of key markets (such as finance, labour, telecommunications and air transport) have been deregulated (through the removal of government restrictions on markets) to increase the level of competition and efficiency.

7. The policies of privatisation, corporatisation, commercialisation and competitive neutrality have been used to improve the efficiency of public trading enterprises (PTEs).

8. Privatisation refers to the full or partial sale of public assets, or public service provision rights to the private sector. Former PTEs that have been fully privatised include the CBA, Qantas and Telstra.

9. Corporatisation refers to the creation of more efficient management structures for public trading enterprises such as the adoption of clear managerial objectives and managerial accountability.

10. Commercialisation refers to the use of incentives such as rates of return or dividends paid by public trading enterprises to their government owners to improve efficiency, profitability and accountability.

11. Competitive neutrality refers to the policy of subjecting public trading enterprises to the same commercial environment as their private sector competitors, in terms of paying taxes and commercial interest rates on debt borrowings. This creates a so called 'level playing field' in markets.

Chapter 17

Labour Market Policy

THE ROLE OF THE NATIONAL AND STATE INDUSTRIAL RELATIONS SYSTEMS

Industrial relations (or workplace relations) refers to the system used to determine wages and working conditions between employers and employees in Australia. Historically Australia has used a centralised system of federal and state industrial commissions or tribunals to determine award wages and conditions of employment for employees in workplaces. Awards set out the legal minimum wages and conditions of employment for employees according to their occupation, industry or the nature of work they perform. There are both federal and state awards, with the Fair Work Commission administering federal awards and state industrial commissions such as NSW Industrial Relations and the NSW Industrial Relations Commission administering state awards in NSW.

The Australian government plays an important role in determining the legislation such as the *Fair Work Act 2009* that underpins the national industrial relations system. In terms of economic policy its influence over national industrial relations is based on achieving the following objectives:

- Controlling the wage demands and expectations of trade unions, in the hope of achieving wage moderation or restraint, and low inflation outcomes. This also helps to contain labour costs for employers in the private and public sectors and promotes efficiency and competitiveness.
- Promoting comparative wage justice through regular adjustments to the National Minimum Wage and the application of the ten uniform National Employment Standards (NES) to protect the incomes and working conditions of all employees in Australia.
- As a mechanism for solving industrial disputes through the use of grievance procedures and mediation as well as the conciliation and arbitration powers of the Fair Work Commission.
- Promoting reform of the labour market through the use of common law contracts, collective enterprise agreements and Modern Awards to promote workplace flexibility and productivity.

The National Industrial Relations System

From January 1st 2010 under the *Fair Work Act 2009* passed by the Rudd government, the industrial relations powers of state governments in NSW, Queensland, South Australia and Tasmania were ceded to the Commonwealth government to create a national workplace relations system. Prior to January 1st 2010 the governments of Victoria, the Northern Territory and the Australian Capital Territory were already under the national workplace relations system created by the *Workplace Relations Amendment Act 2006* (WorkChoices) passed by the Howard government. Both the Howard and Rudd governments used the Commonwealth's power under the Australian constitution to regulate business corporations or 'constitutional corporations' (that are covered by a federal award), for the purposes of setting wages and conditions of employment. Employers and employees in the national system now have the same workplace rights and obligations regardless of the state they work in. These include the following:

- A set of ten National Employment Standards (NES)
- Modern Awards that apply nationally to specific industries and occupations
- A National Minimum Wage administered by the Fair Work Commission
- Enterprise bargaining arrangements for employees and employers negotiating collective agreements
- Protection of employees from unfair dismissal

The State Industrial Relations System

The state industrial relations system consists of state industrial commissions (e.g. the NSW Industrial Relations Commission) and tribunals that administer state awards. These state awards apply to employees who are not in the national industrial relations system since their wages and working conditions are determined by state industrial commissions or tribunals. The employees not covered by the national industrial relations system are mainly state government and local government employees:

- In Western Australia, those employees in state public sector and local government employment and employees in non constitutional corporations in the private sector (e.g. sole traders and partnerships).
- In NSW, Queensland and South Australia, those employees in state public sector and local government employment.
- In Tasmania those employees in state public sector employment.

Examples of employees in the state industrial relations system include public sector teachers, nurses, public servants, the police force, fire brigade, ambulance service and local government workers. However national entitlements to matters such as unpaid parental leave, notice of termination and unlawful termination of employment extend to employees who remain covered by a state industrial relations system. In NSW from January 1st 2010 private sector employers and employees previously covered by the NSW award system (mainly sole traders and partnerships) moved into the national workplace relations system administered by the federal government.

NSW Industrial Relations is the main industrial relations body in NSW. The NSW government passed the *Industrial Relations Act 1996* which underpins the legal framework for industrial relations matters in NSW, specifically the administration of state awards and the State Wage Case.

All existing state and federal awards were streamlined to around 122 Modern Awards under the *Fair Work Act 2009*. If employees in the private sector (such as sole traders and partnerships) were covered by a NSW state award on December 31st 2009, these awards were preserved as 'state reference awards' for a transitional period of 12 months to December 31st 2010. From January 1st 2011 state reference awards ceased operating and the appropriate Modern Award must be used for employees in the private sector in NSW. Common workplaces where this system of Modern Awards applies include the building industry, cafes, child care centres, farms, manufacturing, medical practices, nursing homes, private hospitals, restaurants, retail shops, the transport industry and warehouses.

EVOLUTION OF THE NATIONAL INDUSTRIAL RELATIONS SYSTEM

Industrial relations reform was a key feature of the Howard government's attempt to increase the pace of microeconomic reform in the labour market. The Howard government deregulated and decentralised workplace relations in 1996 by passing the *Workplace Relations Act 1996*, with its features listed below.

The Workplace Relations Act 1996

- The simplification of the award system to cover only 20 allowable matters in the safety net system;
- The introduction of new individual Australian Workplace Agreements (AWAs) as an alternative type of workplace agreement to collective trade union and employer negotiated Certified Agreements;
- The creation of the Office of Employment Advocate (OEA) to administer the operation of AWAs;
- The promotion of freedom of choice in the use of bargaining agents, and the prohibition of 'closed shops' in workplaces, and 'preference for unionists' clauses in employment contracts;
- Restriction of the role of the AIRC in the industrial relations system, to the certification of union Certified Agreements and the administration of the award safety net system; and

- Simplification of the Unfair Dismissals provisions of the previous Keating Labor government's *Industrial Relations Reform Act 1993*.

The *Workplace Relations Act 1996* (WRA) divided workers into **three formal streams** for the purpose of wage adjustments and changes to work or employment conditions:

1. The industrial award system or **Award Safety Net** covered workers unable to negotiate a wage increase under an individual or collective enterprise agreement. The award system provided direct coverage for about one third or approximately three million employees in the Australian workforce.
2. **Certified Agreements** were usually in force for three years, and covered workers who were represented by a trade union at the enterprise or industry level for wage increases. Certified Agreements provided coverage for another third or three million employees in the Australian workforce.
3. **Australian Workplace Agreements** (AWAs) covered wage increases for workers who negotiated on an individual basis, without trade union involvement, but who had the choice of bargaining agents in negotiations. In 2007 there were about 300,000 workers covered by AWAs.

A fourth informal stream (of about three million workers) included employees, the self employed, contractors, managers and executives on over award payments or common law contracts.

The Workplace Relations Amendment Act 2006 (WorkChoices)

The Howard government's WorkChoices legislation came into effect in March 2006, after it was passed by the House of Representatives and the Senate. WorkChoices represented the most radical change to industrial relations structures in Australia, since the advent of the award system of minimum wages in the early 1900s with the Harvester Case. **Table 17.1** lists the main changes to Australian industrial relations under WorkChoices. The federal government further deregulated the labour market by moving employees away from a reliance on industrial awards and Union Collective Agreements, to individual workplace agreements (i.e. Australian Workplace Agreements) and Non Union Collective Agreements.

This strategy was designed to give employers more flexibility in 'hiring and firing' labour, and containing the cost of labour in business production activities. It was argued that this would help businesses to be more profitable and internationally competitive. For employees, it was argued that WorkChoices offered more flexibility in their working arrangements and the opportunity to earn higher wages by raising their levels of productivity in the workplace, particularly through education and training.

The Howard government believed the potential gains from the more flexible workplace arrangements created by WorkChoices, would be higher employment growth and labour productivity, and less industrial disputation. However the potential benefits for the Australian economy would take years to realise, and critics of the WorkChoices reforms such as trade unions, the Australian Labor Party, various state governments and academics, argued that the changes would lead to a greater dispersion of wages and earnings between high and low paid workers, and an erosion of award conditions such as penalty and overtime rates and leave entitlements.

A Unified National Industrial Relations System

In introducing the WorkChoices legislation the Howard government used its power under the Australian constitution to regulate business corporations or 'constitutional corporations' (that are covered by a federal award), for the purposes of setting wages and conditions of employment. The implication was that by legislating to create a unified national industrial relations system, the Howard government had the power to determine wage setting arrangements for up to 85% or 8.5m Australian workers. The various state industrial relations systems would be confined to coverage of workers who were state government employees, or those who worked for unincorporated organisations such as small businesses. The state governments launched an unsuccessful High Court challenge in May 2006, to the federal government's use of the 'corporations power' in the constitution to regulate national industrial relations.

Table 17.1 : Changes to Industrial Relations under the WorkChoices Legislation

1. Creation of a national industrial relations system based on the WorkChoices legislation enacted by federal parliament in 2006 where the government had a majority in both Houses.
2. The simplification of minimum industrial award conditions through a reduction in the allowable matters of the Award Safety Net from 20 to 16.
3. The Australian Fair Pay Commission (AFPC) was established to set minimum wages and working conditions. The AFPC replaced the Australian Industrial Relations Commission (AIRC) in handing down the annual Safety Net Review wage case for low paid workers.
4. The Australian Fair Pay and Conditions Standard (AFPCS) set out only five minimum conditions of employment for workplace agreements: minimum award wages, annual leave, parental leave, personal leave and maximum ordinary hours of work of 38 hours.
5. There was a planned movement away from employee coverage under Union and Non Union Collective Agreements to individually negotiated Australian Workplace Agreements (AWAs).
6. There were changes to Certified and Australian Workplace Agreements which no longer had to pass the No Disadvantage Test and were in operation for up to five years.
7. There was a reduced role for the AIRC in the industrial relations system, confined to settling some industrial disputes, monitoring some awards, and enforcing new labour laws on trade unions.
8. Unfair dismissals provisions were not applicable to businesses with up to 100 employees.

The Australian Fair Pay Commission

The Australian Fair Pay Commission (AFPC), chaired by the academic economist Professor Ian Harper, was established under the WorkChoices legislation to replace the AIRC in setting minimum award wages at the annual Safety Net Review wage case. The AFPC had three main functions:

1. Adjusting the federal minimum adult wage according to inflation and economic conditions;
2. Adjusting award rates of pay and simplifying the award system; and
3. Setting the Australian Fair Pay and Conditions Standard (AFPCS).

The Office of Employment Advocate

The Office of Employment Advocate (OEA) was established under the *Workplace Relations Act 1996* to oversee the administration of Australian Workplace Agreements (AWAs). Under WorkChoices it had enhanced powers in administering the three main types of workplace agreements:

1. Australian Workplace Agreements (i.e. individually negotiated agreements).
2. Union Collective Agreements (i.e. trade union negotiated collective agreements with employers).
3. Employee Collective Agreements (i.e. non union negotiated collective agreements with employers).

One of the key changes under WorkChoices was that none of these agreements had to pass the previous No Disadvantage Test and instead the AFPCS was used as a minimum benchmark or standard.

The Australian Industrial Relations Commission

Under WorkChoices, the AIRC had a much reduced role, with its former responsibility for overseeing and vetting Certified union agreements transferred to the OEA, and administration of the award safety net system was transferred to the AFPC. The AIRC retained some responsibilities for dispute resolution, overseeing the award simplification process, and enforcing labour law on trade unions.

The Workplace Relations Amendment (A Stronger Safety Net) Act 2007

In June 2007 the Howard government enacted another piece of industrial relations legislation called the *Workplace Relations Amendment (A Stronger Safety Net) Act 2007*, which introduced a number of changes to the previous *Workplace Relations Amendment* (WorkChoices) *Act 2006*. These changes included the establishment of a Fairness Test for workplace agreements, and two new statutory agencies called the Workplace Authority and the Workplace Ombudsman. These changes were largely in response to community concerns over the erosion of minimum employment conditions under WorkChoices.

The Fairness Test

In response to research findings by academics and public concern that wages and working conditions were being 'eroded' by employers in AWAs and other agreements under the WorkChoices legislation, a new Fairness Test was introduced in 2007 to ensure that employees received fair compensation if their AWA or collective agreement removed or modified protected award conditions such as penalty rates and overtime loadings. The Fairness Test only applied to agreements lodged with the Workplace Authority on or after May 7th 2007. The Fairness Test also only applied to AWAs for workers earning less than $75,000 per year. If an agreement failed to pass the Fairness Test, the Workplace Authority could refuse to register the agreement, until employees were compensated by the employer for the 'protected conditions' which had been modified by the agreement or removed from the agreement.

The Workplace Authority

The Workplace Authority replaced the Office of Employment Advocate in administering workplace agreements such as AWAs, Union Collective Agreements and Employee Collective Agreements. The role of the Workplace Authority was to apply the Fairness Test to the main types of agreements under WorkChoices such as AWAs and collective agreements, and to ensure that employees received fair compensation if their agreement removed or changed their protected conditions. Therefore the Workplace Authority, in administering the Fairness Test, took into account two main considerations:

- Monetary and non monetary compensation; and
- Work obligations of the employee(s).

The Workplace Authority could also consider the personal circumstances of the employee(s), including their family responsibilities. In exceptional circumstances the Workplace Authority could also consider other factors, such as the industry, location and economic circumstances of the employee(s).

The Workplace Ombudsman

The role of the Workplace Ombudsman (which replaced the previous Office of Workplace Services) was to enforce compliance by employers with minimum pay rates and conditions of employment, and to fine or prosecute employers for breaches of minimum workplace rights and rules which were guaranteed by federal workplace legislation. These minimum conditions included the following:

- Minimum pay rates;
- Minimum leave entitlements;
- Maximum working hours; and
- The right to not work on public holidays.

In addition to enforcing these minimum conditions, the Workplace Ombudsman could also investigate complaints about breaches of other workplace rights such as the coercion of employees by employers to sign AWAs, unlawful termination of employment (e.g. on the basis of race, colour, sex or marital status), or the freedom of association of employees at work to join a trade union or an employer association.

Workplace Relations Amendment (Transition to Fairness) Act 2008

The Rudd Labor government introduced the *Workplace Relations Amendment (Transition to Fairness) Act 2008* on March 28th 2008. It was the first stage of a 'Forward with Fairness' policy, to repeal unpopular features of the WorkChoices legislation, and to move to a new industrial relations policy in 2010. This involved shifting the focus to collective bargaining, prohibiting individual employment contracts such as AWAs, and strengthening the safety net of minimum wages and employment conditions. Details of the five major changes made under the *Transition Act* included the following:

1. Prevention of the making of new Australian Workplace Agreements (AWAs).
2. The prevention of the variation of AWAs except if the agreement did not pass the Fairness Test.
3. The creation of new individual workplace agreements known as Individual Transitional Employment Agreements (ITEAs), to be used in limited circumstances but only during the transition period.
4. The introduction of a new No Disadvantage Test based on the AFPCS, which applied to all workplace agreements made after the commencement of the *Transition Act*.
5. Unfair dismissal laws were reinstated with the commencement of the new system in 2010.

The Fair Work Act 2009

Parliament passed the *Fair Work Act 2009* on March 20th 2009. The legislation had five major elements of the Rudd government's new industrial relations system which operated from January 1st 2010:

(i) A legislated safety net of ten National Employment Standards (NES) which replaced the AFPCS:

1. Maximum weekly hours of work
2. Request for flexible working arrangements
3. Parental leave and related entitlements
4. Annual leave
5. Personal/carer's and compassionate leave
6. Community service leave
7. Long service leave
8. Public holidays
9. Notice of termination and redundancy pay
10. A Fair Work Information Statement

(ii) New Modern Awards which contained the NES, and may include terms that are specific to certain industries or occupations. These terms included minimum wages, types of employment, work arrangements, overtime and penalty rates of pay, allowances, leave, superannuation, ordinary hours of work and dispute settlement procedures. It was envisaged that Modern Awards would streamline and simplify thousands of awards that existed in the federal award system.

(iii) Revised enterprise bargaining arrangements included single enterprise, multi-enterprise and greenfields agreements, approved by Fair Work Australia and must pass a No Disadvantage Test.

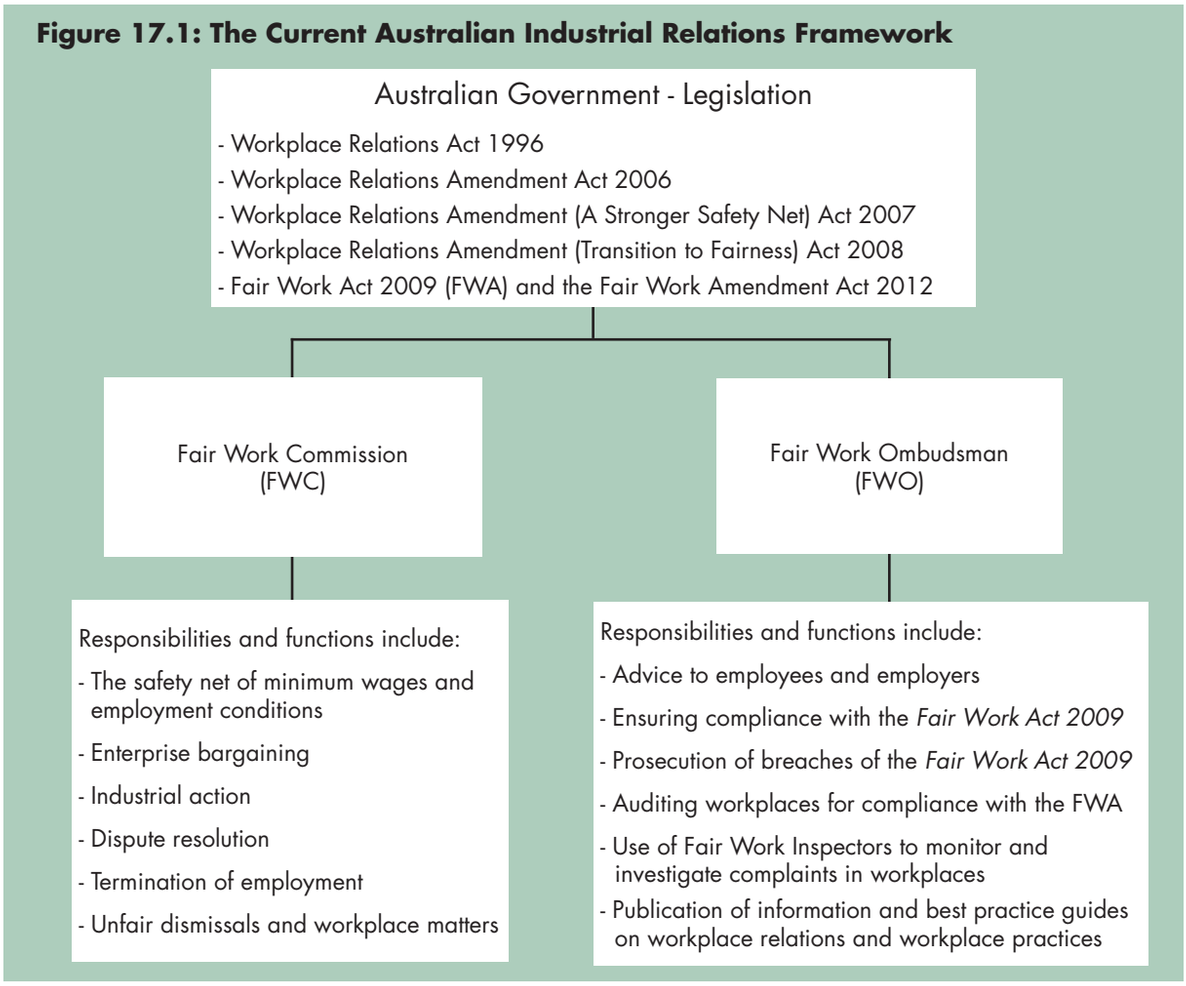
(iv) Streamlined protections dealt with workplace and industrial rights, including protection against discrimination and unfair dismissal in the workplace.

(v) Two new organisations known as Fair Work Australia and the Fair Work Ombudsman replaced previous agencies (the AIRC, AFPC, the Workplace Authority and the Workplace Ombudsman) to regulate the industrial relations system. Fair Work Australia had powers over the safety net of minimum wages and employment conditions, enterprise bargaining and dispute resolution. The Fair Work Ombudsman ensured compliance with the *Fair Work Act 2009* (FWA) by employers.

The Fair Work Amendment Act 2012

The *Fair Work Amendment Act 2012* took effect on July 1st 2013 and gave new functions to the Fair Work Commission, the new name for Australia's national workplace relations tribunal. The Commission was given the express function of promoting co-operative and productive workplace relations and preventing industrial disputes through closer consultation between employers and employees. **Figure 17.1** shows the structure of the current national industrial relations framework in Australia.

Figure 17.1: The Current Australian Industrial Relations Framework



REVIEW QUESTIONS

THE ROLE OF THE NATIONAL AND STATE INDUSTRIAL RELATIONS SYSTEMS

1. What is meant by industrial relations? What are the economic objectives of the Australian government in determining the legal framework for the national industrial relations system?
2. Discuss the main features of the national industrial relations system under the *Fair Work Act 2009*.
3. Discuss the main features of the state industrial relations system.
4. Explain how the *Workplace Relations Act 1996* altered the Australian industrial relations system.
5. List the main changes to Australian industrial relations under the WorkChoices legislation in 2006 and the *Workplace Relations Amendment Act 2007*.
6. List the main changes to Australian industrial relations under the *Transition Act 2008*.
7. List the main changes to Australian industrial relations under the *Fair Work Act 2009*. How did these changes alter the WorkChoices legislation?

The National Employment Standards

Under the *Fair Work Act 2009* the safety net for Australian employees is made up of three parts:

1. The National Employment Standards (NES);
2. Annual adjustments to the National Minimum Wage; and
3. The system of 122 Modern Awards (industry and occupation) commencing on January 1st 2010.

Under the safety net system administered by the Fair Work Commission, employees are protected by legislated minimum standards for pay and conditions that cannot be 'stripped away' by employers. Previously under WorkChoices the Australian Fair Pay and Conditions Standard (AFPCS) contained only five minimum conditions, and the 20 allowable matters previously dealt with in awards were reduced to 16. Rules on long service leave, notice of termination, jury service and superannuation were removed.

The ten National Employment Standards took effect from January 1st 2010 and are listed in **Table 17.2**. They are more comprehensive than the five minimum conditions contained in the former AFPCS and provide a minimum safety net for employees on awards as well as employees on common law contracts.

Table 17.2: The Ten National Employment Standards of the Safety Net

1. Maximum weekly hours of work: 38 hours for full time employees plus 'reasonable' additional hours.
2. Requests for flexible working arrangements: requests by parents with pre-school aged children but the employer can refuse the request on 'reasonable business grounds'.
3. Parental leave and related entitlements: parents are entitled to 12 months unpaid parental leave.
4. Annual leave: 4 weeks paid annual leave is guaranteed to full time employees.
5. Personal/carer's (includes sick leave) and compassionate leave: up to 10 days paid personal leave and two days unpaid carer's or compassionate leave for full time employees.
6. Community service leave: unpaid leave including jury duty, community and emergency services.
7. Long service leave: as provided for in the relevant award covering an employee.
8. Public holidays: provides for paid public holidays, with an employer able to make a 'reasonable request' for an employee to work on a public holiday, and the employee may refuse on 'reasonable grounds'.
9. Notice of termination and redundancy pay: employees must be given written notice of termination (up to 4 weeks notice), and redundancy pay (up to 16 weeks pay) based on length of service.
10. Fair work information statement: this must be given to all new employees.

The National Minimum Wage

Under the *Fair Work Act 2009* the National Minimum Wage (NMW) acts as a safety net for employees in the national workplace relations system by providing minimum rates of pay for employees not covered by an award or a workplace agreement. The National Minimum Wage is adjusted by the Minimum Wage Panel of the Fair Work Commission at its annual Wage Review in June each year. Its objective is to establish and maintain a safety net of fair minimum wages, but also take into account the state of the economy and productivity. **Table 17.3** lists the adjustments to the NMW between 2011 and 2017.

At the first annual wage review in June 2010 Fair Work Australia increased Modern Award minimum weekly wages by $26.40 per week. The National Minimum Wage rose from $543.78 per week (or $14.31 per hour) to $569.90 per week (or $15 per hour), and was equivalent to a 4.8% increase in Modern Awards. The Minimum Wage Panel argued that low paid employees were entitled to a large wage increase since no increase was given in 2009 by the AFPC due to the Global Financial Crisis and inflation had risen by 5.4% between 2008 and 2010, leading to a higher cost of living.

Table 17.3: Annual Wage Review Decisions by the Fair Work Commission 2011-17

Date of Decision	*Weekly Wage Increase*	*Percentage Wage Increase*	*NMW*
June 2011	$19.40 per week	3.4%	$589.30
June 2012	$17.10 per week	2.9%	$606.40
June 2013	$15.80 per week	2.6%	$622.20
June 2014	$16.87 per week	3.0%	$640.90
June 2015	$16.00 per week	2.5%	$656.90
June 2016	$15.80 per week	2.4%	$672.70
June 2017	$22.20 per week	3.3%	$694.90

Source: Fair Work Commission (2017), *www.fairwork.gov.au*

In June 2011 the National Minimum Wage was increased by $19.40, from $569.90 to $589.30 per week. This was a 3.4% annual wage increase, taking the minimum hourly rate of pay from $15 to $15.51. In June 2012, Fair Work Australia increased award wages by 2.9% with the National Minimum Wage rising to $15.96 per hour or $17.10 per week, taking it from $589.30 to $606.40. In June 2013 the Fair Work Commission increased award wages by 2.6% (in line with inflation) and the National Minimum Wage by $15.80 per week, taking its from $606.40 to $622.20.

In June 2014 the NMW was increased by 3%, in line with inflation, to $640.90 or $16.87 per week and similarly in June 2015 the NMW was increased by $16 per week to $656.90 which represented a 2.5% wage increase. In June 2016 the NMW was increased by $15.80 per week to $672.70 representing a 2.4% increase. In June 2017 a large increase of 3.3% by the Fair Work Commission in the NMW by $22.20 per week ($18.29 per hour) lifted the NMW to $694.90. This increase was based on helping the lowest paid to increase their income and to reduce the incidence of poverty among the low paid.

Modern Awards

Industrial awards provide a set of minimum wages and working conditions for employees specific to their industry, job classification, occupation or the type of work they perform. Under the *Transition to Fairness Act 2008* the AIRC was given the task of Awards Modernisation. This led to a reduction in the number of federal awards from the 4,000 that existed in 2006, to about 122 in 2010.

Modern Awards contain around 20 terms, ten of which are also covered in the NES. The main terms contained in Modern Awards are listed in **Table 17.4**. They include minimum wages, types of employment, overtime and penalty rates of pay, leave entitlements, allowances and superannuation. There are also some other important features of Modern Awards:

1. Modern Awards cover employees who are already covered by awards but will not cover employees earning over $100,00 per year.
2. Awards can contain a **flexibility clause** which means that employers and employees can negotiate changes in workplace arrangements to meet their individual needs and enterprise conditions.

Table 17.4: The Contents of Modern Awards

1. Minimum wages, minimum award classification rates of pay and casual loadings
2. Types of employment such as full time, part time, casual and shift time
3. Arrangements for when work is performed
4. Overtime rates of pay
5. Penalty rates of pay
6. Annual wage or salary arrangements
7. Allowances and leave related matters such as leave loadings and entitlements
8. Superannuation entitlements and conditions
9. Procedures for consultation, representation and dispute settlement
10. Outworker terms, certain industry specific redundancy schemes, calculation of ordinary hours, pieceworker provisions and variations of allowances

Enterprise Agreements under the Fair Work Act 2009

Under the *Fair Work Act 2009,* and from July 1st 2009, Fair Work Australia (now the Fair Work Commission) had the role of approving collective agreements which are known as **enterprise agreements**. These agreements are made between groups of employees and firms or groups of firms. There is no longer any distinction between union and non union collective agreements. Also from January 1st 2010 there is no legislative provision for making individual agreements such as AWAs. The focus of the *Fair Work Act 2009* is on the regulation of collective bargaining and the making of enterprise agreements, with an emphasis on protecting the rights of employees and improving their bargaining power in negotiations.

An enterprise agreement is made between one or more employers and two or more employees or one or more trade unions representing a group of employees. Enterprise agreements are made to suit the specific needs of particular enterprises and can offer employees above the minimum rates of pay and employment conditions covered in Modern Awards. They continue to operate after their nominal expiry date until they are replaced or terminated by application to the Fair Work Commission. Enterprise agreements can include a broad range of permitted matters such as the following:

- Rates of pay for employees;
- Employment conditions such as hours of work, timing of meal breaks and overtime;
- Consultative mechanisms in terms of how the agreement will operate;
- Dispute resolution procedures between employees and employers; and
- Deductions from wages for any purpose authorised by the employee (such as superannuation).

They cannot include 'unlawful content' such as discriminatory or objectionable terms. As with Modern Awards, enterprise agreements must provide a **flexibility term** that allows for the inclusion of flexibility arrangements so that variations in the provisions of the enterprise agreement can be made.

Good Faith Bargaining

Those involved in the bargaining process for enterprise agreements are required to bargain in 'good faith'. This means that employees and employers must attempt to reach an agreement. The following are the good faith bargaining requirements that a bargaining representative must meet: attending and participating in meetings; responding to proposals made by others; giving genuine consideration to proposals made by the other party; refraining from unfair conduct; and recognising and bargaining with other bargaining representatives over the enterprise agreement. Failure to comply with these procedures may lead to intervention by the Fair Work Commission which can order bargaining to take place.

There is also provision under the *Fair Work Act 2009* for low paid workers to be represented by a trade union or a bargaining representative in relation to a multi-enterprise agreement. The bargaining representatives may apply for a low paid authorisation from the Fair Work Commission and if an agreement is not reached, the Fair Work Commission may make a low paid workplace determination. This is designed to strengthen the bargaining power of low paid workers and give them an incentive to raise their productivity and wages. The three main types of enterprise agreements under the *Fair Work Act 2009* are Single Enterprise Agreements, Multi-Enterprise Agreements and Greenfields Agreements.

Single Enterprise Agreements

Single enterprise agreements involve a group of employees and a single employer, or two or more employers (such as in a joint venture) co-operating in what is essentially a single enterprise. Such employers are known as single interest employers. Single interest employers can make a single enterprise agreement with the employees employed at the time the agreement is made, or with a trade union if the agreement relates to a genuine new enterprise that the employer or employers are establishing. The single enterprise agreement is made when a majority of the employees of the employer or each employer, vote to endorse the agreement. The agreement may run for up to four years. The agreement must be submitted to the Fair Work Commission for assessment, approval and pass the Better Off Overall Test.

Multi-Enterprise Agreements

Two or more employers that are not all single interest employers may make an enterprise agreement known as a multi-enterprise agreement with a group of employees or a trade union representing a group of employees. The multi-enterprise agreement is made when a majority of the employees of at least one of the employers votes to endorse the agreement. The agreement may run for no longer than four years. The agreement must be submitted to the Fair Work Commission for approval and if the agreement passes the Better Off Overall Test it will be approved by the Fair Work Commission.

Greenfields Agreements

A greenfields agreement involves a genuinely new enterprise that one or more employers are establishing or propose to establish and who have not yet employed persons necessary for the normal conduct of the enterprise. Such agreements may be either a single enterprise agreement or a multi-enterprise agreement. The greenfields agreement is made when it has been signed by each employer and each relevant employee organisation or trade union that the agreement covers. The agreement may run for up to four years. The agreement must be submitted to the Fair Work Commission for approval and the agreement must pass the Better Off Overall Test applied by the Fair Work Commission.

The No Disadvantage Test and the Better Off Overall Test

Enterprise agreements made before January 1st 2010 are subject to a No Disadvantage Test (NDT). The NDT ensures that the agreement does not, or would not result, on balance, in a reduction in the overall terms and conditions of employment of employees who are covered by the agreement. The agreement is compared to the relevant general award or an award designated by the Fair Work Commission as being the most appropriate to cover the kind of work performed by the employees.

Under the *Fair Work Act 2009* enterprise agreements made on or after January 1st 2010 are subject to a 'Better Off Overall Test' (BOOT) by the Fair Work Commission. This involves a comparison between the agreement and a relevant Modern Award to determine whether the employees would be 'better off' under the agreement. This test is more stringent than the No Disadvantage Test since it requires employees to be 'better off' than under the equivalent new Modern Award.

Individual Agreements

From January 1st 2010 there is no legislative provision for making individual workplace agreements. The negotiation of new Australian Workplace Agreements (AWAs) was prohibited from March 28th 2008 under the *Transition Act*, with existing AWAs to continue to operate until terminated by an Individual Transitional Employment Agreement (ITEA) or when they reach their expiry date.

ITEAs were a new type of instrument which were available for limited use during the transition to the government's new workplace relations system beginning on January 1st 2010. ITEAs had a nominal expiry date of 31st December 2009. It is a written agreement between an employer and an individual employee setting out the terms and conditions of the employee's employment. This includes the rate of pay, hours of work and leave entitlements. An ITEA is assessed against the No Disadvantage Test to ensure that it does not disadvantage the employee against an applicable enterprise agreement or award.

Outside the formal system of Modern Awards, the National Employment Standards and enterprise agreements, around 37.3% of Australia's employees in 2016 worked under common law employment contracts. These common law contracts provide significant flexibility for employers and employees to vary wages and working conditions to suit their individual needs and circumstances. They are commonly used for the remuneration of executives, managers, professionals and business owners in the workplace whose incomes may well exceed average weekly earnings. However these common law contracts must still comply with the minimum conditions set out in the National Employment Standards.

Employment Contracts for High Income Earners

High income earners such as managers, professionals and executives of businesses and companies usually have individual common law employment contracts with their employer. These common law employment contracts are outside the formal regulated system under the *Fair Work Act 2009* which had no provisions for employees earning over $113,800 per year. Common law contracts for high income earners may include a statement of annual salary, bonuses or profit sharing entitlements, fringe benefits and salary packaging and/or salary sacrificing arrangements.

Another category of workers includes independent contractors who have a high level of control over how their work is done, are engaged in a specific task, and bear the risk of profit or loss on each task. Such contractors are common in the building and construction and information technology industries. They are covered under the *Independent Contractors Act 2006* and have some general protections under the *Fair Work Act 2009*. Independent contractors negotiate their own remuneration with their employer, have an ABN and invoice the employer for the work done. They are responsible for providing their own superannuation contributions and paying taxation liabilities to the Australian Taxation Office.

Unfair Dismissal

One change implemented to Australian industrial relations under the *Fair Work Act 2009* is the reinstatement of unfair dismissal provisions for small businesses with over 15 employees. This is known as the Small Business Fair Dismissal Code. Employees in such businesses cannot make an application for unfair dismissal if they have not completed six months employment. For employees in small businesses with less than 15 employees they must complete 12 months employment before they can make an application for unfair dismissal. Unfair dismissal is defined as when an employee is dismissed and the dismissal is judged to be harsh, unjust or unreasonable, or the dismissal was not a case of redundancy.

Table 17.5 summarises the key features of the minimum safety net and the types of enterprise agreements in the national industrial relations systems under the *Fair Work Act 2009*. Overall the Act strengthened the safety net system with the inclusion of the National Employment Standards, the annual Wage Review of the National Minimum Wage and the system of Modern Awards. In the area of enterprise bargaining emphasis is placed on good faith bargaining in enterprise agreements and the application of the Better Off Overall Test to all enterprise agreements in protecting employees' entitlements.

Table 17.5: The Current Industrial Relations System under the *Fair Work Act 2009*

The Minimum Safety Net

- The ten National Employment Standards (NES) apply to all employees in the workplace
- Modern Awards contain terms specific to an industry or occupation or type of work performed
- Annual review of the National Minimum Wage (NMW) by the Fair Work Commission

Enterprise Agreements

- Single enterprise agreements are negotiated by trade unions or employees with a single interest employer
- Multi-enterprise agreements are negotiated by trade unions or employees with more than one employer
- Greenfields agreements are negotiated by employees or a trade union with one or more employers for a new enterprise
- All enterprise agreements are subject to approval by the Fair Work Commission through a No Disadvantage Test and a Better Off Overall Test (BOOT) to protect employees' entitlements

Dispute Resolution Procedures

The traditional legal mechanism for solving industrial disputes between employees and employers is through the system of federal and state industrial tribunals, which provide conciliation and arbitration services if collective bargaining fails to resolve an industrial dispute between an employer and employees:

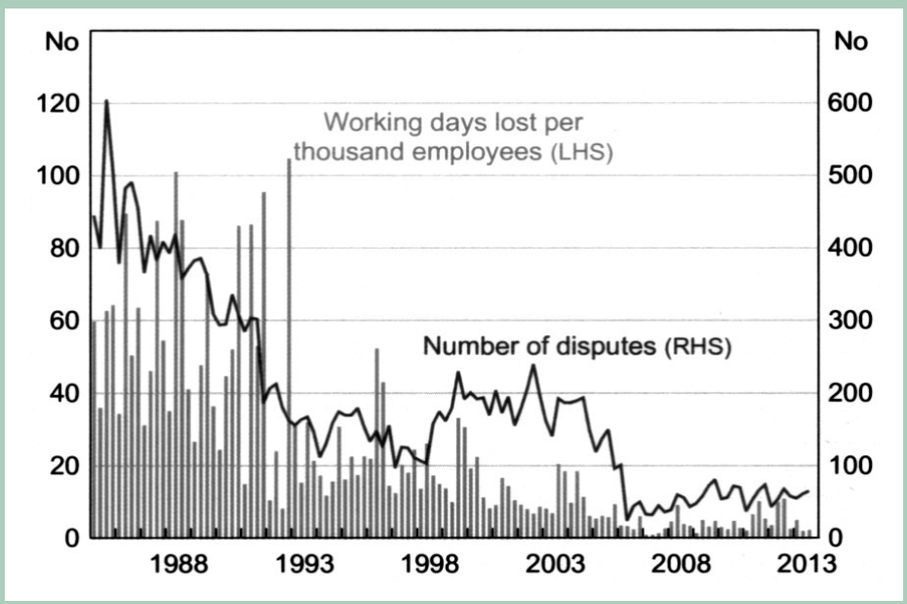
- **Collective bargaining** is where the conflicting parties attempt to reach an agreement through direct negotiation by their representatives. There is no third party or 'umpire' in this situation, but if no agreement is reached, a conciliator or mediator may be used to solve the dispute. A disadvantage of collective bargaining is more protracted industrial disputes if an agreement cannot be reached.
- **Conciliation** is where a third party or conciliator or mediator (usually an industrial tribunal) tries to get the conflicting parties in a dispute to agree to a settlement. If this is achieved, the agreement becomes legally binding on the parties and part of an enterprise agreement or Modern Award.
- **Arbitration** is where a third party or arbitrator makes a binding decision on the parties to a dispute. The arbitrated settlement alters the Modern Award or enterprise agreement and is legally binding on both parties (i.e. the employees and employer).

Under the *Fair Work Act 2009*, the Fair Work Commission has a major role in ensuring the bargaining process and any industrial action occurs according to the law. Bargaining representatives wishing to take industrial action to support their claims must first seek an order from the Fair Work Commission for a protected ballot authorising the industrial action. The Fair Work Commission has the power to suspend or terminate both 'protected' and 'unprotected' industrial action, with legally enforceable orders.

Protected industrial action can only be taken if an existing enterprise agreement has finished its term of three, four or five years; there is an intention to negotiate a new enterprise agreement; and there is a genuine attempt to reach an agreement based on the principle of 'good faith' bargaining.

Figure 17.2 shows the general decline in the number of industrial disputes and the number of working days lost from disputes between 1988 and 2013. This generally reflected strong economic growth, declining unemployment and improved labour-management relations in the 1990s and 2000s. However there was increased disputation in the coal industry in 2010-11 due to a dispute in the Bowen Basin, and a protracted dispute in aviation due to the Qantas industrial dispute at the end of 2011.

Figure 17.2: Industrial Disputes in Australia (quarterly)



Source: Reserve Bank of Australia (2014), *Statement on Monetary Policy*, February, page 55.

THE ROLE OF INSTITUTIONS IN THE CURRENT INDUSTRIAL RELATIONS SYSTEM

Australia's industrial relations system is influenced by many powerful institutions (see **Table 17.6** on page 366). These include the federal government, the Fair Work Commission, the Fair Work Ombudsman, state industrial tribunals, the ACTU and trade union movement, and employer associations such as the Business Council of Australia (BCA), the Australian Chamber of Commerce and Industry (ACCI), the Australian Industry Group (AIG) and the Australian Federation of Employers and Industries (AFEI).

The former Howard government's *Workplace Relations Act 1996* and the *Workplace Relations Amendment Act 2006* reduced the power and influence of the AIRC and the trade union movement in the Australian industrial relations (IR) system, whilst strengthening the bargaining power of employers. Despite an attempt to strengthen the safety net in the *Workplace Relations Amendment (A Stronger Safety Net) Act 2007* the Howard government lost the federal election in 2007, partly because of the unpopularity of its WorkChoices legislation. The Rudd Labor government through the *Transition Act 2008* and *Fair Work Act 2009* moved the industrial relations system back to one based on a strong safety net, the prohibition of formal individual employment contracts such as AWAs, and renewed the emphasis on collective bargaining in enterprise agreements. It also strengthened the regulation of the industrial relations system by giving wide powers to the Fair Work Commission and the Fair Work Ombudsman. The Turnbull government has not changed national industrial relations legislation but was lobbied by business groups such as the BCA and AIG to reduce or even abolish penalty rates and leave loadings. In February 2017 the Fair Work Commission handed down a decision to reduce **weekend penalty rates** in the hospitality, fast food, retail and pharmacy industries to be phased in between 2017 and 2020.

The Role of the Federal Government

The federal government increased its power over industrial relations through the *Workplace Relations Act 1996* and by supporting employers (such as Patrick Stevedores in the waterfront dispute in 1998) in confronting union power by implementing changes to work practices. The *Workplace Relations Amendment Act 2006* (WorkChoices) transferred the power and authority over industrial relations in Australia to the Executive arm of government (i.e. Prime Minister and Cabinet) and Parliament.

WorkChoices meant that minimum labour standards were determined by the Executive in negotiation with the Senate, instead of an independent judicial institution like the AIRC. New industrial relations institutions such as the AFPC, the Workplace Authority and the Workplace Ombudsman were created to administer the new system but lacked the independence from the political process of the AIRC.

The Rudd Labor government continued this trend by legislating the *Workplace Relations Amendment (Transition to Fairness) Act 2008*, which was the first stage in its new 'Forward with Fairness' industrial relations policy that was eventually introduced on January 1st 2010. The *Fair Work Act 2009* was passed by Parliament in April 2009 and took effect from July 1st 2009. The new workplace relations system covers a majority of workplaces in Australia and continues the unified national system of industrial relations created under the *Workplace Relations Amendment Act 2006 (WorkChoices).* The *Fair Work Act 2009* gives the federal government legislative control of Australian industrial relations through key elements of the industrial relations or workplace relations system based on the following elements:

- A legislated safety net of ten National Employment Standards;
- A system of new Modern Awards which contain a flexibility clause;
- Revised enterprise bargaining arrangements including a Better Off Overall Test;
- Streamlined protections dealing with workplace and industrial rights, including protection against discrimination, anti bullying provisions and unfair dismissal in the workplace; and
- Two new organisations that regulate the industrial relations system: the Fair Work Commission (created under the *Fair Work Amendment Act 2012*) and the Fair Work Ombudsman.

The Fair Work Commission

From January 1st 2010 Fair Work Australia replaced the following Australian government institutions which previously regulated the Australian industrial relations system:

- The Australian Industrial Relations Commission (AIRC)
- The Australian Industrial Registry
- The Australian Fair Pay Commission (AFPC)
- The Australian Fair Pay Commission Secretariat
- The Workplace Authority
- The Workplace Ombudsman

Under the *Fair Work Amendment Act 2012,* Fair Work Australia was renamed the Fair Work Commission, the national workplace relations tribunal. It is an independent body under the *Fair Work Amendment Act 2012* responsible for carrying out a range of functions relating to national industrial relations:

- Administering and setting the safety net of minimum wages and employment conditions;
- Administering the system of enterprise bargaining;
- Enforcing rules and sanctions regarding industrial action in the workplace;
- Responsibilities for dispute resolution;
- Administration of rules regarding the termination of employment and unfair dismissal; and
- Other workplace matters including discrimination and bullying in the workplace, freedom of association and the right of entry of trade unions into workplaces.

The Fair Work Ombudsman

The Fair Work Ombudsman replaced the Workplace Ombudsman under the *Fair Work Act 2009.* With offices around Australia, the Fair Work Ombudsman's functions include the following:

- Providing advice, assistance and education to employees, employers and outworkers;
- Ensuring compliance with the *Fair Work Act 2009* and investigating possible breaches of the law;
- Taking court action regarding serious contraventions of the *Fair Work Act 2009;*
- Auditing workplaces for their compliance with the *Fair Work Act 2009;*
- Appointing Fair Work inspectors to monitor and investigate breaches of the *Fair Work Act 2009;*
- Publishing information on the National Employment Standards, Modern Awards, agreement making, the right to freedom of association, and the termination of employment; and
- Producing 'best practice' guides on workplace relations and workplace practices.

Specialist Fair Work Divisions were created under the *Fair Work Act 2009* in the Federal Court and the Federal Magistrates Court to hear new workplace law matters. In addition, a Fair Work Infoline was established together with the Fair Work Ombudsman website to help inform employees and employers of their rights resulting from changes to Australian industrial relations under the *Fair Work Act 2009*.

The Role of Trade Unions

The role and power of trade unions has declined over the last few decades because of changes in the structure of industry and employment. The power base of the union movement lies in manufacturing and the public sector where unionisation levels are highest. However unionisation levels have declined from about 40% of the workforce in the 1970s to around 15% in the 2000s largely because of the growth in the services sector where there is increased casualisation of the workforce, due to the high

incidence of non union part time, shift and casual employment. However widespread opposition to the WorkChoices legislation resulted in a major ACTU campaign ('Your Rights at Work') in 2006-07 to defeat the Howard government and overturn the WorkChoices legislation. Under the *Fair Work Act 2009* trade union activity is regulated through the following measures:

- Restrictions on the right of entry of unions into workplaces to organise workers or to hear grievances.
- Trade unions must have enterprise agreements approved by the Fair Work Commission.
- For industrial action by trade unions to be lawful it must be 'protected industrial action'. This means that industrial action can only be taken when an existing enterprise agreement has passed its nominal expiry date or the industrial action is in support of a new enterprise agreement.
- Industrial action cannot involve '**pattern bargaining**' which involves similar wage claims by trade unions across various industries, as this could lead to an acceleration in wage and cost inflation.

In 2014-15 the *Royal Commission into Trade Union Governance and Corruption* revealed some evidence of corruption, which further damaged the reputation and public confidence in the trade union movement. In 2016 the Turnbull government established the Building and Construction Commission to oversee workplace relations in this industry after findings of corruption by the Cole Royal Commission.

The Role of Employers

Employer associations have exercised more bargaining power since the advent of enterprise bargaining in 1991. The federal government's *Workplace Relations Act 1996* and *Workplace Relations Amendment Act 2006* shifted power in the workplace to employers by simplifying agreement making procedures, and increasing employers' flexibility to change work practices by linking wage increases to improvements in productivity. Under WorkChoices, workplace agreements were subject to lower minimum standards which helped employers to reduce labour costs and improve profitability. Under the *Transition Act 2008* and the *Fair Work Act 2009* the safety net of minimum wages and employment standards were strengthened, adding to employers' compliance costs of employing labour. However the inclusion of flexibility arrangements in Modern Awards and enterprise agreements under the *Fair Work Act 2009* encourages employers and employees to continue with direct bargaining to achieve improvements in workplace productivity. In 2016 employers lobbied the government to reduce penalty rates to promote employment. A summary of the role of the main labour market institutions is contained in **Table 17.6**.

Table 17.6: The Role of Institutions in the Industrial Relations System

Federal Government:	Passing of the *Workplace Relations Act 1996*; *Workplace Relations Amendment Act 2006* (WorkChoices); *Workplace Relations Amendment (A Stronger Safety Net) Act 2007;* the *Workplace Relations Amendment (Transition to Fairness) Act 2008; the Fair Work Act 2009 and Fair Work Amendment Act 2012.* The federal government controls the unified national industrial relations system. Labour market policies: the Job Network, Jobs and Training Compact, Building Australia's Future Workforce & Youth Jobs PaTH programme.
The Fair Work Commission:	Administration of the safety net of the NES, Modern Awards and National Minimum Wage; approval of enterprise agreements through the Better Off Overall Test; and dispute resolution powers.
The Fair Work Ombudsman:	Assistance to employees and employers; ensuring compliance with the *Fair Work Act 2009*; court action against breaches of the *Act*.
Employer organisations:	Submissions to the annual Wage Review by the Fair Work Commission; negotiation of enterprise agreements; and debate on national industrial relations issues such as penalty rates and loadings.
Trade Unions:	Submissions to the annual Wage Review by the Fair Work Commission; negotiation of enterprise agreements; and participation in the debate with employers on national industrial relations issues.

EVALUATION OF THE FAIR WORK ACT 2009

The *Fair Work Act 2009* represents a shift in industrial relations policy away from the reduction in minimum standards and the emphasis on individual bargaining and agreements under WorkChoices, to a system based on a stronger safety net of the NES and Modern Awards, and an emphasis on collective bargaining and enterprise agreements. The *Fair Work Act 2009* is a return to a more strongly regulated industrial relations framework with very comprehensive and formal powers given to the Fair Work Commission and the Fair Work Ombudsman to administer the national industrial relations system.

One of the main advantages of the current industrial relations system is that it has improved the level of equity in the distribution of income through a stronger safety net for low paid workers and the removal of AWAs as formal individual agreements, where employers could force employees to accept lower rates of pay and conditions than under an equivalent award. The new safety net provides for an expanded ten minimum employment standards under the NES and regular annual adjustments through the Wage Review of the National Minimum Wage and Modern Awards by the Fair Work Commission (FWC).

There is also provision for employees in low paid industries to receive assistance from the FWC to engage in bargaining and make multi-enterprise agreements. This is an attempt to achieve greater equity in the bargaining process and should slow the rate of growth in wage dispersion between low wage and high wage employees. It also offers low wage employees the incentive to increase their productivity (through skill acquisition and training) to achieve higher wages and improved employment conditions. These features of the current industrial relations system help to reduce the extent of labour market segmentation between low skilled and low paid employees reliant on adjustments to awards, falling behind highly skilled and paid workers with greater bargaining power in collective enterprise agreements.

A second advantage of the current industrial relations system is the clarity provided for employees and employers with a set of minimum standards and simplification of the enterprise bargaining system, with its three main types of agreements, guidelines for the encouragement of good faith bargaining, and the inclusion of flexibility arrangements to encourage productivity improvements at the workplace or industry level. The introduction of unfair dismissal laws also provides greater certainty of employment for employees in small businesses with over 15 employees, which can help to reduce the incidence of retrenchments, by restraining employers from shedding labour as economic conditions change.

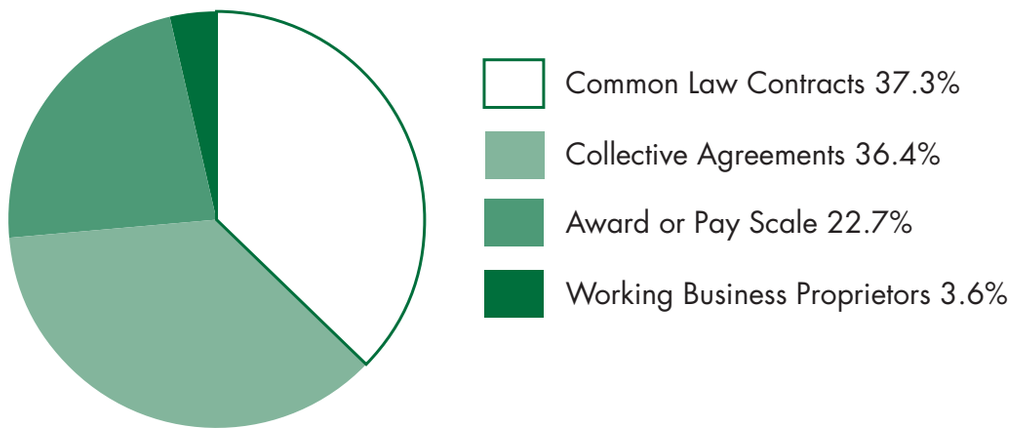
From the viewpoint of employers and employer groups the current industrial relations system reduces the flexibility provided by individual agreements in raising workplace productivity. This was a key feature of WorkChoices, with AWAs and the AFPCS used to reduce labour costs and raise labour productivity through changes to work arrangements. With an emphasis on collective enterprise agreements and the coverage of Modern Awards in the current system there is less incentive for individual workers to raise productivity. Rather, the focus on productivity improvements is placed on entire workplaces and enterprises through direct negotiations between employees and employers. With the abolition of AWAs and a strengthening of the Modern Award system there is less incentive for employers to hire labour because of lower levels of flexibility. However the demand for labour is largely determined by the growth in aggregate demand and output as well as labour costs and productivity. Wages growth fell to between 2% and 3% per annum between 2012 and 2017 as economic growth moderated as the economy transitioned to non mining sources of growth. This helped employers to contain costs and reduced the extent of the rise in the unemployment rate, with many employers cutting working hours rather than retrenching labour. This is reflective of greater labour market flexibility.

The current industrial relation system under the *Fair Work Act 2009* is fairer but more regulated with guidelines provided by the FWC on 'good faith bargaining', and stronger powers for the FWC to intervene and solve industrial disputes through conciliation and arbitration. The nature of the federal industrial relations system is also more legalistic with the FWC staffed by mainly former AIRC commissioners with experience on industrial tribunal panels and expertise in industrial law. This feature reduces the flexibility which was encouraged with the decentralisation of industrial relations between 1996 and 2006, and the emphasis on direct negotiations between employees and employers.

Current Methods of Wage Determination

The main types of wage and employment coverage according to the ABS survey in May 2016 (released in January 2017) of the Australian workforce is illustrated in **Figure 17.3**. The most common methods of setting pay for all employees in May 2016 were unregistered individual arrangements or common law contracts (37.3%) and registered collective agreements (36.4%). The least common methods for setting pay were an award or pay scale (22.7%) which was up from 18.8% in 2014 due to the growth in part time and casual employment, and 3.6% of employees who were working business proprietors.

Figure 17.3: Types of Employment Contracts in the Australian Workforce in 2016

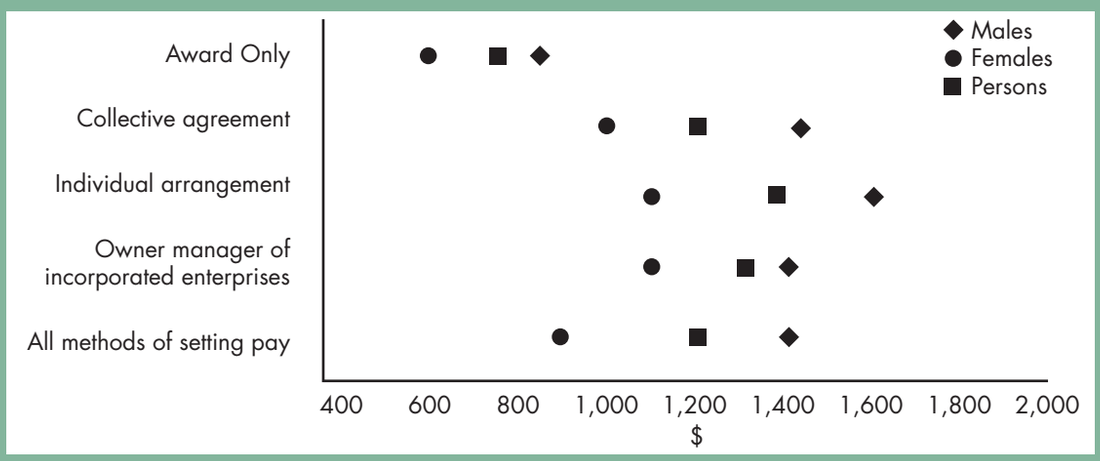


Source: ABS (2016), *Employee Earnings and Hours*, Catalogue 6306.0, January.

The approximate average weekly total cash earnings for employees in May 2014 according to the main methods of setting pay are shown in **Figure 17.4**:

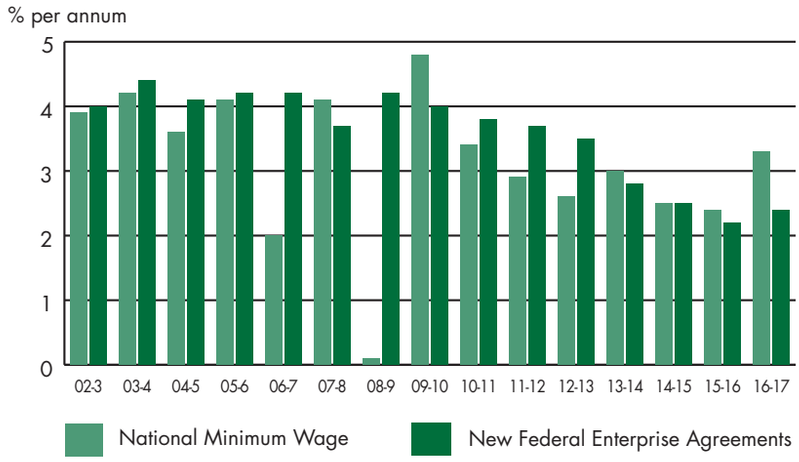
1. The average weekly total cash earnings for males under an award or pay scale was $849 and $609 for females. Award coverage was highest in community and personal services (34.2%).
2. The average weekly total cash earnings for males under a collective agreement was $1,471 and $1,003 for females, with coverage of collective agreements highest in the public sector (85.9%).
3. The average weekly total cash earnings for employees under an unregistered individual arrangement (such as a common law contract or an over award payment) was $1,619 for males and $1,064 for females. Coverage of individual arrangements was highest for managers and other professionals (58.7%) in the private sector.

Figure 17.4: Average Weekly Total Cash Earnings in 2014 by Method of Setting Pay



Source: ABS (2015), *Employee Earnings and Hours*, Catalogue 6306.0, January.

Figure 17.5: Wage Increases for Awards and Federal Enterprise Agreements 2002-17



Sources: Reserve Bank of Australia (2017), www.rba.gov.au and the Fair Work Commission www.fwc.gov.au

EVALUATION OF THE CURRENT INDUSTRIAL RELATIONS SYSTEM

The Australian industrial relations system has become more decentralised and deregulated since the inception of the Prices and Income Accord in 1983. The introduction of the principle of enterprise bargaining in wage negotiations in 1991 was a 'watershed' in Australian industrial relations. It linked wage rises to improvements in productivity at the workplace level. This decentralised wage negotiations away from the centralised National Wage Case held by the AIRC and the reliance of employees for wage rises on adjustments to industrial awards. The *Workplace Relations Act 1996* and the *Workplace Relations Amendment Act 2006* further deregulated and decentralised the industrial relations system by moving employees away from a reliance on awards to individual and collective agreements. The benefits of these changes for the Australian economy included the following:

- The labour market has generally become more competitive and flexible, and this has led to an improvement in the efficiency with which labour is allocated in the economy.
- Labour productivity has increased, because many employees have increased their levels of education, training and skill in order to earn higher wages. Average annual wage increases achieved by workers under federal enterprise agreements was 3% to 4% between 2000 and 2014, compared to an average 2% to 3% annual wage increase of workers under awards (see **Figure 17.5**). Wages growth fell to 1.9% in 2016-17 with weaker economic growth and the increase in part time employment.
- Business enterprises have improved their efficiency and profitability by reforming restrictive work practices, introducing new technology and increasing labour and capital productivity.
- The Australian economy has achieved lower inflation and unemployment outcomes, higher rates of sustainable economic growth and generally lower levels of industrial disputation.

However there have been costs associated with greater labour market decentralisation and deregulation:

- Minimum standards of employment have been reduced over time, providing less protection for workers reliant on adjustments to Modern Awards for wage increases and better working conditions.
- Labour market segmentation has risen as workers with higher levels of skill, training and bargaining power under enterprise agreements have been able to increase their real wages, relative to workers with lower levels of skill, training and bargaining power reliant on adjustments to Modern awards.
- Wage inequality has risen due to increased wage dispersion between highly skilled and highly paid employees on enterprise agreements and individual arrangements, compared to low skilled and low paid employees on Modern Awards or receiving the National Minimum Wage.
- In 2016-17 there was growing evidence of the uncertainty and inequality of paid work with a rise in part time and casual employment as well as underemployment and below trend growth in wages.

The Advantages and Disadvantages of Centralised Wage Determination

A major advantage of the former reliance on a centralised wage determination system in Australia was that **comparative wage justice** was a key wage fixing principle. This meant that there were regular cost of living adjustments made to award wages by the AIRC, which helped to maintain the real wages of low income earners and workers with minimal bargaining power. It also created certainty for wage earners, because wages were adjusted regularly, without workers resorting to industrial action. If a dispute arose the AIRC could use its dispute resolution powers of conciliation and arbitration to resolve disputes.

An example of centralised wage fixing was the Hawke Labor government's use of a Prices and Incomes Accord in 1983 as a social contract between the federal government and the ACTU. The Accord retained the basic elements of the centralised wage fixing system, with federal award wages adjusted to changes in the cost of living at annual national wage cases. This was known as **wage indexation**. The Accord committed the government to improving the social wage (e.g. superannuation, the introduction of Medicare, tax cuts, job training and family allowances), and using expansionary fiscal and monetary policies to increase economic and employment growth. In return the trade union movement agreed to moderate wage demands, and reduce the incidence of industrial disputation, to assist the government in containing inflation and unemployment outcomes in the economy.

The Accord Mark 1 in 1983 (see **Table 17.7**) committed the government to a policy of full wage indexation (i.e. wage rises equivalent to changes in the CPI). National wage cases were held between 1983 and 1995 by the Australian Conciliation and Arbitration Commission (thereafter the AIRC), with submissions from the federal government, the ACTU and employer associations. The Commission used various wage fixing principles in making its annual wage case decisions:

- Comparative wage justice, based on the maintenance of real wages and living standards, and the wage relativities between various award classifications for different occupations and types of work;
- The capacity of industry to pay wage increases based on industry profitability;
- The general state of the economy, in terms of economic growth, inflation and unemployment; and
- Improvements in labour productivity due to more efficient work practices.

Between 1983 and 1995 the Accord evolved as a flexible mechanism for determining wage increases and changes to the system of wage determination (refer to **Table 17.7**). A major change in 1987 was the introduction of a productivity based bargaining component for wage increases, known as the Two Tier Wage System. Between 1987 and 1991 the Structural Efficiency and Award Restructuring Principles were introduced to increase the flexibility of awards, by encouraging higher labour productivity through the reform of work practices. In 1991 the principle of **Enterprise Bargaining** (EB) was introduced, and led to a major decentralisation of wage determination processes away from the reliance on national wage cases held by the AIRC, to direct negotiations between employers and employees over wages. These negotiations were largely based on productivity improvements at the enterprise or workplace level.

However a number of disadvantages were evident with the reliance on centralised wage determination under the Accord. The use of comparative wage justice and wage indexation principles **institutionalised inflation** by largely ignoring the importance of productivity as a wage fixing principle. Regular wage indexation decisions under the Accord contributed to higher inflation outcomes because of rising wage costs. Wage increases unrelated to productivity improvements, tended to 'flow on' from one occupation or industry to another, and led to a permanent '**real wage overhang**', where nominal wages growth outstripped productivity growth and led to poor macroeconomic outcomes in Australia.

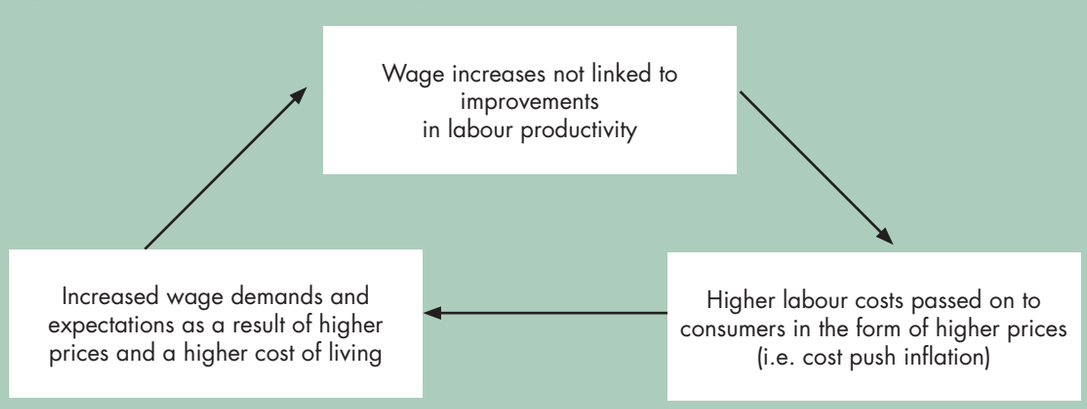
Many trade unions also made 'ambit' claims for wage increases which were unrealistic and this pushed up wage expectations. If a trade union was successful in gaining a wage increase, this could lead to 'leap frogging' where other trade unions increased their wage claims, and wage demands started to accelerate, leading to a wage spiral in certain industries and even in the economy as a whole.

Table 17.7: The Evolution of Australia's Wage Determination System 1983 to 2012

Policy or Legislation	*Year*	*Wage Fixing Principle*	*Degree of Intervention*
Accord Mark I	1983	Full Wage Indexation	Centralised
Accord Mark II	1984	Partial Wage Indexation	Centralised
Accord Mark III	1987	Two Tier Wage System	Centralised/Decentralised
Accord Mark IV	1988	Structural Efficiency Principle	Centralised/Decentralised
Accord Mark V	1989	Award Restructuring Principle	Centralised/Decentralised
Accord Mark VI	1991	Enterprise Bargaining (EB)	Decentralised
Accord Mark VII	1993	EB and the Safety Net System	Decentralised
Accord Mark VIII	1995	EB and the Safety Net System	Decentralised
Workplace Relations Act	1996	CAs, AWAs and the Safety Net of the Award System	Decentralised and Partial Deregulation
Workplace Relations Amendment Act (WorkChoices)	2006	Australian Fair Pay and Conditions Standard (AFPCS), Individual & Collective Agrs.	Decentralised and further deregulation of wages and the labour market
Workplace Relations Amendment (A Stronger Safety Net) Act	2007	A Fairness Test applied by the Workplace Authority to workplace agreements	Regulation of the Safety Net
Workplace Relations Amendment (Transition to Fairness) Act	2008	Collective productivity bargaining and a stronger Safety Net	Regulation of the Safety Net and the transition to a new industrial relations system
Fair Work Act and *Fair Work Amendment Act*	2009 2012	Collective enterprise agreements based on productivity bargaining	Safety Net of ten National Employment Standards, Modern Awards and NMW

With a lack of competition in many Australian product markets, employers simply absorbed these wage increases by passing on the extra wage costs through higher prices. This led to the development of a wage-price spiral situation depicted in **Figure 17.6**. This not only led to poor inflation outcomes, but reduced Australia's international competitiveness. Higher wage costs also impacted on employment, as employers substituted capital for labour, leading to higher unemployment in the labour market. The centralised system was also very legalistic and became very adversarial with high levels of industrial disputation. Critics also argued that an 'industrial relations club' of the federal government, the ACTU and AIRC controlled a highly regulated labour market that was not conducive to structural change.

Figure 17.6: The Wage-Price Spiral



The Advantages and Disadvantages of Decentralised Wage Determination

A decentralised wage determination system is characterised by the direct negotiation of employment contracts between employees and employers at the enterprise, industry or individual level. This may involve individual bargaining, or collective bargaining through trade unions or other representatives of employees. This type of wage determination system is used in the USA and Japan, and in Australia in the 1990s and 2000s under the principle of enterprise bargaining and the use of common law contracts.

The advantages of a decentralised wage determination system is that it is more flexible in operation, and likely to lead to a more efficient allocation of labour resources in the labour market. Since wage increases reflect productivity improvements in enterprise or workplace agreements, there is a greater incentive for employees to undertake skills training and education to earn higher wages, and also less likelihood of cost inflation. Employers also have a greater incentive to demand and hire labour (because of higher labour productivity), and the rate of unemployment may fall in the economy as a result.

The major disadvantage of a decentralised wage determination system is that the market determines wage outcomes based on workers' productivity and skills, and this can lead to a widening of wage and income inequality in labour market, without a strong system of minimum wages and working conditions. For example, employees with high levels of bargaining power, skill and productivity, may achieve higher wages than employees with less bargaining power, skill and productivity, leading to **greater labour market segmentation**. Also industrial disputation may be more protracted during periods of wage negotiations (e.g. when labour contracts are renegotiated), if agreement cannot be reached between the conflicting parties. Another disadvantage of a decentralised wage determination system is that the federal government does not have a formal prices and incomes policy to control wage outcomes and must use monetary policy and higher interest rates to control excessive wages growth and inflation.

The Advantages and Disadvantages of Individual Wage Determination

Most advanced countries have minimum wage legislation and a set of minimum working conditions to protect employees' rights in the workplace. However individual bargaining through common law contracts is also widespread and its advantages are flexibility for employers and employees and the opportunity for highly skilled and qualified workers to earn higher incomes. However for low skilled workers with low bargaining power there is a risk of receiving below minimum wages and working conditions from employers if a safety net of legally enforceable minimum standards is weak or absent. This type of situation was highlighted in Australia by the underpayment of wages to part time and casual employees by franchises such as 7-Eleven and Domino's Pizza between 2015 and 2017.

Education, Training and Employment Programmes

The Australian government was expected to provide $33.8b in 2017-18 in recurrent and capital funding for programmes provided by the Department of Education and Training. This included expenditure on government and non government schools ($18.2b), tertiary education ($9.6b), vocational education and training ($1.8b) and student assistance ($3.1b). Specific funding of $663m was allocated for school infrastructure in the 2017-18 budget. A major policy initiative in the 2017-18 budget was the allocation of $18.6b by the Turnbull government between 2017-18 and 2026-27 on *Quality Schools - True Needs Based Funding for Australia's Schools* (Gonski 2.0).

Expenditure by the Department of Employment on vocational and industry training was forecast to rise by 1.1% between 2016-17 and 2017-18, in line with the completion of the Industry Skills Fund. In terms of employment programmes, the Turnbull government allocated $1.8b to labour market assistance to job seekers and industry in the 2017-18 budget. This included an increase in expenses on wage subsidies and Work for the Dole placements with the introduction of the *Jobactive* programme in 2015-16 and the *Youth Employment Package* in the 2016-17 budget and the Youth Jobs PaTH programme which targeted the young unemployed with pre-employment skills training, internships and wage subsidies.

REVIEW QUESTIONS

THE CURRENT INDUSTRIAL RELATIONS FRAMEWORK

1. List the three elements of the safety net system under the *Fair Work Act 2009*.
2. Discuss the main items contained in the National Employment Standards in Table 17.2.
3. Explain how the Fair Work Commission adjusts minimum wages under the *Fair Work Act 2009*.
4. Discuss the main contents of Modern Awards in Table 17.4. Why were awards modernised under the *Fair Work Act* and how do they protect employees as part of the safety net system?
5. Discuss the main features of enterprise agreements under the *Fair Work Act 2009*. Explain what is meant by 'good faith bargaining' in enterprise agreements.
6. Make a list of the main features of Single Enterprise, Multi-Enterprise and Greenfields Agreements under the *Fair Work Act 2009*.
7. Discuss the role of the Fair Work Commission in approving enterprise agreements by applying the Better Off Overall Test.
8. Discuss the changed role of individual workplace agreements under the *Fair Work Act 2009*.
9. Discuss the methods available for high income earners to enter into employment contracts.
10. What methods of dispute resolution are available in the Australian industrial relations system?
11. Discuss the roles of the Australian government, the Fair Work Commission and the Fair Work Ombudsman in the Australian industrial relations system.
12. Contrast the roles of trade unions and employers in the Australian industrial relations system.
13. Evaluate the changes made to Australian industrial relations under the *Fair Work Act 2009*.
14. Discuss the main types of employment contracts in the Australian workforce from Figure 17.3. Why do average total cash earnings differ between the various types of employment contracts?
15. Discuss the advantages and disadvantages of centralised, decentralised and individual methods of wage determination.
16. Briefly discuss recent federal government education, training and employment programmes designed to support industrial relations and labour market reform.
17. Define the following terms and add them to a glossary

arbitration	labour productivity
Australian Workplace Agreement	Modern Awards
Better Off Overall Test	multi-enterprise agreement
collective bargaining	National Employment Standards
conciliation	National Minimum Wage
enterprise agreements	No Disadvantage Test
Fair Work Act 2009	single enterprise agreement
Fair Work Commission	wage indexation
Fair Work Ombudsman	wage-price spiral
greenfields agreement	WorkChoices
industrial dispute	Workplace Relations Act 1996

CHAPTER 17: SHORT ANSWER QUESTIONS

Year	*Annual %△ in the National Minimum Wage*	*Annual %△ in wage increases for employees under federal enterprise agreements*	*Annual %△ in the CPI*
2011-12	2.9	3.7	1.2
2012-13	2.6	3.5	2.5
2013-14	3.0	2.7	3.0
2014-15	2.5	2.5	1.5
2015-16	2.4	2.2	1.4
2016-17	3.3	2.4	1.9

Sources: Reserve Bank (2017), *Bulletin* and *Statement on Monetary Policy*, August and ABS (2017), Cat. 6401.0.

Refer to the table above of changes in the National Minimum Wage, average wage increases for employees under federal enterprise agreements, and changes in the CPI between 2011-12 and 2016-17, and answer the questions below. Marks

1. What is meant by an 'enterprise agreement'? (1)

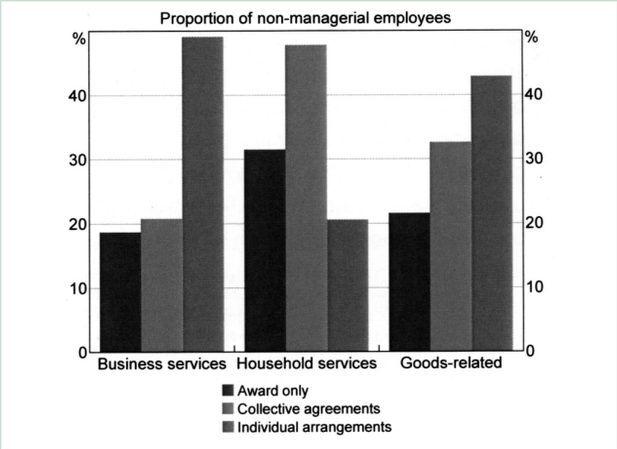
2. Suggest TWO reasons for generally larger average wage increases under federal enterprise agreements than increases in the National Minimum Wage between 2011 and 2017. (2)

3. Discuss THREE benefits of enterprise bargaining for the Australian economy. (3)

4. Explain ONE feature of Modern Awards and ONE feature of enterprise agreements. (4)

CHAPTER FOCUS ON LABOUR MARKET POLICY

Wage Setting Methods in Australia in 2016



Source: Reserve Bank (2017), *Statement on Monetary Policy,* February.

Describe the main methods of determining wages in the current Australian industrial relations system. Refer to the graph and discuss reasons why wage setting methods vary significantly across industries.

CHAPTER 17: EXTENDED RESPONSE QUESTION

Explain the role of the safety net, collective enterprise agreements and common law contracts in determining wages in the current Australian industrial relations system.

CHAPTER SUMMARY

LABOUR MARKET POLICY

1. Key features of the national industrial relations systems under the *Fair Work Act 2009* are:
   - A set of ten National Employment Standards (NES)
   - Modern Awards that apply nationally to specific industries, occupations and types of work
   - A National Minimum Wage administered by the Fair Work Commission
   - Enterprise bargaining arrangements for making various types of enterprise agreements
   - Protection of employees from unfair dismissal
2. The state industrial relations systems administer state awards mainly for employees in the public sector such as those employed in state government authorities and local governments.
3. Australia's industrial relations system has become more decentralised since the principle of enterprise bargaining was introduced in 1991. This principle linked wage increases to improvements in productivity at the workplace or enterprise level. Further decentralisation occurred in 1996 with the *Workplace Relations Act 1996*, which simplified the award system and introduced Australian Workplace Agreements (AWAs) as individual employment contracts.
4. The *Workplace Relations Amendment Act* (WorkChoices) came into force in 2006. It sought to create a unified national industrial relations system.
5. The *Fair Work Act 2009* prohibited the making of new AWAs and strengthened the safety net system by introducing ten National Employment Standards and Modern Awards. The Fair Work Commission has responsibility for making annual adjustments to the National Minimum Wage.
6. The safety net under the *Fair Work Act 2009* consists of the ten National Employment Standards, Modern Awards and adjustments to the National Minimum Wage by the Fair Work Commission.
7. Under the *Fair Work Act 2009* there is an emphasis on collective enterprise agreements (single enterprise, multi-enterprise and greenfields agreements) negotiated by trade unions or employees with employers to reflect industry and enterprise conditions. The negotiation of enterprise agreements involves 'good faith bargaining', with agreements subject to approval by the Fair Work Commission through the application of a Better Off Overall Test.
8. Employment contracts for high income earners include common law contracts and individual contracts negotiated by independent contractors for specific projects or work tasks.
9. The main methods of dispute resolution in the Australian industrial relations system include collective bargaining, conciliation and arbitration. The Fair Work Commission has powers over protected industrial action and encourages employees and employers to bargain in good faith.
10. The main institutions in the current system of Australian industrial relations include the federal government, the Fair Work Commission, the Fair Work Ombudsman, state industrial tribunals, the ACTU and trade unions, and employer organisations like the ACCI, AIG, BCA and CAI.
11. Historically Australia has used a centralised system of wage determination based on industrial awards, with annual adjustments made by the AIRC through a policy of wage indexation. The disadvantage of the centralised wages system was that wage increases did not reflect productivity improvements and led to higher labour costs, inflation and a wage-price spiral.
12. The current industrial relations system is more flexible than the previous centralised system. It has led to the spread of enterprise agreements as one of the main forms of wage adjustment, with less emphasis on awards. The benefit of this system has been a reform of work practices resulting in increased labour productivity and efficiency of enterprises. Another benefit has been increased flexibility in the labour market. However some of the disadvantages of industrial relations reform are increased wage and income inequality and greater segmentation in the labour market.

Chapter 18

Australia's Recent Economic Performance

THE LIMITATIONS OF ECONOMIC POLICIES

The use of macroeconomic policies to achieve the government's economic objectives involves a number of difficulties or limitations. These include **trade-offs** between the simultaneous achievement of economic objectives in both the short and long runs. For example, if there was a boom in the business cycle, and the government attempted to reduce inflation and the current account deficit in the short run through the use of contractionary monetary and fiscal policies, this could be at the expense of lower economic growth and higher unemployment in the future. Alternatively, if there was a recession in the business cycle, and the government attempted to increase economic growth and reduce unemployment in the short run by using expansionary monetary and fiscal policies, this could be at the cost of higher inflation and a larger current account deficit in the future. In the long run the use of macroeconomic policies to counter fluctuations in the business cycle might also be ineffective if the economy returns to its natural rate of unemployment and the trade-off between inflation and unemployment disappears.

Microeconomic policies have been effective in implementing reforms to specific sectors of the economy in need of structural change like the labour market, which macroeconomic policies cannot address. Microeconomic policies work more slowly than macroeconomic policies to achieve their objectives (e.g. higher productivity) but complement the use of macroeconomic policies in the long run. The major problem with microeconomic policies is that they can induce structural change and lead to structural unemployment and adjustment in targeted industries and rising income inequality in the long run.

The government also has to consider the goal of environmental sustainability in the framing of its policy mix or policy design. The achievement of high rates of economic growth should be consistent with improvements in environmental quality and not lead to an increase in environmental degradation and pollution. This includes the impact of economic growth on carbon emissions and the rate of climate change. Alternatively, an over emphasis on the attainment of environmental sustainability could lead to lower rates of economic and employment growth and a reduction in current living standards in the long run. So there is always the possibility of a trade-off between the simultaneous achievement of the objectives of economic growth and environmental quality in the framing of macroeconomic policies.

Time Lags in Policy Implementation

Policy lags are the length of time that elapses between a change in the stance of an economic policy and its effects on real economic activity and economic behaviour. Changes in economic policy may be unpredictable as they may not work in the same way each time they are used, because of changes in the structure of the economy and people's expectations. Changes in the stances of monetary and fiscal policies do not have an instant effect on aggregate demand and are subject to four types of time lags:

1. The **policy formation lag** has two parts: the time taken for the government to decide that a macroeconomic problem exists (such as low growth, rising inflation, higher unemployment or a rising current account deficit), which is the **recognition lag**; and the decision on the type of policy action required by the government and the implementation of the appropriate policy. This is called the **policy implementation lag**. The policy formation lag depends on the time taken by the Treasury and the Reserve Bank to gather information and make recommendations to the government. This involves forecasts of the economy and the analysis of often conflicting data before making a policy recommendation. It is known as an '**inside lag**' because it is within the policy making process.

2. The **autonomous expenditure lag** is an '**outside lag**' and refers to the effect of changes in the stance of fiscal and monetary policies on the components of aggregate demand which are independent of the level of income, such as autonomous consumption (C), investment (I), government (G) and import spending (M). Some fiscal policy actions such as changes in government expenditure have an immediate and direct effect on autonomous spending, whereas changes in tax rates may take a longer time to have an effect. Monetary policy works through the indirect channel of changes in interest rates and takes a longer time to have an impact than fiscal policy, and the effects may vary according to the interest rate elasticity of different types of spending e.g. investment spending tends to be more sensitive to interest rate changes than consumption, government and import spending.
3. The **induced expenditure lag** is also an 'outside lag' and refers to the time taken for changes in monetary and fiscal policies to alter autonomous spending and induce a multiplier effect on aggregate demand and national income. This in turn may lead to a change in induced expenditure, which is dependent on the level of income e.g. a tax cut through expansionary fiscal policy increases disposable income, and may induce more consumption spending and have an eventual multiplier effect on consumer incomes. Similarly a cut in interest rates may increase induced expenditure through an increase in cash flows, borrowing and spending and consumer incomes.
4. The **price adjustment lag** is an 'outside lag' and refers to the time taken for a change in monetary or fiscal policy to affect the price level. This will occur once the changes in spending impact on aggregate demand, which in turn will affect aggregate supply, leading to a new equilibrium level of income and a different price level in the economy.

Global Influences on Policy Implementation

The major global influences on policy implementation are changes in world and regional business cycles and their effects on international output and trade; international investment and financial flows; confidence and expectations in world financial markets; and changes in international economic policies:

- With the process of globalisation leading to a greater level and degree of international economic integration, there is a greater possibility of the transmission of changes in world economic activity from one country or region to another in a shorter period of time. For example, the '**contagion effect**' of the Global Financial Crisis and recession in 2008-09 reduced Australia's export income through lower demand, commodity prices and the terms of trade. The government eased the stances of both monetary and fiscal policies to prevent the economy from going into a recession. This contrasts with the global resources boom cycle between 2005 and 2008 when the stance of monetary policy was tightened to slow Australian economic growth and contain inflation pressures.
- Financial deregulation in most countries has led to very mobile capital flows in world financial markets. Short term changes in investor and exchange rate sentiment can lead to sudden inflows and outflows of capital which can impact on the exchange rate. For example, changes in investor sentiment may be caused by a loss of confidence in government policy responses in dealing with economic problems such as imbalances in Australia's current account deficit and foreign debt. The Australian government has responded to these problems by implementing microeconomic reforms to make industry more competitive, and by using fiscal policy to focus on the medium term objective of achieving fiscal balance over the economic cycle and increasing national saving.
- The Australian government is also influenced by trends in world economic policy such as negotiations to reduce trade barriers through multilateral agreements such as the WTO and APEC. The unilateral decision in 1988 to reduce Australian protection was taken when there was a global movement towards free trade. Another global influence on domestic economic policy in the 1980s was the deregulation of the Australian financial system in line with other OECD countries, which included the use of inflation targeting and a floating exchange rate mechanism to conduct a more effective monetary policy. The Australian government has also implemented policies similar to other OECD countries such as labour market and other microeconomic reforms (such as deregulation of

markets and the privatisation of public trading enterprises) to increase economic efficiency. Since the Global Financial Crisis in 2008-09, the G20, of which Australia is a member, has moved to establish global prudential standards under the Basel Accords (especially amongst major banks) and to strengthen the global financial architecture to prevent another damaging global financial crisis.

Political Constraints on Policy Implementation

The major political constraint on government policy implementation in a parliamentary democracy like Australia is that a major political party must firstly win sufficient public support for its policy platform at a federal election to form a federal government. This usually occurs if the party wins a majority of seats in the lower house or House of Representatives. New legislation can then be introduced by the government as a bill, but it must be passed by both houses of federal parliament to become law.

The government (usually either Labor or a Liberal-National Coalition) usually has a majority of seats in the House of Representatives but not always in the Senate, where the balance of power may be held by minor parties such as the Greens, Nick Xenophon Team, One Nation and Independents. Compromises or deals may need to be negotiated for important legislation to be passed by these minority parties. For example, in 2009 the government's Carbon Pollution Reduction Scheme (CPRS) was not passed by the Senate where the bill was opposed by the Greens, Independents and Opposition parties. The government separated the Renewable Energy Target from the CPRS to gain support for the bill. This strategy failed to win political support in the Senate and the CPRS policy was replaced by the decision in 2011 to introduce a carbon tax in 2012. Another example of a political constraint on the implementation of government economic policy was the opposition the Abbott government experienced in having unpopular measures in its May 2014 budget passed by the Senate where it did not have a majority.

To continue with a programme of economic reform an Australian government must be re-elected by gaining sufficient public support for its policy platform. This support is dependent on the public's perception of the government's record on economic management and the costs and benefits of new policies the government wishes to implement in the future, relative to the party platform of the Opposition parties. Governments and Oppositions planning to implement economic reforms must therefore gain electoral support by winning elections to implement their proposed economic reforms.

REVIEW QUESTIONS

LIMITATIONS ON POLICY IMPLEMENTATION

1. What are the trade-offs or conflicts that can arise between the simultaneous achievement of economic objectives by the government in the short and long runs?
2. What is meant by a policy lag? What is the policy formation lag? Explain the difference between the two parts of the policy formation lag.
3. Distinguish between inside and outside policy lags in the conduct of Australian economic policy.
4. Explain how the autonomous expenditure lag may arise.
5. Explain how the induced expenditure lag may arise. What is the price adjustment lag?
6. How do global influences such as changes in the world business cycle, financial flows and global economic policies affect the formulation and implementation of Australian economic policy?
7. Discuss the main types of political constraints in the Australian system of democratic government that can impact on the formulation and implementation of Australian economic policy.

AUSTRALIA'S RECENT ECONOMIC PERFORMANCE

An evaluation of the effectiveness of Australian government policy responses in achieving key economic objectives can be undertaken by comparing Australia's recent economic performance between 2002 and 2017 with the major seven countries or G7 in the OECD group (i.e. the USA, Japan, Germany, the United Kingdom, France, Italy and Canada). The following analysis compares Australia's economic performance with the OECD's major seven countries (OECD 7), which are market economies, with similar levels of economic development and democratic systems of government to Australia.

Economic Growth and the Quality of Life

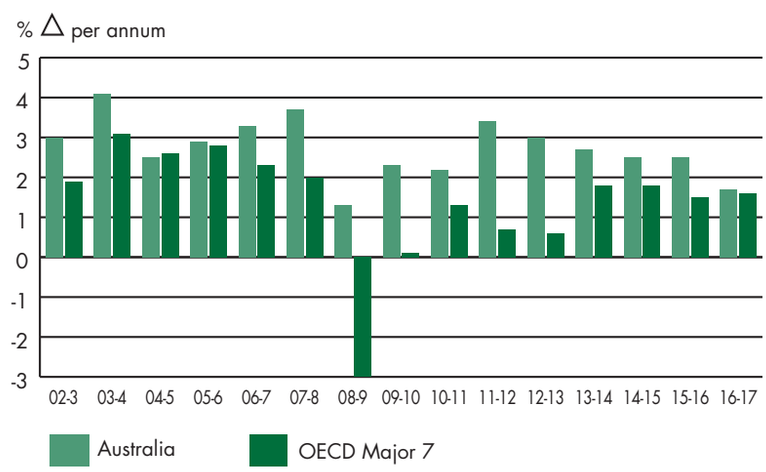
Australia recorded 26 years of consecutive economic growth between the recession of 1990-91 and 2017. The Australian government used expansionary monetary and fiscal policies between 1990 and 1993 to stimulate economic growth after the 1990-91 recession. Growth in GDP was 3.7% in 1992-93, higher than the OECD 7 average of 1.6%. Productivity rose strongly in the 1990s leading to increases in per capita income and the quality of life. Australia's average annual growth rate of 3.8% between 1995 and 2008 was higher than the OECD Major 7's average rate of growth of 2.5% in the same period.

The Reserve Bank eased monetary policy in 2001 to support growth as a US recession caused a global slowdown. Growth recovered to 3.8% in 2001-02 from a low of 1.9% in 2000-01. However growth slowed in 2004-05 to 2.7%, as Australia reached full employment and capacity constraints emerged. A drought in 2005-06 kept Australia's growth rate at 2.9%, which was about the OECD 7's average.

In 2006-07, strong domestic demand and a rising terms of trade sourced from a global resources boom, led to growth of 3.3% in Australia, above the OECD 7's average of 2.3%. Growth stayed above trend at 3.7% in 2007-08 (compared to the OECD 7's average of 2%), but fell to 1.3% because of the Global Financial Crisis in 2008-09. The GDPs of the OECD 7 contracted in 2008-09 by an average of -3% as they experienced deep recessions (refer to **Figure 18.1**). The Australian government used monetary and fiscal stimulus in 2008-09 to support economic and employment growth and to avoid a recession.

In 2009-10 Australia grew by 2.3% as exports to China recovered, whilst the OECD 7 grew by only 0.1% due to the European Sovereign Debt Crisis and slow US growth of 2%. In 2010-11 slower world growth and a 'two speed' economy limited Australia's growth to 2.2%, higher than the 1.3% average growth of the OECD 7. Australia grew by 3% in 2011-12 and 2012-13 whilst OECD 7 growth slowed to just 0.7%. In 2013-14 Australia recorded 2.7% growth and a recovery in the OECD 7 economies led to 1.8% growth. Australia transitioned to non mining sources of growth between 2014 and 2017 with lower growth of 1.7% in 2017, slightly higher than the OECD 7's 1.6% average growth rate.

Figure 18.1: Real GDP Growth for Australia and the OECD Major Seven 2002-2017



Source: OECD - Statistics (2017), www.oecd.org.

Full Employment

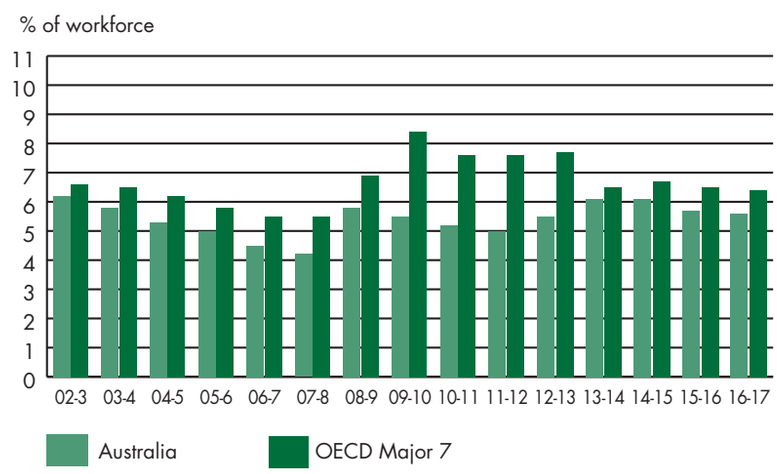
The Australian government has experienced difficulty in achieving the objective of full employment since the unemployment rate peaked after the 1991 recession at 10.7% in 1992-93 despite the government's use of expansionary monetary and fiscal policies. The unemployment rate took six years to fall to 7.4% in 1998-99 despite the use of expansionary macroeconomic policies and strong economic growth. The relative ineffectiveness of macroeconomic policies in reducing unemployment, led the Australian government to placing more emphasis on labour market reforms to reduce unemployment. These policies targeted structural rigidities in the labour market such as rigid work practices; the imperfect flow of information between job seekers and employers; and the regulation of award wages.

The Howard government's reforms in the late 1990s included greater emphasis on enterprise bargaining (under the *Workplace Relations Act 1996*), and improved workplace practices through education and training to increase the flexibility of the labour market and the productivity of labour. The Howard government also introduced new policies like the Job Network; the Work for the Dole Scheme; incentives for small businesses to employ new workers; and education and training programmes to raise skills.

Higher rates of economic growth between 2003 and 2008 resulted from strong growth in domestic demand, and the stimulus to national income from the higher terms of trade sourced from the global resources boom in 2006-07. This led to strong annual employment growth of around 2% and a fall in the unemployment rate. As illustrated in **Figure 18.2**, the annual rate of unemployment in Australia averaged 6% between 2002 and 2009 compared to the OECD 7 average of 6.3%. In 2005-06 the unemployment rate fell to 5% and by 2007-08 to an historic low of 4.2%, well below the OECD 7's average of 5.5%. The achievement of lower unemployment rates between 2005 and 2008 was a result of sustained economic growth, the resources boom and continuous labour market reforms.

In 2008-09 economic growth slowed to 1.3% because of the Global Financial Crisis, and the unemployment rate rose from 5.2% to 5.8%. This was below the average unemployment rate of 6.9% in the OECD 7 as they experienced recessions. The Australian government used expansionary monetary and fiscal policies to support economic and employment growth in 2008-09. Economic recovery in Australia in 2009-10 led to 2.3% GDP growth, with the unemployment rate falling to 5.5%, lower than the average unemployment rate of 8.4% in the OECD 7. In 2010-11 Australia's unemployment rate was 5.2% compared to an average 7.6% in the OECD 7. The unemployment rate rose from 5.1% to 5.5% in Australia between 2011-12 and 2012-13 due to slower growth, but was still below the OECD 7's average unemployment rate of 7.7%. Between 2013-14 and 2014-15 Australia's unemployment rate rose from 5.5% to 6.1% but fell to 5.6% in 2017, well below the OECD 7 average of 6.4%.

Figure 18.2: Unemployment Rates for Australia and the OECD Major Seven 2002-2017



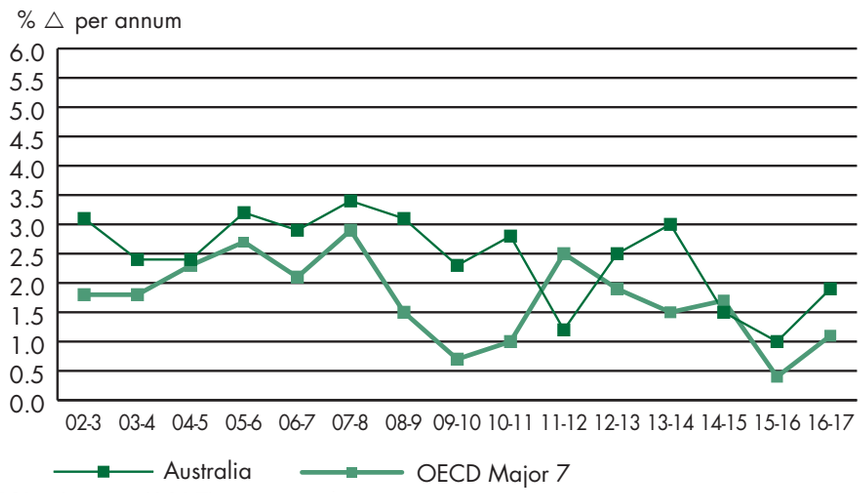
Source: OECD - Statistics (2017), www.oecd.org.

Price Stability

The successful control of inflation and the achievement of price stability has been a major feature of the conduct of Australian economic policy between 2002 and 2017. Apart from periodic rises in CPI and underlying inflation above 3% during the resources boom period in 2007-08, Australia's average inflation rate of 2.7% was slightly above the average of the OECD 7 (2%) between 2002 and 2017 as illustrated in **Figure 18.3**. This was largely due to the more effective conduct of monetary policy with the adoption of inflation targeting in 1993, which has helped to contain inflationary expectations. The inflation target has been formalised as an operational objective for the conduct of monetary policy in successive *Statements on the Conduct of Monetary Policy* (1996, 2003, 2006, 2010, 2013 and 2016). The Reserve Bank's achievement of the 2% to 3% consumer price inflation target on average over the economic cycle has helped to contain inflation, and anchor inflationary expectations in Australia.

Microeconomic policies such as the spread of enterprise bargaining in the labour market; the introduction of the national competition policy in 1995; and cuts in protection in the 1980s, 1990s and 2000s have also helped to reduce inflation pressures in the Australian economy. The impact of technological change and the process of globalisation have also led to a reduction in costs and prices in the world economy, leading to lower import prices of ICT and manufactured goods for Australian consumers and businesses.

Figure 18.3: CPI (All items) for Australia and the OECD Major Seven 2002-2017

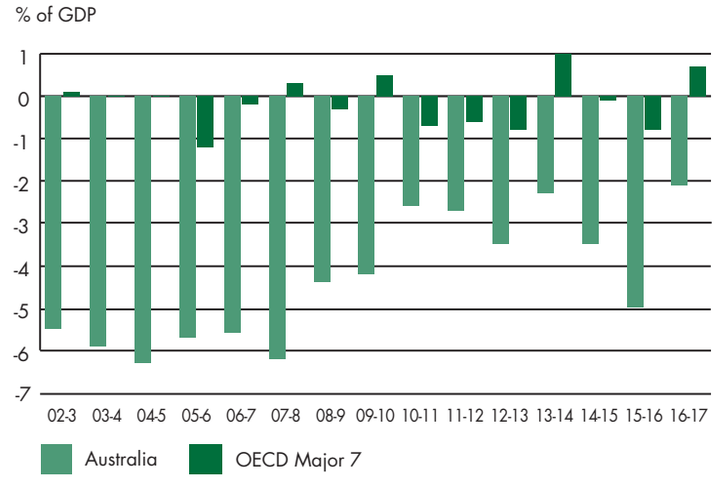


Source: OECD - Statistics (2017), www.oecd.org

Threats to achieving price stability emerged in 2002-03 with higher food prices due to drought and higher housing costs due to the housing boom. CPI inflation rose in 2002-03 to 3.1%, but higher interest rates cut CPI inflation to 2.4% in 2004-05. In 2005-06 higher CPI inflation of 3.2% was due to strong wages growth, higher oil prices, and capacity constraints. The Reserve Bank raised interest rates in 2006 as the economy approached full employment and CPI inflation was above its target band of 2% to 3%. CPI inflation was 2.9% in Australia in 2006-07, higher than the OECD 7 average of 2.1%. The Reserve Bank lifted the cash rate to 7.25% between 2007 and 2008 to contain CPI inflation.

In 2009-10, inflation in Australia fell to 2.3%, due to slower growth caused by the Global Financial Crisis. Average inflation fell to 0.7% in the OECD Major 7 countries as they experienced recessions. CPI inflation rose to 2.8% in Australia in 2010-11 due to higher food prices caused by natural disasters, whilst low economic growth in the OECD Major 7 economies led to average inflation rates of 1%. Between 2011-12 and 2012-13 inflation was 2.5% in Australia, whilst in the OECD 7 it averaged 2% because of weak economic growth. In 2013-14 CPI inflation rose to 3% in Australia as monetary policy was eased to support growth. Lower world oil prices and below trend growth of 2.5% in 2014-15 helped to cut inflation to 1.5% in Australia, lower than the OECD 7's average of 1.7%. In Australia in 2016-17 CPI inflation was 1.9%, compared to the OECD 7 average of 1.1%. Both Australia and the OECD 7 experienced deflationary pressures due to below trend growth and falling commodity prices.

Figure 18.4: Balance on Current Account for Australia and the Major OECD Seven 2002-2017



Source: OECD - Statistics (2017), www.oecd.org

External Stability

In terms of achieving external stability, Australia's performance was below the OECD 7 average between 2002 and 2017. The current account deficit averaged -3.8% of GDP in this period compared to the OECD 7 average surplus of 0.3% of GDP (refer to **Figure 18.4**). This meant that Australia, like the USA, Canada and the UK relied on overseas savings to fund persistent current account deficits, whereas the OECD 7 on average were running current account surpluses (e.g. Japan, Germany and Italy) or much smaller current account deficits (e.g. France, the UK and USA). Australia consequently has a large stock of net external debt and external liabilities which create a large servicing cost, adding to the size of the net primary income deficit and the debt servicing ratio. Monetary policy has been used to control the size of the current account deficit when it becomes unsustainable at more than -5% of GDP. Higher interest rates were used between 2004 and 2008 to limit the growth in domestic demand which led to higher inflation, increased import spending and a larger goods deficit in the balance of payments.

Fiscal policy has been used in the medium term to achieve budget surpluses, raise national savings, and to retire Commonwealth government debt. This has helped to contain the size of the current account deficit. However Australia's national savings are insufficient to fund all of national investment, so there is a continuing reliance on borrowing foreign savings to finance much of domestic investment. Overseas debt and equity borrowings increased during the resources boom period between 2003 and 2008 to finance many investment projects in the mining and resources sector.

The current account deficit reached -6.5% of GDP in 2007-08 because of a larger trade deficit and net primary income deficit. A consequence of Australia's lack of external stability in the balance of payments, is that the exchange rate has experienced periods of volatility caused by negative exchange rate expectations. The exchange rate has tended to experience a long run depreciation which has assisted export competitiveness, but can also be a potential source of imported inflation. Although the current account deficit widened during the high growth period of the resources boom, the exchange rate tended to appreciate as it was in high demand due to rising commodity prices and the boom in mining exports.

The achievement of budget surpluses and the retirement of Australian government debt in 2005-06, led to the view that the size of the current account deficit was a result of private saving and investment decisions. The resources boom between 2003 and 2008 led to an upsurge in private investment which helped to stimulate exports. At the same time, the household saving ratio rose, helping to raise national saving. An improved trade performance between 2010-11 and 2011-12 led to trade surpluses, helping to reduce Australia's current account deficit to -2.6% of GDP. Slower world growth between 2012 and 2016 led to trade deficits and a larger current account deficit of -4.7% of GDP in 2015-16. However the current account deficit fell back to -1.9% of GDP in 2016-17 due to an improved trade performance.

The Distribution of Income and Wealth

A comparison of Australia's distribution of income with the OECD Major Seven can be made from the data in **Table 18.1** which is based on national income surveys in the 2000s. A comparison of the Gini Index shows that Australia (0.34) has a greater level of income inequality than all Major OECD 7 countries except for Italy (0.35) and the USA (0.41). The shares of total income accounted for by the poorest 10% and poorest 20% of the population in Australia were less than for all OECD Major 7 countries except for the USA and Italy. The richest 10% and richest 20% of the Australian population had higher shares of total income than in all OECD Major Seven countries except for the USA. The ratio of the income share of the richest 20% of the Australian population to the poorest 20% of the population was 5.9, the third highest after the USA (9.0), and Italy (6.7).

The distribution of market income became more unequal in Australia in the 1990s and 2000s compared to the 1980s (especially in the low and middle incomes), but targeted and means tested welfare assistance such as age pensions, Job Search Allowances, Family Tax Benefits, and the system of progressive taxation have offset some of the rise in the inequality of the distribution of market income in the 2000s. Income tax cuts in *The New Tax System* in 2000 and in all budgets between 2001 and 2012 helped to reduce the tax burden on all income groups, but especially low and middle income earners.

For example, in the 2008-09 federal budget the Rudd government introduced a ***Working Families Support Package*** designed to help working families to cope with increased cost of living pressures. The package contained personal income tax cuts; assistance to low and middle income earners through an increase in the Low Income Tax Offset; an increase in the Child Care tax rebate; and a new Education Allowance to help with the cost of educating children. These fiscal measures were aimed at providing tax relief and reducing the incidence of poverty traps amongst low income households with children.

Australia has a much stronger social safety net (including the National Minimum Wage and Employment Standards) than other OECD countries, which helps to reduce inequality in the distribution of income. Under the *Fair Work Act 2009* the Fair Work Commission oversees the ten minimum National Employment Standards, the modernisation of awards and conducts annual adjustments to the National Minimum Wage for the low paid. The Fair Work Commission also has responsibility for approving collective enterprise agreements by subjecting them to a Better Off Overall Test. However wages growth slowed to 1.9% in 2016-17 and there was an increase in wage inequality due to the increasing casualisation of work through the growth in part time and casual employment in the labour market.

Table 18.1: Distribution of Income Shares for Australia and the Major OECD Seven

Country	*Survey Year*	*Poorest 10%*	*Poorest 20%*	*Richest 20%*	*Richest 10%*	*Gini Index*	*Ratio of Income Share of the Richest 20% to the Poorest 20%*
Australia	2010	2.6	7.1	42.2	26.5	0.34	5.9
Canada	2010	2.7	7.1	41.0	25.7	0.33	5.7
France	2012	3.1	7.8	41.2	26.8	0.33	5.2
Germany	2011	3.4	8.4	38.6	23.7	0.30	4.6
Italy	2012	1.9	6.2	41.7	26.3	0.35	6.7
Japan	2008	2.7	7.4	39.7	24.8	0.32	5.4
UK	2012	2.9	7.5	40.1	24.7	0.32	5.3
USA	2013	1.7	5.1	46.4	30.2	0.41	9.0

Source: World Bank (2017), *World Development Indicators 2017*, Washington DC. Table 1.3.

Environmental Sustainability

There are both national and global contexts for the Australian government in achieving environmental sustainability. At national and state levels, the federal and state governments are responsible for environmental protection in Australia. This includes protection and conservation of biodiversity, national parklands, water resources, natural and cultural places of significance, and assessment and approvals for the use of natural resources such as mineral and gas deposits, agricultural land, water and forests. The federal, state and territory governments use a combination of regulations and legislation (known as command and control instruments) and market based instruments (such as emissions trading schemes) to manage and conserve environmental resources and achieve environmental sustainability.

Regulations

The federal Department of Environment and Energy administers the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC). The EPBC Act focuses Australian government interests on the protection of matters of national environmental significance such as climate change, coastal and inland waterways, Antarctica, chemical and hazardous wastes, international whaling, ozone layer protection, wetlands, meteorology, world heritage areas, biodiversity, threatened species, national parks, trade in endangered wildlife, and the conservation and ecologically sustainable use of natural resources.

At the state level, the NSW Office of Environment and Heritage administers various acts of the NSW parliament concerning the environment. The *Protection of the Environment Operations Act 1997* is administered by the Environmental Protection Authority (EPA). This Act establishes the environmental regulatory framework and includes a licensing requirement for activities such as mining, agriculture, industrial and commercial development. Environmental protection licences are issued by the EPA to control pollution and protect, restore and enhance the quality of the environment in NSW.

Market Based Policies

A range of market based policies are used by the federal, state and territory governments to encourage environmentally sustainable development. These are known as market based economic instruments because they utilise the forces of demand and supply to change market economic behaviour and include:

- Pollution charges, licences and taxes;
- The use of emission permits in a system of emissions trading known as the carbon market;
- Tradable fishing quotas;
- Incentives such as rebates and tax deductions for the recycling of non renewable resources;
- Private management of public nature reserves;
- Incentives to manage eco-tourism activities;
- Pricing policies for the use of environmental resources such as fees and licences;
- Education campaigns for a cleaner environment including waste management; and
- Taxation incentives for the use of green technologies (e.g. solar power) and 'green' products.

Emissions trading is the best example of a market based scheme for environmental protection. It encourages parties to buy and sell emission permits or credits for reducing the emissions of certain pollutants. Emissions trading allows established emission goals to be met in the most cost effective way by letting the market determine the lowest cost means of pollution abatement. Under such a scheme, the environmental regulator first determines total acceptable emissions (emissions target) and divides this total into tradeable units. These units are then allocated to scheme participants. Participants that emit pollutants must obtain sufficient tradeable units to compensate for their emissions. Those that reduce emissions may have surplus units they can sell to others that find emissions reduction more expensive or difficult. Emissions trading offers advantages over regulation in improving environmental outcomes and minimising the cost of pollution reduction for polluters and their polluting activities.

Environmental Targets

The Australian government announced a Renewable Energy Target in the 2008-09 budget which was to achieve 20% of electricity generation from renewable sources by 2020. The Rudd government also announced a $12.9b national water policy framework in the 2008-09 budget, *Water for the Future*, with plans to address urban and rural water challenges. In the 2012-13 budget the Gillard government introduced a carbon tax of $23 per tonne on large polluting companies from July 1st 2012. The aim was to reduce Australia's emissions by 5% on 2000 levels or 160m tonnes by 2020 and 80% by 2050. The carbon tax was repealed in July 2014 by the Abbott government. It used a policy of Direct Action in 2014-15 based on a $2.55b **Emissions Reduction Fund** to pay companies to reduce their carbon emissions through a bidding process to achieve the government's Emissions Reduction Target of 26%-28% on 2005 levels by 2030. It also set a **Renewable Energy Target** in 2015 of 23.5% by 2020. In 2017 the *Finkel Review* of Australia's electricity market argued for the adoption of a Clean Energy Target.

International Agreements

The Australian government is a signatory to the following global environmental conventions:

- The UN Montreal Protocol to limit CFC emissions to protect the ozone layer;
- The UN World Heritage Convention to protect World Heritage areas;
- The UN Framework Convention on Climate Change (UNFCCC);
- The UN Ozone Layer and Biological Diversity Conventions;
- The UN Antarctic Treaty and the UN Law of the Sea Treaty; and
- The UN Kyoto Protocol to limit carbon emissions into the atmosphere.

The Rudd Labor government ratified the **Kyoto Protocol** to limit CO_2 emissions at the UN Framework Convention on Climate Change (UNFCCC) in Bali in December 2007. The Rudd government committed Australia to reducing carbon pollution to 25% below 2000 levels by 2020 if the world agreed to stabilising the levels of greenhouse gases at 450 parts per million CO_2 or equivalent. However an agreement was not forthcoming at the UNFCCC Copenhagen Conference in 2009 as there was disagreement between major advanced, emerging and developing countries (such as the USA, China and India) over the adoption of emissions targets and the timetable for their introduction.

Under the auspices of the UNFCCC in Paris in December 2015, 195 advanced and emerging countries including Australia agreed to adopt economy wide targets to reduce greenhouse gas emissions under a new Kyoto Agreement to start from 2020. Known as the **Paris Agreement**, the aim of the new Kyoto Agreement is to cut global greenhouse gas emissions and to stabilise global warming below 2 degrees Celsius by 2100. The Turnbull government's Emissions Reduction Target at the Paris Agreement was to cut emissions by 26%-28% on 2005 levels by 2030. This was lower than the emissions reduction targets announced by Britain (50%), Germany (46%), the USA (43%) and the European Union (33%). The signing of the Paris Agreement was historic because of the involvement of China and India and other emerging countries who agreed to take action on climate change with advanced countries. However US President Donald Trump refused to commit to the Paris Agreement at the G20 Summit in 2017.

The Kyoto Protocol

The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change (UNFCCC). The Kyoto Protocol set binding targets for 37 industrialised countries and the European Union to reduce their greenhouse gas emissions by 2012. These were an average of 5% against 1990 levels between 2008 and 2012. The major distinction between the Kyoto Protocol and the UNFCCC is that the Kyoto Protocol commits signatories to reducing their emissions, whilst the UNFCCC encourages industrialised countries to reduce their emissions voluntarily. The UNFCCC argues that the industrialised countries are principally responsible for the current high levels of greenhouse gas emissions in the atmosphere as a result of more than 150 years of industrial development. The Kyoto Protocol places a heavier burden on advanced countries to reduce their emissions under the principle of 'common but differentiated responsibilities'.

At the UNFCCC meeting in Copenhagen, Denmark in 2009 the basis for a new Kyoto Protocol agreement was discussed. In 2011 at the UNFCCC meeting in Durban, 90 countries pledged to cut their carbon emissions. Under the current Kyoto Protocol an international carbon market already exists, but a new expanded agreement would allow emissions trading schemes to be linked globally. A new Kyoto Protocol would contain new market based mechanisms for reducing carbon emissions:

- A system of emissions trading known as the carbon market;
- The clean development mechanism for developing alternatives sources of energy; and
- Programmes for the joint implementation of measures to reduce carbon emissions.

In 2015 at the Paris Conference of the UNFCCC there was broad consensus amongst advanced and emerging countries who offered voluntary emissions reduction targets to reduce global warming by 2^0C.

Australia's Environmental Performance

The environmental indicators in **Table 18.2** show that Australia had higher per capita CO_2 emissions and more endangered species than in all OECD Major Seven countries except for the USA. Although Australia has large water resources, it is also a country and a continent more afflicted by drought than the OECD Major Seven countries and therefore has a major issue with water security. Successive Australian governments have tried to deal with this problem by creating national water markets to price water according to its scarcity in relation to demand, and by implementing the Murray-Darling Basin Plan (2013) to reduce water use for irrigation and restore the health of this major inland river system.

As a large producer and net exporter of energy resources such as coal and oil, the Australian government committed itself to reducing greenhouse gas emissions by ratifying the Kyoto Protocol in 2007 and announced plans in 2013 to implement an emission trading scheme by 2014. This scheme would replace the $23 a tonne carbon tax which was introduced on July 1st 2012. The aim was to reduce Australia's emissions by 5% on 2000 levels or 160m tonnes by 2020 and 80% by 2050.

The Abbott led Coalition won the federal election in 2014 and adopted a very different environmental policy to the previous Labor government. It repealed the carbon tax on July 17th 2014 and introduced a Direct Action Plan, based on a $2.5b Emissions Reduction Fund. This Fund was to be used to achieve an Emissions Reduction Target of 26%-28% on 2005 levels by 2030 by allocating taxpayers' funds for emissions reduction activities in major polluting industries in Australia.

Table 18.2: Environment Indicators for Australia and the OECD Major Seven

Country	*Freshwater Resources 2014 (Cu. Metres pc)*	*Annual Deforestation (% 2000-15)*	*Protected Areas (% of total land 2014)*	*CO_2 Emissions (pc metric tonnes 2013)*	*Biodiversity 2016 (mammal and bird species threatened)*
Australia	20,971	-0.21	14.6	16.3	113
Canada	81,181	-0.01	9.4	13.5	29
France	3,015	-0.71	25.3	5.0	22
Germany	1,321	-0.04	37.4	9.4	16
Italy	3,002	-0.70	21.5	5.7	22
Japan	3,378	-0.02	19.4	9.8	70
UK	2,244	-0.42	28.4	7.1	13
USA	8,846	-0.14	13.9	16.4	112

Source: World Bank (2017), *World Development Indicators 2017*, Washington DC. Tables 3.4 and 3.8.

REVIEW QUESTIONS

AUSTRALIA'S RECENT ECONOMIC PERFORMANCE

1. Explain why it is appropriate to compare Australia's recent economic performance with the OECD Major Seven countries.

2. Describe and account for Australia's economic growth performance in relation to the OECD 7 between 2002 and 2017. Refer to Figure 18.1 and the text in your answer.

3. Describe and account for Australia's slow progress in reducing the rate of unemployment between 1995 and 2005 compared to the OECD 7. Refer to Figure 18.2 in your answer.

4. Discuss the government policies which helped to reduce Australia's unemployment rate between 2005 and 2008. Why did the unemployment rate remain high in the OECD in 2016-17?

5. Why has Australia generally achieved comparable inflation outcomes to the OECD 7 between 2002 and 2017? Refer to the trends in Figure 18.3 in your answer.

6. Why did inflationary pressures emerge in Australia between 2005 and 2008?

7. Contrast Australia's current account balance between 2002 and 2017 with the OECD 7. Refer to the trends in Figure 18.4 in your answer.

8. Discuss government policies that have been used to reduce Australia's current account deficit.

9. How does Australia's distribution of income compare to the OECD 7? Refer to Table 18.1 in your answer.

10. What policies has the Australian government used to reduce inequality in the distribution of income?

11. Distinguish between regulations (command and control) and market based policies to achieve environmental sustainability in Australia.

12. Discuss Australian government policies used to achieve environmental sustainability.

13. Discuss the use of environmental targets and international agreements to achieve environmental sustainability in Australia.

14. Discuss the main features of the Kyoto Protocol and the role of advanced and developing countries in negotiating the Paris Agreement in 2015.

15. Refer to Table 18.2 and compare Australia's environmental record with the OECD 7.

16. How has Australia contributed to global efforts to address environmental issues?

17. Define the following terms and add them to a glossary

economic growth	industrial relations policy
economic objectives	inflation
economic performance	macroeconomic policies
environmental sustainability	microeconomic policies
external stability	monetary policy
fiscal policy	policy lags
full employment	price stability
income distribution	unemployment

CHAPTER 18: SHORT ANSWER QUESTIONS

Economic Indicator	*Year*	*Australia*	*Canada*
Inflation (%Δ p.a.)	2016-17	1.9	1.2
Unemployment (% of workforce)	2016-17	5.6	6.9
Economic growth (%Δ in real GDP)	2016-17	1.7	1.4
Current Account to GDP ratio (%)	2016-17	-2.1	-3.6
Gini Index (ranked by pc income)	Survey year 2010	0.34	0.33

Refer to the table above of economic indicators for Australia and Canada in 2016-17 and answer the questions below. Source: OECD Statistics (2017), www.oecd.org Marks

1. What is meant by internal balance? (1)

2. Discuss ONE economic policy that has been used to reduce unemployment in Australia. (1)

3. Compare internal balance between Australia and Canada in 2016-17. (2)

4. Compare external balance between Australia and Canada in 2016-17. (2)

5. Discuss TWO government policies used to reduce income inequality in Australia. (4)

CHAPTER FOCUS ON AUSTRALIA'S ECONOMIC PERFORMANCE

Relative Economic Performance of Australia and the OECD Major Seven in 2016-17

Economic Indicator	*Australia*	*OECD Major Seven av.*
Real GDP growth rate (annual % change)	1.7%	1.6%
Inflation rate (annual % change)	1.9%	1.1%
Unemployment rate (% of the workforce)	5.6%	6.4%
Current Account Balance (% of GDP)	-2.1%	0.7%

NB: The OECD stands for the Organisation for Economic Co-operation and Development. The OECD Major Seven countries are the United States of America, Japan, Germany, the United Kingdom, France, Italy and Canada.

Source: OECD - Statistics (2017), www.oecd.org

Use evidence from the table to compare and contrast Australia's economic performance (in terms of trends in economic growth, inflation, unemployment and external balance) with the OECD Major Seven countries in 2016-17.

CHAPTER 18: EXTENDED RESPONSE QUESTION

Evaluate the effectiveness of Australian government economic policies between 2002 and 2017 in achieving the objectives of economic growth, internal balance and external balance.

CHAPTER SUMMARY

AUSTRALIA'S ECONOMIC PERFORMANCE

1. A number of limitations can influence the Australian government's ability to achieve the economic objectives of economic growth, price stability, full employment and external balance. These include trade-offs or conflicts between the various objectives in the short and long runs, and changes in the world economy and global economic policies which can impact on the conduct of domestic economic policy.
2. Apart from the objectives of economic growth, and internal and external balance, the Australian government also tries to achieve a reduction in the inequality of the distribution of income and wealth, and ecologically sustainable development (ESD) by preserving the natural environment for use by current and future generations.
3. A number of policy lags occur because of the time that elapses between changes in economic policies and their effects on real economic activity. These include the policy formation lag, the autonomous expenditure lag, the induced expenditure lag and the price adjustment lag.
4. There are also global influences that can impact on the effectiveness of Australian economic policy such as the impact of the process of globalisation, financial deregulation and capital mobility, and changes in the world business cycle, trade and investment flows and global economic policy.
5. The Australian government is also constrained in its ability to change its economic policy framework by the political process, in terms of electoral and parliamentary support for its policy platform and intended legislation. This is especially the case when it does not have a majority in the Senate.
6. In terms of Australia's recent economic performance the following trends are evident:
   - Australia sustained a rate of economic growth of about 3.5% in annual terms between 2002 and 2017, outperforming the OECD Major Seven economies.
   - Until 2008 when the unemployment rate fell to 4.2%, Australia recorded an average unemployment rate of 7% between 1999 and 2008, substantially higher than the OECD Major Seven's average of 6.3%. However unemployment fell from 5.8% to 5.5% after the Global Financial Crisis whilst unemployment averaged 8.4% in the OECD Major Seven.
   - The successful containment of inflation has been a major feature of the conduct of Australian economic policy over 2002-2017, with average inflation of 2.7% in this period, slightly above the average of 2% recorded by the OECD Major Seven countries in the same period.
   - In terms of external stability Australia's performance was lower than OECD Seven standards between 2002 and 2017. Australia's current account deficit averaged -3.8% of GDP compared to the OECD Seven's average surplus of 0.3% of GDP between 2002 and 2017.
7. Other indicators of Australia's recent economic performance include trends in the distribution of income and wealth, and the extent to which ecologically sustainable development has been achieved through management of the natural environment.
8. A comparison of Australia's distribution of income with the OECD Major Seven countries reveals greater inequality in Australia than most of these countries except for the USA and Italy.
9. In terms of ecologically sustainable development, Australia has environmental problems such as carbon pollution, environmental degradation, deforestation and the loss of biodiversity as other OECD Major Seven countries. In particular Australia has high per capita carbon dioxide emissions which add to greenhouse gases and contribute to global warming. This is largely a result of the widespread use of fossil fuels like coal and oil as energy sources in Australia. The Australian government ratified the Kyoto Protocol in 2007 and introduced a carbon tax of $23 per tonne on July 1st 2012 and intended to introduce an emissions trading scheme in 2014 to reduce CO_2 emissions. However the election of the Abbott Coalition government in 2013 led to the repeal of the carbon tax and the adoption of a new policy of Direct Action to reduce carbon emissions.

GLOSSARY OF TERMS

AANZFTA:	ASEAN-Australia-New Zealand Free Trade Area Agreement
ABS:	Australian Bureau of Statistics
absolute poverty:	where an income unit is unable to achieve a basic standard of living
ACCC:	Australian Competition and Consumer Commission
accrual accounting:	accounting for changes in economic value over time in the federal budget
ACL:	Australian Competition Law
ACT:	Australian Competition Tribunal
action lag:	time between the recognition of an economic problem and the implementation of a government economic policy response
ACTU:	Australian Council of Trade Unions
adjustable peg:	exchange rate adjusted in terms of another currency or the TWI
advanced economies:	market economies with high levels of industrialisation and per capita incomes
AFTA:	ASEAN Free Trade Agreement
aggregate demand (AD):	the total level of spending in an economy (AD = C + I + G + X – M)
aggregate supply (AS):	the total output of goods and services in an economy (AS = C + S)
AIEs:	advanced industrialised economies
allocative efficiency:	where price equals the marginal cost of production in microeconomics
ANZCERTA:	Australia New Zealand Closer Economic Relations Trade Agreement
APEC:	Asia Pacific Economic Co-operation
appreciation:	increase in the relative purchasing power of a currency
APRA:	Australian Prudential Regulation Authority
arbitration:	a third party makes a binding decision on the parties to an industrial dispute
ASEAN:	Association of South East Asian Nations (10 member countries)
Asian financial crisis 1997:	capital outflows and exchange rate depreciations in some Asian NIEs due to loan defaults and a loss of foreign investor confidence
ASIC:	Australian Securities and Investments Commission
asset prices:	prices of financial assets such as real estate, shares and bonds
automatic stabilisers:	the systems of progressive taxation and unemployment benefits which offset fluctuations in the business cycle
autonomous consumption:	consumption spending independent of income
autonomous expenditure lag:	the time between the implementation of a government policy response and its effects on autonomous expenditure (i.e. expenditure independent of income)
autonomous exports:	exports independent of changes in national income
autonomous imports:	imports independent of changes in national income
autonomous investment:	investment spending independent of changes in national income
autonomous spending:	spending independent of changes in national income
AWA:	Australian Workplace Agreement - individually negotiated by an employee with an employer (now prohibited under the *Fair Work Act 2009*)
award safety net:	system of annual adjustments to federal minimum award wages
award:	a legally binding agreement covering wages and conditions of employment for particular occupations or industries or types of work
AWOTE:	Average Weekly Ordinary Time Earnings
balance of payments:	record of transactions between the residents of a country and the rest of the world
balanced budget:	where government revenue (T) equals government expenditure (G) i.e. G = T
bandwagon effect:	a speculative movement in relation to a currency's value
Better Off Overall Test (BOOT):	test applied by the Fair Work Commission to enterprise agreements
bilateral exchange rate:	exchange rate between two currencies such as the Australian dollar/$US
biodiversity:	extent of plant and animal species in an ecosystem
Bogor Declaration:	in 1994 APEC members agreed to achieve free trade by 2020
boom:	upper turning point of the business cycle
bounty:	cash payment made on a per unit basis to a producer to increase supply
bracket creep:	the effect of inflation on money incomes, forcing taxpayers into higher tax brackets and the payment of higher MTRs and levels of taxation (tax burden)
Brexit:	majority referendum vote in 2016 by Britain to leave the European Union
BRICs:	large emerging economies of Brazil, Russia, India and China
budget deficit:	a situation where government spending exceeds government revenue (G > T)

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budget surplus:	where government revenue exceeds government expenditure (G < T)
budget:	estimate of government revenue and expenditure for the financial year
business cycle:	changes in the level of economic activity or real GDP over time
CAD to GDP ratio:	current account deficit as a percentage of GDP or national output
CAD/FD cycle:	situation where persistent CADs are financed by foreign debt leading to a higher net primary income deficit and CAD
Cairns Group:	group of agricultural free trading nations including Australia
CAP:	Common Agricultural Policy used in the European Union
capital account:	records the balance of capital items associated with foreign aid, pensions and workers' remittances in the balance of payments
capital imports:	imports of machinery, equipment and other capital goods
Carbon Pollution Reduction Scheme (CPRS):	emissions trading scheme to reduce CO_2 emissions by 60% by 2050
carbon tax:	an indirect tax on carbon dioxide emissions
cash accounting:	accounting only for cash received or paid in the federal budget
cash market:	the market for the borrowing and lending of cash overnight
CDF:	World Bank's Comprehensive Development Framework
centralised wage determination:	wages determined by the AIRC and industrial tribunals
CET:	Common External Tariff imposed by the EU
CFCs:	chlorofluorocarbons
CGS:	Commonwealth Government Securities
circular flow of income model:	model of an economy's sectors and leakages and injections
climate change:	the rise in global temperatures caused by greenhouse gas emissions
COAG:	Council of Australian Governments
collective bargaining:	direct negotiation between employees and an employer over wages
commercialisation:	policy of getting PTEs to pay dividends to their government owners
commodity exports:	exports of agricultural and mineral resources
common property:	publicly owned resources shared by a large numbers of users
Commonwealth debt:	net liabilities of the federal government
comparative advantage:	where a nation is comparatively more efficient in production than another
competition:	market structure where there is more than one producer
competitive neutrality:	removal of PTE advantages to create a 'level playing field' between private and public sector businesses
composition of trade:	pattern of goods and services exported and imported by a country
conciliation:	a third party attempts to resolve an industrial dispute between the parties
conspicuous consumption:	consumption of luxuries to exhibit affluence, status or social position
consumption:	that part of income not saved (C = Y - S)
contagion:	spread of an economic downturn from one economy to another
contractionary monetary policy:	raising of the cash rate by the RBA to reduce inflation
core inflation:	underlying or trend inflation in the economy
corporatisation:	government policy of PTEs adopting private sector incentive structures
cost push inflation:	rise in the price level caused by a reduction in aggregate supply
Council of Financial Regulators:	Reserve Bank of Australia, APRA, ASIC and the Treasury
CPI:	Consumer Price Index
CPM:	Carbon Pricing Mechanism
crowding in:	where a budget deficit causes economic activity to increase and private investment to rise
crowding out:	debt financing of a budget deficit causes interest rates to rise and reduces private investment
currency swap:	arrangement to reverse a currency transaction at a date in the future
current account deficit to GDP ratio:	measure of sustainability of the current account deficit
current account deficit:	expenditure on goods, services and income overseas exceeds the receipt of income from such items from overseas
current account surplus:	export receipts from goods, services and income exceeds the expenditure on imports of these items from overseas
customs union:	countries agree to dismantle domestic trade barriers but erect a common external tariff against other countries
cyclical component of the budget:	changes in taxation revenue and/or government expenditure caused by changes in economic activity or national income

cyclical unemployment:	unemployment due to a deficiency in aggregate demand
debt financing:	issue of government securities to finance a budget deficit
debt servicing ratio:	percentage of export income paid in interest on the foreign debt
decentralised wage determination:	wages determined by a system of enterprise or workplace bargaining
deflation:	fall in the price level over time
deflationary gap:	a situation where the equilibrium level of income is less than the full employment level of income in an economy
demand pull inflation:	a rise in the price level caused by excess aggregate demand
demonstration effect:	rural–urban drift in LDCs caused by conspicuous consumption
depreciation:	loss of purchasing power of the exchange rate which may lead to higher import prices and inflation
deregulation:	removal of government regulations over markets
derivatives:	financial securities derived from primary security products
derived demand:	demand for productive inputs derived from the demand for final output
devaluation:	where a central bank alters a fixed exchange rate to reduce the value of its currency relative to others to increase export competitiveness
developed countries:	industrialised countries with high levels of real per capita income
developed economy:	an economy with high levels of per capita income
developing countries:	countries with low levels of industrialisation and low real per capita income
developing economy:	an economy with low levels of per capita income
development gap:	differences in real per capita income between advanced and developing economies
direct intervention:	central bank intervention (through buying or selling of foreign exchange) in the foreign exchange market to affect the value of the exchange rate
direct investment:	control of an overseas subsidiary by a domestic firm
direct quotation:	exchange rate quotation of the number of units of domestic currency needed to buy one unit of a foreign currency
direction of trade:	sources of imports and destinations of exports of a country
disposable income:	gross income minus taxation i.e. G (Y) - T = D (Y)
dissaving:	level of debt where consumption exceeds income (i.e. C > Y and S < 0)
distribution of income and wealth:	manner in which income and wealth are distributed according to income units or income quintiles in the population
distribution of income:	pattern of income shares for equal proportions of the population or income units
distribution of wealth:	pattern of wealth shares for equal proportions of the population or wealth units
Doha Round:	New round of WTO trade talks begun in 2001 in Qatar
dot.com boom:	growth in the IT sector and IT stocks in the USA in 2000
downswing:	decline in economic activity in the business cycle
duration of unemployment:	length of time of unemployment
dynamic efficiency:	producers alter output according to changes in consumer demand and technology over time
EB:	enterprise bargaining
EC:	European Community
ECB:	European Central Bank
ecologically sustainable development:	development that meets the needs of the current generation without reducing the ability of future generations to meet their needs
economic activity:	an economy's level of output, expenditure, income and employment
economic development:	structural changes in an economy leading to higher rates of economic growth and improvements in human development or living standards over time
economic growth rate:	rate of change in real GDP over time
economic growth:	increases in the real output of an economy as measured by changes in its real GDP over time
economic indicators:	statistical measures of a country's economic performance
economic integration:	process of removing trade barriers between countries
economic performance:	degree of achievement by a government of its economic objectives over time
economy in transition:	a former socialist economy in transition from a planned to a market economy
EEC:	European Economic Community

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EEP:	Export Enhancement Programme used by the USA to subsidise farm exports
effective rate of assistance:	percentage of domestic value added given in tariff or other assistance
emerging economies:	transition and developing economies achieving high rates of economic growth such as Brazil, Russia, India and China (BRICs)
emerging market economies:	developing economies and economies in transition to market capitalism
emissions trading:	system of tradable emission permits to reduce greenhouse gas emissions
EMTR:	effective marginal taxation rate
energy crisis:	rise in oil prices in the 1970s causing stagflation in the world economy
enterprise agreement:	workplace agreement between employees and employer(s)
enterprise bargaining:	a system of linking wage increases to productivity improvements in the workplace
environmental management:	how governments influence the use of natural resources and the effects on environmental quality
equilibrium income:	the level of income where saving equals investment (S = I) or aggregate demand equals aggregate supply (AD = AS)
equitable distribution of income:	a situation where shares of national income are distributed fairly amongst equal shares of the population
equity financing:	the use of equity instruments such as shares to finance a shortfall in income
equivalence scale:	formula used to adjust incomes in comparing incomes of different sized family or income units in the overall distribution of income
equivalent income:	income adjusted for different family types or household structures
EMU:	Economic and Monetary Union of 19 countries in the EU
ERM:	European Exchange Rate Mechanism
ESAs:	Exchange Settlement Accounts
ESD:	ecologically sustainable development
ETMs:	elaborately transformed manufactured goods
ETS	Emissions Trading Scheme
EU:	European Union
euro:	single standard currency used by 19 countries in the Euro Area
European sovereign debt crisis:	financial crisis in some Euro Area countries caused by large budget deficits
exchange rate expectations:	foreign exchange market's perception of a currency's expected value in the future relative to its present value
exchange rate intervention:	buying or selling of a currency by a central bank to achieve stability
exchange rate overshooting:	where a currency's value is above what fundamentals suggest it should be
exchange rate speculation:	buying and selling of currencies to make a profit
exchange rate undershooting:	where a currency's value is below what fundamentals suggest it should be
exchange rate volatility:	extent of variations in the value of an exchange rate over time
exchange rate:	the price of one currency in terms of another currency
expansionary monetary policy:	easing of the cash rate by the RBA to encourage economic growth
export base:	categories of goods and services exported
export credits:	income from the sale of exported goods
export price index:	measure of changes in export prices over time
exports:	goods and services sold in overseas markets
external balance:	achieving equilibrium in the balance of payments where X = M
external shock:	disturbance to a domestic economy from external or global sources
external stability:	goal of financing import expenditure with export income
externality:	unintended consequence of a private action on a third party
factor market:	market where the factors of production are traded such as labour and capital
Fair Work Act 2009:	industrial relations legislation that strengthened the safety net and created Fair Work Australia to regulate the national industrial relations system
Fair Work Commission:	body responsible for administering the formal industrial relations system
Fair Work Ombudsman:	body responsible for ensuring compliance with the *Fair Work Act 2009*
financial account:	record of direct, portfolio and other investment plus reserve assets and derivatives in the balance of payments
financial deregulation:	removal of direct regulatory controls by the Reserve Bank in 1983 over the banking and financial system
financial shock:	disturbance caused to a domestic economy by a change in a financial or monetary variable such as a fall in share prices or a rise in inflation
FIRB:	Foreign Investment Review Board
fiscal balance:	accrual accounting equivalent of the underlying cash balance in the budget
fiscal drag:	impact of inflation in raising tax revenue for the government

fiscal policy:	a government's use of taxation and spending to affect the level of economic activity, resource allocation and income distribution
FitzGerald Report:	report on national saving (1993)
five sector circular flow model:	macroeconomic model of the economy that includes households, firms, government, financial and overseas sectors
fixed exchange rate:	exchange rate system where the central bank sets the value of the exchange rate in relation to another currency such as the US dollar
floating exchange rate:	system of market determined exchange rates
foreign assets:	Australian claims on assets in the rest of the world
foreign debt cycle:	overseas borrowing to pay interest on past borrowings
foreign direct investment:	a domestic firm sets up or controls a foreign subsidiary
foreign equity investment:	investment by foreigners in Australian equities such as shares and options
foreign exchange market:	market where foreign currencies are bought and sold
foreign exchange:	holdings of foreign currencies
foreign liabilities:	claims by the rest of the world on Australian assets
forward market:	market for buying and selling currencies at a date in the future
free riders:	non paying users of a good or service
free trade area:	where trade barriers between countries in a region are removed
free trade:	international trade in the absence of protection by governments
frictional unemployment:	unemployment caused by workers being between jobs in the short term
FTA:	free trade agreement
full employment income:	equilibrium income coincides with full employment of the economy's resources
full employment:	situation where unemployment is at its natural rate
full time employment:	employment for more than 35 hours per week
G7:	USA, Japan, Germany, Italy, France, UK and Canada
G8:	USA, Japan, Germany, Italy, France, UK, Canada and Russia (now expelled)
G20:	G8 plus twelve other major advanced and emerging economies
GATS:	General Agreement on Trade in Services
GATT:	General Agreement on Tariffs and Trade
GDP:	Gross Domestic Product - the total value of domestic output in one year
GFC:	Global Financial Crisis (2008-09)
Gini co-efficient:	measure of income or wealth inequality
global financial crisis:	global credit squeeze caused by losses in the US financial sector in 2007-08
global economy:	sum of all countries in the world engaging in economic activity
global recession:	negative growth in global output, trade and capital flows in 2008-09
global resources boom:	rise in world growth and commodity prices between 2004 and 2008
global triad:	dominance of the USA, Japan, China, East Asia and the EU in global activity
globalisation:	process of economic integration leading to more open world markets and the customisation of products, services and technology on a global basis
GNE:	Gross National Expenditure which equals C + I + G
GNP:	Gross National Product - domestic output plus exports i.e. C + I + G + X
goods balance:	difference of goods credits and goods debits in the balance of payments
goods credits:	income from exports of goods
goods debits:	expenditure on imports of goods
greenhouse gases:	gases resulting from the burning of fossil fuels such as coal, gas and oil
gross foreign debt:	total borrowings of foreign debt
gross foreign equity:	total borrowings of foreign equity
gross foreign liabilities:	gross foreign debt plus gross foreign equity borrowings
gross income:	market income plus transfer payments before taxation
gross world product:	total output of the global or world economy
GST:	Goods and Services Tax
hard core unemployment:	unemployment due to personal characteristics such as a disability
HDI:	Human Development Index calculated by the United Nations
headline cash balance:	difference between federal budget cash revenue and cash expenditure
headline inflation:	CPI measure of inflation
Henry Review:	report in 2010 on possible reforms to the Australian tax system
hidden unemployment:	persons not classified as unemployed as they have given up looking for work
hyperinflation:	situation of runaway or rampant inflation
ICT:	information and communications technology
IMF:	International Monetary Fund
import debits:	payments for imports of goods

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import price index:	measure of changes in import prices over time
imported inflation:	inflation resulting from higher import prices often caused by a depreciation
imports:	goods and services purchased from overseas producers
incidence of unemployment:	impact of unemployment on different groups of persons
income unit:	type of family or household structure used for income comparisons e.g. couples with children, couples without children and single persons
income:	earnings from market and non market sources
index number:	number calculated to measure changes in prices over time
indirect intervention:	central bank action to alter interest rates to affect the value of the exchange rate in the foreign exchange market
indirect quotation:	exchange rate quotation of the number of units of foreign currency needed to purchase a unit of domestic currency
induced expenditure lag:	time between the implementation of a government policy and its effects on induced expenditure (i.e. expenditure dependent on income)
induced spending:	spending dependent on the level of income
industrial dispute:	disruption to work due to the presence of a strike or a lockout
industrial relations reform:	changes to the wage determination system through the introduction of enterprise bargaining and reforms under the WorkChoices legislation and the *Fair Work Act 2009*
industry policy:	government policies affecting the structure, conduct and performance of Australian industry
Industry Statement:	government industry policy announcement
inflation:	rate of increase in the price level over time
inflation rate:	annual percentage change in the CPI or underlying price measures
inflation target:	target of 2% to 3% average consumer price inflation over the economic cycle set by the Reserve Bank of Australia for the conduct of monetary policy
inflationary expectations:	people's perceptions about future price levels based on past and current prices
inflationary gap:	a situation where aggregate demand exceeds aggregate supply at the full employment level of income causing the price level to rise
infrastructure:	economic, social, cultural and institutional capital goods
injections:	investment, government and export spending in the circular flow of income
interest rate cycle:	trends in interest rates over time
interest rate:	annual percentage cost of borrowing funds or percentage return on a financial instrument
intermediate goods:	goods (e.g. raw materials) used in the production of other goods and services
internal balance:	the macroeconomic goals of full employment and price stability
international business cycle:	fluctuations in global economic activity or GDP over time
international competitiveness:	degree of price and quality competitiveness of a nation's exports and import substitutes in relation to foreign produced goods and services, as measured by changes in the real exchange rate and real unit labour costs
international convergence:	the trend for countries to adopt similar economic systems of market capitalism
international financial flows:	flows of international capital, direct, portfolio and other investment and foreign exchange
international specialisation:	international production according to comparative advantage
international trade flows:	flows of exports, imports, services, income and transfers between countries
internationalisation:	increasing integration of a domestic economy with the world economy
Internet:	international computer network through the worldwide web
intra-industry trade:	situation where a country exports and imports similar categories of goods and services
investment:	process of capital formation and the accumulation of a capital stock
Kyoto Protocol:	1998 agreement to limit carbon dioxide emissions into the atmosphere
labour force:	total number of persons employed (full time and part time) plus the number of unemployed persons actively seeking work
labour market reform:	changes to methods of wage determination and work practices
labour market segmentation:	skill and wage differences between occupations in the labour market
lags:	time lapses between a change in policy and its effects on economic activity
leakages:	withdrawals of saving, taxation and imports in the circular flow of income
life expectancy:	number of years a person is expected to live from birth
long term unemployment:	number of persons unemployed for over 12 months or 52 weeks
Lorenz curve:	graph of income or wealth distribution in an economy

LRPC:	Long Run Phillips Curve
Maastricht Treaty:	treaty voted on by Europeans for full monetary integration in the EU in 1993
macroeconomic policies:	monetary and fiscal policies which target aggregate demand
managed exchange rate:	system of exchange rates where the central bank adjusts the exchange rate by using an adjustable peg to a foreign currency (e.g. US$) or the TWI
market failure:	where markets fail to allocate resources efficiently
market income:	wages and salaries plus rent, interest, profits and dividends
market operations:	buying and selling of CGS and Repos by the RBA in the cash market
MDGs:	Millennium Development Goals set by the UNDP to reduce global poverty
means test:	income test used to determine a person's eligibility for welfare payments
merchandise trade:	trade in exports and imports of goods
microeconomic policies:	government policies designed to increase productivity and international competitiveness in the long run through more efficient resource allocation
Millennium Development Goals:	goals set by the UNDP in 2000 to reduce world poverty by 2015
MNC:	multinational corporation
Modern Awards:	simplified and restructured federal awards under the *Fair Work Act 2009*
monetary financing:	printing of money to finance a government's budget deficit
monetary policy:	Reserve Bank changes in interest rates to affect the level of economic activity
monetary union:	adoption by countries of a single currency and a unified monetary policy
Montreal Protocol:	1987 agreement to limit world CFC production
MPB:	marginal private benefit
MPC:	marginal private cost
MPC:	marginal propensity to consume
MPM:	marginal propensity to import
MPS:	marginal propensity to save
MRRT:	Minerals Resource Rent Tax
MSB:	marginal social benefit
MSC:	marginal social cost
MTR:	marginal taxation rate = $\Delta T/\Delta Y \times 100/1$
multifactor productivity:	productivity of all the factors of production
multiplier (k):	multiplied effect of a change in autonomous spending on income
NAFTA:	North American Free Trade Agreement
NAIRU:	Non Accelerating Inflation Rate of Unemployment
national competition policy:	extension of the *Trade Practices Act 1974* to all businesses in 1995
National Employ. Standards:	ten minimum employment standards under the *Fair Work Act 2009*
national income equilibrium:	level of income where AD = AS or S = I
national saving:	the sum of private and public saving
natural environment:	interdependent ecosystem of air, water, plants, soil and animals
natural increase:	number of births minus the number of deaths
natural rate of unemployment:	unemployment due to structural and frictional factors in the labour market
NBFIs:	non bank financial intermediaries
NCC:	National Competition Council
negative externality:	an externality that imposes social costs on a third party or society as a whole
NES:	National Employment Standards under the *Fair Work Act 2009*
net errors and omissions:	allowance for statistical errors and discrepancies in the balance of payments
net foreign debt:	gross foreign debt less Australian debt lending overseas
net foreign debt to GDP ratio:	net foreign debt as a percentage of GDP
net foreign equity:	gross foreign equity borrowings less Australian equity investment overseas
net foreign liabilities:	net foreign debt plus net foreign equity
net foreign liabilities to GDP:	net foreign liabilities as a percentage of GDP
net international investment:	difference between net foreign assets and net foreign liabilities
net migration:	number of immigrants less the number of emigrants
net primary income:	difference between income credits and income debits associated with foreign investment in the balance of payments
net secondary income:	difference between income credits and income debits associated with foreign aid, migrants' funds and workers' remittances in the balance of payments
net services:	difference between service credits and service debits in balance of payments
neutral monetary policy:	no changes made in the cash rate by the RBA over time
New Economy Theory:	theory of economic growth based on the spread of information technology
newly industrialising economy:	an economy that develops an industrial base and sustains high rates of growth in output and incomes over time such as the Asian Tigers

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NHT:	Natural Heritage Trust
NIEs:	newly industrialising economies
No Disadvantage Test:	test applied to all enterprise agreements before January 1st 2010 to ensure employees were no worse off than under an award or relevant agreement
nominal rate of assistance:	percentage of tariff assistance according to the nominal value of output
non renewable resources:	resources with a finite supply such as coal, oil and gas
non tradables:	goods and services produced for domestic consumption only
non use values:	value of resources apart from current consumption such as bequest value
NTBs:	non tariff barriers to trade such as subsidies and quotas
NWI:	National Water Initiative
OECD 7:	seven major market economies in the world: the USA, Japan, Germany, France, UK, Italy and Canada
OECD:	Organisation for Economic Co-operation and Development
Okun's law:	the rate of economic growth has to equal to the sum of productivity and labour force growth for there to be no change in the rate of unemployment
ongoing inflation:	the long run trend in inflation
OPEC:	Organisation of Petroleum Exporting Countries
optimal currency area:	advantages gained by the adoption of a single currency between countries
OTC:	over the counter derivatives
output-spending gap:	situation where national spending exceeds national output
over exploitation of resources:	degradation and depletion of resources through overuse and exploitation
overshooting:	where the exchange rate's value deviates from its equilibrium path
ozone depletion:	reduction in the ozone layer due to the emission of CFCs
part time employment:	employment for more than one hour but less than 35 hours per week
participation rate:	percentage of the working age population in the labour force
PAYG:	pay as you go income tax
PC:	Productivity Commission
Phillips Curve:	curve showing the tradeoff between inflation and unemployment
Pitchford thesis:	assertion that a CAD is not a problem if foreign borrowings are used to finance investment in export industries which generate export income
plan industries:	industries making structural adjustments (e.g. TCF, PMV and steel)
policy formation lag:	elapse of time between the recognition of an economic problem and the implementation of a government policy response
pollution:	impurities that reduce environmental quality
population growth:	rate of increase in the population due to natural increase and net migration
portfolio investment:	purchase of debt or equity securities by a foreign firm or investor
positive externality:	an externality that imposes social benefits on the community e.g a carpark
poverty trap:	situation where welfare beneficiaries lack the incentive to seek paid work
PPP:	Purchasing Power Parity
pre-emptive monetary policy:	use of monetary policy prior to an expected deterioration in economic activity
price stability:	stable or low inflation in terms of the RBA's inflation target of 2% to 3%
Prices and Incomes Accord:	agreement between the federal Labor government and the ACTU (1983-1995) over wages, working conditions and the social wage
prices and incomes policy:	government policy to control the growth in wages and prices
private good:	a good that is rival and excludable in consumption
private saving:	total savings of the private sector (households and firms)
privatisation:	sale of public assets or service provision rights to the private sector
product market:	market where final goods and services are traded
productivity bargaining:	wage claims based on productivity improvements
productivity:	output per unit of input over time
property rights:	legal entitlements to the exclusive use of property
protection:	government assistance to an industry in competing with imports
PTAs:	preferential trade agreements
PTEs:	public trading enterprises
public good:	a good that is non rival and non excludable in consumption
public saving:	total savings of the public or government sector
purchasing power:	goods and services that can be bought by consumers with their money income
quintile:	discrete group of one fifth or 20% of all income units
quota:	quantitative restriction on imports issued through import licences
RBA:	Reserve Bank of Australia

R and D:	research and development
real exchange rate:	nominal exchange rate adjusted for inflation
real GDP:	nominal GDP adjusted for inflation or changes in the price level over time
real income:	money income adjusted for inflation
real shock:	disturbance to an economy caused by a change in a real economic variable
real wage overhang:	wages growth exceeds productivity growth
real wages:	nominal wages adjusted for inflation
recession:	lower turning point of the business cycle
recognition lag:	elapse of time before a government recognises that an economic problem exists and needs to be addressed by a change in the stance of policy
redistributive policies:	use of progressive taxation and government transfers to redistribute income
regimen:	selected basket of goods and services used to calculate the CPI
regional unemployment:	unemployment rate according to geographic region or industry
regulation:	government price, output or entry controls over the operation of markets
relative poverty:	where an income unit is unable to achieve a standard of living relative to the average standard of living in the community
Renewable Energy Target:	20% of Australia's electricity to be generated by renewable sources by 2020
renewable resources:	resources capable of reproduction such as biodiversity
'repos':	Reserve Bank Repurchase Agreements
resource depletion:	use of resources to the point of exhaustion or extinction
revaluation:	where a central bank alters a fixed exchange rate to increase the value of its currency relative to others
RGTS:	Real Gross Time Settlement
RITS:	Reserve Bank Information and Transfer System
RULC:	Real Unit Labour Costs
saving:	that part of income not consumed (S = Y - C)
savings-investment gap:	a situation where national savings is insufficient to fund all of national investment
SDRs:	Special Drawing Rights with the IMF
seasonal unemployment:	unemployment caused by the seasonal nature of work in some industries
single factor productivity:	productivity of a single factor of production such as labour productivity
social wage:	government benefits in kind such as spending on health and education
speculative investment:	investment in financial assets to make expected capital gains
spillover effects:	indirect imposition of costs on third parties
spot market:	cash market for currency trading
SRPC:	Short Run Phillips Curve
stagflation:	situation of rising inflation and unemployment and low economic growth
standard of living:	measure of a country's population in accessing goods and services
sterilised intervention:	where central bank intervention in the foreign exchange market is offset by domestic market operations to leave the stance of monetary policy and interest rates unchanged
STMs:	Simply Transformed Manufactured goods
structural change:	changes in the structure of production, employment & technology in industry
structural component of the budget:	changes to taxation revenue and/or government expenditure caused by deliberate or explicit changes in government policy
structural unemployment:	unemployment due to structural changes in production and industry
sub prime mortgage crisis:	widespread default on sub prime home loans in the USA in 2007-08
subsidy:	cash payment to a producer to increase production
tariff quota:	a quota applies up to a certain quantity of imports then a tariff is applied
tariff:	a tax on imports usually passed on to the consumer through higher prices
taxation reform:	changes to the taxation system to make it simpler, more efficient and fairer
taxation:	compulsory payment out of income or spending by individuals and businesses to the government to finance government expenditure
TCF:	textiles, clothing and footwear industries
technical discrimination:	where a country prohibits imports through customs procedures
technical efficiency:	where output is produced at minimum average cost
technology diffusion:	the spread of new technology from technology innovators to other countries
technology transfer:	new production and management methods associated with foreign direct investment and multinational corporations (MNCs)
TECs:	transition economies - in transition from socialist to capitalist economies

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terms of trade:	ratio of the export price index to the import price index
The New Tax System:	policy changes to the taxation system in 2000 such as the introduction of the GST and cuts in income tax rates and the company tax rate
tradable goods:	exports and import substitutes or import competing goods
tradable goods sector:	export and import competing industries
trade creation:	where international trade results in gains in living standards
trade deficit:	situation where the value of imports exceeds the value of exports (X < M)
trade diversion:	where trade is deflected and re-routed without any gain
trade policy:	government policies affecting exports and imports
trade surplus:	situation where the value of exports exceeds the value of imports (X > M)
tradeoff:	inverse relationship between two economic variables
trade-offs:	compromises or conflicts that arise in achieving economic policy objectives
transfer payments:	government cash benefits to eligible welfare beneficiaries such as pensions
transition economies:	former socialist economies making the transition to market capitalism
transmission mechanism:	channels through which changes in interest rates can affect economic activity
TRIMS:	Trade Related Investment Measures agreement under the WTO
TRIPS:	Trade Related Intellectual Property Rights agreement under the WTO
TWI:	Trade Weighted Index
twin deficits argument:	a reduction in the budget deficit will lead to a rise in national savings and a reduction in the current account deficit
underclass:	marginalised social group such as the unemployed and welfare recipients
underemployment:	where workers would prefer to work full time rather than part time or casually
underlying cash balance:	headline cash balance minus 'one off' payments or receipts such as the proceeds from asset sales or advances to the states
underlying inflation:	measure of CPI inflation adjusted for volatile items or 'one off' price rises
underutilisation rate:	sum of the rates of unemployment and underemployment in the labour force
UNDP:	United Nations Development Programme responsible for the MDGs
unemployment rate:	percentage of the labour force unemployed
unemployment:	situation where some workers cannot find suitable jobs
unsterilised intervention:	where central bank intervention in the foreign exchange market is not offset by domestic market operations, leading to changes in interest rates and the stance of monetary policy
upswing:	recovery in economic activity in the business cycle
Uruguay Round:	GATT round of trade talks completed in 1994
value adding:	increasing the value of exports through processing and transformation
VERs:	Voluntary Export Restraints
vicious cycle of poverty:	low incomes perpetuated by low productivity and low saving
wage expectations:	wage claims by workers for wage increases in the future
wage indexation:	system of adjusting wages according to changes in prices or inflation
Wage Price Index:	measure of average wages growth calculated by the Reserve Bank
wage-price spiral:	situation where a wage increase is followed by a price increase
wages:	monetary return or income for labour's contribution to production
wealth:	total stock of a person's net assets at a particular point in time
WorkChoices:	*Workplace Relations Amendment Act 2006*
work practices:	work methods and skills used by employees and employers in workplaces
workers' remittances:	money sent by foreign workers to families in their home country
working age population:	proportion of the population aged between 15 and 64 years
working poor:	employed persons marginally better off than if receiving welfare payments
Workplace Relations Act 1996:	federal legislation in 1996 governing the industrial relations system
Workplace Relations Amendment Act 2006:	WorkChoices legislation creating a unified national industrial relations system
Workplace Relations Amendment Act 2007:	federal legislation applying a Fairness Test to new workplace agreements
World Bank:	international bank assisting developing countries with development strategies and the provision of official development assistance (foreign aid)
World Heritage Areas:	natural and cultural areas placed on the UN's World Heritage List
WPI:	Wage Price Index
WTO:	World Trade Organisation
youth unemployment:	rate of unemployment for 15 to 24 year olds
zone of intervention:	range of exchange rate values where the central bank intervenes to determine the value of the exchange rate under a managed exchange rate system

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