

AN INTRODUCTION TO THE AUSTRALIAN ECONOMY

by

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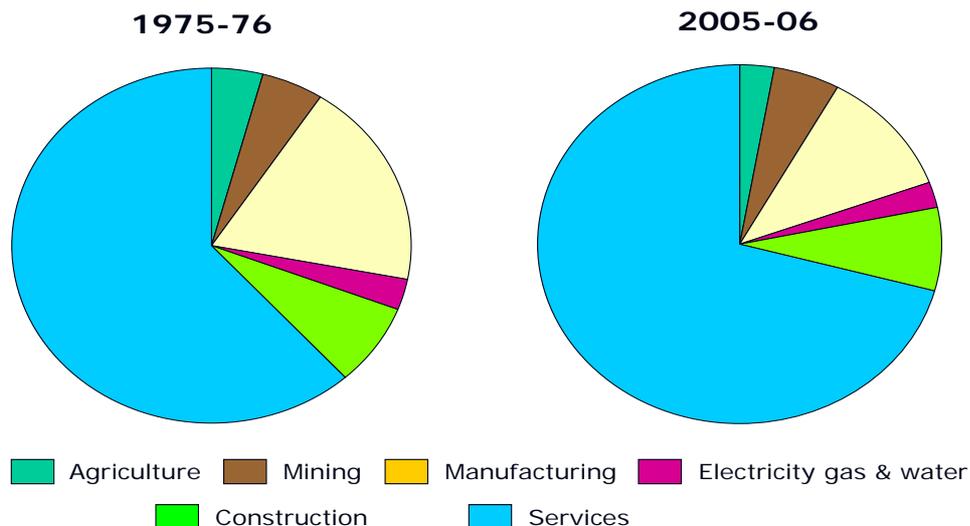
(Note: this paper was originally prepared in August 2000 for Encyclopedia Americana, at the request of the editors, as 'a general introduction to the economy of Australia'. This is an updated and slightly extended version of the original paper)

Structure of Australia's economy

Australia is the world's 17th largest economy, with output – as measured by gross domestic product (at purchasing power parity exchange rates) – in 2005 of US\$630bn, approximately equivalent to that of Illinois or Florida, one-twentieth of that of the United States as a whole or a little over one-third of that of the United Kingdom. In 2005 Australia's per capita GDP (at purchasing power parity exchange rates) of US\$30,900 placed it 14th (between Finland and the Netherlands), about 75% of the figure for the United States, but slightly above that of Japan, Germany, the United Kingdom and France.

Australia is often regarded as primarily a producer of agricultural commodities, minerals and energy. Historically, these products have played an enormously important role in Australia's economic development, particularly in the first 100 or so years after European settlement began in 1788. However, their relative importance declined throughout the twentieth century. In 1900, farming, forestry and fishing accounted for 20% of Australia's gross domestic product, and mining for a further 10%. At this time, the agricultural and mining sectors provided 95% of Australia's exports and jobs for about 30% of Australia's workforce.

Structure of the Australian economy (% of gross value added)



Source: Australian Bureau of Statistics (ABS).

By 2005, however, agriculture and mining accounted for just 8½% of Australia's total output, 5% of its workforce and 55% of its exports. These are still relatively large shares by comparison with other advanced economies (for example, agriculture and mining account for about 2½% of US gross domestic product, 2% of US employment and 21% of total exports).

Conversely, Australia's manufacturing sector is somewhat smaller than in most other advanced economies, accounting for less than 12% of output and employment by 2005. Australian manufacturing has undergone significant structural change since the mid-1970s, as previously high tariffs and other forms of 'protection' against imports of manufactured goods have been gradually removed (a process described in more detail later in this essay).

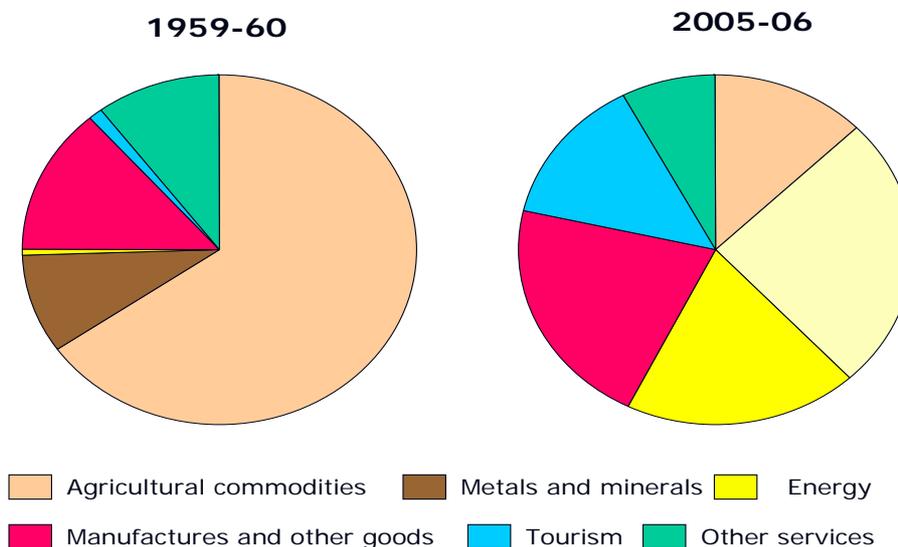
Reflecting Australia's relatively high rate of population growth, the preference of most Australians for living in detached dwellings, and the dispersed pattern of settlement over an area as large as the continental US, the construction sector is somewhat larger than in most other industrial economies, representing over 7% of total output and providing 8½% of total employment.

However, in common with most advanced economies, services sectors account for by far the largest proportion of both economic activity and employment in Australia. Services – including wholesale and retail trade, transport and communications, finance and insurance, property and business services, personal services, tourism and recreation, and government and community services – account for over 70% of Australia's gross domestic product, and employ nearly three out of every four Australians in the workforce. Services – in particular tourism, but also including education, health and consulting services – also provide just over one-fifth of Australia's export income.

Australia's trade

For much of the twentieth century, Australia's position as an exporter of commodities and an importer of manufactured goods meant that its economy was substantially affected by fluctuations in commodity prices, which led to periodic episodes of boom and bust in incomes and spending; and by the generally downward trend in the prices of commodities relative to those of manufactures. Australia's 'terms of trade' (the ratio of the average price of Australia's exports to the average price of Australia's imports) declined by almost 40% between 1949-50 and 1986-87 (over the same period, the corresponding ratio for the US fell by 22%). This was one of the reasons for Australia's decline from 5th to 19th in terms of per capita GDP among industrialized nations between 1950 and 1990.

Composition of Australian exports



'Energy' includes coking and steaming coal, oil and natural gas. *Source:* ABS.

A second reason for Australia's relatively poor economic performance during the decades following the end of World War II was that Australia 'opted out' of the post-war rounds of trade liberalization under auspices of the General Agreement on Tariffs and Trade (GATT), the predecessor to the World Trade Organization (WTO) – on the grounds that farm products (which made up the bulk of Australia's exports at the time) were excluded from the GATT processes.

As a result, much of Australian industry remained sheltered behind relatively high trade barriers, and insulated from the competitive forces which acted as a spur to the pursuit of rapid productivity growth in other advanced economies. Australia derived little benefit from a significant increase in the share of exports in GDP which played such a large role in the rapid growth of Japan, Europe and Canada during this period. By the early 1980s, exports still accounted for less than 14% of Australia's GDP, a smaller share even than during the Great Depression, and compared with over 25% of GDP during the first decade of the 20th century.

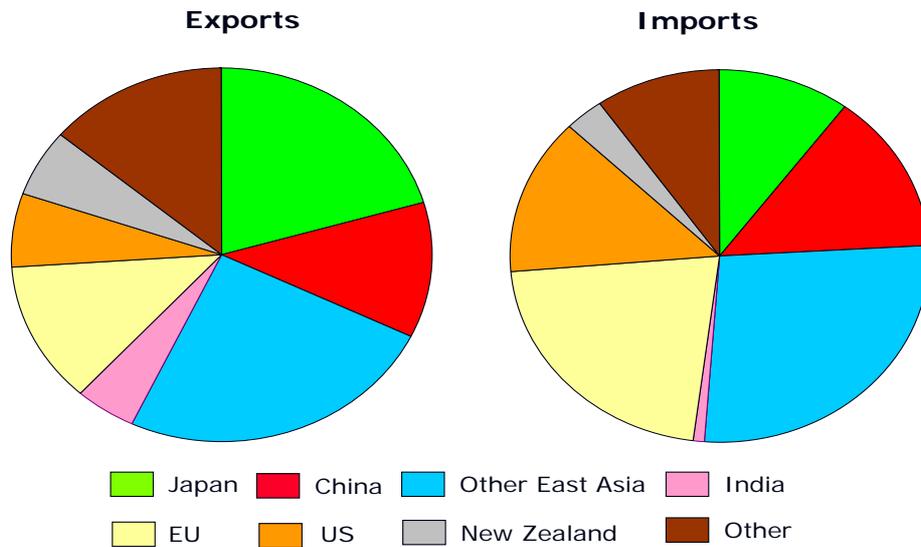
Since the second half of the 1980s, however, these trends have been reversed. Aided by a sharp depreciation in the value of the Australian dollar in the mid-1980s, and by a series of policy measures targeted at improving the export performance of specific sectors of the economy (and more generally at exposing Australian business to greater international competition), exports rose as a share of Australia's GDP to almost 20% by the end of the 1990s. Manufactured goods and services accounted for most of this increase, rising from about 9% and 16% respectively of total exports in the mid-1980s to around 18% and 24% respectively in the latter part of the 1990s, while conversely the share of commodities in total exports fell from over 70% to about 55%. Over the same period, imports as a proportion of Australia's GDP rose from around 16% to 21%.

The rapid economic growth and industrialization of China and, to a lesser extent, other 'emerging' economies, has halted and reversed the downward trend in the prices of many of Australia's mineral and energy commodity exports. From their most recent low in mid-1999, the average US\$ price of Australia's commodity exports has risen by 135%. Beginning somewhat earlier but continuing through this period, the prices of a range of manufactured goods which have grown in importance among Australia's imports – such as information technology and communications equipment, motor vehicles and textiles, clothing and footwear – have fallen in US\$ terms, reflecting (among other things) the growing importance of China and other emerging economies as suppliers of these items at lower costs than traditional sources.

As a result, Australia's 'terms of trade' have generally improved significantly since the late-1980s, and as of mid-2006 were more favourable than at any time since the global commodities boom of the mid-1970s. Despite this, Australia's trade performance since the turn of the century has been rather disappointing. The volume of Australia's exports has risen by less than 1½% per annum, so that even with more favourable prices the share of exports in Australia's GDP has barely moved. Manufacturing and services exports, which have been adversely affected by the strength in the exchange rate induced in part by the rise in the prices of minerals and energy commodities, have declined as a share of total exports by around 6 percentage points since 2000.

Until the 1950s, over half of Australia's exports went to Europe, in particular to the United Kingdom, while the UK was also the source for more than 40% of Australia's imports. However the rapid growth of the Japanese economy in the four decades after the end of World War II, repeated subsequently by other East Asian economies, and the UK's entry into the EU in 1973, produced a substantial re-orientation in the direction of Australia's trade. Japan has been Australia's largest export market since the mid-1960s; and by 1995 East Asia was the destination of over 60% of Australia's exports. In the aftermath of the Asian economic crisis of the late 1990s and the long period of sluggish growth in Japan this share dropped to less than 52% in 1999. Over the past five years, however, China has grown significantly in importance to Australia as a trading partner, accounting for nearly 12% of Australia's merchandise exports in 2005-06 (up from 5% as recently as 1999-2000).

Direction of Australia's merchandise trade 2005-06



Source: ABS.

China has also increased rapidly as a source of merchandise imports, accounting for 14% of the total in 2005-06, up from 6.8% in 1999-2000, and moving past Japan and the US into second place behind the EU which provides 21.6% of the total.

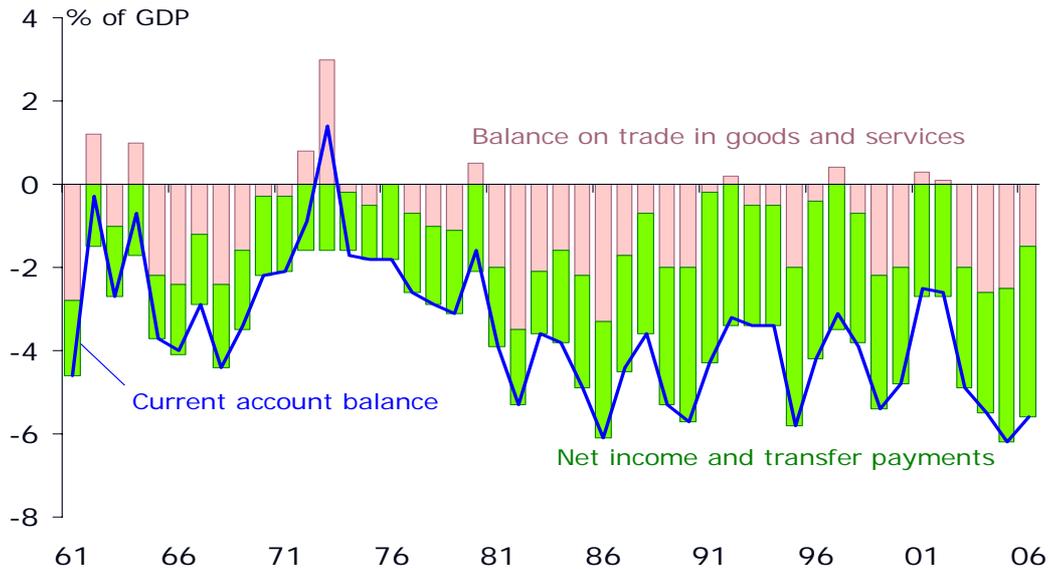
Australia has traditionally run a surplus on its trade with Asia and large deficits with both Europe and the United States, reflecting Asia's dependence on imported commodities, the restrictions imposed on imports of agricultural commodities by the United States and the European Union, and Australia's dependence on imported information technology equipment.

However following the slowdown in Asian economic growth after the financial crisis of the late 1990s, and the emergence of China as a major supplier of manufactured goods (displacing suppliers from other parts of the world), Australia's trade surplus with Asia shrunk significantly: in fact Australia incurred deficits on its merchandise trade with East Asia in 2003-04 and 2004-05.

By contrast, Australia is one of the few countries with which the United States consistently enjoys a trade surplus; in 2005 (the first year of the Free Trade Agreement between Australia and the US) this surplus amounted (according to US figures) to US\$8bn on merchandise trade and US\$11bn on total trade in goods and services, up from \$6.2bn and \$9.1bn, respectively, in 2004.

Over the past three years Australia has also concluded bilateral free-trade agreements with Singapore and Thailand, in addition to the long-standing and comprehensive free-trade agreement it has with New Zealand. Australia is currently engaged in talks with China, Japan and the Association of South-East Asian Nations, with a view to negotiating bilateral trade agreements with each of them. Australia is also currently contemplating bilateral free trade talks with Chile and the Gulf Co-operation Council countries.

Australia's balance of payments



Source: ABS. Data are for financial years ended 30 June

Australia has traditionally relied on foreign capital to supplement its own financial resources in support of economic development – just as the United States did in the 18th and 19th centuries, and more recently in the last two decades of the 20th century and thus far in the 21st. In Australia's case this reflects the more capital-intensive structure of the Australian economy (arising from the above-average importance of farming and mining), Australia's relatively small population, and its dispersal over a large geographic area (necessitating large per capita investments in transport and other infrastructure), and, since the mid-1970s, the declining propensity of Australian households to save (a trend also apparent in other 'Anglo-Saxon' economies).

The corollary of this is that the current account of Australia's balance of payments is almost always in deficit – indeed, Australia has recorded a current account surplus in only three years since 1950, and not at all since 1973.

As a result, Australia's external financial obligations appear, at first sight, to be rather onerous. Australia's foreign indebtedness (net of Australian lending abroad and its official reserve assets) was equivalent to 51.4% of GDP as at mid-2005, while foreign equity investment in Australia (net of Australian ownership of foreign equities) represented the equivalent of 5% of GDP (with foreign equity investment in Australia equivalent to 52% of GDP and Australian equity investment abroad equivalent to 47%).

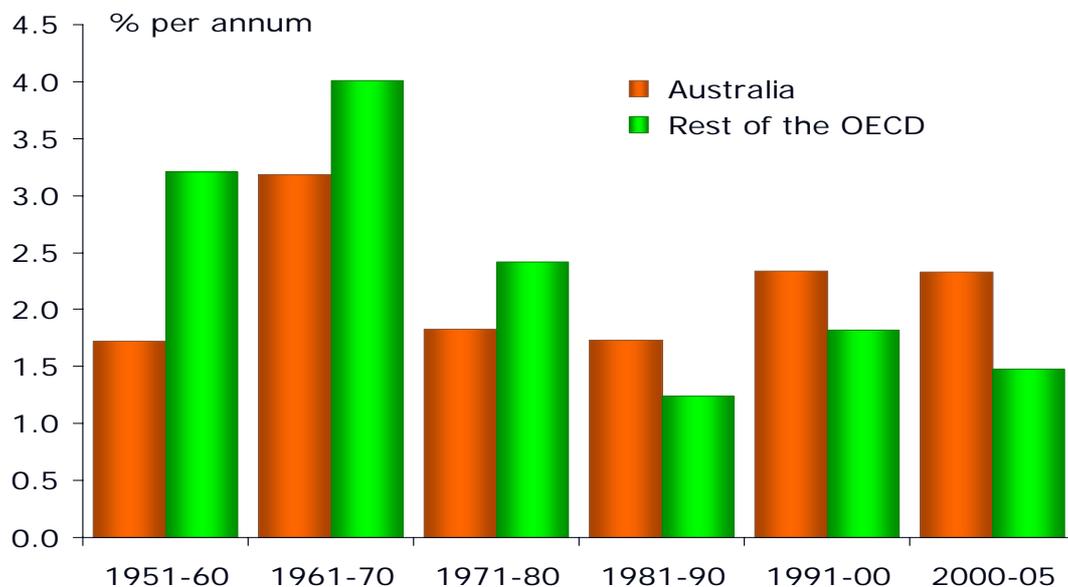
Unlike the vast majority of developing economies, however, the bulk (nearly 96%) of the foreign debt is owed by privately-owned businesses (rather than by the government). And most of the private sector debt is either 'hedged' against exchange rate fluctuations – as is the case with the banks, who are responsible for about three-quarters of Australia's foreign debt - or has been incurred by companies whose revenues (for example, from exports) are largely denominated in foreign currencies. Moreover, except in the late 1920s and early 1930s, Australia has never experienced any real difficulty in meeting its financial obligations to foreign investors: in recent years, payments of interest, dividends and repatriated profits to foreign investors have amounted to less than one-fifth of total export earnings.

Australia's economic performance

Australia, like the United States, experienced rapid growth combined with low inflation and low unemployment throughout most of the 1950s and 1960s. In Australia's case, economic growth was assisted by a large immigration program as well as by the requirements of the post-war 'baby boom' and, in the 1960s, by a substantial expansion in the mining sector; while the attainment of low unemployment rates was partly the result of low levels of female participation in the labour force (reflecting social and legal barriers to the employment of women, particularly after marriage, which continued into the late 1960s and early 1970s).

Abstracting from the impact of rapid population growth, Australia's economic growth rate was actually significantly below the OECD average during the 1950s and 1960s. As with the United States, this partly reflects the fact that Australia suffered comparatively little physical destruction during World War II, so that post-war economic growth was not driven by reconstruction and 'catch-up' was the case for Western Europe and Japan. As noted earlier, however, it also reflects Australia's 'opting out' of the post-war liberalization of trade in manufactured goods in the decades following the end of World War II.

Growth in real per capita GDP



Sources: University of Groningen (Netherlands) and The Conference Board, GGDC Total Economy Database 2006 (<http://www.eco.rug.nl/ggdc>) and Economics@ANZ.

As a result, this period saw average Australian living standards – as measured by per capita GDP – decline from 30% above the OECD average in 1950 to less than 5% above the OECD average by the end of the 1960s.

Again like the United States, Australia experienced a surge in inflation during the 1970s, along with three severe recessions in the mid-1970s, early 1980s and early 1990s. Unemployment, which had not been above 4% (indeed had only once been above 3%) since the late 1940s, jumped sharply in each of these recessions, reaching a peak of over 11% in 1992. Australia's experience of double-digit inflation persisted into the early 1990s.

Australia's relative economic performance continued to decline during this period, so that by the early 1990s Australia's per capita GDP had fallen to nearly 8% below the OECD average.

Australian per capita GDP relative to the OECD average



Sources: University of Groningen (Netherlands) and The Conference Board, GGDC Total Economy Database 2006 (<http://www.eco.rug.nl/ggdc>) and Economics@ANZ.

Since the end of the early 1990s recession, however, Australia has experienced generally rapid economic growth combined with low inflation and declining unemployment, reflecting more consistent and credible macro-economic policy-making, and (as mentioned on page 3) a wide-ranging program of structural reforms beginning in the 1980s aimed at opening up the Australian economy to greater domestic and international competition.

These reforms included the deregulation of the financial system; reductions in tariffs and other trade barriers; the removal of most restrictions on foreign investment; the privatization of government-owned commercial enterprises; the creation of contestable markets in previously monopolized industries such as energy and transport; and, during the 1990s, a gradual movement away from centralized determination of employee remuneration and conditions of employment, in favour of bargaining at the individual enterprise level.

Reforms such as these laid the basis for a significant acceleration in productivity growth during the 1990s: indeed only Finland achieved a greater acceleration in multi-factor productivity growth between the 1980s and the 1990s than Australia.

Unlike the United States (and Finland and Ireland, to some extent), the acceleration in Australian productivity growth owed relatively little to the production of information technology goods: although Australia is a relatively intensive user of ITC products, as noted earlier it is largely reliant on imports of these goods. For much the same reason Australia largely avoided the 'boom-bust' cycle which characterized the US stock market during the second half of the 1990s, and the sharp slowdown in economic activity which followed the puncturing of that boom in the United States in 2000.

The return to sustained low inflation in the 1990s enabled a dramatic decline in interest rates, to their lowest level since the late 1960s, which in turn substantially increased the borrowing capacity of Australian households. The steady decline in unemployment from 1993 onwards, together with gradually rising real household incomes (in contrast to the 1980s), also increased the willingness of Australian households to take on additional debt.

Aided by enhanced competition and innovation in the Australian financial system, and by the unusually favourable treatment provided by the Australian tax system for debt-funded investments (see page 32), these trends fostered a significant expansion in household borrowing, which has in turn helped sustain strong growth in household spending and (as in most other 'Anglo-Saxon' economies) buoyant residential property markets.

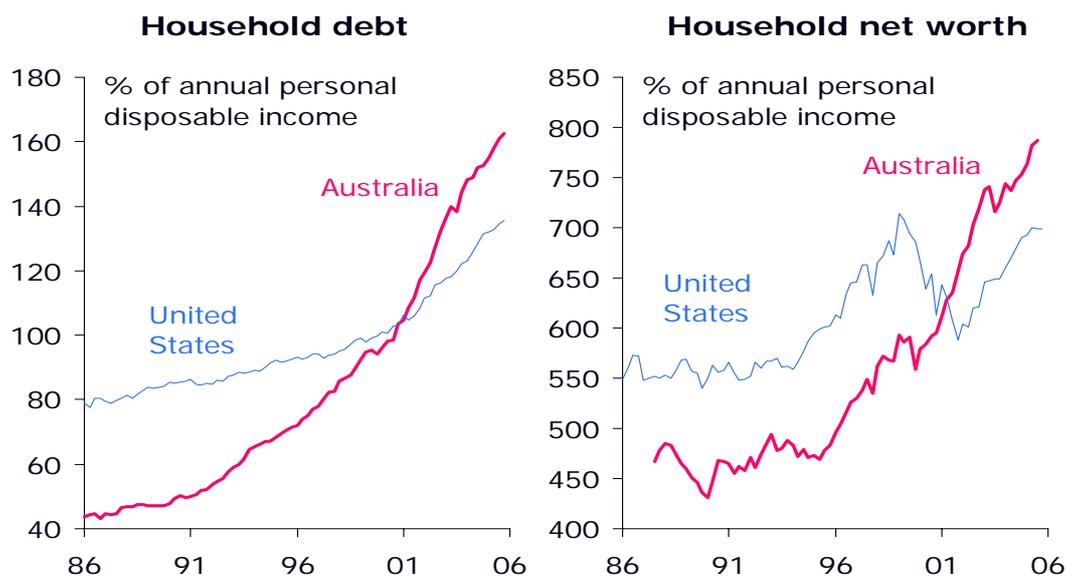
Between 1990 and 2003, established house prices across Australia's eight major cities rose by an average of about 150%, compared with around 130% in the UK, 120% in New Zealand, 78% in the US and 30% in Canada. In effect, the decline in Australian interest rates during this period was 'capitalized' into the level of house prices in what is best understood as a 'step change' from an 'equilibrium' based on 'quantity rationing of housing finance combined with high and volatile interest rates (as during the 1970s and 1980s) to a new 'equilibrium' based on more readily available housing finance and low and stable interest rates.

Since the end of 2003 movements in established house prices have been rather more subdued in cities on the east coast of Australia (indeed, Sydney house prices fell by about 10% over 2004 and 2005 before stabilizing), although they have risen more strongly in Perth and Darwin where the mining boom has been responsible for strong growth in employment, incomes and population.

Although Australian household indebtedness has risen significantly relative to incomes – from around 50% of annual personal disposable income in the early 1990s to around 160% in 2006 – the value of household assets has risen by even more, from around 4½ times annual personal disposable income to more than 7¾ times over the same period. The ratio of Australian household net worth to disposable income has thus risen from around 375% in the early 1990s to over 600% in 2006. The equivalent ratio for US households is around 560%.

Moreover, disaggregated survey data suggests that the most of the increase in household debt, and in household debt servicing obligations, has occurred among households with above-average incomes.

Australian and US household finances



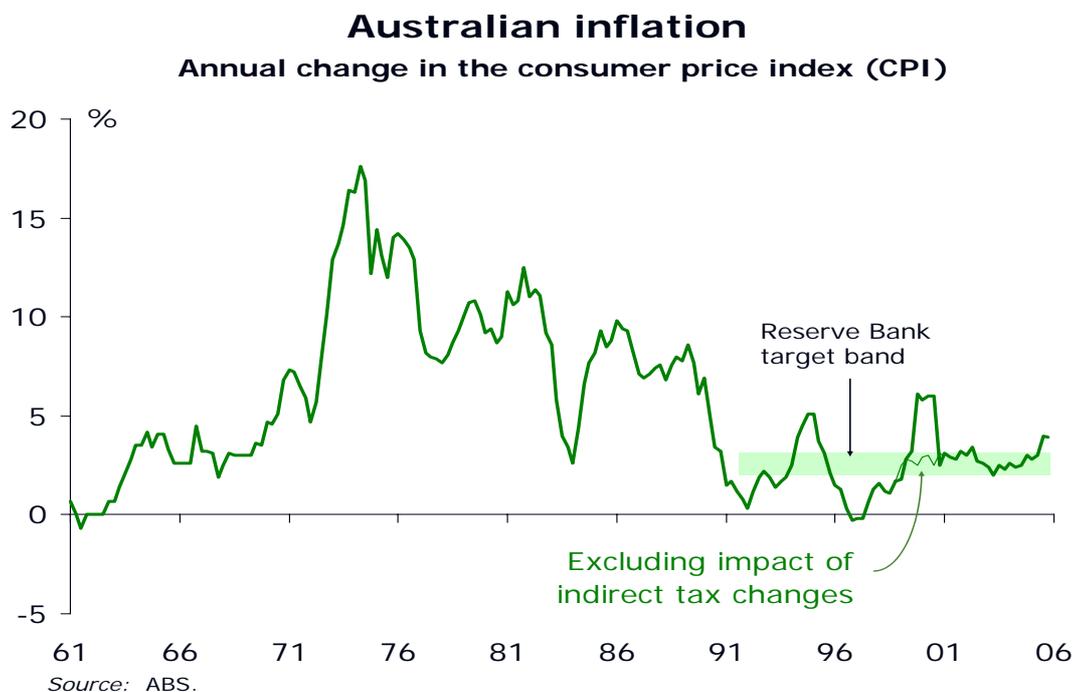
Sources: Australian Bureau of Statistics; Reserve Bank of Australia; US Federal Reserve Board

By contrast with the trend in household finances, the Australian business sector became highly leveraged during the 1980s but became progressively less geared during the 1990s and over the first half of the current decade. The aggregate debt-equity ratio of the Australian non-financial corporate sector peaked at almost 170% in 1990 – at which point non-financial corporate sector cash flows covered interest obligations barely 1.7 times – and declined to just under 70% by the end of 2004 (compared with about 95% for the US non-financial corporate sector). In recent years the ‘interest cover’ ratio of the non-financial corporate sector in Australia has been in excess of 5 times.

Since the recession of the early 1990s, Australia has experienced only two quarters of negative growth, one in 1993 and the other following the introduction of wide-ranging changes to the system of taxes on the purchase of goods and services which, as with similar changes in Japan, Canada and Singapore, resulted in significant distortions to the timing of spending on a wide range of items. This is the longest period that Australia has enjoyed without at least two consecutive quarters of negative growth since independence from Britain in 1901.

Thanks to the combination of above-average growth rates since the early 1990s, and the China-related improvement in its terms of trade, Australia’s per capita GDP has been above the OECD average since 2001, ranking 8th in 2003 and 2004.

Over the past three years, however, Australia’s economy has slowed – notwithstanding the favourable turn in the global economic environment. By the end of 2007 it is likely that growth will have been below 3% for three consecutive years, even after allowing for the impact of a severe drought on agricultural production. This partly reflects the end (other than in Western Australia) of the housing boom referred to earlier, and the fact that, after 15 years of continuous growth, the Australian economy has begun to encounter a series of ‘capacity constraints’, including shortages of skilled labour and infrastructure bottlenecks. There has also been a noticeable slowing in productivity growth since 2002.



Australian unemployment



Source: ABS.

Agriculture

Agriculture has been a major contributor to Australia's economic development since European settlement began in 1788.

In many respects, Australia provides a relatively harsh environment for agricultural activities. For the size of its population, Australia appears at first glance to have ample land. But more than one-third of Australia's land area is desert. Elsewhere, soils are generally thin and not especially fertile. Except in the tropical north, rainfall is low and unreliable, while there are few natural fresh water storages. The recurring 'El Niño' weather patterns in the southern Pacific are usually associated with droughts across northern and eastern Australia. Domestic markets have always been small, so that Australian agriculture has been (and remains) much more dependent on exports than the agricultural sectors of most other economies.

To cope with these circumstances, Australian farmers have made extensive use of advances in agricultural science and technology to become among the most efficient, and least dependent on government support, of any in the world.

According to OECD estimates, subsidies to producers from governments and consumers accounted for only 5% of Australian farmers' incomes in 2005, compared with 16% of the income of American farmers, 32% of that of farmers in the European Union, 56% of that of Japanese farmers and 63% of that of Korean farmers.

The United Kingdom was the principal market for Australian agricultural exports until it entered the European Economic Community (now the European Union) in 1973. The loss of this market, restrictions on imports of agricultural products imposed by the EU, the United States and Japan, and the subsidized dumping of surplus agricultural products by the EU and the US in other markets have imposed heavy costs on Australian farmers and resulted in an extended period of structural change. The number of farms has declined from a peak of over 205,000 in the mid-1950s to 129,934 in 2005; over the same period the average farm size has risen from about 5,500 acres to nearly 8,500 acres.

Despite this, agriculture still provides around one-sixth of Australia's export income. Moreover, processing of agricultural (including fishing and forestry) products accounts for nearly one-quarter of Australia's manufacturing activity.

Wool

Wool has been the mainstay of Australian agriculture for much of the period since European settlement. Wool typically accounted for 40-45% of Australia's total exports from the 1870s to the 1950s, and it was still commonly said into the 1960s that 'Australia rode on the sheep's back'.

Wool prices actually peaked in the early 1950s, at the time of the Korean war, but by the end of the 1950s had fallen to one-quarter of that level in real terms, and continued to trend down (with the exception of brief bursts in 1973 and 1988-89) until the late 1990s. In the early 2000s, wool prices picked up again, peaking in early 2003, before trading lower in the last couple of years.

Adjustment to the downward trend in wool prices was for a long time delayed by a succession of government-sponsored price-support schemes. However the 1990s saw an extended period of structural adjustment in the wool industry, with sheep numbers falling from over 173 mn to just over 100 mn by 2005 (there are now about 70mn more sheep in China than Australia), and wool production declining by more than 50% to its lowest level since 1952. Despite this, Australia remains the world's largest supplier of apparel wool, growing two thirds of the wool sold on the world market. Wool is produced in all States with NSW accounting for about 33% of the total, WA about 25% and Victoria 22%.

Crops

Crop production also has a long history in Australia. Until the early years of the 20th century, crops were grown primarily for domestic consumption. The extension of the railway network over the first three decades of the 20th century facilitated a significant expansion of the area devoted to the production of grains, especially wheat. Wheat production is vulnerable to droughts which have occurred once every 7-11 years, on average (but more frequently so far this decade). Western Australia is the leading wheat-producing state, accounting for between one-third and one-half of total Australian production depending on climatic conditions, followed by New South Wales and South Australia.

Wheat is usually Australia's largest agricultural export, except in years affected by major droughts. Australia is (ordinarily) the world's seventh largest wheat producer and the fourth largest exporter (after the US, the EU and Canada) with around 17% of total wheat exports. All Australian wheat exports are marketed through a single company AWB Ltd, formerly the government-owned Australian Wheat Board, although this arrangement is now under review.

Production of coarse grains (barley, corn, sorghum and oats) is typically about one half the volume and one-third the value of wheat production. Although about half of Australia's coarse grain production is for domestic use, Australia is the world's second largest exporter of barley and the fourth largest exporter of sorghum.

Sugarcane has been grown in the tropical and sub-tropical areas of Queensland since the 19th century. Sugar is Australia's second largest export crop and Australia is the world's third largest sugar exporter, after Brazil and the European Union (whose sugar exports are heavily subsidized), with about 8½% of total world exports.

During the latter part of the 20th century, Australia's crop production diversified significantly to include cotton, rice, canola and other oilseeds, and pulses. These now account for over 12% of the total value of crop production. Cotton production increased more than twenty-fold between the late 1960s and the early 2000s, but Australia remains only a small supplier in the world cotton market, accounting for about 12% of world exports. In recent years cotton and rice production have been severely restricted by shortages of irrigation water.

Meat

The use of refrigeration beginning in the 1890s enabled Australia to develop a significant meat export industry. Beef and veal account for over 60% of Australian meat production, and nearly three-quarters of Australia's meat exports. Beef is Australia's largest agricultural export. Australia is the world's seventh largest beef producer, and the second largest beef exporter (having been overtaken by Brazil in 2004).

About 40% of Australia's beef exports go to Japan and about 40% also go to the US. Canada, Taiwan and Korea account for most of the remainder. All of these countries impose restrictions on imports of Australian beef. Live cattle exports are also a significant market, with Indonesia, the Philippines and the Middle East, the main destinations.

Australia's beef industry is concentrated in Queensland, where about 45% of the 24-million national herd is located. New South Wales, the Northern Territory and the northern part of Western Australia are also important beef-producing areas. Australian beef cattle are predominantly grass-fed on extensive pastures, rather than in intensive feed-lots.

While Australia's sheep flock is intended primarily for wool production, Australia is also the world's second largest producer (after China) and exporter (after New Zealand) of lamb and mutton. Australia began exporting live sheep, primarily to the Middle East, during the 1970s and this trade is now worth the equivalent of about 40% of Australia's lamb and mutton exports. Pigs and poultry each account for around 10% of total Australian meat production, in both cases almost entirely for domestic consumption.

Dairying

Although originally widespread across Australia, dairy production has become increasingly concentrated in Victoria and Tasmania where climatic conditions are most favourable. Dairy cow numbers dropped by nearly 50% between the mid-1960s and the early 1990s, but sharply rising yields enabled milk production to increase by more than 50% over the same period. A further significant round of industry rationalization occurred following the removal of restrictions on inter-state trade in dairy products from July 2000.

Exports of dairy products, especially butter, were hard hit by Britain's entry into the European Union in 1973 and subsequently by subsidized competition from European dairy products in other markets. During the 1990s, however, Australian dairy producers established new markets for products such as cheese in Japan and skim milk powders in South-East Asia. As a result, Australia is now ranked third in terms of world dairy trade and accounts for 16% of world dairy product exports.

Other agricultural industries

The wine industry has been one of the success stories of Australian agriculture. Australia is the world's seventh largest wine producer and fourth largest exporter of wine. Australian wine production doubled between the mid-1980s and the late 1990s, initially in response to a significant shift in Australian consumption patterns towards wine and away from beer and spirits during the 1970s and early 1980s, and have almost doubled again over the past five years.

Australian wine exports have increased nearly five-fold over the ten years to 2005. South Australia is the principal wine-producing state, producing around 65% of Australia's wine exports, but there are important areas of wine production in every other State except Queensland. The main export markets for Australian wine are the United Kingdom, United States, New Zealand, Canada and Germany.

Fishing has historically been a relatively small industry in Australia, largely because of plentiful supplies of domestically-produced meat. However the value of Australian fisheries production increased nearly five-fold during the 1980s and 1990s, largely as a result of strong growth in exports of prawns, lobster, abalone, salmon and (until the mid-1990s) tuna to Japan and other Asian countries.

Much of Australia's original forest cover has been cleared for agriculture, so only about 20% of Australia's total land area is now forested, and a significant proportion of this is contained within national parks. Nonetheless, forestry is an important industry in Tasmania and parts of coastal Victoria and New South Wales. Although plantations (mainly conifers) have expanded rapidly over the past few decades, forestry operations are mainly dependent on native forests and have thus attracted considerable controversy on environmental grounds in recent years. About 85% of Australia's forestry production is for domestic requirements. Woodchips account for about half of the value of Australia's exports of forest products.

Mining

Like agriculture, the mining industry has played an important role in Australia's economic development and is a major contributor to Australia's exports. Australia's five most important individual exports are minerals or energy products. Metal ores and minerals now account for nearly 15% of Australia's exports, processed and refined metals for over 10%, and energy (in the form of coal, crude oil and other petroleum products, and liquefied natural gas) a further 19% - proportions which have risen sharply over the past five years as a result of rising prices for most of these products. Australia is the world's largest exporter of coal, iron ore, bauxite, lead, zirconium and titanium; the second largest exporter of gold, zinc and uranium; the third largest exporter of silver, nickel and aluminium; and the fourth largest exporter of diamonds. It also produces significant quantities of copper, tin, manganese and salt.

Although coal mining commenced at Newcastle, in New South Wales, in 1804 and copper mining in South Australia in the 1840s, it was the discovery of gold in New South Wales in 1849, and then in Victoria in the 1850s, which established the importance of mining as an industry in Australia. The Victorian gold rushes were the principal factor in the dramatic increase in Australia's population in the second half of the 19th century, and helped establish Victoria as the dominant colony by the time of Federation in 1901 (a position it gradually lost to New South Wales during the 20th century).

There were further gold discoveries in Queensland and Western Australia in the 1890s, but after peaking at nearly 120 tonnes in 1903, gold production went into decline in the early decades of the 20th century. Gold mining experienced a major revival in the 1980s and 1990s following the sharp rise in the price of gold in the 1970s and new discoveries in Queensland, New South Wales, the Northern Territory and especially Western Australia. In recent years gold has been Australia's fourth most important export.

Another key development for the Australian mining industry was the discovery of massive silver, lead and zinc deposits at Broken Hill, in the far west of New South Wales in the 1890s. This was the birth place of the Broken Hill Proprietary Ltd, later BHP and more recently BHP-Billiton, which was to become Australia's largest company for much of the twentieth century and a leading participant in the Australian steel, coal and petroleum industries. The discovery of large copper, zinc, lead and silver deposits at Mt Isa, in the far north-west of Queensland, in the 1920s, gave a further lift to Australian metal mining.

Until the 1960s, coal was mined primarily to supply State-run electricity systems and domestic steel production. Coal accounts for over 80% of Australia's electricity generation, with natural gas (in the Northern Territory and to some extent Western Australia) and hydro-electricity (in Tasmania and in the Snowy Mountains along the NSW-Victorian border)) accounting for the remainder. Exports of coking coal, mainly to Japan, began from large open-cut mines in central Queensland in the 1960s. The sharp rise in oil prices in the 1970s prompted a further expansion of coal mining, again mainly in Queensland, to supply steaming coal to Japan and subsequently to Korea, Taiwan and other markets. After struggling with low prices and rising costs during the 1980s and 1990s, Australia's coal industry has gained renewed impetus from the strong demand for both metallurgical and thermal coal from China. Coal has been Australia's most important single export since the mid-1980s.

Iron ore mining began in New South Wales and South Australia in the early years of the 20th century, to supply the requirements of Australia's emerging iron and steel industry. Iron ore mining increased dramatically following the lifting of an embargo on exports of iron ore in the 1960s, which allowed the development of the massive deposits in the Pilbara region in the north-west of Western Australia. Iron ore exports were a key element in the expansion of Australia's trading relationship with Japan. More recently, iron ore has been a key driver of the rapid growth in Australia's exports to China. With prices more than doubling over the past four years iron ore is now Australia's second most important export.

Bauxite mining and alumina refining began in the 1960s, initially at Weipa in far north Queensland and Gove in the Northern Territory, and expanding dramatically in the 1970s with the development of additional deposits in Western Australia. Aluminium smelting increased substantially in the 1980s in conjunction with large additions to Australia's coal-fired electricity-generating capacity in the aftermath of the 1970s' oil shocks. Taken together aluminium and aluminium ores represent Australia's third largest export.

Australia was almost completely dependent on imports of petroleum products until the discovery of large oil fields in Bass Strait, off the south-east coast of Victoria, in the second half of the 1960s. These fields also contained large reserves of natural gas. Oil and gas were also subsequently found in the Cooper Basin in South Australia, the Carnarvon Basin in Western Australia and other locations in Queensland and the Northern Territory. Bass Strait oil production peaked in the early 1990s and has since declined by more than two-thirds.

This has been partly offset by production from the North West Shelf, off the coast of Western Australia. However total crude oil and condensate production in 2005-06 was the lowest since 1982-03, and nearly 40% below its 2000-01 peak. The main value of the North-West Shelf lies in its reserves of natural gas, which have provided the basis for a major expansion in exports of liquefied natural gas (LNG) to Japan and other Asian markets. Oil and gas production from the North-West Shelf and from other reserves in the Timor and Arafura Seas off the north-west coast of Australia is expected to increase well into the 21st century.

Western Australia accounts for about 45% of the total value of Australian mineral production, and mining is the dominant industry in that State. Queensland is the second most important State for mining, with around 25% of total Australian production, followed by New South Wales with just under 14%.

The mining industry in Australia is extremely capital-intensive, employing less than 1% of the Australian work force but 11% of the nation's net business capital stock. Australian mining companies are typically responsible for the construction of port and railway infrastructure associated with their operations, and for the provision of housing and community amenities for their work forces, especially in remote areas.

Manufacturing

The development of manufacturing in Australia has been heavily influenced by the small size of the Australian domestic market and the large distances from potential export markets. Manufacturing has thus traditionally concentrated on the production of goods which would otherwise have been imported, rather than on production for export.

This inward-looking orientation was re-inforced by the long-standing policy of Australian governments of all political persuasions to provide protection for manufacturers against competition from imports in the form of high tariffs and, when in some cases they proved insufficient, non-tariff barriers (such as quotas) as well. As noted earlier (on page 6), Australia 'opted out' of the post-war GATT rounds of reductions in barriers to trade in manufactured goods. Instead it sought to encourage domestic and foreign investment in manufacturing in Australia behind a high tariff wall.

For a long time, these policies appeared to be successful. In the period between Federation and the mid-1960s, with the additional impetus of the requirements of war-time production, Australia developed steel, motor vehicles, clothing and footwear, oil refining, chemicals and household durables manufacturing industries.

High tariffs and other barriers to imports were explicitly intended to enable the high export incomes earned by Australia's farming and mining industries, which employed a relatively small proportion of the population, to be used to create well-paid jobs for large numbers of people in Australia's cities, especially during the years of high immigration which followed the Second World War. Together with Australia's unique system of setting wages and conditions of employment through quasi-judicial tribunals ('conciliation and arbitration') rather than by negotiations between employers and labour unions (see page 27), these arrangements were promulgated by Australia's post-independence political leaders as 'New Protection'. And in the decades following the Second World War the focus on import replacement was further seen as helping Australia to avoid the balance of payments difficulties which it had experienced in the first half of the 20th century.

Manufacturing reached its peak in importance at just over one-quarter of gross domestic product and employment in the early 1960s. The manufacturing sector began to decline in relative importance – and the level of employment in manufacturing in absolute terms – from the mid-1970s onwards, as a result of sharp increases in labour costs, an over-valued exchange rate for the Australian dollar, the cumulative effects of a long-term failure to match the productivity gains achieved by manufacturing operations in other countries, and an abrupt 25% across-the-board reduction in tariffs in 1973 (which was undertaken as an anti-inflationary measure rather than a step towards trade liberalization). The motor vehicle and textiles, clothing and footwear industries secured substantial increases in import protection in the second half of the 1970s and early 1980s, but they fared no better than other areas of manufacturing in terms of profitability or employment.

Beginning in the mid-1980s, government policies towards manufacturing industry began to change. Quotas were replaced by tariffs, and tariffs themselves were gradually reduced: the average effective rate of protection for Australian manufacturing industry fell from 25% in the early 1980s to 5% by the year 2000. Structural adjustment plans were implemented for some industries, such as steel, clothing, motor vehicles and pharmaceuticals, although most of these formal arrangements were discontinued in the 1990s.

Manufacturing has continued to decline as a share of total economic activity, in part reflecting the effects of productivity gains and the out-sourcing of peripheral and support functions. This has also occurred in other countries: but the decline has been more rapid, and the manufacturing sector is now relatively smaller, in Australia than in most other advanced economies. Australian manufacturing has become more specialized. Imports now account for about 30% of total sales of manufactured goods in the Australian market, compared with around 21% in the late 1980s. On the other hand, nearly 13% of Australian manufacturing output is now exported, twice as much as in the 1980s (though this has fallen slightly since 2001). Australia's top 30 exports now include motor vehicles, pharmaceuticals, computer components, telecommunications equipment and aircraft components.

Construction

The building and construction sector typically accounts for around 6% of GDP and around 7½% of total employment. The level of construction activity is however volatile, reflecting its greater sensitivity to fluctuations in interest rates and consumer or business confidence, and to the inherent 'lumpiness' of government and private sector spending on major infrastructure projects.

Housing

Over the past decade, construction of residential dwellings has accounted for an average of 43% of total construction activity.

Australians have traditionally attached a high degree of importance to home ownership, both for the stable foundation it is widely believed to provide for family life and as a means of building wealth through rising house prices. For much of the post-War period governments have encouraged home ownership through direct grants to first-time home buyers. Nearly 69% of Australians own their dwellings (outright or with an outstanding mortgage); and housing accounts for around 55% of total Australian household assets (compared with about 33% for American households). Of the 28% of Australians who live in rented accommodation, more than three-quarters rent from private landlords.

Moreover, Australians have traditionally had a strong preference for detached houses over multi-unit dwellings: separate houses account for 78% of the total housing stock, and 82% of the population live in detached houses. As a result, Australian cities occupy relatively large land areas compared with European or North American cities with similar populations. However rising land costs (especially in Sydney) and changing social preferences (such as an increasing number of people living alone, the later age of marriage and family formation, and a growing distaste for commuting from distant suburbs) have led to greater acceptance of denser forms of living in inner urban areas, so that multi-unit dwelling commencements have risen from around 21% in the early 1980s to as high as 32% in 2004-05.

The increasing popularity of inner-city living has also enhanced the popularity of renovating and extending older dwellings, so that alterations and additions now account for around 46% of total residential construction expenditure, compared with less than 25% in the late 1960s and early 1970s.

The residential construction industry is highly fragmented, with the largest five builders in each State typically having around 50% of their market and a large number of very small businesses. The average construction business employs fewer than five workers, less than half the average for firms across all industries.

Housing activity is highly cyclical, being especially sensitive to the impact of movements in (short-term) interest rates on the demand for housing. Because of the strong linkages between housing activity and parts of the manufacturing sector (most obviously, the production of building materials) and retailing (whitegoods, furniture and floor coverings), fluctuations in housing activity also have a broader economic impact.

The introduction of the 10% goods and services tax (GST) on 1 July 2000 also gave rise to a pronounced cycle in housing activity, since residential construction expenditures which had previously been exempt from wholesale sales tax were subject to GST. As a result, construction activity was 'brought forward' ahead of the commencement date of the GST in order to minimize the impact of the tax, resulting in a temporary sharp downturn after the tax came into effect. Towards the end of the residential property boom of the first half of the present decade, the share of GDP accounted for by residential construction investment exceeded that of business investment in plant and equipment for the first time in Australia's history.

Non-residential construction

Non-residential construction accounts for about 57% of total construction activity, on average. In recent years, non-residential building (offices, hotels, shopping centres, factories, warehouses etc.) has accounted for around 37% of non-residential construction activity, and engineering construction (roads, bridges, ports, water and energy supply infrastructure, mines and oil and gas fields) 63%. At the height of a boom in office construction at the end of the 1980s, these proportions were reversed. However, non-residential building, other than of hotels, was more subdued during the 1990s. The late 1990s and early years of the current decade have witnessed a significant increase in engineering construction associated with higher levels of government spending on infrastructure and some large mining projects, notably the North West Shelf natural gas project and more recently expansion of iron ore and coal mining.

In marked contrast to the residential building sector, non-residential construction is dominated by large companies with heavily unionized workforces.

Services

Despite the continuing significance of agriculture and mining as sources of export income, and the historical importance of manufacturing as a focus of government policy, the provision of personal, business, community and government services accounts for nearly three-quarters of Australian production and employment – much as in other advanced Western economies.

Transport

Given the wide geographical dispersion of Australia's population, and its distance from other major population centres and export markets, transport has always been of particular importance to Australia.

The first railroads were built in the 1850s and railroad networks expanded rapidly, radiating inland from the State capitals, from the 1890s through the 1920s. For the most part, the railroad systems were built and operated by colonial (later State) governments; the principal exceptions being the trans-Australian rail line from Sydney to Perth, and the line from Port Augusta in South Australia to Alice Springs, which were built and operated by the Federal Government. Inter-State rivalries meant that the systems often used different gauges: for example, passengers travelling between Sydney and Melbourne were required to change trains on the border between New South Wales and Victoria until 1962.

There are now around 33,000 kms (21,000 miles) of government-owned railroads in Australia, down from a peak of nearly 44,000 kms in the 1940s. In recent years, some government authorities have sold their rail freight and passenger operations (including the Sydney-Perth, Sydney-Melbourne and Adelaide-Alice Springs passenger services) to private consortia. Privately-owned railroads also service iron ore mines in Western Australia, sugar plantations in Queensland and a small number of other mining operations.

Road is now the predominant form of transport within Australia. Australia has over 800,000 km (500,000 miles) of roads, of which more than half are unpaved. Formally, responsibility for the construction and upkeep of roads is divided between State and local governments, although the Federal Government in effect funds the major interstate highways. Toll roads have traditionally been uncommon, apart from the Sydney Harbour Bridge (on which tolls have been collected since its opening in 1933). Over the past decade, however, new urban freeways in Sydney, Melbourne and Brisbane have been financed by tolls.

Australians own 11.5 million cars and motor cycles, keeping them for about 10 years, on average (longer than is typical in North America or Europe), and driving them an average of 14,800 kms (9,250 miles) each year.

There are a further 2 million light commercial vehicles and around 458,000 trucks on Australian roads, carrying over 1¾ billion tonnes of freight each year.

As an island nation, the overwhelming majority of Australia's trade - nearly 80% of its exports and over 70% of its imports - is necessarily carried by sea. Much of Australia's agricultural, mineral and energy exports are shipped by bulk carriers or tankers, often from specialized ports such as Port Hedland and Dampier in the north-west of Western Australia, Hay Point and Gladstone in Queensland, Newcastle in New South Wales, and Portland and Geelong in Victoria. Container shipping – which accounts for some 74% by value of Australia's imports – is concentrated through the major capital city ports along the south-east coast.

Australia is almost wholly reliant on foreign carriers for international container shipping.

Australia is the world's eight largest aviation market, with over 56mn passengers carried by commercial services in 2003. Over 50 airlines operate regular scheduled international passenger air services to and from Australia. Australia's national airline, Qantas, carries about 40% of this traffic. Qantas was founded as 'Queensland and Northern Territory Aerial Services' in 1920, began international services in 1934 and was nationalized by the Federal Government in 1948. The Government sold a 25% stake in Qantas to British Airways in 1993, and the remainder to private investors via a listing on the Australian Stock Exchange in 1995. Sydney Airport caters for nearly half the international passenger arrivals to and departures from Australia, with Melbourne, Brisbane, Perth and Cairns handling nearly all of the remainder.

Qantas is also by far the most important provider of domestic aviation services, following the collapse of its major competitor Ansett (at the time, a subsidiary of Air New Zealand) in September 2001. Prior to 1989, government policy restricted the major domestic routes to Ansett and the government-owned Trans-Australia Airlines, later renamed Australian Airlines, which was absorbed into Qantas in 1992. Virgin Blue, majority-owned by Richard Branson's Virgin International, is now Qantas' principal competitor on major domestic routes, while regional and commuter airlines provide services to smaller airports across Australia.

Until the 1990s, Australia's major capital city international and domestic airports were owned by the Federal Government. With the sale of Sydney airport in June 2002, however, all of these airports are now owned and operated by private sector companies. The majority of smaller airports are operated by local authorities or private companies.

Communications

Governments have played a major role in the development of communications services across Australia, partly because of the scale of the investments required to provide these services to a small and widely dispersed population, and also because of the strong desire of successive governments to ensure that those living in remote areas have been able to access basic communications services at a reasonable cost. This has, in turn, traditionally been seen as requiring extensive 'cross-subsidies' from profitable operations in and between the major cities to more costly services in more distant regions.

Australia Post, owned by the Federal Government, retains a monopoly of the carriage of standard letters within Australia (at a uniform rate irrespective of origin or destination) and competes with private businesses in parcel delivery, distribution of advertising material, and money order services.

Telecommunications services were also the preserve of Federal Government instrumentalities until the 1990s, but were substantially de-regulated in 1997. There are now three major carriers (including Telstra, the former government monopoly now only about 35% owned by the Federal Government), around 25 smaller carriers and nearly 700 'service providers' (including internet service providers) who purchase network capacity from carriers for on-sale to their customers.

As of 2004, there were 586 fixed line telephones in use per 1,000 residents in Australia (compared with 606 in the US and 560 in Britain), and 827 cellular or mobile telephone subscribers per 1,000 residents (US 621, Britain 1,022).

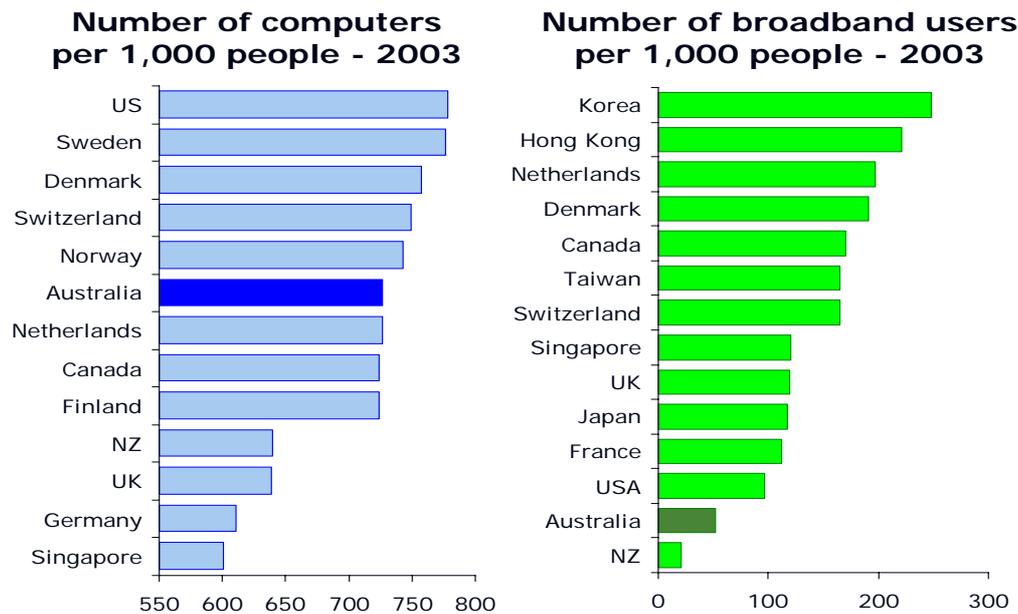
Although charges for international telephone calls have fallen significantly since de-regulation, residential and business telecommunications charges are generally higher in Australia than in the United States and most European countries (mobile call charges especially so).

Australia has experienced a rapid take-up of new information and communications technologies.

By mid-2005, 67% of Australian households had access to a computer at home, with 56% (59% in metropolitan areas) having access to the internet. Some 85% of Australian businesses used computers in the 2003-04 fiscal year, 74% used the internet and 25% had a web presence.

In 2005, Australia ranked 7th in the world (behind only the US, the Scandinavian countries and Switzerland) in terms of the number of computers per 1,000 people, and 4th (behind Iceland, Sweden and Denmark) in terms of the number of internet users per capita. However the take-up of broadband has been fairly slow, with only 52 subscribers per 1,000 inhabitants in 2004, well behind the leader Korea (248 subscribers per 1,000 inhabitants), the Netherlands (197), Canada (169), the Nordic countries (138-191), Israel (140), Singapore (120), Japan (117), and the US (96). This partly reflects the relatively high cost of broadband access in Australia, at US\$9.87 per 100 kbits per month in 2003, compared with US\$3.53 in the US and just US9¢ in Japan.

Take-up of new information technologies



Source: IMD, *The World Competitiveness Year Book* 2006.

While Australia is a relatively intensive user of information and communications technologies (ICT), as noted earlier Australia is not a significant ICT producer. ICT industries accounted for 4½% of total value added in the Australian business sector in 2002-03, (compared with around 9% in the US and 6½% in the EU), while employment in ICT specialized businesses represented 2.5% of total Australian employment (compared with around 4% in both the US and the EU); of these employees, just under half were ICT employees.

Australia thus runs a large trade deficit on ICT products – of some A\$10³/₄bn (US\$8bn) per annum. Australia's relatively high dependence on imported ICT products (and the correspondingly low weighting of technology stocks on the Australian Stock Exchange) resulted in Australia being perceived by some observers, as an 'old economy' at the height of the 'dot com' bubble in the US and other share markets in the late 1990s. However it also meant that Australia avoided the 'boom-bust cycle' experienced by the US and many other countries in the late 1990s and early 2000s, whilst benefiting more than most other OECD countries from the on-going decline in the prices of IT products.

Tourism

Tourism is one of Australia's most important services industries, accounting for 4% of total GDP and directly employing 5½% of the work force.

Australians travelling within the country account for about three quarters of total tourism spending. Most Australians are entitled to four weeks' vacation, plus about ten public holidays each year. In the 2004-05 fiscal year, Australians aged 15 and over took some 72 million trips within Australia of at least one night's duration, spending an average of 4 nights each away from home. Holiday and leisure accounted for 46% of this travel, visiting friends and relatives 33% and business (including conventions) 14%. Queensland accounts for 39% of the domestic holiday and leisure travel market, followed by New South Wales with 38%; while NSW accounts for 38% of the domestic business travel market.

Despite the long distances between Australia and the world's larger population centres, the number of foreign visitors to Australia has grown rapidly, from around 1 million per annum in the mid-1980s to a peak of nearly 5 million in 2000, when the Sydney Olympic Games drew an estimated additional 111,000 visitors to Australia. Foreign visitor numbers fell to less than 4¾ million in 2003 following the September 11 terrorist attacks on the US and the SARS outbreak in Asia. However, inbound tourist arrivals recovered to 5½ million in 2005 and 2006, generating revenue in excess of US\$13bn and putting Australia in 10th place in terms of revenue from international tourism (or 4th in per capita terms).

New Zealand is now Australia's largest single source of foreign visitors, accounting for just under 20% of the total in 2006. Tourist arrivals from Japan have declined by nearly 20% since their peak in 1997, reflecting the poor performance of the Japanese economy until recently and a rise of over 50% in the value of the A\$ against the yen; Japan now ranks third (after the UK) as a source of visitors. The number of Chinese visitors has increased more than five-fold over the past decade; in 2004 China ranked fifth (behind the US) as a source of international tourists, with just under 6% of the total.

One of the more rapidly-growing areas of tourism and recreational activity over the past two decades has been gambling. In the 2004-05 financial year, net expenditure (or the amount lost) on gambling in Australia was equivalent to A\$996 per head of adult population or 1.7% of GDP, compared with 1.4% of GDP in the late 1980s. Much of this growth has come from gaming machines (which now account for 55% of net takings from gambling). Some 76,850 people (0.8% of the workforce) are employed in over 5,300 businesses where gambling is the predominant activity – 18,340 in the 13 casinos located around Australia (including in each of the State and Territory capitals) and the remainder in totalizator (racing) betting, lotteries and other gambling businesses. Gambling taxes have become an important revenue source for State governments, accounting for nearly 9% of State taxation revenues.

Other services sectors

The *retailing* and *wholesaling* sectors each account for about 5¼% and 6½%, respectively, of Australia's GDP. Retailing is a significant employer, accounting for slightly more than one in every seven jobs in Australia, more than any other single industry. Buoyant consumer spending and the relaxation of restrictions on trading hours have resulted in strong growth in the retail sector over much of the past decade.

Food and grocery stores account for 40% of total retail sales. This segment is relatively concentrated, with four major chains accounting for an estimated 58% of total supermarket, grocery, liquor and specialized food retail sales in 2000-01; this is similar to the corresponding figure for the four largest supermarket chains in the UK but compares with a 38% market share for the top 20 chains in the US.

Property and business services is another important sector of the Australian economy, accounting for about 12¾% of GDP and 12% of total employment. This sector includes accounting, legal, and other professional and advisory services; real estate services; and a wide range of services such as cleaning, payroll, repairs and maintenance.

This sector grew rapidly during the 1990s as a result of the increasingly common practice among large corporations and government agencies of 'outsourcing' ancillary services to specialist providers, but has experienced a marked slowdown in the early years of the present decade.

The *financial services* and *government and community services* sectors are discussed in separate sections below.

The financial system and financial markets

The financial system

Australia's financial system evolved along similar lines to that of Britain and Canada, albeit with higher levels of direct government involvement than in either of those countries.

For much of the twentieth century the Federal Government and four of the six State governments operated commercial and or savings banks, while each of the State governments also operated insurance businesses, in some cases with monopoly powers (eg over workplace and transport accident insurance). From the 1940s until the 1980s, the operations of private sector financial institutions were tightly and closely regulated, with often detailed prescription of the types of persons and businesses from and to whom banks and other institutions could borrow or lend, at what interest rate, and of the types and amounts of assets which institutions could, must or could not hold. The development of financial markets, other than the stock market, was also heavily constrained by regulation.

By the 1980s it was widely recognized that the regulatory framework established in the post-war era had become costly and inefficient, was failing to achieve its objectives and had spawned the growth of institutions and activities outside the purview of the regulators.

As a result, and in line with similar developments in other countries, Australia's financial system was progressively deregulated during the 1980s. Official controls over interest rates and over the amount and allocation of lending were gradually dismantled between 1981 and 1988.

The exchange rate, previously set by a committee of officials, was 'floated' in December 1983. Banking licences were made more readily available, and a number of thrift institutions (known in Australia as building societies) converted themselves into banks. Most of the restrictions on foreign participation in the Australian financial system (apart from those governing ownership of the major banking groups) were removed. Regulations governing the structure of life insurance companies' and superannuation (pension) funds' portfolios were abolished. During the 1990s, governments either sold their interests in banks and insurance companies or, in some instances, closed them down after incurring heavy losses in the newly de-regulated environment.

Banks play a somewhat larger role in the Australian financial system than they do in that of the United States. The five major banks (Commonwealth, National, ANZ, Westpac and St George) account for about 66% of the total assets of deposit-taking intermediaries. There are also nine smaller locally-owned banks, 40 branches or locally-incorporated subsidiaries of foreign banks (which operate predominantly in corporate or investment banking activities), 14 building societies and 147 credit unions operating in Australia.

Banks provide about 78% of total housing finance for owner-occupation. Their share of this market has declined from a peak of over 90% in 1993-4 as a result of the growth of US-style 'securitized' mortgages. Unlike the US, however, most Australian mortgages are at variable rather than fixed interest rates: variations in the Reserve Bank's 'official cash rate', undertaken for monetary policy purposes, are reflected almost immediately in mortgage rates and thus attract much more media and public attention than in the United States. Competition between banks and other lenders saw the 'spread' between the standard variable mortgage rate and the official cash rate narrow from 4¼ percentage points in 1993 to around 1¾ percentage points by the end of the 1990s.

Banks also provide around 78% of finance for other personal purposes; over 85% of commercial finance; and around 33% of all lease finance commitments.

Although banks have retained a dominant position in the Australian financial system, the combination of competitive pressure from other institutions (which has reduced the margins between interest rates paid on deposits and charged on loans), mergers between banks and the introduction of new technologies has substantially changed the conduct of banking over the past decade. The number of bank points of representation (branches and agencies) declined by nearly two thirds, from over 13,300 to just under 4,800 between 1993 and 2001, but has since risen to over 5,100 by June 2006. Banks have another 3,266 face-to-face 'points of presence'. There are also over 14,000 automatic teller machines (ATMs) and cash dispensers, and over 340,000 EFTPOS (electronic funds transfer at point of sale) terminals in Australia. In addition, Australia Post provides banking services through 3,190 'giro post' agencies across Australia.

Most bank transactions are now done through ATMs, EFTPOS, telephone banking or on-line; fewer than 20% of transactions are carried out in bank branches. Nonetheless, the decline in the number of bank branches and agencies during the 1990s was a source of considerable unrest, especially in non-metropolitan areas and among those less comfortable with electronic banking facilities.

The activities of banks, building societies and credit unions are supervised by the Australian Prudential Regulatory Authority (APRA), established in 1997 to consolidate the supervisory functions previously exercised by the Reserve Bank of Australia (Australia's central bank) and various State authorities.

The Reserve Bank remains responsible for the conduct of monetary policy, the issue of bank notes and the management of Australia's foreign exchange reserves.

Bank failures in Australia are rare. Although the State Banks of Victoria and South Australia required significant recapitalisation from their government owners following substantial losses in the late 1980s or early 1990s, and a building society which became insolvent at that time was also bailed out by the Victorian State government, no depositor in an Australian bank has lost money since 1931. This is despite the fact that bank deposits are not guaranteed by the Reserve Bank, and that there is no deposit insurance scheme operating in Australia.

Financial markets

Australia's securities markets are supervised by the Australian Securities and Investments Commission (ASIC). The size and importance of financial markets has increased significantly since the early 1980s. Australia's share market (the Australian Stock Exchange or ASX) is the eighth largest in the world, and the third largest in the Asia-Pacific region; while the Sydney Futures Exchange is the largest futures exchange in the region. Trading on both exchanges is fully electronic.

Three factors have been particularly significant to the growth of the financial markets in Australia over the past two decades.

The first of these is the de-regulation of financial markets through the 1980s, mentioned earlier.

The second has been the phased introduction, beginning in the early 1990s, of a compulsory retirement savings scheme – known in Australia as 'superannuation'.

Traditionally, superannuation schemes were provided only to public sector employees and to the 'white collar' employees of larger corporations. These schemes were typically 'defined benefit' schemes: that is, paying a lump sum or (less commonly) a pension upon retirement based on years of service and salary in the year(s) prior to retirement, with the investment risk borne by the employer. Trade unions began pursuing wider access to superannuation in the 1980s, and since 1992 Australian employers have been legally required to pay a proportion of all their employees' wages or salaries (except for those on very low wages or salaries) into superannuation funds. The proportion was initially set at 3% and reached the ultimately intended level of 9% in July 1992. Individuals can elect to make additional superannuation contributions in excess of these minima (although until 2006 limits on the concessional tax treatment of superannuation savings have imposed *de facto* upper limits on voluntary contributions). Employer contributions Around 90% of Australian employees are now members of superannuation schemes.

Superannuation funds are governed by representatives of employees and employers (known as 'trustees'), usually managed by professional fund managers, and subject to prudential supervision by APRA or (in the case of funds with fewer than five members) by the Australian Tax Office. Contributions to superannuation funds, and the investment income earned on them, cannot be accessed by employees until at least age 55. In recognition of this, contributions to superannuation funds may be made out of pre-tax income (and taxed at a concessional rate of 15%); the earnings of superannuation funds are taxed at concessional 15% rate; and from 1 July 2007 payments of superannuation 'lump sums' or annuities to persons over the age of 60 will be tax-free.

There are over 333,400 superannuation funds in existence. Of these, some 325,700 are 'self-managed superannuation funds', similar to US Individual Retirement Accounts (IRAs). Only about 1,300 funds have five members or more.

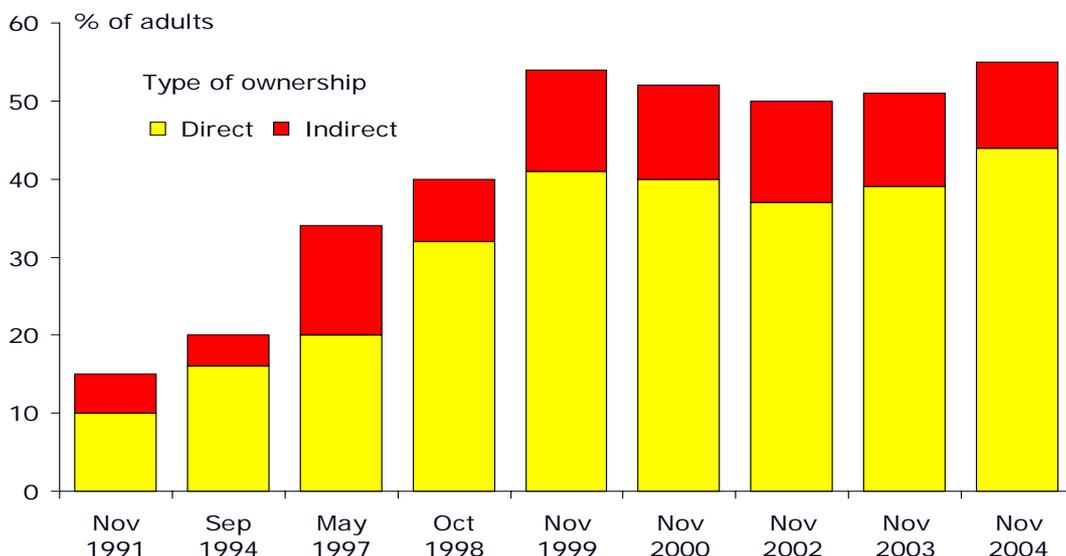
Most superannuation schemes (covering around 85% of members) now take the form of 'accumulation' or 'defined contribution' funds, in which the payment on retirement depends on contributions and investment earnings: the investment risk thus now rests in most cases with employees, rather than employers.

As at 30 September 2006, superannuation funds had assets totalling A\$946bn, equivalent to 955 of annual GDP. Together with life insurance companies, superannuation funds account for about one-quarter of the total assets of the Australian financial system. Typically, the larger superannuation funds have about 33% of their assets in Australian equities, 23% in international equities, 13% and 5% in Australian and international fixed income securities respectively, 8% in property, 7% in cash and 10% in other investments such as hedge funds, infrastructure assets, etc.

The third spur to the growth of financial markets has been the sale of government-owned businesses – banks, airlines, insurance companies, utilities, the principal telecommunications carrier, betting operations, and others – to private investors, a process known in Australia as 'privatization'; and the conversion of a number of mutually-owned building societies and life insurance offices into public companies through 'de-mutualization'.

Privatization of government businesses during the 1990s amounted to over A\$70 billion; while de-mutualizations (including that of Australia's largest life office, AMP) involved assets of over A\$170 billion.

Share ownership in Australia



'Indirect' ownership refers to ownership through managed (mutual) funds or personal superannuation (pension) plans, but excludes employer-sponsored superannuation plans.
 Source: Australian Stock Exchange *Australian Share Ownership Study*.

A large number of individuals became shareholders during the 1990s as a result of these transactions: by November 2004, 44% of Australian adults owned shares directly (compared with 10% at the beginning of the 1990s). Of these, half have only one or two shares in their portfolios. A further 11% owned shares indirectly through managed funds or personal (as opposed to employer-sponsored) superannuation.

Direct equity ownership is thus a little less widespread in Australia than in the United States (where around 50% of adults own shares directly) but more common than in Britain (22%) or other European countries with highly developed investment markets such as Switzerland or the Netherlands (where around 24% of adults own shares directly).

The Australian bond market has until relatively recently been dominated by the borrowing requirements of the Commonwealth (Federal) government. Throughout most of the period since European settlement began, Australian governments have relied on borrowings to finance the provision of infrastructure and other forms of 'national development'. However, except during the two world wars, Australian governments typically avoided debt financing of recurrent expenditures until the mid-1970s. Banks, life insurance companies and superannuation funds, who until the 1980s were required to hold prescribed percentages of their assets in public sector securities, absorbed most of the debt issued by governments.

From the late 1920s until 1990, the Commonwealth undertook borrowings on behalf of State governments, although 'semi-government authorities' (such as the utilities owned by each of the State governments, and the telephone company wholly-owned by the Commonwealth until 1997) issued debt in their own names. Since 1990, State governments have issued debt in their own names.

The bond market expanded significantly between the mid-1970s and mid-1990s, as the Commonwealth and some State governments incurred significant budget deficits for the first time since World War II. Net public sector debt peaked at 35% of GDP in 1995 (not an especially high figure by OECD standards). Since then, a combination of (for the most part) surplus budgets at both the Commonwealth and State levels and major asset sales (especially the selling-down of the Commonwealth's holding in the telecommunications company Telstra) has resulted in total net public sector debt declining to less than 2% of GDP by 2005, and the Commonwealth Government becoming a net creditor.

Until the mid-1990s the bond market was relatively unimportant as source of finance for the private sector, reflecting the pre-emption by governments of most of the investor demand for fixed interest securities and, as noted earlier in this section the dominant position of the banks as providers of finance to business. (In contrast to the US, banks have higher credit ratings than almost all other corporations in Australia). However the declining debt requirements of governments the increasing appetite, (especially from superannuation funds) for fixed interest securities, and the desire on the part of banks to 'securitize' lending assets for balance sheet and risk management purposes has led to rapid growth in the market for non-government bonds in recent years. In April 2002, the value of non-government debt on issue exceeded that of Commonwealth and State government debt for the first time.

The Australian dollar (until 1966, the Australian pound) was formally pegged to the British pound until 1971, to the US dollar from then until 1976, and thereafter until December 1983 'managed' by the Reserve Bank (within guidelines prescribed by the government) against a basket of other currencies known as the 'trade weighted index' or TWI. These arrangements were accompanied by exchange controls which (among other things) restricted borrowing or investment abroad by Australian companies and individuals, and required the Reserve Bank to 'clear' the market for foreign exchange at the prescribed exchange rate at the end of each trading day.

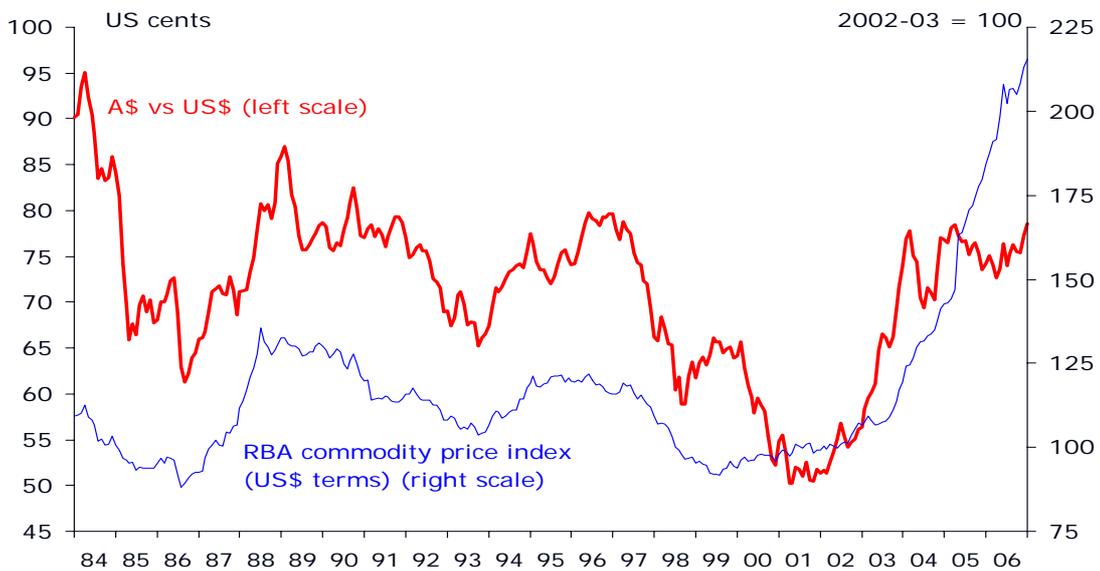
In December 1983 the Australian dollar was 'floated' and exchange controls removed. This was one of the key steps in the deregulation of Australian financial markets described above.

The Australian dollar is now the sixth most actively traded currency in the world (after the US dollar, euro, yen, pound and Swiss franc); the A\$-US\$ is the fourth most traded currency pair around the globe (with about two-thirds of this trading taking place outside Australia). By total volume of trade, Australia's is the seventh largest foreign exchange market in the world (after London, New York, Tokyo, Singapore, Frankfurt and Hong Kong).

Movements in the value of the Australian dollar have usually been closely linked to fluctuations in commodity prices, reflecting the significance of commodities among Australia's exports, although this relationship appeared to break down in the late 1990s, partly as a by-product of the strength of the US dollar at this time. The Australian dollar fell to a record low of US47.9¢ in April 2001, and again fell below US50¢ in September that year, but appreciated significantly over the following three years in line with rising prices for many of Australia's major export commodities and a wide interest rate differential between Australia and the principal world financial centres (the result of Australia not needing to cut interest rates as aggressively as the US, Europe or Japan in the early years of this decade).

Since 2004, on-going increases in commodity prices have kept the A\$ in a range of US73-80¢ despite a significant narrowing in the interest rate differential between Australia and the United States.

The Australian dollar and commodity prices



The Reserve Bank of Australia's commodity price index is an index of the unit prices of Australia's principal commodity exports (in US\$), weighted in accordance with their share in Australia's total commodity exports. *Sources:* Reserve Bank of Australia; Thompson Financial Datastream.

The Australian dollar float is relatively 'clean' in the sense that the Reserve Bank does not seek to 'target' any particular level of the exchange rate. It does buy and sell foreign currencies in order to meet the requirements of the Commonwealth government (eg. for spending associated with diplomatic missions, foreign aid or for defence purposes). It has also, on occasion, 'intervened' in the foreign exchange market when it has judged that trading has become 'disorderly', or 'excessively one-sided'; but such occasions have been rare during the past ten years.

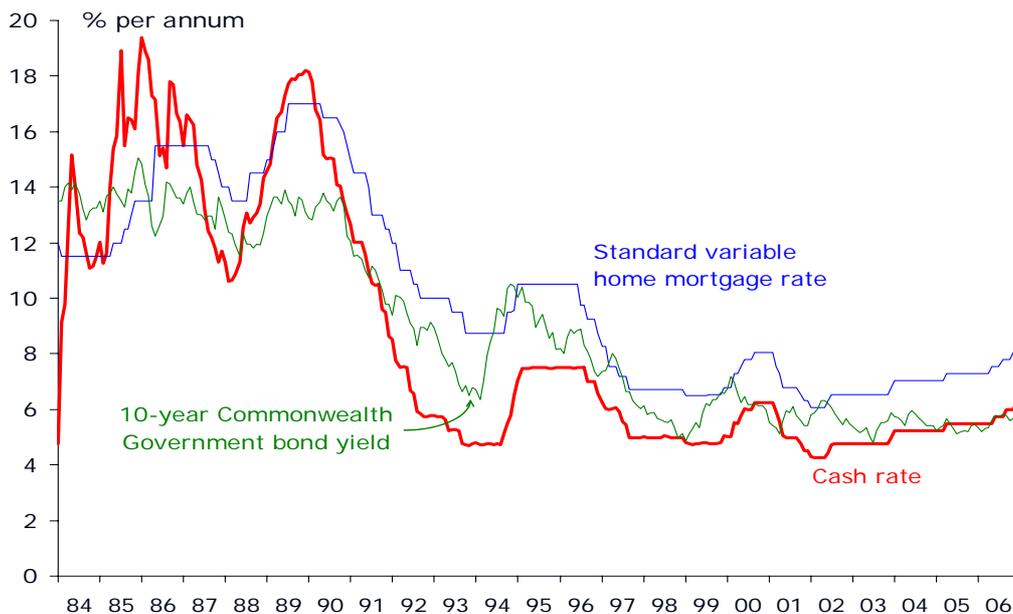
Monetary policy

The Reserve Bank is also responsible for the setting and implementation of monetary policy. The Reserve Bank Act requires the Bank to conduct monetary policy so as to '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'.

In 1993, the Reserve Bank adopted an inflation target of '2-3% per annum, on average over the course of the business cycle'. This target was then formalized in an agreement between the present Government and the Governor of the Reserve Bank in 1996. At the same time the Government formally removed the requirement for the Reserve Bank to consult with it over monetary policy decisions, confirming the *de facto* independence the Bank had acquired in the early 1990s. The Reserve Bank's target is intentionally couched in looser terms ('over the course of the business cycle') than, for example, the inflation targets assigned to the Reserve Bank of New Zealand (1-3%) or the European Central Bank (2%), allowing monetary policy to play a role in dampening fluctuations in economic activity (and hence in employment) over the course of the business cycle.

Changes in the stance of monetary policy are implemented through changes in the targeted level of the cash rate. This is the rate at which banks lend overnight funds to one another through their exchange settlement accounts at the Reserve Bank (and is conceptually similar to the Federal funds rate in the US). The Reserve Bank undertakes 'open market operations' (most commonly, transactions in government securities) so as to maintain the cash rate at the targeted level. Changes in the cash rate are typically reflected very quickly in interest rates charged to borrowers, particularly mortgage and business lending rates. The wholesale money markets tend, as in other countries, to anticipate changes in the cash rate, so that unless the markets are 'surprised' by a change in monetary policy there will usually be little impact, if any, on money market or bond yields.

Australian interest rates



Source: Reserve Bank of Australia.

Monetary policy settings are determined by the Reserve Bank Board, which meets on the first Tuesday of each month (except January). Since 1990, changes in the cash rate have been announced by the Governor of the Bank, typically (although not always) at 9:30 on the morning after the Board meeting.

Changes in monetary policy settings attract much more political and media interest in Australia than in most other countries because the overwhelming majority of Australian mortgages are at 'floating rates', which re-set whenever the Reserve Bank alters its target for the cash rate.

Australia experienced high and volatile interest rates during the 1980s and early 1990s because Australian inflation was also high and volatile (see the chart on page 8); because monetary policy was seeking to pursue multiple, often conflicting objectives and was seen as subject to political influence; and because budgetary policy settings were loose and unstable.

Since the adoption of the inflation-targeting framework, and with the assistance of lower inflation and interest rates in most of Australia's major trading partners and of more sustainable and stable budgetary policies, interest rates in Australia have returned to levels not experienced since the early 1970s.

Labour

For most of the twentieth century, the wages and conditions of employment of Australian workers were prescribed in considerable detail by the decisions of quasi-judicial tribunals, the Conciliation and Arbitration (later, Industrial Relations) Commission and its State equivalents. Their decisions, popularly known as 'awards', were the outcome of hearings involving trade unions, as representatives of employees, and various associations of employers, with the Federal or State Governments often also making representations to the Commissions. 'Awards' stipulated minimum rates of payment and other conditions of employment to be observed by all employers of workers covered by each award, irrespective of conditions in individual businesses or work-places; employers and unions could agree separately on 'over-award' payments.

The conciliation and arbitration system was intended to promote 'fairness' in pay and conditions across different industries and employers, to protect the interests of workers with limited bargaining power, and to minimize the number of strikes and other industrial disputes. In this latter regard, the system was quite unsuccessful: until the early 1980s, Australia was one of the most strike-prone countries in the OECD.

From the late 1980s onwards, the determination of pay and other conditions of employment has become more decentralized, with negotiations between unions or employees and individual employers (through 'enterprise bargaining') at the enterprise, workplace or even individual level becoming more important. In recent years the primary role of the Industrial Relations Commission has been to resolve industrial disputes and to set a 'safety net' of minimum wages and core conditions of work.

By 2004, only 20% of employees had their pay set by awards; these tend to predominate in lower-skilled occupations. 41% of employees' had their pay set by 'collective agreements' or 'enterprise awards' (that is, agreements resulting from bargaining between an employer and a group of employees or unions representing them); and 39% by individual agreements.

Partly as a result of the progressive decentralization of Australian wage-fixing processes, and partly due to the more rapid growth of employment among female-dominated and traditionally less heavily-unionized services sectors, trade union membership declined from over 57% of wage and salary earners in the early 1980s to less than 23% by 2005. Among private sector employees, union membership is less than 17%; among public sector employees, it is over 47%. Employees in the utilities, education, government administration, finance and insurance, and communications services have above-average rates of union membership; comparatively few workers in the agriculture, property and business services, or wholesaling sectors are union members.

Changes in Federal legislation governing workplace relations in 2006 have further reduced the number of 'allowable matters' which can be prescribed in awards, and transferred the setting of minimum wages to a newly-established Fair Pay Commission.

Government

Although the Australian Constitution incorporates some elements of the US system – for example, a bicameral national Parliament (legislature) with a House of Representatives elected from single-member electorates and a Senate in which each State has an equal number of representatives – in most respects the Australian system of government operates along Westminster (British) lines. In particular, as in Britain and Canada, the executive (the Prime Minister and Cabinet Ministers) are selected from among the elected members of Parliament, by the party (or, as at present, coalition of parties) which is able to command a majority in the House of Representatives; and senior public (civil) servants are expected to be non-partisan.

Governments are formally 'accountable' to Parliament: in practice, governments usually face few difficulties passing legislation through the House of Representatives, but rarely enjoy a majority in the Senate and are thus often forced to compromise on contentious legislation with minority parties. (The Government of Prime Minister John Howard, which obtained a majority in the Senate following the Federal elections held in October 2004, was the first to have done so since 1980). The titular Head of State, the Governor-General, as representative of the British Monarch, acts on the advice of the elected government. Similar principles apply to the operation of State governments.

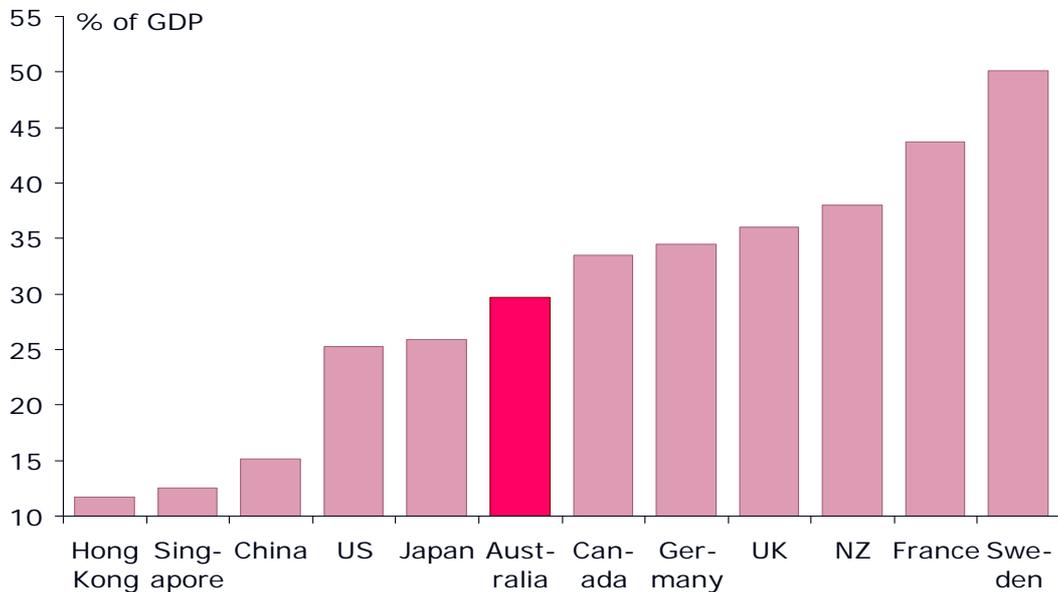
For most of the period of European settlement, governments have had significant responsibilities for the provision of utility services (electricity, natural gas and water), transportation (including railways, shipping and aviation), communications (postal and telephone services, and broadcasting), financial services (banking and insurance), and the marketing of agricultural products. During the 1980s and 1990s the Federal and State governments gradually withdrew from many of their previously extensive business and commercial activities. Today government business operations are largely confined to the postal service, public broadcasting, electricity generation (except in Victoria and South Australia), public transport and water storage and reticulation.

However governments remain the principal providers of health and education services to the majority of Australians; and, as in other advanced economies, are responsible for traditional public services such as defence, law and order, pensions and other social security benefits, economic and social infrastructure, support for cultural activities, and various regulatory functions. State and local governments also actively seek to promote and plan for economic development of their respective jurisdictions.

Spending by the Commonwealth (Federal), State and local governments – excluding that of their business operations – declined from a peak of 39% of GDP in 1992 to 35% in 2000, and have since fluctuated in a range of 34-35% of GDP (according to OECD statistics). These figures are slightly below those for the United States and Japan (36½% of GDP) but well below those for Canada (around 39½%), Britain (45%) and the euro area (47½%).

Correspondingly, Australia's tax burden of 31.2% of GDP in 2004 was around 6 pc points of GDP above that of the United States (reflecting the latter's large budget deficits), and 5 pc points above that of Japan (where persistently weak economic growth over the past decade has resulted in a significant decline in tax collections as a percentage of GDP); but was around 2 pc points of GDP below that of Canada, nearly 5 pc points below that of the UK and 8½ pc points below the EU average.

Taxation as a percentage of GDP, 2004



Sources: OECD, *Revenue Statistics 1965-2004* (2005 edition); IMF, *Government Finance Statistics 2005*; IMD, *World Competitiveness Yearbook 2006*.

Personal income tax accounts for around 41% of total tax collections by Australian governments, somewhat higher than the OECD average (of about 26%). This partly reflects the fact that Australian governments do not levy separate social security contributions, apart from a 1½% income tax surcharge used to partially fund the public hospital and medical insurance system ('Medicare').

Australia's personal income tax rate has traditionally been highly progressive, with the top tax rate becoming payable at fairly modest levels of income by international standards. Over the past two years, the threshold at which the top marginal rate of income tax becomes payable has been lifted from A\$70,000 to A\$150,000 (about 2½ times the average full-time wage, and equivalent to about US\$118,500 at early 2007 exchange rates), while with effect from the beginning of the 2006-07 fiscal year the top marginal rate was lowered from 47% to 45% which, including the 1½% Medicare levy, is roughly in line with the [unweighted] OECD average.

In the United States the top rate of Federal income tax (35% in 2006) is not payable by a single individual (or a married partner filing jointly) on incomes of less than US\$349,700, equivalent to about A\$442,650 at early 2007 exchange rates (note however that in most States and in many cities, State and local governments impose their own income taxes; and that the first US\$75,000 of taxable income is also subject to a 6½% employee social security and Medicare tax).

The Australian personal income tax scale also has a tax-free threshold (available to all tax payers) of \$6,000; tax offsets available to low-income earners mean that individuals do not begin to pay income tax until their annual income exceeds \$10,000 (or, for people aged 65 and over, \$22,000 for singles and \$36,500 for couples).

As noted earlier, Australian employers are required to contribute 9% of their employees' pre-tax incomes to superannuation (which is roughly analogous, at least in part, to the social security contributions levied in many other OECD countries). Additionally, taxpayers earning over \$50,000 per annum are obliged to take out private hospital insurance or pay an additional Medicare levy of 1.0% of taxable income. About 43% of the Australian population is covered by private hospital insurance, paying premiums averaging \$1,160 per annum in 2005-06. Neither of these contributions is classified as 'taxes'.

Many higher-income taxpayers are able to reduce the incidence of high marginal income tax rates by utilizing various concessions, exemptions, and deductions provided for by legislation, or by arranging their affairs with that objective in mind. The revenue foregone as a result of these so-called 'tax expenditures' amounted to nearly 21% of actual revenue collections in the 2005-06 fiscal year.

For example, Australia's income tax system allows unlimited deduction of 'passive investment expenses' (such as interest on borrowings incurred to fund the purchase of investment property or shares) against other taxable income – a (quite lawful) practice known in Australia as 'negative gearing' – which, especially following the introduction in 1999 of a 50% discount on the income tax payable on capital gains on assets held for more than 12 months (effectively reducing the top tax rate on capital gains to 24¼%), provides taxpayers entering into such arrangements with a means of both deferring and reducing tax liabilities.

The interaction of 'negative gearing' with the effective halving of the tax rate payable on capital gains has provided a major spur to individual investment in rental housing. Some 13½% of Australian taxpayers reported earning rental income in the 2003-04 fiscal year, over 60% of them reporting 'running losses' (ie interest payments and other outgoings in excess of gross rental income) with a total net loss of \$2¾ bn.

The Australian tax system permits tradespeople and professionals operating independently to employ their partner or spouse to undertake administrative work and thus (quite lawfully) 'split' their incomes, increasing the amount which falls under the zero-rate threshold and reducing the total amount which is subject to the top rate.

Australia's 30% company tax rate is slightly below the (unweighted) OECD average, but – in contrast to the personal income tax system – is levied on a fairly broad base with few exemptions or concessions and thus accounts for a larger share of total tax collections (17% in 2005-06) than in any other OECD country except Luxembourg and Norway.

However employer payroll taxes (levied in Australia by State and Territory governments) are typically much lower than in other OECD countries and, as noted above, there are no employer social security contributions in Australia (other than the compulsory superannuation contributions described previously).

Estate or inheritance taxes (widely known in Australia as 'death duties') were abolished by the Commonwealth Government in 1978 and by State Governments during the late 1970s and early 1980s, and there are no wealth taxes in Australia.

On 1 July 2000, the Commonwealth Government replaced its long-standing system of wholesale sales taxes applied at various rates to a prescribed range of goods (along with a range of State taxes),, with a 10% goods and services tax (GST) similar to that introduced in Canada in 1991 and to the value-added taxes commonly found in Europe. GST applies to all goods and services except basic foods, residential rents, health and education services, financial services and exports. Revenue from the GST is transferred to State and Territory governments. The Federal Government also levies excises on petroleum products, tobacco products and alcoholic beverages.

On the second Tuesday of May each year, just before the commencement of the Government's financial year on 1 July, the Treasurer (the Minister responsible for economic policy and fiscal affairs) presents to Parliament the Government's estimates of revenues and expenses for the year ahead, popularly referred to as 'the Budget'.

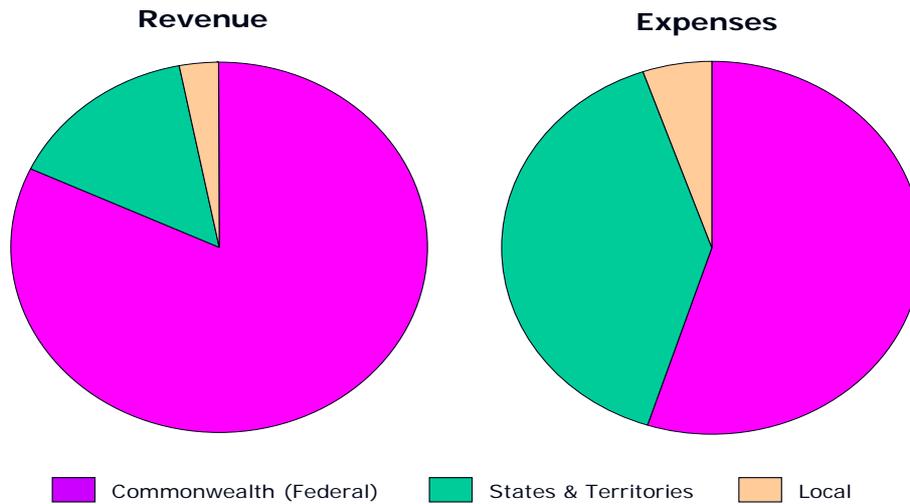
This is usually the occasion for the announcement of any major new spending or taxation policies by the Government of the day, and for the release of the Treasury's forecasts for the Australian economy in the coming year. Australia has followed the British tradition of surrounding the annual Budget with rather more theatre than is common in the United States or continental Europe.

The Commonwealth Government typically collects more in taxes and other forms of revenue than it requires to meet its expenditure commitments – of which social security payments (including age, veterans' and disability pensions, unemployment benefits and family assistance payments) account for nearly 42%, hospital, medical and pharmaceutical benefits payments around 16% and defence about 8%. The Commonwealth Government also funds about half of the cost of tertiary education (the balance coming from tuition and other fees, endowments and other income).

State and local governments are prohibited under the Australian constitution from levying excises or sales taxes and, in practice since 1942, from imposing income taxes. They have thus become dependent to a considerable extent on grants from the Commonwealth Government (New South Wales, Victoria, Western Australia and the Australian Capital Territory less so than the other States and the Northern Territory).

The main sources of State 'own-source' revenue are payroll taxes on employers, taxes on the transfer of property such as real estate or motor vehicles (known as 'stamp duties'), land taxes and, especially in recent years, taxes on gambling. Under the taxation reforms introduced in 2000, the proceeds of the GST are distributed among the States and Territories and this is now their largest single revenue source. However the Commonwealth Government continues to make grants to States for specific purposes, such as health, education and roads.

Revenue and expenses by level of government 2004-05 financial year



Receipts and payments exclude grants from one level of government (predominantly the Commonwealth) to others (mainly States and Territories). *Source:* ABS.

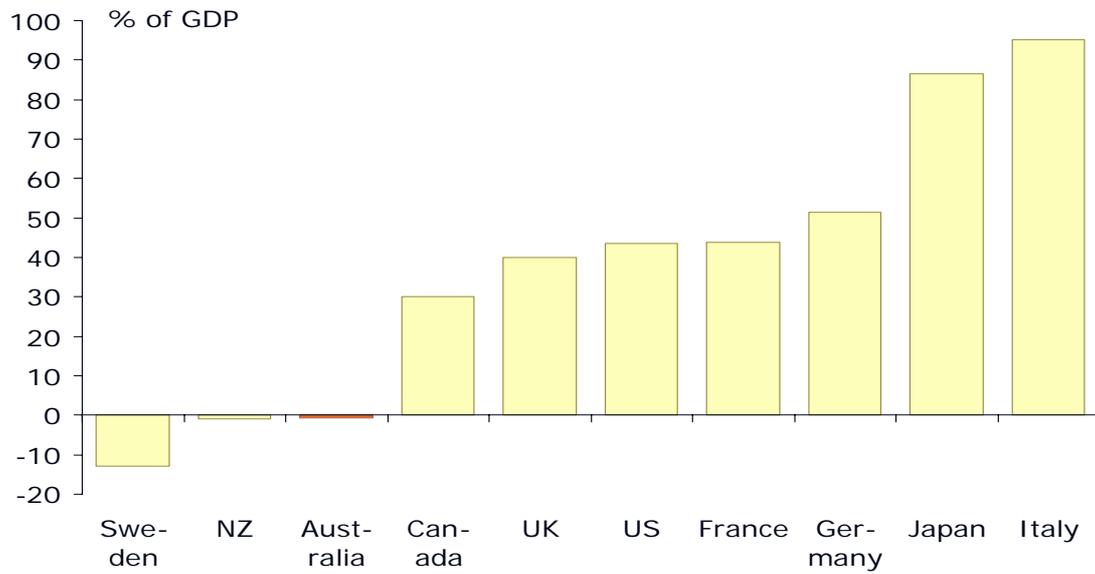
State and Territory governments are responsible for primary (elementary) and secondary education, public hospitals, emergency services (police, fire and ambulance), courts, urban public transport (except in Queensland), arterial roads, urban water supply, nature conservation (including 'national' parks) and support for a range of cultural and recreational activities.

Local governments are funded largely by property taxes (known in Australia as 'rates'), supplemented by grants from State governments. Local governments are generally responsible for public health and sanitation, garbage collection, town planning, local roads, and public libraries. There are no wealth taxes in Australia other than land tax and local government rates, and these are typically lower than in most other OECD countries.

With the exception of the mid-1970s, early 1980s and early to mid-1990s, Australian governments have generally managed to avoid persistently large budget deficits. As a result, and assisted by the privatization programs of the 1990s, Australia had eliminated its overall public sector net debt by 2005. As noted earlier, the Commonwealth Government is now a net creditor, as is the Queensland State Government; the combined net det debt of all State and Territory Governments amounts to less than 5% of GDP.

The Commonwealth Government and the governments of all States and Territories other than Tasmania and the Northern Territory have AAA credit ratings (or their equivalent) from the major rating agencies; Tasmania's and the Northern Territory's credit ratings are one and two notches respectively below that of the Commonwealth. These are much higher credit ratings than those accorded to US States or Canadian Provinces. This reflects not only their generally much lower levels of net debt, but also their relatively low exposure to cyclical fluctuations in revenues and expenditures and (as seen by the rating agencies, although nowhere provided for in legislation) an implicit assumption that the Commonwealth Government would 'bail out' any State or Territory which found itself in severe financial difficulties.

General government net financial liabilities, 2005



Source: OECD, *Economic Outlook* (December 2006).

Since entitlement to age pensions is means-tested, and with Australia's compulsory superannuation scheme expected to result in rising levels of self-sufficiency in retirement income, Australia is better placed than most OECD economies to deal with the issues posed by the aging of its population.

Comparative statistics: Australia and other advanced economies

	<i>Australia</i>	<i>United States</i>	<i>Japan</i>	<i>Euro area</i>	<i>United Kingdom</i>	<i>New Zealand</i>	<i>Canada</i>
Area ('000 sq km)	7,692	9,827	378	2,499	244	269	9,984
Population (mn, 2005)	20.4	296.6	127.7	311.4	60.2	4.1	32.2
Population above 65 (% , 2005)	12.8	11.8	19.4	16.9	16.1	11.6	12.9
GDP (US\$bn ¹ , 2005)	630	12,278	3,911	9,052	1,833	102	1,105
GDP per capita (US\$ ¹ , 2005)	30,897	41,399	30,615	29,069	30,436	24,797	34,273
Average working hours (pa, 2005)	1,757	1,895	1,864	1,693 ⁴	1,787	2,022	1,869
GDP per person employed per hour worked (US\$ ¹ , 2005)	35.63	44.90	32.38	39.29 ⁴	36.29	22.84	33.99
Real GDP growth (% pa, 2000-2005)	3.1	2.4	1.4	1.3	2.4	3.6	2.6
Inflation (% pa, 2000-2005)	3.0	2.5	-0.5	2.2	1.8	2.5	2.3
Unemployment rate, (% , 2005)	5.1	5.1	4.4	8.6	4.8	3.7	6.8
Exports (% of GDP, current prices, 2005)	16.6	10.5	14.3	37.7	26.3	27.8	37.9
Current account balance (% of GDP, 2005)	-6.0	-6.4	3.6	0.0	-2.2	-8.9	2.3
Net international assets (% of GDP, 2005)	-55.4	-20.4	33.5	-12.6	-13.0	-84.7	-13.3
Effective personal income tax rate ² (% of income equal to per capita GDP, 2005)	20.5	21.6	27.2	45.1 ⁴	32.3	21.9	26.6
Maximum corporate tax rate (% , 2005)	30.0	35.0	46.3	35.6 ⁴	30.0	33.0	41.1
Government ³ outlays (% of GDP, 2005)	34.9	36.6	37.0	47.5	44.9	38.2	39.3
Government ³ gross financial liabilities (% of GDP, 2005)	16.9	61.8	173.1	77.3	46.7	28.2	70.8
Public sector employment (% of total, 2004)	15.4	16.4	3.5	12.8	20.3	20.5	5.2
Cost of establishing a business (% of per capita income, 2006)	1.8	0.7	7.5	8.2 ⁴	0.7	0.2	0.9

¹ At purchasing power parity exchange rates. ² Includes compulsory employee social security contributions. ³ General government: ie, excluding public trading or financial enterprises. ⁴ Average for member countries of the euro area weighted by 2004 GDP at purchasing power parity exchange rates ⁵Includes bonuses and long-term incentives.

Sources: IMD, *World Competitiveness Yearbook 2006*; IMF, *International Financial Statistics* December 2006 and *World Economic Outlook* September 2006; OECD *Economic Outlook* No. 80, December 2006; World Bank *Doing Business 2007*;

Comparative statistics: Australia and East Asia

	<i>Australia</i>	<i>China</i>	<i>Korea</i>	<i>Taiwan</i>	<i>Hong Kong</i>	<i>Thai -land</i>	<i>Malay-sia</i>	<i>Indo-nesia</i>	<i>Sing-apore</i>
Area ('000 sq km)	7,692	9,600	100	36	1	513	330	1,891	1
Population (mn, 2005)	20.4	1,307.6	48.3	22.8	7.0	65.1	26.0	219.2	4.4
Population over 65 (% , 2005)	12.8	7.7	8.4	9.7	12.1	6.9	4.3	5.5	8.4
GDP (US\$bn ¹ , 2005)	630	9,412	994	631	233	545	291	977	123
GDP per capita (US\$ ¹ , 2005)	30,897	7,198	20,591	27,721	33,479	8,368	11,201	4,459	28,368
Average working hours (pa 2005)	1,757	2,000	2,270	2,327	2,398	2,184	2,152	2,175	2,056
GDP per person employed per hour (US\$ ¹ , 2005)	35.63	5.42	19.76	25.19	28.81	6.97	12.89	3.83	26.56
Real GDP growth (% pa, 2000-2005)	3.1	9.5	4.5	3.1	4.3	5.0	4.5	4.7	3.9
Inflation (% pa, 2000-2005)	3.0	1.4	3.3	0.7	-1.3	2.3	1.7	9.3	0.6
Unemployment rate, (% , 2005)	5.1	4.2	3.7	4.1	5.7	1.7	3.5	9.9	3.1
Exports of goods (% of GDP, current prices, 2005)	15.0	34.2	36.1	56.8	164.5	62.4	107.9	30.7	196.6
Current account balance (% of GDP, 2005)	-6.0	7.2	2.1	4.7	11.4	-2.1	15.2	0.3	28.5
Net international assets (% of GDP ³ , 2005)	-55.4	12.9	-13.3	117.9	252.7	-33.6	-23.3 ⁴	-46.7	89.5
Effective personal income tax rate ² (% of income equal to per capita GDP, 2005)	20.5	0.0	14.0	11.6	10.0	10.0	20.4	4.1	40.7
Maximum corporate tax rate (%)	30.0	33.0	27.0	25.0	17.5	30.0	28.0	30.0	20.0
General government outlays (% of GDP, 2005)	34.9	18.5	22.9	20.8	17.2	15.0	25.9	19.2	15.4
General government gross debt (% of GDP, 2005)	16.9	4.3	25.2	36.1	1.8	26.8	46.2	64.5	40.1

¹ At purchasing power parity exchange rates. ² Includes compulsory employee social security contributions. ³ At market exchange rates. ⁴ 2004.

Sources: IMD, *World Competitiveness Yearbook 2006*; IMF, *International Financial Statistics* December 2006 and *World Economic Outlook* September 2006; Thomson Financial Datastream; Economics@ANZ.

Comparative statistics: States and Territories

	<i>New South Wales</i>	<i>Victoria</i>	<i>Queens- land</i>	<i>South Australia</i>	<i>Western Australia</i>	<i>Tas- mania</i>	<i>Northern Territory</i>	<i>ACT</i>	<i>Australia</i>
Area ('000 sq km)	800	227	1,731	984	2,530	68	1,349	2	7,693
Population ('000, June 2006)	6,828	5,092	4,053	1,555	2,051	489	207	329	20,606
growth rate (% pa, 2001-2006)	0.8	1.2	2.2	0.6	1.5	0.7	0.9	0.6	1.2
overseas-born (% of total, 2001)	24.8	24.6	18.0	21.2	28.5	10.5	15.5	22.6	23.1
indigenous (% of total, 2005)	2.1	0.6	3.5	1.8	3.5	3.8	29.8	1.3	2.4
Gross product (A\$bn, 2005-06)	310.1	228.2	168.9	60.7	107.9	16.5	11.5	19.1	921.7
real growth rate (% pa, 2001-06)	1.6	3.4	5.3	2.5	5.6	3.7	3.1	2.3	3.3
Per capita gross product (A\$, 2005-06)	46,973	46,148	45,369	40,583	58,688	35,253	59,649	59,454	47,181
Share of gross product ¹ (% , 2005-06)									
Agriculture	1.9	3.0	4.1	5.5	3.4	6.7	2.5	0.0	3.1
Mining	2.5	1.7	12.4	3.2	27.4	2.1	26.1	0.0	7.7
Manufacturing	11.1	13.9	9.0	15.3	7.8	14.5	5.9	2.0	11.0
Electricity, gas and water	2.1	2.9	2.0	3.1	2.6	4.8	1.4	2.4	2.4
Construction	6.9	6.5	8.0	6.0	8.0	5.5	6.9	7.7	7.1
Services	75.5	71.9	64.6	66.9	50.7	66.4	57.2	87.8	68.7
Unemployment rate (% , 2005-06)	5.3	5.3	5.0	5.1	4.1	6.5	5.7	3.2	5.1
Post-secondary qualifications (% of population 15-64, 2006)	54.7	51.2	51.4	48.8	52.2	47.1	55.4	59.7	52.4
Exports (% gross product, 2005-06)	14.6	12.9	20.2	16.9	40.3	17.7	26.1	4.6	18.4
State general government expenses (% of gross product, 2005-06)	13.4	13.0	14.1	17.0	11.5	19.6	22.2	14.5	13.7
Public sector net debt (% of gross product, 2005-06)	4.7	2.0	-5.0	2.8	3.6	8.6	14.0	0.3	2.1

¹ Gross product measured by factor income.

Sources: Australian Bureau of Statistics, *Year Book Australia* 2006 (1301.0); *Selected Social and Housing Characteristics* 2001 (2015.0); *Australian Demographic Statistics* June Quarter 2006 (3101.0); *Australian Social Trends* 2006 (4102.0); *State Accounts* 2005-06 (5220.0); *Government Finance Statistics* 2005-06 (5501.0); *The Labour Force* November 2006 (6202.0).

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Useful Internet Sites

- Austrade: <http://www.austrade.gov.au/>; see also the Austrade Chief Economist's site <http://www.austrade.gov.au/economistscorner>
- Australian Bankers' Association: <http://www.bankers.asn.au/>
- Australian Bureau of Agricultural and Resource Economics: <http://www.abare.gov.au/>
- Australian Bureau of Statistics: <http://www.abs.gov.au>
- Australian Business Economists: <http://www.abe.org.au/index.html>
- Australian Chamber of Commerce and Industry: <http://www.acci.asn.au/>
- Australian Council of Trade Unions: <http://www.actu.asn.au/>
- Australian Industry Group: (peak manufacturing industry association) <http://www.aigroup.asn.au/>
- Australian Institute of Health and Welfare: <http://www.aihw.gov.au/>
- Australian Prudential Regulation Authority: <http://www.apra.gov.au/>
- Australian Stock Exchange: <http://www.asx.com.au/>
- Axiss Australia (information on financial services): <http://www.axiss.gov.au/>
- Business Council of Australia (represents CEOs of large companies): <http://www.bca.com.au/>
- Centre for Independent Studies ('free market think tank'): <http://www.cis.org.au>
- Club Troppo (an economics blog): <http://www.clubtroppo.com.au/category/economics/>
- Committee for Economic Development of Australia (CEDA): <http://ceda.com.au/public/index.html>
- Commonwealth Treasury: <http://www.treasury.gov.au>
- Commonwealth Budget Papers: <http://www.budget.gov.au>
- Department of Foreign Affairs and Trade's Trade Policy site <http://www.dfat.gov.au/trade/>
- Economics@ANZ (ANZ's Economics Group): <http://www.anz.com/go/economics>
- Housing Industry Association Economics Group: <http://economics.hia.asn.au/index.aspx>
- Institutional Economics (an Australian economics blog): <http://www.institutional-economics.com/>
- Invest Australia: <http://www.investaustralia.gov.au> (useful information for foreign investors)
- Melbourne Institute for Applied Economic and Social Research: <http://www.ecom.unimelb.edu.au/iaesrwww/>
- National Centre for Economic and Social Modelling, University of Canberra (income distribution) <http://www.natsem.canberra.edu.au/publications.jsp>
- National Farmers' Federation: <http://www.nff.org.au/>
- Parliamentary Library Economics, Commerce and Industrial Relations Group: <http://www.aph.gov.au/library/intguide/econ/index.htm>
- Productivity Commission (the Commonwealth government's principal advisor on structural reforms): <http://www.pc.gov.au/>
- Property Council of Australia 'Cyberstats': http://www.propertyoz.com.au/trendsnet/cyberstats/fs_cyberstats.htm
- Reserve Bank of Australia: <http://www.rba.gov.au> including monthly Statistical Bulletin at <http://www.rba.gov.au/Statistics/Bulletin/index.html> and chart pack at <http://www.rba.gov.au/ChartPack/index.html>
- Sensis Small and Medium Enterprises Survey: <http://www.about.sensis.com.au/resources/sbi.php>
- Sydney Futures Exchange: <http://www.sfe.com.au/>
- The Australia Institute ('left-wing think tank') <http://www.tai.org.au/>
- VCE (Victorian Certificate of Education) Economics: <http://www.puppyspirits.com/australianeconomy/ausHome.html> (A guide to useful sites for teachers and students)