



AN ECONOMIC HISTORY OF WESTERN AUSTRALIA SINCE COLONIAL SETTLEMENT

175th Anniversary of
Colonial Settlement 1829-2004

Research Paper

December 2004



Department of Treasury and Finance
Government of Western Australia

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1. INTRODUCTION

This publication traces events and developments that helped transform the Western Australian economy from European settlement to the present day. The focus is on the development of the European-style market economy after 1829, although it is acknowledged that the State's history began well before this time.

The content draws heavily from other authors who have previously traced aspects of the State's economic development. It aims largely to draw together these works into a relatively brief, easy-to-read history.

The Department of Treasury and Finance would like to sincerely thank Emeritus Professor Reg Appleyard from the Graduate School of Management at the University of Western Australia for sharing his enthusiasm, knowledge and experience on this topic during the course of this publication. Professor Appleyard donated his time to correct errors, provide insightful comments and point out different sources of information.

We would also like to thank the Department of Industry and Resources, the Department of Agriculture, the Department of Planning and Infrastructure, the Fremantle Port Authority, the Department of Tourism, the Small Business Development Corporation and Landcorp for providing input on industry-specific matters.



2. HISTORY OF THE WESTERN AUSTRALIAN ECONOMY

2.1 Foundation (1829 to 1850)

In many respects, Western Australia's history, relative to other Australian States, is unique. Unlike New South Wales and Tasmania, which were settled primarily as penal colonies, the establishment of a Colony at the Swan River in 1829 was largely in response to enthusiastic marketing by Captain James Stirling of opportunities for business and profits¹. It was also the first British Colony in Australia founded exclusively for private settlement based upon a land grant system.

From the beginning, Western Australia's development has been shaped by its geography, with the 'tyranny of distance' having had a large influence on both its economic development and culture. In 1829, when the first settlers arrived, the only access to the State was by ship. Sailing time to England was four months and few vessels arrived at the Colony's ports during the 1830s.

Despite the original perception of opportunity, Western Australia grew very slowly during its first years. Lack of money capital was a major problem for the new Colony. As conditions for the granting of land required ownership of physical assets considered applicable to land use, there was little incentive for colonists to bring money. Many therefore acquired appropriate physical goods before departure, and also brought indentured workers, in order to maximise their land grant entitlements. The only cash incomes available to colonists by late 1831 were mainly from wheat purchased by the crown-supported Commissariat (government store) at the lowest tendered price (Statham, p184).

Additionally, soil infertility and animal diseases initially led to low agricultural profits. Consequently, investment from England slowed once news of difficult conditions in the new Colony reached England (Lourens, p3). Of the more than one million acres (405,000 hectares) alienated in 1831, only 200 (81 hectares) were in production (Lourens, p9).

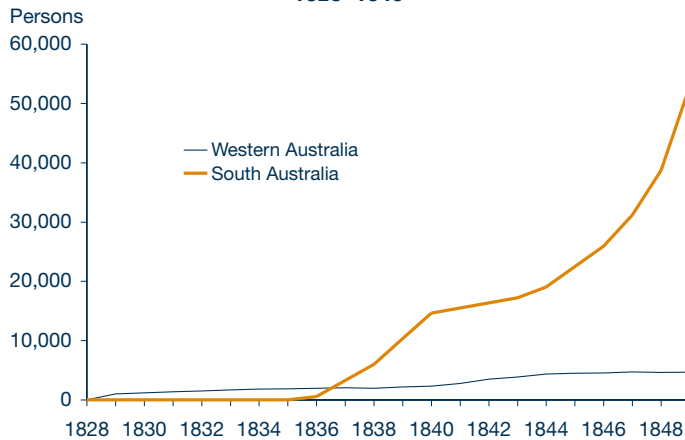
Lack of funds to establish infrastructure and the difficulty of obtaining supplies meant that, initially, the State's population grew very slowly. The foundation European population of less than 2,000 at the end of 1830 had increased to only 4,645 by 1849² (ABS, 2004). In contrast, South Australia (which was not founded until 1836) had a population of 52,904 in the same year.

¹ Although strategic concerns, such as to prevent the French from settling the unannexed Western third of the Australian continent, were also factors.

² Excluding military personnel.



COLONIAL POPULATION Western Australia and South Australia 1828–1849



Note: Indigenous population was not included in population counts until 1961

Source: ABS Cat. No. 3105.0.65.001

The period from 1834 to 1837 was one of economic consolidation. Sheep taken inland to the more fertile Avon Valley were free from disease and multiplying rapidly, which led to the Colony becoming almost self-sufficient (Statham, p190). Indeed, the development of agricultural production and the raising of livestock became the State's first viable export industry.

While cultivation of wheat increased, it remained a time- and money-consuming activity that yielded low profits. In contrast, wool production was less labour and cost intensive and, unlike wheat, wool could be both stored for long periods and exported with relative ease.

As wool could be 10 to 20 times more valuable than the same weight in wheat (Blainey, p128), it could bear the high cost of land transport to port and to Britain, although inadequate land transport still hindered its development as an export industry during the early years.

In this regard, the cost of transporting goods from York to Fremantle (£25 per ton) was much higher than the freight costs from Fremantle to London of £3 per ton (Lourens, p10). Nevertheless, wool to the value of £758 was exported in 1834 (Statham, p190) and the growth of agriculture and pastoralism led to an increase in the value of privately held land.



Growth in the non-rural sector was also important during this period. The role of the military (through its expenditure on agricultural products) was a key factor in the growth in demand for transport, food and accommodation. The military paid for its purchases with money (rather than through the bartering system that had developed amongst many colonists), thus enabling some limited private money capital accumulation. In addition, the Government's associated public works stimulated growth of the non-rural sector. Indeed, this injection of external funds into the economy was greater than the income from the Colony's exports over the period.

The year 1837 marked acceleration in the State's economic development. While the population remained relatively unchanged between 1837 and 1840, the commercial economy began to diversify away from being predominantly agricultural (wool). Two whaling companies began operating and the Colony's first bank was opened³. Important changes to conditions of land tenure also encouraged development over this period and, combined with improved farming techniques, wheat acreage increased by about one-third between 1837 and 1840⁴.

Scarcity of capital for industry was still the major barrier to economic development during this period. Whaling was the most obvious example of this situation. Although a whaling industry initially existed in Perth between 1837 and 1840 and enjoyed some success, in the early days it faced significant overheads and could not match the visiting foreign competitors, whose vessels had the equipment to undertake the more profitable ocean whaling. Local whalers were restricted to less profitable bay whaling (Lourens, p13). In 1843, the industry recommenced on a more profitable basis.

The inability to generate capital to invest in productive enterprises meant that many goods had to be imported. Imports far outstripped exports, further exacerbating the State's money supply problem. While establishment of the State's first bank had a positive impact, its cautious lending policy, which excluded lending against exports' bills of lading⁵ and mortgages on land, meant that merchants still carried much of the lending power in the economy and bartering remained a common form of trade. Nevertheless, despite the lack of strong economic growth, it was reported in 1842 that there 'were nearly as many stores as houses' (Lourens, p4).

3 The Bank of Western Australia soon merged with the Australasian Bank, which had set up in competition. Local businessmen then established the Western Australian Bank in 1841. The Australasian Bank closed in 1845.

4 The 'Glenelg' regulations stated that any settler granted land prior to July 1831 could surrender the whole or a portion of the original grant in exchange for remission certificates to the value of 1s 6d. The certificates could then be used to purchase crown lands with title at the rate of one acre of new crown land for each three acres surrendered. This enabled settlers to exchange unproductive land for more fertile areas or to use their certificates to raise funds by selling them on the open market.

5 A written account of goods shipped by any person, signed by the agent of the owner of the vessel, or by its master, acknowledging the receipt of the goods.



Box 2.1 Whaling

Two whaling companies (the Perth and Fremantle Whaling companies) were established in Western Australia in 1837. Limited capital and expertise meant that these companies had to restrict their operations to a fixed shore base, and as a result, they could not pursue the more valued sperm whales. Despite this, in the first year of whaling, the two companies realised export revenue of £1,780 from 71 tons of oil and 4.5 tons of bone. This exceeded the Colony's export value of wool that year.

However, the decline in international oil and bone prices in 1840 and high costs led to the shut down of the two companies. The whale boats were used for other activities, such as a ferry service on the Swan River.

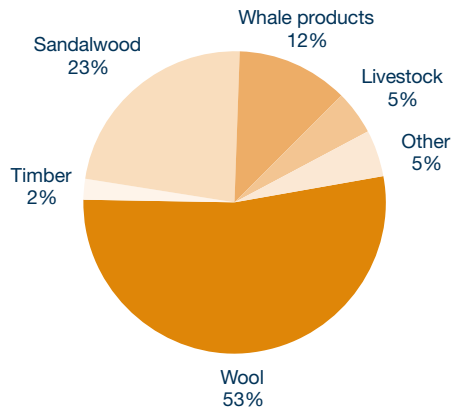
Whaling recommenced in 1843 to take advantage of higher overseas prices of oil and whalebone, and in 1844 comprised almost 40% of the total value of the State's exports. However, costs still remained high as much of the capital required could not be supplied locally and most of the revenue was absorbed by the purchase of equipment. In addition, the industry employed few people, so the flow-on effects were limited.

The Cheynes beach whaling station in Albany, which commenced operations in 1952, was the last whaling station to close in 1978. While whaling had been an environmentally sensitive issue for years prior to this, the industry ceased primarily because whale numbers had been greatly reduced by more than a century of whaling and it was no longer economically viable to hunt them.

Western Australia's native sandalwood industry became an important industry during this time. Light and easily cut with simple tools, it was sold overseas at profitable prices, particularly in China (through the intermediary port of Singapore), where prices offered were significantly higher than in other markets. As a result, sandalwood became a successful and growing industry until eventually the combination of higher transport costs and lower prices (resulting from increased production), and the fact that more accessible stands of sandalwood had been exhausted, reduced profitability.



EXPORT COMMODITIES Swan River Colony, 1845-1850



Source: Vamplew, p122

Lack of capital inflow, particularly during the English 'hungry forties' depression, meant that the Colony's economy stagnated⁶. Additionally, a sharp fall in government spending in 1843 in reaction to a large budget deficit a year earlier led to a reduction in the number of employees in the government sector. At the same time, the realisation of very low livestock and wool prices⁷ and the importation of grain from South Australia (where farmers had lower costs of production, more fertile soil and relatively cheap transport costs) hurt local industry, and also contributed to the Colony falling into an economic depression.

In 1844, the Legislative Council initiated a strong campaign to essentially 'buy local'. Colonists were asked to refrain from purchasing all non-essential imports and to export 'every article of colonial produce that could either be produced, collected or manufactured' (Statham, p202). The campaign was remarkably successful and, by 1848, with commodity prices improving, recovery was generally thought to be complete.

Nevertheless, in 1849, the level of economic activity was still low and the Colony very dependent on financial support from the Crown. While population size is often cited as a key reason for lack of economic development, lack of capital was also behind the Colony's inability to attract new inhabitants. As noted above, capital accumulation was hampered by the initial conditions of settlement and a lack of commercial viability, which was clearly related to the expensive transport costs and lack of markets, both a consequence of the Colony's isolation.

⁶ Although other reasons have been advanced, such as the large decline in immigration into Western Australia due to the ending of Australind and Parkhurst settlement schemes.

⁷ Although Western Australia was much less affected than New South Wales, which was more reliant on wool.



2.2 Convict and Gold Rush Eras (1850 to 1913)

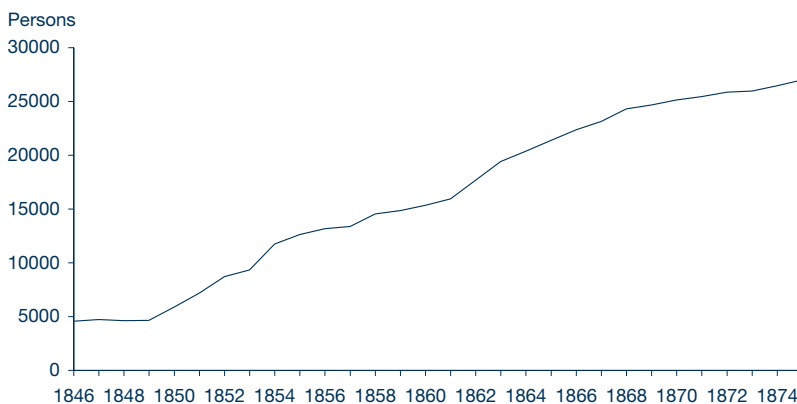
Three major events played an overwhelming role in shaping the State's fortunes during this period – the introduction of convicts, the discovery of gold and federation.

Despite diversification of the economy by the late 1840s, shortage of money capital and labour remained a problem. Consequently, in 1847, a memorial was presented to the Legislative Council (whose members were appointed by the Governor), signed by 22 pastoralists, arguing that convicts would not only provide needed labour but, through the British Government's payment of costs of convict maintenance, also provide an injection of money capital (Statham, p209).

This request was eventually accepted and the British Government agreed to bear all expenses. There would be no limit on the number of convicts sent and they would all be male. With this in mind, the British government also set aside an annual sum to promote immigration to ensure no gender imbalance between the male convicts and the local population. This inflow of both income and labour caused a fundamental shift in the Colony's economic development.

In 1850, approximately 5,886 Europeans (ABS, 2004) lived in the South Western portion of the Colony. By 1868, this number had grown by 18,400 (ABS, 2004), 9,700 of whom were convicts (Appleyard, p212). Despite policies to ensure no gender imbalance, by the end of the 1850s the ratio of men to women was 2 to 1.

COLONIAL POPULATION Western Australia, 1845-1875

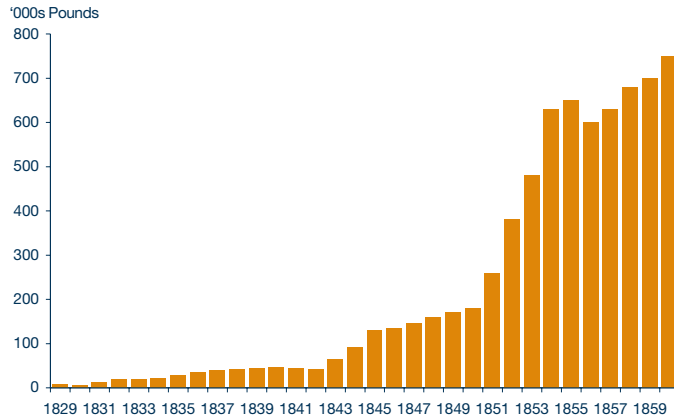


Note: Indigenous population was not included in population counts until 1961

Source: ABS Cat. No. 3105.0.65.001

The increased demand for goods and services by convicts made many previously marginal industries viable. Early estimates of economic activity in the Colony, as measured by estimates of Gross State Product (GSP), indicate that the size of Western Australia's economy in 1860 was four times its level only a decade earlier.

GROSS STATE PRODUCT Swan River Colony, '000s Pounds



Source: Vamplew, p130

One of the significant early contributions to the Colony's economic growth by convicts was their labour for public works projects (including the Fremantle prison, which later was to house many of them). In addition, now that the State had the money capital to exploit the State's natural resources, the pearling and timber industries began to develop.

It was at this stage, too, that the State's natural increase became a major determinant of population growth for the first time. In addition, government revenues increased four-fold in the twenty years from 1869-1889, due mainly to the boost in customs and land sales revenue resulting from the growth in population. The rise in revenue was very important, enabling public expenditure on works, buildings and roads to increase.

One of the most important public expenditures of this time was the commencement of a railway system⁸ which, by lowering land transport costs, underpinned the development of the inland mineral and agricultural areas during the next forty years. While it was hoped that the railways would encourage immigration and further development of the land, initially the system was more successful in attracting immigrants through jobs related to its construction.

⁸ The first government line was from Geraldton to a copper mine at Geraldine, followed by a line from Perth across the Darling Ranges (Appleyard, p216).

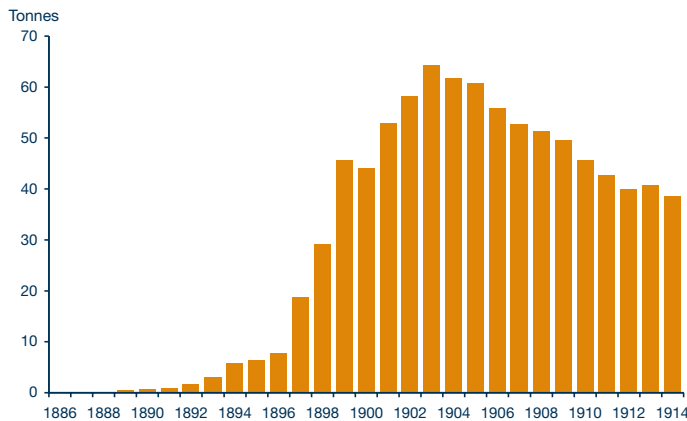


The 1880s also saw very substantial capital formation in telegraph lines and the first outlays on water and sewerage. The emergence of rail and road systems allowed the development of new export products such as the wood of mahogany (jarrah) trees (exported to India) and minerals.

The discovery of gold in Halls Creek in the Kimberley region in 1885 was fundamental in shaping the economic and social landscape of the Colony. News of the discovery travelled internationally and brought an unprecedented rush of immigrants and a level of economic growth previously unknown in the State. Although the Halls Creek gold rush was short-lived, many prospectors stayed in Western Australia and explored other regions, culminating in the discovery of gold at Mt Charlotte near Kalgoorlie in 1893.

The discovery of large deposits of alluvial and reef gold brought thousands of diggers (and later, sometimes their families) from other colonies and from overseas. It also attracted a large amount of investment in mining ventures, marking not only a period of rapid expansion in the Colony but also, for the first time, the new position of being a Colony rich in money capital.

GOLD PRODUCTION Western Australia, 1886-1914



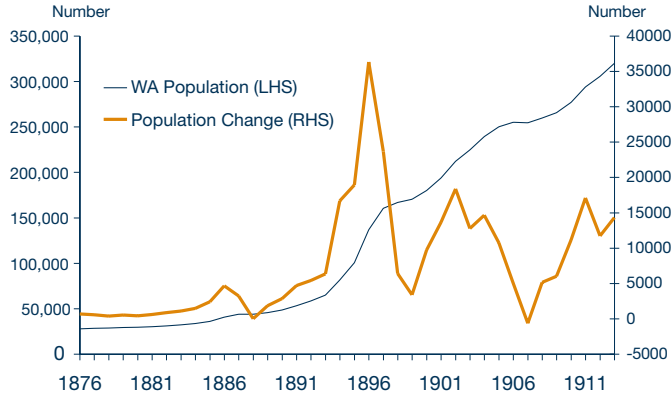
Source: Vamplew, p88

In contrast to the gold rushes in the eastern Colonies, the Swan River Colony (unsure of the benefits brought by a hoard of fortune-seekers who contributed little or no capital), insisted on mining laws that encouraged deep mining, which necessitated highly capitalised companies. While local interests floated some companies, many of these were not successful and so most of the investment came from outside the Colony, a situation that continues in the State today (Appleyard & Davies, pp160-169). At the time, however, illiquid Perth investors viewed gold profits leaving the Colony for Melbourne, Adelaide and London with some annoyance (Lourens, p32).



Other colonies in Australia were in the grip of depression after the Barings Bank Argentinean bond crisis in 1890 (Kindleberger, p8) and collapse of the Melbourne land boom in 1891. This disparity in economic fortunes led to a rapid influx of population in Western Australia. Between 1890 and 1900, the Colony's population grew from 48,502 to 179,967 with much of this growth occurring in the second half of the decade (ABS, 2004).

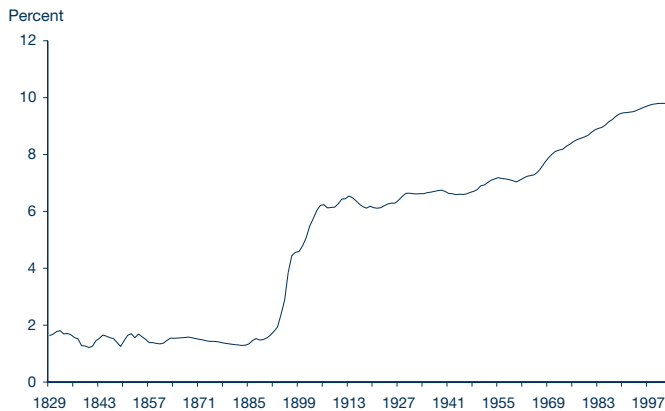
COLONIAL PROPULATION Western Australia, 1876-1913



Note: Indigenous population was not included in population counts until 1961

Source: ABS Cat. No. 3105.0.65.001

WESTERN AUSTRALIAN POPULATION As a Proportion of National Population, 1829-2003



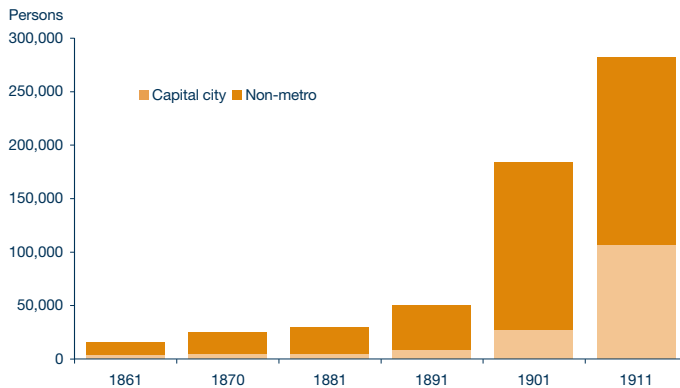
Note: Indigenous population was not included in population counts until 1961

Source: ABS Cat. No. 3105.0.65.001



However, despite the policies to attract long-term investors, much of this new population was transient. With a gold discovery in one area attracting a rapid influx of diggers, many would later uproot to try their luck wherever the next big strike was made. In contrast to today's largely metropolitan population, 32% of the Colony's inhabitants lived in the central and eastern regions (mainly the goldfields) in 1901, compared with 28% in the metropolitan area (Appleyard, p222). Over this period, Kalgoorlie-Boulder also displaced Fremantle as the Colony's second largest town (Lourens, p33).

GEOGRAPHIC DISTRIBUTION OF POPULATION Western Australia, 1861-1911



Note: Indigenous population was not included in population counts until 1961

Source: Vamplew, p41

The composition of growth in the State's population was a key factor in Western Australia joining the other States in the Federation of Australia in 1901. Pastoralists in the State were reluctant to join the Federation, having only been granted responsible government in 1890⁹. However, a large number of recent interstate arrivals still had allegiances on the eastern side of the continent and were pro-federation.

At one point, the goldfields-based Reform League collected 28,000 signatures on a petition to the Crown to separate from Western Australia and federate separately (De Garis, p345). The prospect of losing the richest area of the State was instrumental in the referendum on the Commonwealth of Australia Bill in 1900 being passed by a large majority. Accordingly, on 1 January 1901, Western Australia became a State in the Commonwealth of Australia.

⁹ Government decided by elections to the Parliament.



Integral to the economic development that occurred during this period was the appointment of C.Y. O'Connor as engineer-in-chief for a large government capital works programme. In this period of rapid economic growth, unprecedented levels of public infrastructure expenditure (which was previously restricted through lack of revenue) took place. The Goldfields water supply scheme (via a pipeline from Mundaring Weir to Kalgoorlie) is perhaps the best known, but the development of the Port of Fremantle opened up the State's export capacity.

Box 2.2 Fremantle Port

Fremantle's role as a port began with the arrival of the first ships at the new Swan River Colony in 1829. In early times, cargo was transferred to smaller boats and ferried ashore. Jetties were later built to handle the shipping.

The need for a protected anchorage became increasingly urgent as the gold discoveries of the 1890s brought people and prosperity to Western Australia. The rapid growth in trade and massive economic expansion provided the funds and the impetus to develop new port facilities.

In 1892 C.Y. O'Connor began developing a safe harbour at Fremantle, and Fremantle's Inner Harbour opened in 1897. While it has been deepened, extended and modernised, its visionary design remains essentially unchanged to this day.

Fremantle Port has played a central role in Western Australia's development. It was the largest allied submarine base in the Southern Hemisphere during the Second World War, and the first stop for hundreds of thousands of migrants who arrived in Australia during the post-war immigration period.

Today, Fremantle is still the biggest and busiest general cargo port in Western Australia. It is the closest to Singapore of Australia's five major general cargo ports and is well-positioned for trade with the Middle East, Africa and Europe. It is a significant source of employment and revenue for Western Australia. The annual value of trade through Fremantle Port is more than \$15 billion.



The development of railways during the era of the goldrush was also important, with the extension of the line to Kalgoorlie in 1897, making the Goldfields more accessible. Demand for railway line sleepers provided a significant boost to the local timber industry. Nevertheless, while exports of other commodities (such as wool and timber) increased over the period, the economy was still predominantly driven by gold, which comprised 61% of total exports in 1901.

Box 2.3 Goldfields Water Pipeline

The Goldfields water pipeline was O'Connor's vision to solve the problem of the severe lack of water hampering development in the Goldfields region. O'Connor achieved what many believed was impossible – to pump water from Mundaring Weir, east of Perth, to the Goldfield towns 600 kilometres away. When it was completed in 1903, the Goldfields pipeline was the longest such pipeline in the world.

Many people were sceptical of O'Connor's bold project. The harsh criticism and objections to the project caused O'Connor to commit suicide the year before the pipeline was opened.

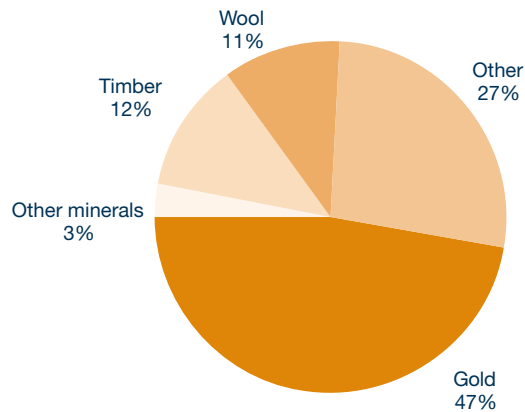
However, the pipeline was a significant step in advancing Western Australia. It supplied essential water to the Goldfields and enabled settlement and development of many towns and thousands of farms, creating new communities throughout the wheatbelt. Today the pipeline supports rural populations and mining and agriculture over a wide area of Western Australia.

Manufacturing remained a minor part of the economy over this period, despite the growth in population. Federation brought with it free trade between the States (after an initial five-year transitional period) and the inability to protect the State's comparatively small industry against the larger industries of the Eastern States. Manufacturing production in Western Australia totalled £3.5 million in 1901, accounting for just 5% of national production (Appleyard, p233).

Initially, Western Australia's isolation was a natural barrier to imported manufactures and so industries sprang up to service local demand. However, manufacturing in the 20th century was characterised by increasing economies of scale and falling transport costs, and the State's relatively small market struggled to support manufacturing industries of consequence (other than the processing of natural resources).



EXPORT COMMODITIES Western Australia, 1913



Source: Appleyard, pp235-6

In the early 1900s, gold yields declined and the economy underwent a period of consolidation, with growth in the economy again being driven by the agricultural sector and population growth dependent on British immigration. Between 1908 and 1913, 46,473 British immigrants entered Western Australia, of whom 30,811 were financially assisted, with the condition that they work in rural employment. In the first decade of the 20th century, agriculture overtook gold as the driver of economic growth.

Wheat (and flour) became a major export commodity, with wheat production in Western Australia surpassing that of all other States, facilitated by government assistance in the form of cheap land, the extension of the railway network (which reduced transport costs significantly and enabled wheat to be grown profitably in the inland districts) and generous credit to new farmers. In addition, investment in agriculture was very important with the purchase of new machinery and technologies.



2.3 World Wars and Depression (1913 to 1946)

Following two decades of unprecedented growth and prosperity, the Western Australian economy went through a period of hardship as a result of a combination of both world and local events. Two world wars, an international depression and a major drought collectively impacted on the economy during a period when the State was attempting to readjust after the gold mining boom peaked in 1903. It is estimated that the level of per capita income reached in 1913 was not surpassed until 1950 (Snooks, p237).

Between 1913 and 1946, the economy underwent significant structural change and economic growth was uneven at best. As the effects of the gold rush died down, mining's share of the economy declined and both the rural and manufacturing industries' shares increased, with the tertiary sector remaining relatively constant. This was in contrast to the rest of Australia, where manufacturing activity became an even larger part of the economy.

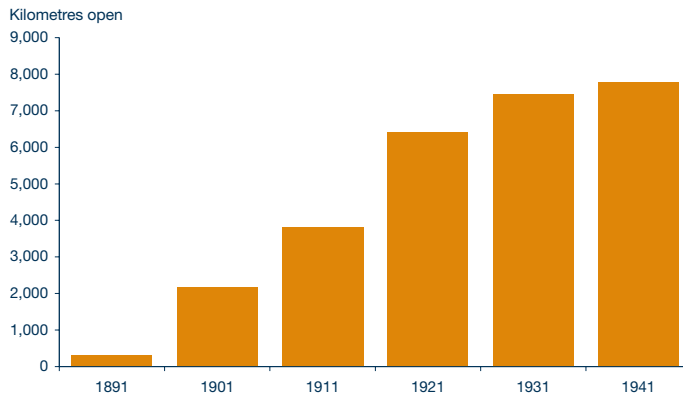
However, while the size of the economy per head of population did not actually increase, it can be argued that the standard of living improved over the period, with enhanced water and sewerage facilities, better transport and communication, and increased access to education, health and entertainment. The growth in population and public works since the beginning of the 20th century brought improved infrastructure and an increase in the number of professionals (e.g. doctors, dentists and teachers). Of available statistics, one telling figure is that the infant mortality rate in 1948 was one third of the rate in 1913 (Snooks, p242).

The fortunes of the agricultural industry fluctuated throughout the period. After expanding from 1903 to 1914, a severe drought in 1914 and the First World War interrupted growth, with agricultural output of wheat falling by 80% in a single year. Only industry assistance by the government of the day and a 90% increase in the price of wheat between 1914 and 1920 managed to avert the industry from major decline.

The agricultural industry revived during the 1920s, supported by railway construction, the replacement of the horse by tractor and truck, increased availability of rural finance and favourable land and immigration policies. An increase in the area of land being cultivated occurred, despite a decline in wheat prices in the second half of the decade. Large scale land clearing took place over this time and, while the potential for salinity problems was recognised as early as 1907, it would be many years before it emerged as a serious threat and steps were taken to ensure the sustainability of rural land use. In the worldwide 1930s depression, however, wheat prices collapsed and industry suffered, with very few farmers able to cover costs. Many deserted the land.



GOVERNMENT RAILWAY TRACK LENGTH Western Australia, 1891-1941



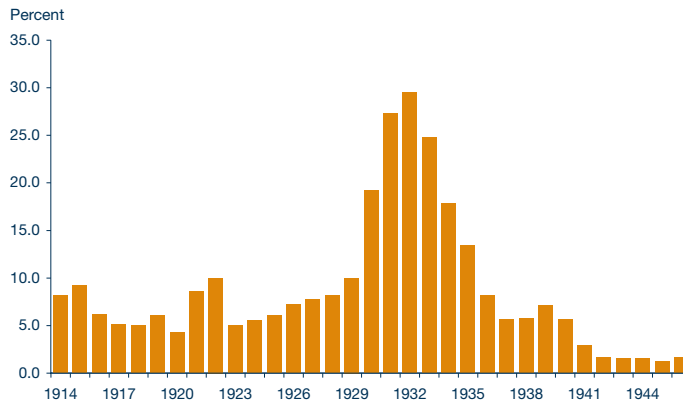
Source: Vamplew, p168

Wool production (initially the State's primary export commodity) expanded rapidly between 1926 and 1934, despite prices falling by 60% in 1930-31. However, a drought between 1935 and 1940 devastated the industry. In 1935 the pastoral areas of the State carried 5.5 million sheep. During the following 5 years, 4.2 million died in the drought. By 1946 (long after the drought had ended), sheep numbers were still only half the number in 1934 (Snooks, p253).

Like the rest of the world, Western Australia was gripped by the 1930s depression. In the 1920s, Australian State governments had borrowed heavily abroad and met repayments through further short-term loans (Mayman & Davies, p83). However, after the 1929 Wall Street stockmarket collapse, loans were recalled and capital inflow dried up, particularly to the governments that had undertaken large capital works such as the wheatbelt railway expansion. Additionally, the contraction in world trade during the depression led to commodity prices falling dramatically. Unemployment reached almost one third of the workforce during the peak of the depression.



TRADE UNION UNEMPLOYMENT RATES Western Australia, 1914-1946



Source: Vamplew, p.152

The revival of the gold mining industry, which had been in steady decline since the turn of the century, buoyed the State's economy in the late 1930s and enabled Western Australia to avoid the downturn experienced in other States, despite the onset of drought. A rapid increase in the price of gold attracted new investment in the industry. The resultant increase in capital and the development of new processes enabled production to return to 1914 levels.

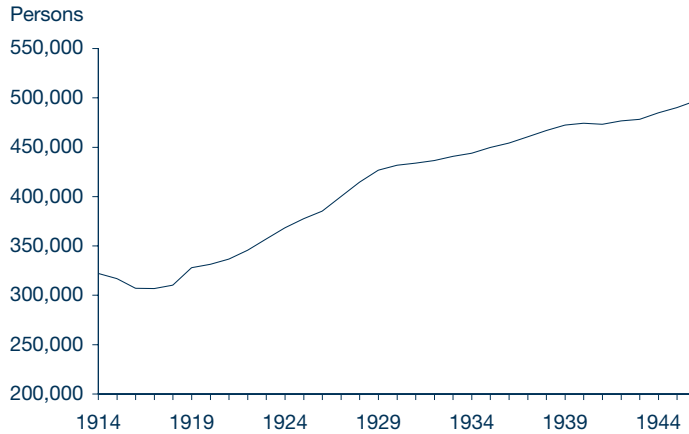
After 1939, however, gold production fell again, with labour shortages during the Second World War causing a large number of mines to cease operation. High costs of inputs following the war also reduced the potential for profit and many mines did not re-open.

The Second World War brought with it Government intervention unprecedented in the State's history, particularly by the Commonwealth. Controls were placed on prices of many goods, while centralised control of production and supply in manufacturing, the rural industries and both land and sea transport (Snooks, p265) was implemented. Western Australia displayed many of the characteristics of a command economy, before controls were wound back as the threat of invasion subsided.

After declining between 1914 and 1919, due to unfavourable economic conditions and heavy war casualties, Western Australia's population continued to increase, albeit more slowly than during the gold rush period. By the end of the Second World War, Western Australia had 6.5% of Australia's population.



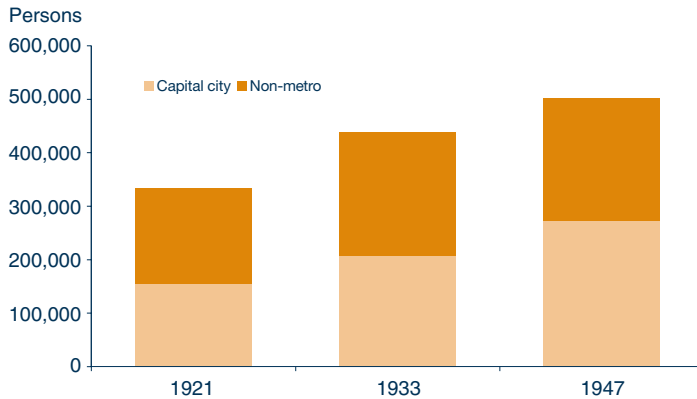
POPULATION Western Australia, 1914-1946



Note: Indigenous population was not included in population counts until 1961

Source: ABS Cat.No. 3105.0.65.001

GEOGRAPHIC DISTRIBUTION OF POPULATION Western Australia, 1921-1947



Note: Indigenous population was not included in population counts until 1961

Source: Vamplew, p41

Despite the emphasis on mining and agriculture as significant industries in the State's economy, urbanisation of the population over the period was significant. Between 1911 and 1947 Perth's population (as a proportion of the State's total) increased from over one-third to just over one-half, creating demand for residential and commercial construction and producing employment opportunities in the construction and service industries.



At the same time, manufacturing also grew to service the needs of the increased population, although as a proportion of the total economy it remained well below that of the rest of Australia. Western Australia was, and remains today, a net importer of manufactured goods.

2.4 Post Second World War (1946 to the Present)

The period after 1945 has been characterised by the development of the State's mining sector into a world-scale industry and Western Australia's increasing access to the rest of the world. Communication and transport advances brought Western Australia much closer to the rest of the world, providing opportunities for local producers to access markets in other countries much more easily. On the other hand, overseas producers could access the Western Australian market relatively more readily. The outcome has been a highly specialised and trade-dependent Western Australian economy (with mining and mineral processing the dominant industries), using income derived to import many other goods and services.

Box 2.4 Aviation in Western Australia

Aviation did much to defeat the tyranny of distance in Western Australia.

The first flight in Western Australia was made at the Belmont Park Race Course in 1911, just over seven years after the Wright Brothers' first flight.

An aerial mail service between Geraldton and Derby commenced in 1921, and was the beginning of Australia's (and the Southern Hemisphere's) first scheduled passenger services. One of the pilots was Charles Kingsford-Smith, who subsequently achieved fame for his long distance record flights. The service took three days compared with the three-week service by ship.

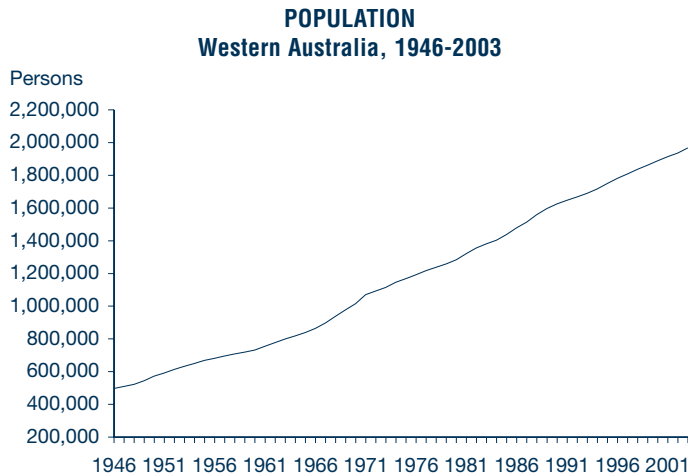
The Second World War saw major disruptions to airline services, including the suspension of airline services in the north-west. The war also disrupted Australia's links with the United Kingdom. These were only re-established in 1943 when Qantas commenced a long and hazardous service, using Catalina flying boats, from Crawley on the Swan River to Ceylon (Sri Lanka) and then linking with services to the United Kingdom. The flight, which often took more than 30 hours of flying time, was flown in complete radio silence, as part of the route skirted enemy-held territory.

Domestic jet travel came to Perth in the early 1960s. Travellers could fly from Perth to Adelaide in under three hours – much faster than the Hercules aircraft which initiated the route some 30 years before and took 25 hours for the three-stop service to Adelaide.



Immediately following the Second World War, agricultural production, (especially wool) again underpinned Western Australia's economic well-being. In 1952, Korean War-induced demand led to the famous 'pound a pound' wool price, the highest recorded in real terms in the 20th century.

Economic growth was also buoyed by strong population growth. Over the period 1945 to 1965, Western Australia's population grew by an average 2.8% per annum, compared with the national figure of 1.9%. A feature of this population growth was its relative smoothness compared with previous periods.



Note: Indigenous population was not included in population counts until 1961

Source: ABS Cat. No. 3105.0.65.001

While agriculture remained strong and improvements in technology were able to enhance efficiencies, growth in secondary industries remained limited. Western Australia remained predominantly an exporter of primary products. Nevertheless, some manufacturing industries developed during the early post-war period, led partly by government policy and subsidies, including for the Chamberlain tractor project (on the wartime Welshpool munitions site), Woolcombers topmaking, and the Wundowie charcoal, iron and wood distillation plant (Ellery, p126).



A major surge in the State's manufacturing industry came with the advent of a substantial mineral processing industry. In 1952, political tensions in the Middle East and the trend of locating processing nearer to consumers led to the development of an oil refinery at Kwinana. This sparked the beginning of the State's first major industrial complex (Ellery, p129). A steel bar plant in 1954 was followed by an alumina refinery in 1961 and a nickel refinery in 1970. Manufacturing peaked at around 46% of total State primary, mining and manufacturing production in 1963-64 (Ghosh, p282), before the iron ore boom reduced its relative importance.

Box 2.5 Kwinana Industrial Area

The Kwinana Industrial Area (KIA) was established in the 1950s following a special Act of Parliament, which protected an area of about 120 square kilometres to accommodate the development of major resource processing industries in the State. The BP oil refinery which commenced production in 1954, followed soon after by the BHP steel rolling mill (which no longer operates) and later by large metals, power and chemical plants. A townsite at Medina was established, which has since expanded to form the core of the town of Kwinana.

The KIA has played an important role in stimulating the economic development of the State. It is large by Australian standards, and competitive globally. The State has provided major road and freight rail connections to the KIA. Another major advantage of the KIA is the deep water in Cockburn Sound.

Flour was a casualty of declining transport costs within Western Australia and the trend of locating processing closer to consumers. Flour was a major component of the State's exports in the first half of the 20th century, but it declined in significance during the development of the State's bulk grain handling system, which reduced transport costs for raw wheat. In particular, the construction of bulk-export facilities at Geraldton (1937), Fremantle (1942), Albany (1956), Esperance (1962) and Kwinana (1976) reduced handling costs and made exporting wheat substantially cheaper than exporting flour.

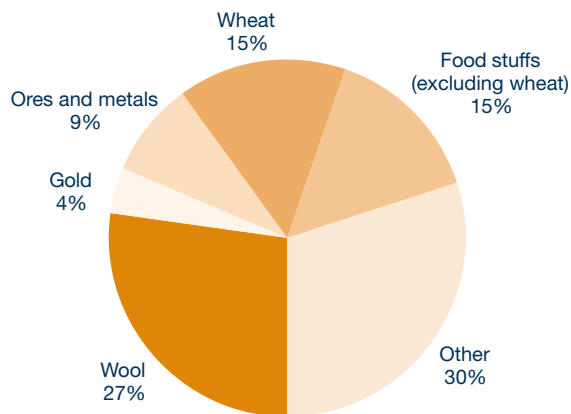
Flour exports peaked in 1961 at 160,000 tonnes, compared with 635,000 tonnes of wheat exported, a record share for a non-drought year. By 1990, however, flour exports had reduced to negligible levels, while wheat exports reached almost five million tonnes.

The State's second major resource boom was stimulated when, in 1960, the Commonwealth Government lifted the iron ore export embargo that had been in place since 1938. Demand was fuelled by the buoyant Japanese economy and Japanese, American and British investment flowed into the State. While Asia had previously been a market for Western Australian products (notably sandalwood and wool), the export of iron ore to Japan marked a fundamental shift in Western Australia's trade dynamic and paved the way for the development of Asia as the State's most important trading region.

Prior to the resurgence of the resource sector, economic conditions had been relatively subdued, with constant-price household income per capita roughly the same in 1960-61 as in 1948-49. However, the mining boom caused income per capita to more than double by 1973-74 (Ghosh p276).

Importantly, while iron ore was (and remains) a significant component of the mining industry, one important aspect of the resources boom in the 1960s that set it apart from the gold rush, was the diversity of commodities being mined. There were major discoveries of nickel, petroleum, bauxite and alumina, which all developed into significant industries in the 1960s and 1970s. There was also a major revival in the mining of gold in the 1980s, stimulated by price increases associated with the end of the gold standard in 1971, high inflation throughout the 1970s, and new processing technology.

EXPORT COMMODITIES, Western Australia, 1964-65



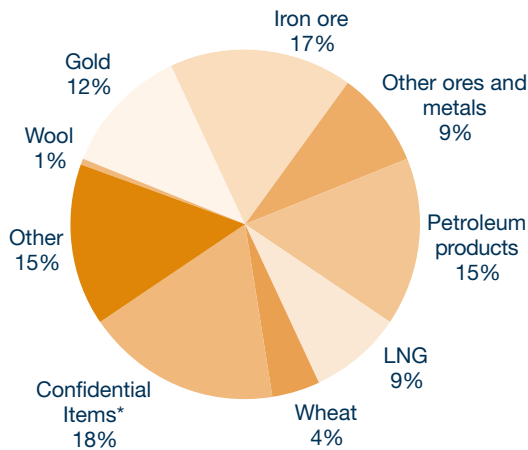
Source: ABS Western Australian Year Book 1967, p362



In 1981 the Western Australian Government negotiated an agreement to allow development of the large natural gas reserves on the North West Shelf. Initially, the Government underwrote the project by signing (through the State Energy Commission of Western Australia) a 20-year 'take or pay' contract for domestic gas supply with the developers and funding the construction of a pipeline from Dampier to Bunbury. However, domestic demand proved to be less than originally anticipated and, together with the cost of the pipeline and the 'take or pay' contract, could have led the State to accumulate debts of around \$7.5 billion (in dollars of the day) over the life of the project (Beddall, p8).

However, the State was able to negotiate a further agreement with the developers and the Commonwealth Government, in which the Commonwealth agreed to forgo a half-share of its royalties on the domestic gas phase over the life of the project in favour of the State, and the 'take or pay' contract was modified. Despite its less than illustrious beginnings, the project exported its first liquefied natural gas (LNG) cargo to Japan in 1989, with LNG exports rising in importance to be worth \$2.6 billion in 2002-03, representing 8% of Western Australia's total merchandise exports (ABS, unpublished data).

EXPORT COMMODITIES, Western Australia, 2001-02

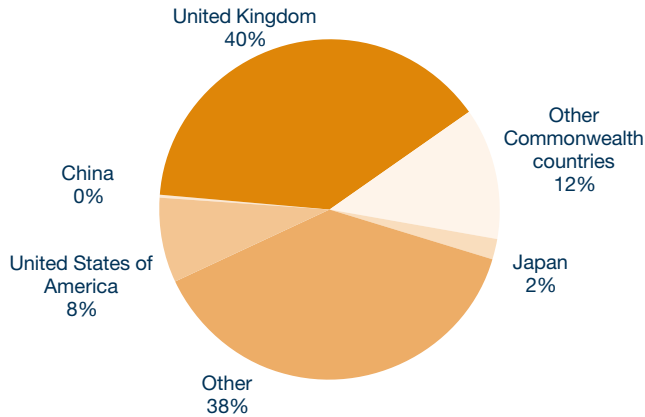


* includes Alumina

Source: ABS Cat. No. 5368.0, Special data request

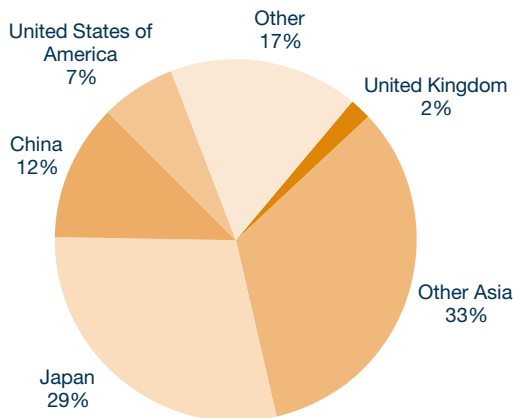
This period also marked the beginning of significant diversification of the State's export markets. The combination of peacetime and expanding economies in the region provided Western Australia with the opportunity to take full advantage of its proximity to the expanding Asian market. Technological advances and greatly reduced transport costs opened up global markets in the second half of the 20th century and, to a large extent, overcame the tyranny of distance that had been an impediment to the State's progress for much of its early history.

**EXPORT BY DESTINATION,
Western Australia, 1954-55**



Source: ABS Western Australian Year Book 1957, p270

**EXPORT BY DESTINATION,
Western Australia, 2001-02**



Source: ABS Cat. No. 5368.0, Special Data Request

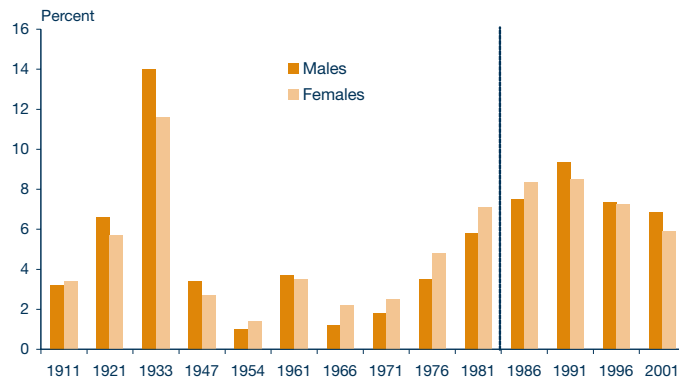


Agriculture remained a strong contributor to the economy over the period, despite its relative declining importance due to the expansion of mining. Broadacre agriculture (wool, cattle, crops) was the staple of this sector, which maintained strong production despite major droughts in 1969 and 2002, the imposition of wheat quotas in 1969 (which reduced the area sown with wheat by a third), a major fall in cattle prices in 1974 and the collapse of the minimum reserve price scheme for wool in 1991. Less successfully, the State Government also sought to establish tropical agriculture in the Kimberley, obtaining funds from the Federal Government to dam the Ord River (completed in 1972). However, hopes for a large cotton industry in the region at the time were dashed by pest problems.

As in previous periods, worldwide events affected Western Australia during the 1970s. The oil price shock of 1974 and subsequent stagflation had a large impact on the State. After a period of benign inflation in the 1960s, price pressures grew, culminating in an 18% increase in prices in 1974-75. High rates of inflation persisted until the early-1990s recession.

Unemployment also edged upwards during the 1970s, from 1.2% in 1970 (ABS 1978) to around 4% by the end of the decade and 10.0% in June 1984, at the tail end of the 1980s recession (ABS 2004a). The unemployment rate then trended downwards for most of the 1980s before rising to over 11% in the early 1990s. The unemployment rate has since declined to below 5% in the latter part of 2004.

UNEMPLOYMENT RATES Western Australia, 1911-2001



* Data taken from two sources, 1986 data onwards based on ABS Labour Force data

Note: Indigenous population was not included in population counts until 1961

Source: Vamplew p154, ABS Cat. No. 6202.0

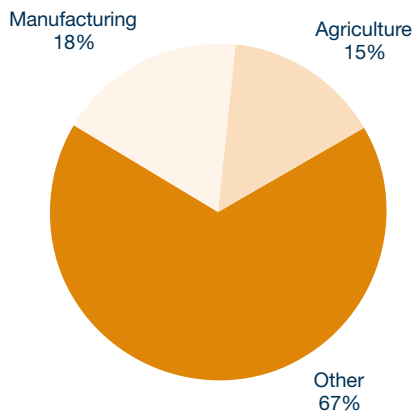


Deregulation of the Australian financial sector during the 1980s also impacted significantly upon the Western Australian economy. In particular, the floating of the Australian dollar (\$) in December 1983 allowed the value of the currency to reflect the economy's underlying performance. The value of the \$A fell from around US\$1.15 in the early 1980s to between US\$0.49 and US\$0.88 since then. This currency depreciation-induced increase in competitiveness provided a substantial boost to the State's export sector.

The resources sector continues to dominate Western Australia's economic landscape into the 21st century. The State remains an export-focussed economy, accounting for around a quarter of the nation's total exports and, unlike the other States, the economy continues to be dominated by primary industries. Agriculture and mining now account for over 20% of GSP, compared with less than 10% in other States (ABS, 2004b). Even the State's relatively small (compared with the rest of Australia) manufacturing industry is largely related to the mining industry. Business investment, a major proponent of the State's economy, has been predominantly driven by capital expenditure in the State's resource industry in recent years.

Even so, the State's economy has diversified and expanded since the end of the Second World War. The development of a significant viticulture industry, mineral processing and refining plants, tourism, and the growth of service industries are all significant components of the State's economy in the 21st century.

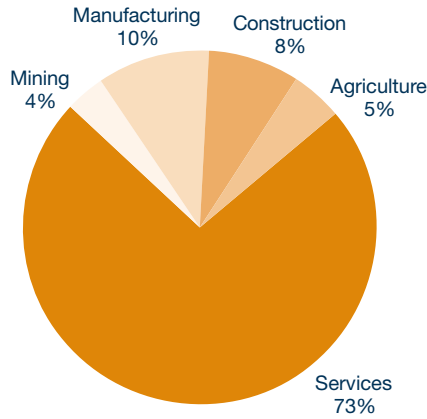
SHARE OF EMPLOYMENT Western Australia, 1954



Source: ABS Western Australian Year Book 1957



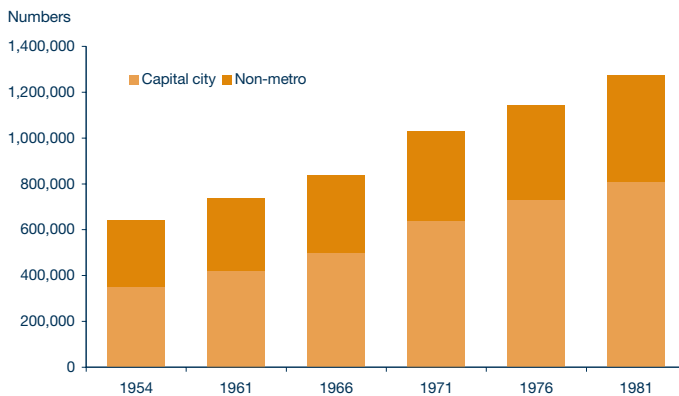
SHARE OF EMPLOYMENT Western Australia, 2003



Source: ABS Cat. No. 6291.0.05

While the primary sector still dominates production, employment in these industries has declined, with the service industry now the State’s major employer. Productivity improvements, an increase in capital intensity of the resource sector, and increasing farm size and mechanisation has meant that fewer workers are required to produce primary sector output. However, the income generated supports substantial employment in the remainder of the economy.

GEOGRAPHIC DISTRIBUTION OF POPULATION Western Australia, 1954-81



Source: Vamplew, p41



With the decline in employment in the primary industries and increasing employment in the service industries, 73% of the State's population now resides in the State's capital city. While this proportion has been largely constant since the mid-1980s, it masks a shift in population within the regions, with coastal centres in the South West and Peel regions gaining substantial population, while the mining and agricultural areas have had little or no population growth.



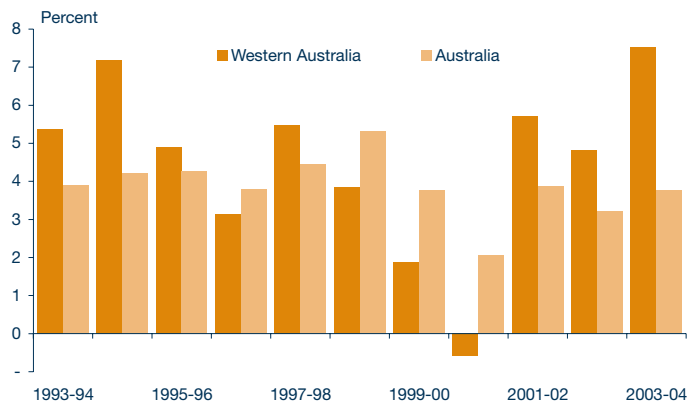
2.5 The Western Australian Economy Today

Improvements in economic data collection over the past 15 years allow for a more detailed review of the Western Australian economy and for a comprehensive comparison of the State's economy relative to the rest of Australia.

Western Australia has a strong, stable economy with diverse mineral wealth and technologically advanced manufacturing activities. As was the case for much of its history, the economy is highly export-oriented, with commodity exports and their markets being diversified significantly.

Over the past decade, the Western Australian economy has performed strongly, with real economic growth exceeding that of Australia as a whole, averaging 4.4% per annum compared with 3.9% per annum nationally.

ECONOMIC GROWTH 1993-94 to 2003-04



Source: ABS Cat. No. 5220.0.01



2.5.1 Population and Income

Western Australia is the fourth largest State economy in Australia, behind New South Wales, Victoria and Queensland. In 2003-04, Western Australia's GSP was \$89.2 billion, which represented 11.3% of the national economy.

In per capita terms, Western Australia was the most productive State in Australia, with GSP per capita of \$45,277 in 2003-04 compared with the national figure of \$39,234.

2003-04 GROSS STATE PRODUCT

	Gross State Product (\$m)	Gross State Product Per Capita (\$)
New South Wales	270,983	40,242
Victoria	201,133	40,650
Queensland	135,226	35,210
South Australia	52,400	34,217
Western Australia	89,155	45,277
Tasmania	13,479	28,082
Northern Territory	9,210	46,356
Australian Capital Territory	15,245	47,255
Australia (GDP)	786,754	39,324

Source: ABS Cat. No. 5220.0.01

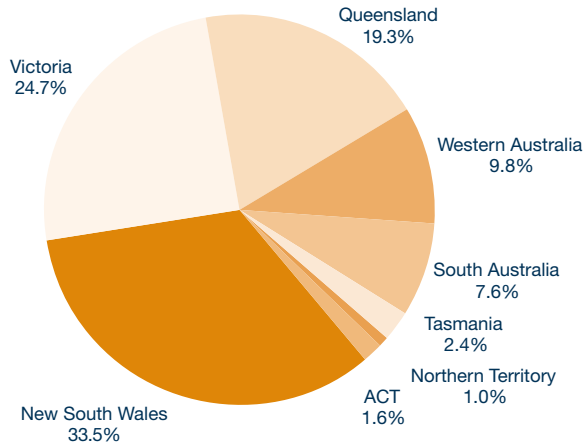
A definitive measure of Western Australia's economy that can be compared against other regions in the world is not available. Nevertheless, some indication can be gained by considering the size of the Australian economy relative to other economies in the world.

In Purchasing Power Parity (PPP) terms, Australia's economy is the 16th largest in the world, with GDP of \$US528 billion (CIA World Fact Book). It is relatively small compared with the United States (US\$10,082 billion in PPP terms) and Japanese (US\$3,550 billion in PPP terms) economies. The Australian economy is similar in total size to the Indonesian and Turkish economies (CIA World Fact Book), despite having a substantially lower population than these countries.

Western Australia's population was an estimated 1.98 million people as at 30 June 2004, making it the fourth most populous State in Australia with a 9.8% share of the national population. Western Australia's population surpassed South Australia's in 1982.



POPULATION BY STATE 2003-04



Source: ABS Cat. No. 3105.0.65.001

Western Australia's population has grown faster than the national average over the past decade, with annual growth of 1.5%, compared with 1.2% per annum nationally.



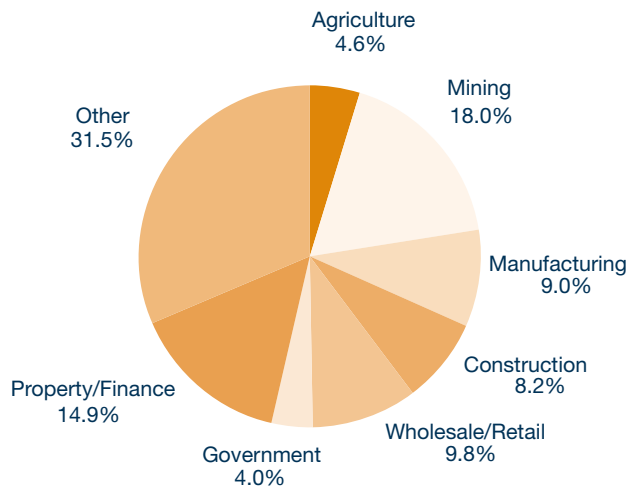
2.5.2 Industrial Structure

Output

The Western Australian economy is a highly specialised trade-dependent economy, with exports of primary commodities (mining and agricultural) dominating production.

The mining industry accounts directly for around 18% of the State's total production. Mineral processing (such as gold, nickel and alumina refining) is also a substantial contributor to the manufacturing industry.

TOTAL FACTOR INCOME BY INDUSTRY
Western Australia, 2003-04



Source: ABS Cat. No. 5220.0.28

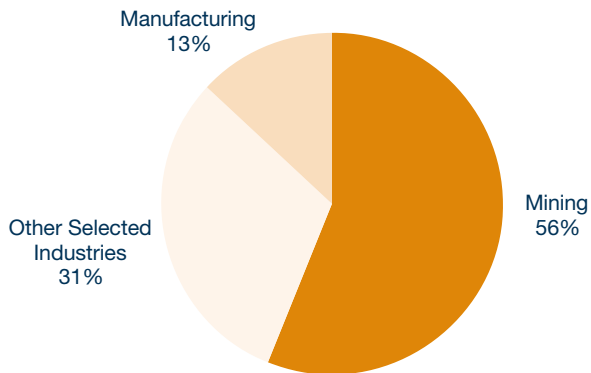
Apart from mining, the only other industries in which Western Australia exceeds its overall share of national GDP are the agricultural and construction industries. The relatively large construction industry services the State's rapidly growing population (in relation to dwelling construction) and also business investment in the mining industry.



Investment

As indicated by its large share of production, the mining industry tends to attract the highest share of investment of all industries. In 2003-04, mining investment accounted for around 56% of business investment in Western Australia. Nationally, mining investment comprised just 18% of total business investment.

BUSINESS INVESTMENT BY INDUSTRY Western Australia, 2003-04



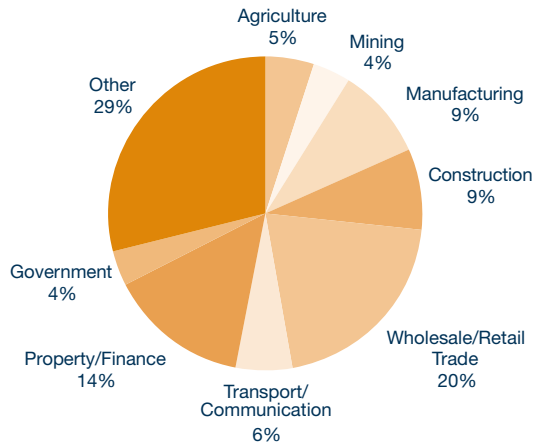
Source: ABS Cat. No. 5625.0.106

Manufacturing, which includes mineral processing, accounted for around 13% of business investment in Western Australia, while other industries accounted for 31%. The equivalent national shares were 22% and 60%.

Employment

The wholesale and retail trade sector was the largest employer in Western Australia in 2003-04, with an average of 198,000 workers, or 20% of the State's workforce. Other major employers include the property and finance industry, with 14% of the workforce, and manufacturing, with 9% of total employment.

EMPLOYMENT BY INDUSTRY
Western Australia, 2003-4



Source: ABS Cat. No. 6291.0.05

In contrast to its large share of production, the mining industry employed only 38,500 people in 2003-04, or 4.0% of the workforce. This reflects the highly capital-intensive nature of this industry in Western Australia. Also, as noted above, much of the mineral processing industry is classified as manufacturing, and so employment in mineral processing (e.g. alumina refining) is not captured in the mining employment category.

External Trade

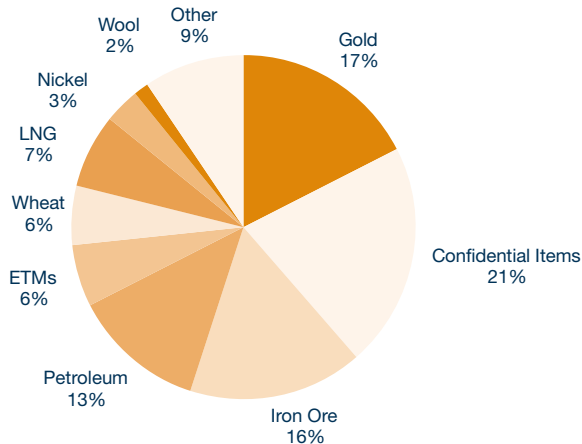
Reflecting the resource-oriented nature of Western Australia's economy, merchandise exports account for a significant proportion of the State's economic activity. In 2003-04, Western Australia recorded a nominal merchandise trade surplus of around \$20 billion. In contrast, there was a national merchandise trade deficit of around \$22 billion in 2003-04.

Mineral and energy exports, such as iron ore, petroleum, gold, alumina, LNG and nickel are among the State's main export commodities. Elaborately transformed manufactures (e.g. ships and boats, medicaments and electrical equipment) and agricultural commodities (e.g. wheat, wool, barley, canola, lupins and meat) also account for a significant proportion of Western Australia's exports.



While the drought in 2002 affected agricultural production for 2002-03, a return to normal seasonal conditions resulted in recovery of agricultural exports in 2003-04.

MAJOR EXPORT COMMODITIES Western Australia, 2003-04



Source: ABS Cat. No. 5368.0, Special Data Request

Western Australia's major overseas imports consist of plant and equipment (reflecting capital-intensive business investment), gold and oil (for refining) and manufactured items.

Japan is Western Australia's single largest export destination, accounting for 22% of the State's exports in 2003-04. China has also become an increasingly important market for the State's exports. Growing demand for raw materials has underpinned annual average export growth to China of 24% per annum over the past five years. In 2002-03, China overtook South Korea as the State's second largest export destination. Other major export markets for Western Australia include South Korea, the United Kingdom and the United States.



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