

# Economic *Roundup*

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# Venture capital in Australia

Dominic Regan and Gene Tunny<sup>1</sup>

Venture capital is an important vehicle for financing new and innovative high-risk ventures. While its size relative to the economy is typical for an OECD country, Australia's total venture capital investment is relatively smaller than that of the United States. The US, however, has a number of regions or 'clusters' with very high levels of venture capital activity, such as Silicon Valley and Boston, which benefit from a combination of hard-to-define favourable circumstances and historical developments. While a range of economic and geographic precursors are necessary for the development of successful clusters, they do not appear to be sufficient in themselves. There appears to be no right way to develop a cluster and no magic formula.

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1 The authors are from the Macroeconomic Policy and Industry, Environment and Defence divisions of the Australian Treasury. This article has benefited from comments and suggestions provided by Greg Coombs, Graeme Davis, Matthew Flavel, David Gruen, John Hawkins, Kruno Kukoc, Tony McDonald, Joann Wilkie and colleagues in Industry Policy Unit. The views in this article are those of the authors and not necessarily those of the Australian Treasury.

## Introduction

Venture capital is an important contributor to many of the innovations that drive improvements in productivity and living standards. Many of the most successful and innovative companies in the global economy in recent years, including Google and Starbucks, were financed in their early stages by venture capital. Although not the only financing option available to entrepreneurs, it is an important vehicle for financing new and innovative high-risk, high-return ventures. It is the global successes such as Google, however, that have resulted in the perception that venture capital is associated with success. Of course, owing to the risky nature of the ventures, alongside the successes, venture capital has funded some spectacular failures, including eToys and Boo.com.

Venture capitalists provide the finance, at least initially, so that the ideas of innovators and entrepreneurs can be developed and brought to market. In Australia, venture capital has helped create and grow many innovative firms, including Austral (the world's leading manufacturer of fast ferries and passenger water craft), Wizard Home Loans, and Seek (the internet job-advertising service).

This article explores the factors affecting the relative size and nature of Australia's venture capital investment. It asks whether venture capital activity could feasibly develop in Australia on the same scale, relative to the economy, as the US. This article is an initial examination and forms part of a series of articles on the economic importance of innovation. It follows previous work on Australia's research and development effort (Davis and Tunny 2005) and links with a paper on entrepreneurship (Kukoc and Regan 2008) in this edition of *Economic Roundup*.

The next section defines venture capital and considers the characteristics that distinguish it from other forms of finance. Following this, some international comparisons of venture capital data are presented. The article then develops an hypothesis to explain the level of venture capital activity in Australia. The article concludes with a short discussion of some possible implications of the analysis.

## What is venture capital exactly?

For centuries, people have developed ways of pooling their money to undertake risky ventures. The East India Company was an early example, and the fictional voyage of the Pequod in *Moby Dick* was illustrative of the high-risk, high-return whaling ventures of the nineteenth century. Venture capital is simply a modern variation on a long-established practice of pooling money to finance risky ventures.

Venture capital is one means of financing that allows an idea, or intellectual property (IP), to be taken from its conception through to proof-of-concept and

commercialisation. Venture capital is 'high risk private equity capital for typically new, innovative or fast growing unlisted companies' (ABS cat. no. 5678.0). However, the lines between venture capital and other forms of private equity tend to be blurred making accurate measurement difficult. As the Productivity Commission (2007, pp 308-309) notes:

'Venture capital is a subset of the private equity market. Private equity covers professionally managed pools of funds seeking investment in high-risk high-return opportunities in unlisted companies or situations. Venture capital covers seed, early stage and expansion stage investment, usually IP based, with prospects for rapid growth, and with a higher risk/higher return profile than later stage private equity investment.'

Venture capitalists are either professional venture capital firms, consisting of a few partners, or 'business angels' – wealthy individuals with particular niche interests.<sup>2</sup> Typically, businesses financed by venture capital are engaged in speculative ventures and cannot obtain finance from traditional sources.

The amounts of money provided by venture capital firms are typically not large and are even smaller for 'business angels'. Venture capitalists typically take a significant stake in the ownership of the new firm and exert a considerable degree of influence. Venture capitalists also can increase their control over the firm through contractual arrangements, including penalties for under-performance. As Berlin (1998, p 21) notes:

'The severity of the penalties for not meeting objectives, which range from a reduced ownership share to being replaced altogether, provides the entrepreneur with powerful incentives to work exceptionally hard and also gives the venture capitalist lots of power to influence the firm's direction.'

The focus of venture capitalists is typically in bringing a start-up firm to an initial public offering (IPO), or having it merged with or acquired by another firm, after around three to five years of close involvement (Berlin 1998). Potentially, venture capital offers the 'best of both worlds' to entrepreneurs. By freeing entrepreneurs from working in a bureaucratic corporate environment, it allows them to leverage off the business acumen of venture capitalists. It also provides a focus on commercialising the innovation and increasing the market value of the firm – a focus that may otherwise be lacking.

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2 Business angels are not included in the venture capital data used in this article. The OECD (2005) notes: 'As business angels are excluded, international comparisons may be affected since business angels in the United States have tended to invest much more than venture capital funds in new firms.'

## Venture capital in Australia

As with entrepreneurship (Kukoc and Regan 2008), venture capital is difficult to measure. The distinction between it and other forms of finance is not always clear. Following the 2004-05 Venture Capital Survey, the ABS concluded that previously published estimates included some later stage private equity and they renamed their publication to 'Venture Capital and Later Stage Private Equity' to account for this. The ABS notes, however, that the series remains consistent over time. With this in mind, we now turn to international comparisons.

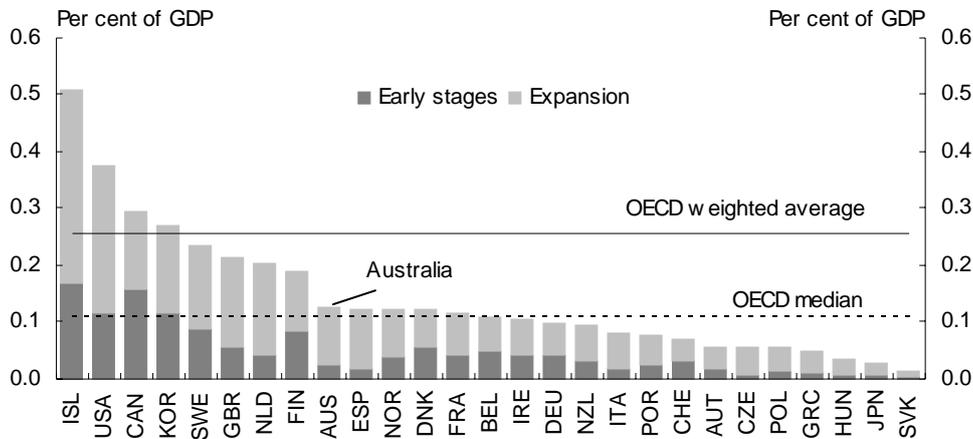
## International comparisons

In the early 2000s, Australia's venture capital intensity (at 0.1 per cent of GDP in 2000-03) was around the average for the OECD, but was smaller than that of the United States (Chart 1a). In 2005, Australia's venture capital intensity was 0.05 per cent of GDP (Chart 1b).

Large year-to-year changes in venture capital intensity suggest a degree of caution is needed in interpreting venture capital data. Definitions of venture capital can vary across countries and the data can be volatile from year-to-year and estimates from different sources can differ significantly. This is illustrated in Chart 1b which updates Chart 1a with data for 2005. It shows considerable changes in venture capital intensities over time. Of course, where data are volatile, caution is needed in interpreting a single observation.

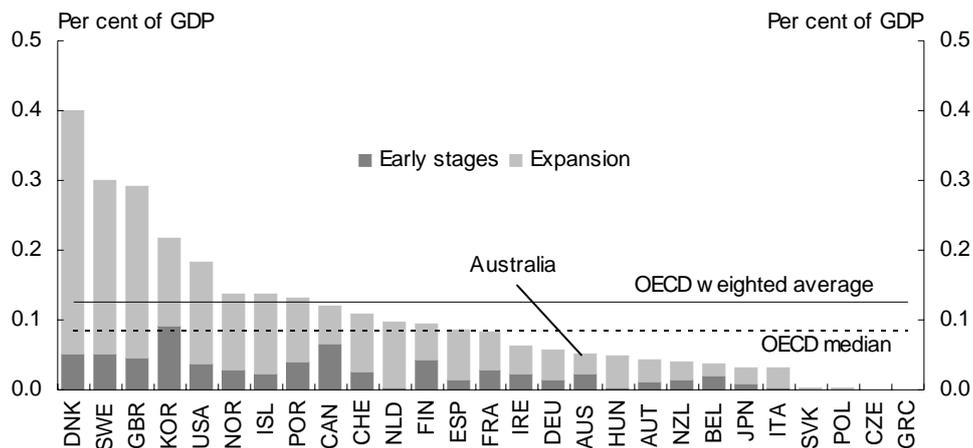
Australia's venture capital intensity was below the OECD median in 2005. Denmark, which in 2000-03 ranked below Australia, had the highest intensity in the OECD in 2005, while Iceland (ISL) moved from the highest intensity in 2000-03 to around the OECD weighted average in 2005. The United States maintains its position around the top of the ranking (moving from second to fifth place), but its venture capital intensity in 2005 was around half its reported level in 2000-03.

**Chart 1a: Venture capital investment in OECD countries, 2000-2003**



Source: OECD (2005).

**Chart 1b: Venture capital investment in OECD countries, 2005**



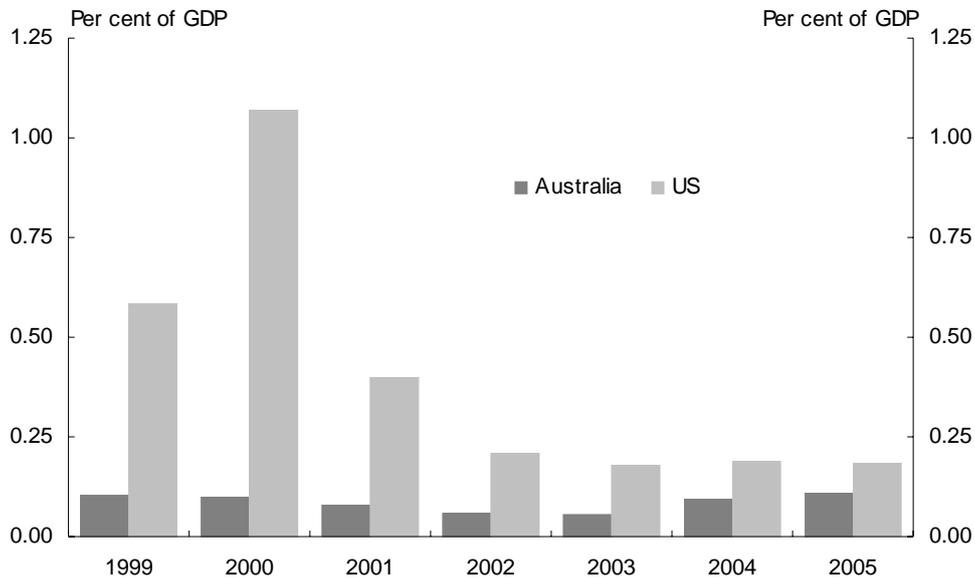
Source: OECD (2007).

The venture capital data in the charts above also capture investments in the expansion stages of businesses, including buy-outs of business. Arguably, some of these investments do not match the commonly-understood meaning of venture capital, as they are financing businesses that have already started up. Of course, in some cases the difference between early and expansion stages of a business may be difficult to define, as some businesses may take years to develop their initial idea.

The volatile nature of venture capital investment is further illustrated in Chart 2 which shows that venture capital activity in the US has fallen significantly in the years since the dot-com boom of the late 1990s and early 2000s (Chart 2). It is possible that the OECD average shown in Chart 1a is significantly affected by the spike in US venture capital activity during the dot-com boom.

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**Chart 2: Venture capital investment, per cent of GDP**

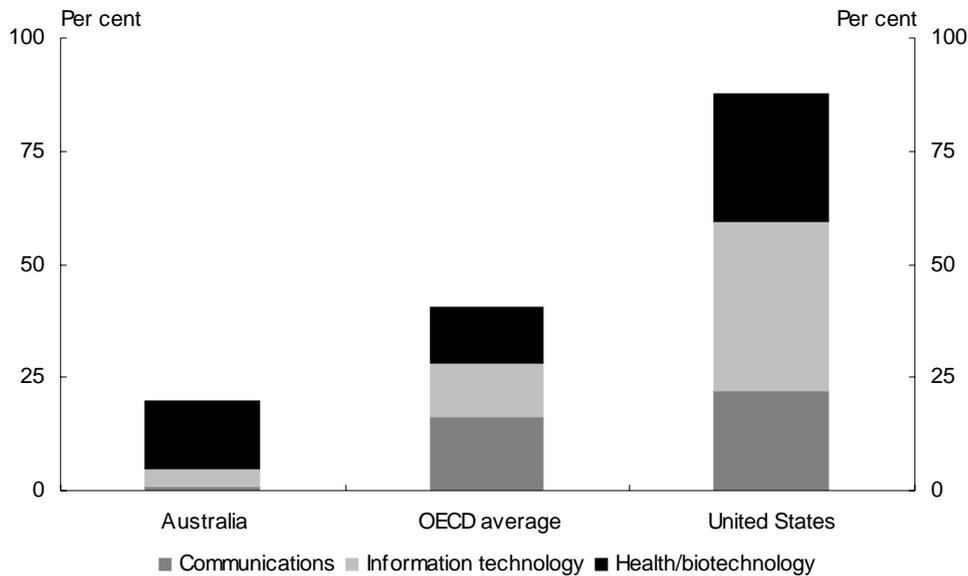


Source: National Science Foundation (2006) and Bureau of Economic Analysis (2007); ABS cat. no. 5678.0 (various issues) and cat. no. 5204.0.

Notes: Australian data are for the financial year beginning in the calendar year, and are based on ABS data, rather than the data sources underlying the OECD's data in Charts 1a and 1b.

Based on the available data, Australia's venture capital intensity appears to be around the median for OECD countries. At June 2006, the ABS estimates around \$11 billion had been committed to venture capital and later stage private equity funds (ABS, cat. no. 5678.0). However, only around \$7 billion had been drawn down and invested by the venture capital fund managers in around 900 different companies. It is possible that venture capital fund managers would have invested more if there were projects available that matched their criteria for investing. Therefore, if there is a problem with 'under-investment' of venture capital in Australia, it does not appear to be due to a lack of available funds.

The mix of venture capital activity that is conducted domestically will be influenced by Australia's industry structure. Only around 20 per cent of venture capital in Australia is in the high-technology sectors of health and biotechnology, communications, and information technology (Chart 3). In contrast, almost 90 per cent of venture capital activity in the US occurs in these sectors. Australia's lower venture capital intensity may be due to relatively smaller high-technology sectors, but this cannot be determined based on available data.

**Chart 3: Share of high-technology sectors in total venture capital, 2005**

Source: OECD 2007.

Another possible explanation for Australia's level of venture capital activity is that the scale and geographical dispersion of economic activity in Australia place a natural constraint on the development of a large venture-capital-financed, high-technology sector. Support for this view is provided by the concentration of high-tech industries and venture capital activity in a small number of regions within countries, such as Silicon Valley and Boston in the US. Given that high-tech clusters are few and far between even in the US, it is unsurprising that there do not appear to be similar clusters in Australia, which has an economy less than one-tenth the size of the US economy.

The economic fundamentals underlying the development of high-tech clusters and venture capital activity have significant implications for public policy in this area, as discussed in the next section.

### The location of clusters and venture capital activity

High-technology industries tend to be heavily concentrated in regional 'clusters'. For example, there are highly successful ICT clusters in Silicon Valley and Boston and there is an aerospace cluster in Seattle. It is a firm's nearness, both in terms of location and relationships, to entrepreneurs, industry experts, financial and accounting specialists, marketers, and related businesses that determine the success of the firm and the intensity of a high-technology cluster (O'Mara 2005). Clusters such as Silicon

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Valley constitute a complex economic 'ecosystem', with a vast array of specialised businesses in related industries.

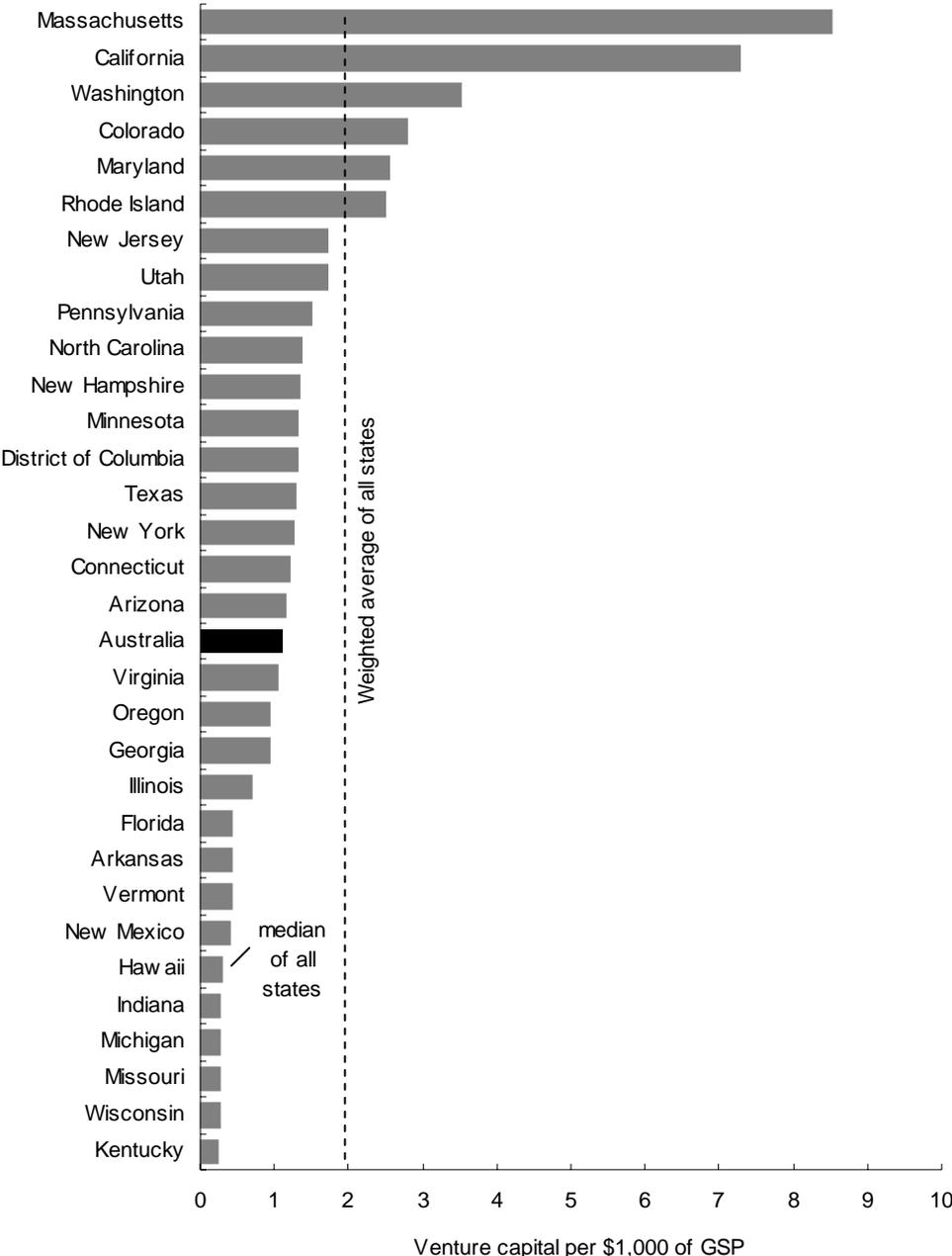
Regions that already have high-technology clusters tend to be more productive and attract a highly skilled workforce. They are also more likely to attract and sustain a large venture capital sector because the factors that result in clustering also are likely to reduce the risk to investors and increase potential profits. In this way they maintain their competitive advantage while driving the technological frontier forward.

Combined with competitive pressures, the confluence of the innovator's knowledge and the venture capitalist's industry experience creates a 'hothouse' environment that drives rapid growth of start-up firms. While venture capital is seen as a risky business, it is the considerable expertise of the venture capitalists that reduces risks and creates successful firms with self supporting clusters.

High-technology industries tend to be global in outlook. It follows that high-technology clusters will attract ideas that originate in other regions or countries. Ideas generated by Australian entrepreneurs may be easier to fund and generate higher returns in the US, for example, because they can take advantage of the unique opportunities within clusters. However, Australian firms and consumers will ultimately benefit from the commercialisation of the ideas, irrespective of where they are developed, as Australians are typically early adopters of new technologies.

Australia could be expected to have a lower intensity of venture capital (as a proportion of GDP) than the US, as Australia may not be the logical place to locate many of the venture capital-reliant sectors. As noted in the introduction, there is a significant difference between the levels of venture capital in Australia and the US. However, if Australia were a state of the US, it would rank 18<sup>th</sup> in terms of venture capital intensity, and therefore above the median US state (Hawaii) (Chart 4). It is difficult to be precise, however, about exactly where Australia would lie, given the significant variation in the data from year-to-year and the uncertainties that underlie the venture capital estimates.

**Chart 4: Venture capital intensity, 2006**



Source: National Science Foundation (2008); ABS cat. no. 5678.0 (2005-06 data).  
 Notes: We have not included all the US states in Chart 4 due to space limitations.

Looking at the distribution of venture capital across the US, only a few states drive up the overall US average to its very high level (Chart 4). The intensity of venture capital across the US varies considerably, with Massachusetts and California together accounting for over half of US venture capital investment. These two US states are

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home to unique regions associated with high-growth Information and Communications and Technology (ICT), biotechnology, and other high-technology industries.

In explaining why Australia does not match the intensity of venture capital in the US, the question is really why Australia does not have regions like Silicon Valley that attract unusually high levels of venture capital activity?

Regions like Silicon Valley have a comparative advantage in venture capital-financed activities because the closeness, or 'propinquity', of individuals with expertise in their field can significantly reduce the risk of the venture. This comparative advantage, combined with the global nature of high-technology industries, makes competing with regions such as Silicon Valley in ICT very difficult.

The importance of the agglomeration of economic activity, with its array of specialisations and linkages, suggests that it is very difficult to create clusters through direct policy interventions. O'Mara (2005) argues that replicating the success of Silicon Valley has proven exceedingly difficult, even in US regions with similar economic circumstances. In the US, efforts to create 'cities of knowledge' foundered in Philadelphia and Atlanta, which did not have the hard-to-define precursors that Silicon Valley and Boston had (Box 1). Around the world, there are a number of examples of where, despite policy interventions, expectations of the emergence of high-tech clusters were not realised, including the so-called 'Silicon Glen' in Scotland and the Multifunction Polis in South Australia.

While a range of economic and geographic precursors are necessary to the development of successful clusters, they do not appear to be sufficient in themselves. There appears to be no right way to develop a cluster and no magic formula.

### **Box 1: High-tech clusters in the United States**

According to O'Mara (2005) so-called 'cities of knowledge' like Silicon Valley had their genesis in the US's Cold War defence policies. The opportunity to work in well-funded military research harnessed an academic science sector that united behind national security goals. The initial military focus created large spin-offs for civilian industry, leading to the creation of an entrepreneurial culture that brought together universities, industry and, importantly, a well-educated middle class. These collaborative arrangements were supported by a range of incentives from all levels of government, though it is unclear how important particular policies were.

The bringing together of industry and academia, along with favourable public policies, was important to the creation of successful US clusters, but did not translate into success everywhere. Philadelphia and Atlanta both had a large defence industry and strong academic links (with Pennsylvania University and Georgia Tech), but they failed to develop significant clusters. There are other factors at play that are much harder to define, let alone reproduce.

Along with these important ingredients, O'Mara suggests that Silicon Valley's success may be due to a number of cultural and socio-economic factors. These include the favourable climate of California with its rapidly expanding population of skilled and educated people attracted by the promise of a pleasant middle-class suburban environment. California also had more stable social conditions, in contrast to the socio-economic problems of Pennsylvania, including poverty, deteriorating urban areas, and declining industries.

The lesson for policy advisers is that it is very difficult to create clusters through policy interventions. The Productivity Commission (2007, p. 313) notes:

It is not the role of government to 'de-risk' highly risky commercial ventures. This is also an area where good program design is hard to achieve. Quite apart from the usual business program risks for government of potential crowding out of private finance and administration costs, governments may also face the risk of subsidising projects with poor commercial prospects.'

Recent analysis suggests that factors such as labour market flexibility and competitive tax regimes might be more important drivers of venture capital intensity than providing a larger pool of funds (Da Rin, Nicodano and Sembenelli 2006). Bankruptcy laws may also have an impact (Armour and Cumming 2006).

## Conclusion

The costs that drive Australia's relative venture capital intensity are real and are not a function of policy settings. Given these real impediments, it is not surprising that Australia would come somewhere in the middle of a distribution of US states by venture capital intensity.

The levels of venture capital financing and high-technology activity are related to economic and geographical fundamentals. Artificially increasing the venture capital intensity of the economy to some international benchmark would be unlikely to produce positive outcomes.

Broadly speaking, innovation and economic growth are underpinned by sound economic framework policies. These include sound policy frameworks for fiscal and monetary policies, competitive markets, education, intellectual property, and tax, among other policy areas.

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# Measuring entrepreneurship

Kruno Kukoc and Dominic Regan<sup>1</sup>

Entrepreneurship has long been seen as a key driving force of a free market economy. Modern definitions of entrepreneurship emphasise a strong link between entrepreneurship and innovation and distinguish entrepreneurship from simple form of management. Entrepreneurship is also seen as a critical link between new knowledge and economic growth as it facilitates the transfer of knowledge. In the absence of internationally comparable indicators that capture the real innovative nature of entrepreneurship it is difficult to draw firm conclusions about the true level of entrepreneurial activity in Australia or any other country. Given the likely effect of entrepreneurship on economic growth, indicators that capture its innovative nature will be important for good policy outcomes in a small open economy like Australia.

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<sup>1</sup> The authors are from Macroeconomic Policy Division, the Australian Treasury. This article has benefited from comments and suggestions provided by David Gruen, Greg Coombs, Gene Tunny, Tony McDonald, Jyothi Gali and colleagues in Industry Policy Unit. The views in this article are those of the authors and not necessarily those of the Australian Treasury.

## Introduction

Entrepreneurship has been identified by many researchers as a major driving force of a free market economy. However, it was only recently that economists began to synthesise the knowledge about entrepreneurship and analyse its impact on economic growth.

This new interest in entrepreneurship appears to have been triggered by research and development (R&D) and innovation developments. Many countries, particularly in Europe, that have had significant increases in R&D and innovation expenditures over the last two decades have not experienced the boost to economic growth they were expecting from such investment. Some empirical studies (Shanks and Zheng PC 2006; Jaumotte and Pain 2005a, b, c) also question the positive relationship found between R&D and innovation expenditures, and economic performance. According to these studies, the rate of return on R&D and innovation expenditures typically quoted appears to be implausibly high. There are clearly a number of other influences that affect any direct empirical relationship between knowledge inputs and economic outputs at either firm level or country level. Many researchers now believe that the missing link could be the entrepreneur.

This paper looks into the nature of entrepreneurship, its link to innovation and economic growth and the difficulties with its measurement. It forms part of series of articles on the economic importance of innovation and links to a paper on venture capital (Regan and Tunny, 2008) also in this edition of the *Economic Roundup*. Entrepreneurship is a multifaceted and heterogeneous activity. Therefore, good understanding of its nature and proper measurement of its intensity are important for public policy. The paper outlines recent findings in this area before looking at measurement difficulties arising from the entrepreneurship indicators that are currently used. Australia's comparative position based on some of these is also provided. The final section of the paper explains the need to derive new indicators that will capture the innovative nature of entrepreneurship in order to be able to assess its impact on economic performance.

## Entrepreneurship and innovation

The definition of entrepreneurship has evolved over time. While in the eighteenth and nineteenth century (Cantillon 1775; Say 1803; Mill 1848) the term was used to describe the process of bearing the risk to organise factors of production to deliver a product or service demanded by the market, modern approaches focus more on the concept of innovation.

Schumpeter (1934) equated entrepreneurship with the concept of innovation applied to a business context:

‘The entrepreneur is the innovator who implements change within markets through the carrying out of new combinations. The carrying out of new combinations can take several forms; 1) the introduction of a new good or quality thereof, 2) the introduction of a new method of production, 3) the opening of a new market, 4) the conquest of a new source of supply of new materials or parts, 5) the carrying out of the new organization of any industry.’

As such, the entrepreneur moves the market to a new equilibrium. Schumpeter’s definition also emphasises the combination of resources. Yet, the managers of existing businesses are not typically regarded as entrepreneurs.

Numerous modern definitions of entrepreneurship are mostly a re-working and expansion of Schumpeter’s definition. Most modern definitions include a strong link between entrepreneurship and innovation, and distinguish entrepreneurship from a simple form of management. Entrepreneurship is thus seen as the process of identifying, developing, and bringing forward new innovative ways of doing things for the exploitation of commercial opportunities.

## Link to economic growth

The increased focus in recent years on R&D and innovation appears to have raised interest in the relationship between entrepreneurship and economic growth.

Robert Solow (1956) provided a growth accounting framework that included only two explicit factors of production: physical capital and labour, as well as the implicit factor of technological change. While the specification of these factors has seen considerable evolution, such as the link between the endogenisation of knowledge investments and technological change explored by Romer (1986) and Lucas (1993), growth theory has generally remained focused on these three factors in the decades after Solow’s path-breaking article (Audretsch 2007).

Throughout the 1960s, 1970s and 1980s, the dominant view was that economic growth was generated by large corporations investing heavily in R&D and education automatically leading to innovation and technology entrepreneurship. However, this view was not able to explain the paradox in the 1980s and 1990s where, for many countries, high investment in human capital and R&D did not generate the expected economic growth.

Romer (1986) and Lucas (1993) assumed automatic spillover of knowledge from the firm or organisation where it was generated to a third party for commercialisation.

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Based on this assumption, public policy has mainly focused on investing in education and R&D and supporting R&D in large businesses and in academia. However, recent research (Audretsch 2007), argues that entrepreneurship represents a critical link between R&D and economic growth as it facilitates the transfer of knowledge created in incumbent organisations to other organisations. According to Audretsch, this transfer is unlikely to happen automatically due to so called 'knowledge filters'. These knowledge filters include various institutional, managerial, information and knowledge barriers that prevent a new idea or knowledge from being commercially developed. The entrepreneurial activity of individuals within or outside incumbent organisations generating R&D reduces the effect of these filters and increases the impact of new investments in R&D and human capital on economic growth. This activity of entrepreneurial individuals may not necessarily go against the efforts of the incumbent organisations to protect their intellectual property and secure most of the returns from the commercialisation of new knowledge. The knowledge that spills over is often knowledge not recognised by the incumbent organisations as commercially valuable.

In many OECD countries there has been a new focus on entrepreneurship capital in recent years, a factor not considered in Solow's or Lucas' models of economic growth. The result is a growing consensus that investment in new economic knowledge alone will not guarantee economic growth. Rather, key institutional mechanisms are a pre-requisite for such knowledge investments to become transmitted and transformed into economic knowledge, through the process of spill-over and commercialisation (Audretsch 2007). These views see entrepreneurship as a driving force of economic growth due to its invaluable role as a conduit of knowledge spillovers and commercialisation.

Entrepreneurship and competition both determine the degree to which innovation contributes to productivity and thereby economic performance. Commercialised innovation by one firm is likely to have a small effect on the economic performance of a country, but competition and sound institutions force other firms to either come up with innovations of their own or loose market share. Within this dynamic process, the entrepreneurship which occurs on both small and large scales has been considered to be responsible for a substantial share of efficiency improvements in an open economy.

## Entrepreneurship indicators

While countries have a strong desire to understand levels of entrepreneurship and the factors that influence them, entrepreneurship data are in a relatively early stage of development (OECD 2006). Good comparable databases at the international level are simply not available at present and at this stage, international rankings provide little meaningful guidance to policy analysts.

There has been some comparative analysis on policies that support entrepreneurship (OECD 1998) but very little or no work on statistical measures of entrepreneurship. An OECD Ministerial Meeting in Istanbul in 2004 called for countries to develop more robust statistics on entrepreneurship to improve policy development and monitoring. As a result, the OECD has commenced work on the development of a 'periodic scoreboard' of internationally-comparable entrepreneurship indicators to assist evidence-based policy development. The work is currently in progress with the first results expected in 2008.

The job of finding the right indicators of entrepreneurship is not an easy one. Entrepreneurship is an inherently intangible concept: a complex and dynamic activity that is often interlinked with a range of other business activities and outcomes in the economy. Thus, the key issue in measuring entrepreneurship is how to disentangle the entrepreneurial activity from other, more ordinary business activities.

As previously noted, modern definitions usually equate entrepreneurship with the commercial pursuit of new innovative concepts or combinations. Consistent with these definitions, indicators of entrepreneurship should aim to reflect the levels of commercial activity triggered by the desire of economic agents to commercialise new concepts or combinations and should exclude other, non-entrepreneurial business activities.

Unfortunately, none of the existing business indicators seem able to isolate the activities that relate to commercialisation of new concepts only. For example, the approach based on new start-ups or the importance of small business and self-employment in the economy usually produces biased results as it includes activities driven purely by self-employment objectives<sup>2</sup>. Another approach uses venture capital, a very narrow and specialised form of finance with its own measurement issues, as a proxy for the level of innovative business activity in the economy. This measure may not include all entrepreneurial activities as entrepreneurs will often have access to a number of other forms of finance.

Given the problems with the measurement of entrepreneurship, there have been very few attempts to assess Australia's entrepreneurial activity in an international context. OECD (1998) commented that in several respects the Australian business sector cannot be considered as particularly entrepreneurial, a conclusion based predominantly on the rate of enterprise creation and expansion as well as on anecdotal evidence (for example, some well known world-class inventions originating in Australia such as the black-box flight recorder which were commercialised elsewhere). Other proxies for

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2 This is particularly the case in transition and developing economies.

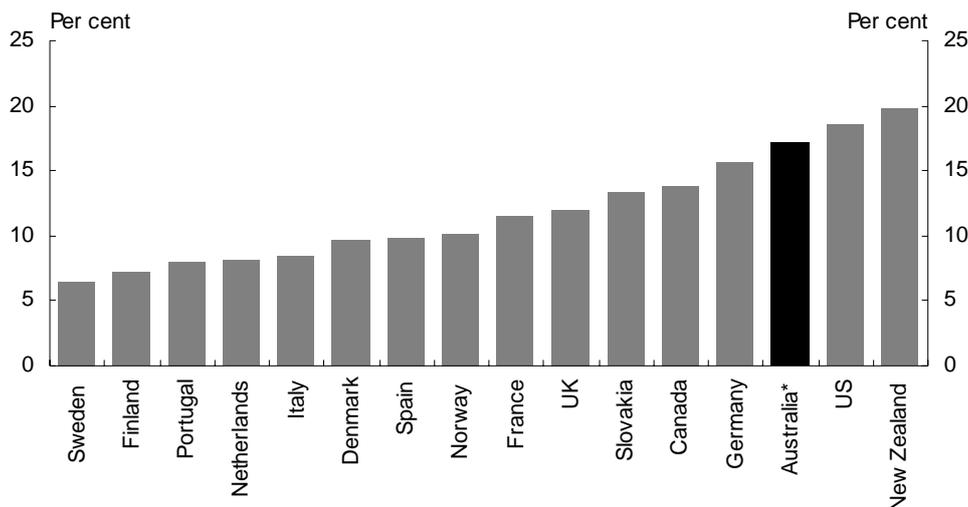
## Measuring entrepreneurship

entrepreneurship such as the importance of small and medium enterprises (SME) in the economy were also considered.

The pace at which firms are starting up and closing down – firm dynamics – is a commonly used indicator of the level of entrepreneurial activity in the economy. This indicator reflects the Schumpeterian notion of ‘creative destruction’, the level of turbulence in the economy that leads to commercialisation of new innovative ways of doing things and thus to economic growth. However, the databases used for different countries are often not comparable, so it is difficult to draw any firm conclusions in this regard.

With all the caveats about this approach, more recent data than those used in the OECD study (Chart 1) show that Australia ranks high on this criterion. The annual business start-up rate for Australia has been around 17 per cent in recent years, the third highest among the selected OECD countries.

**Chart 1: Raw business start-up rate for selected countries**



Source: Treasury calculations based on Vale 2006 and ABS 2007 cat no 8165.0.

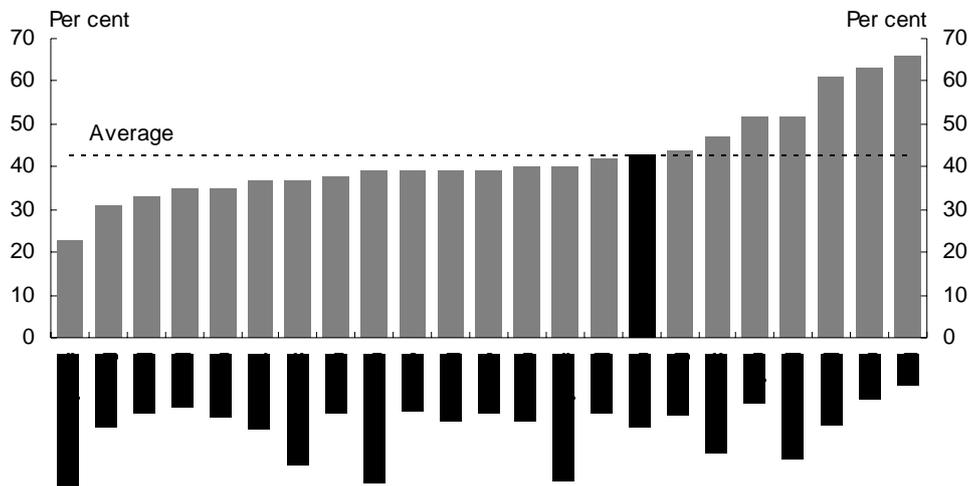
Note: Average rates between 2000 and 2004. \* Australia average for 2003 and 2004.

In addition to the issue of non-comparability of data from different countries, the main disadvantage of this approach is that it includes new start-ups that are simply a supply response to an increased demand for existing products/services or a way of finding self-employment. Similarly a high rate of closing downs may just mean a higher rate of failure due to factors not necessarily related to failed attempts to commercialise new concepts or ideas. Additionally, industry structure is likely to influence the rate of start-ups and close-downs significantly. For example, an economy heavily based on services is more likely to result in higher start-up and close-down rates due to a generally higher number of SMEs in the service economy. Australia’s relatively strong

position in Chart 1 may be the result of a number of one-off factors such as the 50 year high in the terms of trade.

Another related indicator often used as a proxy for entrepreneurial activity is the size of the small business sector in a country. It is widely recognised that SMEs and the entrepreneurship generated by them, are a key source dynamism and innovation in developed and emerging economies and make important contributions to job creation, economic growth and productivity (OECD 2005). Again, internationally comparable data in this area are unfortunately limited. Chart 2 provides information on firm size by employment in the manufacturing sector in OECD countries. According to this measure Australia ranks around average.

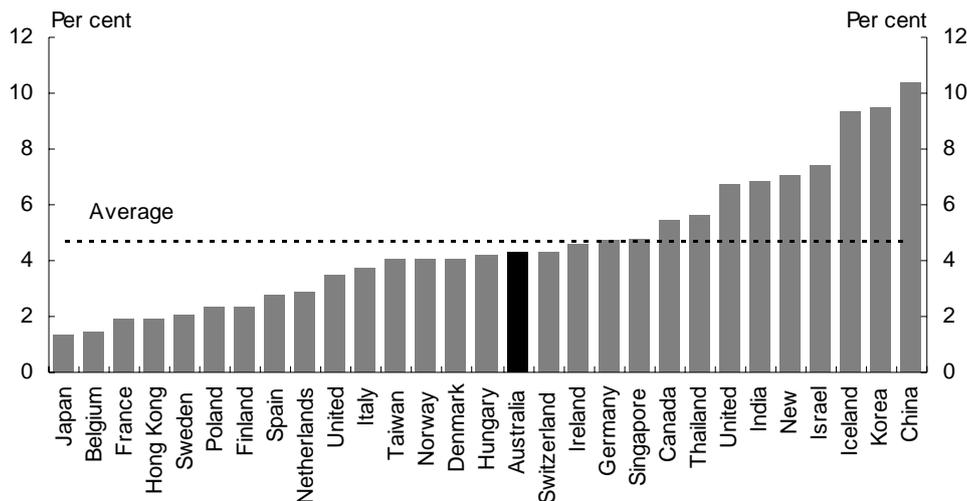
**Chart 2: Proportion of employment in the manufacturing sector, by small business, 2001**



## Measuring entrepreneurship

economic growth than ‘entrepreneurial activity’ in general. While this study did not attempt to distinguish between innovative and ordinary ventures it did distinguish between ambitious ventures and less ambitious ventures in terms of expected employment expansion. Those ventures that expected to employ between 6 and 19 more employees within five years after the start of the firm were classified as moderate growth ventures and those that expected 20 or more employees as high growth ventures and were therefore distinguished from ordinary ventures that expected to employ less than six more employees within the next five years. The results of the study suggest that ‘ambitious entrepreneurship’ contributes more strongly to economic growth than entrepreneurial activity in general. It could be assumed that many of the ambitious entrepreneurs were likely to be ambitious due to the innovative nature of their ventures. According to the ambitious entrepreneurship method, Australia ranked around the middle, and just below the average, of the developed and developing countries that participated in the Global Entrepreneurship Monitor (GEM) in 2002 (Chart 3).

**Chart 3: Total Entrepreneurial Activity (TEA) Medium and High Growth**



Source: Stam, Suddle, Hessels and Stel (2007).

While this study makes some progress towards excluding ordinary business ventures from the measure of entrepreneurial activity, it did not base its findings on the innovative nature of entrepreneurship. The group of ‘ambitious entrepreneurs’ was likely to also include a number of businessmen who were optimistic about future expansion for reasons not related to the innovative nature of their venture (such as confidence in local market conditions at a particular time).

Another proxy for high entrepreneurial activity in the economy is the level of venture capital activity. Australia's venture capital intensity was around the median for the OECD but is lower than the OECD average (Regan and Tunny, 2008).<sup>3</sup>

Contrary to most other indicators that quite often overestimate the level of entrepreneurship in a country; the venture capital investment indicator is more likely to lead to underestimation. The venture capital indicator does not include a potentially large number of entrepreneurs who are reluctant to acquire funds from a venture capitalist as this often means losing operational and management freedom. For many entrepreneurs the desire for operational freedom often plays a critical role in their decision to undertake the entrepreneurial activity in the first place.

### Why is good measurement so important?

The most important implication of good or bad measurement of entrepreneurial activity is its effect on public policy. If properly designed, good indicators can give an early warning of existing regulatory or other impediments to entrepreneurship. Similarly if conducted poorly, the measurement may lead to inappropriate policy interventions which may have negative side-effects in other areas of economic and social activities without a resulting increase in the entrepreneurial activity. This is particularly important in a small open economy operating at near full capacity. In such an economy, any government-induced reallocation of scarce resources that is not addressing a market failure results in an opportunity cost for the economy as a whole.

Entrepreneurship is a broad concept and as such encompasses a number of activities that could be affected by government policies. To flourish, entrepreneurship generally requires efficient financial markets, a simple and transparent corporate taxation system, labour market flexibility and bankruptcy rules adapted to the realities of the business world. Factors that seem critical for entrepreneurial activity are the level of risk and complexity and the expected rate of return to the individual from such activity. Thus, it is generally accepted that government policies should create a simple and transparent institutional and tax environment that encourages trouble-free entry of new innovative ventures and facilitates fast exit of failed ventures. However, the extent to which governments should do more, and seek to actively support or subsidise entrepreneurial activity remains unclear – the data are simply not yet good enough to provide a reliable answer to that question, beyond a general presumption that such interventions only make economic sense in response to market failures.

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3 The OECD average appears to have been skewed upwards due to a very high result for Iceland. The OECD has suggested caution when interpreting the venture capital data for Iceland due to some specific local market factors influencing the results.

## Measuring entrepreneurship

The renewed focus on the relationship between entrepreneurship and economic growth across the OECD runs the risk of generating a range of policy initiatives which go beyond general policies that support freedom of markets and reduce regulatory impediments to individual initiative. Due to the complex nature of entrepreneurship, new policy initiatives could affect a range of economic and government activities. It is for this reason that new, more reliable indicators of entrepreneurial activity should be developed to assess and guide the policy activity aimed at stimulating entrepreneurship.

In general, it will be important to link any new measures of entrepreneurship to the actual commercial activity arising from new ideas and not to restrict ourselves to measures of regular business activity that we know are currently easy to collect or produce. Improvements to existing techniques and surveys may well allow production of useful, comparable data in the future that will enable a proper assessment of entrepreneurial activity across a range of countries.

The ABS is expected to release details of its Business Longitudinal Database Record Files in mid-2008. These data sets contain useful information that could be used in designing better indicators of entrepreneurial activity in Australia. Ideally, this could be coordinated with the OECD's efforts to develop better and more consistent indicators of entrepreneurship across its member states.

## Conclusion

Modern definitions of entrepreneurship emphasise a strong link between entrepreneurship and innovation. Entrepreneurship is seen as a critical link between new knowledge and economic growth as it facilitates the transfer of knowledge. These factors distinguish entrepreneurship from more simple forms of management and ordinary business activities.

Notwithstanding this, existing indicators fail to capture the innovative nature of entrepreneurship. Furthermore, comprehensive and internationally comparable data for entrepreneurial activity are not yet available. In the absence of data that capture the real innovative nature of entrepreneurship it is difficult to draw firm conclusions about the true level of entrepreneurial activity in Australia or any other country.

The complex nature of entrepreneurship and its importance for economic growth demand internationally comparable indicators that will be able to distinguish entrepreneurship from ordinary business activities. When this becomes available, it will likely improve the quality of public policy initiatives aimed at supporting entrepreneurial activity.

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# A perspective on trends in Australian Government spending

Kirsty Laurie and Jason McDonald<sup>1</sup>

This paper provides a summary of trends in government spending. It reveals strong growth in government spending and the size of government, particularly over the past four years. It also discusses the distribution and sustainability of spending and notes the importance of high quality spending and flexibility in resource allocation in responding to future pressures.

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<sup>1</sup> The authors are from Budget Policy Division, the Australian Treasury. This article has benefited from comments and suggestions provided by Gordon de Brouwer, David Gruen, David Martine, Tony McDonald, Adam McKissack, Penny Sirault, Anupam Sharma, David Tune, Megan Thomas and Lukas Weber. The views in this article are those of the authors and not necessarily those of the Australian Treasury.

## Introduction

Governments intervene in the economy to achieve a number of policy outcomes, including addressing market failures or improving social equity by redistributing resources. Direct expenditure is one mechanism that governments can use to implement their policies. Spending often has advantages over alternative policy mechanisms, such as tax expenditures, regulation, guarantees and loans. In particular, spending tends to be more transparent, better allowing the community to hold government accountable for their decisions. For example, it is often difficult to determine the burden, distribution and sustainability of regulation as the economic effects are difficult to measure. The greater accountability on spending also means that it is often the most effective means of achieving government policy objectives.

This paper seeks to analyse recent government spending trends by assessing the size, distribution and sustainability of Australian Government spending.

## Size of government spending

As spending needs to be financed through revenue, spending has associated costs caused by taxation distorting resource allocation and reducing economic growth. The higher the tax rates, the higher the distortion, so all other things being the same, higher government spending will reduce economic growth. But, importantly, spending may be either welfare reducing or enhancing, depending on whether the benefits from the spending are greater than the costs of taxation needed to finance it. High levels of good quality spending may involve benefits greater than the costs of taxation. The budget task is to identify and reduce spending that is of low value or that reduces welfare, allowing for either lower taxes or for spending which is of higher social value and adds, overall, to wellbeing. Some spending may address social needs that do not increase measured economic growth, but do improve societal wellbeing. The size of government is therefore a decision of social choice involving trade-offs between economic growth and other social objectives. The overall objective should be to increase general wellbeing.

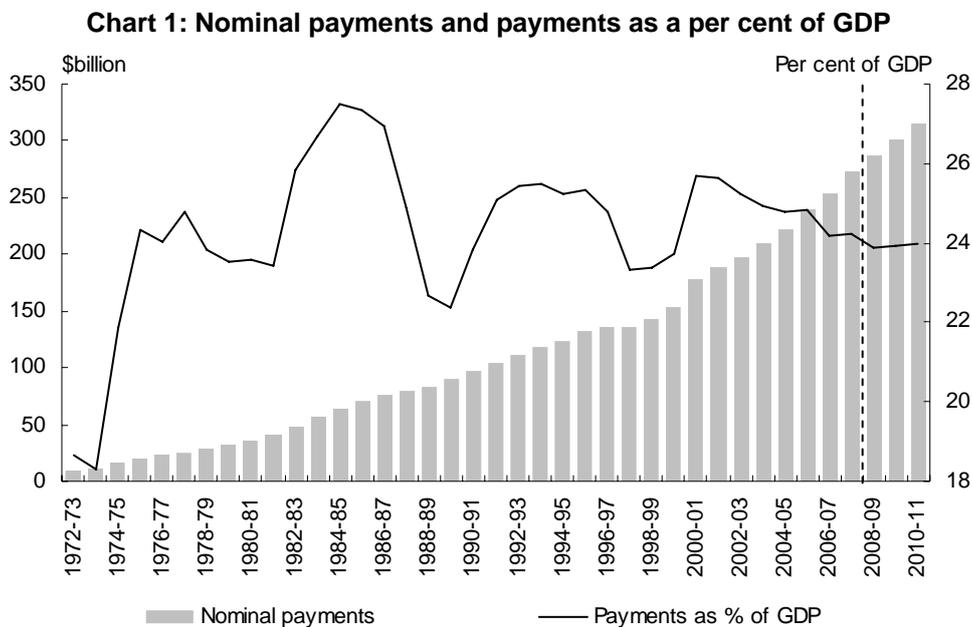
## Spending growth in nominal and real terms

Spending as a proportion of GDP is a measure of the level of direct government involvement in overall economic activity. Measuring spending as a proportion of GDP has at least two benefits. First, it provides a comparable base for analysing spending through time. Unlike nominal dollars, spending as a proportion of GDP provides a meaningful comparison between years of relative resource use. Second, spending as a proportion of GDP shows the relative extent of government intervention in the economy and therefore assists in analysis of social choice. GDP represents the

resources available and spending represents the share of those resources allocated by government through the budget.

Our analysis reveals an increase in levels of spending over the past 35 years. In particular, over the past decade the total dollar value of Australian Government spending (including GST payments to the State and Territory governments)<sup>2</sup> has grown by 54 per cent since 2000-01<sup>3</sup> from \$176.9 billion to an estimated \$272.2 billion in 2007-08 (see Chart 1). Based on the Pre-election Economic and Fiscal Outlook 2007, spending is projected to grow further to \$314.3 billion by 2010-11 (an increase of 78 per cent since 2000-01). This equates to 5.9 per cent growth per annum.

Chart 1 below shows that, as a proportion of GDP, spending is estimated to fall from around 26 per cent in 2000-01 to around 24 per cent in 2007-08.



Source: Commonwealth of Australia 2007a and 2007c.

However, Australia's recent terms of trade increases have led to a significant rise in nominal GDP, reducing the effectiveness of the spending to GDP ratio as a measure of government resource use. The terms of trade effect on nominal GDP is masking a significant increase in real spending – a measure which more effectively represents

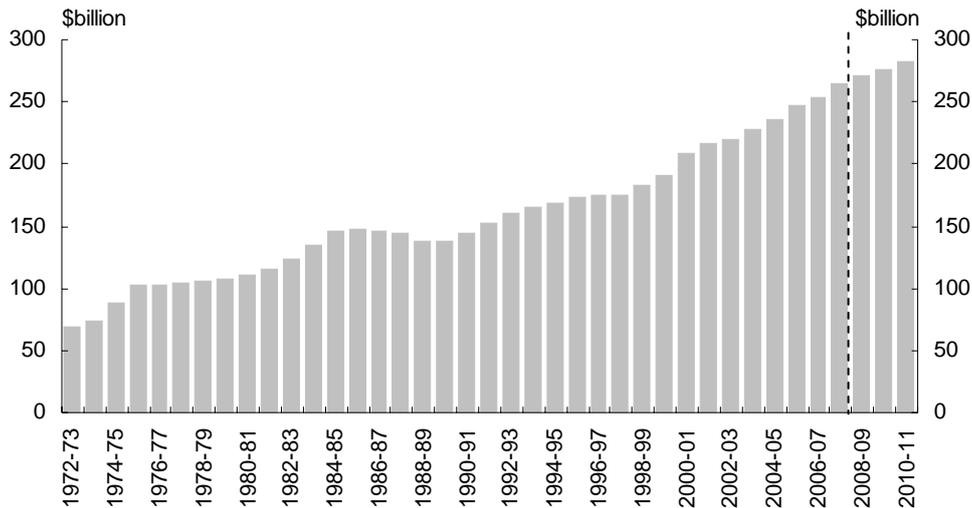
2 Unless otherwise stated, GST payments to the State and Territory governments have been included in the analysis from 2000-01. These payments replaced the Financial Assistance Grants that are included in the data prior to 2000-01 as well as a number of State and Territory taxes (which are not included).

3 2000-01 is the first year in which GST payments are included in the data.

## A perspective on trends in Australian Government spending

the government's call on real resources. Using the consumer price index (CPI) to convert spending into 2006-07 dollars, real government spending has grown significantly over the past decade, from \$174.7 billion in 1997-98 to \$264.1 billion in 2007-08, and is projected to grow to \$282.1 billion by 2010-11 (see Chart 2).

**Chart 2: Real government payments**



Source: Commonwealth of Australia 2007a and 2007c.

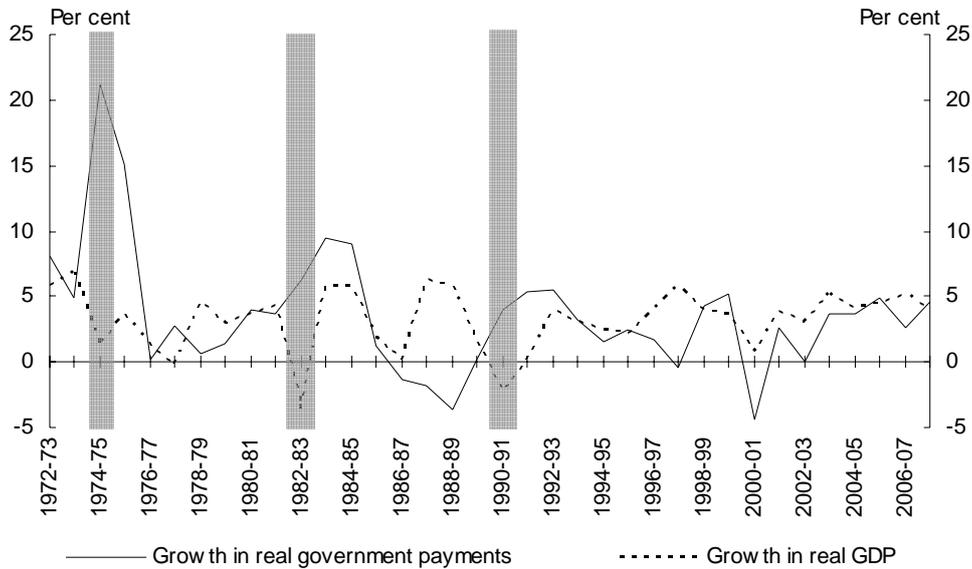
Excluding GST payments to the State and Territory governments, real government spending has grown faster in the period from 2004-05 to 2007-08 than in any other four-year period since the 1990s recession.

Chart 3 below shows the growth in real government spending since 1972-73, with the shaded area representing those years in which it was generally recognised, based on a range of indicators, that the economy was in a recession. The recent growth in spending stands out, along with the growth in spending under the Whitlam Government in 1974-75 and the increased spending following the recessions in 1982-83 and 1990-91.

The recent growth in spending is particularly noteworthy given Australia has experienced 17 consecutive years of real GDP growth. The economy is currently operating at close to its limits of capacity. Unemployment has fallen to 4.1 per cent, a 33 year low, and capacity utilisation is at a record high of 84.2 per cent. By way of comparison, during the recession in the early 1990s the unemployment rate peaked at 10.9 per cent and capacity utilisation fell to 75.7 per cent. In the current environment the costs of the government drawing on the economy's resources are clearly higher

compared to earlier periods since resources must be redirected from other economic activities instead of from idle capital or unemployed labour.<sup>4</sup>

**Chart 3: Growth in real government payments and growth in real GDP**



(a) Note: Shaded area represents those years in which there was generally recognised, based on a range of indicators, to have been a recession.  
Source: Australian Treasury.

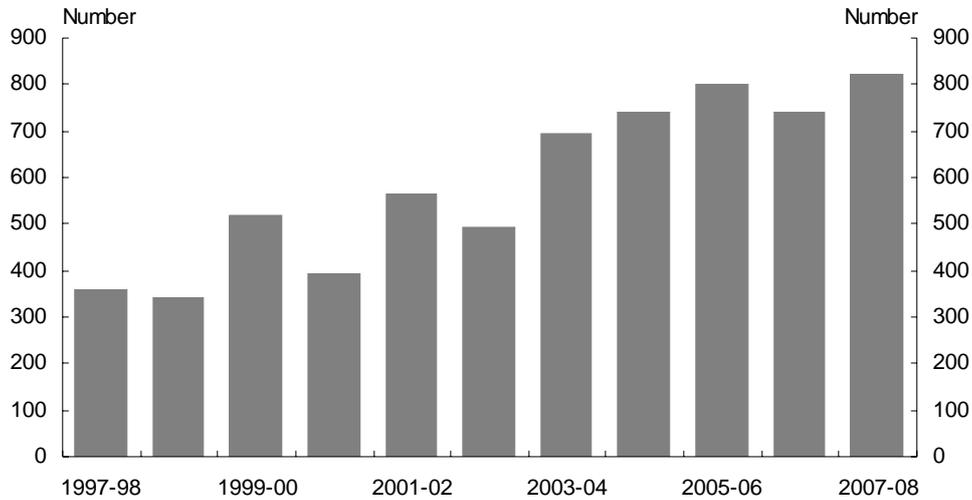
### Growth in policy decisions

The growth in real spending in recent years reflects both an increase in the number of policy measures and the cost of these measures.

The number of decisions (including tax and savings measures) announced in the Budget or Budget updates for particular years has more than doubled over the past decade from 359 in 1997-98 to 825 in 2007-08 (see Chart 4).

<sup>4</sup> ABS 2008 and National Australia Bank 2007.

**Chart 4: Number of measures**



Source: Australian Treasury.

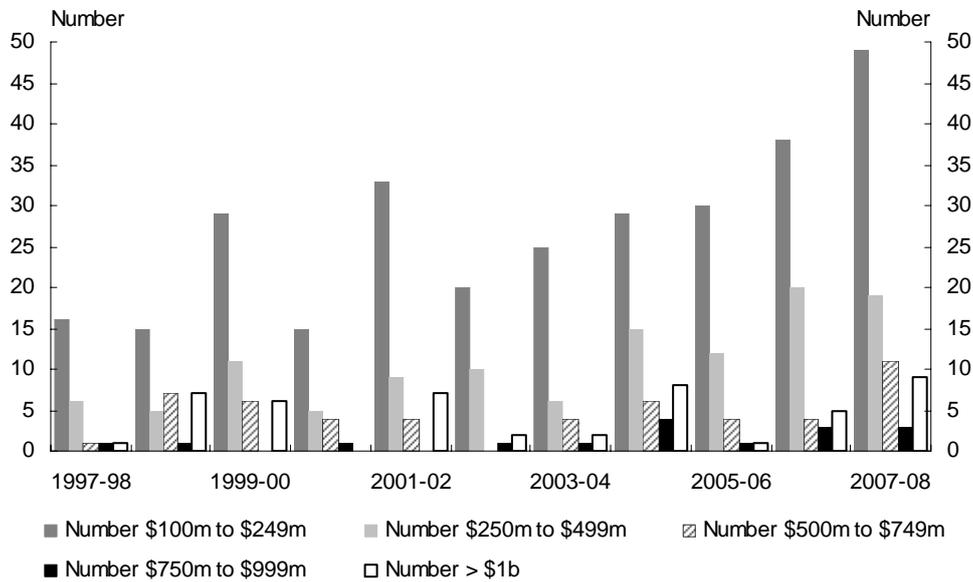
Most of the new spending decisions have been for small amounts. Around 90 per cent of decisions taken each year have totalled less than \$100 million over the forward estimates. However, the number of decisions valued between \$100 million and \$249 million has grown from 16 in 1997-98 to 49 in 2007-08, and the number of decisions worth over \$1 billion dollars has risen from one in 1997-98 to nine in 2007-08 (see Chart 5). Of note, the number of decisions valued between \$500 million and \$999 million has not shown as much variation, despite the growth in the total number of decisions.

In addition, there has been a reduction in the number and proportion of savings measures included in Budget reports since the 1997-98 Budget.<sup>5</sup> In the 1997-98 Budget, close to a third of all measures had a savings component, whereas more recently, savings measures have averaged around 1.5 per cent of total measures.

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<sup>5</sup> A measure is included as a saving in this analysis if it reduced an entitlement for any entity, or if the measure were made to better target policy outcomes. Efficiency improvements in government departments, compliance measures or indirect savings have been excluded.

**Chart 5: Number of measures \$100 million or more**



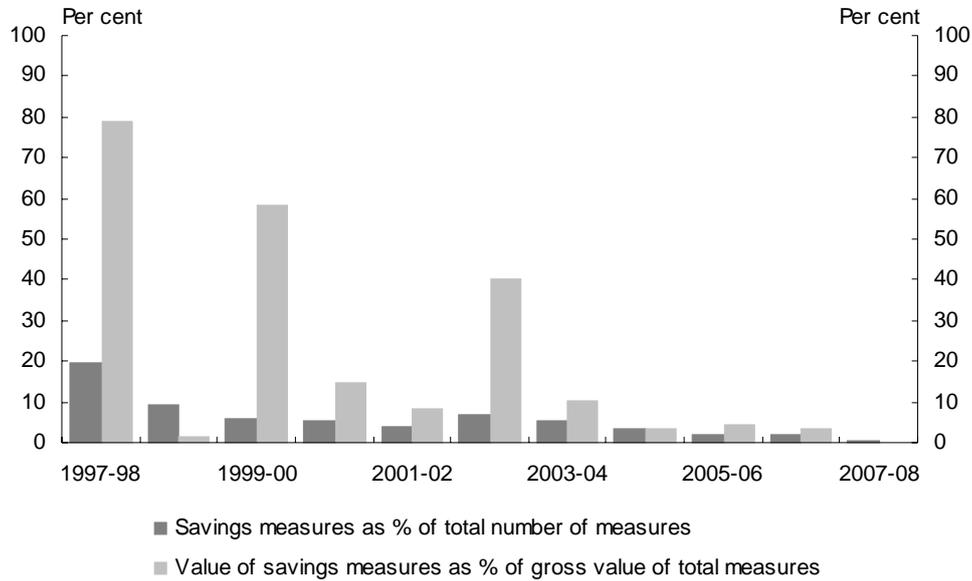
Source: Australian Treasury.

Chart 6 shows the number of savings measures as a proportion of the total number of measures and also shows savings measures as a proportion of the gross value of all measures in each year.<sup>6</sup> In both cases, the proportions clearly decrease over the period, especially following the spike in 2002-03.<sup>7</sup>

6 Some of the savings measures identified were included as a part of a package of measures. As there was no breakdown of the financial impact of these measures, the value of these savings may be underestimated as the value reflects the net value of the new spending proposals.

7 The spike in 2002-03 is a result of the 2002-03 Budget and Mid-year Economic and Fiscal Outlook (MYEFO) having the smallest net expenditure of any year from 1996-97. Furthermore, a number of savings were achieved in that year, the most significant of which was the reform to the Pharmaceutical Benefits Scheme, realising savings of almost \$1.2 billion.

**Chart 6: Savings measures as a proportion of the total number and gross value of measures (including MYEFO measures)**

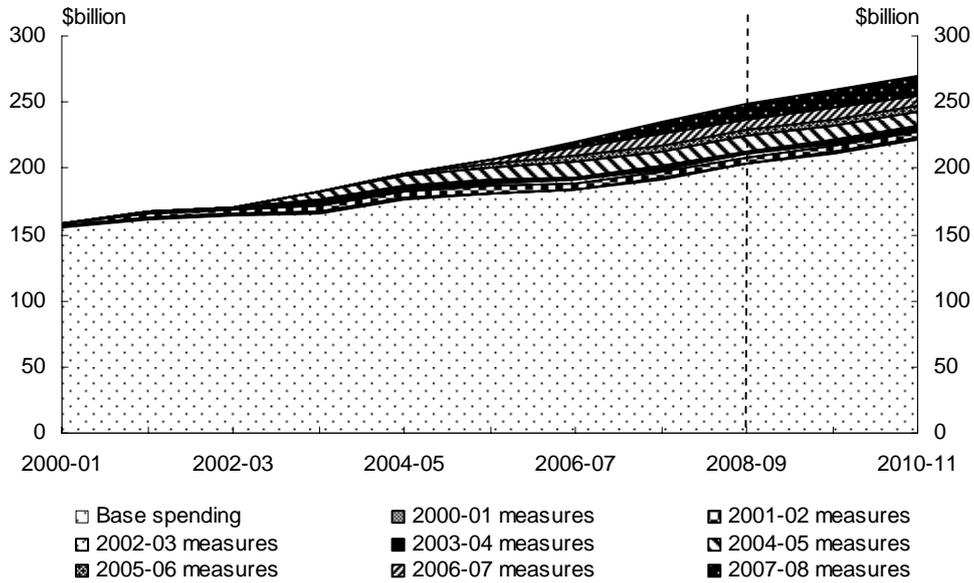


Source: Australian Treasury.

As a result of the increase in spending measures and the fall in the number and value of savings measures, there has been a growth in total spending over time. The effect of the accumulation of policy decisions on the growth in 'base' spending (that is, the level of spending which would have occurred if decisions since the 1999-00 mid-year update had not been taken) can be seen in Chart 7.

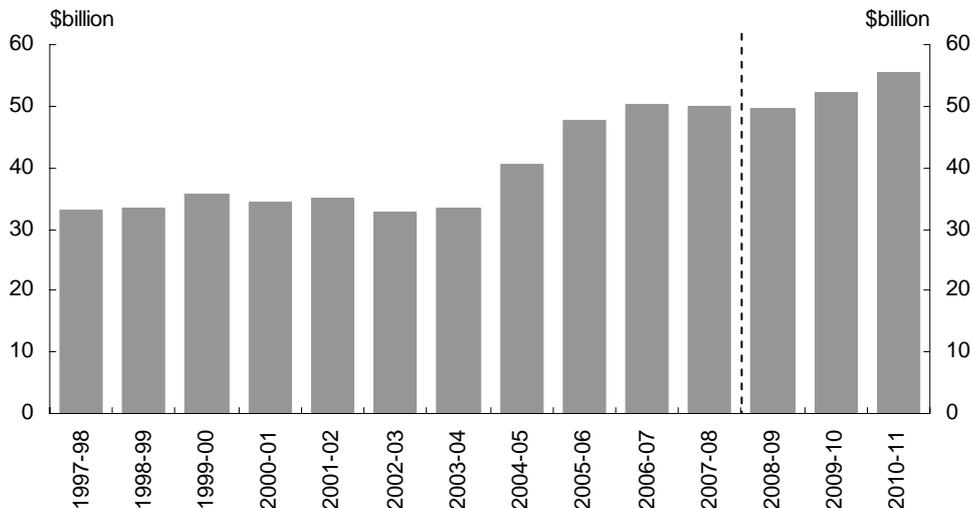
Spending can also be delivered through the tax system as tax concessions ('tax expenditures'). Since 1997-98 there has also been growth in real tax expenditures. Tax expenditures have grown by 51 per cent in real terms since 1997-98, from \$33.1 billion in 1997-98 to \$49.9 billion in 2007-08, and are expected to grow further by 2010-11 (see Chart 8). These expenditures have similar impacts on the economy as conventional spending.

**Chart 7: Accumulation of policy decisions (expenses)<sup>8</sup>**



Source: Australian Treasury.

**Chart 8: Value of real tax expenditures**



(a) Note these expenditures show the impact on taxpayers of deviations from the tax treatment that would normally apply. Tax expenditures are estimated on an assumption of no behavioural change and are therefore not necessarily reliable indicators of the budgetary impact of removing particular tax concessions. Consequently, tax expenditures are not additive to direct spending.

Source: Commonwealth of Australia 2008, 2006c, 2005c, 2005d, 2004c, 2003c, 2001c.

8 This chart shows the accumulation of expense decisions in nominal terms. However, the upward trend remains in real terms, with the base spending growing from \$182.7 billion in 2000-01 to \$198.9 billion in 2010-11 (in 2006-07 dollars). A base year of 1999-2000 has been chosen due to the introduction of accrual accounting in 1999-2000.

## Distribution of government spending

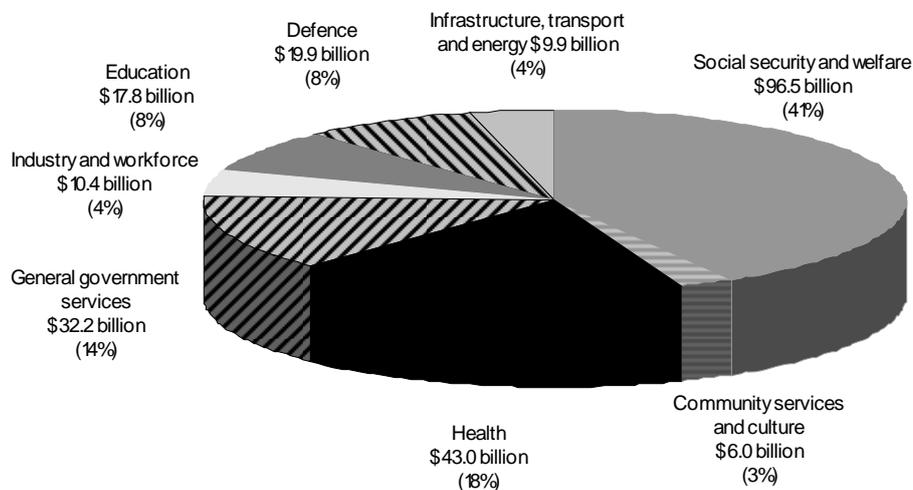
Governments have a unique role in redistributing resources in the economy due to their ability to compulsorily acquire resources through taxation and regulation. Analysis of functional spending can therefore assist the community in determining whether government priorities reflect community priorities.

Distributional analysis is also important for assessing the quality of spending decisions. Not all spending has the same impact on the economy. Governments can either spend on current consumption (such as goods and services) or invest for future consumption (for example, financing superannuation). They can spend in ways that either improve aggregate economic supply (such as public economic infrastructure) or reduce it (for example, some forms of industry protection); and can increase aggregate demand (for example, through own purpose government consumption) or not.

## Spending by function

In the 2007-08 Budget, estimated expenses excluding GST for 2007-08 were \$236 billion. The allocation of spending is detailed in the chart below, including 41 per cent on social security and welfare, and 18 per cent on health.

**Chart 9: 2007-08 Budget expenses — functional splits**



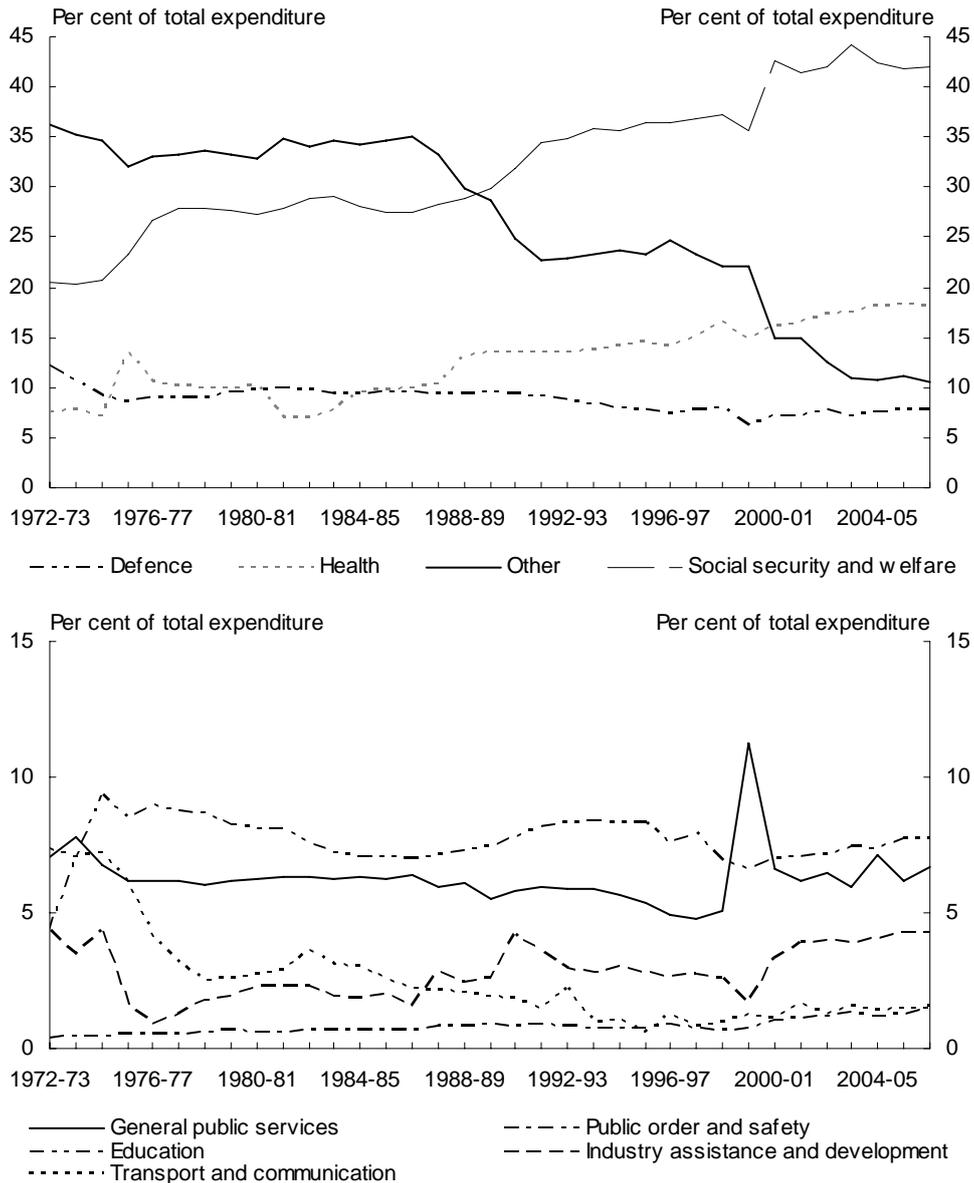
Source: Commonwealth of Australia 2007a.

Although whole-of-government functional historical data published in Statement 6 of Budget Paper No. 1 are not updated to reflect function classification or accounting changes, broad conclusions can be reached based on these data.

A perspective on trends in Australian Government spending

Charts 10 and 11 show that since 1972-73 spending on social security in real terms has been growing substantially faster than other areas of Australian Government expenditure, followed by health. Other purposes financing (mainly transfers to the State and Territory governments) has fallen relative to other forms of spending, although this does not include GST payments.

**Charts 10 and 11: Real spending on functions**

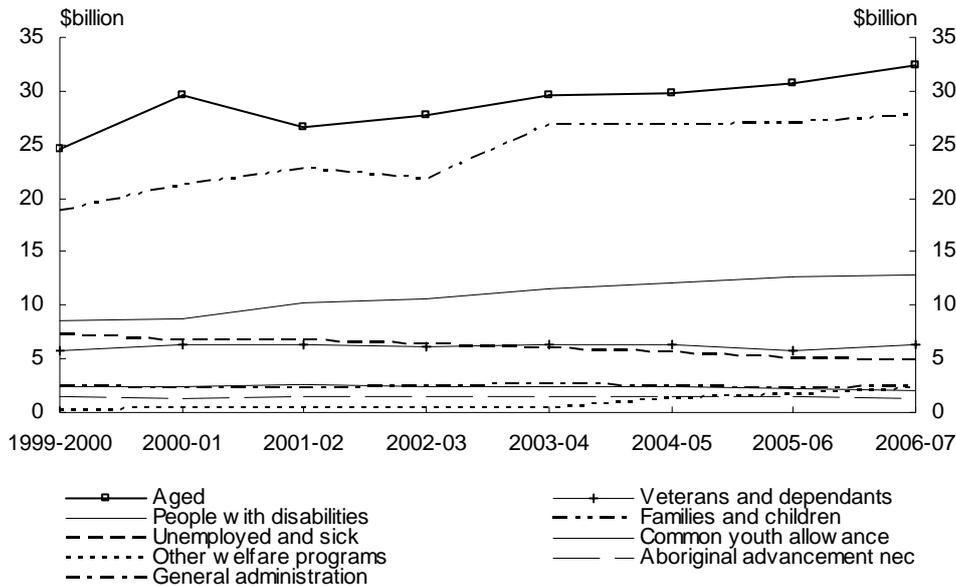


Source: Australian Treasury based on Budget papers since 1973-74.

A perspective on trends in Australian Government spending

Social security spending can be broken down into sub-functions. Again, the data are not strictly consistent across time and are subject to the same caveats but the risk of non-comparability is lessened by focusing on more recent years. In real terms, assistance to the aged and families with dependent children has been rising strongly and assistance to the unemployed falling (see Chart 12). Program level data on growth in spending support this finding, with strong real growth in the Maternity Allowance, Community Care, the Carer Payment and the Carer Allowance since 2003-04.

**Chart 12: Social security and welfare real spending**



Source: Commonwealth of Australia 2007b, 2006b, 2005b, 2004b, 2003b, 2002b, 2001b.

Transfers provided through social security often affect the economy indirectly by changing individuals' decisions to supply labour or save their incomes. But when governments directly spend on goods or services they also directly influence resource use in the economy. For example, government spending on industry assistance and development has had an average annual compound growth rate of 6 per cent from the on-set of the commodity boom in 2003-04 to 2006-07.<sup>9</sup> Where such spending directly addresses market failures, it may be improving economic supply. However, where it does not, it distorts the allocation of resources. This places more pressure on aggregate prices to redirect resources in the economy, particularly in an economy close to full employment.

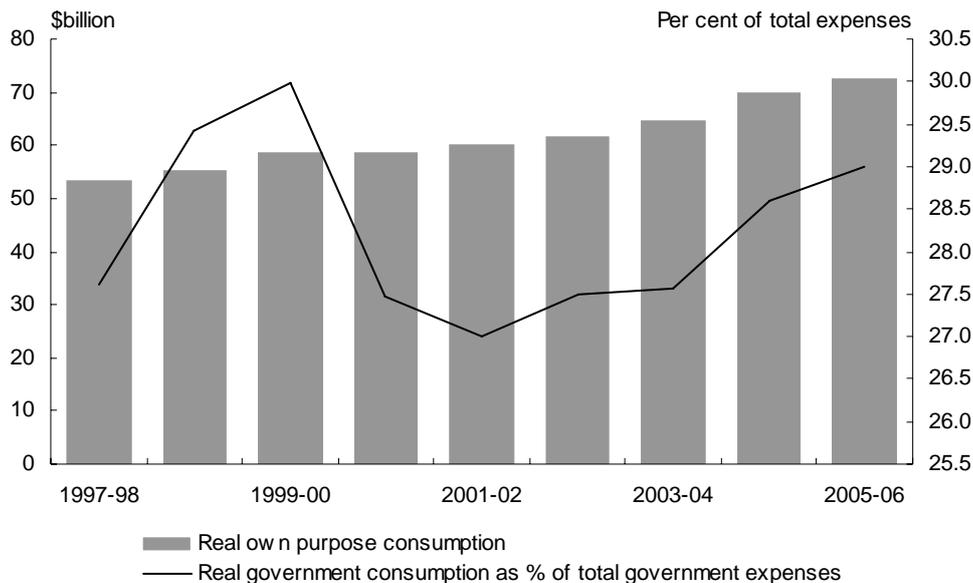
<sup>9</sup> Industry assistance and development is estimated to grow by 14 per cent in real terms from 2006-07 to 2007-08 based on estimates in the Mid-Year Economic and Fiscal Outlook 2007-08.

## Government own purpose consumption spending

Government own purpose consumption is spending on goods and services by the government, as opposed to capital purchases or transfers to individuals and other entities.<sup>10</sup> This is likely to be a better measure of the government’s measured stimulus of the economy than total spending since such spending feeds directly into aggregate demand. In contrast, transfer payments (such as unemployment benefits) do not feed directly into the calculation of aggregate demand. They must first feed through private decision makers who can choose whether to save or consume.

Chart 13 shows that government real own purpose consumption has grown from \$53.3 billion in 1997-98 to \$72.5 billion in 2005-06. As a proportion of total government expenses, government own consumption has grown slightly from 28 per cent in 1997-98 to 29 per cent in 2005-06.

**Chart 13: Australian Government real own purpose consumption and own purpose consumption as a proportion of total Australian Government expenses**



Source: Commonwealth of Australia 2007a and ABS 2006b.

<sup>10</sup> Government own consumption is defined as the net expenditure on goods and services by public authorities (other than those classified as public corporations) which does not result in the creation of fixed assets or inventories or in the acquisition of land and existing buildings or second-hand assets.

## A perspective on trends in Australian Government spending

As a percentage of GDP, government own purpose consumption has fluctuated over the period, averaging 7.2 per cent of GDP – higher than the proportion of GDP in 1997-98.

In the 1990s, government own purpose consumption grew slower than GDP. However, in recent years, government own purpose spending growth is beginning to match or exceed GDP growth.

### Number of public servants

Spending on public servant salaries is one component of government own purpose consumption spending.

While the number of public servants has grown since 1997-98 (when the average (full-time equivalent) staffing level (ASL) was 163,297), there was a change to data collection in 1998-99 which makes comparison with earlier periods difficult. However, even when considered over a slightly shorter period, there is still an upwards trend for average staffing levels. In fact, employment in the public service has been growing faster than employment in the rest of the economy. Chart 14 illustrates that total ASL has increased by 29 per cent since 1998-99 from 189,137 to an expected 243,859 in 2007-08. This equates to average annual compound growth of 2.9 per cent per annum compared to average annual compound growth in full-time equivalent employment of 2.1 per cent.<sup>11</sup>

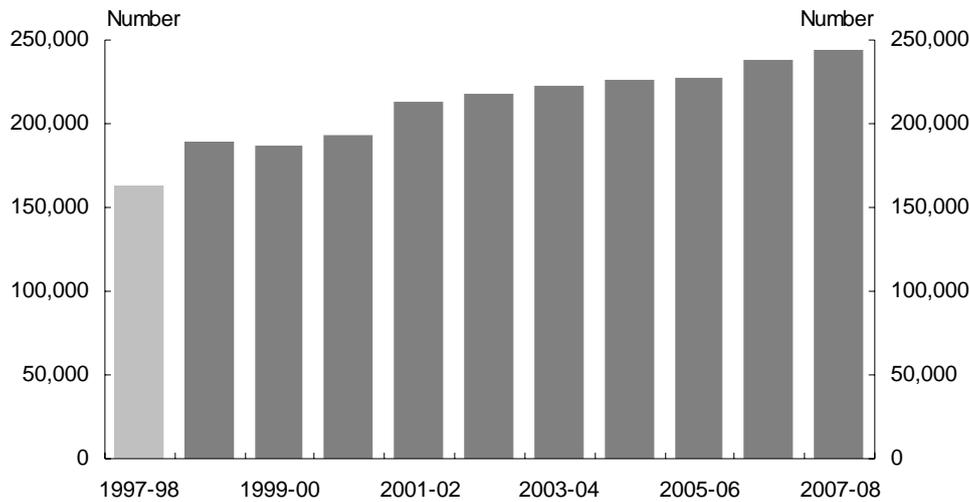
This growth is noteworthy given that the proportion of public servants with at least a bachelors degree is almost twice that in the private sector (40 per cent compared with 23 per cent).<sup>12</sup> Therefore growth in the public sector is likely to be reducing the supply of highly educated labour for the rest of the economy.

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11 Australian Treasury and ABS 2008.

12 ABS 2006a.

**Chart 14: Total average staffing levels in the general government sector**



Source: Commonwealth of Australia 2007a, 2006a, 2005a, 2004a, 2003a, 2002a, 2001a, 2000a, 1999a, 1998a.

## Sustainability of government spending

Finally, we look at the sustainability of government spending through time.

Under the *Charter of Budget Honesty Act 1998*, the Government is required to release a report at least every five years that examines the long-term sustainability of current government policies over the following 40 years.<sup>13</sup> The second Intergenerational Report (IGR) was released by the former Government in April 2007. It found that the fiscal sustainability of the Australian Government had improved since the first Intergenerational Report was released in 2002 but that demographic and other factors would continue to provide challenges for economic growth and long-term fiscal sustainability. Spending pressures according to government policies at the time resulted in a projected 'fiscal gap' between revenues (assumed to be a constant share of GDP) and projected spending in 2046-47 of around 3.5 per cent of GDP.

The improved outcome for the fiscal gap (see Chart 15) was a result of lower growth in projected spending per person (mainly in health)<sup>14</sup> and higher projected nominal GDP per person compared to the first IGR. This latter effect was primarily due to the rise in the terms of trade since the release of the first IGR.<sup>15</sup> Consequently, the fiscal gap may have been larger in the absence of the strong terms of trade experienced over the past

13 Commonwealth of Australia 1998c.

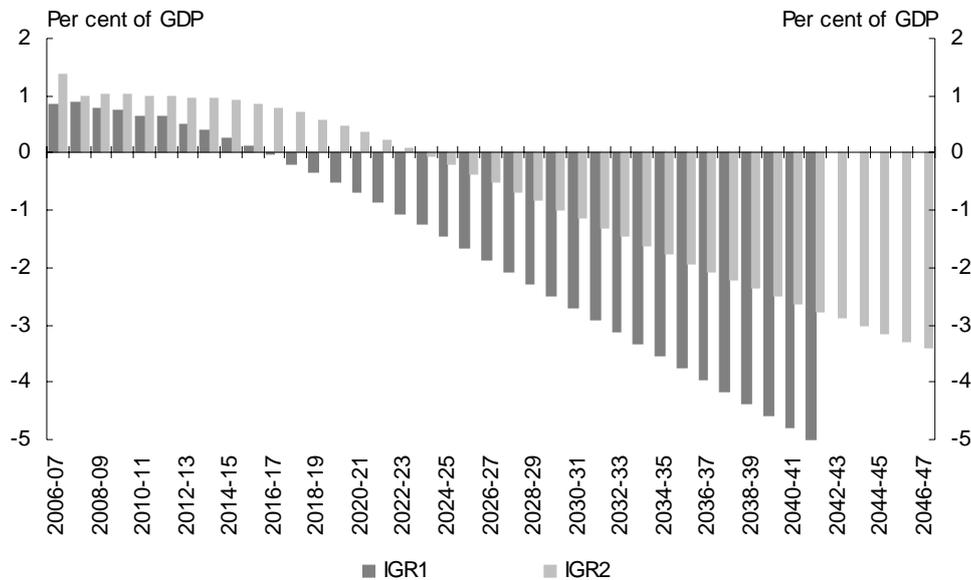
14 Note that the fall in projected spending per person on health includes the impact of some changes to projection methodologies.

15 Commonwealth of Australia 2007d.

## A perspective on trends in Australian Government spending

few years. This highlights that spending projections can be unexpectedly influenced by external events and that continuing reforms are necessary to improve productivity and participation to ensure that the government's finances can be made more sustainable.

**Chart 15: Fiscal Gap**

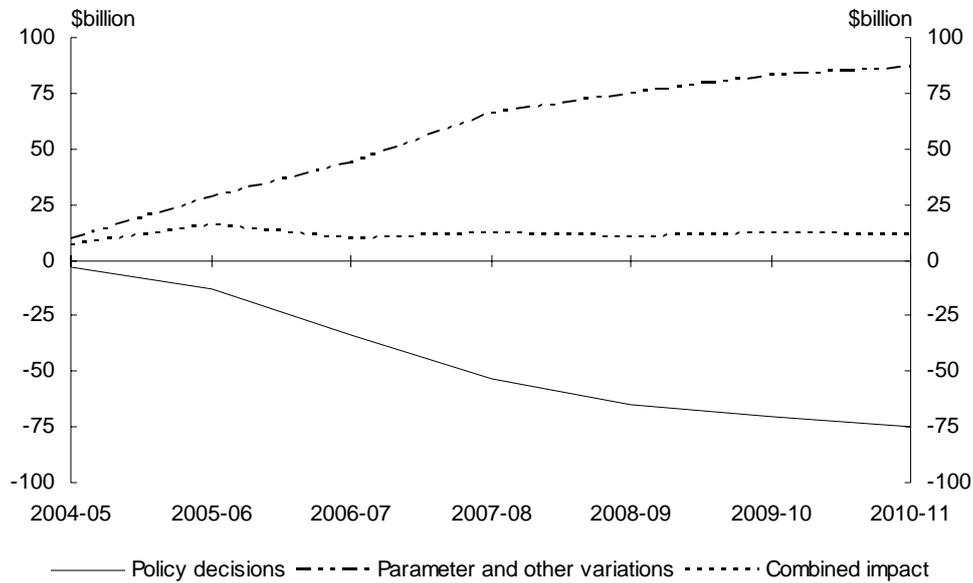


Source: Commonwealth of Australia 2007d.

From the 2004-05 Budget to the 2007 Pre-election Economic and Fiscal Outlook, parameter and other variations have added \$391 billion to the budget surplus over the period 2004-05 to 2010-11, while new spending decisions (including income tax cuts) have reduced the surplus by \$314 billion over the same period. Revenue variations contributed \$334 billion to the budget surplus. Effectively, the additional revenue from the commodity boom has been spent, or provided as tax cuts (see Chart 16).

The terms of trade have led to a significant increase in the GDP deflator since 2003-04. Normally the GDP deflator and CPI move together, but these indices have diverged significantly over recent years. This has resulted in spending as a proportion of nominal GDP falling, even though the government's claim on the quantity of national output has been rising. The increasing GDP deflator has effectively been masking changes in the underlying size of government. This means that more of the goods and services produced in the economy are affected by government spending decisions, with the growth in government being financed by higher relative prices for the goods and services the country sells overseas.

**Chart 16: Cumulative impact on underlying cash balance of policy decisions and parameter variations**

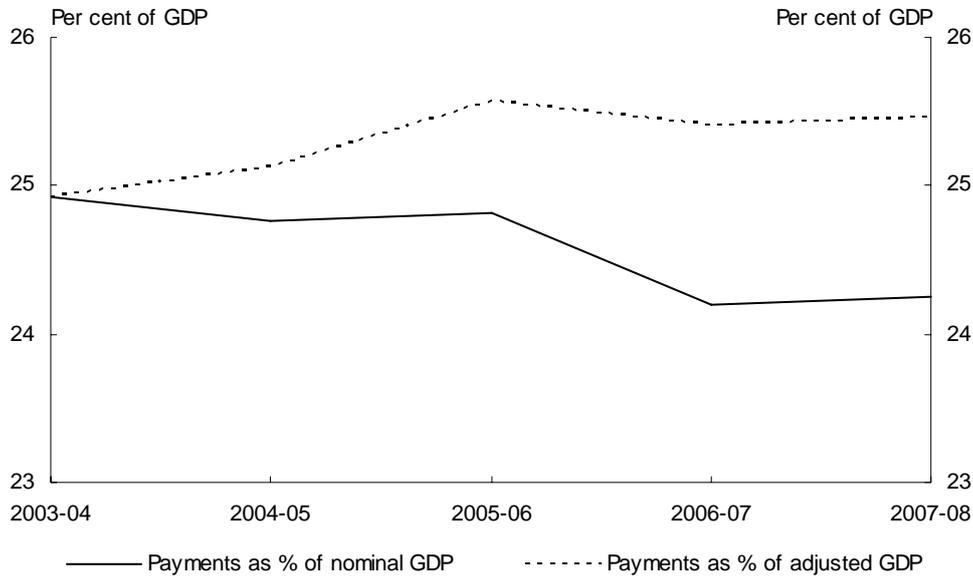


Source: Australian Treasury.

The masking effect of the increase in nominal GDP can be seen by comparing spending as a proportion of nominal GDP and as a proportion of 'adjusted GDP', which is constructed by inflating real GDP by the consumer price index (rather than by the GDP deflator). Chart 17 shows that if it were not for the significant growth of the GDP deflator over recent years, payments would have increased as a proportion of GDP over the past five years.

The policy question is whether government spending growth should be moving in line with the growth in nominal GDP. Some elements of recent government spending growth have related to the redistribution of revenues from the increase in the terms of trade through spending on transfers. However, analysing spending as a proportion of real GDP may be a better indicator of the sustainability of government finances and the impact on the long-run improvements to wellbeing. Real GDP growth is directly influenced by domestic policy choices affecting productivity and participation growth. Government spending financed from nominal GDP growth that does not improve the prospects for future real GDP growth may not be as sustainable.

**Chart 17: Effect of significant growth in the GDP deflator on (nominal) payments as a proportion of GDP**



Source: Australian Treasury.

## Conclusion

Despite cyclical savings in spending, total government spending has grown significantly over the past decade and in particular since 2004-05. Much of this growth may reflect the strong fiscal outlook. However, even with a strong fiscal outlook it is important to have high quality spending. This can help the sustainability of the government's finances by focussing on measures that enhance Australia's productive capacity. It is also important because most spending measures are ongoing and they reduce the flexibility of the government to respond to future pressures.

The budget process provides robust analysis of new spending proposals but this is only a small fraction of overall spending. Effective ongoing review arrangements are important for ensuring that the overall stock of programs (including tax expenditures) remains aligned with government priorities. An effective budgetary framework also ensures that changing priorities are addressed through the reallocation of resources (not only through incremental increases in resourcing), that programs are managed efficiently and effectively, and that there is maximum scope for flexibility to respond to future pressures, including the emerging fiscal pressures from demographic change.

## Technical Appendix

### Spending trends excluding GST

All charts on government spending in this article include payments of goods and services tax (GST) to the State and Territory governments, consistent with the practice adopted by the Government. This results in a jump in spending in 2000-01 from the introduction of the GST. However, even if GST payments are not included, our analysis reveals strong growth in real payments in the past decade. This is shown in the following table:

**Table: Real Australian Government payments excluding GST**

	\$ million	% of GDP
1997-98	174,666	23.3%
1998-99	182,192	23.4%
1999-00	191,564	23.7%
2000-01	183,191	22.5%
2001-02	188,085	22.3%
2002-03	188,185	21.6%
2003-04	195,043	21.3%
2004-05	202,127	21.2%
2005-06	211,965	21.3%
2006-07	217,355	20.8%
2007-08 (e)	227,175	20.9%
2008-09 (p)	232,245	20.4%
2009-10 (p)	236,556	20.5%
2010-11 (p)	240,805	20.5%

(e) Estimates

(p) Projections

Source: Australian Treasury.

### Deflators

Data on nominal spending in this paper have been deflated by the consumer price index (CPI) in order to examine changes in 'real' (rather than nominal) spending. A CPI deflator has been used, rather than a GDP deflator, to convert nominal spending into 2006-07 dollars as price impacts on government expenditure depend mainly on consumer prices and nominal wages.

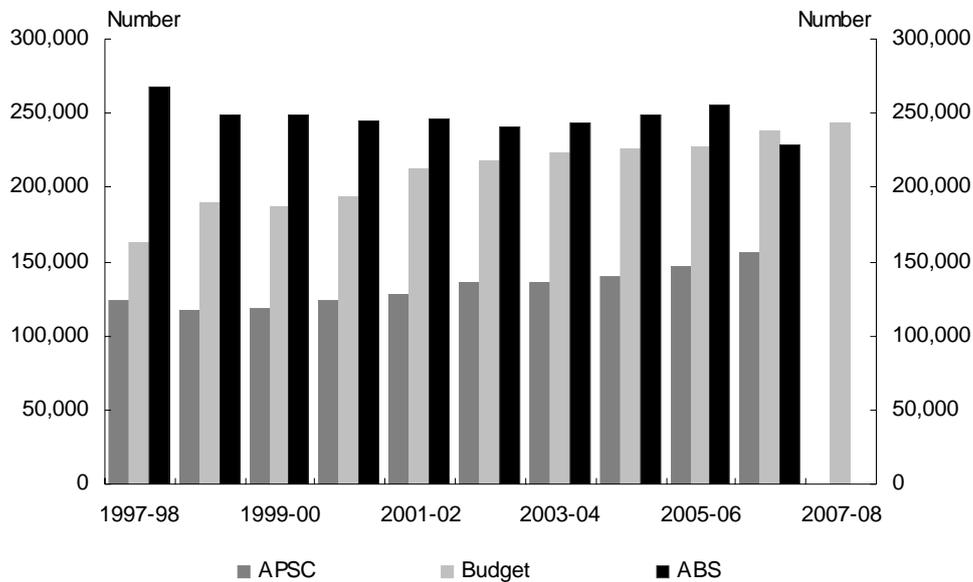
### Comparison with other statistics on the number of public servants

Note that the discussion on the number of public servants in this article has used Government Finance Statistics data from the Budget papers. Chart 18 below highlights that the story of the growth in the number of public servants differs depending on which statistics are used. For example, the ABS data show a decline in the number of

A perspective on trends in Australian Government spending

public servants since 1997-98. The Australian Public Service Commission statistics (APSC) and Budget statistics, on the other hand, show an increase.

**Chart 18: Comparison of public servant numbers<sup>16</sup>**



Source: APSC 2007, Commonwealth of Australia 2007a, 2006a, 2005a, 2004a, 2003a, 2002a, 2001a, 2000a, 1999a, 1998a and ABS 2007a.

These different outcomes result from different classifications and methodologies used in each of these sources. The budget statistics provide an estimate of the average staffing level in the Australian Government general government sector while the APSC statistics include only those covered by the *Public Service Act 1999* and do not include permanent defence force members. The ABS statistics also exclude defence force members and exclude employees based overseas but are more comprehensive as they include all entities that report to Parliament, including those covered by the *Commonwealth Authorities and Companies Act 1997*. In addition, the APSC and ABS statistics use a head count approach, which weights part-time employees equally with full-time workers, while the budget statistics use a full-time equivalent.

Which data are best depends on the issue at hand. In seeking to understand the extent to which the 'bureaucracy' serving the government has grown, the number of full-time equivalent public servants is of most relevance. We therefore consider the budget numbers to be the best source.

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16 Note there are some timing differences between the data from different sources.

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# Australian household net worth

Anthony Goldbloom and Andrew Craston<sup>1</sup>

Treasury has decided to cease compiling its own measure of private sector wealth in favour of a series based on Australian Bureau of Statistics household net worth. Most elements of the ABS household net worth measure are now available with quarterly frequency. Treasury will apply a quarterly approximation to the remaining components and backcast data to make it suitable for use in the Treasury Macroeconomic Model (TRYM).

The article concludes with a brief analysis of the new wealth figures. Australian household net worth increased by 11.6 per cent in the year to June 2007 — slightly faster than its long run average growth rate of 10.5 per cent.

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1 The authors are from Domestic Economy Division, the Australian Treasury. This article has benefited from comments and suggestions provided by John Hawkins and Steven Kennedy. The views in this article are those of the authors and not necessarily those of the Australian Treasury.

## Introduction

Wealth was described by the author Frank Herbert as a tool of freedom, whilst being known to scholar Robert Burton as devil's bait. The definition may be contentious, but its analytical uses are not; it is a useful explanator of movements in aggregate consumption, and is often used as a benchmark when examining the level of foreign liabilities.

The Treasury private sector wealth series was developed for use in the Treasury Macroeconomic Model (TRYM) at a time when the Australian Bureau of Statistics (ABS) did not publish a net worth series. Since 1995, the ABS has published a household balance sheet – making available a measure of household net worth. The ABS measure is an annual series and is therefore not suitable for use in the TRYM model, which relies on quarterly data. However, as of November 2006, the ABS altered its methodology – as a result the majority of the ABS household net worth measure is available with quarterly frequency. Household net worth is conceptually equivalent to private sector wealth as the household sector – after subtracting public and foreign ownership – ultimately lays claim on the whole private sector.

This article will continue with a brief discussion of the ABS measure of household net worth. The third section contains a discussion of the differences between the ABS measure and the Treasury measure. This is followed by an overview of modifications made to the ABS measure to make it suitable for use in the TRYM model. A brief analysis is then provided of recent trends in household net worth.

## The ABS measure of household wealth

ABS household wealth has been published with annual frequency in the ABS annual national accounts since 1995 with the time-series dating back to 1989. It comprises dwelling assets, financial assets and liabilities and the capital stock held by unincorporated entities.

As of the 2005-06 annual national accounts, the ABS dwelling asset measure adopted the Reserve Bank of Australia's dwelling asset measure (ABS 2006). The RBA estimates dwelling assets as the product of the number and mean value of dwellings held by the private sector. This series is made available quarterly by the Reserve Bank with the publication of their *Bulletin* statistical tables.

The ABS measure of financial assets and liabilities is also published quarterly by the ABS in their quarterly financial accounts (5232.0) publication. Financial assets and liabilities are split by instrument and by sector.

The remainder of the household balance sheet comprises non-dwelling capital and land held by unincorporated entities. These are only available annually with the publication of the annual national accounts. This asset class made up 10 per cent of household net worth in June 2007.

## Differences between the ABS measure and the old TRYM measure

Treasury first published annual estimates of private sector wealth in the Summer 1990 edition of the *Economic Roundup*. It drew on several works including: Helliwell and Boxall (1978), Piggot (1987) and Horn (1987). Since this publication, it was updated to include developments in methodology outlined in Callen (1991).

The methodology estimates the consolidated household and business sectors – this equates to household wealth since the household sector ultimately owns the assets of the private sector (again net of foreign ownership). Previous editions of the *Economic Roundup* have argued that estimating the consolidated household and business sector is simpler than the household sector alone, because it avoids the often complex interactions between these sectors. However, the ABS has painstakingly split the private sector into its component parts, which has the advantages of outlining the detail of holdings in the private sector.

The Treasury series also differs from the ABS measure in its valuation methodology. The Treasury approach approximates two wealth series, one at market value and another at replacement cost. The ABS measure values assets of unincorporated entities at replacement cost, whilst it prices financial assets and liabilities at market value. It is true that the ABS uses mixed methodologies, but it is difficult to obtain a market value for the assets of unincorporated entities as they are generally not traded.<sup>2</sup> The Treasury market value approach attempts to estimate all capital at market value, which is theoretically sound, but practically fraught.

## Modifications to the ABS measure

As mentioned above, the TRYM model is estimated using quarterly data, so a quarterly wealth series must be determined. Moreover, the consumption function (the main use for private sector wealth in the TRYM model) is estimated from 1972, so a wealth series with more history is needed.

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<sup>2</sup> In practice market values differ from replacement cost in that they include disequilibrium gyrations. In the case of the ABS measure, the market value of financial assets implicitly incorporates goodwill, whereas the estimated value of the assets of unincorporated entities does not.

## Australian household net wealth

Two of the three components of the ABS wealth measure are published quarterly (the dwelling asset measure is compiled and reported quarterly by the RBA as are the ABS quarterly financial accounts). Only assets held by unincorporated entities are not available with quarterly frequency, but with this being only a relatively small component, for the purposes of the TRYM model it is not too problematic to approximate this component.

Quarterly values for assets held by unincorporated entities are obtained using an interpolation approach. These assets are split into the categories: machinery and equipment, non-dwelling construction, non-dwelling land and other. Each are individually interpolated using a constant quarterly growth rate.<sup>3</sup>

The RBA's dwelling asset series is available back to 1960. However, the two remaining non-dwelling components are not. A consistent wealth series based on the national balance sheet was therefore constructed and then spliced on to create this history. An historical non-dwelling wealth series was created as a private sector wealth series, similar in principle to the old TRYM approach; this is spliced onto ABS household net worth (excluding dwelling assets).

The historical series was created by backcasting the national net worth series (using capital stock estimates, estimates of inventories, estimates of the value of commercial land and subtracting off foreign investment). The private components of these categories were then apportioned (where relevant) using various indicators. Finally, domestic private claims on the public sector were added onto this series. The result is an approximation of household net worth going back to June 1960.

## Trends in household net worth

Australian household net worth increased by 11.6 per cent in the year to June 2007, slightly faster than its long run average growth rate of 10.5 per cent.<sup>4</sup> Real household net worth increased by 8.9 per cent in the year to June 2007 and real household net worth per capita grew by 7.1 per cent. The increase in household net worth was driven by a 15.0 per cent increase in non-dwelling wealth and 10.0 per cent growth in the value of dwelling assets.

So far this decade, household net worth has risen by an average annual rate of 10.6 per cent, in line with long run average growth, with the driver of this increase

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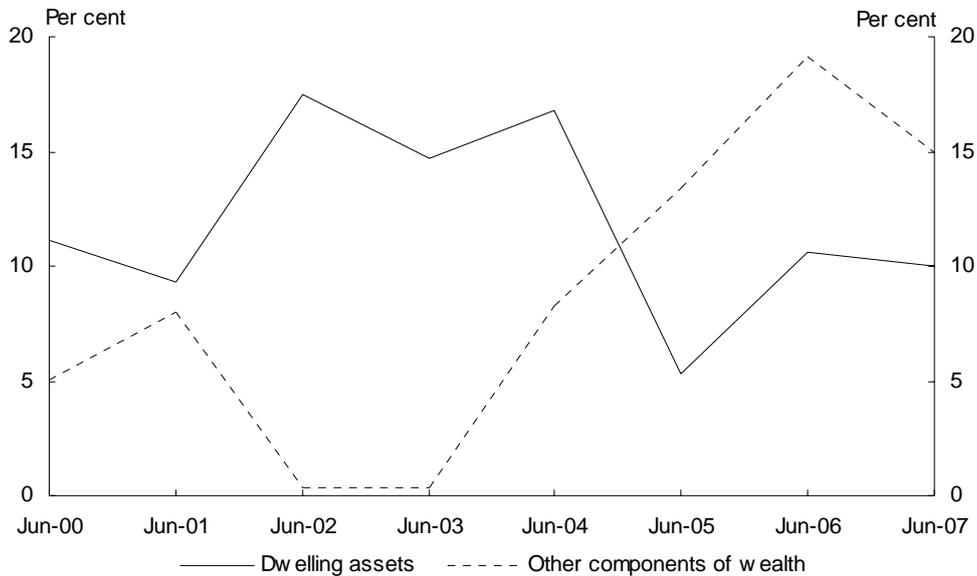
3 An alternative approach would be interpolation using gross fixed capital formation for these categories. However, since the unincorporated entities' component of the capital stock is small, it is not clear that this would provide an accurate quarterly break-up.

4 The long run rate is the average annual growth rate between June 1960 and June 2007.

switching midway through the decade. Between June 2000 and June 2004, the value of dwelling assets increased at an average annual rate of 14.5 per cent, whilst the value of other household wealth components increased by only 4.2 per cent. Over this period, house prices grew rapidly, with a weighted average of capital city prices increasing by 13.3 per cent per year.

However, since June 2004, the value of dwelling assets increased by an average annual rate of 9.2 per cent, whilst the value of other household wealth increased by 15.3 per cent. Over this period the S&P ASX 200 increased by an average annual rate of 21.1 per cent. The 9.2 per cent annual increase in the value of dwelling assets reflected strong growth in Western Australia. House prices in Perth increased by an annual average rate of 22.3 per cent from June 2004, while the volume of dwelling investment rose by an average of 8.7 per cent in the same period.

**Chart 1: Annual growth in the components of household net worth**



### Concluding remarks

With the Treasury discontinuing its measure of private sector wealth, articles of this type will no longer be published in the Treasury *Economic Roundup*. However, the quarterly approximation of ABS household net worth will be released by the ABS as part of the modellers’ database.

Australian household net wealth

**Table 1: Estimate of household wealth — \$billion**

As at June	Dw elling assets	Non-dw elling w ealth	Total w ealth
1960	24.1	22.3	46.4
1961	26.2	23.8	50.0
1962	28.3	25.8	54.1
1963	29.1	28.0	57.0
1964	33.0	30.7	63.8
1965	35.7	33.6	69.3
1966	38.8	36.2	75.0
1967	39.9	38.0	78.0
1968	43.0	40.9	83.9
1969	48.1	44.6	92.7
1970	56.0	48.4	104.4
1971	64.7	53.6	118.4
1972	74.0	59.0	133.0
1973	89.9	65.3	155.2
1974	117.8	77.0	194.8
1975	132.9	91.7	224.6
1976	152.7	106.9	259.6
1977	169.7	121.4	291.1
1978	181.3	134.7	316.0
1979	197.8	153.1	350.8
1980	235.5	170.9	406.4
1981	281.8	197.2	479.0
1982	301.1	227.0	528.1
1983	320.1	254.3	574.4
1984	361.2	285.3	646.5
1985	401.9	314.6	716.4
1986	423.0	354.6	777.6
1987	443.9	409.2	853.1
1988	562.5	464.0	1026.6
1989	714.4	504.8	1219.1
1990	774.7	530.7	1305.4
1991	805.8	549.2	1355.1
1992	838.2	574.8	1412.9
1993	873.6	617.4	1491.0
1994	938.8	657.8	1596.6
1995	999.4	666.7	1666.0
1996	1037.9	702.3	1740.1
1997	1131.5	788.5	1920.0
1998	1255.8	808.4	2064.2
1999	1360.5	893.8	2254.3

**Table 1: Estimate of household wealth — \$billion (continued)**

As at June	Dw elling assets	Non-dw elling w ealth	Total w ealth
2000	1511.7	938.8	2450.5
2001	1652.1	1013.9	2666.1
2002	1940.2	1017.2	2957.4
2003	2224.6	1021.1	3245.6
2004	2598.1	1105.1	3703.2
2005	2736.0	1253.0	3989.0
2006	3027.1	1492.7	4519.8
2007	3329.7	1716.3	5046.0

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## William Lyne: social reformer

Carol Gisz and John Hawkins<sup>1</sup>

The following article is the fourth in a series of biographies of Australia's federal treasurers. William Lyne was Australia's fourth Treasurer and the oldest person to have taken the office. Lyne, the Premier of New South Wales at the time of Federation, was offered the appointment as Australia's first Prime Minister, but the offer was withdrawn when he was unable to form a ministry with broad support. As Treasurer in 1907-1908 he handed down two Budgets, and was closely involved with increasing tariffs, establishing the industrial arbitration system and initiating Australia's social welfare system with the introduction of old age pensions.



Portrait of Sir William John Lyne, courtesy of National Library of Australia, nla.pic-an24232189

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<sup>1</sup> Carol Gisz is from Domestic Economy Division, the Australian Treasury, as was John Hawkins at the time of writing. The views in this article are those of the authors and not necessarily those of the Australian Treasury.

## Introduction

Sir William John Lyne KCMG was Australia's fourth Treasurer, and remains the oldest person to take the office. A member of the Protectionist Party, he held three important portfolios in the first decade after Federation, being Minister for Home Affairs, Minister for Trade and Customs and finally Treasurer. Despite coming quite close to being prime minister on a few occasions, 'Big Bill' Lyne has been neglected by historians.<sup>2</sup>

Lyne was 'never perfectly in control of his temper'.<sup>3</sup> Prime ministers George Reid and Alfred Deakin referred to him as a 'rogue elephant'.<sup>4</sup> But as Reid acknowledged, while 'one of the rudest' parliamentary debaters he was 'one of the most amiable of men in private life'.<sup>5</sup> Lyne was renowned for how well he knew his constituents, his abilities as a raconteur, his sincerity and his generosity. This helped him hold a parliamentary seat for thirty years, even when as in 1910 he was not representing a political party.<sup>6</sup>

He worked long hours as an administrator. Possessing a 'rough shrewdness', Lyne was more skilled at persuading and cajoling than giving speeches or debating.<sup>7</sup> 'Lacking the gift of oratory, he was more the politician than the statesman, but his steadfast adherence to the principles he espoused always commanded the respect of his political opponents.'<sup>8</sup>

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2 Billy Hughes (1950, p 80) said 'The story of Sir William in the Federal Parliament is an epic, which deserves and no doubt in the fullness of time will have at the hands of future historians and analysts that full and detailed treatment'. Sadly, this is still to come to pass.

3 McMinn (1989, p 143).

4 It seems rather hypocritical for the gargantuan Reid to ridicule Lyne's weight, but this may be an example of Reid's renowned humour. Lyne stood 188 cm (over six feet) tall and weighed over 100 kgs (17 stone), but was solid rather than corpulent. The elephant analogy was regarded as apt by a contemporary columnist given Lyne's 'persistence, the resoluteness, the capacity for the very little and the very large task' (FF 1908, p 505).

5 Reid (1917, p 265).

6 These views were expressed in his obituary in the *The Sydney Morning Herald*, 4 August 1913. Similar views were expressed by contemporary writers; see for example Punch, 4 August 1904, p 141 (where it was said Lyne was 'a good sport, he plays to win but does not wail if he loses'); *The Australian Magazine*, 1 May 1909, pp 364-5 and FF (1908). A colleague describes how on a visit to Hume with Lyne 'he brought up every human soul, young and old, and presented each to me with a few charming words about them, and he meant all he said of them. So I learnt about each one's struggles, sorrows and successes from their best friend, and the effect on the constituents was deep'; Joseph Carruthers, cited by Hogan (2006, p 210).

7 *The Australian Magazine*, 1 May 1909, p 366.

8 *The Sydney Morning Herald*, 4 August 1913.

## Lyne's career before politics

Lyne was born in Apslawn, Van Diemen's Land (later Tasmania) on 6 April 1844 and was the eldest son of John Lyne, a farmer and later a member of the Tasmanian House of Assembly.<sup>9</sup> As a child he was remembered for his inventiveness and as a teenager he was a helpful handyman.<sup>10</sup> At twenty, he moved to Brisbane, and journeyed overland to the Gulf and worked on sheep stations. But the enervating climate did not suit him and, after some time back in Tasmania, during which he wed Martha 'Pattie' Shaw and worked as the council clerk, Lyne moved to the Albury region to lease a sheep run.

Lyne was involved in many social activities including being captain of the local cricket club, a rector's warden, a chairman of the Albury district's sheep directors, a member of the committee of the Albury and Border Pastoral Agricultural and Horticultural Society and an officiator at local races.

## Premier and Treasurer of New South Wales

Lyne entered the New South Wales parliament in 1880, the same year as his long-time rival George Reid. By 1885 he held the public works ministry and in 1895 become Leader of the Opposition. He became Premier and Treasurer in 1899 when the Labour Party switched its support from Reid's Free Trade Party to Lyne's Protectionists.

Lyne was the Premier of New South Wales for a year and a half. His government introduced old age pensions and graduated death duties, regulated coal mines and reformed local government, but its proposals for female suffrage and compulsory arbitration were rejected by the upper house. It took bold action to stamp out bubonic plague and acted promptly to send armed forces to the Boer War.

Lyne was elected as a NSW delegate to the Constitutional Convention of 1897, and served on the finance committee. He opposed Federation on the grounds that the proposed Constitution was insufficiently democratic.

Lyne would sometimes visit his brother Carmichael's farm in Tasmania, where he met the young Joseph Lyons. Their discussions encouraged the interest in politics which would eventually bring Lyons to the Treasurer's and Prime Minister's job.

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<sup>9</sup> Nyman (1976) gives an account of Lyne's early life and his ancestors.

<sup>10</sup> Childhood friends recall him constructing a chariot from an old pram tethered to some goats (Anon 1904).

## The 'Hopetoun blunder'

Four days after he arrived in Sydney, the Governor-General designate, Lord Hopetoun, to 'gasps of astonishment', named Lyne as the first Prime Minister.<sup>11</sup> Lyne's opposition to Federation was a major reason he failed to attract fellow Protectionists such as Edmund Barton and Charles Kingston or any of the eminent Victorians such as Alfred Deakin and George Turner to his team. After tense negotiations, and a 'please explain' telegram from the British Colonial Secretary Joseph Chamberlain, Lyne stood aside. On Christmas Eve Hopetoun named Barton as Prime Minister instead.

## Federal parliament

Barton magnanimously appointed Lyne to his cabinet as the first Minister for Home Affairs, an important portfolio responsible for organising the first federal elections and the federal public service. He was elected to the first federal parliament as a Protectionist member for Hume in March 1901 and only that month did he resign as NSW Premier. He retained the Home Affairs portfolio under Barton, presiding over the Bill to adopt women's suffrage in 1902, which allowed women in all states to vote in the second federal election in 1903.

When Barton removed to the High Court, Lyne seems not to have been seriously considered as a successor and Alfred Deakin took over as prime minister.<sup>12</sup> Deakin was not initially impressed by his cabinet colleague. Writing in 1900 he had described Lyne as 'a crude, sleek, suspicious, blundering, short-sighted backwoods politician' whose 'politics were a chaos and his career contemptible', an opinion likely coloured by Lyne's opposition to Federation.<sup>13</sup> But these opinions were not made public and Deakin and Lyne gradually built up a good working relationship. Lyne was Deakin's Minister for Trade and Customs from September 1903 to April 1904, and again when Deakin returned to office in 1905. He introduced the 'new protection' legislation. He stood in as acting Prime Minister during Deakin's illness in 1907.

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11 Accounts vary as to whether this was the result of Hopetoun just naively appointing the Premier of the senior state; making a 'courtesy' offering which Lyne had indicated he would graciously decline; Lyne persuading him of his merits; or the Machiavellian Reid promoting Lyne's claims in the belief that Lyne would make an easier incumbent to beat in the inaugural election than would Barton. Carroll (2004), La Nauze (1957), Reynolds (1948, Chapter 14), Lloyd and Sykes (2001) and Wise (1913) give these varying accounts of what Deakin referred to as the Hopetoun 'blunder' in a letter to Barton.

12 Hume-Cook (1935, p 150) claims that Lyne told him Barton had promised Lyne 'first claim' on the job were Barton to leave it.

13 Deakin (1944, pp 64 and 107).

Lyne was at the radical end of the Protectionist Party, and hoped it would form a coalition with Labour.<sup>14</sup> For example, he was among a minority of Protectionists who supported a land tax, having wanted to break up the large estates as far back as 1880. In 1905 he attacked the Reid government, which was nominally supported by the Deakinites. In a speech he declared that 'capital was the greatest tyrant on earth if not checked by labour'.<sup>15</sup>

Pattie Lyne died in 1903 and Lyne married Sarah Jane Olden, in secret, in 1905.

In June 1906 Lyne introduced the Australian Industries Preservation Bill to prevent the establishment of foreign monopolies. In April 1907 Lyne accompanied Deakin to the colonial conference and gave speeches defending protectionism and arguing for preferential trade within the Empire; (Lyne 1907a, b).

## Lyne's term as Treasurer

When Forrest resigned as Treasurer, Deakin gave the post to Lyne and he served for the rest of Deakin's second term, to November 1908.<sup>16</sup> He inherited George Allen as secretary, who had held the post since Federation, and by one account drove Allen very hard.<sup>17</sup>

Over the course of Lyne's term as Treasurer, he made provisions for transferring the funding of several responsibilities from the States to the Commonwealth, operating under the principle that there must ultimately be a complete severance between the Commonwealth and state finances.

Lyne brought down the 1907 Budget on 8 August, less than a fortnight after assuming the office, so it was largely the work of John Forrest. In his speech he noted the improvements in Australia since Federation, including an increase in trade, in banking deposits and in the railway returns. The 1907 Budget made provision for additional customs duties. Lyne noted that he expected the additional duties to initially lead to a

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14 Labour rejected this idea in June 1905.

15 *The Sydney Morning Herald*, 22 June 1905, pp 4-5.

16 Billy Hughes, who sat in two parliaments with Lyne, said 'I don't suppose he had ever read a standard work on economics in his life: the classic tomes of Adam Smith, Ricardo and John Stuart Mill were to him virgin fields from which he had held chastely aloof.' (Hughes 1950, p 28).

17 It was claimed that Lyne's first budget speech 'is still remembered with horror' by Treasury officials for the speed with which it needed to be prepared. It was claimed Lyne 'stormed and commanded and drove, so that, by sitting up late at night and working hard all day, the Treasury was able to produce within ten days the famous budget speech which accompanied the tariff. No financial prophecies have ever been so far astray as those contained in that speech' (Punch, 16 September 1909, p 428).

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considerable increase in revenue, but that ultimately the duties would lead to more articles to be manufactured and more produce to be grown in Australia, resulting in a decrease in the revenue.

The Budget also provided for expenditure on a number of capital works, including in connection with the telephone system and the postal service, with Lyne noting that 'a time of abundant revenue is the most opportune for expenditure of a non-recurring nature'. The Budget also transferred spending on defence and meteorology from the States to the Commonwealth, making provision for the establishment of a coastal defence Navy.

Lyne was instrumental in having the *Surplus Revenue Act 1908* passed, which permitted the Commonwealth to retain all surplus revenue (previously section 93 of the Constitution required the Commonwealth to hand over any surplus revenue to the States on a monthly basis).<sup>18</sup> This gave Lyne the funds to transfer age pension responsibilities to the Commonwealth from the states.

Between the passage of the *Surplus Revenue Act 1908* in June and his Budget in October, Lyne was able to put around £441,000 into trust accounts for the Commonwealth, rather than having to return this money to the States. Of this amount, £190,000 was credited to the Old-age Pensions Fund, and £250,000 was credited to the Harbour and Coastal Defences Fund. Lyne's 1908 Budget made provision for a further £410,000 to be paid into the Old-age Pensions Fund over the next year.

Lyne noted in presenting the 1908 Budget (14 October) that customs and tariff revenue had exceeded the forecasts of the previous Budget, which he attributed partly to 'the general prosperity caused by the high prices ruling for primary products', also noting that 'in a country such as Australia, where periods of prosperity, caused mainly by favourable seasons and periods of distress, alternate irregularly, it is impossible to forecast the revenue with any degree of certainty'.

The 1908 Budget also established the Commonwealth stamp printing office, and foreshadowed a government bank of issue, the introduction of an Australian silver and bronze coinage and Commonwealth banking notes. Lyne also noted that the Commonwealth should have a Public Works Department, due to the failure of the States to spend money allocated for public works. His term as Treasurer set the pattern for Australian financial arrangements for the second decade of the Commonwealth.

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18 At the time section 87 of the Constitution, also known as 'the Braddon clause', required that three-quarters of Commonwealth customs and excise revenue (which comprised the majority of Commonwealth revenue) be returned to the States. This clause did not expire until the end of 1910. The Act was very controversial (Wright 1969).

In April 1908 Lyne tried to negotiate an alliance with Labour when it appeared Deakin might resign, but this time could not get enough support from his own party.<sup>19</sup>

Lyne also advocated an Australian iron and steel industry and a small arms factory on defence grounds. He argued that since Federation NSW had moved ahead, which he attributed to protectionism.

## Lyne's career after being Treasurer

In 1908 Lyne opposed the merger, or 'fusion', of the Protectionist and Free Trade parties (later renamed the Liberal party), accusing Deakin of betrayal.<sup>20</sup> He thereafter sat as an independent protectionist, along with three followers (George Wise, John Chanter and David Storrer). He can be viewed as the last of the Deakinite radical liberal protectionists.<sup>21</sup> While generally supporting Labor in the House he never joined the party.<sup>22</sup>

Lyne held his seat in 1910. By the 1913 election an ailing Lyne's campaign largely relied on a letter to his constituents stressing his record.<sup>23</sup> But this was not enough to fend off a national swing to the conservatives in country areas and he was defeated. His seat of Hume was the last declared and its gain by the Liberals brought an end (temporarily) to the Fisher Government. Lyne died in Double Bay, Sydney, shortly afterwards, on 3 August 1913. He was survived by Sarah Jane and their daughter, and three daughters and a son from his first marriage.

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19 *Australasian*, 18 April 1908, p 966; (McMinn 1989, p 244); (Loveday 1977, p 437).

20 In some of the wildest scenes in parliament, Lyne shouted 'Judas!' and 'Traitor!' at Deakin. A similar tirade by Lyne a couple of months later was all too much for the speaker, Holder, who collapsed in the chamber, supposedly muttering 'dreadful, dreadful' and died shortly afterwards; (Souter 1988, p 115). The journalist (Baxter Cook 1958, p 137) claims that Joseph Cook would never have agreed to the fusion unless Lyne was excluded from the cabinet. This is possible, given that Cook and Lyne had been on bad terms since they were opponents in the NSW parliament in the 1890s.

21 None of the radical protectionists who ran for Fusion survived.

22 He had long had good relations with Labour, since it brought him to the NSW premiership. He generally supported Watson's short-lived Government in 1904 and spoke against its overthrow; (McMullin 2004, pp 116 and 149). In 1907 he said in London 'the Labour party in Australia has never done anything that has not been to help and improve the country. They have been in office once and if I had my way they would be there now'; (Lyne 1907b, p 30). The Labor caucus minutes show letters of condolence to him when his wife died and of congratulations when he recovered from illness. In 1910 the Labor Government invited Lyne to travel to England for George V's coronation; (Weller 1975). He was not opposed by a Labor candidate the whole time he was in federal parliament despite the controversy of such 'immunity' in Labor circles.

23 Lyne Papers, National Library of Australia.

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## What's new on the Treasury website

The Treasury's website, [www.treasury.gov.au](http://www.treasury.gov.au), includes past issues of the *Economic Roundup*. Some of the other items posted on the website since the previous issue of *Roundup* that may be of interest to readers are listed below.

What's new on the Treasury website

## Budget statements

### Tax Expenditure Statement 2007 (January 2008)

<http://www.treasury.gov.au/contentitem.asp?NavId=002&ContentID=1333>

The statement provides details of concessions, benefits and incentives delivered to taxpayers through the tax system. This assists transparency and encourages public scrutiny of government programmes delivered through the tax system. The statement lists around 300 tax expenditures and estimates their value over an eight year period, from 2003-04 to 2010-11. The tax expenditures in this statement are drawn from all announced policies applying up to the date of finalisation of the *Pre-election Economic and Fiscal Outlook 2007*.

## Other

### Potential Changes to the Eligible Investment Rules for Managed Funds, Including Property Trusts (February 2008)

<http://www.treasury.gov.au/contentitem.asp?NavId=002&ContentID=1347>

The Government has asked the Board of Taxation to examine options for a managed investments tax regime in Australia, including the potential for a specific tax regime for real estate investment trusts (REITs).

Pending the review by the Board of Taxation, Treasury is seeking public comment on potential changes to Division 6C of the *Income Tax Assessment Act 1936*, which provides eligible investment rules for widely held managed investment trusts (managed funds), including property trusts. The closing date for comments is 17 March 2008.

### First Home Saver Accounts — Consultation Paper (February 2008)

<http://www.treasury.gov.au/contentitem.asp?NavId=002&ContentID=1341>

The Government has confirmed its 2007 federal election commitment to establish First Home Saver Accounts to assist Australians aged 18 and over to save for their first home.

The Government is seeking comments and submissions by 7 March 2008 to assist in settling the final administrative and legislative features of First Home Saver Accounts.

### Australia-Japan Tax Treaty (February 2008)

<http://www.treasury.gov.au/contentitem.asp?NavId=002&ContentID=1339>

The Governments of Australia and Japan have signed a Convention for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with Respect to Taxes on Income, to replace the existing treaty which was signed in 1969.

### **Criminal Penalties for Serious Cartel Conduct — Draft Legislation (January 2008)**

**<http://www.treasury.gov.au/contentitem.asp?NavId=002&ContentID=1330>**

A discussion paper has been released to serve as a basis for consulting stakeholders in relation to the Government's commitment to implement criminal penalties for serious cartel conduct. Cartel conduct refers to contracts, arrangements or understandings between competitors to fix prices, share markets, control output or rig bids. Such conduct harms consumers, businesses and the economy by increasing prices and reducing choice, service, innovation and efficiencies. The paper also contains an exposure draft of legislation.



## Sources of economic data

The following table provides sources for key economic data. Australian Bureau of Statistics (ABS) data can be obtained over the internet at <http://www.abs.gov.au>. The Reserve Bank of Australia information is available at <http://www.rba.gov.au>. Similarly, OECD information is available at <http://www.oecd.org>. Information on individual economies is also available via the IMF at <http://www.imf.org>.

### International economy

Output, current account balance and interest rates	OECD Main Economic Indicators
Consumer price inflation	ABS cat. no. 6401.0

### National accounts

Components of GDP, contributions to change in GDP	ABS cat. no. 5206.0
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### Incomes, costs and prices

Real household income	ABS cat. nos. 5204.0 and 5206.0
Wages, labour costs and company income	ABS cat. nos. 5204.0, 5206.0 and 6345.0
Prices	ABS cat. nos. 6401.0 and 5206.0
Labour market	ABS cat. no. 6202.0

### External sector

Australia's current account, external liabilities and income flows	ABS cat. nos. 5368.0, 5302.0 and 5206.0
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## Past editions of *Economic Roundup*

A full index to articles published in *Economic Roundup* was included in the Spring 2006 edition. Details of articles published in recent editions are listed below:

### **Autumn 2007**

Political awareness

Peer review in the context of regional integration

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The role of education in enhancing intergenerational income mobility

Comparing the net foreign liability dynamics of Australia and the United States

A few sovereigns more: the rise of sovereign wealth funds

John Forrest: Four times Treasurer

Key themes from the Treasury Business Liaison Programme — October 2007

Copies of these articles are available from the Treasury. Written requests should be sent to Manager, Domestic Economy Division, The Treasury, Langton Crescent, Parkes, ACT, 2600. Telephone requests should be directed to Mr Chris McLennan on (02) 6263 2756. Copies may be downloaded from the Treasury web site <http://www.treasury.gov.au>.

