

Government of South Australia

South Australian Government submission to the Federal Parliamentary Inquiry into raising the level of productivity growth in the Australian Economy

August 2009

PREPARED BY:

Department of Trade and Economic Development Department of Further Education, Employment, Science and Technology Department of Primary Industries and Resources

Introduction

The South Australian Government welcomes the opportunity to provide a submission to the Federal Government's House Standing Committee on Economics 'Inquiry into raising the level of productivity growth in the Australian Economy'.

Enhancing productivity is vital to raising Australian living standards over the long term. Productivity growth is the only sustainable way of increasing wages and income per capita while maintaining economic competitiveness. In simple terms, productivity is about doing more with less.

Productivity is a result of a wide range of socio-economic factors such as the quality of national and international regulatory regimes, infrastructure, the rate of innovation and technology uptake, the level of skills and education, and the degree of openness to international trade. Governments therefore have a significant role to play in helping to improve productivity across the economy in partnership with industry and the broader community.

In recognition of the importance of productivity outcomes, the South Australian Government has included a productivity target in South Australia's Strategic Plan (SASP). The target is for South Australia to exceed Australia's average labour productivity growth rate in trend terms by 2014.¹ To achieve this the South Australian Government is implementing a broad range of strategies such as ensuring a competitive business environment, increasing skills development in key areas of State need, facilitating the development of relatively high value-add industries, promoting innovation and technological uptake, and working with individual firms to identify ways to improve efficiency.

In this submission the South Australian Government has sought to provide the Committee with relevant information about the State's productivity performance and the State's efforts to enhance productivity growth rates. A number of the inquiry's Terms of Reference refer to the 'adequacy' of the level of key determinants of productivity – in these cases the submission focuses on the targets South Australia has set given 'adequacy' is a somewhat subjective question. The 'right' level of investments to improve productivity determinants is something which Governments, firms and households achieve by making investment decisions that take into account the benefits of the productivity outcomes and the costs involved in achieving them.

¹ Government of South Australia, 2007 update, *South Australia's Strategic Plan*, pg 13.

Key Messages

- South Australia's Strategic Plan contains an ambitious productivity target, recognising the essential role of productivity in improving living standards. The Plan also contains targets for a wide range of factors which drive productivity outcomes.
- South Australia's measured productivity growth rates have been similar to the national average over the long term but its productivity level is lower than that of Australia.
- The best available international data suggests Australia's rate of productivity growth was also lower than the OECD average during the period 2001-2007.
- The quality and availability of productivity statistics is of concern, particularly at the State and industry levels. A range of obstacles would need to be overcome for this to be fully addressed, including ensuring the Australian Bureau of Statistics is adequately resourced to undertake further work in this topic area.
- Productivity is recognised to be a poor indicator of the impact of subtle changes in product quality and innovation. To monitor the impact of government support of such changes, other measures are required, particularly those relating to competitiveness.
- Microeconomic reform is widely acknowledged as a major contributor to productivity growth. South Australia has initiated and undertaken significant reforms in recent years including reviews of the State's planning and development system and the State's skills and workforce development system.
- Factors commonly seen as barriers to SME's adopting best practice technology include lack of knowledge about technological options, lack of time to implement technological changes, and other costs involved in implementation.
- Public infrastructure investment is another important factor underpinning productivity, with investment in ICT infrastructure particularly vital. There has been an inability to satisfy demand for affordable broadband in metropolitan and non-metropolitan areas due to inadequate infrastructure. Eventually this should be addressed by the new National Broadband Network.
- Australia's performance in research and development appears to be lagging many other countries. However the most recent Federal Budget and Cutler Review of the National Innovation System attempt to address some of these imbalances, including by doubling the Commonwealth's investment in research infrastructure for the next 5 years.
- It is important to further boost the nation's education and skills base if the nation is to meet future workforce demands and continue progressing towards an economic structure more weighted towards high-value add knowledge-intensive industries. The South Australian Government has created a new Skills Strategy and Training and Skills Commission to drive forward the State reforms needed to meet challenges in these areas.
- The South Australian Government is committed to pursuing higher productivity levels by participating in and supporting productivity enhancing initiatives across a wide range of policy areas.
- Given the wide range of factors underpinning productivity, it is important that all government and community sectors continue to work together in a coordinated and collaborative way through forums such as the Council of Australian Governments.
- Priority reforms and measures that can be undertaken to lift Australia's permanent rate of productivity growth are thought to include climate change mitigation and

adaptation policies, drought and water policy reform, further reform of the vocational education and training systems, activities in early childhood development, further reduction of business red tape and greater harmonisation of regulation across State borders, further reform of the Federal tax and income support systems, infrastructure provision including the roll-out of the National Broadband Network, the implementation of the recommendation of the Cutler Review of the National Innovation System, and reform in agricultural research.

• In prioritising future initiatives it is important that Governments are well informed about the benefits likely to be obtained from each activity or investment to achieve the highest payoff to Australia's productivity and living standards.

A) Trends into Australia's productivity growth rate during the past 20 years and reasons for the recent trending decline

There are several ways in which productivity growth can be measured² but one of the most accessible and commonly used measures is value of output per hour worked. Like any other way of measuring productivity, this usefulness of the measure is qualified by concerns about the quality of the underlying data.

Chart 1 below indicates the productivity level (measured in output per hour worked) of South Australia relative to Australia over the period 1989/90 to 2007/08. The chart clearly indicates that absolute productivity levels in both South Australia and Australia have been in a general upward trend, albeit at a declining pace. The absolute level of output per hour worked in South Australia has been lower than that for Australia. Part of the explanation for this difference is industry structure, with South Australia's manufacturing sector being relatively large compared to that of Australia as a whole. Data obtained from the ABS on productivity by industry at the national level suggest that there have been significant differences across industries in productivity performance over the past twenty years.³



Chart 1 – Output Per Hour Worked 1989/90 to 2007/08

Source: Calculated from ABS Cat. no. 5220 and ABS Cat. no. 6291.0.55.001

Chart 2 below presents the annual change in productivity over the years 1989/90 to 2007/08. The chart shows that on a year-by-year basis productivity growth is highly volatile and therefore assessments of productivity growth should be undertaken over long timeframes where possible.

² Organisation for Economic Cooperation and Development, 2001, Measuring Productivity – OECD Manual – Measurement of Aggregate and Industry-Level Productivity Growth, pp 13-18.

³ ABS Cat. No. 5204 Australian System of National Accounts (growth calculated from index numbers)



Chart 2 – Annual change in output per hour worked 1989/90 to 2007/08

Source: Calculated from ABS Cat. no. 5220 and ABS Cat. no. 6291.0.55.001

Chart 3 below demonstrates how the choice of timeframe can affect the productivity growth rate comparison. The results show that growth in output per hour worked has declined in more recent years for both South Australia and Australia. The decline could be linked to patterns in labour utilisation over the business cycle, as firms first better utilise their internal labour resources before hiring additional workers who may be less productive on average than their existing workforce.

Chart 3 also shows that over the last fifteen years South Australia's compound productivity growth exceeded that of Australia as a whole. In the absence of evidence to the contrary, it is reasonable to expect similar long-term productivity growth rates across jurisdictions. This conclusion was also reached by the Productivity Commission in a 2005 report on the economic implications of ageing.⁴



Chart 3 - Compound growth rate for output per hour worked over last 5, 10 and 15 years

Source: Calculated from ABS Cat. no. 5220 and ABS Cat. no. 6291.0.53.001

⁴ Productivity Commission 2005, *Economic Implications of an Ageing Australia*, Research Report, Canberra, pg 123.

B) Trends in productivity growth rates against other OECD countries

Issues with productivity measures make international comparisons difficult. The most prominent measurement issues associated with international comparisons are accounting for countries being at different stages of the business cycle, managing issues associated with exchange rate valuations, and differences in methodology.⁵

The most useful international comparison data available is that from the Organisation for Economic Cooperation and Development (OECD), which attempts to adjust data from national statistical agencies to eliminate as many of the differences as possible.





Source: OECD Statistical Database, www.oecd.org

According to OECD calculations, Australia's productivity growth dropped from an average of 2.5% per annum in 1995-2000 to 1.3% per annum over the years 2001-2007. Australia's annual productivity growth has remained below the annual

⁵ Young et al, Commonwealth Treasury, 2008, *Economic Roundup Issue 3: International comparison of industry productivity*, Australian Treasury, Canberra, pg 53.

growth rate of the OECD since 2002, with the year 2007 being the only exception. Consequently, Australia dropped from 10th place to a 20th place in the OECD productivity ranking list – see Chart 4.

Research into international productivity differences by the Commonwealth Treasury⁶ has indicated that industry structure is not the main reason for Australia's productivity underperformance. The research found that Australian firms are operating at lower productivity levels than firms in comparable industries. This suggests that productivity policy needs to have both economy-wide and firm-level dimensions.

C) The adequacy of productivity growth measures

The availability and quality of productivity statistics is an issue that has existed for a significant period of time, particularly at the State and industry level. The South Australian Government has raised this issue with the Australian Bureau of Statistics (ABS) and relevant Commonwealth Ministers on a number of occasions. It is understood there are a variety of challenges that need to be addressed including:

- Limits on the resources of the ABS;
- Concerns about the quality of the data underpinning productivity measures;
- Difficulties assigning economic activity accurately across jurisdictions (eg where all activity is reported through the head office); and
- Difficulties assigning economic activity accurately across industries (eg poor quality of ANZSIC coding).

The South Australian Government has and continues to advocate that the ABS be well-resourced so that it can address these challenges and develop a comprehensive set of productivity measures, including reliable State level estimates. A range of productivity measures would be valuable as most measures give only a partial understanding of productivity performance and the underlying reasons for that performance. In the case of agriculture, for example, gross value of production per megalitre of water is a useful partial measure of productivity but allocating water on the basis of this indicator would likely lead to inefficient (and less productive) use of limited resources as it does not recognise that the relationship between production and water consumption is non-linear.

Currently the ABS does not publish State level productivity estimates. State Governments and other statistical users consequently resort to calculating productivity estimates using published ABS data on the various components of productivity measures such as the value of output and the number of hours worked. This creates potential for inconsistencies to arise between user estimates, particularly when calculating productivity measures more complex than output per hour worked, such as multifactor productivity.

The South Australian Government has previously commissioned the construction of a measure of multifactor productivity for South Australia and Australia over the period since 1990/91.⁷ Multifactor productivity is complex to calculate but also is a more

⁶ Commonwealth Treasury, 2008, *Economic Roundup Issue 3, 2008: International comparison of industry productivity.*

⁷ South Australian Centre for Economic Studies, January 2008, *Productivity Analysis 2006-07*.

comprehensive measure of productivity, incorporating a combination of inputs into production including capital and labour. In constructing the measure it was necessary to make assumptions about the State capital stock and investment by the market sector. It is unlikely assumptions would be made on a consistent basis by other jurisdictions if they were to undertake the same exercise without coordination.

At the sectoral level, there has been a recent increase in data collection by the Australian Bureau of Agricultural and Research Economics (ABARE) to facilitate reporting of regional (South Australian agricultural industry level) and irrigation industry productivity estimates. Work of this detail has not generally been undertaken for other industries at the State level but would be desirable as part of a work program to improve the availability and quality of productivity statistics.

The Primary Industries Standing Committee of CoAG has been discussing, with some concern, the apparent decline in agricultural productivity growth. The SA Government has argued that this trend (as it relates to *physical* productivity) is likely to continue, but that it can be countered by changes that are unlikely to be measured adequately by productivity estimates. The main change in question is a shift from commodity production for spot markets on the one hand to growing to customer specification on the other. The aim of the change in business model is to help the (trade) customer target higher-valued niche markets. In principle, that change should be reflected in a change to the price index for the agricultural product. In practice, that is unlikely to be at all accurate⁸. To monitor such changes and their impact on prosperity and therefore to assess the appropriateness of its encouragement of them, the SA Government considers that productivity should be supported by other measures, particularly those relating to competitiveness.

D) The contribution made by microeconomic reform to the permanent improvement in the growth rate of productivity and the continuing effectiveness of the microeconomic reform agenda

The South Australian Government believes microeconomic reform is an essential part of increasing productivity. Microeconomic reform aims to improve the way in which markets work to achieve more efficient allocation of resources and produce better economic outcomes for the community.

In 1999, the Productivity Commission undertook a study into microeconomic reform and the link with productivity. The Productivity Commission compared the timing of reforms with observed productivity outcomes and undertook detailed case studies of particular sectors to identify the influences on changes in their productivity performance. The report concluded that microeconomic reform had played the major role in bringing about productivity gains.⁹

The South Australian Government has continued to initiate and undertake significant microeconomic reforms in recent years including:

⁸ OECD 2001, *Measuring Productivity: OECD Manual*, OECD, Paris, Section 3.3.3, pp.35-37.

⁹ Productivity Commission 1999, *Microeconomic Reforms and Australian Productivity: Exploring the Links*, Canberra, pg XXIV.

- Reviews led by the South Australian Economic Development Board of the Planning and Development system (2008) and the Skills and Workforce Development in SA (2008);
- Ongoing reviews of business red tape (2008 ongoing);
- Inquiries by the Essential Services Commission of South Australia (ESCOSA) into water and wastewater pricing processes (2009/10), the rail access regime (2009), and the pricing and access regimes that apply to commercial ports in SA (2007);
- Reform of the State Public Sector Act (2009); and
- Reviews of the Occupational Health, Safety and Welfare Regulations (commenced 2007, ongoing) and of the WorkCover scheme (2007).

E) The willingness and ability of small and medium enterprise to adopt best practice technology

The South Australian Government has a number of service delivery arms which assist the small and medium enterprise (SME) sector to grow. Through these interactions the following factors are commonly seen to be barriers to SME's adopting best practice technology. These include:

- A lack of knowledge of options about available technology and its benefits;
- A lack of time to implement best practice technology; and
- Concerns about the cost of implementation.

An additional factor to be considered is the growing prevalence of micro businesses and home based businesses that are less likely to interact with industry groups and government service delivery arms. For many of these businesses, traditional notions of what will enhance or drive productivity growth may be of limited applicability.

The South Australian Government funds a Centre for Innovation which is tasked with overcoming many of these barriers by assisting SMEs to keep abreast of best practice within their industry sector and adopt best practice technology.

F) The adequacy of the level of investment in physical capital

South Australia's Strategic Plan includes a target for business investment which is to exceed Australia's ratio of business investment as a percentage of the economy by 2014. As shown in Chart 5, business investment as a proportion of Gross State Product (GSP) in South Australia has continued to trend upwards in recent years with strong economic conditions but is nonetheless currently below the national average.

The State's strategies to reach the target include promoting South Australia as an investment location, attracting and facilitating new investments, and maximising the opportunities from major projects (including associated infrastructure requirements).



Chart 5 – Business investment as a percentage of GSP/GDP 1989/90 to 2007/08

Source: Calculated from ABS Cat. no. 5220 and ABS Cat. no. 5204

G) The adequacy of the level of investment in public infrastructure

The Strategic Infrastructure Plan for South Australia provides the overarching framework for the planning, prioritisation and delivery of infrastructure by all government and private sector infrastructure providers in South Australia. It is currently in the process of being updated.

South Australia's Strategic Plan includes a target of matching the national average in terms of investment in key economic and social infrastructure. This target is currently measured by examining public and private new engineering construction as a proportion of GSP. The most recent Strategic Plan Progress Report for this measure noted that the difference between South Australia and Australia has widened slightly. Quantity, quality and suitability of public infrastructure are also important considerations to consider in any assessment of the adequacy of infrastructure investment and unfortunately public infrastructure spending is unable to properly take these aspects into account.

Evidence from research undertaken by the OECD indicates that infrastructure supporting Information and Communication Technologies (ICT) is particularly important as it has a particularly strong link to better productivity performance by enabling industries to operate in new and more efficient ways. South Australia's Strategic Plan incorporates this with a target of broadband usage (as a proxy for penetration of ICT into the economy). The target is for South Australian broadband usage as a percentage of household internet connections to exceed the Australian average level by 2010 and maintain this advantage thereafter. Broadband penetration in terms of household internet connections in South Australia is currently around 10 percentage points lower than the national average.

Within the telecommunications industry in Australia there has been an inability to satisfy the demand for affordable broadband services due to inadequate infrastructure. This is not restricted to regional, rural and remote locations – there are

also broadband blackspots in metropolitan cities. In Adelaide, the most requested form of broadband, ADSL, cannot be provided to over 55,000 premises spread throughout the Adelaide metropolitan region.

A mid-term solution to this has recently been announced through the Australian and South Australian Governments jointly supporting a rollout of wireless broadband across metropolitan Adelaide. Following a public Tender, a local South Australian firm will provide fast (ASDL+ equivalent) broadband in black spot areas of Adelaide to reach many of these 55,000 premises in the next 15 months.

Although the National Broadband Network (NBN) will ultimately address the need for major increases in the level of broadband services, the current level of infrastructure has been affected by the uncertainty associated with NBN processes over the last year. Telecommunications infrastructure investment shrank while awaiting the outcome of the initial NBN tender, until the announcement that the initial tender process had been abandoned and replaced by a new NBN initiative. Since that time, many service providers have announced projects to continue their rollout of services into new areas. This demonstrates the importance of Government providing certainty when encouraging private investment in physical capital.

H) The level of resources devoted to research and development

South Australia has a number of Strategic Plan targets directed at increasing the level of public and private investment in research and development. One of these targets is for the State's public expenditure on research and development as a percentage of GSP to match or exceed average investment compared to other Australian states. Chart 6 below shows South Australia has performed well on this measure.



Chart 6 – Public expenditure on R&D as percentage of GSP/GDP 1992/93 to 2006/07

Innovation underlies productivity growth at the most basic level as noted in the recent Cutler innovation review report *Venturous Australia*.¹⁰ Despite governments around

¹⁰ Cutler, T, 2008, *Venturous Australia – Building Strength in Innovation*, Cutler & Company.

Australia providing considerable support for research and development, the Venturous Australia report noted that support for science and innovation has declined from a high of 0.76% of GDP in 1993 to a low of 0.58% in 2007.¹¹ Australia is also being outperformed by other countries:

- Australia is ranked 16th in domestic expenditure on research and development as a percentage of GDP¹²;
- Australian venture capital was 0.051% of GDP compared with an OECD average of 0.112% of GDP and 0.401% of GDP for the leading country Denmark¹³; and
- Business expenditure on research and development in Australia was 1.15% of GDP compared with the OECD average of 1.56%.¹⁴

While South Australia's public R&D performance has been above the national average, there is clear evidence of demand for research funding significantly exceeding supply. For example, last year South Australia's \$4 million Premier's Science and Research Fund was over subscribed 12-fold with the value of applications received totalling \$50 million.

The most recent Federal Budget attempts to address some of these imbalances by doubling the Commonwealth's investment in research infrastructure for the next 5 years with its \$903 million Super Science program and its allocation of almost \$2 billion in the Education Investment Fund for research assets, buildings and sustainability programs commencing 2008-09. The Commonwealth has also moved to equalise the true cost of research by investing an additional \$512 million in its Sustainable Research Excellence program over the next 4 years in response to the Bradley review.

I) The adequacy of resources devoted to training and development of the labour force

South Australia's Strategic Plan has several targets related to achieving higher levels of training and development of the labour force, including:

- Equalling or bettering the national average for the proportion of the labour force with non-school qualifications by 2014;
- Increasing South Australia's proportion of higher education students to 7.5% of the national total by 2014; and
- Exceeding the national average for vocational education and training (VET) by 2010.

The commitment to improving training and education attainment rates is supported by a considerable body of work showing a positive relationship between educational

¹¹ Cutler, T, 2008, Venturous Australia – Building Strength in Innovation, Cutler & Company, pg 8.

¹² OECD Science, Technology and Industry Scoreboard 2007, A-2. Trends in domestic R&D

expenditure http://lysander.sourceoecd.org/vl=4005094/cl=13/nw=1/rpsv/sti2007/a-2.htm, accessed 7 Aug 2009

¹³ OECD Science, Technology and Industry Scoreboard 2007, A-9 Venture Capital, http://statlinks.oecdcode.org/922007081P1G9.XLS, accessed 7 Aug 2009

¹⁴ ABS 8104.0 Research and Experimental Development, Businesses, Australia, 2006-07, and OECD Science, Technology and Industry Scoreboard 2007

attainment and productivity. International studies have found skills to be key to improving productivity in the workplace as well as enabling people to share in the benefits of economic growth.^{15 & 16} This research has led to considerable national attention on the education and training sector.

Governments in Australia provide considerable support to boost the population's skill base. It is important to boost this further if the nation is to continue progressing towards an economic structure more weighted towards high-value add knowledge-intensive industries. The South Australian Government recently created a new Training and Skills Commission (TASC) which has assessed there is likely to be around 134,000 total job openings in South Australia over the next 5 years arising from growth in the economy and from people leaving the workforce. This demand for workers will generate significantly greater demand for higher education and VET qualifications.

The Council of Australian Governments (COAG), under the National Agreement for Skills and Workforce Development, have also set ambitious targets for education attainment, in particular, to reduce the proportion of Australians aged 20 to 64 without qualifications at Certificate III level and above by 50 percent between 2009 and 2020. Modelling work undertaken by TASC suggests that an additional 10,400 qualification completions will be required each year above the current rate of completions in order to meet the target.

To meet such challenges in 2008 South Australia initiated the *Skills Strategy for South Australia's Future*. A further wave of system reforms is expected to occur around the regulatory framework for VET, levels of investment, and the availability of information for students and businesses to improve the alignment of individual training choices and industry skill needs. The reforms will assist VET and the higher education sectors to adapt to the intended increase in demand.

Implicit in the targets to raise the proportion of people with higher education qualifications and to reduce the proportion without post school qualifications is the need to raise the level of generic skills for the community more broadly. The need for generic skills in a dynamic labour market was reinforced by a European Commission report showing the increasing need for workers to gain key competences to be able to adapt to a variety of tasks over their working lives.¹⁷

In the current Global Financial Crisis climate there is also a heightened recognition of the need to ensure individuals are not left behind during the economic recovery. The proposed Retrenched Workers Training Entitlement – part of the broader Vocational Education and Training Reform agenda – is a further initiative that will need to be resourced.

Recent reforms have focused more on skills acquisition. As important as the acquisition of skills is to the productivity of the workforce, it is also important to consider how those skills are applied in the workplace if we are to actually achieve

¹⁵ Leitch S, 2006, *Prosperity for all in the Global Economy – World Class Skills*, HM Treasury, UK.

¹⁶ International Labour Organization, 2008, *Conclusions on skills for improved productivity, employment growth and development*, International Labour Conference, Geneva.

¹⁷ Commission of the European Communities, 2008, *New Skills for New Jobs: Anticipating and matching labour market and skills need*, Brussels.

higher productivity outcomes. This leads to matters beyond the education and training system itself and includes consideration of workplace conditions and practices. This may be an area which receives more attention in the future from Government, businesses and the broader community.

J) The key reforms and measures that can be undertaken to lift Australia's permanent rate of productivity growth

The South Australian Government is committed to pursuing higher productivity levels by participating in and supporting productivity enhancing initiatives across a wide range of policy areas. All governments and community sectors can make valuable contributions to this goal and should continue to work in a coordinated and collaborative way to achieve gains in priority areas through forums such as CoAG.¹⁸

Some of the priority reforms and measures that can be undertaken to lift Australia's permanent rate of productivity growth are currently seen as:

- Climate change mitigation and adaptation policies, including facilitating the growth of high-value add 'cleantech' industries so Australians can profit from the economic opportunities which come with the transition to a carbon constrained economy;
- Drought policy reform and water policy reform (notably in the Murray Darling Basin) to enable more efficient resource allocation and environmental sustainability;
- Further reform to increase the responsiveness of the vocational education and training systems, support greater engagement with skills and training amongst young people, and providing training places to retrenched workers;
- Additional resources and activities to improve early childhood development outcomes;
- Further regulatory reform to reduce business red tape and deliver greater harmonisation across State borders, including in areas such as business licensing, occupational health and safety, and planning and development permits;
- Further reform of the Federal tax and income support systems;
- Provision of infrastructure, especially the roll-out of the National Broadband Network;
- Implementation of the Cutler Review of the National Innovation System, with particular emphasis on skills (reforms to immigration policy and teacher quality), public sector research (better funding of universities and public sector research institutions) and R&D (revamping incentives for company R&D schemes); and
- Increased effectiveness and efficiency of public and private agricultural research.

In prioritising future initiatives it is important that Governments are well informed about the benefits likely to be obtained from each activity or investment, as well as any costs associated with undertaking them. This will put Governments in the best possible position to prioritise reforms and measures to achieve the highest payoff to Australia's productivity and living standards.¹⁹

¹⁸ Council of Australian Governments, 2 July 2009, Communique – Preamble.

¹⁹ Productivity Commission 2008, 2007-08 Annual Report, Productivity Commission, Canberra.

References

Australian Bureau of Agricultural and Resource Economics (ABARE) 2009, *Outlook for agriculture*, presentation by Phillip Glyde at Outlook 2009.

Commission of the European Communities, 2008, New Skills for New Jobs: Anticipating and matching labour market and skills need, Brussels.

Council of Australian Governments, 2 July 2009, Communique – Preamble.

Cutler, T, 2008, Venturous Australia – Building Strength in Innovation, Cutler & Company.

Economic Development Board (EDB) of South Australia, March 2009, *Economic Statement: South Australia's Prospects for Growth.*

Engineers Australia, April 2009, Engineering Construction: South Australia.

Government of South Australia, 2007 update, South Australia's Strategic Plan.

International Labour Organization, 2008, *Conclusions on skills for improved productivity, employment growth and development*, International Labour Conference, Geneva.

Leitch S., 2006, *Prosperity for all in the Global Economy – World Class Skills*, Her Majesties Treasury, United Kingdom.

Louca, J. 2003. 'Introduction', in Williams, C., Draca, M., Smith, C (eds) *Productivity and Regional Economic Performance in Australia*, Office of Economic and Statistical Research, Queensland Treasury, Australia.

Organisation for Economic Cooperation and Development (OECD), 2001, *Measuring Productivity – OECD Manual – Measurement of Aggregate and Industry-Level Productivity Growth*.

OECD Science, Technology and Industry Scoreboard, 2007, Online web-book, <u>http://www.sourceoecd.org/scoreboard</u>

Productivity Commission 1999, *Microeconomic Reforms and Australian Productivity: Exploring the Links*, Canberra.

Productivity Commission 2005, *Economic Implications of an Ageing Australia*, Research Report, Canberra.

Productivity Commission 2007, *Public Support for Science and Innovation*, Research report, Productivity Commission, Canberra.

Productivity Commission 2008, 2007-08 Annual Report, Productivity Commission, Canberra.

South Australian Centre for Economic Studies (SACES), January 2008, *Productivity Analysis* 2006-07.

South Australian Centre for Economic Studies (SACES), April 2006, *Economic Issues: South Australia's Recent Productivity Performance*.

Young et al, Commonwealth Treasury, 2008, *Economic Roundup Issue 3: International comparison of industry productivity*, Australian Treasury, Canberra.