

Productivity and Economic Reform

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PRODUCTIVITY AND ECONOMIC REFORM

The theme for today's conference is how Tasmania can keep pace with the recovery from the global recession, and under that heading I've been asked to talk about 'productivity and economic reform'.

Productivity is, as Reserve Bank Governor put it earlier this year, 'the only real basis for optimism about future income'¹. Or, as Paul Krugman famously put it, before he himself became as well-known as his columns in the *New York Times* and his Nobel Prize have since made him, productivity 'isn't everything, but in the long run it's nearly everything'². Alan Blinder and William Baumol explain why: because 'nothing contributes more to reduction of poverty, to increases in leisure, and to the country's ability to finance education, public health, environment and the arts'³.

Strictly speaking, productivity is the rate at which outputs of goods and services are produced per unit of input of factors of production such as labour, capital and raw materials.

In practice there are all sorts of other measures of productivity that are used in specific contexts, such as tonnes of grain per hectare or litres of milk per cow in agriculture, grams of metal per tonne of ore extracted in mining, 'weighted inlier equivalent separations' per bed day in hospitals, revenue per seat kilometre in aviation, rent per square metre in property and so on. These measures tend to be management tools, rather than economic indicators, but they serve to remind us that the concept of productivity is in fact a rather complex one, and has multiple purposes.

Economists are accustomed to talking about 'multi-factor' productivity at the macro level as gross product per unit of labour and capital services, with labour typically measured as hours worked and capital services as a constructed index of the services provided by the existing capital stock. Thus defined, productivity measures the efficiency with which labour and capital are combined to produce goods and services, and implicitly captures the effects of advances in science and technology, organizational changes, and the movement of factors of production from lower- to higher-productivity activities.

We also focus on labour productivity, that is, gross product per hour worked, because that (together with average hours worked and the labour force participation rate), is a major determinant of per capita income, which is the best measure we have (albeit an incomplete one) of people's average material standards of living.

It is these latter concepts of productivity that I will be concerned with here.

Since the mid-1980s, successive Australian governments have pursued reform agendas consciously directed at the objectives of higher levels of productivity and faster rates of productivity growth. By any measure, those reform agendas met with considerable success during the 1990s:

- multi-factor productivity grew at a 2.3% annual rate between the productivity growth cycle peaks in 1993-94 and 1998-99, well above the average over the preceding three decades of 1.1% per annum;
- and labour productivity grew at a 3.3% annual rate over this same period, compared with the long-run average of 2.2% per annum.

¹ Glenn Stevens, 'Challenges for Economic Policy', Address to the Anika Foundation, Sydney, 28 July 2009.

² Paul Krugman, *The Age of Diminished Expectations* (MIT Press, Cambridge, 1992), p. 9.

³ Alan Blinder and William Baumol, *Economics: Principles and Policy* (Harcourt Brace Jovanovich, San Diego, 1993), p. 778.

Most empirical investigations of the reasons for this significant improvement in Australia's productivity performance attribute it to a combination of 'micro-economic reforms' (trade liberalization, privatization, deregulation, competition policy and so on) designed to facilitate the movement of factors

of production from lower- to higher-productivity activities or to enhance the incentives faced by the managers of private or government-owned enterprises to lift productivity by exposing them to greater competition, and the diffusion of new information and communications technologies⁴.

A more sceptical interpretation comes from John Quiggin, who suggests that the reported increase in [labour] productivity may actually be the result of an unmeasured increase in work hours⁵, for example as a by-product of more flexible working arrangements or through the spread of mobile phones and blackberries that enable people to be connected to their workplaces '24/7' if they wish or their employers insist.

It remains unclear from these and other studies whether these developments led to a one-time shift in the *level* of Australian productivity, or to an increase in the *trend* rate of growth.

However the former (and less encouraging) possibility appears to be suggested by the fact that, since the late 1990s, Australia's productivity performance has deteriorated substantially:

- multi-factor productivity growth has slowed to just 0.5% per annum over the nine years to 2007-08, less than half the long-term average;
- while labour productivity growth slowed to 1.7% per annum, about three-quarters of the long-term average.

As a result, relative to the US as a crude benchmark for 'best practice', Australian labour productivity has fallen from a peak of 88% in 1999 back to 80% in 2008 – in effect reversing all of the gains in relative performance that Australia made in the 1990s, although the effects of that on Australian incomes have been obscured by the substantial improvement in Australia's terms of trade over the same period, and (in a relative sense) by our stronger overall economic growth performance during the past two years.

To some extent, the deterioration in Australia's productivity performance during the current decade reflects developments specific to three sectors.

Labour productivity in the mining sector has declined at an annual average rate of 2.8% per annum since 1998-99, and by 5.8% per annum since the last (economy-wide) productivity growth cycle peak in 2003-04. This largely stems from the fact that the 'mining boom' which got under way earlier this decade has entailed a substantial increase in employment (of 113% over the eight years to 2008-09) and in investment (a 57% increase in the real net value of the mining industry capital stock over the seven years to 2007-08) which has yet to be fully reflected in higher output (which has risen by only 15% over the eight years to 2008-09), many projects only having come 'on stream' in the past couple of years, and some yet to do so.

In addition, and from this perspective somewhat perversely, high metal prices have made it more economic for mining companies to exploit lower-yielding ore bodies: yet this shows up in the statistics

⁴ See, for example, David Gruen, 'Australia's strong productivity growth: will it be sustained?' Reserve Bank of Australia *Bulletin*, February 2009, pp. 62-69; Dean Parham, 'Sources of Australia's productivity revival', *The Economic Record* Vol. 80, no. 249, 2004, pp. 239-257; Graeme Davis and Jyoti Rahman, *Perspectives on Australia's productivity prospects*, Treasury Working Paper 2006-04, September 2006; and Productivity Commission, *ICT use and productivity: a synthesis from studies of Australian firms*, Commission Research Paper, Canberra, July 2004.

⁵ John Quiggin, 'The Australian productivity miracle: a sceptical view', *Agenda*, no. 8, 2001.

as lower productivity⁶. (This, incidentally, is another reminder of the importance of interpreting productivity data carefully).

Labour productivity in the utilities sector (electricity, gas and water) has also declined over the past decade, at an even faster rate than in the mining sector, reversing a good deal of the strong gains recorded in the second half of the 1990s. As the Productivity Commission has noted⁷, this result seems at odds with evidence from other studies, and although drought and water restrictions will have detracted from productivity in the water industry, this is unlikely to have been large enough to account for the magnitude (or persistence) of the decline in productivity across the utilities sector as a whole.

Drought has also had a significant adverse impact on measured productivity in the agricultural sector, with employment levels remaining fairly steady since 2004 despite considerable swings in the volume of production.

While developments in these three sectors account for a significant proportion of the slowdown in overall productivity growth since the turn of the century, productivity growth has also slowed in every other sector for which the ABS produces data, with the exceptions of transport and storage, health and community services, and culture and recreational services.

Aside from these sector-specific developments, there are a number of plausible explanations for the slowdown in overall productivity growth during the past decade. Not necessarily in order of importance, these include:

- the generally buoyant level of corporate profitability may have lessened the sense of urgency on the part of businesses to seek out productivity gains;
- as the economy moved closer to 'full employment' of labour and capital in the years preceding the onset of the financial crisis, businesses may have found themselves forced to use less productive labour and capital;
- labour productivity may have been adversely affected by inadequacies in specific types of capital stock, such as infrastructure assets;
- there has been little by way of new competition-enhancing micro-economic reforms since the end of the 1990s, partly because many of the more obvious areas for reform had by then been largely completed, but also because of a diminished appetite on the part of governments for reforms which carried the risk of significant political costs in the short-term while delivering economic (and political) benefits over much longer periods⁸; and
- the increased emphasis on 'national security' during the current decade has led to the employment of a large number of people whose own contribution to aggregate productivity is at best marginal, and who in performing their duties almost by definition detract from the productivity of others.

⁶ Australian Treasury, 'Raising the level of productivity growth in the Australian economy', Submission to the House of Representatives Standing Committee on Economics, published in Round-Up, August 2009, pp. 51-52.

⁷ Productivity Commission, *Annual Report 2007-08* (Canberra, 2008), p. 11.

⁸ Incidentally, to the extent that the Howard Government's 'Workchoices' reforms, now partially reversed by the Rudd Government's *Fair Work Act*, achieved one of their stated objectives of increasing the employment of people with low skills, they would have had a negative impact, at least initially, on measured labour productivity growth.

Grattan Institute's productivity growth program will seek to test these hypotheses and, if possible, quantify the extent to which these factors have contributed to the slowdown in productivity growth over the past decade.

Clearly, this productivity growth slowdown needs to be reversed if we as Australians don't want to have all of our standard-of-living eggs in the China-driven resources boom basket. As Finance Minister Lindsay Tanner said in a recent speech 'if we are to revive productivity growth in the Australian economy, we need more competition and more investment'.

There are three reasons why micro-economic reform remains a critical part of any strategy to improve Australia's productivity growth performance.

First, productivity growth will be enhanced by allowing labour and capital to move from low-productivity activities to high-productivity ones. Indeed, historically this has been the largest source of long-term productivity gains for most of today's advanced economies and is the most important driver of productivity growth in emerging economies such as China and India.

Micro-economic reforms which facilitate the re-allocation of labour and capital to industries and enterprises which are capable of achieving higher levels of productivity or faster rates of productivity growth will enhance overall productivity growth; conversely, policies which have the effect of 'locking up' labour and capital in poorly-performing industries or firms will detract from our productivity performance. That's one reason why 'propping up' businesses which would otherwise face closure is usually a poor use of public funds.

Second, fostering greater competition among businesses acts as a spur to business owners and managers to improve the efficiency with which they combine labour and capital in order to produce goods and services. As the OECD pointed out some years ago, 'competition has pervasive and long-lasting effects on economic performance by affecting economic actors' incentive structure, by encouraging their innovative activities, and by selecting more efficient ones from less efficient ones over time'; and 'the link between product market competition and productivity growth is positive and robust'⁹.

Hence, micro-economic reforms which allow greater competition, both among Australian businesses and between Australian and foreign businesses, will in general help to improve productivity growth over time.

Third, micro-economic reforms aimed at reducing the regulatory burden on businesses, in particular where businesses have to contend with inconsistent or overlapping regulations across jurisdictional boundaries, will enhance productivity growth by reducing the diversion of resources to essentially unproductive activities. I should emphasize that this is not the same thing as advocating a more 'laissez faire' approach to consumer, investor or environmental protection, occupational health and safety or other areas which are quite properly the subject of a considerable amount of regulation. Rather what I am suggesting here is the need for reforms which eliminate unnecessary red tape, and which reduce delays and costs.

The micro-economic reforms required under each of these three headings are generally less 'spectacular' than the sweeping reforms of the 1980s and early 1990s – there are very few if any 'big bangs' on this agenda – but progress in each of these areas will be vital.

However achieving higher rates of productivity growth requires more than just micro-economic reform. It also requires increased investment in the fundamental drivers of productivity growth: physical and human capital.

⁹ Sanghoon Ahn, "Competition, Innovation and Productivity Growth: A Review of Theory and Evidence", OECD Economics Department Working Paper No. 317, Paris, 2002, pp. 5-6.

There has been a significant and sustained increase in business investment over the past decade, much of it in the resources sector (which now accounts for over one third of total business investment, compared with 11% in 2000-01), and this is likely to have a productivity pay-off as projects move into full production.

However until quite recently, public investment had declined quite significantly, almost halving as a share of GDP between the early 1980s and the early years of this decade. To be sure, not all of the public investment undertaken during the decades when public investment typically accounted for between 6 and 8% of GDP was 'high quality' or 'productivity enhancing'; and some of what had during that era been public investment is now undertaken by the private sector. Even so, there can be little argument that Australia's economic performance has been adversely affected by a legacy of under-investment, and mis-directed investment, in infrastructure. The World Economic Forum's most recent *Global Competitiveness Report* ranked Australia only 21st for the overall quality of our infrastructure, with air transport ranking best at 19th, railways 26th, roads 31st and ports 41st out of 134 countries surveyed¹⁰.

Those rankings will need to improve if Australia is to improve its long-term productivity performance. Recent research published by the OECD¹¹ suggests that infrastructure investment can boost long-term economic output by more than other types of investment, provided it is effectively targeted and accompanied by 'appropriate' regulations and price signals.

There is a large body of literature demonstrating that investments in education and training can boost individual productivity. Increased levels of education raise the skills and abilities of individual workers, enhance the flexibility of workplace teams, allow for the more rapid utilization of new skills and production technologies, and foster the creation of knowledge and ideas.

The empirical evidence on the linkages between levels of educational attainment and overall productivity is less unambiguous, partly because the measures of educational attainment which are typically used as measures of 'human capital' in such studies are generally incomplete and inadequate measures of the quality of education embodied in the workforce¹². Nonetheless there can be little doubt that sustained improvements in the quality and quantity of education received by Australians, both formally in educational institutions and informally in workplaces, would contribute positively to enhancing Australia's long-term productivity performance.

Grattan Institute's productivity growth program aims to uncover more evidence on the fundamental determinants of productivity growth and to identify ways in which public policy can contribute to supporting the ability of those factors to enhance Australia's productivity performance.

Lifting overall productivity is arguably even more important for Tasmania than it is for Australia as whole. As I have noted many times in the past, including I think on every occasion that I've spoken at this forum, the biggest single reason why Tasmanians have, on average, lower material standards of living than other Australians is because labour productivity in Tasmania is substantially below the national average. Unfortunately the annual State accounts which are normally released during November have been delayed this year, so data for 2008-09 is. Over the five years to 2007-08, gross product per hour worked in Tasmania averaged 7.5% below the Australian average, and in most of these years, Tasmania's figure was the lowest or second-lowest of any State.

From one perspective, Tasmania's poor productivity performance reflects a combination of an above-average representation in its economic structure of sectors where productivity nationally is below the all-industries average, and lower-than-national-average productivity in industries accounting for more than half of Tasmania's economy.

¹⁰ World Economic Forum, *Global Competitiveness Report 2008-09* (Geneva, 2009).

¹¹ OECD, *Economic Policy Reforms: Going For Growth* (Paris, 2009).

¹² Australian Treasury, *op. cit.*, p. 61.

From a different perspective, Tasmania's below-average level of productivity is the almost inevitable outcome of below-average levels of investment in physical capital and significantly below-average levels of educational participation and attainment.

More than in other parts of Australia, Tasmania needs to encourage and facilitate the emergence of new industries and firms, rather than propping up dying ones, in order to assist the movement of labour and capital from low-productivity activities into high-productivity ones; it needs to create a stronger environment for increased levels of business investment; it needs to improve the quality of much of its infrastructure; and, especially, to increase the levels of educational attainment and participation of its present and future workforce.

Jonathan West's recently released paper¹³ lists 'productivity enhancement' as one of the three key areas on which government economic policy should focus, and highlights the importance of innovation in productivity enhancement.

In so doing he challenges a lot of what I had regarded as 'conventional wisdom' about where, how and why innovation occurs, especially in the context of the agricultural sector. That's not to say I agree with all of his conclusions and recommendations (for example some of those relating to the electricity sector), but I do think that his report has substantially advanced our understanding of what could be done to improve Tasmania's long-run productivity performance.

Hopefully, the importance of lifting Tasmania's overall level of productivity and sustaining faster rates of productivity growth will be a key focus of the discourse leading up to the State election due next year, and that whoever emerges as the victor (or victors) from that contest will have done so with both a substantial agenda for productivity-enhancing reforms and the will and capacity to implement it.

¹³ Jonathan West, *An Innovation Strategy for Tasmania: A New Vision for Economic Development*, Australian Innovation and Research Centre, University of Tasmania (Hobart, October 2009)