Productivity

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After leaving ANZ Saul took up part-time roles as Director of the Productivity Growth program at the Grattan Institute and as an advisor in PricewaterhouseCoopers' Economics and Policy Practice. In December 2011, Saul returned to the financial markets as Chief Economist of Bank of America – Merrill Lynch Australia.

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While Australia's economic performance over the past decade has been impressive on many dimensions, productivity is not among them. Australia's productivity performance over the past decade has been, to put it mildly, poor – both by Australia's own historical standards, and by contemporary international standards.

Australia's productivity performance in the 2000s

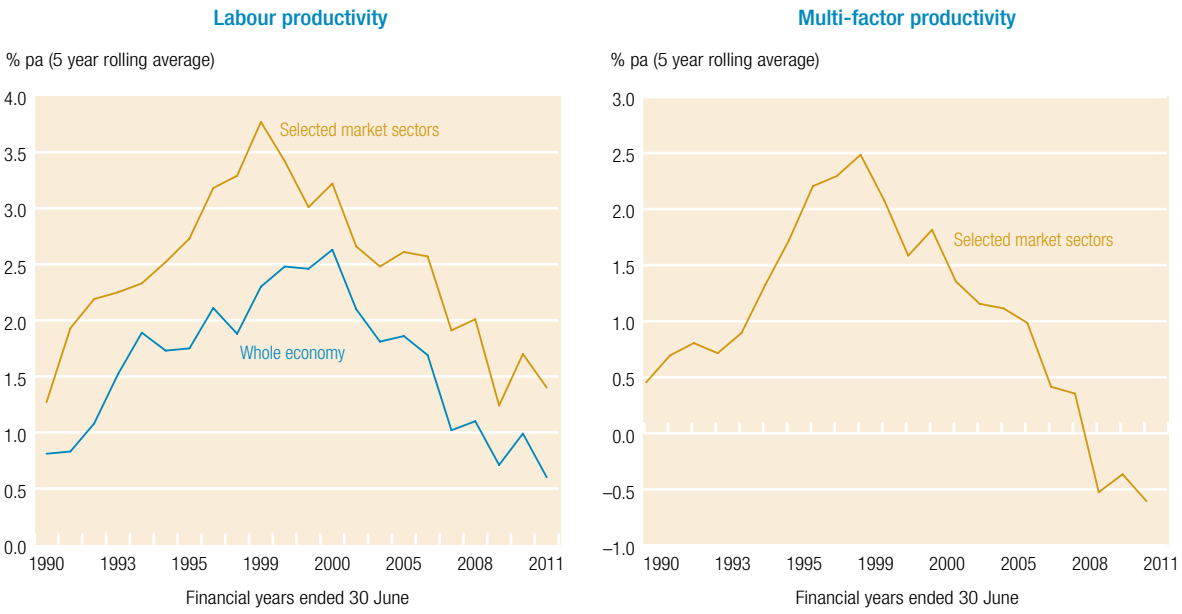
Australia's productivity performance, however measured, has deteriorated substantially since the late 1990s:

- Since 2005–06, labour productivity (real gross value added per hour worked) across the Australian economy as a whole has grown at an average annual rate of just 0.6 per cent, compared with 1.9 per cent per annum over the first half of the 2000s, 2.5 per cent over the second half of the 1990s, and 1.7 per cent per annum during the first half of the 1990s. Indeed going back to the 1960s, there is no period of five years or more during which labour productivity growth has been slower than since the mid-2000s;[1]
- Labour productivity in what the Australian Bureau of Statistics (ABS) calls the market sector (ie excluding public administration and safety, education and training, and health care and social assistance sectors where productivity is particularly difficult to measure) has grown at an average rate of just 1.1 per cent per annum over the past six years, compared with 2.4 per cent per annum over the first half of the 2000s and 2.9 per cent per annum over the second half of the 1990s;
- Multi-factor productivity (which takes account of the contribution of capital as well as labour) in the market sector actually *declined* over the six years to 2010–11. It declined at an average annual rate of 0.7 per cent, after growing by 0.9 per cent per annum, on average, over the first half of the 2000s and at an average annual rate of 1.7 per cent during the second half of the 1990s.

As Reserve Bank of Australia Governor Glenn Stevens put it last year: "It is now just about impossible to avoid the conclusion that productivity growth performance has been quite poor since at least the mid 2000s."[2]

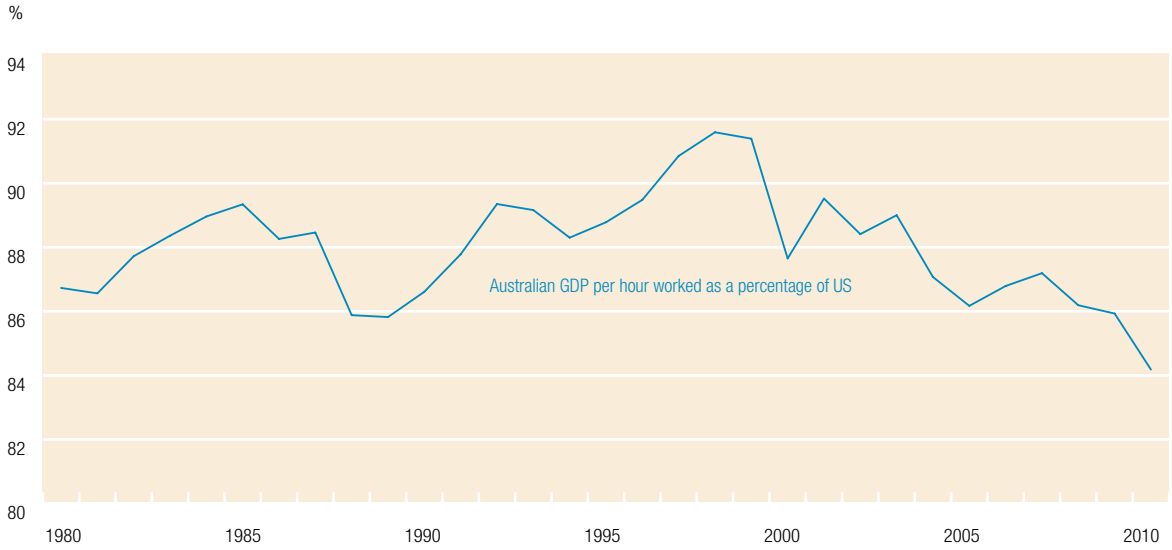
Australia has been by no means unique in experiencing a slow-down in productivity growth since the turn of the century. However, whereas Australian labour productivity growth was in line with the (unweighted) OECD average in the 1990s, during the 2000s it was 0.2 percentage points below the weighted OECD annual average growth rate. Australia ranked 11th out of 25 OECD countries in descending order of labour productivity growth in the 1990s, and 17th out of 34 countries in the 2000s.

Figure 1
Australian labour and multi-factor productivity growth in the 1990s and 2000s



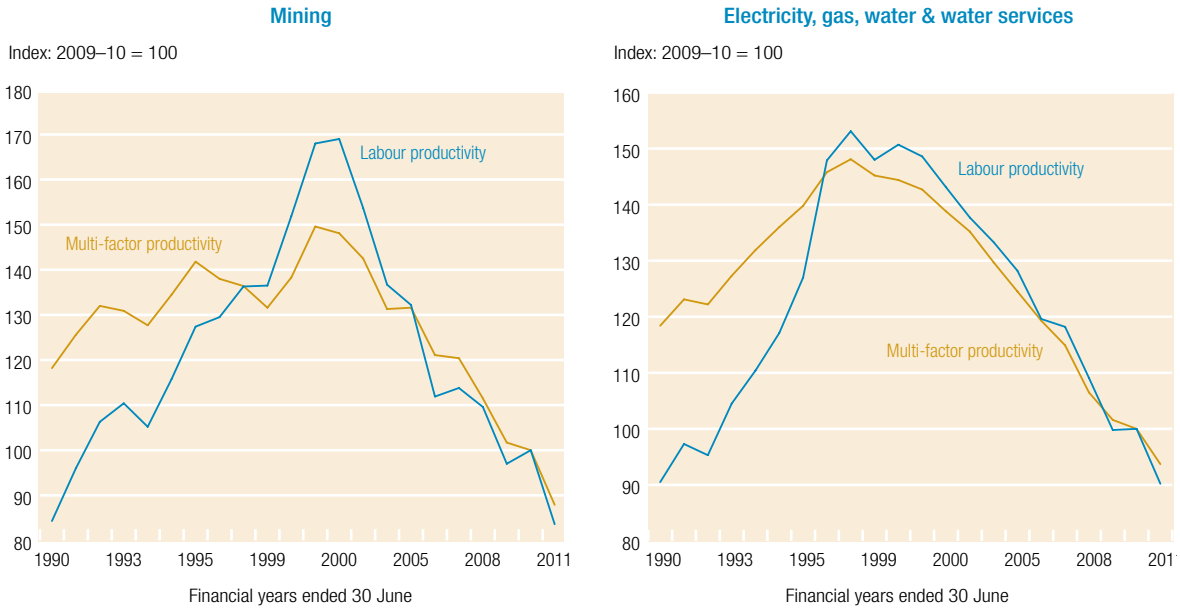
Note: 'Selected market sectors' are agriculture, forestry and fishing; mining; manufacturing; electricity, gas, water and waste services; construction; wholesale trade; retail trade; accommodation and food services; transport, postal and warehousing; information, media and telecommunications; financial and insurance services; and arts and recreation services.
Sources: ABS Australian National Accounts (5204.0) and Experimental Estimates of Industry Multi-factor Productivity (5260.0.55.002).

Figure 2:
Australian labour productivity as a percentage of the US level



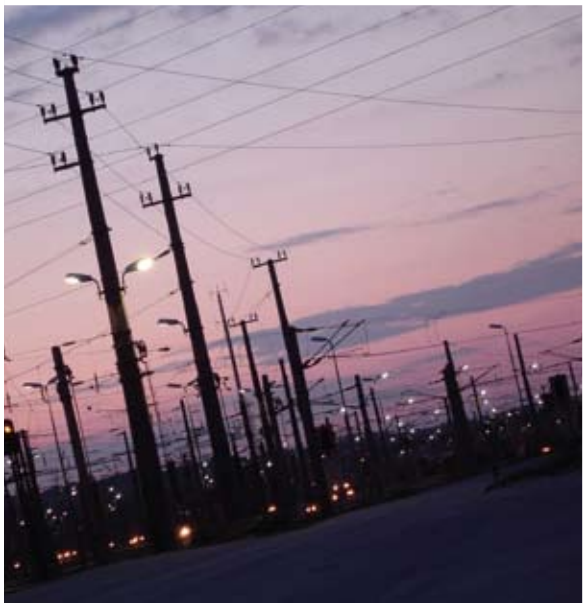
Note: Labour productivity here is real GDP (in 2010 US dollars) per hour worked.
Source: The Conference Board Total Economy Database (January 2011).

Figure 3
Productivity in the mining and utilities sectors



Source: ABS Experimental Estimates of Industry Multi-factor Productivity (5260.0.55.002).

Using the United States as a crude proxy for best practice in terms of labour productivity[3], the level of Australian labour productivity declined from a peak of 91.6 per cent of the corresponding US level in 1998 to 84.2 per cent of the US level in 2010, more than reversing the five percentage point increase in this ratio which occurred between 1990 and 1998 (see Figure 2).



"The mining sector has been gearing up for a huge expansion in response to the demand for energy and minerals (particularly those associated with steel-making) from China and India."

Can the productivity growth slowdown be explained by peculiar trends in mining and utilities?

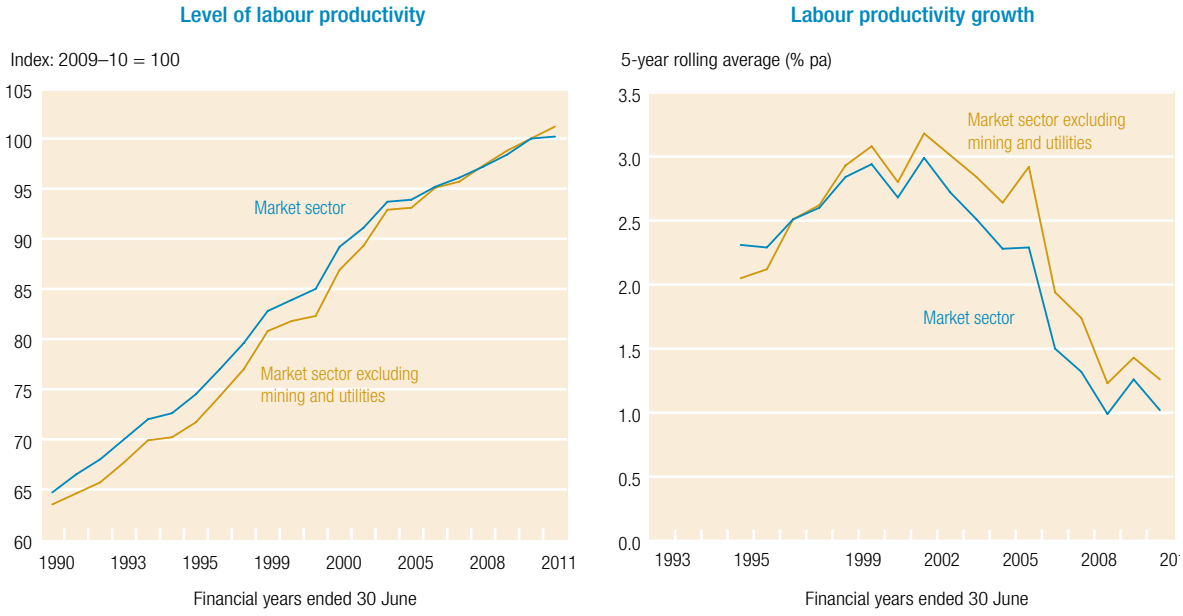
Until recently the accepted wisdom in policy circles and elsewhere had been that the decline in Australia's productivity growth rates since the beginning of the 2000s could be ascribed largely to sharp falls in productivity in the mining and utilities sectors. This was the result of factors peculiar to those industries and which would eventually be reversed, so that there was no particular cause for concern.

There is no denying that both labour and multi-factor productivity have fallen sharply in the mining and utilities sectors over the past decade, as shown in Figure 3.

The mining sector has been gearing up for a huge expansion in response to the demand for energy and minerals (particularly those associated with steel-making) from China and India. Since 2001-02, hours worked in mining have risen by more than 150 per cent and the real value of the mining industry's capital stock has risen by 115 per cent. Yet the volume of mining output has risen by only 26 per cent over the same period. As a result, labour productivity in the mining sector has fallen by 50 per cent over this period, and multi-factor as a whole moves past the ramping up stage into full production. Although, it has changed to the extent that high prices for various mineral commodities have made it commercially logical for companies to exploit low-grade ores (which require larger amounts of labour and capital to produce a given volume of output, therefore also detracting from measured productivity), the mining industry's apparently poor productivity performance could continue for a prolonged period.

The utilities sector recorded substantial productivity gains in the 1990s, largely as a result of reforms engineered by State Governments. However, during the past decade electricity and gas businesses have had to invest heavily in response to continued growth in demand (especially for peak load, which inevitably entails a large degree of "redundancy" at non-peak times), to replace ageing transmission infrastructure, and to meet government-mandated renewable energy targets. Likewise governments have undertaken significant investments in water infrastructure (including desalination plants in five states), with a view to

Figure 4
Market sector labour productivity including and excluding the mining and utilities sectors



Sources: ABS Australian National Accounts (5204.0), Labour Force, Australia, Detailed, Quarterly (6291.0.55.003) and author's calculations.

guaranteeing security of supply in drought conditions, while simultaneously imposing restrictions on the use of water throughout much of the decade. As a result this has detracted from the output of water businesses without commensurate reductions in factor inputs.

In this sector, hours worked have increased by 80 per cent since 2002–03, and the real value of the productive capital stock by almost 90 per cent, whereas output has risen by only 13 per cent: correspondingly, labour productivity has fallen by 37 per cent and multi-factor productivity by 33 per cent in the utilities sector over this period.

However, given over the last decade both the mining and utilities sectors have employed about 19 per cent of Australia's non-housing capital stock and a little over two per cent of Australia's workforce, to produce about 11 per cent of Australia's overall output, it seems *prima facie* implausible that these two sectors could have accounted for nearly all of the decline in Australia's productivity since the turn of the century.

Indeed if these two sectors are excluded from consideration[4] (as shown in Figure 4), labour productivity growth in the rest of the market sector has still slowed from 3.1 per cent per annum over the five years to 1999-2000 to 1.3 per cent per annum over the five years to 2010–11, only 0.1 of a percentage point per annum less than the decline in the equivalent measure of labour productivity growth including the mining and utilities sectors.

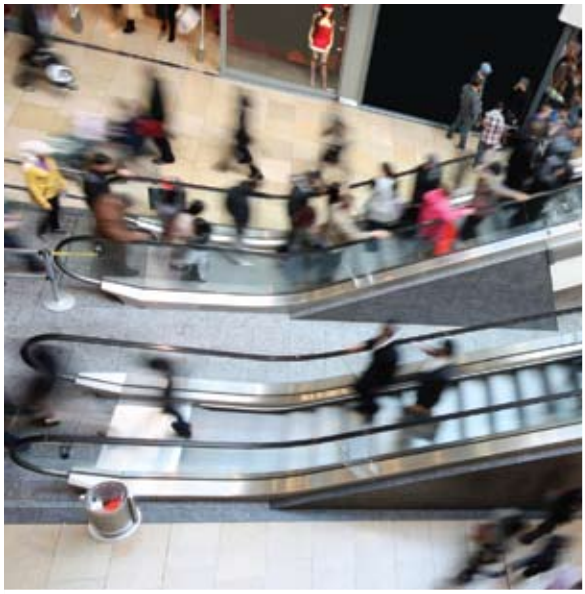
Other explanations for Australia's productivity slowdown

A considerable volume of research supports the contention that the acceleration in Australia's productivity growth rate during the 1990s owed much to the economic reforms implemented by successive governments of both political persuasions during that decade and the second half of the preceding decade.[5]

To the extent that the reforms of the 1980s and 1990s prompted step changes in the level of productivity – as may well have been the case with, for example, the privatisation of government monopolies or with at least some aspects of competition policy – then the fading of what appeared at the time to have been an increase in the *rate* of productivity growth is unsurprising.

It seems highly plausible that at least part of the slowdown in productivity growth since the turn of the century is attributable to the absence of any significant productivity-enhancing reforms.

The dearth of productivity-enhancing reforms since about 2000 is clearly in part attributable to changes in the political environment. This includes a diminution in the enthusiasm of both major political parties for continuing reforms of the type pursued in the 1980s and early 1990s once the politically easiest reforms



"… the past decade has been one of almost uninterrupted growth in economic activity, employment and household disposable income."

(what management consultants typically call the low-hanging fruit) had been accomplished, and once what remained was seen as more politically challenging, including to important elements of the core constituencies of both sides of Australian politics.[6] Changes in voting behaviour – particularly in rural and regional areas, but also in areas such as western Sydney – made both major political parties more sensitive to the views of those who perceived themselves (not always inaccurately) as losers from the reforms of the 1980s and 1990s.

The lack of enthusiasm for productivity-enhancing reforms since about 2000, on the part of both political leaders and the public at large, also seems in part attributable to the more prosperous economic circumstances of the last decade.

The willingness of political leaders to undertake (and the public at large to accept, if only tacitly) the reforms of the 1980s and 1990s were to a significant degree prompted by the economic vulnerabilities exposed by the persistence of high inflation and unemployment since the mid-1970s, the decline in Australia's terms of trade during the 1970s and 1980s, and two severe recessions occurring within less than a decade.

By contrast, the past decade has been one of almost uninterrupted growth in economic activity, employment and household disposable income. There has been lower unemployment than at any time since the mid-1970s, sound public finances (especially by comparison with other advanced economies), relatively low and stable inflation, relatively low and stable interest rates, a generally rising exchange rate (something widely seen among the broader population as a short-hand summary of international investors' views of Australia's economic performance) and (perhaps most importantly in this context) a dramatic reversal of the downward trend in Australia's terms of trade which had prevailed throughout most of the twentieth century.

This diminished focus on productivity over the past decade has not been confined to the public policy arena.

As the profit share of Australia's national income has increased to unprecedented levels during the past decade (apart from the period immediately after the global financial crisis), businesses have attached less importance to the pursuit of productivity gains at the enterprise or workplace level (which is, after all, where the decisions that lead to higher levels of

"…whatever public or private benefits that have been procured through legislation and regulation of this type they have inevitably come at some cost in terms of productivity."

productivity are formulated and executed, if at all). A survey conducted last year by Telstra found that, among over 300 organisations each with over 200 employees, while 76 per cent regard productivity as an important business priority, only 24 per cent have "achieved significant productivity improvement" over the past year, a proportion which was only five percentage points higher than when this survey was first conducted in 2009.[7]

As with the diminished enthusiasm for productivity-enhancing reforms at the political level, this low emphasis on achieving productivity gains at the enterprise level, is to at least some extent, understandable. Productivity-enhancing change in individual workplaces is often disruptive and unpleasant, both for those on the receiving end of that change and those (typically middle managers) who have to communicate and implement it. When making such changes is no longer a matter of survival – as it was for many businesses in the 1990s – it is not surprising that the appetite for making them has diminished.

It is also inevitable, and consistent with both historical experience and the contemporary experience of other countries, that as the Australian economy moved closer to full capacity in the second half of the 2000s, a situation characterised by (among other things) increasing shortages of skilled labour and the emergence of bottlenecks in key areas of infrastructure provision, measured productivity would deteriorate. This is irrespective of whether political and business leaders had maintained their earlier enthusiasm for productivity-enhancing change in either public policy-making or business decision-making.

Another pertinent development of the past decade has been the increasing volume of legislation and regulation in reaction to various actual or perceived threats to security, instances of misbehaviour in the corporate sector, and other more quotidian aspects of life.

A common belief underpinning this legislation and regulation appears to be that it is both possible and desirable to eliminate various kinds of risk (to life, property, public order and safety, people's savings, standards of corporate or private behaviour, and so on) through additional legislative or regulatory action, irrespective of the probabilities attaching to those risks or the adequacy of existing legislation or regulation, and irrespective of the costs of seeking to eliminate those risks relative to the benefits.[8]

Much of this legislation and regulation has required the employment of additional staff, the acquisition of additional capital equipment or the costly modification of existing buildings and infrastructure. This is without resulting in the production of any additional (measured) goods or services, and often with the incidental effect of diverting time and attention from activities that would have otherwise resulted in the production of additional goods and services.

In other words, whatever public or private benefits that have been procured through legislation and regulation of this type they have inevitably come at some cost in terms of productivity.

Australia's experience in this regard has not been unique, although when you look beyond the realm of aviation security to other aspects of business and personal life, the quantum and reach of risk-averting legislation and regulation may have been more pervasive in Australia than in many other advanced economies.

Consistent with this, Australia has slipped from fifth on the World Bank's annual ranking of economies by "ease of doing business" in 2005, to 15th last year.[9]

Although difficult to verify in any empirical manner, there is considerable anecdotal evidence suggesting that the increased recourse to legislative and regulatory means of eliminating various types of risks has

"It is also clear that the broader business community has begun to press for a renewed emphasis on policy measures aimed at enhancing productivity growth…"

prompted business owners and managers to devote increasing proportions of their time and attention to compliance and risk management activities. They have become less willing to take on some of the risks associated with decisions to undertake organisational change, enter new markets, develop new products or services, or engage in other forms of productivity-enhancing innovation.

One illustration of this may be the apparent decline in Australia's relative take-up of new technologies.

In the second half of the 1990s, Australia ranked behind only the Nordic countries and the United States in various (objective and subjective) measures of the penetration or diffusion of new information and communications technologies. However, by the end of the past decade, Australia's ranking had slipped to between 15th and 22nd, behind not only the US and Nordic countries but also a large number of Western European countries, a growing number of Asian economies, Canada and Israel.

It would be wrong to suggest that there is any single, or overwhelming, cause of Australia's poor productivity performance over the past decade. But there seems to be little doubt that the broader economic and political environment (one in which there has been little pressure on either policy-makers or individual firms) to pursue productivity-enhancing structural or organisational change) has been of critical importance. As Treasury Secretary Martin Parkinson puts it: "The root causes of Australia's present productivity performance are embedded in the decisions of the last decade."[10]

Reversing the decline in Australia's productivity growth rate

One of the reasons for Australia's poor productivity performance over the past decade has been the lack of any real incentives for firms to pursue productivity gains in the absence of compelling reasons to do so. There are now some indications that the difficulties being encountered by sectors of the economy, which are adversely affected by some of the side-effects of the mining boom, in particular the rising exchange rate (something which did not occur to the same extent, if at all, during previous commodities booms) are prompting businesses in those sectors to place a much higher priority on productivity-enhancing organisational and other changes at the enterprise or workplace levels, as a matter of survival, without any need for public policy changes.

It is also clear that the broader business community has begun to press for a renewed emphasis on policy measures aimed at enhancing productivity growth, although to date, the focus of business attention has been largely confined to industrial relations.

Public policy initiatives can contribute to improving Australia's productivity performance to the extent that they increase the incentives facing the owners or managers of enterprises (including government agencies themselves) to make productivity-enhancing changes (to the goods and services they produce, or the way in which they are produced). They achieve this through increasing the ability of owners or managers of enterprises to implement productivity-enhancing changes once they have decided to make them (or, alternatively, reducing the barriers and obstacles to implementing productivity-enhancing change); or facilitating the movement of factors of production from existing uses to ones in which they can be combined in ways that result in higher levels of productivity overall.

There are several ways in which public policy initiatives could enhance the capacity of Australian businesses to improve their productivity performance and thereby that of the economy as a whole.

Regulatory reform

Many areas of the Australian economy that have remained, largely for political reasons, insulated from competitive pressures of the sort that, in other sectors, have acted as strong incentives for the pursuit of productivity-enhancing structural and organisational change – including international aviation, agricultural marketing (other than grains), pharmacies, newsagents, private service professions (such as law, medicine, and architecture), and services sectors dominated by public sector agencies (such as health care, education, public transport and law enforcement).

Some of these are relatively small as a share of output or employment; others (in particular the service delivery sectors mentioned above) are both large themselves, and important 'enablers' for other sectors of the economy. One of the key obstacles to the pursuit of productivity-enhancing reforms in these areas is the near-universal belief that there is a linear correlation between the number of people employed in delivering these services and the quality of them. This is notwithstanding the absence of any empirical evidence in support of that belief (for example, between staff-student ratios in schools and student outcomes, or between police numbers and crime rates).

A rethinking of the increasing trend, identified earlier, of seeking to reduce perceived risks through legislation and regulation without any assessment of probabilities or opportunity costs, would almost certainly be beneficial from the standpoint of improving productivity performance. As the Victorian Competition and Efficiency Commission pointed out last year, this requires "greater public understanding of risk issues, including the omni-present nature of risk in everyday life and the constant trade-offs between risk and return that characterise daily decision-making."[11]

Few areas of regulation have broader effects than regulation of the labour market. As Productivity Commission Chairman Gary Banks has observed:

> "...whether productivity growth comes from working harder or working smarter, people in workplaces are central to it. The incentives they face and how well their skills are deployed and redeployed in the multitude of enterprises that make up our economy underpins its aggregate performance. It is therefore vital to ensure that regulations intended to promote fairness in Australia's workplaces do not detract unduly from their productivity… if we are to secure Australia's productivity potential into the future, the regulation of labour markets cannot remain a no-go area for evidence-based policy making." [12]

Given the inadvisability of drawing conclusions about productivity from data over relatively short periods, it is not yet possible to make any reliable statistically-based inferences about the effects of the present government's changes to workplace relations arrangements on economy-wide productivity growth, although there does appear to be a growing body of anecdotal evidence that some businesses are seeking to make productivity-enhancing organisational changes in workplaces, they are finding those changes more difficult to implement than might have been the case hitherto.

The Productivity Commission's recent draft report on retailing noted that closing the productivity gap between Australia and countries such as the US "will require greater workplace flexibility so that employers and employees can work cooperatively and creatively together, to deliver the required productivity improvements". It also suggested that "some aspects of the *Fair Work* system may be inhibiting the adoption of flexibility enhancing provisions" in retailing workplace arrangements, and observed that the workplace flexibility provisions in the *Fair Work* system appear to have been used to place "greater emphasis on strategies for developing family-friendly workplaces, rather than productivity".[13]

Of course the scope for regulatory reform extends well beyond the workplace relations framework.

"The Business Council of Australia (BCA) argues that 'significant reforms…are needed in all jurisdictions to improve their regulatory processes'."

The Business Council of Australia (BCA) argues that "significant reforms…are needed in all jurisdictions to improve their regulatory processes"[14], while the OECD has drawn attention to the need for further reforms in infrastructure regulation, and that Australia's barriers to foreign direct investment are the seventh highest in the OECD.[15]

There are also still examples where outright deregulation ought to be more actively considered. For example, the removal of restrictions governing entry into the Sydney taxi industry (for which there are few efficiency or social reasons) could produce benefits "in the order of $250 million per annum", with even greater productivity and service benefits if accompanied by reform of the "anti-competitive control of the taxi radio networks over all taxi operators."[16]

Taxation reform

Tax reform could play an important role in improving Australia's productivity performance. Australia's personal and business income tax systems (and state land and payroll tax systems) are littered with exemptions and concessions which confer favourable treatment on particular groups of taxpayers, particular forms of business organisation, or particular types of economic activity at the expense of others, leading to household and business investment decisions often being excessively influenced by tax considerations rather than their intrinsic merit (which must be to the detriment of productivity, among other things).

The Henry Review of Australia's tax system urged that: "Australia should configure its tax and transfer architecture to promote stronger economic growth through participation and productivity."[17] Unfortunately, many of the Review's recommendations to that end were promptly ruled out – by both sides of politics – for transparently political reasons.

Skills and infrastructure

To the extent that Australia's poor productivity performance over the past decade reflects past underinvestment, or poorly targeted investment, in skills formation and in infrastructure, some combination of more and better targeted investment in these areas will contribute to improved productivity performance, albeit with lags that are inevitably protracted. These two areas have been key elements of the current Australian Government's productivity agenda.

Yet despite the continuing upward trend in the proportion of the Australian working-age population with formal educational qualifications, it is not at all clear that the quality of Australian human capital has increased significantly. The OECD concluded, earlier in the decade, that "skill upgrading has played, at best, a modest role in GDP growth per employed person" in Australia (and also in the US, Canada, the Netherlands and New Zealand).[18] An ABS survey undertaken as part of an OECD study of adult literacy and life skills found that 46 per cent of Australians aged 15–74 lacked the minimum prose and document literacy skills and 50 per cent lacked the minimum numeracy skills "required for individuals to meet the complex demands of everyday life and work in the emerging knowledge-based economy."[19]

It has been recognised for some time that younger Australians from lower socio-economic backgrounds

"The consequences of Australia's poor productivity performance over the past decade have not, as yet, become widely apparent."

tend to lag at least one year behind the Australian average, and more than two years behind students in the highest socio-economic quartile (OECD 2010c: 139). The results from the latest OECD Program for International Student Assessment (PISA) suggest that the performance of Australian 15-year old students has declined significantly over the past decade, despite a 33 per cent real increase in public expenditure, and a 54 per cent real increase in private expenditure, on education during this period. [20]

By comparison with schools and higher education, the vocational education and training (VET) sector attracts little public attention. Yet there is evidence that the effectiveness of the training provided by this sector is variable, and that this sector is characterised by low completion rates in occupations that regularly appear on national skills shortage lists. [21]

It is widely accepted that Australia's infrastructure, particularly in transport, is inadequate for many of the requirements of Australia's growing economic, personal and social needs. This is in part due to under-investment in infrastructure in the 1980s and 1990s. However, as the OECD notes, it also reflects "weak co-ordination between public infrastructure and development and fiscal management" and a "lack of co-ordination between the various levels of government, and between jurisdictions at the same level", so that "infrastructure decisions are frequently taken with no regard for national priorities".[22] The solution to these weaknesses is not simply more spending on infrastructure, especially if that spending lacks coordination and has little regard for national priorities, as in the past. It is of no less importance to the objectives of higher levels of productivity or faster productivity growth that better use is made of existing infrastructure, including through rational pricing regimes, and through avoiding ill-conceived regulation that detracts from the efficiency with which existing infrastructure is used (for example, by arbitrary and knee-jerk reductions in speed limits on roads, or security procedures entailing excessive or unnecessary delays in the movement of goods and passengers through airports).

Innovation

As noted earlier, Australia's innovation effort falls well short of OECD best practice on many dimensions, suggesting the potential for improvements in Australia's innovation effort to contribute to higher levels of productivity and faster rates of productivity growth.

In this area, no less than in any others, it is important to emphasise that productivity growth happens as a result of decisions being taken and implemented by the owners and managers of individual enterprises (and government agencies). The role of public policy is to improve the incentives facing those owners and managers to undertake productivity-enhancing innovations, and to remove obstacles to the undertaking of such innovations where they have been inadvertently created by past public policy interventions.

Among the issues that could be usefully considered in this domain are the extent to which Australia's competition laws inhibit the kind of collaboration among firms in the same industry which overseas experience suggests is an integral part of the innovation process in many industries; the extent to which the treatment of options by the Australian taxation system inhibits the ability of start-up companies to attract and retain talented staff, or to attract institutional investment; and the extent to which what appears to be a highly legalistic approach on the part of many Australian universities to intellectual property rights inhibits the transfer of knowledge between those undertaking pure or basic research in higher education institutions to innovative entrepreneurs.

Conclusion

The consequences of Australia's poor productivity performance over the past decade have not, as yet, become widely apparent. This is largely because they have been masked by a combination of faster population growth (until recently) and the most sustained upswing in Australia's terms of trade in over a century.

The sense of importance of sustaining high rates of productivity growth for Australia as a whole and for individual businesses, has declined substantially. This is a result of a combination of factors including a weakening of an earlier, widely shared consensus around the need for on-going economic reform that is perhaps the inevitable result of what has now been the longest period of more-or-less uninterrupted economic growth in more than a century, falling unemployment, rising real incomes (which have in turn been fairly widely distributed), and rising personal wealth (for most of the past two decades).

It may well be that an end to this period of comparatively easy prosperity – at least for sectors of the Australian economy that are adversely affected by some of the side-effects of the mining boom, or by the more frugal behaviour of Australian households, and possibly for the broader Australian economy if the global economy enters a renewed downturn with limited means on the part of economic policy-makers in the major advanced economies to ameliorate using the tools that have become customary over the past seventy years – will prompt a renewed focus, both among policy-makers and business leaders, on the objective of raising both the level of productivity and the rate of productivity growth.

If a renewed focus is not prompted, then it is likely that Australia's economic performance after the present resources boom comes to an end (whenever that might be) will deteriorate significantly – as it did after the end of the last significant commodities boom in the mid-1970s – and that the consequences of that for the living standards of Australia's population will be impossible to disguise.

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The views in this article are those of the author and should not be attributed otherwise.

Endnotes

1 Measured productivity growth is very sensitive to business cycle fluctuations: hence it is unwise to draw inferences about productivity growth from changes over periods shorter than three years (at a minimum).

2 Glenn Stevens, 'The Cautious Consumer', Address to the Anika Foundation, 26 July 2011.

3 On the grounds that the United States has higher GDP per hour worked than any other OECD country except for Luxembourg and Norway, two small economies an unusually large proportion of each of which is accounted for by a sector with intrinsically high levels of labour productivity, namely financial services and oil extraction, respectively.

4 Using the method detailed in Saul Eslake and Marcus Walsh, *Australia's Productivity Challenge*, (Grattan Institute, Melbourne, February 2011).

5 For example, Charles Bean, 'The Australian Economic 'Miracle': A View from the North' and Peter Forsyth, 'Microeconomic Policies and Structural Change', both in David Gruen and Shona Sretha, *The Australian Economy in the 1990s* (Reserve Bank of Australia, Sydney, 2000), pp. 74–114 and 235-267; Productivity Commission, *Annual Report 2009–10* (Canberra, 2010), p.62; and OECD, *Towards a Seamless National Economy*, *OECD Reviews of Regulatory Reform: Australia 2010* (OECD, Paris, 2010), p. 14.

6 For example, newsagents, pharmacies, farming interests and the traditional professions (for the Liberal and National Parties), and public sector unions (for the Labor Party).

7 *The Telstra Productivity Indicator* (Telstra, Melbourne, April 2011), p. 10.

8 For example, John Mueller and Mark Stewart (the latter a Professor of Civil Engineering at the University of Newcastle in NSW), in *Terror, Security and Money* (Oxford University Press, 2011) report that the myriad 'security' measures enacted after the terrorist attacks of the early 2000s have never been subjected to any kind of probability assessment or cost-benefit analysis. Their own cost-benefit analyses find that of these measures, only the decision to harden cockpit doors in aircraft has been 'cost effective'; while programs under which gun-toting officers travel on selected flights, and the implementation of ' full body scanners' at airports, fail such tests 'miserably' and 'comprehensively'.

9 World Bank and International Finance Corporation, *Doing Business 2012* (Washington DC, 2011), p. 6.

10 Martin Parkinson, 'Sustaining Growth in Living Standards in the Asian Century', Address to the Seventh Melbourne Institute – *The Australian* Economic and Social Outlook Conference, (Melbourne, 30 June 2011), p. 22.

11 Victorian Competition and Efficiency Commission, *Securing Victoria's Future Prosperity: A Reform Agenda*, draft report (Melbourne, November 2011), p. 90.

12 Gary Banks, 'Successful Reform: Past Lessons, Future Challenges', Address to the Annual Forecasting Conference of Australian Business Economists, (Sydney, 8 December 2011), p. 16.

13 Productivity Commission, *Economic Structure and Performance of the Australian Retail Industry*, Draft Report (Canberra, July 2011), pp. 287, 307 and 319.

14 Business Council of Australia, *2010 Scorecard of Red Tape Reform* (Melbourne, 2010), p. 9.

15 *OECD, Economic Surveys – Australia*, Volume 2010/21 (Paris, November 2010), pp. 99 and 47.

16 Peter Abelson, 'The High Cost of Taxi Regulation, with Special Reference to Sydney', *Agenda*, Vol. 17, No. 2 (2010), pp. 41–72

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