

Productivity and Growth

On 10-11 July 1995, the Bank convened a conference entitled 'Productivity and Growth'. The following excerpt is the introductory chapter of the conference volume.

The economics profession was born of Adam Smith's inquiry into the nature and causes of the wealth of nations, and the issues he addressed remain as important today as they were when he raised them. Although economic progress does not follow a simple pattern to be explained with any certainty, an understanding of the environment conducive to growth is central to the achievement of continuing advances in the standard of living.

While Adam Smith had great instinct about the forces that enrich a nation, formal analysis of growth had to wait until the conceptual tools of the Keynesian revolution, particularly national-income accounting, were assimilated and yielded the neoclassical growth model. Further analysis awaited the new growth theory of the past decade. These analyses, however, have not led to a clear operational guide for policy makers but, instead, suggest a range of possible causes of growth and policy prescriptions. Ultimately, though, the policy prescriptions in different economies reflect what is acceptable to each society.

In the Australian context, there has been a growing acceptance that productivity and growth are enhanced by the liberalisation of markets. This acceptance has arisen partly from dissatisfaction with the performance of

the economy under insular policies of industry protection, excessive regulation, and centralised industrial relations which failed to deliver adequate improvements in living standards – an issue reinforced by rapidly-rising living standards in other economies, especially those in neighbouring East Asia. In fact, concern about Australia's economic performance relative to other countries has often been dramatised by our slide down the 'totem pole' of comparative per capita income levels.

In response, over the past two decades, there has been a program of market liberalisation. Whilst a gradualist and mainly consensual approach has been adopted, the program has been extensive. Financial markets have been deregulated, industry protection has been largely dismantled and a range of activities targeted for microeconomic reform. Liberalisation has also extended to labour markets, which are now moving from a centralised system of industrial relations to one that embraces enterprise agreements. The extent of reform marks a clear regime change, one that endorses competitive markets as the means of securing the most productive use of the nation's resources. Furthermore, official inquiries into the competitiveness of Australian industry, such as the Hilmer Report, form the basis of an agenda to continue the reform process.

This change in approach to economic management has been embraced in the belief

that it will deliver a growth dividend and improve living standards. With this process of reform underway for some years, it is appropriate to take stock of Australia's growth performance and prospects. The papers in this Volume were commissioned by the Bank to improve our understanding of productivity and growth. In particular, the papers seek to address four main questions:

- How bad, or good, is Australia's growth and productivity performance?
- What developments in productivity and growth have occurred at the sectoral and enterprise levels?
- What lessons can be learned from the extraordinary East-Asian growth experience?
- What is the role for policy in the achievement of Australia's growth potential?

Australia's Comparative Growth and Productivity Performance

There is a widespread view that Australia's growth and productivity performance has long

been inadequate. This view is supported, for example, by data published by official international agencies indicating that productivity growth has been slower in Australia than in other comparable countries for an extended period.

Table 1, drawn from a new comparative database recently published by the OECD, summarises the conventional evidence. It shows that while total output growth in Australia was in line with that of other OECD countries over the period 1970-89, both labour and total-factor productivity were well below. In fact, Australia had the lowest total-factor productivity growth of the 14 OECD countries for which data were available.

An additional OECD study for the period 1989-94 gives a more favourable impression of Australia's recent economic performance. It suggests that, over the past five years, both labour productivity and total-factor productivity have slightly surpassed the OECD average. The difference is not, however, great and may be affected by cyclical influences. Over a longer run of years, productivity growth has been less than in other industrialised economies.

There is, as well, evidence of a progressive decline in Australia's level of real per capita

Table 1: Australia's Comparative Growth and Productivity Performance
(Per cent per annum)

	Australia	Canada	Germany	Japan	UK	US	OECD
1970 to 1989							
Real GDP	3.2	3.7	2.5	4.6	2.1	3.0	3.1
Labour productivity	1.0	1.4	2.3	3.7	1.7	1.0	2.0
Total-factor productivity	0.6	0.8	1.5	2.1	1.1	0.7	1.4
1989 to 1994							
Real GDP	2.2	1.0	2.9	2.1	0.8	2.0	1.9
Labour productivity	1.8	0.7	2.7	1.0	1.9	1.0	1.5
Total-factor productivity	1.1	-0.4	1.8	-0.5	1.2	0.6	0.5

Note: Database confined to: Australia, Belgium, Canada, Denmark, Germany, Finland, France and Italy, Japan, Sweden, the United Kingdom and the United States. These countries account for over 90 per cent of GDP in all OECD countries.

Sources: For the period 1970-89, data are from OECD Working Paper No. 145, and for the period 1989-94, they are from OECD, *Economic Outlook*, June, 1995.

income relative to other countries. In 1938, Australia was ranked 4th in conventional league tables of per capita income. By 1960, its ranking was 11th; by 1993 it was 15th, equal with Belgium. According to estimates by the World Bank, Australia's real per capita income is now less than the high-performing East-Asian economies of Hong Kong and Singapore. Thus we are presented with two stylised facts, suggesting that Australia's productivity and growth performance has been relatively poor.

However, as the papers in this Volume show, while such summary measures of economic progress are valuable in certain contexts, they can be naive and lead to inappropriate conclusions about comparative performance. Three main problems give the flavour of the issues involved.

First, Australia began its economic development as a 'frontier' economy with a rich endowment of natural resources and a small population; it is to be expected that its initial levels of real per capita income were very high. However, a comparative advantage in the production of primary commodities, with low income elasticities of demand and secular price falls, does not lend itself to the maintenance of such relative affluence.

Second, meaningful comparisons of per capita income levels are difficult to perform. They require each country's income to be denominated in the price of a set of representative goods. For conventional league tables, the choice of this set of goods is most appropriate for a 'core' group of countries in Europe, but less so for other countries, like Australia, that are outside this core. When attempts are made to address this problem, or when account is taken of differences in the living conditions and preferences of communities, Australia's ranking improves, often considerably.

Third, even if accurate relativities can be established, comparisons of growth performance made at the same point in time, as opposed to the same stage of development, are misleading. Economies tend to follow a development path in which growth takes off, accelerates and subsequently slows down, as

the economy matures. Less-developed economies can enjoy rapid growth through technological catch-up and by encouraging factors to accumulate faster than is sustainable for an advanced economy. Once allowance is made for each country's position on its development path, Australia's per capita growth has proceeded at a rate to be expected of a mature, industrialised economy. In this respect, our growth performance has been remarkably average.

Of course, achieving average performance amongst economies of our type implies there is room for improvement. Analysis of productivity, in particular differences at the sectoral and enterprise level, provides some guidance here.

Sectoral and Enterprise Developments

Trend improvements in productivity are necessary to sustain a desirable pace of economic growth. Indeed, much of the program of market liberalisation has been designed to secure continuing improvements in productivity. Consequently, it has been both a puzzle and a source of concern, that during much of the 1980s in Australia, labour-productivity growth was unusually slow.

Many argue that poor labour-productivity growth in the second half of the 1980s was a consequence of wage moderation. The wage pause and the Prices and Incomes Accord restrained real wages, encouraging a shift in the capital/labour ratio. While this resulted in increased employment, it lowered labour-productivity growth. But we can also throw light on this issue by decomposing the aggregate outcomes. Examination of sectors reveals substantial differences in productivity performance.

Over the course of the last business cycle, *the level* of labour productivity declined in four main industries – construction, wholesale and retail trade, finance, and recreation. These declines were offset by improvements elsewhere in the economy to generate an

overall slowdown in productivity, at least in measured productivity.

While part of the slowdown is real, part can be attributed to measurement problems. Indeed, it would be surprising if falls in actual productivity levels have occurred. There are inherent difficulties in identifying the productivity of non-market industries where it is hard to obtain the market value of output, and also of service industries where it is hard to measure the quality of output. And yet these industries comprise a large and increasing share of the economy.

Measurement problems are epitomised by the deregulation of shopping hours that occurred progressively throughout the 1980s and early 1990s. Opening shops for longer hours should hardly affect aggregate sales and hence, *measured* output. It does, however, require more staff, so measured labour and total-factor productivity growth are lower while shopping hours are being lengthened. In the meantime, though, shops have provided a new and improved service, called 'convenience', that is difficult to value. In a number of industries, these types of measurement difficulties appear to have become especially pronounced in the second half of the 1980s.

In some areas, at least, we expect measurement problems to be reduced. Consequently, measured productivity should recover. This, combined with the positive influences of market liberalisation and outward orientation, already evidenced in some sectors, gives cause for optimism that Australia's trend rate of productivity growth will be higher in future than it was in the 1980s. In fact, productivity performance at the enterprise level provides strong evidence in support of this view.

At the enterprise level there have been important changes in both attitude and the organisation of work that have delivered, and will continue to deliver, productivity improvements. Case studies indicate that the program of market liberalisation, in particular the increased exposure to international competition, has encouraged firms to focus on a range of aspects of performance. Of these,

productivity is central to the ability of firms to maintain competitiveness in both domestic and foreign markets. These developments have been complemented by the new focus of organised labour on the objectives of enterprises. Returns to labour are increasingly benchmarked against indicators of performance at the enterprise level, encouraging wage outcomes in line with productivity – a prerequisite for achieving the objectives of competitiveness and maintenance of low inflation.

Given our pursuit of sustainable growth through market-induced improvements in productivity, what lessons can be learned from the extraordinary growth achievements of East Asia?

The East-Asian Miracle

East-Asian economies have enjoyed remarkably rapid economic growth for a generation – a performance that has attracted the attention of policy makers hoping to emulate this success. For economists, the East-Asian experience presents the intellectual challenge of providing an explanation in terms of economic conditions and policies, rather than simply characterising it as 'miraculous'.

For OECD countries, growth-accounting exercises suggest that technology usually plays a larger role in the growth process than factor accumulation. This result is not so clear-cut for East-Asian countries where some have argued that growth may be 'extensive', in the sense that it reflects massive factor accumulation as resources are mobilised in a newly-industrialising society. This conclusion appears, however, to be a fragile one. The more widely-endorsed view accepts that factor accumulation has been important for East-Asian growth, but argues that technological progress has also played a key role.

Of course, forces other than factor accumulation and technology have contributed to East-Asian growth. Macroeconomic management has been

generally good and has been complemented by policies that have enhanced the integrity of the financial system. There has also been an extensive array of selective interventions designed to promote growth by encouraging certain types of economic activity, in particular investment and exports – the so-called ‘engines of growth’. Identifying the role played by policy has, however, proven difficult. To what extent would strong growth have been achieved anyway, through the ‘natural’ forces of factor accumulation, catch-up and convergence? Has economic success permitted particular policies to be pursued (e.g. with respect to saving) or did the policies generate economic success?

One way to address this issue of reverse causality is to examine the conditions prevailing at the beginning of the growth period. For example, had high rates of investment or exports preceded economic growth, it might confidently be argued that they helped cause it. In fact, high rates of investment and exports evolved only gradually, making their role in the growth process harder to interpret. Nevertheless, there are other attributes of these economies that did precede their rapid growth. As well as low initial-income levels, predisposing them to technological catch-up, East-Asian countries had less inequality of income and land distribution, and more primary education than comparable countries that were subsequently less successful. Perhaps these were important ingredients in the transition to rapid growth and technological catch-up.

The Role for Policy

It is of vital interest to economists to identify public policies that promote growth, or certainly do not inhibit it. In the Australian context, the principal focus has been on ‘getting the basics right’. With regard to microeconomics, this has entailed a program of liberalisation in both goods and factor

markets designed to encourage greater efficiency in resource use. This has already had demonstrable effects on productivity in many sectors of the economy, with tentative signs that higher aggregate productivity growth is in prospect.

While economic theories of growth offer guidance for microeconomic-policy design, they do not assign a specific role to macroeconomic policy. Nevertheless, it is hard to believe that macroeconomic policies have no influence on growth. Indeed, there is by now considerable agreement about the features of a macroeconomic environment conducive to growth: a stable and sustainable fiscal policy; an appropriate real interest rate; a competitive and predictable real exchange rate; a balance of payments that is regarded as viable; and a low and predictable inflation rate. Several of these conditions have figured prominently in public-policy debate in Australia.

A country’s fiscal position, the viability of its balance of payments and its level of national saving are all inextricably linked. In Australia’s case, national saving has fallen, both as a result of public dissaving associated with budget deficits, but also as a consequence of a decline in private saving – one that is unusual by OECD standards. If international capital flows were highly mobile, national saving would not be a constraint on investment and growth, as capital would flow from countries with excess saving to those where profitable investment opportunities exceed domestic saving. But this appears not to be the case. Owners and managers of each nation’s saving act to keep most of it at home. Consequently, if domestic saving is deficient, investment and growth are lower than they would be if capital were perfectly mobile. This suggests a need for both fiscal restraint and incentives to boost private saving.

The final ingredient of a macroeconomic environment conducive to growth is a low and predictable inflation rate. Indeed, satisfying this condition is of key concern to central banks. Higher inflation interacts with the tax system to affect saving and investment. It generates greater uncertainty about future

inflation, discouraging long-term contracting and raising risk premia on interest rates, thereby inhibiting investment. Higher inflation is also associated with more relative price variability so that price signals become more difficult to interpret and the sectoral allocation of resources is adversely affected.

In principle, each of these factors can have a causal effect on growth. The benefits of price

stability accrue only gradually, however, so that empirical estimation of the growth dividend from low inflation is confounded by a myriad of other influences. Nevertheless, the widespread concern that inflation is costly has led to endorsement of a low-inflation objective in Australia. This reflects a belief that, in the long run, the growth benefits of low inflation are worthwhile.