The resources boom and the two-speed economy

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The resources boom has prompted much discussion of Australia having become a two-speed economy. There are concerns that the gains from the boom accrue largely to mining-related sectors and the states where these are concentrated, while the rest of the country is being hit by higher interest and exchange rates as a result of the boom.

This article shows that there has been a divergence in output and employment growth between the mining states and the rest of the country in recent years. Less well recognised is that this is not a new phenomenon. Although recent growth differences have been larger than average, the mining states have generally grown faster than the rest for some time, mainly reflecting faster population growth.

Nor does the evidence support the contention that the non-mining states have largely missed out on the benefits of the boom. Recent growth in employment and real household disposable incomes in these states has been well above average. This suggests that income gains from the boom have been more widely distributed and that it has provided a stimulus to labour demand generally.

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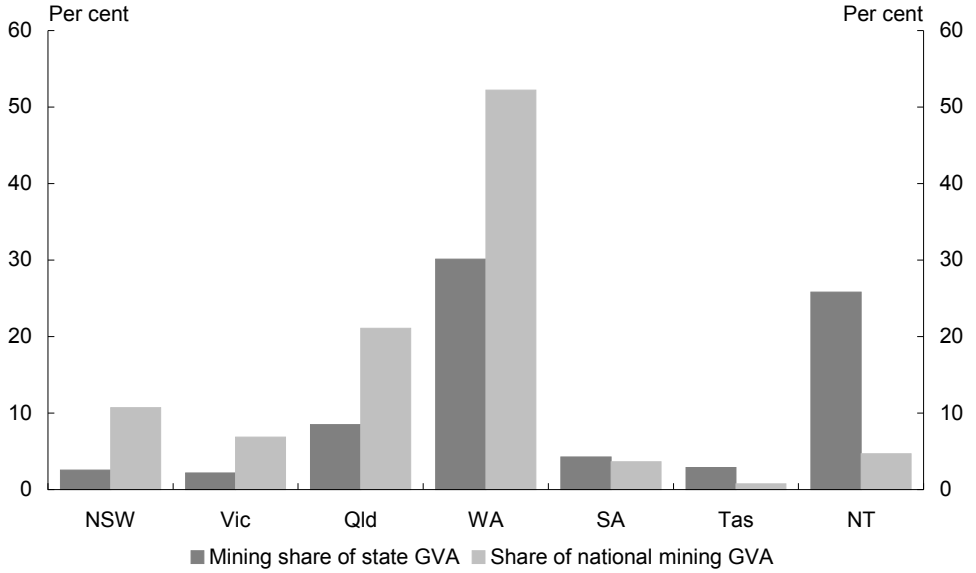
1 The author is from Domestic Economy Division, the Australian Treasury. This article has benefited from comments and suggestions provided by David Gruen. The views in this article are those of the author and not necessarily those of the Australian Treasury.

Introduction

Strong rises in non-rural commodity prices have seen Australia's terms of trade rise by almost 50 per cent since early 2004. These price rises have profound effects on the economy as they constitute both a large shift in relative prices — which induces resource movements between sectors — and a large increase in real incomes — which boosts aggregate demand.

There is a major geographic dimension to these impacts, as mining activity is a relatively larger proportion of the economies of Western Australia, the Northern Territory and Queensland (Chart 1). The boost to activity from the terms of trade is therefore stronger in these 'mining states' than in the rest of Australia.[2] To put this into national perspective, the mining states accounted for one-third of the national GDP in 2006-07, of which Queensland contributed 19 per cent and Western Australia 13 per cent. The remaining two-thirds of the economy is dominated by New South Wales (32 per cent) and Victoria (24 per cent).

Chart 1: Mining shares of gross value added at basic prices, 2006-07[(a)]



(a) Gross value added at basic prices excludes taxes less subsidies on products, which are not apportioned by industry.
Source: ABS cat. no. 5220.0.

The stimulus from the resources boom means that mining states will tend to grow faster than the non-mining states while the mining industry is expanding. Further, faster expansion of mining-related sectors and regions will attract labour and capital

2 For simplicity, this article uses the term 'states' to include the territories.

away from the rest of the economy. In a fully-employed economy, this may imply slower growth in non-mining sectors and regions (Henry 2006). In the presence of capacity constraints, the stimulus to demand from rises in the terms of trade adds to inflationary pressures, requiring some offsetting mechanism to moderate demand growth. Under the macroeconomic policy framework in operation in Australia this largely occurs through higher interest rates and a higher exchange rate.

This phenomenon of differences in state economic performance as a result of the resources boom has been characterised as a 'two-speed economy'. The purpose of this article is to examine the evidence with respect to three key questions.

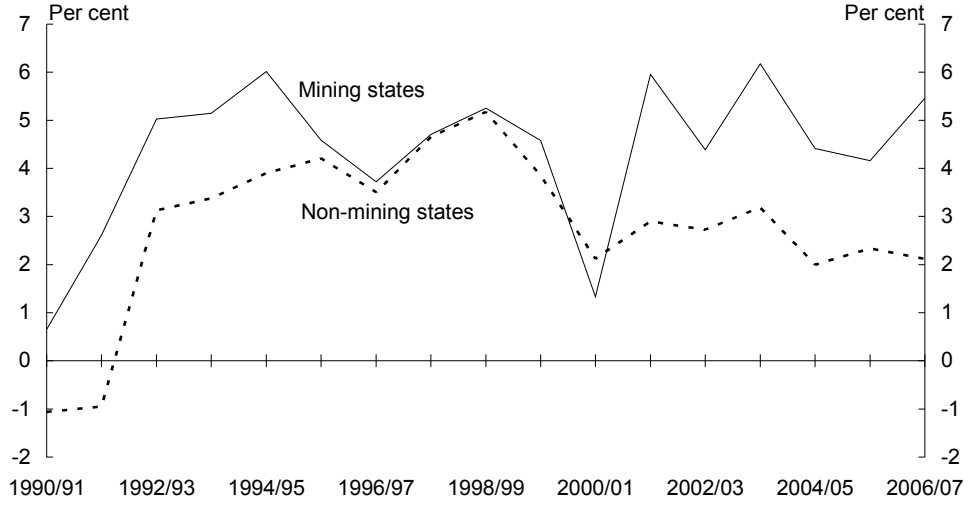
- Has the recent resources boom been associated with widening differences in economic performance between the states?
- Has recent economic performance in the non-mining states weakened in absolute terms?
- How have differences in economic performance translated into differences in average income growth between states?

Have recent differences in state economic performance been unusually large?

Much of the recent commentary on the two-speed economy assumes that recent differences in state economic performance have been unusually large. Chart 2 shows that while output growth in the mining states has been faster than in the non-mining states since the resources boom commenced in early 2004, such gaps are not unusual.[3] Apart from the period 1996-97 to 2000-01, the mining states have grown significantly faster than the rest since 1989-90 (the period for which data are available). Nor has recent output growth in the mining states been unusually fast in absolute terms.

3 Mining and non-mining state growth data presented in this article are weighted averages, which reflect the relative economic size of each state. Mining states are Queensland, Western Australia and the Northern Territory.

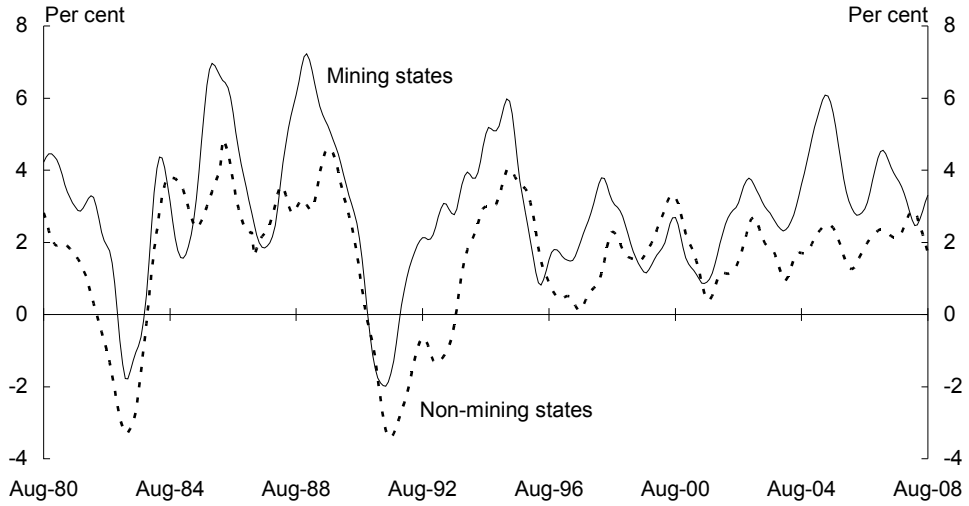
Chart 2: Gross state product growth



Source: ABS cat. no. 5220.0.

A comparison of employment growth, which is available over a longer time period, also indicates that faster growth in the mining states has been the norm (Chart 3). There was a large gap in employment growth in the initial stages of the current resources boom, although gaps of this size have also been seen on a number of previous occasions.

Chart 3: Employment growth (trend, through the year)

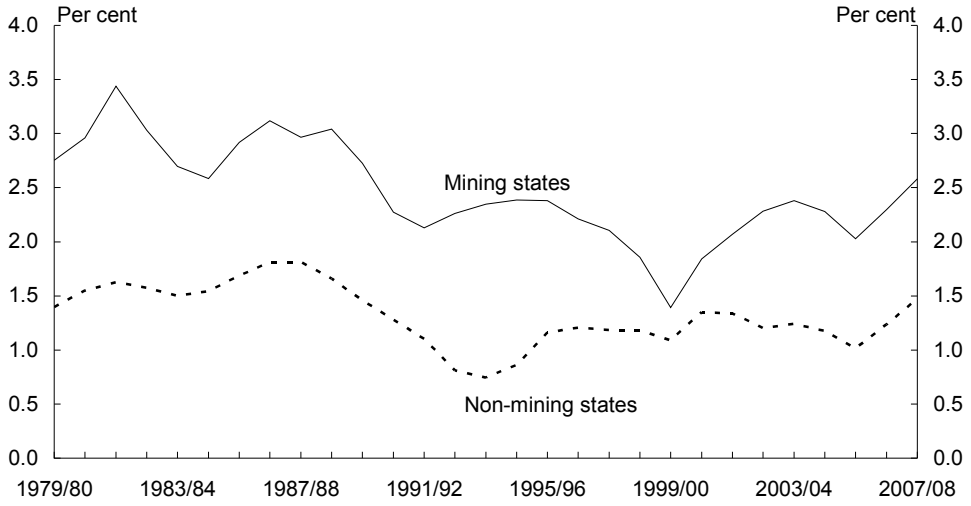


Source: ABS cat. no. 6202.0.

These data suggest that the two-speed economy is not a new phenomenon. Chart 4 shows that these long-running differences between mining and non-mining state growth can be attributed largely to faster population growth in the mining states.

The resources boom does not appear to have had any noticeable effect on relative population growth: in fact, recent differences have been smaller than those seen up to the mid-1990s.

Chart 4: Growth of civilian population aged 15 and over



Source: ABS cat. no. 6202.0.

How has the resources boom affected output and employment growth in mining and non-mining states?

If differences in state growth performance are not a new phenomenon, have they been widened by the resources boom? To help answer this question, Table 1 compares average growth rates for key economic variables over the period since 2003-04 with those over the period 1990-91 to 2003-04. The earlier period provides a reasonable benchmark for normal performance as both mining and non-mining states had employment to population ratios in 2003-04 that were close to those in 1989-90. This means that average performance is not affected by differences in capacity utilisation between the start and end of the period.

Table 1: Mining and non-mining state output and employment growth

	Average growth 1990-91 to 2003-04 (per cent)	Average growth since 2003-04(a) (per cent)	Difference between periods (per cent)
Mining states			
Gross state product	4.3	4.7	0.4
Population	1.9	2.2	0.2
GSP per head	2.3	2.5	0.2
Employment	2.2	3.9	1.7
State final demand	4.1	7.3	3.1
Non-mining states			
Gross state product	2.9	2.2	-0.7
Population	0.9	1.0	0.1
GSP per head	2.0	1.1	-0.9
Employment	1.2	2.1	0.9
State final demand	3.2	3.1	-0.1
Mining/non-mining state gap			
Gross state product	1.4	2.5	1.1
Population	1.0	1.1	0.1
GSP per head	0.4	1.4	1.0
Employment	1.0	1.8	0.8
State final demand	0.9	4.2	3.3

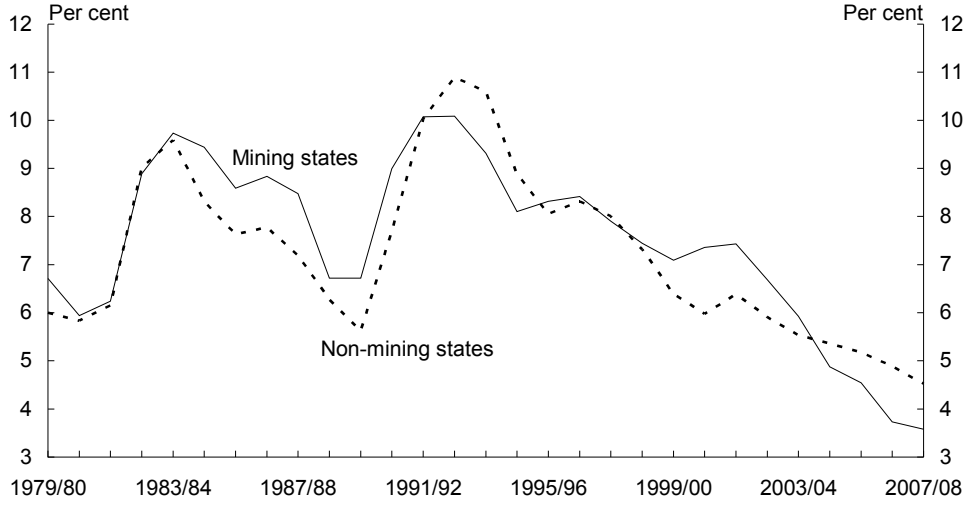
(a) Averages to 2007-08 for employment and to 2006-07 for other variables.
Sources: ABS cat. nos. 5202.0 and 6202.0.

Before the resources boom, average annual GSP growth in the mining states was around 1½ percentage points faster than in the rest of Australia, while average employment growth was 1 percentage point faster. These differences largely reflect population growth being about 1 percentage point higher in the mining states. On a per head basis, GSP growth was less than ½ of a percentage point faster in the mining states than elsewhere.

As we would expect, the resources boom has provided a greater stimulus to activity in the mining states than elsewhere. Since 2003-04, the average gaps between mining and non-mining states' growth in output and employment have been around 1 percentage point wider than previously. GSP and employment have grown about twice as fast in the mining states as in the non-mining states over this period.

An important consequence of this stronger employment growth has been to reverse the experience of the previous quarter-century in which mining states generally had higher rates of unemployment than the rest of Australia (Chart 5). The unemployment rate in the mining states has fallen to around 1 percentage point below the unemployment rate in the rest of Australia.

Chart 5: Unemployment rates



Source: ABS cat. no. 6202.0.

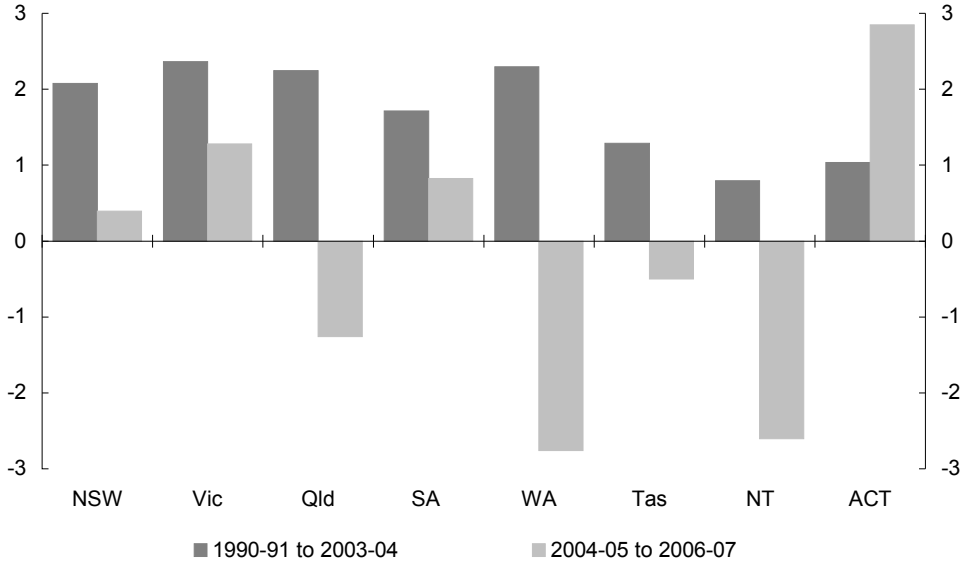
Another notable development shown in Table 1 is that final demand growth in the mining states in the recent period has increased far more than output growth. In other words, most of the increase in demand growth from these states has been met from interstate or overseas production. One reason for this is that capital goods used in the mining industry, whose investment has been a key driver of increased demand growth, are largely produced elsewhere. In addition, with unemployment falling to very low rates, capacity to meet increased demand from local production has been constrained.

Has recent economic performance in the non-mining states slowed in absolute terms? Table 1 shows that recent GSP growth in the non-mining states has been about ¾ of a percentage point slower than previously, while final demand has grown at around its previous average rate. Notwithstanding this, recent labour market performance in the non-mining states has been stronger than previously. Employment growth in the non-mining states has been almost 1 percentage point faster than the previous average. This has been associated with a fall in the unemployment rate in these states of around 1 percentage point since 2003-04 (Chart 5).

This raises the question of why employment growth in the non-mining states has been so strong when GSP growth has moderated, implying that the second-round effects of strong mining-related activity and incomes on demand for goods and services produced in the non-mining states have been more than offset by other factors. These other factors would include higher interest and exchange rates and the post-2003 housing market correction, which particularly affected New South Wales.

A possible explanation may be found in the general slowing in producer real wage growth in the non-mining states since 2003-04 (Chart 6).[4] This observation appears consistent with the Stolper-Samuelson theorem, which suggests that rising resources prices will put general downward pressure on producer real wages when the economy is at full employment.[5] If wages grow more slowly relative to output prices, employers have an incentive to employ labour more intensively than otherwise, so that labour demand grows more strongly than output.

Chart 6: Annual growth in producer real wages (period average)[(a)]



(a) Producer real wage is calculated as the ratio of average weekly ordinary-time earnings for full-time adults to the implicit GSP price deflator.
Source: ABS cat. nos. 5220.0 and 6302.0 and author's calculation.

This suggests that the resources boom has benefited workers in non-mining states by boosting demand for labour across the country, reducing unemployment rates more quickly than would have occurred otherwise. However, this absorption of unemployed labour means that these high rates of employment growth are unlikely to be sustainable into the future. Unless growth in labour supply can be boosted, any future divergence between employment growth in the mining and non-mining states is more likely to be associated with below-trend growth in the latter.

4 The producer real wage is the nominal wage deflated by output prices, whereas the standard consumer real wage measure is the nominal wage deflated by consumer prices. Rises in export prices cause output prices to grow faster than consumer prices. As a result, producer real wages fall relative to consumer real wages. Hence, a fall in producer real wages need not imply a fall in consumer real wages.

5 See Henry 2006 for a more detailed explanation.

How has the resources boom affected income growth in mining and non-mining states?

Comparisons of output growth may not provide a good indication of the effects of the resources boom on living standards, as rises in the terms of trade cause incomes to grow faster than output. Table 2 shows that the gap between mining and non-mining states in real gross domestic income (GDI) growth in recent years has been much wider than the gap in output growth. GDI is total income derived from economic activity located within a state, which captures the effects of output price changes on incomes.

Table 2: Mining and non-mining state income growth and inflation

	Average growth 1990-91 to 2003-04 (per cent)	Average growth since 2003-04(a) (per cent)	Difference between periods (per cent)
Mining states			
Real gross domestic income per head	2.4	6.1	3.7
Real household disposable income per head	1.4	3.2	1.8
CPI	2.6	3.5	0.9
Non-mining states			
Real gross domestic income per head	2.9	2.0	-1.0
Real household disposable income per head	1.0	2.4	1.4
CPI	2.6	2.8	0.2
Mining/non-mining state gap			
Real gross domestic income per head	-0.6	4.1	4.7
Real household disposable income per head	0.4	0.7	0.3
CPI	-0.1	0.7	0.7

(a) Averages to 2007-08 for CPI inflation and to 2006-07 for other variables.
Sources: ABS cat. nos. 5202.0 and 6302.0 and author's calculation.

This does not imply that higher income growth has gone only to mining state residents. GDI does not distinguish income recipients according to residency. Growth in real household disposable incomes provides a better indication of the extent to which income gains have gone to mining state residents. On this measure, the gap between growth in household incomes in mining and non-mining states has widened only slightly in the recent period. Further, households in the non-mining states have also enjoyed significantly faster growth in real disposable incomes than in the past.

This suggests that the income gains from the resources boom have been spread much more widely than the states in which mining is concentrated. Further, average gains to households in the mining states have not been exceptionally large. There are a number of reasons for this.

First, a substantial share of the increased mining company profits reflected in GDI growth has accrued to foreign shareholders. A comparison of increases in GDI — income derived from economic activity within Australia — and gross national income

(GNI) — income accruing to Australian residents — suggests that around 30 per cent of the income gains from the terms of trade rise over the past four years may have gone to foreign residents.[6]

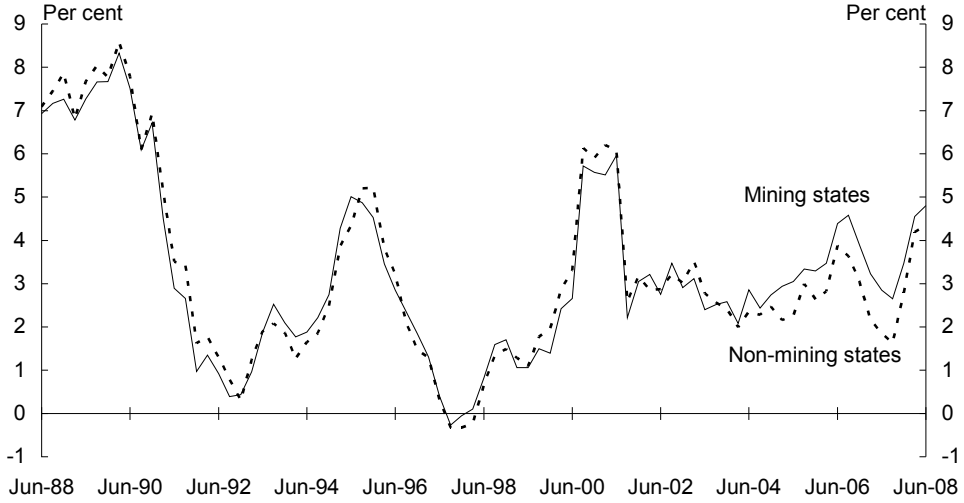
Second, Australian shareholdings in mining companies — including indirect holdings through superannuation and other investment funds — are spread across the states. As the non-mining states account for nearly 70 per cent of the Australian population, most of the increased profits accruing to Australian shareholders are likely to have gone to residents of these states.

Third, a substantial proportion of increased mining-related incomes has accrued to the Commonwealth Government through increased company income and other tax revenues. Treasury estimates that around one-third of the additional national income attributable to the resources boom has gone to Commonwealth tax revenues (Commonwealth of Australia 2008). These increased revenues have financed personal income tax reductions and increases in government benefits to households.

Finally, the resources boom has seen an unusually large divergence between state inflation rates (Chart 7). Inflation in the mining states has averaged around ¾ of a percentage point higher than elsewhere since 2003-04, although the gap has narrowed more recently as inflation has picked up in the non-mining states. Inflation has been higher in the mining states because these have been the regions where demand growth has been strongest and pressures on capacity have been greatest. This higher inflation has offset around ⅓ of the additional income growth that would otherwise have accrued to mining state residents.

6 This calculation assumes that GDI and GNI would have grown in line with GDP in the counterfactual. The total income gain is the difference between actual and counterfactual growth in GDI over the past four years. The income gain to Australian residents is the difference between actual and counterfactual growth in GNI. The estimated income gain to foreign residents is the difference between these two estimates.

Chart 7: Headline Consumer Price Index inflation (through the year)[(a)]

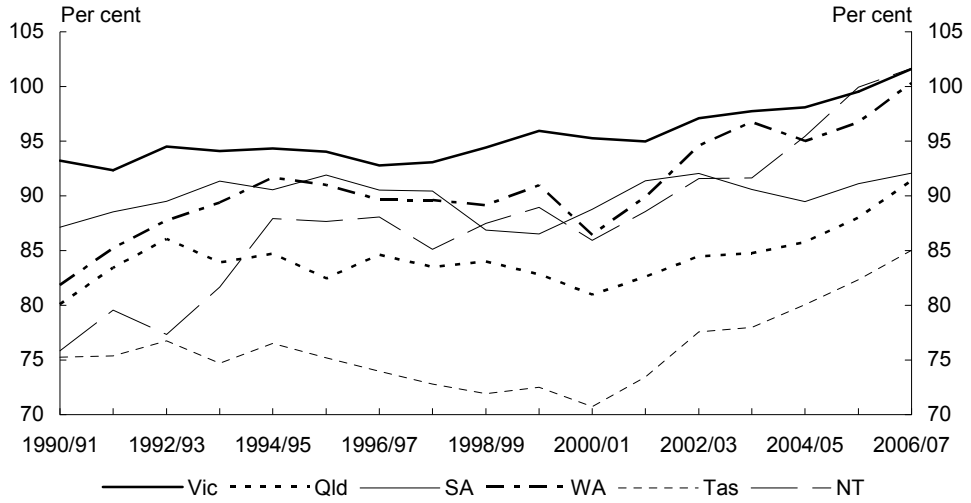


(a) Price indexes constructed using current capital city CPI weights.
Source: ABS cat. no. 6401.0.

It is also useful to consider relative state household income levels. Chart 8 shows that residents of the key non-mining states, New South Wales and Victoria, have until recently had higher average incomes than the rest of the country (excepting the Australian Capital Territory).[7] Income levels in Western Australia and the Northern Territory have recently caught up with those in New South Wales and Victoria. However, the convergence of income levels in other states toward New South Wales levels has been a long-running trend. The resources boom does not appear to have had much impact on this trend.

7 This comparison is based on nominal income levels. Comparison of real income levels is not feasible because consumer price data by state are only available in index terms. Deflating nominal incomes using price indices allows us to compare real income growth between states, but not real income levels. Given the higher inflation rates in mining states since 2003-04, relative real incomes in these states in recent years will have grown less than relative nominal incomes.

Chart 8: Household disposable income per head (proportion of NSW level)



Source: ABS cat. no. 5202.0.

Conclusions

Many of the concerns expressed about Australia having become a two-speed economy are premised on the view that differences in state economic performance during the resources boom have been unusually large and that the gains arising from growth in mining-related activity and incomes are narrowly concentrated.

In fact, Australia has long been a two-speed economy as a result of higher population growth in the mining states. Differences in state employment and output growth have been larger than average in recent years, but by no means exceptional.

While recent output growth in the non-mining states has been slower than average, growth in employment and real household disposable incomes has been significantly faster. This suggests that the benefits of the resources boom have spread well beyond the sectors and regions most closely linked with the mining sector.

Average real income gains to mining state residents appear to have been only moderately greater than those accruing to residents of other states. Much of the surge in mining-related incomes has been distributed elsewhere through mining company shareholdings and increased Commonwealth tax revenues. Mining state residents' income gains have been also been eroded by relatively higher inflation.

References

Commonwealth of Australia 2008, Budget Paper No. 1, *Budget Strategy and Outlook 2008-09*.

Henry, K 2006, 'The Fiscal and Economic Outlook', address to the Australian Business Economists, 16 May.