

## WHY SYDNEY KEEPS GROWING -- TRENDS IN POPULATION DISTRIBUTION IN NEW SOUTH WALES, 1991 TO 1996

By Shane Nugent

*During the late 1980s, many overseas immigrants settled in Sydney. This maintained the city's population growth despite high levels of out-migration. In the early 1990s overseas migration eased but, between 1991 and 1996, Sydney's growth remained constant and its share of the population of New South Wales increased. This development was unexpected but it can be explained by fewer people leaving Sydney, by young adults moving into Sydney from other areas in the State and by net migration losses from inland New South Wales to other States (especially Queensland).*

### INTRODUCTION

The release of population estimates based on the 1996 Census showed a surprising result for New South Wales -- Sydney's share of the State's population increased, reversing the trend of the late 1980s. This trend was surprising because it was not reflected in intercensal population estimates published before the 1996 Census results were available, and because it occurred despite a drop in overseas migration, where Sydney is the major destination.

This paper uses unpublished internal migration data from the 1996 Census to explore the factors underlying this increased concentration of population in Sydney.

### POPULATION GROWTH IN NEW SOUTH WALES

The population of New South Wales increased from 5.9 million at June 1991 to 6.2 million at June 1996, an average annual increase of 1.02 per cent.<sup>1</sup> This was slightly lower than the average annual growth rate of 1.29 per cent in the 1986 to 1991 period.

As Table 1 shows, this slower growth was due to lower overseas migration, partially offset by smaller losses from interstate migration.

**Table 1: Components of population growth, NSW, 1986-91 and 1991-96**

Component	1986-91	1991-96	Change
Net overseas migration	265,500	149,700	-115,800
Net interstate migration	-114,000	-71,800	+42,300
Natural increase	216,600	219,000	+2,400
Total increase*	367,200	306,000	-61,200

\* Total includes intercensal discrepancy.

Sources: *Australian Demographic Statistics, December Quarter 1992 and June Quarter 1997*, Cat. No. 3101.0

## METROPOLITAN SHARE OF POPULATION

Writing in 1986, but referring to 1981 Australian Census data, Graeme Hugo wrote that 'internal migration patterns between metropolitan and non-metropolitan areas have changed significantly in the last decade and it is difficult to state with any confidence whether these tendencies will continue'.<sup>2</sup>

In New South Wales this lack of confidence in future trends has been justified. As shown in Table 2, Sydney's share of the State's population increased from 1981 to 1986, then fell between 1986 and 1991.

<b>Table 2: Metropolitan share of NSW population, 1981 to 1996 (percentages)</b>				
	1981	1986	1991	1996
Sydney SD	62.6	62.8	62.3	62.6
Rest of NSW	37.4	37.2	37.7	37.4
Total NSW	100.0	100.0	100.0	100.0

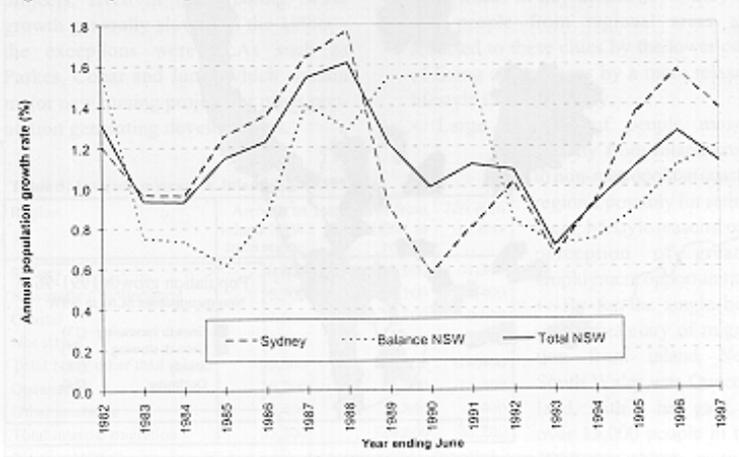
Sources: Australian Bureau of Statistics, *Regional Population Growth, Australia 1996-97*, Cat. No. 3218.0; *Estimated Resident Population and Components of Change in Population of Statistical Local Areas, New South Wales, 1986 to 1991*, Cat. No. 3208.1; *Regional Population Growth, Australia 1996-97*, ABS Cat. No. 3218.0

Intercensal population estimates between 1991 and 1996 showed that Sydney's share of the State's population continued to decline. However the 1996 Census showed that Sydney's share of the New South Wales population had in fact increased over the 1991 to 1996 period. While the changes in the share of the total seem marginal, they reflect large changes in population growth rates, as shown in Table 3 and Figure 1.

<b>Table 3: Average annual population growth rate, Sydney and NSW balance, 1981 to 1996 (percentages)</b>			
	1981-86	1986-91	1991-96
Sydney SD	1.14	1.13	1.11
Rest of NSW	0.91	1.46	0.86
Total NSW	1.11	1.29	1.02

Sources: See Table 2

Figure 1: Population growth rate, Sydney and NSW balance, 1981 to 1986



Source: See Table 2

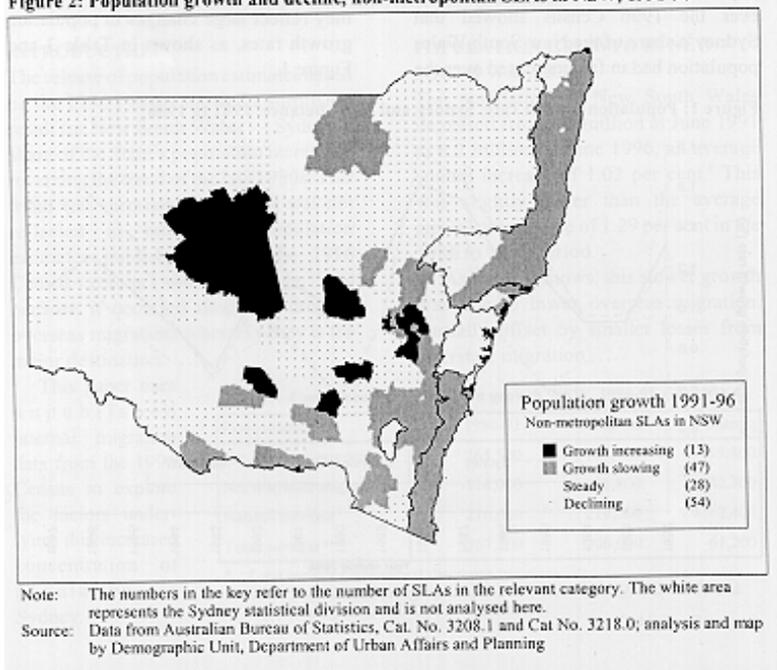
The increase in Sydney's share of the State's population in the 1991 to 1996 period is particularly surprising when the components of population growth are examined (see Table 1). Census data show that almost 90 per cent of overseas migration is to Sydney. Thus it would be expected that the impact of lower overseas migration to New South Wales would be reflected largely in Sydney. However, the reverse was true. While Sydney's average annual growth rate remained constant at about 1.1 per cent, the growth rate in the remainder of the State almost halved from 1.5 per cent to 0.9 per cent.

The following sections further explore population growth patterns in New South Wales (NSW), seeking possible factors underlying this unexpected centralisation of population growth in Sydney.

## INLAND VERSUS COAST -- POPULATION TRENDS IN NON-METROPOLITAN NSW

Population growth patterns in non-metropolitan New South Wales between 1991 and 1996 were not uniform. As shown in Figure 2, there is a continuous strip of population growth along the entire coast. Growth rates in coastal areas were generally quite high. However, virtually all growing coastal Statistical Local Areas (SLAs) had considerably slower growth rates in the 1991 to 1996 period than in the previous five years (the only exception being Shellharbour, part of the Wollongong urban area). With the exception of Tweed Part A (Tweed Heads), the absolute population growth was also lower.

Figure 2: Population growth and decline, non-metropolitan SLAs in NSW, 1991-96



As Table 4 shows, the average population growth rate in coastal areas of the State fell significantly in the 1991 to 1996 period to 1.87 per cent. While still a high growth rate, it is well below the average of over 3 per cent through the 1980s.

**Table 4: Average annual population growth rate, non-metropolitan NSW, 1981 to 1996 (percentages)**

	1981-86	1986-91	1991-96
Inland	0.29	0.63	0.03
Coastal	2.99	3.21	1.87
Newcastle and Wollongong	0.47	1.19	0.83
Total Non -Metropolitan	1.02	1.51	0.81

Sources: See Table 2

In inland New South Wales the population of most SLAs fell in the 1991 to 1996 period. Overall population growth fell to only 0.03 per cent. Growth was limited to the major regional centres such as Dubbo and Wagga Wagga, the Central West region (which is relatively close to Sydney), the ACT sub-region, a strip of SLAs along the Murray River and the Murrumbidgee Irrigation Area, and a few SLAs where growth was attracted by specific projects, generally new mining projects. Even in the growing SLAs growth generally slowed in the 1990s - the exceptions were SLAs such as Parkes, Cobar and Junee which contain major new mining projects or other population generating developments.

### Migration patterns--inland NSW

Internal migration data from the 1996 Census provide a valuable resource to further explore population losses from inland areas of the State. Table 5 shows internal migration from inland New South Wales for the period 1991 to 1996 for the population aged 5 years and over. (See note at the end of this paper for the definition of 'inland' NSW and other

geographic terms.) It should be noted that this is census count data and therefore is not fully comparable with the estimated resident population data cited previously in this paper.

Region	Arrivals to inland NSW from region	Departures from inland NSW to region	Net gain or loss
Sydney	30,600	31,900	-1,300
Newcastle / Wollongong	6,700	10,100	-3,400
Coastal	12,500	22,100	-9,600
Not stated	1,000	1,100	-100
Total NSW other than inland	50,800	65,200	-14,400
Queensland	10,200	25,600	-15,400
Other interstate	32,400	35,800	-3,400
Total internal migration	93,300	126,600	-33,200

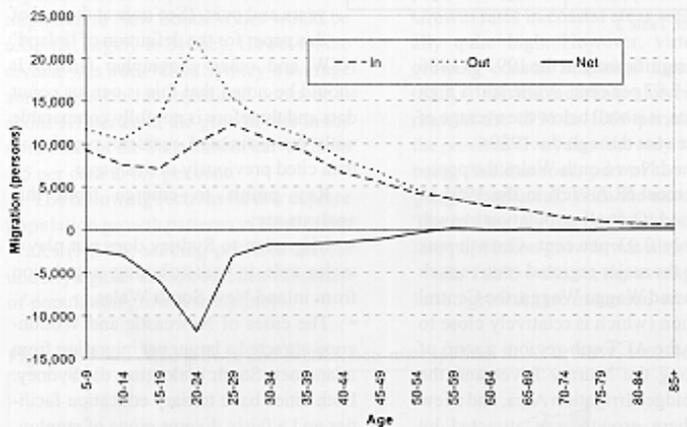
Source: 1996 Census, unpublished internal migration table, compiled for the NSW Department of Urban Affairs and Planning (migration by age by SLA, NSW, 1991-96)

Key points to emerge from this analysis are:

- Migration to Sydney does not play a major role in redistributing population from inland New South Wales.
- The cities of Newcastle and Wollongong attracted a larger net migration from inland new South Wales than did Sydney. Both cities have tertiary education facilities and a fairly diverse range of employment opportunities despite recent employment losses in key industries. It may be that people from regional areas are attracted to these cities by the lower cost of living and perhaps by a more relaxed lifestyle than in Sydney.
- Large numbers of people moved directly from inland areas to non-metropolitan coastal regions, possibly for retirement, lifestyle reasons, or a perception of greater employment opportunities.
- By far the single biggest beneficiary of migration from inland New South Wales was Queensland, with a net gain of over 15,000 people in the 1991 to 1996 period. While much of this migration was from the New England region, parts of which are closer to Brisbane than to Sydney, all inland parts of the State lost people to Queensland.

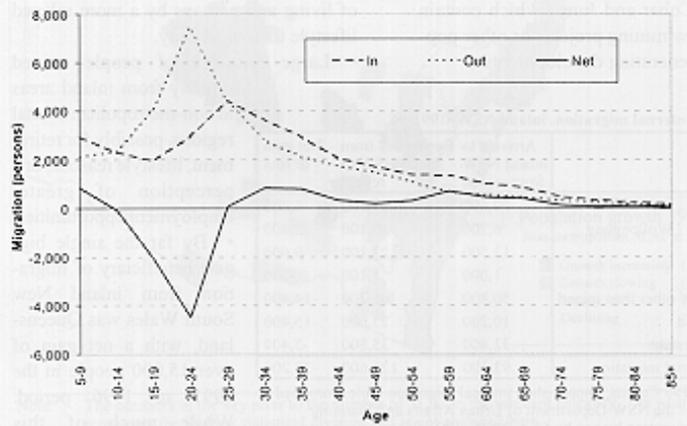
This aggregate analysis hides some important differences between age groups. As shown in Figure 3, the largest out migration, and net migration loss, was of those aged 20 to 24 at the time of the census. This indicates that young people are leaving inland areas seeking tertiary education or employment. While this loss was partly offset by a peak in inward migration to the inland in the 25 to 29 years age group, the overall pattern is one of net internal migration losses in all age groups.

Figure 3: Age profile of internal migration, inland NSW, 1991-96



Source: See Table 5.

Figure 4: Age profile of internal migration, inland NSW to Sydney, 1991-96



Source: See Table 5.

While aggregate net migration from inland New South Wales to Sydney is close to zero, inland areas also lose large numbers of young people to Sydney. This is shown in Figure 4. The pattern is similar to that for all migration, with an even more pronounced peak at ages 20 to 24. With the exception of ages 15 to 24, inland areas had a small net migration gain from Sydney in all other age groups.

### Migration patterns -- Non-metropolitan coastal NSW

The pattern of internal migration to non-metropolitan coastal areas of New South Wales, as revealed by the 1996 Census, is quite different to that for the inland, as shown in Table 6.

Table 6: Internal migration, non-metropolitan coastal NSW, 1991 to 1996			
Region	Arrivals to non-metropolitan coastal NSW from region	Departures from non-metropolitan coastal NSW to region	Net gain or loss
Sydney	52,500	25,000	27,600
Newcastle/Wollongong	12,800	12,000	800
Inland	22,100	12,500	9,600
Not stated	1,000	1,000	100

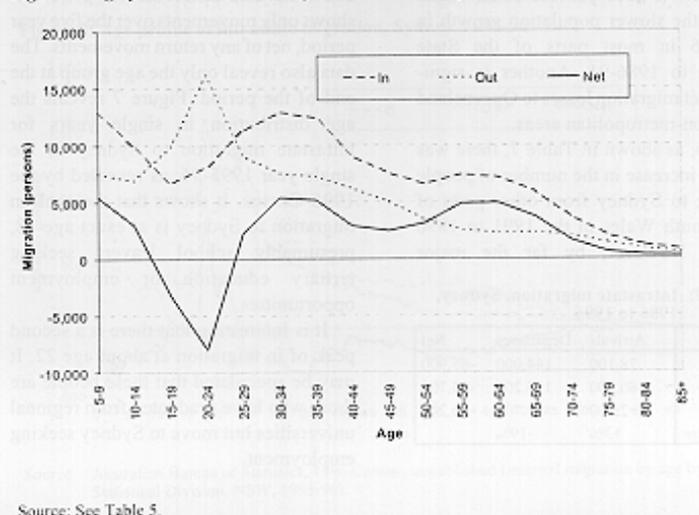
Total NSW apart from non-metropolitan coastal	88,400	50,400	38,000
Queensland	16,100	26,200	-10,000
Other interstate	20,400	13,900	6,500
Total internal migration	125,000	105,200	34,500
Source: See Table 5.			

Key points in relation to migration to non-metropolitan coastal New South Wales are:

- Large net migration flows from both Sydney and inland New South Wales.
- A large net outward migration to Queensland. While much of this was from far north coast SLAs, which are closer to Brisbane than to Sydney, virtually all coastal SLAs lost population to Queensland.
- Net inflows from other States, mostly from Victoria and the Australian Capital Territory, and mostly but not exclusively to the south coast.

While coastal areas of the State experienced an overall net migration gain, there are major variations between age groups, as shown in Figure 5. Between 1991 and 1996 there were major migration losses in the 20 to 24 years age group, with smaller net losses in the 15 to 19 years group. All other age groups experienced net internal migration gains. The peaks in net migration gains were in the 30 to 39 years age groups and in those aged 55 to 64, around retirement age.

Figure 5: Age profile of internal migration, non-metropolitan coastal NSW, 1991-96



## MIGRATION TO AND FROM SYDNEY

While the above analysis provides an insight into patterns of population movement in New South Wales in the 1991 to 1996 period, it does not answer the question as to why Sydney's share of the State's population increased in the 1990s. However, it does provide some clues. One is the slower population growth in 1991-96 in most parts of the State relative to 1986-91. Another is significant net migration losses to Queensland from non-metropolitan areas.

Also, as shown in Table 7, there was a small increase in the number of people moving to Sydney from other parts of New South Wales in the 1991 to 1996 period. However, by far the major contributor to Sydney's gain relative to the rest of the State was the significant decrease in Sydney's net intrastate migration loss. This was a 19 per cent smaller between 1991 and 1996 than between 1986 and 1991.

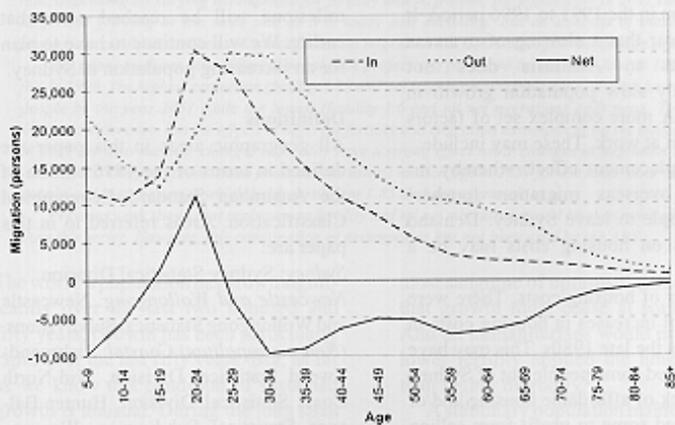
<b>Table 7: Intrastate migration, Sydney, 1986 to 1996</b>			
	Arrivals	Departures	Net
1986-91	78,100	144,000	-65,900
1991-96	80,500	116,200	-35,700
Change	+2,500	-27,700	+30,200
% Change	+3%	-19%	

This pattern of lower migration from Sydney was restricted to coastal areas. In fact the number of people moving from Sydney to the inland increased marginally, although it was outweighed by more people moving from inland areas to Sydney.

As with the discussion of regional migration patterns above, the aggregate intrastate migration data for Sydney hide significant variations among age groups. Figure 6, which shows the 1996 age distribution of migrants in the 1991 to 1996 period, shows that the peak of both in-migration to Sydney and net migration was in the 20 to 24 years age group. Apart from a small positive flow in the 15 to 19 years group, Sydney lost people to other parts of the State in all other age groups.

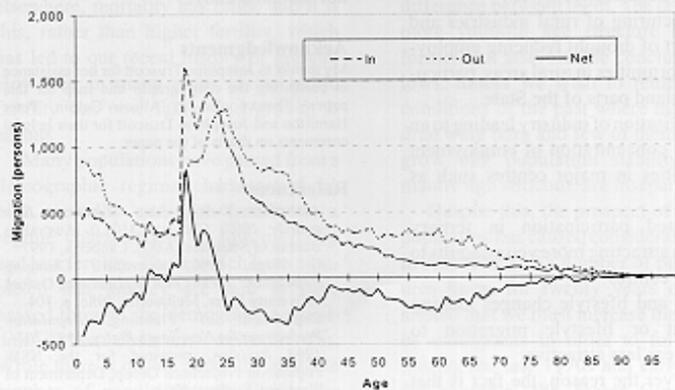
The five-year migration data reported above can also distort the true picture. It shows only movements over the five year period, net of any return movements. The data also reveal only the age group at the end of the period. Figure 7 reveals the age distribution in single years for intrastate migration to Sydney in the single year 1995-96, as revealed by the 1996 Census. It shows that the peak in migration to Sydney is at exact age 18, presumably school leavers seeking tertiary education or employment opportunities.

Figure 6: Age profile of internal migration to Sydney, 1991-96



Source: See Table 5.

Figure 7: Age profile of intrastate migration, Sydney, 1995-96



Source: Australian Bureau of Statistics, 1996 Census, unpublished (internal migration by age by Statistical Division, NSW, 1995-96)

It is interesting that there is a second peak of in migration at about age 22. It may be speculated that these people are those who have graduated from regional universities but move to Sydney seeking employment.

The migration data show that much of Sydney's population growth stems from attracting an increasing number of young adults from regional areas of New South Wales.

In summary, the main reason for Sydney's continued population growth in the 1991 to 1996 period was fewer people leaving Sydney for other parts of the State. There were also slightly more people from other areas moving to Sydney. However, these aggregate figures mask more significant flows in certain age groups. In particular, there is a large and accelerating movement of young adults from all parts of New South Wales to Sydney.

## IMPLICATIONS FOR THE GROWTH OF SYDNEY

The above analysis provides some clues about the factors underlying Sydney's increased share of the New South Wales population in the 1991 to 1996 period. It seems clear that a slowing of overseas migration to Australia does not necessarily slow population growth in Sydney. A more complex set of factors have been at work. These may include:

- A displacement effect, whereby increased overseas migration 'pushes' more people to leave Sydney. Demand pressures on housing costs may be a factor.

- Impact of housing costs. There were significant increases in housing costs in Sydney in the late 1980s. This may have either forced some people out of Sydney due to lack of affordable housing and/or encouraged some to profit from selling their Sydney house to move elsewhere for lifestyle reasons. House price increases in Sydney in the 1990s have generally been much slower.
- Restructuring of rural industries and the impact of drought reducing employment opportunities in rural areas, particularly in inland parts of the State.
- Globalisation of industry leading to an increased concentration of employment opportunities in major centres such as Sydney.
- Increased participation in tertiary education attracting more young adults to the major centres.
- Social and lifestyle changes making retirement or lifestyle migration to coastal areas less attractive.

Whatever the reason, the fact is that Sydney is continuing to grow despite a slowing of overseas migration. Over the past decade or more, strategic metropolitan planning for Sydney has been based on the expectation that 4.5 million will need to be accommodated in the foreseeable future. The most recent published projections show that this would be about 2021.<sup>3</sup> The evidence from the 1996 Census suggests that this milestone will be reached somewhat earlier. We will continue to have to plan for an increasing population in Sydney.

## Definitions

All geographic areas in this paper are defined in terms of the 1996 edition of the Australian Standard Geographical Classification. Areas referred to in this paper are:

*Sydney*: Sydney Statistical Division.

*Newcastle and Wollongong*: Newcastle and Wollongong Statistical Subdivisions.

*(Non-metropolitan) Coastal*: Richmond-Tweed Statistical Division, Mid-North Coast Statistical Division, Hunter Balance Statistical Subdivision, Illawarra Balance Statistical Subdivision, Lower South Coast Statistical Subdivision.

*Inland*: All areas of New South Wales not included above.

## Acknowledgments

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## References

<sup>1</sup> *Australian Demographic Statistics, June quarter 1997*, Cat. no. 3101.0, Australian Bureau of Statistics (ABS), Canberra, 1997

<sup>2</sup> G. Hugo, 1986, *Australia's Changing Population: Trends and Implications*, Oxford University Press, Melbourne, 1986, p. 304

<sup>3</sup> Department of Planning, *Population Projections for New South Wales, 1991-2021, 1994 Revision*, prepared for the NSW Population Projections Group, Department of Planning, Sydney, 1994 <sup>4</sup> *Population Projections for Queensland*, Queensland Department of

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<sup>5</sup> R. A. Barker, 'Interstate migration to South-East Queensland: an analysis', *People and Place*, vol. 1 no. 4, 1993, pp. 30 - 37

<sup>6</sup> *ibid.*

<sup>7</sup> *ibid.*

<sup>8</sup> M. J. Bell, *Internal Migration in Australia 1981-1986*, Australian Government Publishing Service (AGPS), Canberra, 1992; M. J. Bell, *Internal Migration in Australia 1991-1996*, AGPS, Canberra, 1992

<sup>9</sup> *1995 Queensland Migration Survey*, Queensland Government Statistician's Office, Brisbane, 1996

<sup>10</sup> Queensland Treasury, 'An Economic Model of Interstate Migration', *Queensland Economic Review*, Winter, 1998, pp. 28-31

<sup>11</sup> *Australian Demographics Statistics*, ABS, cat. no. 3101.0 (various issues)

<sup>12</sup> P. Brain (Executive Director National Institute of Economic and Industry Research), Address to a forum on 'Medium Term Outlook and the Strategies for South-East Queensland', Brisbane, 3 September 1998

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