

# **COMMONWEALTH GRANTS COMMISSION**

**DISCUSSION PAPER CGC 2001/5**

## **TRENDS IN EQUALISATION**

**PRIORITY ISSUES CONFERENCE**

**CANBERRA**

**28 SEPTEMBER 2001**

AUGUST 2001

# TRENDS IN EQUALISATION

## DISCUSSION PAPER CGC 2001/5

### CONTENTS

#### *Section*

Introduction	2
Changes in State Grants	2
Changes in Grant Shares	3
Changes in Population Shares	5
Changes in Relativities	7
Explanation of Changes in State Grants for Each State	10
Extent of Redistribution	12
Conclusion	13

#### *Attachment*

A	Charts showing each State's population share, relativity share and grants share since 1981-82	15
---	---	----

## INTRODUCTION

1. The Commission's relativities, calculated on the basis of the principle of Horizontal Fiscal Equalisation (HFE), have been used to distribute untied revenue<sup>1</sup> among the States and included Territories<sup>2</sup> for twenty years. Over that period, State grants have changed in response to changes in their population, fiscal circumstances and the amount of Commonwealth funds to be distributed.

2. In recent times, some concerns have been expressed about increases in the redistribution that is occurring between the States — the extent to which States receive more (or less) than an equal per capita share of untied revenue. This paper presents some information on the changes in grants and the extent of grants redistribution over the last twenty years.

## CHANGES IN STATE GRANTS

3. A State's grant depends on:

- (i) its share of the Australian population;
- (ii) the way its economic, social, demographic and physical circumstances impact on its fiscal circumstances; and
- (iii) the amount of untied revenue to be distributed (the pool).

4. Generally speaking, as the amount of revenue to be shared among the States has increased over time, all State grants have increased. The grant share a State receives would stay the same proportion of the pool if both its population share and its relativity remained constant.

5. Much of the analysis in this paper has been done in terms of State shares of untied revenue because shares are not influenced by the size of the pool.

6. A State's grant share depends on its population share and its relativity calculated by the Commission<sup>3</sup>. The relativity determines how much a State's grant share differs from its population share. A relativity above one results in a grant share above the population share. A relativity below one results in a grant share below the population share.

---

<sup>1</sup> In this paper, untied revenue refers to the total amount of Financial Assistance Grants and Health Care Grants unless it is otherwise indicated.

<sup>2</sup> The Northern Territory from 1988-89 and the ACT from 1993-94. In the rest of this paper the word 'States' includes the Australian Capital Territory and the Northern Territory unless the context indicates otherwise.

<sup>3</sup> Attachment A provides charts that show the population share, relativity share and grant share of each State for the period 1981-82 to 2001-02.

7. The relativities calculated by the Commission reflect the relative economic, social, demographic and physical circumstances of each State. The States are in positions of HFE when their shares of untied revenue are equal to their relativity adjusted population shares.

8. Generally speaking, a State with a stronger economy will have greater revenue raising capacity and a lower relativity, other things being equal. A State with higher costs of providing services will have a higher relativity.

9. There are many economic activities and social, demographic and physical factors that affect the relativities. Changes in the relative circumstances of States as reflected in these activities and factors can result in complex movements in the relativities.

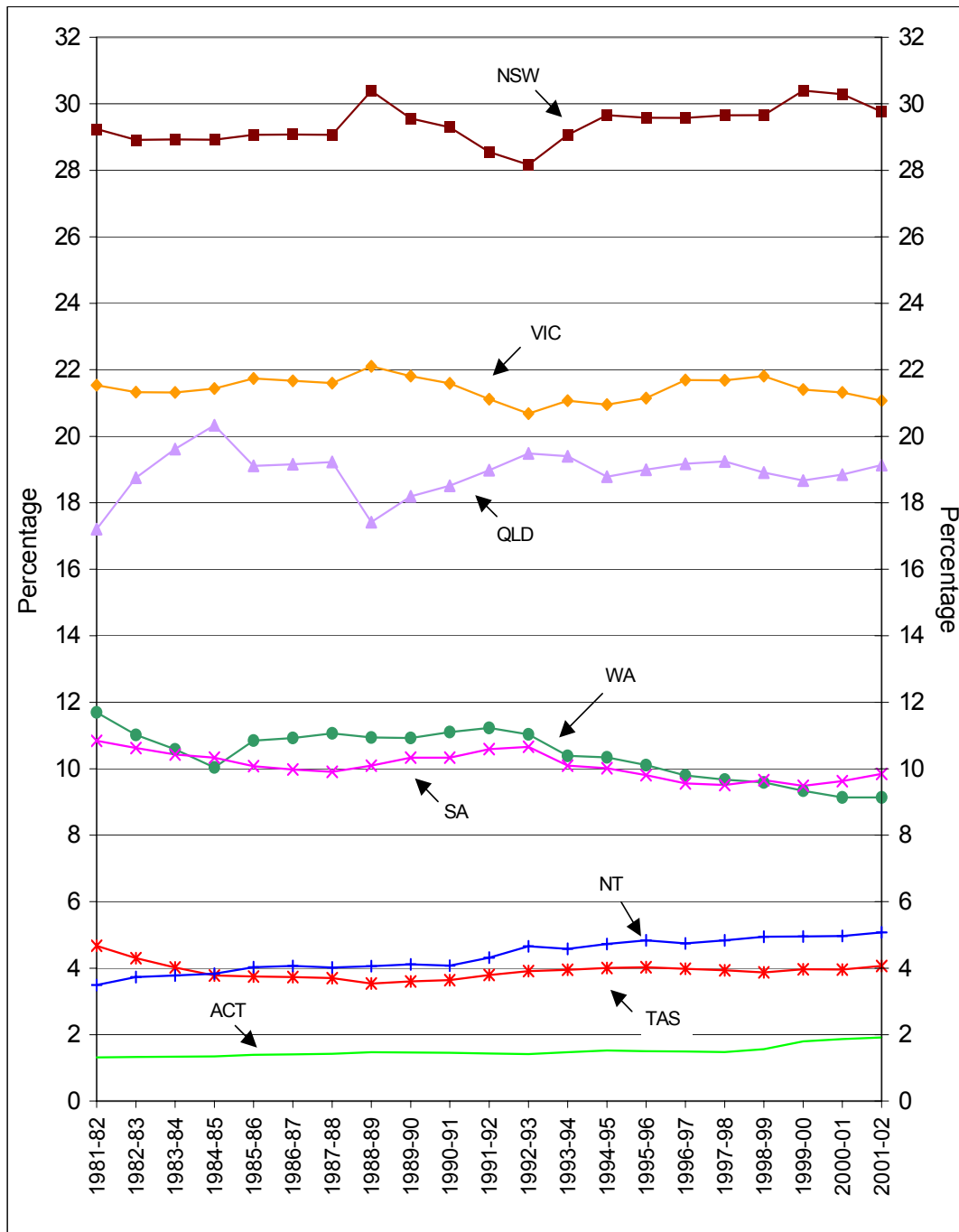
### ***Changes in Grant Shares***

10. Chart 1 and Table 1 show the changes in State grant shares over the last twenty years. They show that:

- (i) the grant shares for New South Wales, Queensland, the ACT and the Northern Territory have increased;
- (ii) Tasmania's grant share has generally increased since 1988-89;
- (iii) the grant shares for Western Australia and South Australia have declined; and
- (iv) Victoria's grant share has remained relatively constant.

11. These trends are due to the interaction of the States' population shares with their differing fiscal circumstances as measured by the Commission's relativities. These two factors may change in the same or different directions and can result in different grant share effects. For example, an increase in a State's population share would mean a larger grant share if its relativity remained constant. Similarly, an increase in a State's relativity would mean a greater grant share if its population share remained constant.

**Chart 1** STATE GRANT SHARES <sup>(a)</sup>, 1981-82 TO 2001-02



(a) The grant shares presented in this paper were calculated using data published in Commonwealth Budget Papers. The Budget Papers did not publish a relativity for the ACT prior to 1993-94 or a relativity for the Northern Territory prior to 1988-89. To increase the comparability over the period, for both Territories the closest year's relativity has been used in place of the missing relativities. Furthermore, the relativities have been re-based for the whole period so that the States' average relativity is equal to one.

**Table 1** STATE GRANT SHARES

	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
	%	%	%	%	%	%	%	%
1981-82	29.24	21.54	17.21	11.69	10.84	4.68	1.31	3.49
1982-83	28.92	21.33	18.76	11.02	10.62	4.30	1.33	3.73
1983-84	28.93	21.32	19.62	10.58	10.42	4.02	1.33	3.78
1984-85	28.92	21.43	20.33	10.03	10.33	3.78	1.34	3.83
1985-86	29.07	21.73	19.11	10.85	10.08	3.74	1.39	4.03
1986-87	29.08	21.66	19.16	10.93	9.98	3.73	1.41	4.07
1987-88	29.07	21.60	19.23	11.06	9.90	3.70	1.42	4.02
1988-89	30.39	22.10	17.41	10.94	10.09	3.53	1.47	4.06
1989-90	29.56	21.81	18.19	10.93	10.34	3.60	1.46	4.11
1990-91	29.29	21.59	18.51	11.10	10.33	3.64	1.46	4.07
1991-92	28.54	21.11	18.98	11.22	10.59	3.80	1.43	4.32
1992-93	28.17	20.68	19.48	11.03	10.66	3.91	1.41	4.65
1993-94	29.06	21.07	19.40	10.39	10.09	3.95	1.47	4.58
1994-95	29.66	20.95	18.78	10.34	10.01	4.01	1.52	4.73
1995-96	29.59	21.15	19.00	10.10	9.80	4.03	1.50	4.83
1996-97	29.57	21.69	19.17	9.80	9.56	3.98	1.49	4.74
1997-98	29.65	21.68	19.24	9.67	9.51	3.94	1.48	4.84
1998-99	29.66	21.81	18.91	9.59	9.65	3.87	1.56	4.95
1999-00	30.40	21.40	18.67	9.34	9.48	3.96	1.80	4.95
2000-01	30.29	21.32	18.85	9.13	9.62	3.95	1.87	4.97
2001-02	29.76	21.07	19.13	9.13	9.84	4.07	1.91	5.08

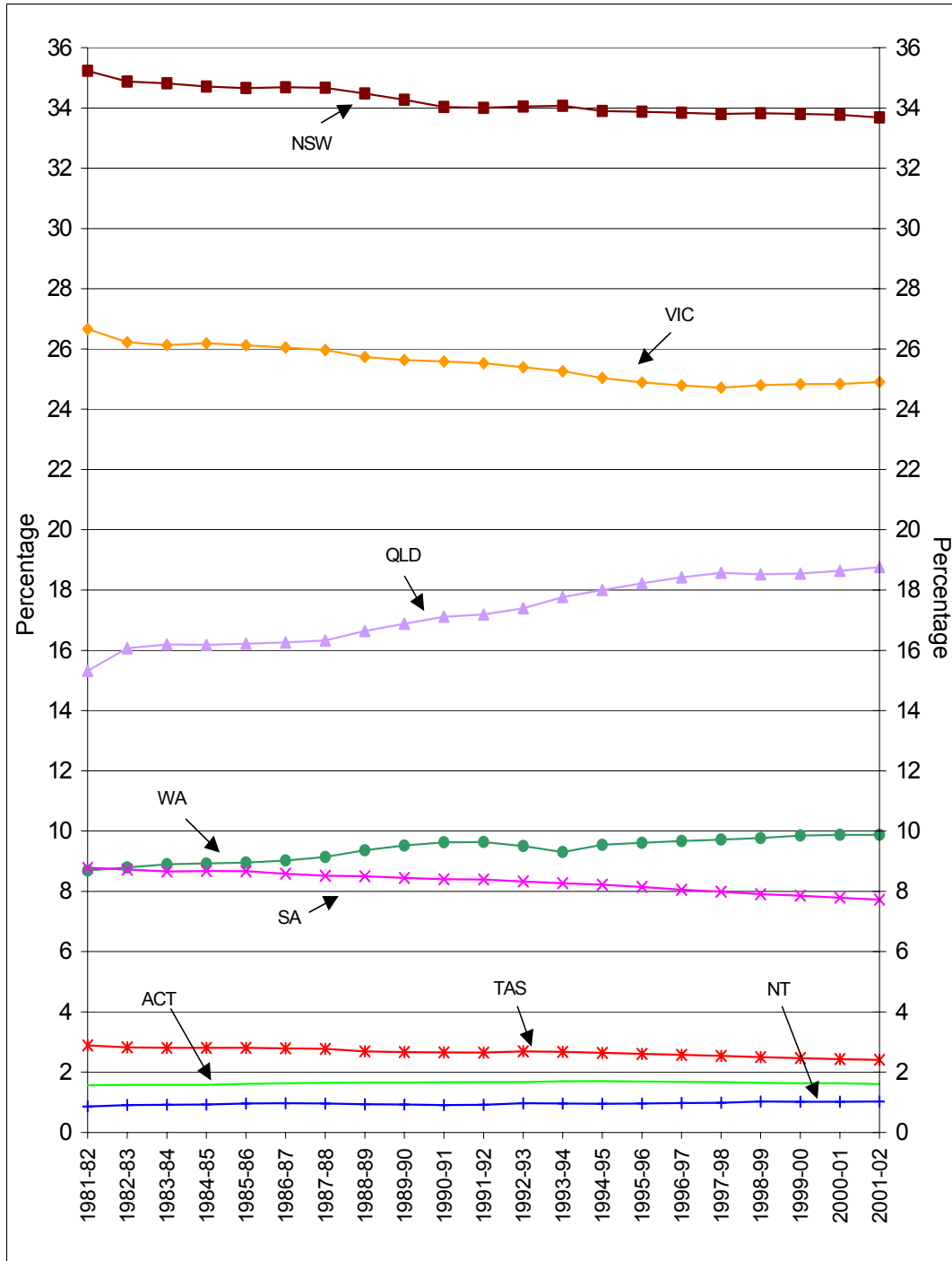
***Changes in Population Shares***

12. State shares of the Australian population are important in determining grant shares. Population shares and grant shares would be the same if Commonwealth revenue were distributed on an equal per capita basis. If the relativities did not change, changes in population shares would produce changes in grant shares.

13. Chart 2 and Table 2 present population shares over the period. They show the following trends.

- (i) Queensland, the Northern Territory, Western Australia and the ACT have increased their shares of the Australian population — by 22.5 per cent, 19.8 per cent, 13.7 per cent and 2.5 per cent respectively in relative terms over the period.
- (ii) Tasmania, South Australia, Victoria and New South Wales have experienced a decline in their shares of the Australian population — by 16.6 per cent, 12.1 per cent, 6.4 per cent and 4.4 per cent respectively in relative terms over the period.

**Chart 2** STATE POPULATION SHARES, 1981-82 TO 2001-02



**Table 2** STATE POPULATION SHARES

	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
	%	%	%	%	%	%	%	%
1981-82	35.23	26.66	15.32	8.69	8.79	2.89	1.57	0.86
1982-83	34.87	26.22	16.07	8.79	8.73	2.82	1.58	0.91
1983-84	34.81	26.13	16.19	8.90	8.66	2.80	1.58	0.92
1984-85	34.71	26.19	16.18	8.93	8.68	2.81	1.58	0.93
1985-86	34.66	26.12	16.22	8.96	8.67	2.80	1.61	0.96
1986-87	34.68	26.05	16.26	9.03	8.59	2.79	1.63	0.97
1987-88	34.67	25.96	16.32	9.14	8.52	2.77	1.65	0.96
1988-89	34.48	25.73	16.64	9.36	8.50	2.69	1.65	0.94
1989-90	34.27	25.64	16.88	9.52	8.44	2.66	1.66	0.93
1990-91	34.03	25.59	17.11	9.63	8.40	2.66	1.67	0.91
1991-92	34.00	25.53	17.19	9.64	8.39	2.65	1.67	0.92
1992-93	34.04	25.39	17.40	9.50	8.33	2.69	1.67	0.97
1993-94	34.07	25.26	17.76	9.31	8.27	2.67	1.70	0.96
1994-95	33.90	25.04	18.00	9.54	8.22	2.64	1.70	0.95
1995-96	33.87	24.89	18.22	9.61	8.15	2.61	1.69	0.96
1996-97	33.84	24.79	18.42	9.67	8.05	2.57	1.68	0.97
1997-98	33.80	24.71	18.57	9.72	7.99	2.54	1.67	0.99
1998-99	33.83	24.80	18.52	9.77	7.91	2.50	1.65	1.03
1999-00	33.80	24.83	18.54	9.85	7.86	2.46	1.63	1.02
2000-01	33.78	24.84	18.63	9.88	7.79	2.43	1.63	1.02
2001-02	33.68	24.90	18.77	9.88	7.73	2.41	1.61	1.03

***Changes in Relativities***

14. For the period 1975-76 to 1981-82<sup>4</sup>, relativities and grant shares for the six States were unchanged. The Commission's 1982 Review relativities were phased in by a third each year between 1982-83 and 1984-85, and the 1985 Review relativities were used for 1985-86 to 1987-88. Since 1988-89, the pool has been distributed using relativities calculated each year.

15. Relativities capture:

- (i) the relative strengths of State economies, and thus the amount of own source revenue each of them can raise;
- (ii) States' relative costs of providing services due to differences in population structure and composition, in service scale and in physical influences; and

<sup>4</sup> For those years, the grants were distributed based on relativities set out in the *States (Personal Income Tax Sharing) Act 1976*.

- (iii) differences in States' receipts of Specific Purpose Payments (SPPs) treated by inclusion.

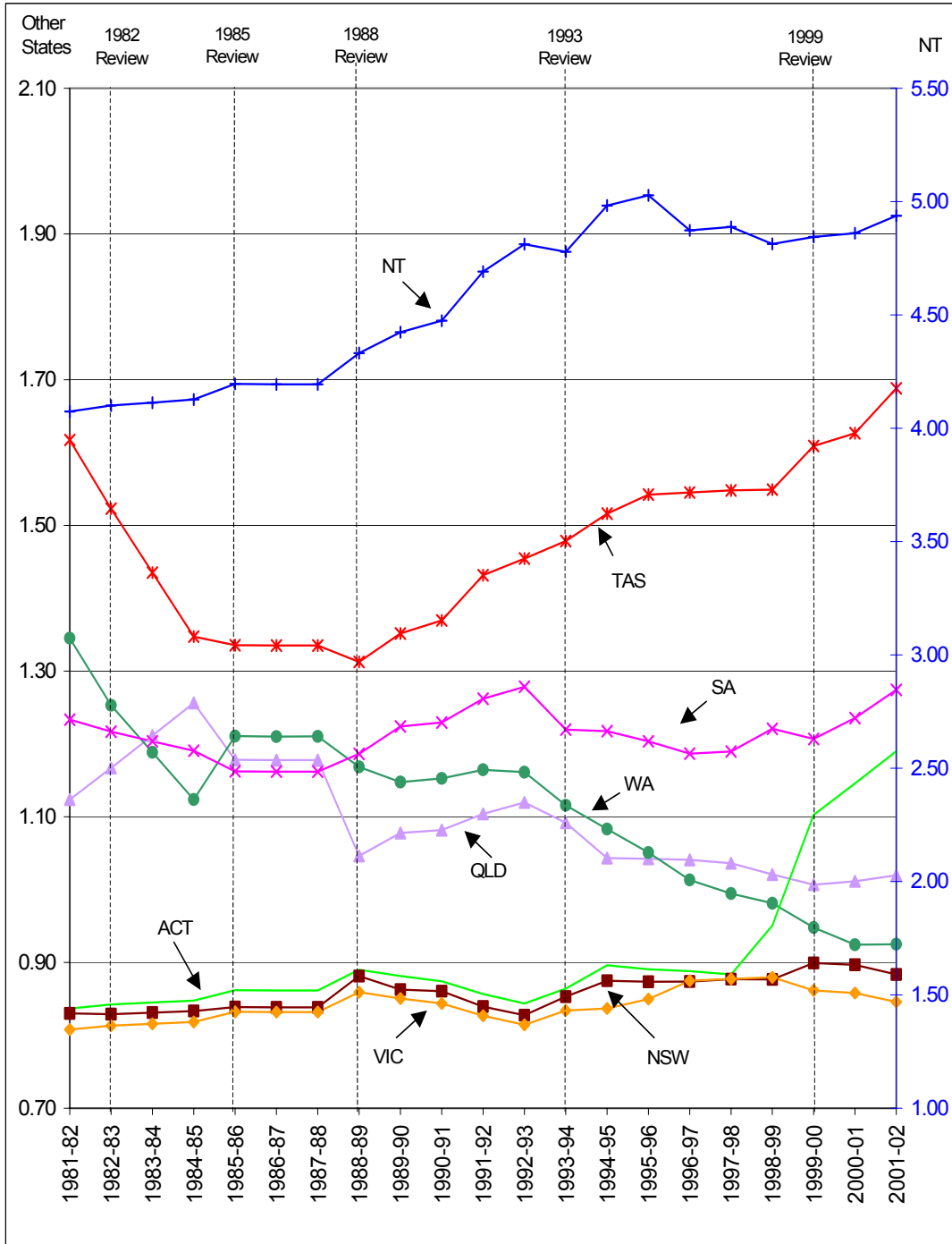
16. Changes in relativities occur as these factors change and are reflected in changes in data used to measure them.

17. Changes in relativities also occur when the Commission makes changes to the scope and methods of assessment to improve equalisation. Thus, relatively large changes in relativities can occur in a review.

- (i) In the 1988 Review, the Northern Territory was included in the standard for the first time and a non-State services disability factor and some disability factors relevant to the Northern Territory were introduced.
- (ii) Major method changes in the 1993 Review included the inclusion of the ACT in the standard; the introduction of assessments for expenditure on roads and housing; the introduction of an input costs disability factor; and the removal of the non-State services factor.
- (iii) A major change in the 1999 Review was the inclusion of an assessment of needs for depreciation.

18. Chart 3 and Table 3 show the relativities for the period 1981-82 to 2000-01. Not surprisingly, the changes in the scope of functions and assessment methods in the 1988, 1993 and 1999 Reviews had noticeable effects on the relativities.

**Chart 3** PER CAPITA RELATIVITIES, 1981-82 TO 2001-02



**Table 3** PER CAPITA RELATIVITIES<sup>(a)</sup>

	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
1981-82	0.83001	0.80788	1.12363	1.34524	1.23343	1.61727	0.83690	4.07331
1982-83	0.82919	0.81325	1.16715	1.25300	1.21690	1.52291	0.84247	4.10043
1983-84	0.83105	0.81572	1.21140	1.18838	1.20373	1.43510	0.84502	4.11284
1984-85	0.83318	0.81844	1.25631	1.12372	1.19084	1.34716	0.84785	4.12660
1985-86	0.83879	0.83213	1.17830	1.21075	1.16249	1.33557	0.86203	4.19560
1986-87	0.83842	0.83176	1.17777	1.21021	1.16197	1.33498	0.86165	4.19374
1987-88	0.83843	0.83178	1.17779	1.21023	1.16199	1.33500	0.86166	4.19381
1988-89	0.88141	0.85907	1.04635	1.16834	1.18638	1.31266	0.88994	4.33144
1989-90	0.86260	0.85069	1.07783	1.14758	1.22414	1.35175	0.88125	4.42359
1990-91	0.86072	0.84384	1.08181	1.15269	1.22948	1.36956	0.87416	4.47491
1991-92	0.83943	0.82703	1.10408	1.16445	1.26204	1.43158	0.85674	4.69173
1992-93	0.82746	0.81443	1.11984	1.16137	1.27865	1.45457	0.84369	4.81245
1993-94	0.85310	0.83412	1.09185	1.11583	1.21972	1.47845	0.86409	4.77897
1994-95	0.87493	0.83676	1.04331	1.08307	1.21767	1.51614	0.89612	4.98250
1995-96	0.87343	0.84976	1.04246	1.05106	1.20350	1.54217	0.89072	5.02821
1996-97	0.87391	0.87496	1.04079	1.01315	1.18662	1.54501	0.88801	4.87377
1997-98	0.87720	0.87736	1.03620	0.99477	1.18966	1.54799	0.88335	4.88802
1998-99	0.87672	0.87949	1.02078	0.98148	1.22065	1.54922	0.95044	4.81359
1999-00	0.89941	0.86178	1.00680	0.94786	1.20671	1.60893	1.10262	4.84394
2000-01	0.89688	0.85824	1.01131	0.92446	1.23544	1.62648	1.14580	4.86015
2001-02	0.88349	0.84605	1.01957	0.92497	1.27422	1.68819	1.19011	4.93727

(a) The relativities in each year have been re-based so that the Australian average is one (that is, the population weighted sum of the relativities equals one). This was necessary because, prior to 1993-94, the relativity for Victoria was used as the base and was set to one.

### *Explanation of Changes in State Grants for Each State<sup>5</sup>*

19. *New South Wales.* New South Wales' relativity trended upwards over the period. The 1988, 1993 and 1999 Reviews all increased New South Wales' relativity as a result of the changes in scope and methods, such as the inclusion of input costs disabilities and depreciation assessments. These were partly offset by large increases in economic activity over the period 1988-89 and 2001-02, which increased New South Wales' revenue raising capacity. The upward trend in its relativity has outweighed the decline in its population share, resulting in a rise in its grant share over the period.

20. *Victoria.* Victoria also experienced an upward trend in its relativity over the period. Between 1988-89 and 2001-02, falls in economic activity (and revenue-raising capacity) increased its relativity, although the increase was partly offset by reductions in its relative costs of providing services. The rise in the relativity has moderated the impact of the fall in its population share, so its grant share has declined only a little.

<sup>5</sup> Analysis of the contribution of assessments for revenue, expenditure and SPP to each State's relativity has focused on the period 1988-89 to 2001-02.

21. **Queensland.** Queensland's relativity fell over the period. Increases in economic activity (and revenue raising capacity) and reductions in the costs of providing services have reduced its relativity. In addition, Queensland's relativity fell in the 1988, 1993 and 1999 Reviews because of changes in scope and methods (the introduction of an input costs disability factor and the Debt Charges and Depreciation assessments). Its very rapidly increasing population share, even with its falling relativity, has resulted in an increasing grant share.

22. **Western Australia.** Western Australia's relativity had a downward trend over the period, with the decline being more significant between 1992-93 and 2000-01. This trend is largely caused by its strong revenue raising performance and the rapid increase in revenue from its SPP Grant in Lieu of Mining Royalties. Western Australia's relativity also fell in the 1988, 1993 and 1999 Reviews. The change to the Mining revenue assessment in the 1993 Review had a large impact, reducing Western Australia's grant by \$100 million. Western Australia's increasing population share has moderated the decline in relativity but has not been sufficient to keep its grant share stable.

23. **South Australia.** South Australia experienced an upward trend in relativity over the period, although the trend is confused by cycles of ups and downs. Falls in economic activity (and revenue raising capacity) and reductions in SPP receipts are driving forces behind the changes. Its relativity rose in the 1988 Review but fell in both the 1993 and 1999 Reviews. In the 1999 Review, this was mainly due to changes to Debt Charges and Community Health assessments. The downward trend in its population share has had a greater effect on its grant share than the changes in relativity.

24. **Tasmania.** Tasmania's relativity over the period is U-shaped. It declined significantly in the early to mid 1980s as a result of the phasing-in of the Commission relativities and increased significantly after 1988-89. Falls in economic activity and SPP receipts and increases in relative costs of providing services have been the main drivers. The downward trend in its population share and the upward trend in its relativity have made Tasmania's grant share in recent years fairly stable.

25. **ACT.** The ACT's relativity has been rising since 1997-98. This is because of the phasing-in of its requirement for State-like levels of Superannuation and Debt Charges. Since the 1999 Review, the ACT's revenue raising capacity has reduced and its cost of service provision increased (mainly due to changes made to scale disability factors and the exclusion of the wages of Commonwealth public servants and the defence forces from the payroll tax base). The ACT's grant share has moved in line with its relativity, although the downward trend of population share in recent years has offset some of the increase.

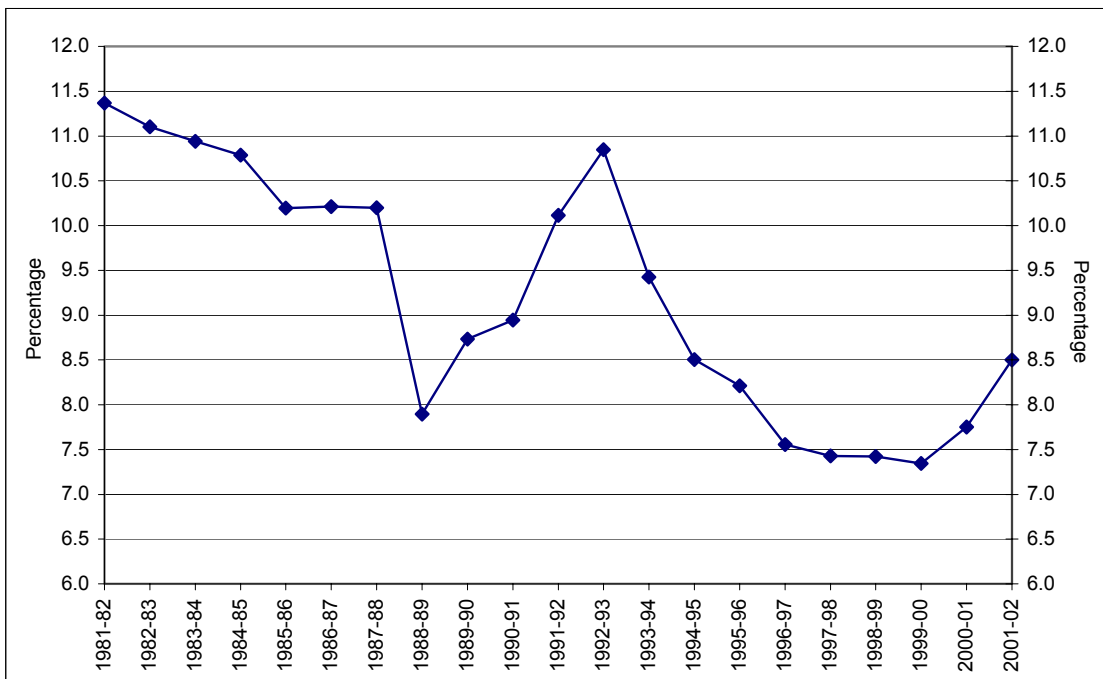
26. **Northern Territory.** The Northern Territory has experienced an upward trend in relativity. Its very high cost of providing services is the main driving force for its relativity. Its revenue raising capacity is roughly at the Australian average level. The rise in both relativity and population share has increased its grant share.

## EXTENT OF REDISTRIBUTION

27. As for changes in State grants, the absolute amount of redistribution (the extent to which the distribution differs from an equal per capita distribution) increases with the size of the pool. For example, the untied revenue to be shared has risen from \$8203 million in 1981-82<sup>6</sup> to \$25 285 million in 2001-02 (an increase of over 200 per cent). This compares with the increase in redistribution between States from \$949 million to \$2149 million (an increase of about 125 per cent) over the same period.

28. Redistribution as a percentage of the pool (relative redistribution), however, is affected by changes in both the population shares and the relativities. As a percentage of the pool, the redistribution has fallen from 11.4 per cent in 1981-82 to 8.5 per cent in 2001-02. Chart 4 shows how the redistribution as a percentage of the pool has changed over time.

**Chart 4** REDISTRIBUTION AS A PROPORTION OF FAG/HCG GRANTS



29. The decline in the extent of redistribution reflects the combination of the fall in the population shares of both Victoria and New South Wales and the rising trends in their relativities. The rise in the ACT's relativity and its change from below one to above one in

<sup>6</sup> The ACT is not included in 1981-82.

1999-2000 may have reinforced the trend. The change of Western Australia's relativity from above one to below one in 1997-98, however, offsets the trend.

30. Changes in the extent of redistribution, combined with changes in the size of the pool, can have significant implications for the absolute amount of redistribution, especially when they move in the same direction. For example, Victoria has stated that it expects the amount redistributed from New South Wales, Western Australia and itself to the other States to grow from \$2.2 billion in 2001-02 to \$3.2 billion in 2005-06<sup>7</sup>. This projection assumes:

- (i) that the FAG/HCG pool will increase by 16.9 per cent during this period, based on the growth in the guaranteed minimum amounts calculated by the Commonwealth Treasury; and
- (ii) that the average relativities to be applied in 2005-06 would be equal to the relativities for 1999-2000 calculated by the Commission for the 2001 Update<sup>8</sup>.

31. Victoria's projection implies that the percentage redistribution would rise from 8.5 per cent of the pool in 2001-02 to 10.9 per cent in 2005-06. This is not impossible, given the volatility of the relativities over the last two decades. It remains, however, to be seen if this will actually be the case. It will depend on the changes that occur in State fiscal circumstances and population shares.

## CONCLUSION

32. The absolute amount of redistribution has increased as the untied revenue to be distributed has increased. However, redistribution as a percentage of the untied revenue being distributed has declined. This is a result of the interaction between the changes in population shares and changes in relativities.

33. The population shares of Queensland, Western Australia, the ACT and the Northern Territory have increased over the last two decades. The population shares of New South Wales, Victoria, South Australia and Tasmania have declined over that period.

34. Over the period, the relativities of Queensland and Western Australia have declined while those of the other States have risen. Relativities have moved up and down around the trends, as States' relative fiscal circumstances changed in the short term. The changes in relativities as the recession of the early 1990s were brought into the calculations is an interesting example of this — those States that experienced a deeper decline in revenue bases than others experienced increases in their relativities as a result. Changes in

---

<sup>7</sup> Victoria Budget Statement 2001-02, p130.

<sup>8</sup> 1999-2000 is the most recent year included in Commission assessments. But the relativities based on 1999-2000 data would be the least reliable relativities calculated in the 2001 Update because financial standards for that year were based on estimates that will be replaced in the 2002 Update.

the scope of equalisation and the methods of assessments introduced in each Review have also played a part in shaping the trends in the relativities.

35. The main reason for the decline in the percentage of the pool redistributed over the period is that New South Wales, Victoria, Queensland, Western Australia and South Australia (and the ACT in the last few years) have experienced opposite movements in population shares and relativities. These circumstances have also resulted in the relative stability of the grant shares of those States. The same is true for Tasmania, with the exception of the first few years. The Northern Territory's population share and relativity have all moved up, so its grant share has risen more than its population share.

36. Generally speaking, the amount of redistribution will rise with the untied revenue to be distributed in the future. However, it is not possible to accurately predict the percentage of the pool required to achieve HFE among the States.

## ATTACHMENT A

---

### **CHARTS SHOWING EACH STATE'S POPULATION SHARE, RELATIVITY SHARE AND GRANT SHARE**

1. This attachment includes charts that show the population share, relativity share and grant share of each State for the period 1981-82 to 2001-02.
2. The relativity share has been calculated using the State's annual relativity and its population share in 1981-82. It shows the effect of changes in the relativity only.

