HEAVY VEHICLE REGISTRATION FEES AND TAXES

1 This working paper describes how the Commission calculated the revenue each State would have raised from heavy vehicle registration fees and taxes if it made the Australian average effort. The development of the assessment method is discussed in Volume 3 of the 2004 Review Working Papers.

DESCRIPTION OF THE CATEGORY

2 Table 1 provides a list of vehicles designated as heavy vehicles and light vehicles.

Table 1 Vehicle designations

Type of vehicle	Light vehicles	Heavy vehicles
Plant and equipment	GVM less than 4.5 tonnes	GVM over 4.5 tonnes
Trailers	GVM less than 4.5 tonnes	GVM over 4.5 tonnes
Non-freight carrying trucks	GVM less than 4.5 tonnes	GVM over 4.5 tonnes
Rigid trucks	GVM less than 4.5 tonnes	GVM over 4.5 tonnes
Articulated trucks	-	All
Buses	-	All
Light commercial vehicles	All	-
Passenger vehicles	All	-
Other vehicles (for example, motor cycles and caravans)	All	-

Note: GVM means Gross Vehicle Mass.

3 The category consists of revenue from motor vehicle registrations, transfers, motor tax and traffic improvement and number plate fees for heavy vehicles including surcharges[1].

4 Uniform heavy vehicle charges were set by the National Road Transport Commission (NRTC) for heavy vehicles in all States and Territories on 1 July 1996. From 1 October 2001 all States adopted the national heavy vehicle charges set by NRTC. Some States provide concessions/rebates on those charges.

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[1] Prior to the 2004 Review, the category also included stamp duty on third party insurance premiums applicable to these vehicles.

5 Heavy vehicle registration charges are adjusted annually by a formula developed by the NRTC[2], and vary according to vehicle type. The charges are set to ensure that the heavy vehicles 'pay their way' for the costs they cause by 'wear and tear' of roads and bridges, and are based on:

- road expenditure over a rolling three year period;
- the estimated distance travelled and average mass of different types of vehicles; and
- the estimated road wear caused by different types of vehicles.

Why revenues raised from heavy vehicle registration charges differ

6 Revenue raised from heavy vehicle registration fees and taxes is a relatively small component of own source State revenues. Table 2 shows the average revenue raised for the last six financial years. In 2006-07, the average revenue of $35.18 per capita represented 1.29 per cent of total own-source revenues.

Table 2 Heavy vehicle registration fees and taxes revenue as a share of States' own-source revenue, 2001-02 to 2006-07

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Average revenues ($pc)	26.87	28.79	30.48	31.87	33.08	35.18
% of total own-source revenues	1.40	1.40	1.37	1.38	1.31	1.29

7 Table 3 shows how revenues raised from heavy vehicle registration fees and taxes per capita differ greatly for each State and from the Australian average. The Commission seeks to understand the reasons for the differences. If the reasons are to do with tax provisions, they are differences in revenue raising effort due to policy differences and have no impact on State shares of the pool. If the reasons are due to circumstances beyond a State's control, they are revenue raising disabilities and are taken into account in the revenue assessment. They do affect State shares of the pool.

Table 3 Heavy vehicle registration and fees revenue per capita, 2008 Update

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
	$pc	$pc	$pc	$pc	$pc	$pc	$pc	$pc	$pc
2001-02	19.65	26.49	26.35	43.04	43.35	26.50	7.04	37.78	26.87
2002-03	21.17	28.70	27.95	46.60	43.84	28.28	9.76	44.92	28.79
2003-04	22.70	30.96	28.43	49.37	45.64	31.38	10.30	47.22	30.48
2004-05	24.16	32.07	30.23	50.43	46.31	33.49	9.85	53.68	31.87
2005-06	25.19	33.66	32.04	51.08	46.77	33.17	10.31	53.85	33.08
2006-07	26.96	35.24	34.16	54.86	49.32	38.17	10.25	53.14	35.18

8 Since all States have agreed to impose the same fees and taxes for a given type of vehicle, the differences in per capita revenue are not caused by policy differences.

[2] The National Transport Commission (NTC) replaced the NRTC from 1 January 2004.

9 States' capacities to raise revenue from heavy vehicle registration fees and charges depend on the size and structure of the vehicle fleet. Vehicle numbers are not determined by population size alone. They also depend on the dispersion of population, industry and resource bases, the number of local and interstate road transport companies located in each State and the availability of a competitive off-road transport network.

Box 1: The Commission's concept of average

The Australian average revenue per capita is not a simple average of the revenue per capita for the eight States. It is a population weighted average, calculated by dividing the total revenues raised by all States by total population of all States. Population weighting gives equal weight to people irrespective of their State of residence. But, since more Australians live in New South Wales, that State carries more weight in the calculation of the average. For example, more than 32 per cent of Australians live in New South Wales, and less than 2 per cent in the ACT. Population weighting gives the experience of New South Wales ($26.96 per capita in 2006-07) about 21 times the weight of the experience of the ACT ($10.25 per capita). This means that the average revenue per capita is generally closer to the revenue per capita of New South Wales than the revenue per capita for the ACT.

This concept of average also applies to the average effective tax rate. In calculating the average effort to raise revenue the total revenue raised by all States is divided by the total revenue bases of all States. This weights the revenue effort of each State according to its share of the total Australian revenue base.

ASSESSING STATES CAPCITIES TO RAISE REVENUE

The equalisation task

10 The box below outlines the Commission's framework for measuring the ability of States to raise revenues from their own bases. For each tax, the Commission measures the revenue base available to each State, based on the average State policy on how the tax is levied, not that State's own policy. The assessed revenue base is policy neutral.

Box 2: Revenue assessment framework for each category of tax to be assessed

Aim: to measure the revenue base available to each State assuming it applied the average policy for levying the tax[3].

Step 1: Review States' legislation and provisions to establish how the tax is levied — who pays it, on what activities or assets is it levied, and what exclusions from taxable liability are allowed by the States.

Step 2: Establish the average policy. The average policy is the policy applied to the majority of the total tax base. Account may also be taken of the number of States that follow the policy.

Where policy differences between States are negligible, the actual revenues raised by each State would be an appropriate measure of each State's relative ability to raise revenues from their revenue bases. In this case, it would not be necessary to measure the revenue base itself. It is called the actual per capita (APC) method of assessment. It attributes differences in observed revenues per capita between States entirely to differences in abilities to raise revenues from their revenue bases.

Most often, observed differences in per capita revenues are due to both differences in revenue effort (policy) and to circumstances beyond the direct control of State governments (revenue raising disabilities).

Step 3: Determine the best conceptual measure of the revenue base under the average policy. The preference is to measure revenue bases under average policy settings using the number and value of activities, transactions or assets subject to the tax.

A broader measure (such as household disposable income, or total private expenditure) is adopted if:

- the tax itself is broad and its incidence is not easily shifted across State boundaries;
- differences in State policies have large effects on the relative number and value of activities, transactions, or assets taxable in each State, and it is not possible to adjust the data to remove the effects of the policy differences — in this case, data from a third party, such as the Australian Bureau of Statistics (ABS), may be used to mitigate some of the problems inherent in State-provided data; or
- data on the preferred conceptual measure of the revenue base are not available.

However, broad measures tend to be more distant from the States' actual tax bases, and there is a judgment to be made as to how well they reflect the ability to raise taxes.

Where differences between each State's policy and the average policy are very large, and a representative and policy neutral revenue base cannot be calculated with confidence, the Commission uses State mean resident populations as the revenue base. This implies equal ability to raise revenues per capita in each State. This is the equal per capita (EPC) assessment method. It attributes differences in observed per capita revenues between States to policy, and does not cause any redistribution of GST shares.

ASSESSING REVENUE FOR HEAVY MOTOR VEHICLES

Revenue base

11 Given that a common rate structure applied throughout Australia for heavy motor vehicles, the revenue base for the 2008 Update was the number of vehicles in each National Transport Commission (NTC) classification weighted by the relevant uniform national heavy vehicle charge set by NTC for that classification.

[3] The aim is to adopt a revenue base that inherently reflects all revenue raising disabilities, without measuring them separately. This approach differs from the approach used for expenses which starts from an assumption of equal costs per capita and makes allowances for each individual source of cost disabilities.

New issues for the 2008 Update

12 **New South Wales** advised that in previous Updates it had been allocating revenue collected from issuing number plates as a road user charge. For this Update, it has reclassified for all assessment years those revenues as motor vehicle revenues — the correct GFS classification. For heavy vehicles, such revenue, totalling $7 million in 2006-07, represented around 4 per cent of heavy vehicle actual revenue collected by New South Wales under this assessment.

Calculating the revenue base

13 Table 4 shows the number of heavy vehicles registered by type and State that were liable to pay NTC charges in 2006-07 and the charges that applied from 1 July 2006.

Table 4 Number of vehicles[(a)] and NTC charges by class, 2006-07

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust	NTC Charge
	No.	No.	No.	No.	No.	No.	No.	No.	No.	$
Rigid trucks – type 1										
2 axle, 4.5 to 12.0T GVM	45 245	41 387	32 839	22 999	11 274	4 469	977	1 941	161 131	343
3 axle, 4.5 to 16.5T GVM	342	956	276	191	120	22	6	14	1 927	686
4 axle, 4.5 to 20.0T GVM	7	6	13	9	1	1	0	1	38	1 029
5 axle, 4.5 to 20.0T GVM	0	0	3	0	0	0	0	0	3	1 029
Rigid trucks - type 2										
2 axle, over 12.0T GVM	13 379	13 663	14 051	9 739	3 488	1 560	282	593	56 755	572
3 axle, over 16.5T GVM	11 552	11 676	10 713	7 793	3 276	1 361	276	362	47 009	914
4 axle, over 20.0T GVM	2 094	1 362	1 798	1 255	312	116	60	58	7 055	2 285
5 axle, over 20.0T GVM	0	2	8	4	1	0	4	0	19	2 285
Rigid - Short combination										
2 axles to 6 axles max	1 999	1 621	1 750	1 376	1 860	140	18	155	8 919	629
3 axles to 6 axles max	3 006	3 412	2 897	1 325	1 357	390	75	102	12 564	2 285
4 axles to 6 axles max	439	196	252	388	75	23	1	15	1 389	2 285
5 axles to 6 axles max	0	0	0	0	0	0	0	1	1	2 285
Rigid - Medium combination										
2 axles to over 6 axles	9	7	3	5	2	0	0	0	26	4 342
3 axle to over 6 axles	1 962	1 468	1 218	292	267	153	37	25	5 422	4 342
4 axle to over 6 axles	233	132	172	393	28	29	1	10	998	4 684
5 axle to over 6 axles	0	0	4	0	1	0	0	0	5	4 684
Rigid - Long combination										
2 axles	0	0	0	9	0	0	0	0	9	5 998
3 axles	5	0	59	25	19	0	0	28	136	5 998
4 axles	5	0	11	92	2	0	0	8	118	5 998
5 axles	0	0	0	22	0	0	0	1	23	5 998
Articulated trucks										
Short combination prime mover										
2 axles	1 205	2 717	1 712	893	500	86	23	51	7 187	1 485
3 axles	10 507	13 157	8 818	4 685	3 733	1 074	141	183	42 298	3 883
4 axles	11	12	45	111	6	18	0	0	203	5 025
5 axles	0	0	0	1	0	0	0	0	1	5 025

Table 4 Number of vehicles[(a)] and NTC charges by class, 2006-07 *(continued)*

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust	NTC Charge
	No.	No.	No.	No.	No.	No.	No.	No.	No.	$
Medium combination prime mover										
2 axles	22	79	43	5	5	0	3	0	157	4 569
3 axles	2 836	5 843	2 990	741	972	298	57	9	13 746	5 711
4 axles	2	3	0	30	0	1	0	1	37	6 283
5 axles	0	0	0	0	0	0	0	0	0	6 283
Long combination prime mover										
2 axles	2	4	5	12	1	0	0	2	26	5 711
3 axles	1 061	555	3 588	3 145	1 246	0	2	550	10 147	5 711
4 axles	2	0	30	512	0	0	0	40	584	6 283
5 axles	0	0	0	24	0	0	0	0	24	6 283
Bus										
2 axles, over 12.0T GVM	6 129	4 167	3 376	1 915	1 239	598	354	186	17 964	572
2 axles, 4.5 to 12.0T GVM	3 950	2 466	3 626	2 366	1 038	598	160	471	14 675	343
3 axles, over 12.0T GVM	715	635	461	190	220	46	14	110	2 391	1 428
3 axles, 4.5 to 12.0T GVM	0	1	4	0	0	0	0	0	5	1 428
4 axles, over12.0T GVM	0	0	4	0	0	0	7	0	11	1 428
Articulated	96	39	47	120	146	22	34	7	511	572
Special vehicle										
Truck special vehicle	3 013	4 859	0	2 012	0	0	0	138	10 022	229
Truck special veh. – 1 axle	0	0	39	0	68	7	0	0	114	229
Non-freight vehicles										
(a) Special										**0**
(b) Other										
1 axle	0	1	1	0	20	0	0	0	22	286
2 axles	500	238	650	527	159	0	5	90	2 169	286
3 axles	279	135	119	78	80	0	2	20	713	571
4 axles	389	271	300	334	137	0	12	33	1 476	857
5 axles	24	51	34	60	16	0	0	4	189	1 142
6 axles	4	3	12	17	4	0	0	1	41	1 428
7 axles	3	0	3	0	0	0	0	0	6	1 713
8 axles	15	1	18	2	0	0	0	0	36	1 999
9 axles	10	0	8	0	1	0	0	0	19	2 284

Table 4 Number of vehicles[(a)] and NTC charges by class, 2006-07 *(continued)*

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust	NTC Charge
	No.	No.	No.	No.	No.	No.	No.	No.	No.	$
Heavy trailers										
1 axles	1 149	2 511	1 438	1 309	650	190	22	101	7 370	343
2 axles	7 060	11 434	11 308	10 396	5 205	1 158	127	1 229	47 917	686
3 axles	20 245	33 506	26 796	17 559	10 855	2 271	266	2 013	113 511	1 029
4 axles	612	865	1 326	682	195	126	9	64	3 879	1 372
5 axles	0	15	18	331	0	0	0	9	373	1 715
6 axles	7	0	30	53	3	0	0	17	110	2 058
7 axles	0	1	11	1	0	0	0	0	13	2 401
8 axles	8	1	4	1	0	0	0	0	14	2 744
9 axles	0	0	0	0	0	0	0	0	0	3 087
Grand total	**140 133**	**159 458**	**132 931**	**94 029**	**48 582**	**14 757**	**2 975**	**8 643**	**601 508**	

(a) ABS unpublished data on NTC vehicle classes from March 2007vehicles census.
Note: GVM stands for Gross Vehicle Mass.

14 Table 5 presents the notional revenue for each vehicle classification. The amounts were calculated by multiplying the vehicle numbers by their corresponding NTC charge rates.

Table 5 Total notional revenue, 2006-07

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Rigid trucks – type 1									
2 axle, 4.5 to 12.0T GVM	15 519	14 196	11 264	7 889	3 867	1 533	335	666	55 268
3 axle, 4.5 to 16.5T GVM	235	656	189	131	82	15	4	10	1 322
4 axle, 4.5 to 20.0T GVM	7	6	13	9	1	1	0	1	39
5 axle, 4.5 to 20.0T GVM	0	0	3	0	0	0	0	0	3
Rigid trucks - type 2									
2 axle, over 12.0T GVM	7 653	7 815	8 037	5 571	1 995	892	161	339	32 464
3 axle, over 16.5T GVM	10 559	10 672	9 792	7 123	2 994	1 244	252	331	42 966
4 axle, over 20.0T GVM	4 785	3 112	4 108	2 868	713	265	137	133	16 121
5 axle, over 20.0T GVM	0	5	18	9	2	0	9	0	43
Rigid - Short combination									
2 axles to 6 axles max	1 257	1 020	1 101	866	1 170	88	11	97	5 610
3 axles to 6 axles max	6 869	7 796	6 620	3 028	3 101	891	171	233	28 709
4 axles to 6 axles max	1 003	448	576	887	171	53	2	34	3 174
5 axles to 6 axles max	0	0	0	0	0	0	0	2	2
Rigid - Medium combination									
2 axles to over 6 axles	39	30	13	22	9	0	0	0	113
3 axle to over 6 axles	8 519	6 374	5 289	1 268	1 159	664	161	109	23 542
4 axle to over 6 axles	1 091	618	806	1 841	131	136	5	47	4 675
5 axle to over 6 axles	0	0	19	0	5	0	0	0	23
Rigid - Long combination									
2 axles	0	0	0	54	0	0	0	0	54
3 axles	30	0	354	150	114	0	0	168	816
4 axles	30	0	66	552	12	0	0	48	708
5 axles	0	0	0	132	0	0	0	6	138
Articulated trucks									
Short combination prime mover									
2 axles	1 789	4 035	2 542	1 326	743	128	34	76	10 673
3 axles	40 799	51 089	34 240	18 192	14 495	4 170	548	711	164 243
4 axles	55	60	226	558	30	90	0	0	1 020
5 axles	0	0	0	5	0	0	0	0	5
Medium combination prime mover									
2 axles	101	361	196	23	23	0	14	0	717
3 axles	16 196	33 369	17 076	4 232	5 551	1 702	326	51	78 503
4 axles	13	19	0	188	0	6	0	6	232
5 axles	0	0	0	0	0	0	0	0	0

Table 5 Total notional charges revenue, 2006-07 *(continued)*

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Long combination prime mover									
2 axles	11	23	29	69	6	0	0	11	148
3 axles	6 059	3 170	20 491	17 961	7 116	0	11	3 141	57 950
4 axles	13	0	188	3 217	0	0	0	251	3 669
5 axles	0	0	0	151	0	0	0	0	151
Bus									
2 axles, over 12.0T GVM	3 506	2 384	1 931	1 095	709	342	202	106	10 275
2 axles, 4.5 to 12.0T	1 355	846	1 244	812	356	205	55	162	5 034
3 axles, over 12.0T	1 021	907	658	271	314	66	20	157	3 414
3 axles, 4.5 to 12.0T	0	1	6	0	0	0	0	0	7
4 axles, over 12.0T	0	0	6	0	0	0	10	0	16
Articulated	55	22	27	69	84	13	19	4	292
Special vehicle									
Truck special vehicle	690	1 113	0	461	0	0	0	32	2 295
Truck special veh. – 1 axle	0	0	9	0	16	2	0	0	26
Non-freight vehicles									
(a) Special									
(b) Other									
1 axle	0	0	0	0	6	0	0	0	6
2 axles	143	68	186	151	45	0	1	26	620
3 axles	159	77	68	45	46	0	1	11	407
4 axles	333	232	257	286	117	0	10	28	1 265
5 axles	27	58	39	69	18	0	0	5	216
6 axles	6	4	17	24	6	0	0	1	59
7 axles	5	0	5	0	0	0	0	0	10
8 axles	30	2	36	4	0	0	0	0	72
9 axles	23	0	18	0	2	0	0	0	43
Heavy trailers									
1 axles	394	861	493	449	223	65	8	35	2 528
2 axles	4 843	7 844	7 757	7 132	3 571	794	87	843	32 871
3 axles	20 832	34 478	27 573	18 068	11 170	2 337	274	2 071	116 803
4 axles	840	1 187	1 819	936	268	173	12	88	5 322
5 axles	0	26	31	568	0	0	0	15	640
6 axles	14	0	62	109	6	0	0	35	226
7 axles	0	2	26	2	0	0	0	0	31
8 axles	22	3	11	3	0	0	0	0	38
9 axles	0	0	0	0	0	0	0	0	0
Grand total	156 931	194 989	165 536	108 871	60 446	15 875	2 882	10 091	715 620

15 Table 6 shows the revenue bases for the six years to 2006-07. Over this period, the Australian per capita revenue base increased by 17.1 per cent. The increase was above average in Victoria (20.9 per cent increase), Queensland (19.1 per cent), Western Australia (22.7 per cent) and Northern Territory (17.70 per cent). Smaller increases were recorded in New South Wales (11.7 per cent), South Australia (2.6 per cent) and Tasmania (12.7 per cent).

16 Given the resource development going ahead in Western Australia, Queensland and Northern Territory it is not surprising that heavy vehicle numbers, particularly the higher fee paying vehicles, are increasing in these States. Historically, Victoria has been regarded as a transport hub, for both north-south and east-west freight services.

Table 6 Heavy vehicle registration fees and taxes, revenue base

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
	$m	$m	$m	$m	$m	$m	$m	$m	$m
2001-02	135.390	150.945	123.369	81.554	56.649	13.529	2.773	7.997	572.206
2002-03	137.705	159.401	127.516	79.659	59.766	13.618	2.814	8.287	588.767
2003-04	143.551	168.975	135.467	84.317	58.268	14.493	2.803	8.250	616.124
2004-05	149.516	177.432	144.467	92.464	57.926	15.302	2.796	8.963	648.866
2005-06	154.697	185.684	153.917	101.511	59.618	15.613	2.953	9.100	683.092
2006-07	156.931	194.989	165.536	108.871	60.446	15.875	2.882	10.091	715.620
	$pc	$pc	$pc	$pc	$pc	$pc	$pc	$pc	$pc
2001-02	20.50	31.22	33.60	42.60	37.35	28.65	8.64	40.28	29.29
2002-03	20.70	32.56	33.85	41.09	39.16	28.67	8.68	41.55	29.77
2003-04	21.45	34.09	35.07	42.84	37.93	30.15	8.59	41.06	30.77
2004-05	22.21	35.35	36.51	46.23	37.45	31.56	8.51	43.88	32.01
2005-06	22.79	36.47	38.02	49.79	38.20	31.96	8.89	43.60	33.23
2006-07	22.89	37.73	40.03	52.29	38.34	32.29	8.56	47.42	34.31
	Percentage increase in per capita revenue base, 2001-02 to 2006-07								
	%	%	%	%	%	%	%	%	%
	11.7	20.9	19.1	22.7	2.6	12.7	-0.9	17.7	17.1

Calculating assessed revenues per capita

17 Having derived the revenue base, an effective rate of tax was calculated for each State by dividing actual revenue by the revenue base.

18 Assessed revenues per capita are calculated by applying the Australian average effective rate of tax to the revenue base of each State and dividing by State population. Table 7 shows the calculations.

Table 7 Calculation of assessed revenue from effective rates of tax 2006-07

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Population '000	6 856	5 168	4 136	2 082	1 577	492	337	213	20 859
Revenue base $m	156.931	194.989	165.536	108.871	60.446	15.875	2.882	10.091	715.620
Revenue base $pc	22.89	37.734	40.027	52.29	38.338	32.29	8.56	47.418	34.308
Actual revenues $m	184.862	182.106	141.263	114.227	77.753	18.767	3.451	11.308	733.737
Actual revenues $pc	26.96	35.24	34.16	54.86	49.32	38.17	10.25	53.14	35.18
Effective tax rate (a) %	1.178	0.9339	0.8534	1.0492	1.2863	1.1821	1.1975	1.1206	1.0253
Assessed revenues $m	160.903	199.925	169.727	111.627	61.976	16.277	2.955	10.346	733.737
Assessed revenues (b) $pc	23.47	38.69	41.04	53.61	39.31	33.11	8.78	48.62	35.18
	%	%	%	%	%	%	%	%	%
Assessed revenue raising capacity ratio (c)	66.72	109.99	116.67	152.42	111.75	94.12	24.95	138.21	100.00
Revenue effort ratio (d)	114.89	91.09	83.23	102.33	125.46	115.29	116.79	109.30	100.00

(a) Effective tax rate was calculated by dividing actual revenue by the revenue base.
(b) Assessed revenue for each State was calculated by multiplying its revenue base by the average effective tax rate of 1.02532 per cent.
(c) Calculated by dividing each State's revenue base pc by the Australian average revenue base pc. This is the same as dividing each State's assessed revenue pc by the Australian average revenue pc.
(d) Calculated for each State by dividing its actual revenue pc by its assessed revenue pc.

19 Assessed revenues per capita can also be calculated by developing a capacity factor from the revenue base and applying that to the average per capita revenue. Table 8 shows the calculations.

Table 8 Calculation of assessed revenue from category capacity ratios 2006-07

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Actual revenue $pc	26.96	35.24	34.16	54.86	49.32	38.17	10.25	53.14	35.18
Revenue base $pc	22.89	37.73	40.03	52.29	38.34	32.29	8.56	47.42	34.31
Revenue capacity ratio % (a)	66.72	109.99	116.67	152.42	111.75	94.12	24.95	138.21	100.00
Assessed revenue $pc (b)	23.47	38.69	41.04	53.61	39.31	33.11	8.78	48.62	35.18

(a) State revenue base per capita divided by Australian revenue base per capita.
(b) State revenue capacity ratio multiplied by the Australian average actual revenue.

20 This alternative approach has the advantage of making explicit the States' relative revenue capacity. Also, by comparing actual revenues per capita with the assessed per capita revenues, a relative effort ratio can be derived.

21 Table 17 at the end of this section shows the average, actual and assessed revenues per capita for each State for all years of the 2008 Update.

22 Table 9 shows the actual and assessed per capita revenues for each State and the average revenue in 2006-07. Figure 1 presents the same information pictorially.

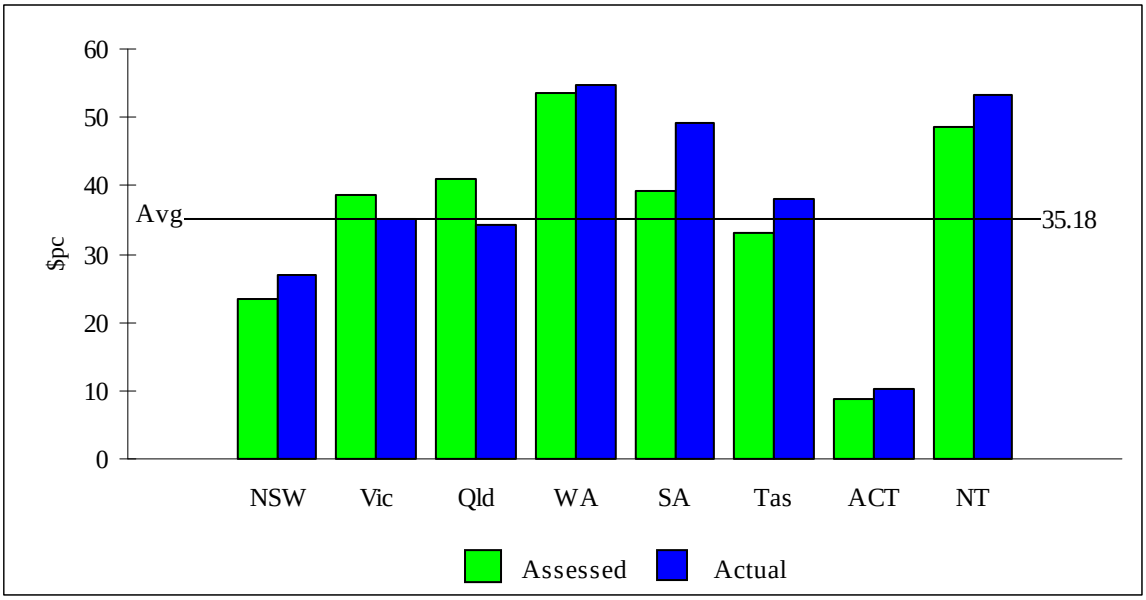
Table 9 Heavy vehicle registration fees and taxes assessment results, 2006-07

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
	$pc	$pc	$pc	$pc	$pc	$pc	$pc	$pc	$pc
Actual revenues	26.96	35.24	34.16	54.86	49.32	38.17	10.25	53.14	35.18
Assessed revenues	23.47	38.69	41.04	53.61	39.31	33.11	8.78	48.62	35.18
	%	%	%	%	%	%	%	%	%
Assessed revenue raising capacity ratio (a)	66.72	109.99	116.67	152.42	111.75	94.12	24.95	138.21	100.00
Revenue effort ratio (b)	114.89	91.09	83.23	102.33	125.46	115.29	116.79	109.30	100.00

(a) State revenue base per capita divided by the Australian average revenue base per capita. This is the same as dividing each State's assessed revenue per capita by the Australian average revenue per capita.

(b) Actual revenues per capita divided by assessed revenues per capita.

Figure 1 Heavy vehicle registration fees and taxes revenue per capita — assessed, actual and average, 2006-07



Relative abilities to raise revenues

23 A State's revenue capacity compares its assessed revenue (which reflects its disabilities) with the average revenue. A capacity above 100 per cent means that a State has an above average capacity to raise revenue.

24 In 2006-07, New South Wales, Tasmania and the ACT had below average ability to raise heavy vehicle registration fees and taxes because they had fewer heavy vehicles per capita than the national average. The relatively low numbers of heavy vehicles per capita, and hence low revenue raising capacity, in New South Wales was consistent with its low revenue capacity for light vehicles.

25 The low capacity for the ACT could be attributed to its limited manufacturing base and compact geographic size reducing the need for heavy vehicle fleets for distribution purposes.

Table 10 Revenue raising capacities, 2008 Update

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
	%	%	%	%	%	%	%	%	%
2001-02	69.97	106.58	114.70	145.45	127.54	97.80	29.50	137.52	100.00
2002-03	69.53	109.39	113.71	138.05	131.54	96.31	29.17	139.59	100.00
2003-04	69.71	110.80	113.98	139.23	123.26	97.99	27.92	133.46	100.00
2004-05	69.38	110.44	114.08	144.45	117.02	98.61	26.59	137.09	100.00
2005-06	68.57	109.76	114.40	149.85	114.98	96.19	26.75	131.20	100.00
2006-07	66.72	109.99	116.67	152.42	111.75	94.12	24.95	138.21	100.00

Revenue efforts

26 Revenue effort compares each State's actual revenue (which reflects both disabilities and policy choices) with its assessed revenue.

27 Figure 1 shows that for most States, there is a close correspondence between actual and assessed revenues, as would be expected given the uniform charging regimes. Differences occur because of any decisions by States to rebate charges. Differences can also arise because of the difficulties faced by States in compiling actual revenues for the two motor vehicle assessments, particularly in allocating revenue between light and heavy vehicles.

EFFECT ON THE DISTRIBUTION OF THE POOL: 2008 UPDATE

28 Table 11 shows the assessed differences from average for 2006-07. They are calculated by:

- subtracting each State's assessed revenue per capita from the average revenue per capita; and
- multiplying the resulting numbers by each State's population.

Table 11 Assessed revenues, difference from average, 2006-07

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Assessed revenues $pc	23.47	38.69	41.04	53.61	39.31	33.11	8.78	48.62	35.18
Difference from average $pc	-11.71	3.51	5.86	18.44	4.13	-2.07	-26.40	13.44	0.00
Population million	6.856	5.168	4.136	2.082	1.577	0.492	0.337	0.213	20.859
Difference from average $m	-80.3	18.2	24.3	38.4	6.5	-1.0	-8.9	2.9	90.2

Note: For Australia, the difference from equal per capita is equal to the sum of negatives or positives.

29 The assessed differences from average in $ millions for each of the assessment years are presented in Table 12. The average of these amounts over the Update period provides an indication of the impact of the assessment on the distribution of the pool.

Table 12 Assessed revenues, difference from average, 2008 Update

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
	$m	$m	$m	$m	$m	$m	$m	$m	$m
2001-02	-53.3	8.5	14.5	23.4	11.2	-0.3	-6.1	2.0	59.7
2002-03	-58.4	13.2	14.9	21.2	13.9	-0.5	-6.6	2.3	65.5
2003-04	-61.8	16.3	16.5	23.5	10.9	-0.3	-7.2	2.0	69.3
2004-05	-65.7	16.7	17.8	28.3	8.4	-0.2	-7.7	2.4	73.6
2005-06	-70.6	16.4	19.3	33.6	7.7	-0.6	-8.1	2.2	79.2
2006-07	-80.3	18.2	24.3	38.4	6.5	-1.0	-8.9	2.9	90.2
Average	-65.0	14.9	17.9	28.1	9.8	-0.5	-7.4	2.3	72.9

Note: The average is a simple average of the six years from 2001-02 to 2006-07 and does not take into account the size of the pool; for Australia, it is the sum of the positives or negatives.

30 Table 13 shows the effect of the assessed revenue differences on the distribution of the pool.

Table 13 Heavy vehicles registration fees and taxes, Contribution to distribution of the pool, 2008 Update [a]

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total redistributed
$m	$m	$m	$m	$m	$m	$m	$m	$m
79.2	-18.7	-21.9	-34.3	-11.2	0.7	9.1	-2.8	88.9

(a) All distributions were calculated using the 2007-08 GST revenue pool and December 2007 population.
Note: The Total redistributed is the sum of negatives or positives.

31 The assessments imply the States with above average revenue raising capacity —Victoria, Queensland, Western Australia, South Australia, and Northern Territory — required less GST revenue totalling $88.9 million if they are to have the financial capacity to provide the average level of service. The other States — New South Wales, Tasmania and the ACT— had below average assessed revenues per capita and needed additional GST revenue totalling the same amount.

Differences from an equal per capita assessment

32 States' capacities to raise revenue from heavy vehicle registration fees and charges were not equal because of the differences between them in the size and structure of their heavy vehicle fleets.

CHANGES IN DISTRIBUTION OF THE POOL: 2008 UPDATE COMPARED WITH 2007 UPDATE

33 Table 14 shows:

- the impact of the 2007 Update assessment on State shares of the pool;
- the impact of the 2008 Update assessment on State shares of the pool; and
- the difference.

Table 14 Comparison of the 2008 Update and 2007 Update assessments[(a)]

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total redist'd
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Redistribution from EPC resulting from the 2007 Update assessment (a)	78.2	-17.3	-21.4	-33.0	-13.1	0.6	8.9	-2.8	87.7
Effect of revising category averages and revenue bases for 2001-02 to 2005-06									
Category averages	0.7	-0.2	-0.2	-0.3	-0.1	0.0	0.1	0.0	0.8
Revenue bases	-0.7	0.2	0.3	-0.1	0.1	0.0	0.0	0.1	0.8
Interactions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.1	0.2	-0.3	0.0	0.0	0.1	0.1	0.4
Effect of replacing 2001-02 category averages and revenue bases with those for 2006-07									
Category averages	-0.5	0.1	0.1	0.2	0.1	0.0	-0.1	0.0	0.5
Revenue bases	1.5	-1.5	-0.8	-1.2	1.8	0.1	0.1	0.0	3.5
Interactions	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.1
Total	1.0	-1.4	-0.6	-1.0	1.9	0.1	0.0	0.0	3.0
Redistribution from EPC resulting from the 2008 Update assessment (a)	79.2	-18.7	-21.9	-34.3	-11.2	0.7	9.1	-2.8	88.9
Total effect of revisions and updating (b)	0.9	-1.4	-0.5	-1.3	1.9	0.1	0.1	0.1	3.1

(a) Using the same pool and populations that were used to calculate the 2008 Update redistribution.
(b) This figure shows the change in the amount redistributed among the States between the 2007 Update and the 2008 Update. It does not necessarily equal the difference in the total redistribution from EPC between the two inquiries.

34 The table also breaks the difference into smaller parts. As shown, changes in this update are relatively small.

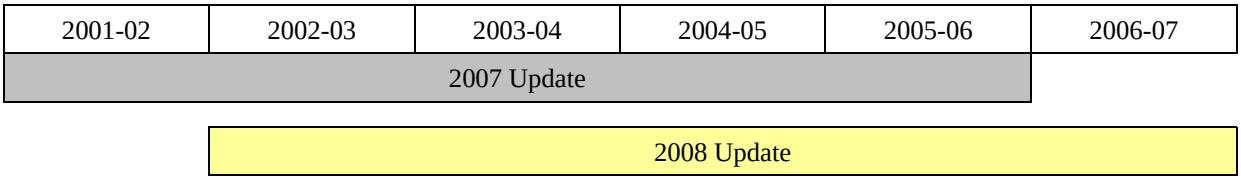
What has changed?

35 The changes arose because of:

- revisions to the financial and assessment data that were used in the 2007 Update; and
- the advancing of the reference period by one year — a new year comes into the reference period and the oldest year drops out.

36 Figure 2 shows the reference periods for the two inquiries.

Figure 2 Advancing the reference period, 2008 Update



37 The effect of revisions was calculated by replacing 2007 Update data with 2008 Update data for the years 2001-02 to 2005-06. The effect of advancing the reference period one year was assessed by comparing the data for the year entering the reference period (2006-07) with the financial and assessment data for the year dropping out (2001-02). In both cases, the Commission considered the impact of replacing financial data (average revenues) separately from the effect of replacing assessment data (revenue bases).

Changes due to revising revenue data and revenue bases for years 2001-02 to 2005-06

38 ***Revising revenue data.*** New South Wales advised that it was reallocating revenues collected for the issue of plates from a user charge revenue item to a motor vehicle revenue item. The revisions were made for all assessment years, and in 2006-07, revenue collected from the issuing of plates for heavy vehicles amounted to $7 million, which represented 4 per cent of total actual revenue collected by the State under this assessment, or around 1 per cent of total actual revenue for the assessment.

39 The net effect of the additional revenue was to raise the average effective tax rate for each of the assessment years. However, since New South Wales and, to a much smaller extent, Tasmania and the ACT, had below average revenue raising capacity, they benefited slightly by around $0.8 million from the higher average effective tax rates.

40 ***Revising revenue base data***. The NTC charges were updated to those that applied from 1 July 2006 rather than 1 July 2005. As the charges increased uniformly by about 2.7 per cent, it had little effect on the redistribution.

41 There were small adjustments to the yearly populations, with small increases in the populations in all States except New South Wales. While populations for Western Australia and Tasmania were revised upwards, the percentage increases were below the overall average percentage adjustments. In the absence of any other changes to revenue base calculations, the population revisions would act to largely increase the revenue raising capacity of New South Wales, Western Australia and Tasmania relative to other States.

42 Table 15 summarises these changes. 2007 Update numbers have been calculated using the 2007 Update populations and 2008 Update numbers have been calculated using the 2008 Update populations for the common years. As noted, changes to the average revenues between the 2007 Update and the 2008 Update were small, and there was little change to the relative capacities due to the revisions to the revenue bases.

Table 15 Heavy vehicles registration fees and taxes assessment data, average of 2001–02 to 2005-06

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Avg
	$pc	$pc	$pc	$pc	$pc	$pc	$pc	$pc	$pc
Actual revenues									
2007 Update	21.75	30.49	29.14	48.20	45.38	30.60	9.54	47.99	30.02
2008 Update	22.58	30.37	29.00	48.10	45.18	30.56	9.45	47.49	30.22
	%	%	%	%	%	%	%	%	%
Assessed revenue raising capacity ratios									
2007 Update	69.20	109.56	114.45	143.38	123.13	97.28	28.16	136.81	100.00
2008 Update	69.44	109.40	114.17	143.40	122.87	97.38	27.99	135.77	100.00

Changes in State circumstance — the effects of replacing 2001-02 revenue data and revenue base data with those for 2006-07

43 ***Replacing revenue data.*** The national average per capita revenues increased by 30.9 per cent, less than the increase in the pool of 34.8 per cent. The category was therefore less important in 2006-07 than in 2001-02 resulting in a smaller redistribution of the pool towards New South Wales and the ACT, the two States with consistently below average capacity.

44 ***Replacing revenue base data.*** Changes in revenue capacities redistributed $3.5 million. Capacities to raise revenue were different in 2006-07 than in 2001-02 because of changes in the numbers of heavy vehicle registrations and fleet structures in each State. The capacities of Victoria, Queensland, Western Australia and Northern Territory were higher in 2006-07, and their overall shares of the pool arising from this assessment declined.

45 Table 16 summarises how the average revenue and revenue raising capacity ratios for 2006-07 were different from 2001-02.

Table 16 Heavy vehicle registration fees and taxes assessment data, 2001-02 and 2006-07

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Avg
	$pc	$pc	$pc	$pc	$pc	$pc	$pc	$pc	$pc
Actual revenues									
2001-02	19.65	26.49	26.35	43.04	43.35	26.50	7.04	37.78	26.87
2006-07	26.96	35.24	34.16	54.86	49.32	38.17	10.25	53.14	35.18
Assessed revenues									
2001-02	18.81	28.64	30.83	39.09	34.27	26.28	7.93	36.96	26.87
2006-07	23.47	38.69	41.04	53.61	39.31	33.11	8.78	48.62	35.18
	%	%	%	%	%	%	%	%	%
Assessed revenue raising capacity ratios									
2001-02	69.97	106.58	114.70	145.45	127.54	97.80	29.50	137.52	100.00
2006-07	66.72	109.99	116.67	152.42	111.75	94.12	24.95	138.21	100.00

This chapter was prepared by the Revenue section of the Commonwealth Grants Commission. If you have any questions about its content please contact Lintong Feng on (02) 6229 8833 or lintong.feng@cgc.gov.au.

Date: 29 February 2008

Table 17 Assessment of revenue, Heavy Vehicles Registration Fees and Taxes

	2002-03		2003-04		2004-05		2005-06		2006-07	
	Amount	Per Capita	Amount	Per Capita	Amount	Per Capita	Amount	Per Capita	Amount	Per Capita
	$m	$	$m	$	$m	$	$m	$	$m	$
Average Revenue		28.79		30.48		31.87		33.08		35.18
New South Wales										
Assessed difference	58.357	8.77	61.800	9.23	65.701	9.76	70.580	10.40	80.259	11.71
Revenue - Assessed	133.195	20.02	142.222	21.25	148.892	22.11	154.015	22.69	160.903	23.47
Actual	140.875	21.17	151.942	22.70	162.686	24.16	171.018	25.19	184.862	26.96
Victoria										
Assessed difference	- 13.233	- 2.70	- 16.324	- 3.29	- 16.707	- 3.33	- 16.445	- 3.23	- 18.150	- 3.51
Revenue - Assessed	154.181	31.50	167.411	33.78	176.692	35.20	184.866	36.31	199.925	38.69
Actual	140.499	28.70	153.421	30.96	160.950	32.07	171.364	33.66	182.106	35.24
Queensland										
Assessed difference	- 14.868	- 3.95	- 16.459	- 4.26	- 17.761	- 4.49	- 19.294	- 4.77	- 24.251	- 5.86
Revenue - Assessed	123.340	32.74	134.213	34.75	143.864	36.36	153.239	37.85	169.727	41.04
Actual	105.308	27.95	109.828	28.43	119.608	30.23	129.725	32.04	141.263	34.16
Western Australia										
Assessed difference	- 21.236	- 10.95	- 23.536	- 11.96	- 28.332	- 14.17	- 33.622	- 16.49	- 38.388	- 18.44
Revenue - Assessed	77.050	39.75	83.537	42.44	92.078	46.04	101.063	49.57	111.627	53.61
Actual	90.341	46.60	97.180	49.37	100.854	50.43	104.126	51.08	114.227	54.86
South Australia										
Assessed difference	- 13.862	- 9.08	- 10.895	- 7.09	- 8.388	- 5.42	- 7.731	- 4.95	- 6.515	- 4.13
Revenue - Assessed	57.808	37.87	57.728	37.58	57.684	37.30	59.355	38.04	61.976	39.31
Actual	66.908	43.84	70.117	45.64	71.624	46.31	72.978	46.77	77.753	49.32
Tasmania										
Assessed difference	0.505	1.06	0.295	0.61	0.214	0.44	0.616	1.26	1.017	2.07
Revenue - Assessed	13.172	27.73	14.359	29.87	15.238	31.43	15.544	31.82	16.277	33.11
Actual	13.432	28.28	15.085	31.38	16.235	33.49	16.203	33.17	18.767	38.17
Australian Capital Territory										
Assessed difference	6.611	20.39	7.168	21.97	7.687	23.40	8.051	24.23	8.889	26.40
Revenue - Assessed	2.722	8.40	2.777	8.51	2.784	8.47	2.940	8.85	2.955	8.78
Actual	3.163	9.76	3.360	10.30	3.237	9.85	3.427	10.31	3.451	10.25
Northern Territory										
Assessed difference	- 2.274	- 11.40	- 2.049	- 10.20	- 2.415	- 11.82	- 2.155	- 10.32	- 2.860	- 13.44
Revenue - Assessed	8.016	40.19	8.174	40.68	8.926	43.70	9.059	43.40	10.346	48.62
Actual	8.959	44.92	9.487	47.22	10.966	53.68	11.240	53.85	11.308	53.14