

MANUFACTURING AND OTHER INDUSTRY

- 1 This working paper describes the expenses assessment for the Manufacturing and Other Industry category and provides information on its impact on GST revenue distribution for the 2008 Update. The Commission's assessment aims to estimate the expenses each State would face if it provided the Australian average level of service to manufacturing and other industry. The development of the assessment method is discussed in Volume 5 of the 2004 Review Working Papers.

DESCRIPTION OF THE CATEGORY

- 2 The category comprises expenses on administration, planning, support, regulation, inspection and promotion relating to industries not covered by the other services to industry categories (namely, the Primary Industry, Tourism and Mining, Fuel and Energy categories). More specifically, the category includes expenses on:
 - manufacturing activities and research into manufacturing methods, materials and industrial management; and
 - other services designed to support, promote and encourage new or expanding industries not elsewhere classified and the development of advanced technology related to these industries.
- 3 The Commission included the following SPPs in the category for the 2004 Review.
 - Enterprise Development Program; and
 - National Business Information Service
- 4 The last payment under the Enterprise Development Program was in 2000-01, outside the five year period covered by the 2008 Update. The last payment under the National Business Information Service was in 2001-02.
- 5 Table 1 shows the gross average expenses for the last six financial years. In 2006-07, the category average of \$12.97 per capita represented 0.2 per cent of the total gross average expenses. In 2006-07, user charges accounted for almost 26 per cent of gross average expenses associated with this category.

Table 1 Manufacturing and Other Industry, average expenses and user charges, 2001-02 to 2006-07

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Average expenses (\$pc)	10.54	7.66	10.21	12.63	15.02	12.97
% of total State average expenses	0.20	0.14	0.19	0.22	0.25	0.20
Average user charges (\$pc)	2.25	2.68	2.95	3.30	3.26	3.35
% of category average expenses	21.36	34.92	28.84	26.11	21.69	25.81

DEVELOPMENTS SINCE THE 2007 UPDATE

- 6 The Australian Bureau of Statistics (ABS) revised its current price estimates of gross state product (GSP) by industry due to the availability of new data. This data is used to assess the size of the service provision task in each State. All states were affected by the revisions although the extent to which each State was affected varied. In the manufacturing and other industries category the ABS changes resulted in upward revisions in industry factor incomes in all States for almost all years of the assessment. The ABS advised that the current data is the best available but that there will be further revisions to GSP estimates by industry in the 2007-08 issue of the *Australian National Accounts, 5220.0*. These revisions are likely to partially offset the revisions published in the 2006-07 issue of 5220.0.
- 7 Changes in earlier updates have affected the 2008 assessment. From the 2006 Update onwards, the Commission decided to substitute State population data for counts of business locations that were derived from the Australian Business Register because the ABS advised that the latter were not fit for purpose¹. Use of population data meant that an equal per capita assessment applied to this contributor to the disability calculation.

ASSESSMENT METHOD

Description of the assessment

- 8 The assessment method for the 2008 Update was the same as was used for the 2007 Update, and used three components: fixed costs, regulation and economic development.
 - The expenses for fixed costs were assessed using the general method.
 - The expenses for regulation were assessed using economic environment and input cost factors.
 - The expenses for economic development were assessed on an equal per capita basis.

¹ More details on the Commission’s decision can be found in the 2006 Update working paper on Mining, fuel and energy.

Assessment structure

9 Table 2 summarises the assessment for the 2008 Update.

Table 2 Manufacturing and other industry, assessment structure for the 2008 Update, 2006-07

Expense component	Component weight	Factors	Basis of calculation
	%		
Fixed costs	14.0	Administrative scale Input costs	General method. General method, with weights of 80% for wages, 2% for accommodation and 0.5% for electricity.
Regulation	30.1	Economic environment Input costs	Based on mean resident population and value of production of all industries except agriculture, fisheries, mining, tourism, government administration and defence, ownership of all dwellings and general government — State population and value of production sub-factors each being weighted by 50%. General method, with weights of 60% for wages, 2% for accommodation and 0.5% for electricity.
Economic development	55.9	None	Equal per capita.

Calculating the category factor

10 Table 3 summarises the components, component weights and disability factors assessed for this category for the last year of the 2008 Update. It also shows the calculation of the category factor for 2006-07.

Table 3 Manufacturing and other industry, derivation of category factor, 2008 Update, 2006-07

Factors	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Fixed costs (component weight = 14 %)								
Administrative scale	0.38031	0.50456	0.63046	1.25230	1.65373	5.30328	7.74403	12.25245
Input costs	1.02528	0.99212	0.98387	0.99199	0.97579	0.95664	1.01939	1.01769
Component factor	0.38993	0.50059	0.62029	1.24227	1.61369	5.07334	7.89420	12.46916
A Wgtd comp factor	0.05486	0.07042	0.08726	0.17477	0.22702	0.71373	1.11058	1.75420
Regulation (component weight = 30.1 %)								
Economic environment	1.02794	1.02371	0.94922	1.03468	0.93308	0.88652	0.97866	0.96330
Input costs	1.01919	0.99309	0.98935	0.99482	0.98016	0.96490	1.01447	1.01260
Component factor	1.04767	1.01664	0.93911	1.02931	0.91457	0.85540	0.99282	0.97544
B Wgtd comp factor	0.31521	0.30587	0.28255	0.30969	0.27516	0.25736	0.29871	0.29348
Economic development (component weight = 55.9 %)								
EPC	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
Component factor	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
C Wgtd comp factor	0.55898	0.55898	0.55898	0.55898	0.55898	0.55898	0.55898	0.55898
Category factor	0.92905	0.93528	0.92879	1.04343	1.06116	1.53008	1.96827	2.60666

11 The factor was calculated as follows:

$$\begin{aligned}
 \text{category factor} &= \text{fixed costs} + \text{regulation} + \text{economic development} \\
 \text{fixed costs} &= 0.1400 [\text{administrative scale} * \text{fixed costs input costs}] \\
 \text{regulation} &= 0.3010 [\text{economic environment} * \text{input costs}] \\
 \text{Economic development} &= 0.5590 [\text{EPC factor}]
 \end{aligned}$$

12 In each case, the contribution to the category factor was calculated as the expenses component weight multiplied by the component factor (the bracketed terms in the formulas). Each contribution to category factor was rescaled to ensure that the sum of assessed equalled the sum of actual expenses.

RESULTS FOR 2006-07

13 Table 10 at the end of this section shows the average, actual and assessed expenses for each State for all years of the 2008 Update.

14 Table 4 shows, for 2006-07, actual and assessed gross expenses per capita and assessed cost of service provision ratio.

Table 4 Manufacturing and other industry, assessment results, 2006-07

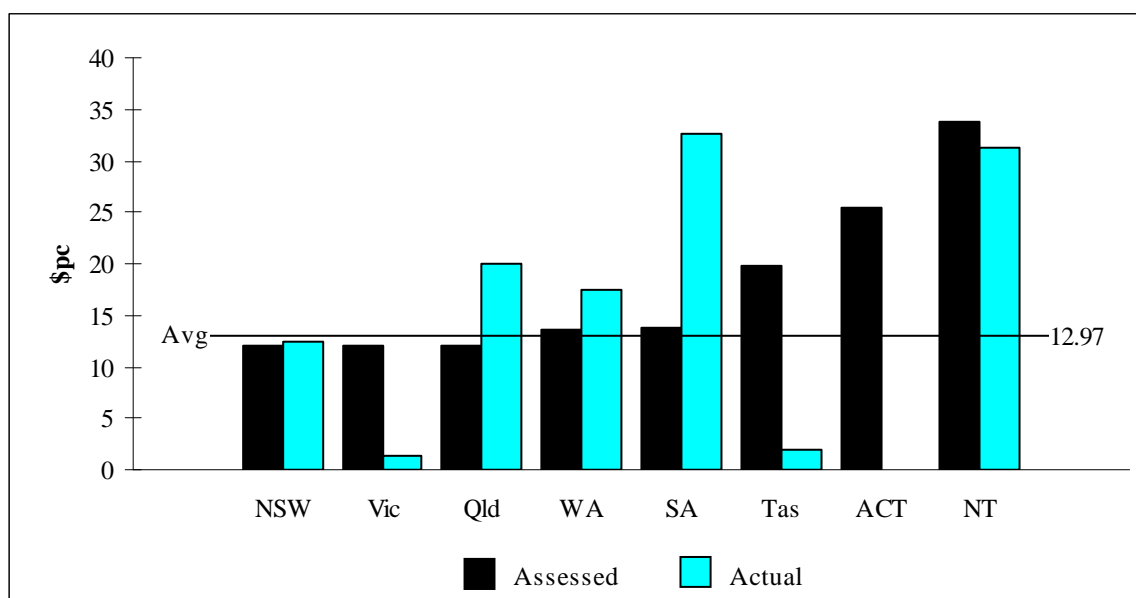
	NSW	Vic	Qld	WA	SA	Tas	ACT(a)	NT	Avg
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Actual expenses	12.5	1.4	20.0	17.5	32.6	2.0	0.0	31.3	13.0
Assessed expenses	12.0	12.1	12.0	13.5	13.8	19.8	25.5	33.8	13.0
	%	%	%	%	%	%	%	%	%
Assessed cost of providing services ratio (b)	93	94	93	104	106	153	197	261	100

(a) ACT expenses may include municipal transactions.

(b) The assessed cost of services ratio is the ratio of assessed to average gross expenses per capita.

15 Figure 1 shows the gross expenses per capita for 2006-07 in terms of assessed, actual and gross average expenses.

Figure 1 Manufacturing and other industry, gross assessed, actual(a) and average expenses, \$ per capita, 2006-07



(a) ACT expenses may include municipal transactions.

Cost of service provision ratios

16 A State's cost of service provision ratio is the ratio of assessed gross expenses per capita to average gross expenses per capita. For this category, the key influence on the cost of service provision ratio were the fixed cost expenses, which were higher per capita for less populous States.

CONTRIBUTION TO GST AND HCG POOL DISTRIBUTION

17 Table 5 shows the category's contribution to the distribution of GST revenue and health care grants (the pool) implied by the 2008 Update. It also shows the contribution of each factor and component to the total distribution of the pool.

Table 5 Manufacturing and other industry, contribution of assessment to distribution of the pool, 2008 Update

Factor	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total redist'd
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Fixed costs									
Administrative scale	-8.5	-5.1	-3.0	1.1	2.0	4.1	4.5	4.8	16.6
Input costs	0.4	0.0	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.4
Component factor	-8.3	-5.1	-3.1	1.1	1.9	3.9	4.6	5.0	16.5
Economic development									
EPC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Component factor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Regulation									
Economic environment	1.1	0.8	-1.1	0.0	-0.4	-0.3	0.0	0.0	1.8
Input costs	0.6	-0.1	-0.3	-0.1	-0.1	-0.1	0.0	0.0	0.7
Component factor	1.7	0.7	-1.4	-0.1	-0.5	-0.3	0.0	0.0	2.4
Redistribution from EPC resulting from the 2008 Update assessment									
Update assessment	-6.6	-4.4	-4.5	0.9	1.4	3.6	4.7	5.0	15.6

Differences from an equal per capita assessment

- 18 The table indicates that the main driver of this assessment was the administrative scale factor, which redistributed \$16.6 million. GST shares were redistributed from the more populous States, New South Wales, Victoria and Queensland, with above average economies of scale to less populous States where administrative scale costs are relatively higher.
- 19 For the regulation component, only New South Wales and Victoria had above average needs because of above average economic activity (as measured by factor income) in the industries covered by the category — although this factor had less overall effect on the redistribution than fixed costs.

CHANGES SINCE THE 2007 UPDATE

Effect of assessment on the distribution of the pool

- 20 The assessments in each update are based on a five year average of the most recent expense data and indicators of disability. For the 2007 Update, data for the period 2001-02 to 2005-06 were used, and for the 2008 Update the data covered 2002-03 to 2006-07. In addition to ‘shifting’ the data window one year forward when performing the next update, data for each year are revised where necessary to account for any corrections or changes since the last update. For example, expense data can be revised by the ABS between the updates. Hence, changes in the

distribution of the pool between the 2007 Update and the 2008 Update were brought about because the Commission:

- used revised financial data in the average expenses and other revised data in factor calculations for the years 2001-02 to 2005-06; and
- replaced 2001-02 average expenses and factors with those of 2006-07 to move forward the five-year period on which GST revenue distribution was based. Moving the five-year period forward in this way ensures the assessments reflect recent trends in State priorities on the services provided and recent trends in State demographic, and economic circumstances on the relative costs of those services.

Table 6 Manufacturing and other industry, effect of assessment on distribution of the pool, 2007 Update to 2008 Update

	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)	-7.1	-4.6	-4.6	0.9	1.5	3.8	4.9	5.2	16.3
Effect of revising category averages and factors for 2001-02 to 2005-06									
Category average	-1.3	-0.9	-0.7	0.2	0.3	0.7	0.9	0.9	2.9
Category factors	1.0	0.6	0.3	-0.1	-0.2	-0.4	-0.5	-0.6	1.8
Interactions	0.7	0.4	0.2	-0.1	-0.2	-0.3	-0.4	-0.4	1.3
Total	0.3	0.1	-0.2	0.0	-0.1	0.0	0.0	0.0	0.4
Effect of replacing 2001-02 category averages and factors with those for 2006-07									
Category average	0.1	0.1	0.1	0.0	0.0	-0.1	-0.1	-0.1	0.3
Category factors	0.0	0.0	0.2	0.1	0.0	-0.1	-0.1	-0.1	0.3
Interactions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.2	0.1	0.3	0.1	0.0	-0.1	-0.2	-0.2	0.6
Redistribution from EPC resulting from the 2008 Update assessment (a)	-6.6	-4.4	-4.5	0.9	1.4	3.6	4.7	5.0	15.6
Total effect of revisions and updating (b)	0.5	0.2	0.1	0.1	-0.1	-0.2	-0.2	-0.3	0.8

(a) Using the same pool and populations that were used to calculate the 2007 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.

- 21 Table 6 shows the distribution of the pool resulting from the assessments in the 2007 Update and the 2008 Update. It also summarises the effect of revisions and the effect of moving the five year window forward.
- 22 Compared with an equal per capita (EPC) assessment, the 2008 Update redistributed \$15.6 million away from New South Wales, Victoria and Queensland to the other States. This was slightly lower than the redistribution in the 2007 Update (\$16.3 million). The difference in redistribution between the updates totalled \$0.8 million.
- 23 Revisions to the category average and factor made a larger impact on the redistribution than the replacement of data although all effects were relatively small. The revisions were in part due to substantial revisions by the ABS to industry factor income data, which is used to assess the size of the service delivery task in each State.
- 24 Table 7 shows the changes in GST revenue attributable to changes in each factor arising from both revisions over the period 2001-02 to 2005-06 and replacing 2000-01 data with 2006-07 data.

Table 7 Manufacturing and Other Industry, effect of assessment on GST revenue distribution by factor, 2007 Update to 2008 Update

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total redist'd
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Fixed costs									
Administrative scale	0.5	0.2	0.0	-0.1	-0.1	-0.2	-0.2	-0.2	0.7
Input costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Economic development									
EPC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Regulation									
Economic environment	0.0	0.0	0.0	0.1	-0.1	0.0	0.0	0.0	0.1
Input costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

- 25 The main reasons for the changes in GST revenue distribution between the two updates are explained in more detail in the following sections.

Changes due to revising average expenses and factors for years 2001-02 to 2005-06

- 26 *Revising average expenses.* In Table 8 the average expenses are shown for the six financial years of this update and those of the previous update. Overall, upward revisions were made to average expenses for 2001-02 to 2005-06 in this category. This increased the importance of the category to the GST distribution and thereby increased the amount of GST revenue redistributed for that period (\$2.9 million). The revisions increased the GST revenue shares of the States assessed to have above average service provision costs (Western Australia, South Australia, Tasmania, the Australian Capital Territory and the Northern Territory) and reduced the shares of those with below average service provision costs.

Table 8 Manufacturing and Other Industry, Average expenses used in the 2007 and 2008 Updates

	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
2008 Update		10.54	7.66	10.21	12.63	15.02	12.97
2007 Update	6.42	9.97	7.61	10.26	12.28	8.19	
Difference	-	0.56	0.05	-0.05	0.35	6.83	-

27 *Revising category factors.* Revision to assessed cost of providing services made the second largest impact on the redistribution in this update (\$1.8 million). This was due mostly to a decline in the importance of administrative scale in the category. Scale expenses grow by inflation but the category has grown faster than this, resulting in a decline in the effect of scale disabilities on the redistribution. States with above average scale disabilities (Western Australia, South Australia, Tasmania, the ACT and the Northern Territory) consequently had less GST revenue distributed to them for this disability.

Changes in State circumstances — replacing 2001-02 with 2006-07 data

28 Table 9 shows the actual expenses and implied costs of service provision for 2001-02, the year that drops out, and 2006-07, the year that comes in, for the 2008 Update assessment.

29 *Replacing average expenses.* Since 2001-02, State spending on this function has grown by 36.6 per cent, lower than growth in the GST pool (43.9 per cent). When growth of the category expense is lower than growth in the GST pool the category’s importance in determining GST revenue shares diminishes. For States whose service provision costs are above average this means they will gain a smaller share of GST revenue than in the previous update. Hence, replacing the 2001-02 average expenses with 2006-07 average expenses has led to a small redistribution (\$0.3 million) away from Western Australia, South Australia, Tasmania, the Australian Capital Territory and the Northern Territory to New South Wales, Victoria and Queensland. The effect for Western Australia and South Australia was very small and has rounded to zero in Table 6.

Table 9 Manufacturing and Other Industry, actual expenses and assessed cost of providing services, 2001-02 and 2006-07

	NSW	Vic	Qld	WA	SA	Tas	ACT(a)	NT	Avg
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Actual expenses									
2001-02	15.9	2.3	6.3	10.4	29.1	1.4	0.0	10.9	10.5
2006-07	12.5	1.4	20.0	17.5	32.6	2.0	0.0	31.3	13.0
	%	%	%	%	%	%	%	%	%
Change between 2001-02 and 2006-07(b)	78.4	59.5	319.3	167.3	112.0	139.1	-	288.2	123.1
	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc	\$pc
Assessed expenses									
2001-02	9.8	9.8	9.6	10.9	11.2	16.6	21.9	29.7	10.5
2006-07	12.0	12.1	12.0	13.5	13.8	19.8	25.5	33.8	13.0
	%	%	%	%	%	%	%	%	%
Assessed cost of providing services ratio									
2001-02	93	93	91	103	107	157	208	282	100
2006-07	93	94	93	104	106	153	197	261	100

30 *Replacing category factors.* Between 2001-02 and 2006-07, assessed service provision costs increased in Victoria, Queensland and Western Australia. In Victoria, the increase was due to revisions to industry factor income but the impact of changes was small and effectively resulted in no significant redistribution. In the case of Queensland and Western Australia, the effects were due mainly to growth in input costs. Increasing wage and accommodation input costs in those States relative to the rest of Australia resulted in an increase in their assessed expenses in this Update and their share of GST revenue. Relative service provision costs decreased in all other States except New South Wales where these were stable (Table 9). Therefore, replacing the 2001-02 factors with 2006-07 factors increased the GST revenue shares of Queensland and Western Australia and reduced the shares of the other States, albeit by a negligible amount (\$0.3 million).

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Table 10 Assessment of Expenses, Manufacturing and Other Industry

	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 Expenses		7.66		10.21		12.63		15.02		12.97
New South Wales										
Assessed difference	- 5.673	- 0.85	- 5.496	- 0.82	- 5.415	- 0.80	- 5.425	- 0.80	- 6.309	- 0.92
Expenses - Assessed	45.317	6.81	62.867	9.39	79.610	11.82	96.559	14.22	82.602	12.05
Actual	43.271	6.50	74.602	11.15	118.031	17.53	93.000	13.70	85.372	12.45
Assessed difference	- 3.541	- 0.72	- 3.545	- 0.72	- 3.567	- 0.71	- 3.732	- 0.73	- 4.337	- 0.84
Expenses - Assessed	33.978	6.94	47.081	9.50	59.821	11.92	72.745	14.29	62.678	12.13
Actual	11.000	2.25	11.000	2.22	7.000	1.39	7.000	1.37	7.000	1.35
Queensland										
Assessed difference	- 3.129	- 0.83	- 3.561	- 0.92	- 3.903	- 0.99	- 4.201	- 1.04	- 3.819	- 0.92
Expenses - Assessed	25.746	6.83	35.896	9.29	46.061	11.64	56.621	13.98	49.814	12.05
Actual	25.000	6.64	34.000	8.80	34.000	8.59	96.000	23.71	82.702	20.00
Western Australia										
Assessed difference	0.726	0.37	0.678	0.34	0.617	0.31	0.714	0.35	1.173	0.56
Expenses - Assessed	15.583	8.04	20.783	10.56	25.874	12.94	31.338	15.37	28.174	13.53
Actual	28.000	14.44	32.000	16.26	36.878	18.44	37.994	18.64	36.398	17.48
South Australia										
Assessed difference	1.202	0.79	1.160	0.75	1.130	0.73	1.104	0.71	1.251	0.79
Expenses - Assessed	12.901	8.45	16.853	10.97	20.662	13.36	24.545	15.73	21.698	13.76
Actual	41.129	26.95	49.155	32.00	56.155	36.31	70.156	44.96	51.421	32.61
Tasmania										
Assessed difference	2.942	6.19	3.006	6.25	3.067	6.33	3.166	6.48	3.380	6.87
Expenses - Assessed	6.583	13.86	7.916	16.47	9.189	18.95	10.504	21.50	9.756	19.84
Actual	0.663	1.40	0.663	1.38	0.663	1.37	0.663	1.36	0.960	1.95
Australian Capital Territory(a)										
Assessed difference	3.649	11.26	3.792	11.62	3.953	12.03	4.112	12.38	4.228	12.56
Expenses - Assessed	6.133	18.92	7.124	21.84	8.102	24.66	9.103	27.40	8.594	25.53
Actual	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00	0.000	0.00
Northern Territory										
Assessed difference	3.823	19.17	3.967	19.75	4.117	20.16	4.262	20.42	4.434	20.84
Expenses - Assessed	5.352	26.84	6.020	29.96	6.697	32.78	7.397	35.44	7.194	33.80
Actual	2.531	12.69	3.119	15.52	3.291	16.11	4.000	19.16	6.657	31.28

Note: Refer to Attachment A of the 2008 Update, Relative Fiscal Capacity of States for how these figures are compiled.