The Real Revenue Raising Capacities of the States and Territories and the Implications for the Equitable Distribution of GST Revenue

Peter Abelson

Faculty of Economics and Business, Sydney University

Abstract

The Commonwealth Grants Commission's recommended allocation of $45 billion of GST (VAT) revenue annually to the states and territories is heavily influenced by its estimate of their revenue raising capacity, which it argues is primarily a function of the value of a their tax bases. This paper argues that revenue raising capacity is primarily a function of household disposable income after allowances for major cost of living differences, notably housing and journey to work costs. We find that the CGC significantly underestimates the real fiscal capacities of the Australian Capital Territory and South Australia, slightly underestimates the capacities of the Northern Territory, Tasmania and Western Australia, and greatly overestimates the real fiscal capacities of New South Wales and Queensland. The paper concludes that the principles on which the CGC determines the distribution of billions of dollars of funds are fundamentally in error and should be reformed.

JEL H70, H73, H77

Key words GST revenue, revenue raising capacity

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I Introduction

Under Commonwealth-State agreements, the Commonwealth Grants Commission (CGC) effectively determines the distribution of all GST funds (net of Commonwealth administrative expenses) to the states and territories.[1] In 2010-11 this amounted to a distribution of $45 billion. This represents about 30% of the total recurrent revenues of the states and territories and has a major impact on state revenue and programs.

The CGC's recommendations are based on its assessments of the expenditure requirements and revenue raising capacities of the jurisdictions. In this paper I examine how the CGC assesses the revenue raising capacity of the states and territories, an alternative and (I believe) more appropriate measure of revenue raising capacity and the implications for the distribution of GST revenue.

Section II describes the CGC methodology for estimating revenue capacity and the results, based principally on the size of tax bases. Section III critiques this methodology and provides alternative measures of revenue capacity based principally though not only on real household disposable income. Section IV provides an overview of state-based incomes. Section V provides estimates of real household disposable income per capita in each state and territory drawing on tax data and corrected for costs of living and journey to work differences. In Section VI, I assess the implications for the distribution of GST funds which turn out to be considerable. There is a brief concluding section.

[1] GST denotes the Australian goods and services tax which is described in most countries as a value added tax.

II CGC Method for Estimating Revenue Capacity

The CGC aims to provide equal fiscal capacity to each jurisdiction. According to the CGC (2010), this means that "if states levied comparable taxes, then with their GST revenue they would have the same capacity to fund comparable services". To this end, the CGC recommends GST grants per capita equal to the sum of assessed recurrent and capital expenses needed to achieve equal services in each jurisdiction less the sum of their revenue capacity to achieve these services and Commonwealth payments outside the GST system. Formally,

Recommended GST revenue per capita = (ARE + ACE) – (ARC + ACP) (1)

where for each state and territory

ARE = assessed recurrent expenses per capita

ACE = assessed capital expenses per capita

ARC = assessed revenue capacity per capita

ACP = assessed Commonwealth payments per capita

These estimates are made for the most recent three years for which relevant data are available and the average outcome for these three years is used as the basis for recommending the current and immediate future distribution of GST revenues.

In 2009, the CGC added another variable: changes in the states and territories net financial worth per capita mainly due to population growth over the year (described as "assessed net lending"). However this additional factor does not affect the analysis of current revenue capacity per capita.

Table 1 shows the CGC's illustrative grants per capita for each of the four main categories for each state and territory and the overall relativity using 2007-08 data

drawn from the Draft Report for the 2010 Review. This is the middle of the three years that determine the current relativities. The last row shows the broadly similar recommended relativities for 2010-11 in the 2010 Review Final Report. Under these recommendations, the Northern Territory (NT), South Australia (SA), Tasmania and ACT receive significantly more GST revenue per capita than the national average.

Table 1 CGC recommended grants per capita and relativities for 2007-08 and 2010-11 ($s)

	NSW	Vic	QLD	WA	SA	Tas	ACT	NT	Average
Assessed recurrent expenses	7311	6963	7442	7880	7570	8078	7281	15000	7424
+ assessed net capital transactions	110	152	1648	342	35	-7	70	350	188
- assessed revenue capacity	3884	3696	4234	5124	3422	3227	3519	3643	3974
- Commonwealth payments	1631	1558	1674	1648	1720	1665	1517	2616	1639
Assessed share of GST revenue	1906	1862	1898	1450	2462	3178	2316	9091	1999
Illustrated relativity for 2007-08	0.954	0.931	0.950	0.725	1.232	1.590	1.158	4.547	1.000
Recommended relativity 2010-11	0.952	0.940	0.913	0.683	1.285	1.621	1.153	5.074	1.000

Sources: CGC, Draft and Final *Report on State Revenue Sharing Relativity 2010 Review*.

Within this overall framework, revenue capacity is an important factor. The four recipient states and territories have the lowest assessed revenue capacities.

The CGC derives estimates of revenue capacity in three ways. The main CGC measure, which accounts for 52% of estimated revenue capacity of the states and territories, is the value of the relevant tax base for each tax in each jurisdiction, given state taxation policies. *The tax base is defined as an average of state taxation policies*. Most of the balance of the revenue capacity is estimated on a per capita basis. There is an additional allowance for the value of mineral production in each jurisdiction which now accounts for nearly 10% of state revenue per capita.

Table 2 summarises how the CGC estimates the tax base for the major state and territory taxes. For example, the tax base for the payroll tax is the gross earnings of private sector employees and public trading enterprises working in companies with payrolls over a certain threshold. The tax base for the land tax is the value of various categories of land excluding principal residence. The tax base for stamp duty is the value of dutiable transactions.

Table 3 shows the CGC's assessment of revenue capacity per capita and relativities in 2007-08. Overall the CGC estimates that WA and Queensland have the highest fiscal capacities and Tasmania, the ACT and NT the lowest fiscal capacities.

Table 2 Revenue base for major state and territory taxes

Tax	Revenue base	Comments / qualifications
Payroll tax	Gross income of employees	Gross earnings of private sector employees and public trading enterprises above a company threshold
Land tax	Value of residential, commercial and industrial land	Excludes value of land for principal residences
Stamp duty	Value of household and commercial transactions that attract stamp duty	Mainly real property transactions
Insurance taxes	Premiums collected on general, life and CTP policies	Excludes workers compensation and revenues for fire/emergency services
Motor taxes	Value of private and commercial vehicles	
Mining taxes	Value of mining production	Proxy for tax on mining resources
Other taxes (e.g. gambling taxes)	Estimated on per capita basis	The per capita criterion accounts for about 42% of assessed revenue capacity.

Source: CGC, *Report on State Revenue Sharing Relativity 2010 Review*.

Table 3 CGC assessment of revenue capacity per capita in 2007-08 ($ per capita)

	NSW	Vic	QLD	WA	SA	Tas	ACT	NT	Average
Payroll tax	824	775	661	829	627	531	635	604	753
Land tax	238	196	210	300	125	68	182	84	213
Stamp duty on conveyances	610	594	894	811	461	448	673	449	668
Insurance taxes	135	115	109	118	109	90	85	94	119
Motor taxes	285	313	336	399	305	316	261	278	315
Total of above taxes	2092	1992	2211	2456	1627	1452	1837	1510	2068
Mining revenue	110	21	341	986	113	93	0	452	224
Other revenue sources	1682	1682	1682	1682	1682	1682	1682	1682	1682
Total rev. capacity /capita	3884	3696	4234	5124	3422	3227	3519	3644	3974
Total relativities	0.977	0.930	1.065	1.290	0.861	0.812	0.885	0.917	1.000

Source: CGC, Draft *Report on State Revenue Sharing Relativity 2010 Review*.

III A True Measure of Revenue Capacity

The value of a state or territory's tax bases may sometimes be a reasonable proxy for capacity to pay taxes. But they are *not* measures of capacity to pay and often they are poor correlates of capacity to pay. For example, the value of land is not necessarily correlated with household income. Indeed, to the contrary, high land and property prices *increase* the cost of living and *reduce* a household's capacity to pay tax. Thus the CGC is effectively taxing households that have high living costs. The payroll tax base as currently measured depends on the corporate structure (the presence of large companies) in the respective state or territory economy. It is not a measure of the total wage earnings in each jurisdiction.

All taxes are borne ultimately by households (albeit some by non-resident households). The capacity of households to pay depends on their real after-tax income. This is their gross income less income taxes and *after* adjustment for cost-of-living differences.

The burden on households is most evident for taxes that are levied directly on them such as taxes on land owned by households, property transactions between households, insurance premiums and motor vehicles. In each case the capacity to raise tax revenue depends entirely on the capacity of the household to pay the tax. For example, the capacity to pay rates on land or taxes on insurance premiums depends on the household's income, not on the value of the land or insurance premium. The values of the land and the insurance premiums are wholly irrelevant considerations.

The Productivity Commission's (2008) report on the revenue raising capacity of local government discussed these issues in detail and comprehensively dismissed the idea that a local council's revenue capacity depended on the value of the land tax base. In the words of the Commission (p.49): "income is a more appropriate indicator of the fiscal capacity of a local government than the rateable value of land". And (p.69): "The best indicator of fiscal capacity is the aggregate after-tax income of the local community". This view is supported by the mainstream academic literature (e.g., Musgrave and Musgrave, 1989; Bradbury and Ladd, 1985; Barro, 2002).

Identifying the real incidence of a tax, and therefore the capacity to pay, is more complex when a business bears the statutory incidence of a tax. It is a basic theorem of public finance (Rosen and Gayer, 2007; Abelson, 2008) that the real incidence of a tax depends on the relative elasticity of demand and supply for the taxed item rather than on the statutory incidence. Thus a general payroll tax levied on gross income payable by the employer has a similar impact on wages received by workers as an income tax levied on gross income payable by employees.

The issue is complicated when a tax, like the payroll tax in most states, is a partial (selective) tax on labour incomes. Here employers in the taxed sector may bear some of the costs of the tax because labour can escape to the untaxed sector. However, Abelson (2008) shows that a selective tax on payroll reduces the wage received in both the taxed and untaxed sector. In equilibrium, workers of similar skills receive the same after-tax wages in both sectors. Thus much of the burden of a selective payroll tax is borne by labour, which overall is in relatively inelastic supply.

The impacts of taxes on intermediate goods, such as commercial land or vehicles, are borne initially by firms using the land or vehicles. However, these taxes are either passed on in higher prices to consumers or result in lower company profits and hence lower shareholder income. Either way, resident households bear most of the tax and household disposable income is the real criterion of capacity to pay. Thus, however taxes are levied, capacity to pay taxes depends principally on real household disposable income of resident households.

The major exception to this principle is taxable corporate surpluses that accrue to non-residents. Returns to fixed natural resources are especially suited to state taxation. In so far as non-residents derive income from land or natural resources, the value of the resources on which these returns are based are part of a state's fiscal capacity and this is appropriately included in a jurisdiction's fiscal capacity.

The capacity to tax mobile capital including capital invested in land is more arguable. Most Australian jurisdictions make tax *concessions* in order to attract marginal external

capital. On the other hand, if major corporates obtain excess profits from investment of capital or the capital is not mobile for some reason, it may be feasible (and not inefficient) to tax these economic rents via payrolls or land tax and this would constitute extra revenue capacity. This topic deserves some consideration but is not examined in detail in this paper.

In summary, the real income available to pay taxes is the most appropriate measure of revenue capacity. This is the aggregate after-tax household income of residents of the state or territory community modified for major differences in the cost of living plus income from fixed resources accruing to non-residents that can be taxed.[2] This measure of revenue capacity is supported by the academic literature and similar to the method used by the Productivity Commission (2008) to estimate the revenue capacity of local governments around Australia.

IV Gross State Product and Household Income per Capita

For an initial perspective before turning to more relevant and detailed calculations, we show first some overview data on a simple measure of a jurisdiction's taxable capacity, namely gross state product (GSP). This consists of wages and salaries, gross operating surplus, income of unincorporated businesses, and taxes less subsidies on production and imports.

Table 4 shows three sets of statistics for each jurisdiction in 2007-08: GSP per capita; gross household income per capita; and estimated disposable household income per

[2] Arguably capacity to pay should be standardised for differences in working hours because wage rates are in some ways a better measure of earning capacity than incomes. However at the state level (though not at city level) there are minor differences in average hours worked (ABS 6291.0.55.003, Table E03).

capita. Income here is personal income. It does not include transfer payments (government benefits).

The dollars shown in Table 4 are converted to index numbers in Table 5. The two most significant columns are those for GSP per capita and disposable household income per capita. Drawing on either of these indices, the three states with the highest fiscal capacity are WA, NT and the ACT. WA has easily the highest GSP per capita. The ACT has easily the highest disposable income per capita. On the other hand, Queensland has a below average capacity to raise tax revenue. The results for ACT, NT and Queensland are at significant variance with the CGC's measures of revenue capacity.

Corporate profits are the major reason why the GSP per capita index differs from the household income indices. As shown in Table 6, gross operating surplus is a much higher proportion of GSP in WA and NT than elsewhere. It is also a relatively high proportion of GSP in Queensland. On the other hand, net taxes on production are a low proportion of GSP in both WA and NT.

Table 4 GSP and household income per capita in 2007-08 ($s)

	GSP per capita	Gross household income per capita	Disposable household income per capita
NSW	51,880	47,512	33,456
Victoria	51,205	46,378	33,546
Queensland	50,727	42,190	30,276
South Australia	36,171	41,816	30,404
Western Australia	76,683	48,255	34,091
Tasmania	42,994	39,229	29,216
Northern Territory	72,324	45,261	34,952
ACT	60,043	68,957	52,389
Australia	53,523	45,944	32,898

Source: ABS, 2007-08, *Australian National Accounts, State Accounts,* Cat. No.5220.0.

Table 5 GSP and household income per capita in 2007-08 in index numbers

	GSP per capita	Gross household income per capita	Disposable household income per capita
NSW	96.9	103.4	101.7
Victoria	95.7	100.9	102.0
Queensland	94.8	91.8	92.0
South Australia	67.6	91.0	92.4
Western Australia	143.3	105.0	103.6
Tasmania	80.3	85.4	88.8
Northern Territory	135.2	98.5	106.2
ACT	112.2	150.1	159.2
Australia	100.0	100.0	100.0

Source: ABS, 2007-08, *Australian National Accounts, State Accounts,* Cat. No.5220.0.

Table 6 GSP by income components in 2007-08 (%)

	Employee compensation	Gross operating surplus	Gross mixed income	Net taxes on production
NSW	51.1	30.9	7.5	10.5
Victoria	49.3	27.8	9.9	12.5
Queensland	47.0	34.1	9.5	10.4
South Australia	47.5	28.4	9.5	10.4
Western Australia	36.8	47.8	7.8	6.7
Tasmania	46.2	26.5	11.1	16.4
Northern Territory	37.3	49.2	5.5	8.2
ACT	61.4	25.2	5.1	9.2

Source: ABS, 2007-08, *Australian National Accounts, State Accounts,* Cat. No.5220.0.

V Real Household Disposable Income in the States and Territories

In this section we estimate real household disposable income defined as household disposable income less housing and journey-to-work (JTW) costs. Housing costs are the main component of differences in the cost of living between jurisdictions. JTW costs are also accounted for to obtain estimates of the final goods and services that households can purchase.

The estimates are for financial year 2005-06. This is the latest year for which the housing costs in the states and territories are available from the Australian Bureau of Statistics (ABS). While for practical purposes the results would need updating, the changes between 2005-06 and 2007-08 (the year used for the comparative CGC relativities) were small. In any case, the aim of the paper is to demonstrate the principles and the order-of-magnitude relativities that would be obtained rather than to estimate precise numbers.

Household income

Table 7 shows average disposable income per capita for each state and territory based on data from the Australian Taxation Office. The income includes income from capital and property as well as from labour. It does not include non-taxable welfare benefits or salary sacrifices.

The indices in Table 7 are broadly consistent with the disposable household income indices in Table 5. As before, incomes are highest in the ACT and WA and lowest in Tasmania, SA and Queensland. The main difference is that estimated household

disposable income in NT is below average in Table 7 whereas it is above average in Table 4.

Housing costs

Table 8 shows estimated average housing costs per annum for each state and territory in 2005-06. These are factored up from the weekly housing costs for owners and renters estimated by the ABS and shown in a table in the annex. Housing costs include rents, municipal and water rates, interest payments and mortgage repayments when the initial purpose of the loan was to buy or renovate the dwelling.[3] There is no allowance for Commonwealth rent assistance. The table also shows some key demographic and housing quality information for each state.

As shown in Table 8, housing costs per household and per capita were highest in NSW and the ACT. However, the latter statistic reflects the absence of low priced regional or rural housing, the high proportion of owners with mortgages and the quality of the housing.

Importantly, these costs do *not* account for differences in housing quality around Australia. Housing quality, as measured by average number of bedrooms per dwelling and average number of bedrooms per capita, was highest in the highest income jurisdictions (ACT and WA). On the other hand, NSW not only had highest housing costs, it also had low housing quality with the highest proportion of units and the second lowest number of bedrooms per capita (after NT). Ideally housing costs across

[3] We do not include the opportunity cost of owner's equity. This is an important component of housing user costs but not relevant to this exercise.

jurisdictions would be standardised for quality, but this is beyond the scope of this paper.

Journey-to-work costs

JTW costs have two components: out-of-pocket costs and travel time costs. Out-of pocket costs depend on the mode of travel. In this paper, estimated JTW costs are based on bus travel which is generally available and a low cost form of travel. Travel time is valued at anything between 33% and 100% of the wage rate depending on whether the time is viewed as loss of leisure time or loss of working time respectively (Abelson, 2008, Chapter 11). In this paper travel time is valued at 50% of the wage rate.

To estimate out-of-pocket JTW costs, we assume an average journey length of 16 km in the large cities (Sydney and Melbourne), 9 km in the other state capitals, and 5 km in the regions.[4] Drawing on IPART (2009), the bus fares in 2008 for each of these trip lengths were about $5.00, $3.50 and $2.50 respectively. Allowing 400 commuting trips per annum, this translates into average annual out-of-pocket commuting costs of $2000, $1400 and $1000 per annum per worker respectively.

Our estimates of travel time costs are based on the HILDA 2002 survey of households (Melbourne Institute of Applied Economic and Social Research, IAESR, 2002). As shown in Table 9 below, valuing travel time at 100% of the foregone wage IAESR (2002) estimated that the cost of journey-to-work time varied from around $40 per week in regional areas, to $70 per week in small cities, and up to $109 per week Melbourne and $123 in Sydney in 2002. For this exercise, we value travel time at 50% of the wage

[4] The average JTW distance in Sydney is 16 km (source: Transport Data Centre, 2002, p.35, *2006 Household Travel Survey*. The average travel distance in Brisbane is 9 km (source: Queensland Transport Main Roads, *South East Queensland Travel Survey - Fast Facts*).

rate and allow an escalation factor of 20% to allow for inflation and increases in real incomes between 2002 and 2006.

In Table 9, we combine the out-of-pocket and travel time costs, estimate a weighted cost per worker per jurisdiction and then convert these to a per capita basis allowing for non-workers. Journey-to-work costs are lowest in NT, Tasmania and SA. They are highest in NSW and Victoria.

Real household income by jurisdiction

Table 10 shows estimated real household disposable income after allowing for housing and JTW costs. Real income is highest in the ACT, WA and NT with indices of 1.483, 1.145 and 1.128 respectively compared with an Australian average of 1.000. The jurisdictions with the lowest real income are Tasmania, NSW and Queensland with indices of 0.944, 0.957 and 0.972 respectively. This is a very different ordering to the CGC index in Table 3.

Table 10 also shows the results without any allowance for travel time costs. The ranking is broadly the same that with estimated travel time costs. However, the relative positions of Victoria and NSW improve slightly.

Table 7 Gross and disposable income per capita per state and territory in 2005-06.

State or Territory	Total income	Net tax	Imputation credits	Medicare Levy	Medicare surcharge	Total Tax	Total disposable income	Population	Total income per capita	Total tax per capita	Disposable income per capita	Index
	$mn	$mn	$mn	$mn	$mn	$mn	$mn	No	$	$	$	No
ACT	9,767	2,463	131	135	8	2737	7,030	324,034	30,143	8447	21,696	134.8
WA	47,413	11,922	762	660	39	13382	34,031	1,959,088	24,202	6831	17,371	107.9
NSW	151,325	38,626	3045	2093	90	43854	107,471	6,549,177	23,106	6696	16,410	101.9
VIC	109,168	26,610	2088	1515	72	30284	78,884	4,932,422	22,133	6140	15,993	99.3
NT	3,969	903	30	54	4	991	2,977	192,898	20,574	5139	15,434	95.8
QLD	81,993	19,280	1330	1127	58	21794	60,199	3,904,532	20,999	5582	15,418	95.7
SA	30,370	6,962	515	419	15	7911	22,459	1,514,337	20,055	5224	14,831	92.1
TAS	8,698	1,915	116	118	4	2153	6,545	476,481	18,255	4520	13,735	85.3
Aust.	442,704	108,681	8017	6120	289	123107	319,596	19,852,969	22,299	6201	16,098	100.0

Source: Australian Taxation Office, *Taxation Statistics, 2005-06*, Personal Tax Table 3A.

Table 8 Housing costs per annum in 2005-06

	Unit	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Aust.
Housing cost										
Average cost per household	$	11076	8736	9672	7540	9308	6396	9724	11492	9620
Average cost / capita	$	4347	3521	3828	3177	3820	2687	2684	4576	3859
Demographics										
No. of households	('000)	2570	1988	1545	638	804	200	53	129	7962
Population	('000)	6549	4932	3904	1514	1959	476	192	324	19850
Housing quality / size										
Average persons / household	No.	2.60	2.50	2.51	2.36	2.42	2.39	2.83	2.49	2.51
Average bedrooms / dwelling	No.	3.05	3.01	3.1	2.92	3.21	2.96	2.87	3.27	3.06
Average bedrooms / person	No.	1.17	1.20	1.24	1.24	1.33	1.24	1.01	1.31	1.22
Percentage of flats/units	%	15.5	9.3	8.9	6.3	6.1	6.9	7.9	7.6	10.6
Home ownership										
Owner without mortgage	%	30.5	34.8	33.1	33.7	28.9	36.1	17.7	27.3	32.1
Owner with mortgage	%	35.9	35.6	34.9	34.6	41.9	35.8	39.6	42.5	36.5
Total home ownership	%	66.4	70.9	68.0	68.3	70.8	71.9	59.3	69.8	68.6

Source: ABS, *Housing Occupancy and Cost,* Cat: 4130.0.

Table 9 Estimated costs of journey to work (JTW) per worker and per capita per jurisdiction

Region	2006 Cost of fares	2002 Hilda survey time costs[a]	2002 Hilda survey time costs[a]	2006 estimated time costs	2006 Total JTW cost	Population	Workers by region	Weighted average cost	Workforce as % population	Annual cost per capita in 2006
	$ / annum	$ /week	$ / annum	$ / annum	$ / annum	No	%	$ / annum	%	$ /annum
Sydney	2000	123.36	5921	3553	5553	4,284,379	63	4565	48	2211
Rest of NSW	1000	65.80	3158	1895	2895	2,532,803	37			
Melbourne	2000	109.43	5253	3152	5152	3,744,373	73	4511	50	2248
Rest of Victoria	1000	61.70	2962	1777	2777	1,383,937	27			
Brisbane	1400	84.88	4074	2444	3844	1,820,400	44	3131	51	1592
Rest of QLD	1000	54.13	2598	1559	2559	2,271,146	56			
Perth	1400	84.00	4032	2419	3819	1,476,143	72	3384	52	1766
Rest of WA	1000	44.52	2137	1282	2282	582,902	28			
Adelaide	1400	68.79	3302	1981	3381	1,146,119	73	3039	48	1473
Rest of SA	1000	38.55	1850	1110	2110	422,085	27			
ACT	1400	66.70	3202	1921	3321	334,225	100	3321	56	1854
Tasmania	1400	52.16	2504	1502	2902	489,922	100	2902	46	1321
Northern Territory	1000	47.40	2275	1365	2365	210,674	100	2365	48	1138
Australia		83.64	4015	2409		20,699,108			50	

(a) Source: Melbourne Institute of Applied Economic and Social Research (2002). Other estimates as described in the text.

Table 10 Average real income per capita per state and territory in 2005-06

State / territory	Disposable income per capita	Housing costs per capita[a]	Commuting costs per capita	Real income per capita	Real income per capita	Real income per capita Exc. travel time costs	Real income per capita
	$	$	$	$	Index	$	Index
ACT	21,696	4576	1854	15,266	1.483	16,388	1.419
WA	17,371	3820	1766	11,785	1.145	12,880	1.119
NT	15,434	2684	1138	11,612	1.128	12,269	1.066
Vic	15,993	3521	2248	10,224	0.993	11,610	1.008
SA	14,831	3177	1473	10.181	0.989	11,028	0.958
Qld	15,418	3828	1592	9,998	0.972	10,991	0.955
NSW	16,410	4347	2211	9,852	0.957	11,274	0.979
Tas	13,725	2687	1321	9,717	0.944	10,401	0.903
Aust.	16,098	3839	1961	10,291	1.000	11,513	1.000

(a) No allowance is made for difference in housing stock or size.

VI Implications of Real Measures of Revenue Capacity

Table 11 shows our estimated real per capita relativities with and without travel time costs. These real income relativities are then applied to both the revenue from the top five taxes and to “other revenues” shown in Table 3. These combined tax revenues averaged $3750 per capita in 2007-08 across Australia.

We then add on the CGC’s estimate of the revenue capacity related to mineral production. Arguably, mineral profits would be a better measure of taxable capacity

than the value of mineral production (which is the CGC's measure of revenue capacity), but we do not have data on mineral profits by jurisdiction.

Finally the table shows assessed total revenue capacity per capita, including and excluding an estimated time cost of the journey to work, in each jurisdiction.

Table 11 Assessed revenue capacity per capita as per 2007-08 ($)

	NSW	Vic	QLD	WA	SA	Tas	ACT	NT	Average
Including JTW travel time									
Real per capita relativities	0.957	0.993	0.972	1.145	0.989	0.944	1.483	1.128	1.000
Total of household taxes	3589	3724	3645	4249	3709	3540	5561	4320	3750
Plus mining revenue	110	21	341	986	113	93	0	452	224
Total rev. capacity /capita	3699	3745	3986	5280	3822	3633	5561	4682	3974
Excluding JTW travel time									
Real per capita relativities	0.979	1.008	0.955	1.119	0.958	0.903	1.419	1.066	1.000
Total of household taxes	3671	3780	3581	4196	3593	3386	5321	3998	3750
Plus mining revenue	110	21	341	986	113	93	0	452	224
Total rev. capacity /capita	3781	3801	3922	5182	3706	3479	5321	4450	3974

Table 12 summarises the differences per capita and in total per jurisdiction between our estimates and the CGC estimates. A negative figure implies that the CGC underestimates revenue capacity. For a jurisdiction it shows the amount by which that jurisdiction's revenue raising capacity has been underestimated. Positive results signify that the CGC has overestimated the revenue raising capacity of the jurisdiction.

Table 12 Financial implications of our estimates of revenue capacity compared with CGC

	Unit	NSW	Vic	QLD	WA	SA	Tas	ACT	NT
Differences per capita									
Including JTW travel time	$	+185	-49	+248	-156	-400	-406	-2042	-1039
Excluding JTW travel time	$	+104	-105	+312	-58	-284	-252	-1802	-807
Differences per jurisdiction									
Including JTW travel time	$m	+1213	-240	+968	-305	-605	-193	-662	-200
Excluding JTW travel time	$m	+673	-518	+1217	-114	-429	-120	-584	-156

This paper finds that the CGC methodology greatly underestimates the real per capita fiscal capacity of the ACT and NT and also underestimates the capacities of Tasmania, SA and WA. On the other hand, the CGC significantly overestimates the real fiscal capacities of NSW and Queensland.

In aggregate terms, we find that the CGC methodology underestimates ACT's annual financial capacity by some $600 million and SA annual capacity by $500 million, depending on the benchmark chosen. On the other hand, the CGC overestimates Queensland's annual fiscal capacity by $1.0 - $1.2 billion and NSW's capacity by between $0.7 and $1.2 billion, depending again on the choice of benchmark.[5]

As noted in Section V, these estimates assume equal housing standards across Australia. Actually, ACT and WA have the largest houses and NSW and NT the smallest housing units. Without correcting for house sizes, this means that ACT and WA housing costs are over-estimated and the NSW and NT costs under-estimated.

[5] It may be observed that the estimated differences per jurisdiction sum to -$31 million with JTW travel time and $-24 million without it. These small differences from zero (just over $1 per person) reflect rounding errors.

VII Conclusions

In this paper I have argued that the fiscal capacity of the states and territories should be measured principally by disposable household income after allowances for major differences in the cost of living, notably for housing and journey to work costs. Fiscal capacity is augmented in so far as jurisdictions can tax the economic rents earned by non-resident owned corporations, principally from ownership of land and mineral resources.

On the other hand, the CGC determines fiscal capacity as a function principally of the estimated values of the tax bases. This paper has argued that this is a fundamentally flawed approach and produces flawed conclusions. This is supported by a common sense test. Whereas average disposable household income in the ACT is far higher than in any other state and territory and 59% higher than the Australian average, the CGC concludes that that the ACT has only 89% of the average Australian capacity to raise revenue. This extraordinary conclusion suggests that something is seriously amiss with the CGC's calculation method.

These different approaches to estimating fiscal capacity produce quite different results. We find that the CGC methodology underestimates ACT's annual financial capacity by some $600 million and SA annual capacity by $500 million, depending on the benchmark chosen, and also slightly underestimates the fiscal capacities of Tasmania, the Northern Territory and Western Australia. On the other hand, the CGC overestimates Queensland's annual fiscal capacity by $1.0 - $1.2 billion and

NSW's capacity by between $0.7 and $1.2 billion, depending on the treatment of journey to work costs.

These findings are based on limited and, to some extent, non-current data. Nevertheless the orders of magnitude are considered reasonable. More importantly, the principles on which the CGC determines the distribution of billions of dollars of funds to the states and territories are fundamentally in error and should be reformed.

Appendix

Supplementary Table Housing costs per household per week in 2005-06

	NSW	Vic	QLD	WA	SA	Tas	ACT	NT	Average
Owners									
Without mortgage	29	31	30	24	28	24	31	32	29
With mortgage	405	309	326	322	258	232	343	276	338
Renters									
Public housing	105	109	109	81	87	81	104	86	100
Private landlord	258	203	223	180	186	156	280	248	223
All renters	227	188	204	162	156	138	228	180	199
Average all housing	213	168	186	179	145	123	221	187	185

Source: ABS, *Housing occupancy and Cost*, Cat: 4130.0.

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