

# Supplementary Submission to the Commonwealth Grants Commission

## Review of the Financial Capacity of Norfolk Island 2006

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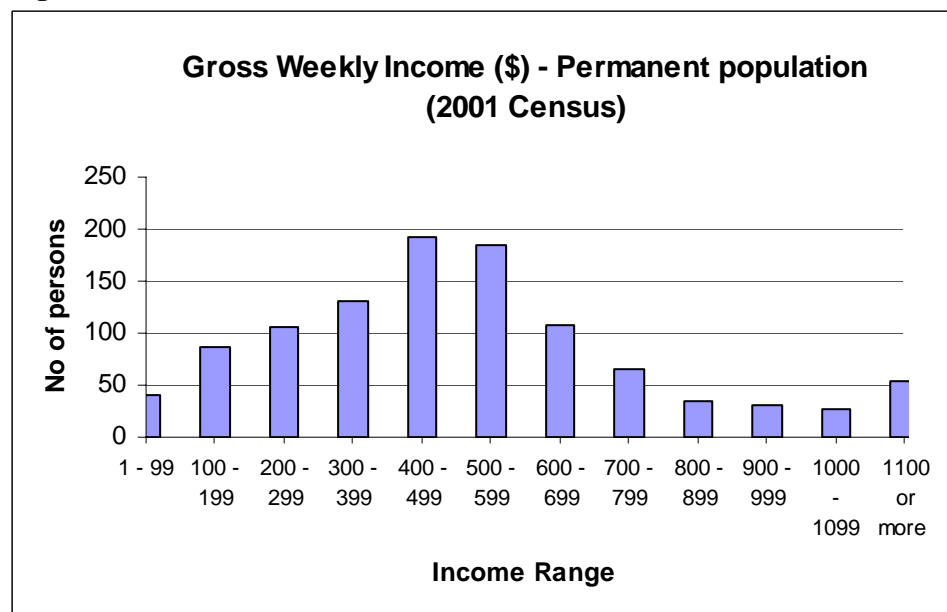
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### Background

1. My original submission to this Review highlighted a number of demographic and structural issues with a direct bearing on such matters as the likely costs of future services and capacity for long term revenue raising.
2. This submission seeks to clarify a number of previous comments with respect to income distribution on the island, taking into account the cursory nature of some of the underlying data. These comments highlight limitations with existing information on income and business activity and the important need for more systematic data collection and modelling of the island economy.
3. For the purposes of this supplementary submission, my previous comments are reproduced below:

The distribution of gross weekly income from the 2001 Census is presented in Figure D. Based on these figures, over 80 per cent of the population had an annual income between \$2,500 and \$55,000, and 57 per cent earned between \$13,000 and \$33,000 per annum. It is likely the majority of wage and salary earners fall within these categories. Some 6 per cent of the population stated they had no income.

**Figure D**



It is noted that 137 respondents or nearly 11 per cent of the population did not state their income, while a further 4 per cent indicated their income was over \$57,000 per annum. A crude estimate of the average income of these two latter groups can be derived from the Gross Domestic Product (GDP) for the island, conservatively estimated at \$80.35 million in 1995-96 (CGC, 1997). This GDP figure converts to \$113 million in 2004-05 dollars. In general terms, GDP less capital depreciation can be used as an estimate of total income. Given the conservative estimate for GDP, and hence no allowance for capital depreciation, total income is crudely estimated at \$113 million. Taking the difference between total income and total annual earnings for 80 per cent of the population (\$24.82 million in 2001 or \$29 million in 2004-05 dollars), provides residual income of around \$84 million. This equates to around \$442,000 per annum for 190 respondents or 15 per cent of the population.

The main observation arising from the above analysis is that income distribution is not uniform, and a small proportion of the population (10-15%) may account for up to 75% of total income with high average earnings. Various reports have noted the regressive nature of the present taxation system (e.g. Department of the Treasury 2004) which produces a greater proportional tax burden on low to middle income earners. Such issues would need to be considered with respect to the design of an equitable and efficient tax system into the future.

#### A further note on income distribution

4. The main point of clarification here is to highlight the general observation about the nature of income distribution on the island and the likely spike in the distribution at higher income levels – rather than the simplistic estimates of annual “average” earnings for those respondents that did not state their income. Clearly, income levels for those respondents may be highly variable and include a range of low to high incomes – as their income was literally “unstated”. It is therefore important to recognise that such average estimates are necessarily crude and subject to underlying assumptions about total income – and at best provide an order of magnitude of unreported income in official statistics.
5. Nevertheless, given the magnitude of the surplus between available estimates of total income (derived from the CGC calculation of GDP in 1995-96), and income reported in the 2001 census for 85 per cent of the population, it is plausible to conclude that income distribution is not uniform and a small proportion of the population may account for a relatively high proportion of total income. Such distributional aspects would be a relevant consideration in the consideration and evaluation of revenue raising options.
6. For example, based on the income method for the calculation of Gross Domestic Product in 1995-96, the CGC specifically estimated private sector gross profit and wages and salaries at \$57.4 million (noting some estimates at \$70 million), together with wages and salaries of employees for general Government and Government Business Enterprises at \$6.85m. This provides a range for total private income of between \$64.25 million and \$76.85 million, excluding any other possible income components.

7. By comparison, the 2001 census revealed total income of \$24.82 million for 85 per cent of the population. This results in a surplus of residual income of between \$39.43 million and \$52.03 million, or 61 and 68 per cent of total income respectively. This implies such a surplus would fall in varying proportions to respondents with "unstated income" or those with income "greater than \$57,000 per annum". These groups represented 15 per cent of the population (referred to below as the residual population).
8. However, it is important to acknowledge the uncertainty in estimating this surplus income given the limited data about total income and comparison of data between different time periods. In particular, there are likely to have been a number of significant changes in economic activity since 1995-96, where current activity and income may well be lower or higher (given the trend of higher inbound tourism since the mid-1990s). To provide some indication of this uncertainty, the sensitivity of the "surplus" income to an assumed range of total income estimates is presented in **Table A**. The range of income estimates were derived from the GCG calculation of GDP in 1997.

**Table A – Sensitivity of estimated “surplus” income to key assumptions**

<b>Assumed total income</b>	<b>Total census income (85% of population)</b>	<b>Total surplus income</b>	<b>Proportion of surplus income to total income</b>	<b>Proportion of residual to total population</b>	<b>Estimated average income for residual population</b>
<b>(\$million)</b>	<b>(\$million)</b>	<b>(\$million)</b>	<b>(%)</b>	<b>(%)</b>	<b>(\$ per annum)</b>
113 <sup>A</sup>	29	84	74	15	442,000
80.35 <sup>B</sup>	24.82	55.53	69	15	292,000
76.85 <sup>C</sup>	24.82	52.03	68	15	273,000
64.25 <sup>D</sup>	24.82	39.43	61	15	207,000
<i>Total income scenario = \$64.25m</i>					
<b>Assumed residual population with average earnings (A)</b>	<b>Total census income plus (A)</b>	<b>Total surplus income</b>	<b>Proportion of surplus income to total income</b>	<b>Proportion of residual to total population</b>	<b>Estimated average income for residual population</b>
<b>(%)</b>	<b>(\$million)</b>	<b>(\$million)</b>	<b>(%)</b>	<b>(%)</b>	<b>(\$ per annum)</b>
0	24.82	39.43	61	15	207,000
25	26.00	38.25	60	11	268,000
50	27.18	37.07	58	8	390,000

<sup>A</sup> Total GDP figure of \$80.35m converted to real 2004-05 dollars. Used as a proxy for private income given conservative CGC estimate and increased activity since 1995-96. Total GDP includes income of Government Business Enterprises of \$4m.

<sup>B</sup> Total GDP figure in nominal dollars.

<sup>C</sup> Upper estimate of private sector profits and wages, and government employee incomes (nominal).

<sup>D</sup> Lower CGC estimate of private sector profits and wages, and government employee incomes (nominal).

9. It is clear that based on the assumed range of total income, up to 15 per cent of the population may account for between 60 and 75 per cent of total income. As noted previously, this suggests that income distribution is not uniform and a small proportion of the population may account for a relatively high proportion of total income with relatively higher earnings.
10. However, as discussed above, the income of the residual population (those respondents with “unstated” income) may vary widely and not be evenly distributed. It may be plausible, for example, that while some of the residual population may have higher relative income, others may have similar income as reported for the rest of the population (i.e. 85 per cent of census respondents). To account for such assumptions, further sensitivity analysis is presented in Table A where 25 and 50 per cent of the residual population are assumed to have the same average income as the rest of the census population (just over \$24,700 in 1995-96 dollars). For the total income scenario of around \$64.25 million this does not change the general finding on income distribution – where between 8 and 11 per cent of the population may account for around 60 per cent of total income.

### Concluding comments

11. This supplementary submission clarifies a number of previous comments made with respect to income distribution on the island and the extent of uncertainty in some of the underlying data. This uncertainty highlights the need for more reliable economic information and statistics on income levels and related private sector activity over time.
12. Despite the underlying uncertainty in some of the data, the crude analysis presents a number of general findings with respect to income distribution that warrant further investigation. In particular, the likely spike in the distribution of income at higher levels would be a relevant consideration in the evaluation of revenue raising capacity, particularly with respect to the design of an efficient and equitable taxation system into the future.

## References

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Department of the Treasury 2004, *Discussion Paper: Taxation Options for Norfolk Island*, Report to the Norfolk Island Government, Canberra.