# Goods and Services Tax

Australia's Goods and Services Tax (GST) is a broad based tax on the supply of most goods and services in Australia. A tax of 10 per cent is charged on the final sale of all taxable goods and services. Revenues are collected by the Australian government, but are returned directly to the State governments from which they were collected (subject to an equalisation process). Since the introduction of the GST in 2001, GST revenues as a share of both GDP and of household consumption have been rising steadily (figure 11.1). The 2004-05 Budget papers predict GST revenues to account for 4 per cent of GDP and 7 per cent of consumption expenditure.[1]

Figure 11.1 **GST revenue**
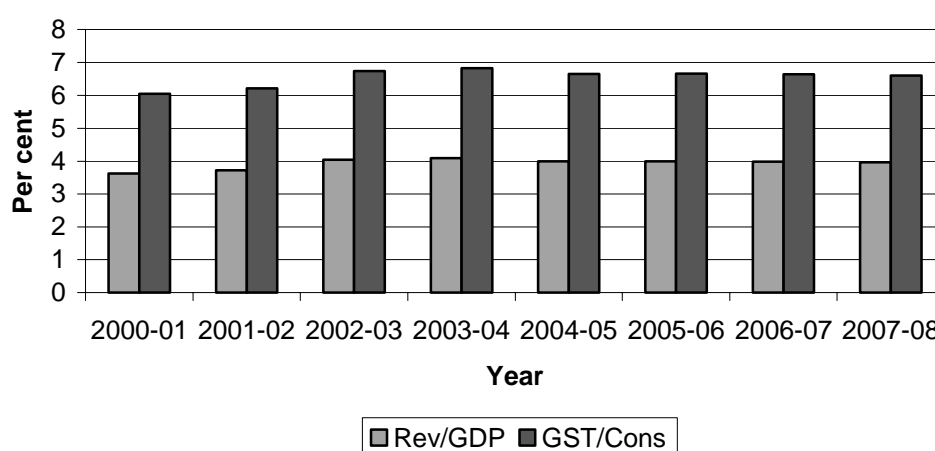


*Data source:* Richardson (2004).

Relatively, the GST provides only a small amount of the total funding for government spending. Combined State, Territory and Federal revenues in 2003-04 amounted to $268.1 billion. GST revenues contributed to 12 per cent of this figure, around $33.2 billion. For the States, however, the revenue earned through the GST amounts to a significant component of their respective budgets. For most State and

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[1] The actual budget papers' estimate of GST/GDP for 2004-05 is 4.09%. Were recent ABS data of GST revenue used (ABS 2005, *Australian National Accounts: National Income, Expenditure and Product*, Cat. 5206.0), the estimate of GST/GDP would be 4.15%.

Territory governments, the GST accounts for about one quarter of total revenues (figure 11.2) — with only the Northern Territory substantially higher.

Figure 11.2    **GST revenues**
2004-05 estimated



**GST revenues as a proportion of total government revenues**
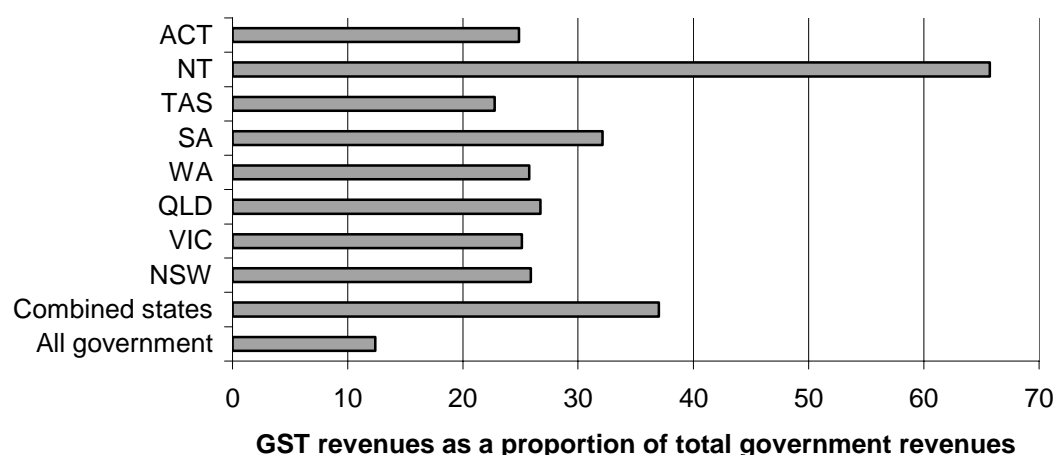
*Data source:* Treasury and State and Territory budget papers. Revenues include non-tax revenues, such as Australian Government Specific Purpose Payments.

There are several ways in which GST revenues may be affected by ageing (box 11.1):

- Some consumption items are exempt from taxation (indeed, GST-free items accounted for around 31 per cent of household consumption in 2003-04, and about 19 per cent of GDP).[2] If the old spend more or less proportionately on these exempt items than others, then ageing will shift expenditure towards or away from tax exempt goods and services, with implications for the revenue base. Since the GST is a flat rate tax, other changes in the patterns of consumption that may occur with ageing make no difference to the revenue base.

- The share of income used for households' consumption spending (or its inverse, the saving ratio) may change over time as a result of ageing, affecting the overall level of consumption in the economy and the revenue base for the GST.

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[2] GST-free items include fresh foods; many educationally-related expenditures (such as education courses, materials, administrative fees and student accommodation); most health care (such as hospital treatment, medicines, many professional health services); childcare; some utility services (such as water and sewerage); residential rents; acquisition of residential properties (including investment properties and mortgage repayments); and some financial services.

- As noted in chapter 5, ageing affects overall economic growth and thereby the income from which consumption is funded. However, by itself, this factor does not change the ratio of GST revenue to GDP, and is ignored in this section.

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**Box 11.1   Modelling the impact of ageing on GST revenues**

Empirically, the ratio of disposable household income (HY) to GDP has been stable over time (at around 0.6). It is assumed that this pattern continues so that:

$HY_t = 0.6\ GDP_t$

HY is directed by households to three things: consumption later (savings — S, which are not taxable through the GST), GST-exempt consumption (TEC) and consumption that is taxable through the GST (the consumption revenue base — CRB). TEC has two components.

The first includes tax exempt items whose consumption levels per capita are age-related (TECAR). These are health care, education spending and housing costs.

The value of TECAR is modelled as:

$$TECAR_t = \sum_i \ \sum_x \frac{C_{i,x,t}}{POP_{x,t}} \frac{POP_{x,t}}{POP_t}$$

where C(i,x,t) is consumption of the $i^{th}$ tax exempt good by the $x^{th}$ age group at time t. Profiles of C(i,x)/POP(i,x) by different age group (x) were obtained from current data. It was assumed that *relative* spending on tax-exempt items per capita between different age groups would remain constant over time. Further, it has been assumed that C(i,x)/POP(i,x) would grow by the same rate as GDP per capita, with the exception of health care, where the same assumptions as those used in chapter 6 were used.

The second component of TEC are items whose consumption is not age-related (TECNAR). These include fresh food and a residual group encompassing a large range of miscellaneous items. It is assumed that TECNAR comprises a fixed share of household income.

In our baseline case, we have adopted the assumption that there is no change in the ratio of savings to HY, though we explore scenarios in which this assumption is relaxed (chapter 11).

Accordingly, the consumption revenue base can be projected as:

$CRB_t = (1-\beta-\lambda)\ HY_t - TECAR_t$

Where β is the savings ratio and λ is the ratio to household income of tax-exempt consumption items that are not age-related.

Finally, GST revenue as a share of GDP is calculated as 10 per cent of CRB/GDP.

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## Is there an ageing dimension to consumption of tax exempt items?

Per capita consumption of GST-exempt items increases with age (figure 11.6 in chapter 11). Approximately 28 per cent of consumption by people aged under 60 years is untaxed — most of this is expenditure on housing and fresh food. In contrast, around 35 per cent of the consumption of those aged over 75 years is untaxed. This suggests that an ageing population will shift a greater share of consumption spending to tax exempt items, reducing State and Territory revenue bases below what they would be otherwise.

Three tax-exempt consumption items have particularly noticeable age-related consumption patterns: health, education and housing (figure 11.3 to figure 11.5 and table 11.1).

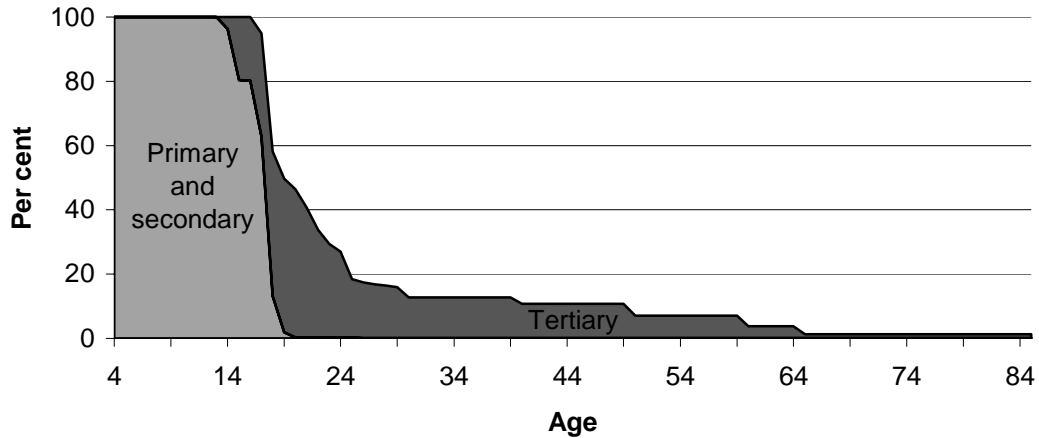Figure 11.3    **Private health expenditures**
                Per capita**a**
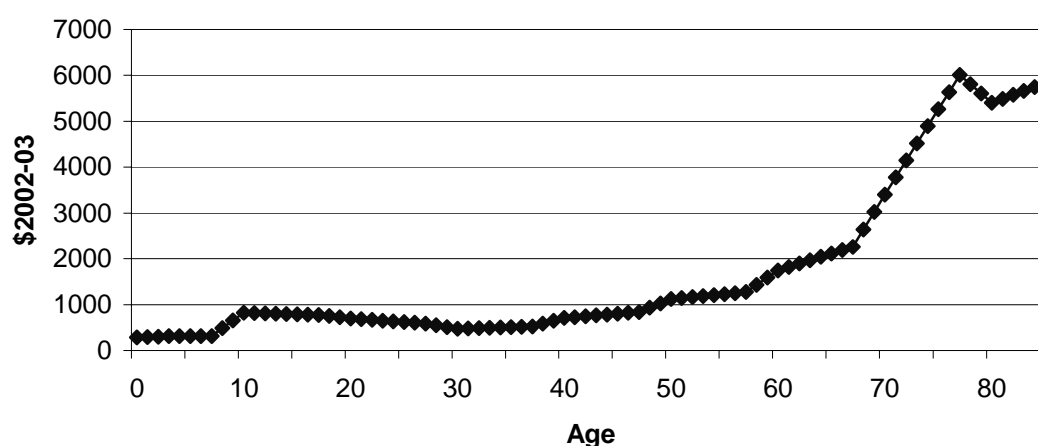


**a** The private health expenditure profile is calculated by subtracting the public health expenditure profile in chapter 6 from the total health expenditure profile in appendix A.

*Data source:* Commission estimates

Figure 11.4 **Participation in education**
2003**a**



**a** Direct data on private spending on education by the age of the recipient is not readily available. However, for the purposes of GST calculations, a reasonable proxy for such spending was developed from data on participation rates in education and aggregate information on private education costs. For any age group, x, private education spending (E) was estimated as:

$$E_x = PR(x, SP)C(SP) + PR(x, T)C(T)$$

where C(SP) is the average private cost per student of secondary and primary tuition (approximately $1402 per student in 1999 from the Household Expenditure Survey), PR(x,SP) is the participation rate in such schooling by a person aged x years, C(T) is the average private cost per student of tertiary education (approximately $1175 per student in 1999). And PR(x,T) is the participation rate of someone aged x in tertiary education.

*Data source:* ABS (*Schools Australia, 2003*, Cat. no. 4221.0; *Education and Training in Australia, 1998,* Cat. no. 4224.0; and *Household Expenditure Survey, Australia: Detailed Expenditure Items, 1998-99*, Cat. no. 6535.0); DEST (2004); NCVER (2003); and Commission estimates.

## Forecasting future GST revenues

Initial estimates of GST as a share of GDP were produced using the methodology outlined in box 11.1 and the age profiles of consumption noted above. Non-taxable expenditure will account for around 36 per cent of total household consumption (21.4 per cent of GDP) by 2044-45 (Commission estimates), up from its current share of 31.3 per cent of household spending (18.7 per cent of GDP). The main source of this change is increased expenditure on private health services, which will increase by about 2 percentage points as a share of GDP. The surge in private health expenditures, however, is partly offset by a reduction in tax-exempt consumption of education and housing. This reflects relatively fewer children in education and an increase in homeownership that reduces tax-exempt housing consumption (figure 11.7 in chapter 11).

## Figure 11.5 **Housing costs**
Per capita, 2004[a]
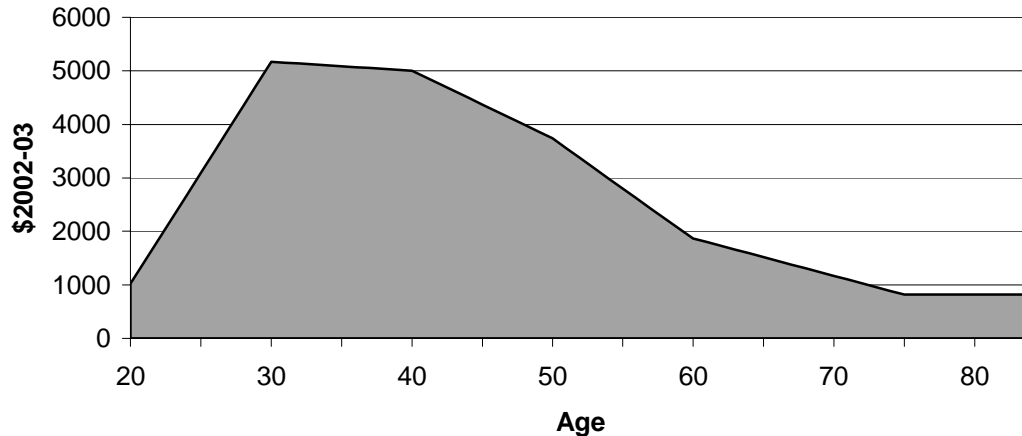


**a** This was estimated by applying a linear piecewise transformation to the profile of housing expenditures by age. Housing expenditures are quite high until the mid 40s, as the degree of outright homeownership is relatively low, with those in the market both renting and servicing mortgage debt.

*Data source:* ABS (*Housing Occupancy and Costs, Australia, 1997-98*, Cat. no. 4130.0; *Household Expenditure Survey, Australia: Detailed Expenditure Items, 1998-99*, Cat. no. 6535.0), and Commission estimates.


## Table 11.1 **Housing expenditure**
2003-04[a]

| Age | Households by tenure type, thousands | | | Housing costs by tenure type | | | Total | Pop, millions | Per capita |
|---|---|---|---|---|---|---|---|---|---|
| | *Outright* | *Mortgage* | *Rent* | *Outright* | *Mortgage* | *Rent* | | | |
| 15-24 | 6.7 | 46.1 | 257.5 | 2 992 | 12 700 | 8 523 | 2 800 | 2.66 | 1055 |
| 25-34 | 99.3 | 600.7 | 647.9 | 1 750 | 15 240 | 9 483 | 15 472 | 2.87 | 5384 |
| 35-44 | 277.9 | 844.6 | 478.7 | 1 750 | 12 644 | 9 031 | 15 488 | 2.97 | 5212 |
| 45-54 | 586.8 | 612.0 | 287.7 | 1 524 | 11 289 | 8 692 | 10 304 | 2.66 | 3875 |
| 55-64 | 631.8 | 194.3 | 145.2 | 1 298 | 8 523 | 6 999 | 3 493 | 1.83 | 1908 |
| 65+ | 1 194.4 | 52.8 | 184.4 | 1 072 | 3 895 | 4 403 | 2 298 | 2.44 | 944 |

**a** The ABS reports household mean weekly housing costs by age and tenure type. Individual housing expenses were estimated by dividing aggregate housing expenditure by the number of persons in each age category. For example, given the tenure characteristics of 55-64 year olds, and the mean tenure-specific housing costs, this cohort spent some $3.5 billion dollars on housing in 2001. Per capita, the average 55-64 year old will have spent approximately $1932 on housing in 2004.

*Source*: ABS (*Housing Occupancy and Costs, Australia, 1997-98*, Cat. no. 4130.0; *Household Expenditure Survey, Australia: Detailed Expenditure Items, 1998-99*, Cat. no. 6535.0) and Commission calculations.


Consequently, the GST revenue base will decline over the next 40 years. Consumers today spend some 41 per cent of GDP on GST-eligible goods and services (which realises GST revenue of 4.11 per cent of GDP given the flat

10 per cent tax rate). Changes in Australia's demographic composition and growth in health spending will result in net substitution away from taxed consumption items towards tax exempt classes. This will reduce the Government's GST revenue to 3.84 per cent by 2044-45 (figure 11.6) — or a reduction in available GST revenues of around 6 per cent.

Figure 11.6 **The GST revenue base**
2003-04 to 2044-45
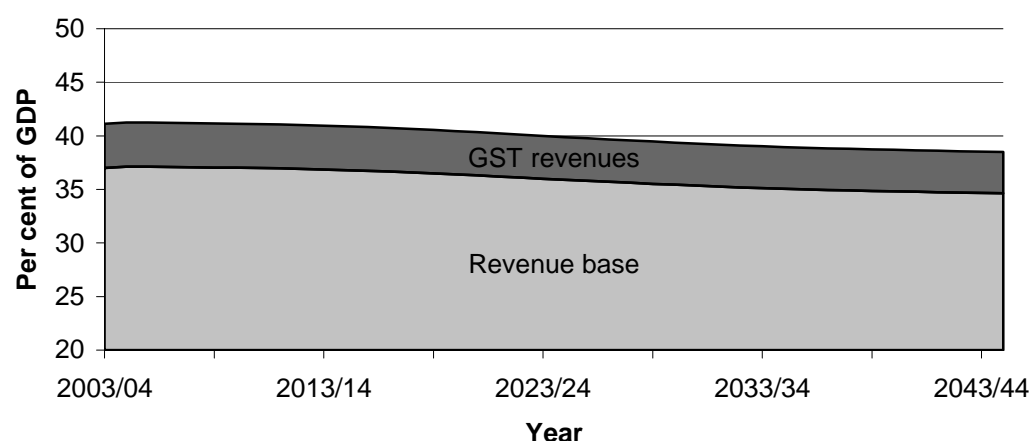


*Data source:* figure 11.7; figure 11.3; figure 11.4; figure 11.5 and Commission estimates.

These estimates assume that current age spending profiles remain constant over the medium term. This assumption has been made largely because of the uncertainty about age-adjusted trends in the housing, education and health sectors.