

Government in Practice

Now, what I want is, Facts. Facts alone are wanted in Life.

Mr Gradgrind in *Hard Times*, Charles Dickens

The Legal Basis of Government ♦ Measures of Government Size ♦ Government Regulation ♦ Government Expenditure and Revenue ♦ Government Budgets: Deficits, Debt and Assets ♦ International Comparisons ♦ Determinants of Government Expenditure

Few economists would agree with Mr Gradgrind that all we need to know is facts. However, theory without facts is of little use. To understand the role of government, we need to know the legal basis of government, concepts of government size, the nature of government regulation, and the nature of government expenditure and revenue. Central to understanding government is an understanding of the annual budget.

This chapter addresses these and related issues. We start by outlining the legal basis of government in Australia. We then discuss concepts of government size and regulation. The central part of the chapter describes government expenditure, revenue and debt in Australia. Some international comparisons of government expenditure are also provided. The last part of the chapter discusses the major drivers of government expenditure.

The Legal Basis of Government¹

The Australian Constitution, as laid out in the *Commonwealth of Australia Constitution Act 1900*, provides the legal basis for government in Australia.² The Constitution created a federation of the six then British colonies. It created the Commonwealth government (now known as the Australian government) and established the rules governing relations between the Commonwealth and the states (as the colonies became). It also established the powers of the Commonwealth parliament, the executive and the judiciary. Unlike many other constitutions, the Constitution does not provide a formal bill of rights for individuals. Individual rights were assumed to be protected by common law and the exercise of democracy.³ Box 2.1 describes some other important features of the Australian Constitution.

¹ This section draws on Saunders (1997).

² The Act came into force on 1 January 1901.

³ The Constitution declares some individual rights, including freedom of religion and just compensation for property acquired by the Commonwealth. Parliament has now passed laws against racial and sexual discrimination. Australia is also a signatory to the Universal Declaration of Human Rights (United Nations).

Box 2.1 Features of the Australian Constitution

The Australian Constitution responded to local political issues and drew on UK, US and Swiss practices. It drew the system of parliamentary government from the United Kingdom. The elected parliament would be responsible for appointing the government (because government must have the confidence of the parliament). Parliament would determine public policies and budgets, which would be implemented by the executive arm of government.

From the United States, the Constitution drew the concept of two elected parliamentary houses. The House of Representatives (the 'Lower House') is elected by direct popular vote on the principle of one person, one vote. The Senate (the 'Upper House') would provide the states with power by providing each state with equal representation in the Senate. As in the United States, the judiciary is formally independent and responsible for interpreting and protecting the Constitution.

From Switzerland was drawn the idea of a referendum to approve changes in the constitution.

Changes to the constitution require the approval of a majority of electors nationally and a majority in at least four of the six states.

In practice, government does not always reflect these principles. Parliament exercises limited control over the executive arm of government. Although the Constitution requires that parliament impose taxation, the executive branch prepares the all-important annual budget.⁴ The executive initiates most policies, which are usually approved by parliament, at least by the Lower House. It decides when elections will be held (within a maximum three-year period) and when parliament will meet.⁵ The executive is sometimes constrained by the Senate where it may not hold a majority. But, contrary to the intentions of the Constitution, the Senate is generally dominated by political parties rather than by the states. Sometimes small parties with two or three elected members representing minority views (often quite strongly) hold the balance of power in the Senate and require special concessions in return for agreeing to pass bills.

Under the constitutional process, the states granted powers to the Commonwealth but retained residual (ungranted) powers. For example, the states initially controlled income taxes. They also controlled economic activities and labour markets that took place entirely within their area. As nationhood became more important, particularly in wartime, the states ceded important powers to the Commonwealth, notably the income tax in 1942 following a national referendum. In 1946, another referendum greatly extended the Commonwealth's power to redistribute monies to individuals and so to create a welfare state. Commonwealth powers over the economy also increased as trade and labour markets crossed state borders. Although the Commonwealth government is increasingly powerful because of its ownership of most tax revenues, the federal nature of the country introduces political competition between the Commonwealth and the states which provides some constraint on the power of the Commonwealth.

The Constitution devotes little space to economic issues. But what it does say about them has important consequences. The main sections dealing with economic matters are Chapter 1 (Section 51), and Chapter 4. Section 51 describes the economic powers of the Commonwealth government. Chapter 4 describes the main principles governing finance and trade in the federation.

Some main economic points of the Constitution inclusive of amendments are:

- Monetary policy. The Commonwealth government has exclusive power to issue coins and currency in Australia.
- Taxation. In effect, following the 1942 referendum, the Commonwealth controls income taxes because the Commonwealth can withhold financial assistance to the states if they levy income tax. Also, under Section 90, only the Commonwealth can raise customs and

⁴ The Senate has limited powers to amend money bills.

⁵ Formally, the Governor General makes these decisions, but he (or she) normally acts on the advice of the Prime Minister.

excise taxes. In 1997 the High Court interpreted 'excise' widely to mean any tax imposed up to and including point of sale.⁶

- Borrowing. Both the Commonwealth and the states have the right to borrow to finance budget deficits.
- External trade. There would be a single external tariff for any good.
- Trade between states shall be free and unrestricted.
- A uniform law for commerce across Australia. The Commonwealth has the power to make laws for trading and financial corporations. This has paved the way for most trade practices legislation and substantial workplace legislation.
- Labour markets. The Commonwealth can conciliate and arbitrate for the prevention and settlement of industrial disputes extending beyond the limits of any one state.
- Redistribution of public monies to the states. Following some transition arrangements, the Commonwealth would determine the distribution of its revenues to the states.
- Redistribution of public monies to individuals. The Constitution initially gave the Commonwealth very limited power over social security for invalid and old age pensions. By a referendum in 1946, the Commonwealth gained greatly increased social security powers, including provisions for unemployment, sickness, families and students.

Measures of Government Size

The size of government (GS) is measured most often by the ratio of general government expenditure to gross domestic product (GDP).

$$GS_1 = \text{Total general government expenditure/GDP} \quad (2.1)$$

Total general government expenditure is the sum of current and capital government expenditure on goods and services and transfer payments by all levels of government (Commonwealth, state and local government) that are financed through the annual budgets (see Table 2.1). Current expenditure includes the cost of publicly produced goods (mainly wages) and the purchase of goods from the private sector (e.g. medical supplies) that are used for current consumption. It also includes contributions to statutory authorities and subsidies to some public trading enterprises. Capital expenditure is expenditure on physical capital formation, such as hospitals and school buildings. Of course, intra-governmental flows must be netted out. Transfer payments are cash transfers from taxpayers to recipients. They include personal income benefits such as unemployment benefits and pensions, personal subsidies in kind for example for housing, business subsidies and interest payments.

Expenditure is related to GDP because GDP represents the productive capacity of the economy.⁷ In 2016–17, general government expenditure in Australia totalled 34.6 per cent of GDP. GS_1 is a popular measure of the size of government because it can be readily estimated, includes all goods and services and transfers financed by government, and largely determines taxation requirements. It is also convenient for international comparisons.

Another expenditure measure of government size is:

$$GS_2 = \text{General government expenditure on goods and services/GDP} \quad (2.2)$$

GS_2 excludes transfer payments. This measure is consistent with the concept of GDP, which also excludes transfer payments. In 2016–17, GS_2 was 22.0 per cent of GDP. Expenditure on goods and services is sometimes described as exhaustive expenditure because it exhausts the purchasing power of the money spent. In contrast, transfer payments redistribute resources; they do not use them.

⁶ *Ha v New South Wales* (1997)

⁷ For this purpose, GDP is usually measured at factor cost, which excludes indirect taxes and subsidies.

Table 2.1 General government expenditure in Australia in 2016–17

<i>General government expenditures</i>	<i>\$billion</i>	<i>% of GDP</i>
Expenditure on goods and services		
Current expenditure	325.0	18.5
Capitalexpenditure	60.8	3.5
Total	385.8	22.0
Transfer payments		
Personal benefits	130.3	7.4
Interest payments ^a	26.7	1.5
Business subsidies	23.0	1.3
Other transfers ^b	42.0	2.4
Total	222.2	12.7
Total general government expenditure	607.9	34.6
Gross domestic product	1754.7	100.0

(a) Including interest on unfunded superannuation liabilities

(b) For example subsidies for expenses such private housing rents, private health insurance, child care etc.

Source: ABS, 2017, *Australian System of National Accounts 2016–17*, Tables 2, 30 and 32, Cat. No. 5204.0.

Thus, GS_2 shows how government influences directly the use of resources. However, this measure omits slightly over a third of government expenditure and does not show government's financing requirements.

General government expenditure does not include expenditure by public trading enterprises (PTEs). Inclusion would involve some double counting because PTEs sell goods to government as well as to private firms. To avoid double counting, national income accounts identify PTE capital expenditure plus dividend and interest payments as a separate item.⁸ Accordingly, for a more comprehensive measure of the size of the public sector than GS_1 or GS_2 , we can adopt a third measure:

$$GS_3 = (\text{Total general government expenditure} + \text{PTE capital outlays})/\text{GDP} \quad (2.3)$$

The GS_3 measure is not often used. Although PTEs are part of the public sector they generally act commercially and are similar in some ways to private firms. Problems of definition arise when government is part owner of an enterprise. Also, consistent international comparisons are hard to obtain.

A fourth measure of government size (GS_4) focuses on the role of government as a producer of goods. A common measure is the ratio of government employment to total employment.

$$GS_4 = \text{Total government employment}/\text{total employment} \quad (2.4)$$

Because government purchases various goods and services from the private sector, GS_4 is generally lower than GS_2 . In Australia, government at all levels employs about 16 per cent of the total workforce, including employees in welfare administration. Unlike expenditure measures of government size, employment measures do not show the extent to which economic resources are subject to government control.

⁸ In the *Government Finance Statistics* (ABS), PTE outlays include fixed capital expenditure outlays, interest and other property income payments, capital grants and advances and net expenditure on stocks, land and intangible assets.

Finally, government size is sometimes measured by the ratio of tax revenue to GDP.

$$GS_5 = \text{Total tax revenue/GDP} \quad (2.5)$$

GS_5 shows the size of the tax burden. However, tax revenue is generally less than general government expenditure, with the gap met by other revenue measures, such as user charges, or by borrowing. Indeed, the gap between taxation and expenditure may be several percentage points of GDP. Therefore, tax revenue gives only a partial picture of government activity.

Government Regulation

Government spending is only a partial measure of government control over an economy. Even a low-spending government can regulate almost any area of private business activity. In Australia the government has long exercised significant control over the economy (see Box 2.2). *The Economist* (19 March 2011) noted that while President Bush was in office in the United States from 2000 to 2008 over 1000 pages of federal regulations were added each year and that a quarter of a million Americans have jobs devising and implementing federal rules.⁹ Japan is another country where public expenditure is low and regulation is high.

Box 2.2 Government regulation in Australia

Government has played a major role in the development of Australia. In the 19th century the public sector was mainly instrumental in developing energy, transport and communications across the continent.

Following federation in 1901, government regulations increased. Government adopted a high-tariff protectionist stance along with an industrial welfare policy designed to ensure payment of adequate wages. In 1907, in the Harvester judgement, Justice Higgins laid down that the basic wage should be sufficient to provide for the basic needs of a family of five, estimated at 42 shillings a week. Australia was one of the few countries in the world with compulsory arbitration of wages and key work conditions. The government also introduced various welfare policies, including age pensions, workers' compensation for injury and some unemployment relief. Australians generally looked on government to provide social justice and 'to soften' market forces in the form of international prices or to 'elude them or master them'.¹⁰ After the Second World War, the role of government increased further. The 1945 White Paper committed the Commonwealth government to guarantee full employment and to intervene as necessary to achieve that guarantee.

In the 1950s, government introduced import controls to respond to balance of payments difficulties and to maintain employment. It also provided subsidies to many import-

competing manufacturing businesses. The 1972–75 Labor government further expanded the role of government by greatly increasing public expenditure, especially in health and education, control of foreign investment and protection of the environment. Despite advocating smaller government, the Liberal government (1975–83) did little to reduce public expenditure or regulations. In 1984 the Brookings Institute concluded its review of the Australian economy with the observation that 'Australia's public policies are greatly influenced by the national mistrust of market outcomes' (Caves and Krause, 1984, p. 400).

Since the mid-1980s there has been substantial liberalisation of the economy. Capital markets were liberalised by the floating of the dollar, the lifting of controls over foreign exchange transactions and deregulation of the domestic banking sector. Effective tariffs have been reduced from 35 per cent in the 1970s to 5 per cent today. Many public enterprises have been privatised and many public services contracted out. Telecommunications and airlines have been largely deregulated.

Today both major political parties are committed to promoting market competition. However, as we see in Chapter 14, maintenance of competitive markets requires regulatory policies. And Chapter 29 (Box 29.3) describes ongoing regulation in labour markets.

⁹ Under President Trump, many regulations are being undone. At this point, the verdict on this is an open one.

¹⁰ Hancock (1961, p. 67). This classic study, *Australia*, was first published in 1930.

Regulations are diverse and numerous. They include price and quantity controls, product standards, regulations of medicines and foods, occupational health and safety regulations in labour markets, environmental and urban planning controls, as well as public safety measures such as closed-circuit cameras related to the wars on terror and drugs.

There is no simple measure of the extent of government regulation. It is hard even to count the number of regulations without defining what counts and what does not. The World Bank (1997) suggested three indicators of the amount of government intervention in an economy: the openness of the economy (the share of trade in GDP), the overvaluation of the currency (based on the black-market exchange rate) and the gap between local and international prices. Other authorities, such as the influential journal *The Economist*, advocate that the estimated cost of government regulations should be published in an annual regulatory budget. This would be a very complex exercise especially if benefits are included. Although economists can estimate the price and output impacts of individual regulations and their welfare costs and benefits, it is difficult to estimate the total gross or cost of regulation in any country.

Public expenditure substitutes

Often government requires the private sector to make certain expenditures that substitute for public expenditure. These expenditures are known as **coerced private expenditures**. For example, governments in Australia require private firms to contribute to employee retirement schemes, provide redundancy payments, pay workers compensation for injury and invest in pollution control. An extreme example of coercion is military conscription where government pays conscripted labour far less than its economic opportunity cost. Jury service is another example. When there are large coerced private expenditures, public expenditure becomes a poor measure of the real influence of government on the economy.

Tax expenditures are another major form of expenditure substitute. Tax expenditures are tax concessions. These concessions create revenue losses that have a similar effect on the budget as government expenditures. Suppose that some farmers spend \$100 million on plant and equipment and that their marginal tax rate is 30 per cent. Government could assist the farmers by (1) giving them a grant of, say, \$30 million or (2) allowing them to deduct their capital expenditure against current income, reducing their combined taxable income by \$100 million and their tax payments by \$30 million. Either way, the farmers would gain \$30 million, and the cost to government (i.e. to other taxpayers) is \$30 million. Alternatively, instead of providing allowances to families with dependent children, government could allow an equivalent amount in tax deductions. There are many forms of tax concessions, including tax exemptions or deferrals, expenditure deductions, accelerated depreciation and so on. Any such concession represents a call on the budget similar to direct outlays.

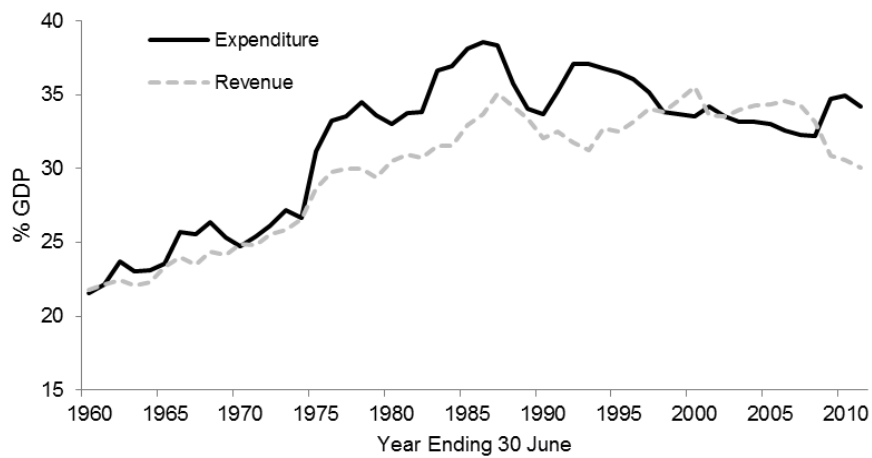
To assess the size of a tax concession, it is necessary first to establish what constitutes 'normal tax'. This can be difficult. In a detailed review, the Australian Treasury (2017) estimated that large Commonwealth tax expenditures totalled \$149 billion in 2016-17, equal to a third of Commonwealth outlays or some 8.5 per cent of GDP. This included an estimated \$61.5 billion for exempting homes from capital gains tax (CGT) and discounting CGT for investment housing properties, and \$32.9 billion on concessions to superannuation contributions and earnings.

Tax expenditures
A term for tax
concessions

Government Expenditure and Revenue

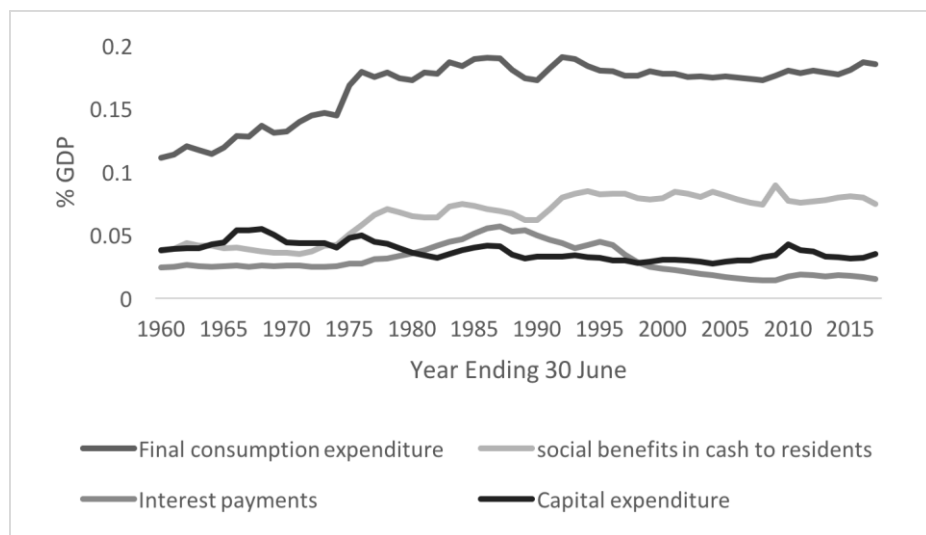
As shown in Figure 2.1 overleaf, government spending by all levels of government rose from less than 25 per cent of GDP in the mid-1960s to about 37 per cent of GDP in the late 1980s. Between then and 2007, general government expenditure oscillated but tended down to about 33 per cent of GDP. Following the global financial crisis, it moved sharply upwards to 35 per cent of GDP in 2009-10 and it has remained about that level in each year since then.

Figure 2.2 shows the main components of general government expenditure: consumption, income transfers, capital expenditure and interest payments. Consumption expenditure, the largest component, rose from 12 per cent of GDP in the mid-1960s to 20 per cent of GDP in the mid-1980s, but fell back to about 18 per cent in recent years. Personal income benefits, the second largest component, have increased from 4 per cent of GDP in the mid-1960s to about 8 per cent of GDP today. This does not include **in-kind** transfers tied to housing, health, child care and so on (see Table 2.1). Since the early 1980s, government fixed capital expenditure has generally been between 2 and 3 per cent of GDP. On the other hand, interest payments have fallen from a high of 5 per cent of GDP in the late 1980s to less than 2 per cent today due to government policies due mainly to lower interest rates and partly to a reluctance to borrow.



Source: ABS, *Time Series Spreadsheets*, Cat. No. 5204.0

Figure 2.1 General government expenditure and revenue (as a percentage of GDP)



Source: ABS, *Time Series Spreadsheets*, Cat. No. 5204.0

Figure 2.2 General government expenditure components (as a percentage of GDP)

Traditionally, public trading enterprises supplied most infrastructure services in Australia, including power, water, transport and communications services. Also, the states owned many banking and insurance businesses. In the early 1980s, PTE gross capital expenditure was over 6 per cent of GDP. Following the sale of many PTEs to the private sector, PTE capital outlays have fallen to-day to only about 1.5 per cent of GDP. Thus, public sector expenditure overall in 2016-17, including PTE capital expenditure, was 36.1 per cent of GDP.

Table 2.2 shows general government expenditure by function in 2015–16. The largest government programs are social security and welfare, health and education, which account for 28.1 per cent, 19.4 per cent and 14.6 per cent of total expenditure respectively. Within social security and welfare, there are several large programs including assistance to families, the unemployed, people with disabilities and the elderly (see Chapter 23). Other major expenditure areas are transport and communications, defence, public order and safety, and housing and community amenities, as well as general public services.

Table 2.2 General government expenditure by function 2015-16 (\$billion)

<i>Expenditure category</i>	<i>Commonwealth^a</i>	<i>State and local government^b</i>	<i>Total</i>	<i>% of total expenditure</i>
Social security and welfare	152.0	20.1	168.8	28.1
Health	69.3	68.0	116.4	19.4
Education	32.3	58.4	87.9	14.6
General public services	22.7	13.1	34.8	5.8
Public debt transactions	16.0	8.6	38.2	6.4
Transport and communications	7.2	29.7	29.2	4.9
Other economic affairs	9.2	5.3	14.2	2.4
Defence	26.2	0	26.2	4.4
Public order and safety	4.8	25.1	29.3	4.9
Housing and community amenities	7.3	18.9	22.9	3.8
Recreation and culture	3.4	10.4	13.6	2.3
Other	80.5	13.8	19.4	3.2
Total	430.9	271.6	600.8	100.0

(a) Excludes GST payments to the states.

(b) The sum of Commonwealth and state and local government expenditures exceeds total government expenditure due to transfers between jurisdictions.

(c) Total slightly different from Table 2.1 with data from later source.

Source: ABS, *Government Finance Statistics*, Cat. No. 5512.0, 2015-16.

Table 2.3 Sources of general government revenue in 2015-16

<i>Sources of revenue</i>	<i>Total government (\$billion)</i>	<i>% of total revenue</i>
Taxation revenue	464.7	80.5
Sales of goods and services	55.0	9.5
Interest income	8.5	1.5
Dividend income	11.7	2.0
Other	37.6	6.5
Total	577.7	100.0

Source: ABS, *Government Finance Statistics*, Cat. No. 5512.0, 2015-16.

Government revenue

Government raises most of its revenue via taxation, but a significant and increasing proportion by other means. As shown in Table 2.3 above, in 2015–16 government obtained 80.5 per cent of its revenue through taxation. It obtained just under 10 per cent in sales of goods and services, nearly 4 per cent in interest and dividend income, and 6.5 per cent by a variety of through other charges (fees, fines, etc.).

The major sources of taxation revenue are detailed in Table 2.4. In summary, the main sources of tax revenue were:

- Income taxes, including company tax 57.0 per cent
- Employers' payroll and labour taxes 5.0 per cent
- Taxes on goods and services (including motor vehicles) 27.4 per cent
- Taxes on wealth 10.6 per cent

Table 2.4 General government taxation revenue in Australia in 2015–2016 (\$billion)

<i>Sources of taxation</i>	<i>Commonwealth</i>	<i>State and local</i>	<i>Total government</i>	<i>% of total revenue</i>
Taxes on income				
Individuals	192.1	–	192.1	41.3
Enterprises	71.2	–	71.2	15.3
Non-resident	1.8	–	1.8	0.4
Total	265.1	–	265.1	57.0
Employers' payroll and labour taxes	0.7	22.7	23.3	5.0
Taxes on provision of goods and services				
General taxes (sales taxes)	1.5	–	1.5	0.3
Goods and services tax	60.3	–	60.3	13.0
Excise tax	22.4	0.1	22.5	4.8
Tax on international trade	14.1	–	14.1	3.0
Taxes on gambling	–	6.1	6.1	1.3
Taxes on insurance	–	5.7	5.7	1.2
Total	98.3	11.9	110.2	23.7
Taxes on use of goods and performance activities				
Motor vehicle taxes	–	9.9	9.9	2.1
Other	5.8	1.5	7.3	1.6
Total	5.8	11.4	17.3	3.7
Taxes on wealth				
Land taxes	–	7.2	7.2	1.6
Municipal taxes	–	16.9	16.9	3.6
Taxes on capital and financial transactions	–	22.5	22.5	4.8
Other	–	2.9	2.9	0.6
Total	–	49.6	49.6	10.6
Total taxation revenue	369.9	95.5	465.5	100
Percentage of total (%)	79.5	20.5		

Sources: ABS, *Public Sector Accounts, Taxation Revenue*, Australia, Cat. No. 5506.0, 2015–16.

A major feature of the tax revenue is the high proportion levied by the Commonwealth. The Commonwealth collects just under 80 per cent of all taxes, but its own purpose spending accounts for little over half of all government expenditure. The state and local government deficit is funded mainly by revenue from the goods and services tax (GST), which the Commonwealth passes on to the states, and by other grants from the Commonwealth. The imbalance of expenditure and revenue at each level of government is known as **vertical fiscal imbalance** (for further discussion see Chapter 33).

Government Budgets: Deficits, Debt and Assets

As we saw in Figure 2.1 total government expenditure usually exceeds current revenue. This creates a budget deficit. That deficits often occur is not surprising. Expenditure includes current and capital expenditure. Naturally governments may borrow to fund some or all capital expenditure, with repayments made as the capital assets provide services, rather than pay for capital assets out of current revenue. This means creating debt as well as assets. To understand what is happening, the key financial terms (expenditure, revenue, deficit, debt and assets) need to be defined.

Expenditure and revenue are flow concepts that apply to a given period. However, there is an important distinction between cash and accrual accounts. **Cash accounts** are based on payments made or received in an accounting period. **Accrual accounts** are based on expenses incurred and revenue earned in that period regardless of whether payment has been made or received. Most private companies use accrual accounts. Australian governments changed from cash to accrual budgeting in the financial year 1999–2000, as did the UK government.

Five key accrual terms. We now define five key terms in an accrual framework, including two definitions of budget outcomes.

Current expenditures are expenses incurred to provide services and transfers in a designated accounting period such as a financial year. Employee expenses include entitlements such as superannuation and long-service leave that are accrued as well as wages and salaries paid out in the year. Other operating expenses include depreciation of all assets, *including previously purchased assets*, but not expenditure on purchase of new assets. Transfer payments include personal benefit payments and interest payments.

Current revenue is the revenue due in an accounting period from taxes, sales of goods and services, interest and dividends, and fees and fines. It also includes operating grants from another level of government.

The **net operating balance** equals current operating revenue minus current expenses. It is broadly similar to a company's net income (i.e. its profit or loss).

Net capital investment is capital expenditure on new physical assets and inventories less depreciation. In an accrual budget, net capital investment does not include the purchase or sale of financial assets.

The **overall budget balance** equals the net operating balance minus net capital investment. This is the budget that is commonly referred to as being in deficit or surplus. The balance is also described sometimes as the net borrowing or lending balance. This measure of budget balance is not strictly an accrual concept because it includes all capital expenditure and does not include depreciation.¹¹

Two key cash terms. In addition, there are two important cash-based measures of the overall budget balance. The **underlying cash balance** is the budget balance based on cash payments

Accrual accounting

Expenses and income are recorded when they are incurred not when they are paid

Net operating balance

Current operating revenue minus current expenses

Overall budget balance

Net operating balance minus net capital expenditure

¹¹ Some experts (e.g. Gruber, 2016, Chapter 4) contend that it is too difficult, and not practical, to distinguish between consumption and capital expenditure. Our view is that this is a critically important expenditure distinction with major policy implications (see Chapter 29 below).

and receipts rather than on accrued payments and receipts. It includes expenditure on new assets such as schools, but not the purchase or sale of financial or existing physical assets. It ignores accrued financial liabilities, such as pensions, and depreciation of plant and equipment.

The **headline cash balance** equals the underlying cash balance plus sales and purchases of financial and physical assets. This allows for the sale of physical assets to fund and apparently avoid a budget deficit. However, from the perspective of the government's balance sheet, it is immaterial whether government sells a physical asset worth \$x million or takes on a financial liability of \$x million.

Summary. The main budgetary concepts along with the Commonwealth government's (then) estimated budgets for 2016-17 and 2017-18 are shown in Table 2.5. These figures exclude GST revenue, which the Commonwealth counts as a state tax (though this is contrary to law and the view of the Australian Bureau of Statistics). In these years all four estimated measures of budget balance were in deficit. This is not always the case. In some years one or more of the four measures of budget balance may be in surplus and the others in deficit. This provides politicians with a perfect opportunity to confuse the public!

Accrual measures generally provide a more informative picture of the budget than do cash budgets because they reflect real economic activity over a period and they exclude financial transactions that have no effect on the net worth of government. Therefore, the preferred measures of budgetary outcome are the (accrual) net operating balance or budget balance. However, cash flow forecasts are required, especially for short-term management of the budget, to establish working capital needs.

The government's balance sheet: assets and liabilities (debts)

We turn now to the government's balance sheet. The main components for the whole Australian public sector are defined and shown in Box 2.3. On the one hand, government (on behalf of the state) owns various financial and non-financial assets. Financial assets include equity assets. Non-financial assets include produced and non-produced assets (land). On the other hand, borrowing to fund a budget deficit creates a financial debt (liability).¹²

Table 2.5 Summary of Commonwealth government budget estimates for 2016-17 (\$billion)

<i>Budget figure</i>	<i>Basis</i>	<i>2016-17</i>	<i>2017-18</i>	<i>Comments</i>
Total current revenue ^a	Accrual	412.1	444.4	Includes all current revenues
Total current expenses	Accrual	450.8	464.3	Real operating expenses
Net operating balance (NOB)	Accrual	-38.7	-19.8	Current revenue – current expenses
Net capital investment (NCI) ^b	Accrual	2	0.5	Capitalexpenditure – depreciation
Budget (fiscal) balance	Accrual	-40.7	-20.3	NOB – NCI = net lending/borrowing balance
Underlying cash balance (UCB)	Cash	-37.6	-29.4	Budget balance on a cash basis
Headline cash balance	Cash	-51.1	-48.4	UCB + financial purchases and sales

(a) Includes expected earnings from Future Fund.

(b) Equals net acquisition of non-financial assets.

Source: Treasurer, *Budget Strategy and Outlook, 2016-17*, Budget Paper No.1, Statement 3, Table 3.

¹² Government can fund a deficit by printing money, which is known as an inflation tax (Chapter 25).

Box 2.3 Key balance sheet concepts and numbers for Australian public sector at 30 June 2016

<i>Assets/liabilities</i>	<i>Definition/components</i>	<i>\$billion</i>
Assets	Are controlled and provide future economic benefits	
Financial assets	Cash, deposits, investments, loans, accounts receivable, equity assets	761.9
Non-financial assets	Produced assets and non-produced assets (land), other non-financial assets	1716.7
Total assets	Financial plus non-financial assets	2478.7
Liabilities	Amounts owed to other parties	
Financial liabilities	Deposits held, advances received, borrowing, accounts payable	908.9
Other liabilities	Unfunded employee entitlements, other provisions	720.2
Total liabilities	Financial plus other liabilities	1703.4
Net measures		
Net public debt	Sum of deposits held, borrowing and advances received less sum of cash, financial assets (excluding equity) and advances paid	380.4
Net financial liability	Total liabilities minus financial assets	-941.4
Net public worth	Total assets less total liabilities	775.3

Source: ABS, *Government Finance Statistics*, Cat No 5512, 2015-16.

Table 2.6 Public net worth and net debt as percentage of GDP

<i>Measure</i>	<i>2007-08</i>	<i>2008-09</i>	<i>2009-10</i>	<i>2010-11</i>	<i>2011-12</i>	<i>2012-13</i>	<i>2013-14</i>	<i>2014-15</i>	<i>2015-16</i>
Net public worth	75.6	74.7	72.6	64.6	48.9	55.3	52.8	52.2	46.7
Net public debt	-7.3	-3.5	2.3	9.5	15.2	16.1	18.1	20.3	19.1

Source: ABS, *Government Finance Statistics*, Cat No 5512, 2015-16.

Total financial debt is the stock of liabilities that accrue from running deficit budgets. These liabilities include deposits received, advances paid, accounts receivable, borrowings, unfunded employee entitlements and various provisions (insurance technical reserves).

There are three important summary measures. One which gets a lot of attention is the **net public debt**: this is the sum of deposits held, borrowing and advances received less the sum of cash, financial assets (excluding equity) and advances paid. The net public debt, combined with the interest rates attached to the liabilities and assets, determines the net interest payment to be funded from current revenue.

However, net public debt is only a partial picture of government liabilities and assets. Net financial liability provides a fuller picture. **Net financial liability** equals total government liabilities less financial assets including equity assets. Equivalently, financial assets less total liabilities are called **net financial worth**.

The third and most comprehensive measure of government's financial position is **net public worth**, which equals total assets less total liabilities. This is the most important measure. If government has high net public worth, it should be able to reconfigure the components of the balance sheet to provide safe levels of net public debt and net financial liability.

Table 2.6 shows recent trends in the net debt and net public worth of Australian governments. Over the decade before the global financial crisis (GFC) in 2007-08, net debt fell substantially as Commonwealth and state governments sold PTEs and often adopted overall budget surpluses. Thus, at end 2008-09, general government net debt was negative (relevant assets exceeded relevant liabilities). Following the GFC, net public debt rose to around 20% of GDP. By international standards these are still very low amounts of public

Net public debt
Financial liabilities
minus financial assets
(excluding equity)

Net public worth
Total assets less total
liabilities

debt. On the other hand, with the rise in debt, the net public worth fell from around 75% of GDP before the GFC to around 50% of GDP at end 2016-17.

These totals conceal major differences between different levels of government. The states collectively have high net public wealth (in land, fixed assets and PTEs) and very low debt. On the other hand, at end 2015-16, the Commonwealth had a negative net worth of \$403 billion, including a net debt of \$300 billion due to recent budget deficits as well as large unfunded superannuation liabilities. Thus, the Commonwealth net debt was over 90% of all government debt and equivalent to 18.1% of GDP. Some policy implications are discussed in Chapter 29.

International Comparisons

Table 2.7 shows general government expenditure (GGE) as a percentage of GDP in 13 OECD economies from 1960 to 2014. Excluding Australia, GGE rose from an average of 28.4 per cent of GDP in 1960 to 44.2 per cent in 1980, reflecting large increases in most countries over this period. GGE then remained quite stable in relation to GDP, albeit with ups and down in various economies, over the next 25 years to 2005. However, government deficits to bailout major financial and other institutions and to avert a global financial and economic meltdown led to substantial increases in GGE. Average GGE as a percentage of GDP rose to 47.3 per cent in 2010. It fell slightly to 46.3% in 2014 mainly due to declines in the UK and United States.

Since 1980, there has been minor convergence among OECD countries. The GGE / GDP ratio has risen substantially in some countries, notably Japan, Spain and the United States. On the other hand, high GGE countries like, the Netherlands and Sweden have reduced the GGE GDP ratio. However, there remain large differences between these and other OECD countries.

A major consequence of the recent rise in public expenditure and the associated deficits has been the rise in public debt. In countries such as Japan, Greece and Italy, net public debt rose to around 100 per cent of GDP in 2009 and gross public debt was an even higher proportion of their GDP (see Table 29.3)

Table 2.7 General government expenditure as a percentage of GDP

<i>Country</i>	<i>1960</i>	<i>1980</i>	<i>1990</i>	<i>2000</i>	<i>2010</i>	<i>2014</i>
Australia	21.3	32.6	33.3	33.5	34.5	36.0
Austria	35.7	48.1	38.6	52.1	52.8	52.3
Belgium	30.3	58.6	54.8	49.1	53.3	55.2
France	34.6	46.1	49.8	51.6	56.4	57.1
Germany	32.4	47.9	45.1	45.1	47.3	44.3
Italy	30.1	42.1	53.4	46.2	49.9	50.9
Japan	17.5	32.0	31.3	37.3	39.6	40.3
Netherlands	33.7	55.8	54.1	44.2	48.2	46.2
Spain	18.8	32.2	42.0	39.1	45.6	44.9
Sweden	31.0	60.1	59.1	52.7	51.2	51.5
Switzerland	17.2	32.8	33.5	33.7	32.8	33.5
United Kingdom	32.2	43.0	39.9	36.6	47.8	43.3
United States	27.0	31.4	33.3	32.8	42.9	38.0
Average (exc. Australia)	28.4	44.2	44.6	43.4	47.3	46.3

Table 2.8 Structure of general government expenditures (as percentages), 2015

<i>Country</i>	<i>General public services</i>	<i>Defence</i>	<i>Public order and safety</i>	<i>Economic affairs</i>	<i>Health</i>	<i>Education</i>	<i>Social security and welfare</i>	<i>Other^a</i>
Australia	12.5	4.4	4.9	10.0	19.4	14.6	28.2	6.1
Denmark	13.5	2.0	1.8	6.7	15.6	12.8	43.0	4.5
France	11.0	3.1	2.9	10.0	14.3	9.6	43.1	6.0
Germany	13.5	2.3	3.6	7.1	16.3	9.6	43.1	4.6
Italy	16.6	2.4	3.7	8.1	14.1	7.9	42.6	4.6
Japan	10.4	2.3	3.2	9.5	19.4	8.7	40.7	5.6
Spain	14.9	2.2	4.6	10.0	14.2	9.3	39.1	5.7
Sweden	14.1	2.3	2.6	8.4	13.8	13.0	41.6	4.2
United Kingdom	10.6	5.0	4.7	7.1	17.8	12.0	38.4	4.5
United States	13.8	8.8	5.4	8.7	24.2	16.2	20.8	2.1
OECD	13.2	5.1	4.3	9.3	18.7	12.6	32.6	4.2

(a) Includes environment protection, housing and community amenities, and recreation, culture and religion.

(b) Based on 2015-16 expenditure.

Source: OECD Statistics, *General Government Accounts, Government Expenditure by Function*, 2015-16.

Table 2.8 shows the shares of the major components of general government expenditure in various OECD countries in 2015. Because classifications may vary between countries, too much should not be inferred from minor differences. However, clearly, inter-country differences in GGE result more from differences in income transfers (social security and welfare payments) than from differences in expenditure on goods and services. Australian expenditure on goods and services was broadly in line with international practice, but expenditure on social security and welfare was significantly lower than in most other countries except for the United States.

The reasons for the low level of social security payments in Australia include smaller proportions of elderly and unemployed people than in Europe, more reliance on the private sector for retirement incomes and workers' compensation, and a more means-tested approach to social assistance than is common in many other countries. These issues are discussed in more detail in Chapters 22 and 23 below.

Determinants of Government Expenditure

What drives the levels of general government expenditure that we have observed? As we have noted, the major components of government expenditure are expenditure on consumption goods and services and welfare (transfer) payments. We focus mainly on these below but also discuss briefly transfer payments other than welfare payments and capital expenditure.

But, to start, we make two preliminary observations. First, expenditure is a product of the quantity of goods or services supplied and their unit costs. Therefore, we need to consider what drives both quantities and costs. Second, quantities may be driven by normal demand factors, broadly by individual preferences, or by social preferences (views on equity and social justice). Individual preferences are easier to measure and forecast and we can draw on conventional economic studies and explanations. Social preferences can be explained and understood but are harder to measure and forecast.

On the other hand, a more political approach to explaining public expenditure emphasises the role of politicians, bureaucrats and special interest groups in influencing government expenditure. These factors are examined in Chapter 10.

Government consumption expenditure

To explain government spending on consumption goods, we need therefore to consider the quantity and unit cost of government consumption goods. Holding other public expenditure constant, government expenditure rises in relation to GDP if either (1) the quantity of publicly provided goods rises faster than the output of market goods or (2) the cost of publicly provided goods rises relative to the cost of other goods.

As discussed in Chapter 4 (see Table 4.1), governments supply a wide range of goods, including pure public goods that are necessary for the functioning of the state, a range of goods associated with market failures of some kind, including various health, education and infrastructure services, and many goods for social purposes, again often health and education services, but also housing and family support services of various kinds, to name just a few examples. Clearly the demand for many of these services depends on both individual and social preferences.

Individual preferences are primarily a function of income, demographics, external circumstances and relative prices. Demand for public goods may rise faster than GDP if the income elasticity of demand for public goods is greater than 1.0, demographic changes increase the demand for major public services like health or education or increased population density and urban congestion increase demand for environmental and urban services. As we see below, there is no clear answer whether this demand does grow faster than GDP.

In a review of the evidence from cross-sectional studies of state and local government data in the United States, Mueller (2003) found that most estimates of the income elasticity of demand for public goods are less than 1.0 and that few estimates of the income elasticity are substantially greater than 1.0.

On the other hand, several studies (e.g., OECD, 2003; Villanyi *et al.*, 2010; Australian Treasury, 2010) have shown that an ageing population is likely to increase the GGE/GDP ratio. The OECD (2003) estimated that the increasing proportion of over 65s in the population will increase public expenditure on health care and long-term care by between 1.5 and 4.0 percentage points of GDP up to 2050. An ageing population also reduces the workforce participation rate which raises the GGE/GDP ratio.

Circumstances, such as increased urban densities, congestion and environmental pressures, may also raise the demand for some government services, for example public transport and waste disposal services. Some, but not all, such pressures may be dealt with by regulation rather than by increased public services.

Turning to social preferences, similar factors drive the provision of welfare services as drive the provision of cash transfers that are discussed below. Fundamental to this is society's perception and acceptance of social needs. However, there may well be social preferences to provide services, including health, education and social services of various kinds for those who cannot afford them and to do so in preference to income transfers. These issues are discussed at many points in this book.

It may be supposed as a default assumption that the costs of public production would rise approximately in a similar fashion to the costs of private production. In that case, relative quantities of production rather than relative prices would drive the contribution of public production to GDP.

In a classic article, Baumol (1967) argued that costs of public production would rise faster than costs of private production because government mostly provides labour intensive services. He argued that opportunities for productivity improvements in government are low because of the small role of technology and the relatively few opportunities for substituting capital for labour. If wages in government employment rise with market wages, as they are likely to, unit costs would rise faster in government than in private firms. Mueller (2003) cites various studies that found a relative rise in the price of government-provided goods and that this explained part of the rise in general government expenditure.

However, it is not clear that this phenomenon is due to technical constraints or that productivity must rise more slowly in the public sector. Computers and other innovations provide many opportunities for increased productivity in provision of services, which is now the dominant part of the private sector in most OECD countries including Australia. If productivity does rise by less, and unit costs by more, in the public sector than in the private, this may be due to bureaucratic inertia and constraints rather than to the inherent technology of supplying public services. Tunny (2000) found that, in so far as the cost effect exists, the causes of rising costs appear to be political rather than technical.

Personal transfer payments

Personal transfer payments depend on (1) the number of beneficiaries and (2) the levels of benefits provided. Clearly, government determines both eligibility for benefits and benefit levels. Ideally these decisions would be a result of social preferences taking account of both the ability to pay of the better-off in society and the needs of the less well-off, as well as to any disincentives arising from income transfers. Of course, in some cases, the decisions are arbitrary or self-promoting political decisions rather than an outcome of social preferences.

However, given the eligibility criteria, the number of beneficiaries depends on economic, social and demographic circumstances. Government transfer payments rise with increased numbers of age-based (young and old) dependants in society, families and single parents, unemployment and earnings inequalities. Widespread demographic and social changes have increased the proportions of elderly persons and single-parent households in many societies. Market forces along with globalisation have greatly increased economic inequality within countries (see Chapters 20 and 34). In most OECD economies, transfer payments have risen in proportion to GDP because governments have extended eligibility for personal benefits, for example to single parents and for maternity leave, and because they have increased personal benefit levels. However, the proportions of unemployed and elderly persons have also risen, reflecting economic and social factors.

In Australia, in the 1960s under 1 million people (about 10 per cent of the population) received benefits from the Commonwealth government. Today, out of a population of 24.3 million, some 2.5 million receive public pensions, 2 million families receive family support payments, over 0.7 million receive disability allowances and another 0.7 million receive unemployment benefits. Ignoring other smaller categories of recipients and counting families as one individual, there are some 6 million people in these major benefit categories or about 24 per cent of the population. This reflects social or economic changes as well as social preferences and political determinations.

Other transfer payments

As we observed above, other transfer payments have fallen significantly relative to GDP in Australia in recent years due principally to declines in government borrowing and lower nominal interest rates. Government subsidies to business have also fallen. However, government borrowing and interest rates may of course rise.

Government capital expenditure

Early theories suggested that government capital expenditure would rise as a proportion of GDP with increased demand for the transport, communications and energy infrastructure necessary for economic development.¹³ In so far as these are public goods (associated with some form of market failure) the government would have a major role in the supply of these goods. In developed economies it is sometimes argued that public investment is required to cope with high-density urban systems and environmental degradation. While there is casual

¹³This is sometimes called Wagner's law of expanding state activity (named after the 19th century economist).

observation that this investment is required and is being undertaken in Australia's largest cities (Sydney and Melbourne), we are not aware of empirical studies of the interaction between government capital expenditure and urbanisation. Indeed, in Australia it is often argued that low population density creates higher demands on public expenditure.

Summary

Economic factors explain some changes in government consumption expenditure and transfer payments. The demand for public consumption goods rises with income, but it does not appear to be income elastic. Demand also changes with changes in demographic structure. Government expenditure may also rise relatively fast because of low increases in productivity in the public sector, but this may reflect bureaucratic and political inefficiency rather than technical factors of production.

Economic and demographic factors can also explain some increases in transfer payments associated with increased dependants and income inequality. Moreover, some commentators have observed that technical changes, such as increased cash transactions in developing countries and electronic innovations in developed economies, have facilitated the means by which governments can collect tax and fund desired expenditures.

In a study of the determinants of the growth in public expenditure, Borcharding (1985) estimated that economic factors (income and cost changes) explained 38 per cent of the growth in US public budgets. Most of the balance would be explained by an increase in transfer payments. This is, of course, a very dated study and based on the US economy. But it seems likely to-day that public expenditure, especially the large component involved in transfer payments, reflects to a large extent social preferences or political factors.

Summary

- The *Commonwealth of Australia Constitution Act 1900* (with amendments) establishes the main powers of the Commonwealth and state governments, including their economic powers.
- The most common measure of government size is the ratio of general government expenditure to GDP.
- Government also regulates the private sector in many ways, including by coerced private expenditures which may substitute for public expenditure.
- General government expenditure in Australia is about 35 per cent of GDP. The largest components are government consumption expenditure and personal benefit transfers.
- Australian governments raise nearly 80 per cent of current revenue via taxation, with most of the rest raised by sale of goods and services, receipts of interest and dividend payments, fees and fines.
- Commonwealth taxes account for over 80 per cent of all taxes collected but the Commonwealth accounts for only half of own purpose expenditures.
- The overall budget balance equals current revenue less operating expenses and capital expenditure.
- The net operating balance equals current revenue less current expenses.
- The two key balance sheet concepts are net public debt and net public worth. Net public debt is broadly financial liabilities less financial assets (excluding equity holdings). Net public worth is total assets less total liabilities.
- Compared with other developed economies, Australian government expenditure is low. This reflects mainly a lower level of income transfers due to means testing of benefits. It also reflects a relatively high level of mandated private expenditure for welfare purposes.
- Government expenditure on goods and services can be explained partly by market failures and by socioeconomic factors such as rising income, the relative unit costs of government production and demographic factors. Socio-economic factors, such as demographic changes, also explain some of the growth in transfer payments.
- However, social preferences relating to household needs and political decisions are the main drivers of transfer payments and also impact on government capital and consumption expenditures.

Questions

1. If government size is measured by the ratio of general government expenditure to GDP, what happens to the size of government if:
 - i. government increases welfare payments to unemployed persons, when such transfer payments are not recorded as part of GDP?
 - ii. unemployment rises?
 - iii. interest rates fall?
 - iv. government increases income tax rates?
 - v. government requires all households with more than a certain level of income to hold private health insurance?
 - vi. government subsidises private health insurance?
 - vii. the terms of trade improve?
2. Explain why tax expenditures can have the same real effects as actual government expenditures. Give an example.
3. Explain the difference between cash and accrual accounting.
4. What is the distinction between current and capital expenditure? What are the arguments for and against treating capital expenditure differently in the government's accounts?
5. The headline cash budget balance is a common measure of budget outcomes. What are the main weaknesses of this measure?
6. Are student university fees included in Commonwealth government revenue? And are HECS repayment obligations included in the net worth of the Commonwealth?
7. The Australian government has established a Future Fund with revenues from past budget surpluses and asset sales quarantined in the Fund to pay for unfunded superannuation liabilities. What are the main arguments for and against such a fund?
8. How can the income elasticity of demand for public goods be estimated from cross-sectional data for different jurisdictions, such as US states and local governments? What difficulties might arise in estimating this income elasticity?
9. Does Baumol's theory of low public sector productivity growth partly explain the increase in government expenditure as a percentage of GDP?
10. Personal benefit payments as a percentage of GDP have doubled since the 1960s. What factors explain the increase in personal benefit payments? Is this trend likely to continue in the future?
11. What are
 - i. the major government expenditure benefits in kind to Australian households?
 - ii. the major business subsidies provided by the Australian government?
12. In presenting the 2011–12 budget, the Australian government announced provision of \$3.1 billion to the National Broadband Network Company which it owns, but it did not include this amount in the estimated expenditure or in the budget deficit of \$22.6 billion. How could the government justify excluding this payment from the budget? Is this exclusion appropriate?

Further Reading

- Australian Bureau of Statistics (2005) *Australian System of Government Finance Statistics: Concepts, Sources and Methods*, ABS, Cat. No. 5514.0, Canberra.
- Australian Bureau of Statistics (2017) *Government Finance Statistics: Australia ABS*, Cat. No. 5512.0, Canberra.
- Borcherding, T.E. (1985) 'The causes of government expenditure growth: a survey of the U.S. evidence', *Journal of Public Economics*, 28, 359–382.
- Gruber, J. (2016) *Public Finance and Public Policy*, 5th ed., Chapter 4, Worth Publishers, New York.
- Mueller, D.C. (2003) *Public Choice III*, Chapter 21, Cambridge University Press, Cambridge.
- Robinson, M. (2002) 'Accrual accounting and Australian fiscal policy', *Fiscal Studies*, 23, 287–300.
- Rosen H. and T. Gayer (2014), *Public Finance*, 10th ed., Chapter 1, McGraw-Hill, New York.
- Treasurer (2010) *Australia to 2050: Future Challenges*, Treasury, Canberra.
- Treasurer (2011) *Budget Strategy and Outlook 2011–12* (Australian Government budget <<http://www.budget.gov.au>>).

