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CENTRE FOR THE ECONOMICS OF EDUCATION AND TRAINING

Australia's educational expenditures

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This paper provides an analysis of revenue for and expenditure on Australian education institutions. It includes a review of funding from public and private sources and from overseas. Analyses are made for education as a whole and for the major sectors: schools, vocational education and training (VET) and higher education. Estimates are considered in current and constant prices. Analysis is made of changes in expenditure per student or hour of training. Brief consideration is given to non-institutional expenditures including student assistance and employer expenditures.

Education overall

The total public and private spending on education institutions absorb about 5.5 per cent of the GDP. The percentage has declined, but only very slightly, in the years from 1994 to 2002. There have been shifts in the composition of spending and in the source of revenues.

Revenues

Governments provide about 75 per cent of the funds for education institutions with the private sector and overseas students providing 25 per cent. The Commonwealth provides about 30 per cent of revenues and the States and Territories about 45 per cent. The Commonwealth is also the major provider of student assistance.
The Commonwealth has almost the whole *public* responsibility for funding higher education. However its funds provide a declining proportion of the revenues of universities, which have expanded their overseas and local fee revenues substantially. Treating HECS as privately funded, universities receive less than 45 per cent of their revenues from the Commonwealth. But Commonwealth funds are over 50 per cent if allowance is made for the net addition to Commonwealth loans to support HECS each year. The Commonwealth provides over 40 per cent of the revenues of non-government schools, 30 per cent of funds for VET and about 13 per cent of the revenues of government schools.

Total expenditures

The total of public and private expenditure on educational institutions was about $40 billion or about 5.5 per cent of GDP in 2001-02. Total expenditure on educational institutions as a percentage of GDP has been roughly constant in recent years, though the relative contribution of private expenditure has increased. At constant prices, inputs into education increased by less than 2 per cent per annum in the years 1993-94 to 2001-02. A volume measure of output, based on student numbers and hours of education and training, increased by about the same amount.

Net exports of education

From the mid 1980s Australia has developed a large export industry in education and training. By 2001-02 the estimated value of education fees received from overseas students exceeded $2 billion, compared with a total expenditure on education in Australia of around $40 billion. Expenditure from overseas has been growing at 10 per cent per annum in current prices in the period from 1993-94. Overseas student fees now provide over 10 per cent of the revenues of higher education and a growing if much smaller percentage in VET and schools. Australian students also study abroad but the net effect is very strongly in Australia's favour.

Student assistance

The Commonwealth government is the major provider of student assistance and in 2001 supported nearly 400,000 full-time secondary and tertiary students especially through Youth Allowance, AUSTUDY and ABSTUDY. The total provided is well in excess of $2 billion a year or about a 0.25 % of GDP.

Employer expenditures

Employers in 2000-01 spent $4 billion on training, $3.6 billion after deduction of government subsidies. This is equal to about 0.5 per cent of GDP. The proportion of employers who provided training was higher than in 1996—though those providing training provided relatively less per employee, so the share of the wage bill spent on training remained at the same level as in 1996.

Sectors

Schools

Total school enrolments have grown at less than 1 per cent per annum in the last decade. Enrolments in government schools have changed very little. There has been small growth in enrolments in Catholic schools and substantial growth in other non-government schools. Commonwealth and State Governments together provide about 80 per cent of the funds for schools: about 95 per cent of total funds for government schools and 55 per cent of total funds for non-government schools.

The Commonwealth Government through education grants directly provides about 20 per cent of overall funds for schooling. As mentioned it funds about 40 per cent of expenditure by non-government schools and about 13 per cent for government schools. Real expenditures per student have been growing in both government and non-government schools. In the 1990s resources increased fastest in Catholic schools. There is some indication that growth is faster in other non-government schools in the early 2000s. The growth in school resources per student is reflected in reductions in student teacher ratios. The growth in non-government schools has been financed by a growth in both private funds and government grants.

Vocational education and training (VET)

Training hours delivered in VET grew on average 4 per cent per annum in the period 1997 to 2002. The growth in student numbers was a little slower. Total revenues and

expenditure in the VET sector increased in current prices in the years 1997 to 2001 but declined a little in constant price measures. Total expenses measured in constant prices declined substantially per hour of training after 1997 to 2000 but may have stabilised or increased a little since. Given the growth in student numbers and hours of training it follows that resources per student fell markedly in the period up to 2001.

In 2001-02 governments provided about 80 per cent of the revenues of public VET institutions, falling from over 85 per cent in the early 1990s. Funds from private fee-for-service, including overseas student fees, are the main source of private income. These funds increased as a proportion of revenues. Fees from Australian students in publicly funded courses have not increased noticeably as a share of revenue in recent years.

The theme of 'growth through efficiencies' was used in the VET sector in recognition of the need to use resources more effectively to achieve desired outcomes. The introduction of training packages increased costs through the emphasis on workplace assessment but also made it possible in some cases to reduce the hours of delivery in the classroom, freeing some resources for alternative uses. The most notable changes in the distribution of expenditure were the increased allocation of funds to non-TAFE providers, mainly associated with user choice for apprenticeships and traineeships, a decline in the share of expenditure going to student services and a decline in the share of funds spent on personnel. A greater proportion of staff was employed on casual or part-time contracts.

Higher education

Universities in 2001 received about 45 per cent of their total revenues directly from the Commonwealth government. The largest other sources of revenue were the Higher Education Contribution Scheme (HECS) which provided about 18 per cent and full fee overseas students which provided over 10 per cent. Over half the HECS finance is now funded by repayments or up-front payments and the remainder from government advances. There has been a very substantial growth in overseas student numbers and a smaller expansion in the number of full-fee-paying Australian students.

The number of publicly supported Australian students in higher education places has changed little in recent years. Funds per student in constant prices are estimated to have declined about 1 per cent per annum (when full allowance is made for the changes in salary costs). At the same time the universities reduced the share of their expenditures directed to employing staff. These changes have contributed to, but do not fully explain, the very large increases in the ratio of students to academic staff from the mid 1990s.

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The rapidly growing revenues from full-fee-paying overseas students may have been used to cross-subsidise the education of Australian students but the data analysed in this report does not allow estimation of this. While at first glance the cost of a place in higher education is much higher than in schools or VET, the growing share of total revenue contributed by HECS means that the cost of higher education places *to government* may in many cases be lower than the average cost of places in government schools or government funded places in the VET system. Attributing part of the cost of academic staff to research would further affect the comparison.

Summing up

In the last few years expenditures on educational institutions have grown in real terms by about 2 per cent per annum. Private expenditure and expenditure by overseas students have grown faster than public expenditure, though part of the expansion of private expenditures has been financed by government, such as grants to non-government institutions and advances to support HECS.

Most of the additional resources for education have gone to schooling. On average, both government and non-government schools have experienced continuing substantial growth in real expenditure per student, with the greatest increases in the 1990s in the Catholic sector and it seems in the non-Catholic sector in the 2000s although complete data for recent years are not yet to hand. The expansion of enrolments and in funding levels per student in non-government school up to 2000 was funded by the expansion of both private and government expenditure.

The total real resources in VET in 2001 were about the same as in 1997 but hours of training had increased by about 4 per cent per annum. There are various ways in which efficiencies have been pursued to offset the effects of the apparent reduction in resources per hour. An increased proportion of expenditure in this period went to non-TAFE providers and, as with universities, there was a reduction in the share of expenditure on personnel.

In higher education there has been very little growth in publicly funded Australian student numbers in recent years and a small decline in real public funding per student. The most notable changes are the continued growth in the proportion of the 'public' expenditures funded through HECS and the expansion in fee paying overseas students and Australian students in postgraduate courses. The decline in staffing ratios in higher education is much larger than the decline in funding per student. The gap is a matter for further analysis.

Introduction[1]

This paper provides an analysis of revenue for and expenditure on education in Australia. This includes consideration of the extent to which education is funded from public and private sources and from overseas. Analyses are made for education as a whole and for the major sectors: schools, vocational education and training (VET) and higher education. Estimates are considered in current and constant prices and analysis is made of changes in expenditure per student or hour of training.
Financial data on education and training can be useful in considering research and policy questions. Some of the types of questions and the sorts of data to help answer them are:

i. *How much is provided and by whom?*
Indicated by:

- the resources for education and training in total, for each education sector and as a share of GDP;
- the sources of public finance by level of government and share of government activities; and
- the sources of private finance.

ii. *How efficient is the provision of education and training?*
Indicated by:

- resources per unit of output, such as cost per student per year, compared across levels and types of education and training;
- how the resources are deployed on personnel and other uses;
- changes in resources per unit over time, measured in constant prices; and
- relation between funding mechanism and efficiency.

iii. *How effective is the provision of education and training?*
Indicated by:

- the relation of resources per unit of output to measures of outcomes in aggregate; and
- resources per unit of output and outcomes for particular forms of learning.

iv. *How equitable is the provision of education and training?*
Indicated by

- the distribution of education and training resources by various equity target groups including age gender ethnicity and socio-economic background.; and
- the sources of funds, by various groups.

The data considered in this paper provide important inputs to the first two questions concerning the total expenditure, its financing and the expenditure per unit of output, such as students per year or hours of training. Much of the data is too aggregated to help directly with questions of effectiveness or equity but may be used in consideration of such issues. For example data on expenditure per student is essential information in estimating expenditure on different groups of students by socio-economic status or ethnicity.

[1] Thanks to Tom Karmel, Mike Long, Chris Selby Smith and Chandra Shah for comments.

Data quality

There are considerable deficiencies in the data available for education and training:

- There are inconsistencies across states and territories in the provision of data within sectors.
- There are differences in approach among the major sectors—schools, VET and higher education.
- The finance data is at a high level of aggregation so it is difficult to attribute expenditure to particular outputs.
- The expenditures on privately funded VET and higher education are largely omitted from the data sets considered.

Scope

For the purposes of the scope of this paper it is helpful to refer to a classification of finance based on institutional and non-institutional expenditures, the types of goods and services provided and the sources of funding. This classification is based on that developed by the OECD (2002 p.144) and in Burke *et al* (2001).

Table 1. Education and training expenditure by funding source and activity

	Education and training institutions	***Education and training outside educational institutions***
Instruction	Publicly funded expenditure spending on educational services	na
	Subsidised privately funded expenditure on instructional services	Subsidised privately funded expenditure on books or training
	Privately funded expenditure e.g. on tuition fees	Privately funded expenditure e.g. on books and other school materials or private tutoring or training
Research and development	Publicly funded expenditure on university research	**na**
	Privately funded expenditure for university research and development	na
Educational services other than instruction	Publicly funded expenditure on ancillary services e.g. meals, transport to schools or housing on campus	Subsidised privately funded expenditure e.g. on student living costs or reduced prices for transport
	Privately funded expenditure e.g. on fees for ancillary services	Privately funded expenditure e.g. on student living costs or transport

Source: adapted from Burke *et al* 2001 and OECD 2002. Note that this classification includes research and development in universities but arbitrarily excludes research and development undertaken elsewhere.

Table 1 shows the three dimensions of the classification:

- The first dimension indicated in the horizontal axis relates to whether the spending takes place in:

  education and training institutions, or

  outside education and training institutions.

- The second dimension, represented by the vertical axis, classifies the purpose or activity for which the goods and services are purchased:

  instruction;

  research (at tertiary level only); and

  ancillary services such as transport and for support for living costs.

- The third dimension, represented by the shading, distinguishes between the sources from which the funds originate.

  public funding (no shading);

  private expenditure on education that is subsidised by public funds is indicated by cells (vertical hatching); and

  private unsubsidised spending (grey shading) by

  - households;
  - other private entities; and
  - net expenditure from overseas.

  Other areas labeled 'na' (not applicable), which are considered out of scope.

The immediate concern of this paper is with education and training institutions and with instruction. It is important that they be clearly delineated from non-institutional expenditure and non-instructional expenditures in the data for all the education sectors. This is not always possible with existing data sets.

Accrual accounting

In Australia, government finance statistics in all but the Northern Territory are now on an accrual accounting basis. In contrast the OECD (2002) reports financial data on a cash basis. Accrual accounting attributes revenues and expenses to the period in which they apply rather than when cash payments occur.
Accruals reporting involves the following statements:

1. Operating statement;
2. Statement of stocks and flows;
3. Balance sheet; and
4. Cash flows.

The operating statement presents:

Revenues;

Expenses,

The net acquisition of non-financial assets and the consequent net borrowing or lending.

The statement of stocks and flows shows:

Opening balances of financial and non-financial assets and financial liabilities;

Financial flows during the reporting period; and

The closing balance.

The opening and closing balances of the stocks and flows statement form the balance sheet.
The cash flow statement reports the flows of cash within the accounting period whereas the operating statement reports on when the economic event occurred irrespective of whether there were cash flows or not in the period.

Anticipated advantages of accrual accounting

The use of a *common* accounting convention across all jurisdictions should lead to increased comparability of data. The use of the conventions of *accrual accounting* should contribute to improved awareness of the real costs of the resources applied in any form of education and training. The operating statement is the main one that is relevant for the review of efficiency. Statements of stocks and flows and of balance sheets are important more for financial accountability purposes than for policy purposes but they are needed to provide inputs relating to capital use to the operating statement. Statements of cash flows are needed for financial accountability more than for policy purposes (though in fact they are still the major reports used in policy considerations at an institution level).
The statement of revenues, other than attributing revenues to the time period to which they apply rather than when the funds are actually received, does not differ markedly from the statement of cash receipts used in cash reporting.
The statement of expenses is more markedly different to a statement of cash expenditures. The main differences in the reporting of expenses in the public sector are in relation to employer contributions to superannuation costs and the allocation of the costs of capital over time. Where institutions as employers already make cash payments into a superannuation fund then the change to accrual accounting is not of much consequence.

The major changes are in relation to capital. There are two aspects to this.

depreciation of non-financial assets which is included in the operating statement as an operating expense;

the user cost of capital, that is the value foregone implicit in using the capital in this activity rather than another (roughly measured by the interest rate on borrowings) is conceptually to be included as an operating expense. To date this has not occurred to any great extent in reporting for education and training. For example, for VET only for Queensland and Western Australia reported a capital charge for 2001 (NCVER 2002).

The benefits of accrual accounting are probably modest to date. Superannuation costs are now recognised not only in State and national reports but also in institutional costs in some States. The user cost of capital however remains largely at the level of State reporting and has little effect on the VET and school institutions—that largely operate on a cash basis.

Education and training in total

Educational institutions

The ABS provides some aggregate estimates of expenditure on education in the *Australian System of National Accounts* (ABS 5204.0) and in *Government Finance Statistics Education* (electronic delivery ABS 5518.0.55.001).

National Accounts data

Table 2 summarises for 2001-02 final expenditures on education in Australia. Government and private final expenditure on education exceeded $38 billion. Fees received from overseas students have recently reached $2 billion a year but this is partly offset by spending by Australian students overseas. The net figure may be around $1.5 billion though the current ABS estimates shown in Table 2 is somewhat under $1 billion. (based on ABS communications, ABS 5302.0 and AEI 2001). Total spending is shown in Table 2 as $39.3 billion and this is equal to 5.5 per cent of GDP.
'Final expenditure' applies to spending on goods and services in educational institutions and does not include financial assistance to students for their living costs and does not include training in the workplace carried out by employers, other than that provided by educational institutions.

Table 2. Final expenditure on education, Australia 2001-02 (actual prices)

	$ Billion
Government final expenditure education	26.9
Private final expenditure education services*	11.4
Net expenditure overseas adjustment, education*	0.9
Total final expenditure on education	39.3
Gross Domestic Product (GDP)	713.0
Total expenditure on institutions as % GDP	5.5

Source: ABS 5204.0 and data from the ABS.
Note: * As discussed in the text it is possible that private expenditures and the net expenditure overseas adjustment may be higher than shown here.

The data in Table 2 show private expenditure and overseas expenditure make up over *30 per cent* of the total spending on education. But, part of that final spending is supported by government current transfers to private institutions and by government loans to support the HECS scheme for university students. As considered further below, it seems that private and overseas spending net of government transfers to the private sector makes up 20 to 25 per cent of the total.
Table 3 provides more detail of government and private final expenditures on education (not counting the net overseas adjustment) from 1993-94 to 2001-02. In current prices final expenditures on education rose at just under 5 per cent per annum at current prices

over the period from 1993-94. The GDP grew at over 5 per cent per annum so declined *very slightly* as a percentage of GDP.

Table 3. Final expenditure on education, Australia 1993-4 to 2001-02

	1993-94	*1996-97*	*1999-00*	*2000-01*	*2001-02*	*Annual growth %*
Current price measures	*$b*	*$b*	*$b*	*$b*	*$b*	
Government final consumption expenditure	16.6	18.7	22.2	23.2	24.3	4.3
Government gross fixed capital formation	1.8	2.1	2.2	2.4	2.6	3.4
Total government final expenditure	18.4	20.8	24.2	24.5	26.9	3.7
Household final consumption expenditure	5.3	6.9	8.8	9.4	10.0	7.4
Private gross fixed capital formation	0.5	0.7	1.2	1.3	1.5	12.4
Total private expenditure	5.8	7.6	10.0	10.7	11.4	7.9
Total final expenditure on education	24.2	28.4	34.1	35.2	38.3	4.8
GDP	447	530	629	669	713	5.2
	%	*%*	*%*	*%*	*%*	
Total final expenditure on education as % GDP	*5.4*	*5.4*	*5.4*	*5.3*	*5.4*	
Indexes 2000-01=1.00						
Implicit deflator GDP	*0.88*	*0.92*	*0.96*	*1.00*	*1.03*	*1.7*
AWE ordinary adult full-time earnings	*0.75*	*0.85*	*0.95*	*1.00*	*1.06*	*3.6*
Hours worked in education	*0.90*	*0.94*	*0.97*	*1.00*	*1.00*	*1.4*
Volume and constant price measures	$b	$b	$b	$b	$b	
GDP chain volume measure	510	575	658	669	696	3.5
Final expenditure on education/ implicit price deflator of GDP	27.6	30.8	35.7	35.2	37.4	3.1
Final expenditure on education/ (0.7AWE+0.3 implicit deflator GDP)	30.7	32.6	35.8	35.2	36.6	1.5
Education gross value added, chain volume measure	26.2	27.6	29.3	29.9	30.3	1.7

Source: Data from ABS 5204.0, 6401.0, 6302.0

Note: This table omits the measure of net expenditure from overseas on education shown in Table 1. GDP is Gross Domestic Product; AWE is Average Weekly Earnings. AWE is used in this table only because a better measure such as the Wage Cost Index is available only from September 1997. The effect of different price deflators on the estimates of 'real' change in education inputs and outputs is being investigated.

Table 3 includes three measures of the inputs to education and a volume measure of output:

The hours worked in the education sector—this increased by *1.4 per cent* per annum.

The change in the expenditure on education deflated by an approximate measure of price changes in the education sector. This measure was based on average weekly earnings as an indicator of salaries and wages and the implicit deflator of GDP as a measure of other price changes affecting education inputs[2]. Adjusting with this measure education inputs are estimated to increase at *1.5 per cent* per annum.

Education expenditure adjusted by the deflator of the GDP—this increased of *3.1 per cent* per annum. The large difference between this and the first two measures reflects the fact that labour costs tend to grow faster than the general level of costs as measured by the GDP deflator. And education is a labour intensive sector.

The chain volume measure of value added in education—this increased at *1.7 per cent* per annum. This is a measure based largely on equivalent full-time student numbers in schools and higher education and hours of training in the VET sector. The figures are certainly only an approximation to output but at face value imply that output per unit of input has increased in the period from 1994.

Governments undertook some 70 per cent of final expenditures on education institutions in the financial year 2002 compared with 76 per cent in 1994. Government final expenditures on education at current prices increased by 3.7 per cent per annum. Private expenditures in total grew at 7.9 per cent per year (though they are in part funded by government).

Government finance statistics for education

The ABS produces *government* finance statistics that include the operating expenses of government education institutions and transfers from the government to the private sector for education. They do not include the operating expenses of private education institutions other than the government transfers to those private institutions. That is, they do not count fees paid to private institutions.

[2] Average weekly earnings were used since the Wage Cost Index is only available from 1997.

Government finance statistics for education include payments such as AUSTUDY which applies to students commencing study after age 24. The education statistics do not now include payment to students under the Youth Allowance that is the major form of student assistance for students aged 16 to 24[3].

Table 4 provides a summary of the data. The sub-total of employee and non-employee expenses plus depreciation can be taken to approximate the operating expenses of all government education institutions. In total in 2001-02 this came to $31.1 billion. These operating expenses were in part funded by 'sales of goods and services' shown in the last line to total $6.2 billion in 2001-02. The main elements of these sales are the payments deemed to be made by students on HECS and the fees paid by overseas students. The remaining $24.9 billion is funded by governments and by any other revenue such as returns on investments to tertiary institutions.

The two rows showing transfer expenses largely represent government funds transferred to private schools or VET institutions. A small part of it represents some elements of student assistance (excluding Youth Allowance). Current transfer payments are easily the fastest growing item of operating expenses in the period from 1998-99 shown in the table, increasing at nearly 14 per cent per annum in current prices compared with the main expenses for public education growing at 5.3 per cent.

Table 4. All Australian governments, education financial data (current prices)

	1998-99	*1999-00*	*2000-01*	*2001-02*	
	$b	*$b*	*$b*	*$b*	Annual increase %
Operating expenses					
Employee expenses	17.9	18.5	19.6	20.7	4.9
Non-employee expenses	7.0	7.4	7.7	8.7	7.5
Depreciation of fixed assets	1.7	1.8	1.6	1.7	-0.2
SUB-TOTAL	26.7	27.6	29.0	31.1	5.3
Current transfer expenses	*4.3*	*4.5*	*5.9*	*6.3*	13.7
Capital transfer expenses	*0.1*	*0.1*	*0.1*	*0.1*	6.2
TOTAL operating expenses	31.1	32.3	35.0	37.5	6.5
Net acquisition of non-financial assets	0.1	0.3	0.5	0.8	109.6
Sales of goods and services	4.6	5.1	5.5	6.2	10.2

Source. ABS 5518.0.55.001 *Government Finance Statistics, Education*

Net acquisition of non-financial assets represents the purchase of new assets minus depreciation. For 2001-02 net acquisition of non-financial assets *plus* depreciation equals

[3] This is strange in view of the definitions given in the glossary. The glossary for the 2000-01 education statistics states that operating expenses also include some payments which are meant to facilitate education but which are not spent on educational services and facilities: 'These types of payments, termed current monetary transfers to households, include living allowances paid to students which are used to finance expenditure on food, clothing, transport, rent and so on'. The Youth allowance is included under Social security and welfare, not under education.

$2.5 billion. This is fairly close to the figure for government gross fixed capital formation in the national accounts, shown in Table 3 at $2.6 billion[4].

The Government Finance Statistics provide details on operating expenses and sales of the major sectors of education. Summary data are shown in Table 5. The fastest growth in operating expenses is seen to be in schools, though it must be remembered that this includes government transfers to the private sector. The importance of 'sales' to the university sector is indicated with nearly half the operating expenses accounted by sales.

The data in Table 5 together with data on non-government school funding discussed in a later section have been used to make a rough approximation to the sources of funds for the major sectors of education. This is shown in Table 6.

Governments are source of about 75 per cent of revenues for education with the States and Territories at just over 45 per cent and the Commonwealth at just under 30 per cent. Governments are seen to provide over 95 per cent of funds for government schools, over 80 per cent of TAFE funds, and over 55 per cent of non-government school funds. The Commonwealths role is largest in relation to universities and non-government schools. Government schools receive over 40 per cent of funds, universities nearly 25 per cent, non-government schools about 20 per cent and TAFE nearly 10 per cent.

ABS data on expenditure in the sectors is very limited so it is necessary to use the data provided by the authorities for each sector for data on expenditure per student or to examine changes over time. Unfortunately, as discussed in Burke *et al* (2001), the data for the education sectors are not strictly comparable, though changes over time can be compared reasonably safely.

[4] It is not possible here to take on the task of reconciling the government expenditure in these statistics with those in the national accounts. It can be noted that there are differences in the two sets of statistics in the treatment of depreciation, though this appears to make a relatively small difference to the total.

Table 5. Government Finance Statistics by Government Purpose Classification, Australia

	1998-99	*1999-00*	*2000-01*	*2001-02*	
Operating Expenses by	*$b*	*$b*	*$b*	*$b*	Annual increase %
Primary and secondary education	17.3	18.1	19.6	21.3	7.2
University education	8.1	8.5	9.1	9.7	6.1
Technical and further education	3.3	3.3	3.6	3.9	5.4
Tertiary education n.e.c.	0.0	0.1	0.1	0.0	-16.1
Pre-school education and education not definable by level	1.1	1.1	1.1	1.1	0.7
Transportation of students	0.8	0.8	0.8	0.9	5.4
Education n.e.c.	0.4	0.4	0.6	0.6	14.8
Total	**31.1**	**32.3**	**35.0**	**37.5**	**6.5**
Sales of Goods and Services					
Primary and secondary education	0.4	0.4	0.5	0.6	12.5
University education	3.6	4.1	4.3	4.8	10.6
Technical and further education	0.6	0.6	0.7	0.7	9.4
Tertiary education n.e.c.	0.0	0.0	0.0	0.0	-41.5
Pre-school education and education not definable by level	0.0	0.1	0.1	0.0	1.6
Transportation of students	0.0	0.0	0.0	0.0	-
Education n.e.c.	0.0	0.0	0.0	0.0	-40.0
Total sales	**4.6**	**5.1**	**5.5**	**6.2**	**10.2**
Net Acquisition of Non-Financial Assets					
Primary and secondary education	0.0	0.1	0.2	0.3	
University education	0.2	0.3	0.3	0.4	26.8
Technical and further education	0.0	0.0	0.0	0.0	
Tertiary education n.e.c.	0.0	0.0	0.0	0.0	-20.6
Pre-school education and education not definable by level	0.0	0.0	0.0	0.0	
Transportation of students	0.0	0.0	0.0	0.0	
Education n.e.c.	-0.1	-0.1	0.0	0.0	
Total	**0.1**	**0.3**	**0.5**	**0.8**	**109.6**

Source. ABS 5518.0.55.001 *Government Finance Statistics, Education*

Table 6. Approximate source of funds by sector, Australia 2001-02, per cent distribution

	Government schools plus transport	Non-government schools	University education	Technical and further education	Tertiary education n.e.c.	Pre-school ed. and ed. not definable by level	Education n.e.c.	Total
Source of funds within sectors								
Fees, 'sales' etc	3	44	41	19	5	4	1	22
Other revenues	0	0	11	0	0	0	0	3
Commonwealth	13	40	46	29	0	17	93	29
States and territories	84	16	2	52	95	79	6	46
Total	100	100	100	100	100	100	100	100
Distribution of funds across sectors								
Total	42	20	24	9	0	3	1	100

Source. Based on data in ABS 5518.0.55.001 Government Finance Statistics, Education and MCEETYA National Report on Schooling.

Note: This includes the Commonwealth's additional advance to support HECS as Commonwealth expenditure and a consequent reduction in estimated sales. It excludes the main student assistance Youth Allowance but not others such as ABSTUDY and AUSTUDY. It excludes private payments to private VET and higher education institutions.

Taxation concessions

What is not measured in Tables 1 to 6 is the extent to which private funding is offset by reductions in income tax payable. This is mainly for donations for capital purposes. They are probably most important for the non-government school sector. For higher education and VET, students who are paying fees for courses to enhance their career may claim the expense against personal income. Brief consideration suggests this is not unimportant but that it is equal to only a quite small proportion of the total expenditures.

Aggregate exports of education

From the mid 1980s Australia has actively encouraged full-fee paying students from other countries to enrol in Australian education institutions. Table 7 shows the growth in the number of overseas student numbers by the courses they are enrolled in. Total numbers more than doubled in the years 1994 to 2001. Nearly 60 per cent of overseas students are in higher education courses, about 20 per cent in ELICOS and 16 per cent in Vocational Education. Higher education has experienced the fastest growth and its off-shore courses are the fastest growing element.

Table 8 provides an overview of the expenditures. The ABS estimates the value of the spending of overseas students under the heading of 'education related travel'. Data from the Australian Education International (AEI 2001) shows that about half the credits are the payment of fees by overseas students and the rest represents their other spending[5]. Australians spend overseas too but the debits are only about 15 per cent of the credits. Table 8 shows that the net credits grew relative to the GDP in the 1990s but remained at about half a per cent of GDP in the years 2000 to 2002. The nominal value of the net credits increased by nearly 130 per cent from 1994 to 2002 and measured in constant prices the increase was nearly 95 per cent.

Table 7. Overseas student numbers by major sector, Australia, 1994 to 2001

	1994	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*
	'000	*'000*	*'000*	*'000*	*'000*	*'000*	*'000*	*'000*
Courses Undertaken								
Higher education onshore	35	40	47	53	57	61	73	86
Higher education offshore	8	11	13	16	23	29	35	43
Total higher education	44	51	59	69	79	90	108	129
Vocational Education	19	23	28	31	30	30	31	40
School Education	13	14	17	17	15	14	13	15
ELICOS	26	34	43	37	27	29	37	49
Total	102	122	148	155	151	163	188	233

Source: AEI 2001 and 2003
The number of students in each sector is now based on the type of course rather than the type of provider.
ELICOS is English Language Intensive Courses for Overseas Students

Table 8. International payments for education-related travel, Australia 1990 to 2002

	1994	*1997*	*2000*	*2001*	*2002*
	$b	*$b*	*$b*	*$b*	*$b*
Fees	0.88	1.45	1.84	na	na
Goods and services	1.04	1.50	1.88	na	na
Total credits	1.92	2.95	3.72	4.12	4.18
Total debits	-0.38	-0.55	-0.61	-0.71	-0.66
Net credits	1.54	2.40	3.10	3.41	3.52
GDP	447	530	629	669	713
Net credits % GDP	0.35	0.45	0.49	0.51	0.49

Source. ABS 5302.0 time series spreadsheets and AEI 2001

Table 9 shows the distribution of course enrolments by type of provider. About two thirds of VET courses were provided by private providers. About half of ELICOS courses are provided by specialist ELICOS colleges and the rest by VET and other providers.

[5] IDP International notes that spending on overseas students offshore is not included in these data. The estimate for offshore students was estimated at $193 million for 2000-01 (IDP 2002)

Table 9. Distribution of overseas student enrolments by type of course and type of provider, 2000, Australia, '000

	Course type				
Provider type	*VET*	*ELICOS*	*School education*	*Higher education*	*TOTAL*
Public Higher		7		105	113
Private Higher		1		3	3
Public VET	7	3			10
Private VET	22	6			29
Public School		0	3		4
Private School		1	9		10
ELICOS College		18			18
Other	2		1		2
TOTAL	31	37	13	108	188

Source AEI 2001
Note: NCVER shows a total of 19,800 overseas students enrolled in public VET institutions in 2000

The expenditures for the 1999 and 2000 are shown in Table 10[6]. If we divide the student numbers into the total fees it appears that average fees are lowest in higher education and highest in ELICOS and VET. But this probably the reflects the provision of courses offshore and rather than the cost of a full-year course. An inspection of the fees charged for overseas students on the DEST website shows that universities tend to charge the highest rates of fees per annum.

[6] IDP International has noted that payments by off-shore students may be omitted from these data. The estimated value in 2000-01 was $193 million (IDP 2002).

Table 10. Expenditure by overseas students

	*1999**	*2000*
	$b	*$b*
Fees		
Higher Education	0.80	0.98
Vocational Education	0.32	0.34
School Education	0.13	0.13
ELICOS	0.31	0.40
Total	1.57	1.84
Goods and services		
Higher Education	0.81	1.01
Vocational Education	0.35	0.38
School Education	0.15	0.15
ELICOS	0.25	0.32
Total	1.56	1.86
Total		
Higher Education	1.61	1.99
Vocational Education	0.67	0.71
School Education	0.28	0.28
ELICOS	0.56	0.72
Grand total	3.12	3.70

Source: AEI 2001

Note: Some overseas students are supported by Commonwealth government overseas aid.

Non-institutional spending

So far attention has been concentrated on education and training institutions and no attention has been given to non-institutional spending. This includes spending on ancillary matters such as student living costs; and privately funded or subsidised instruction outside education institutions.

Subsidies to student living costs

Under a number of schemes, students receive financial assistance that is not counted as expenditure on education institutions—though students could use some of their assistance for institutional fees. The major forms of assistance to students for living costs are those provided by the Commonwealth:

Youth Allowance, approximately 360,000 clients in 2001-02 of whom over 80 per cent were full-time students aged 16 to 24 (and some older persons continuing on the allowance);

AUSTUDY 35,000 students aged 25 and over;

ABSTUDY 50,000 school and post-secondary students; and

Assistance for isolated children, 12,000 students.

States also provide some assistance, for example maintenance allowances to persons from low-income homes.

Total spending on these schemes is in excess of $2.5 billion or equal to about 7 per cent of expenditure on institutions (DEST 2002, FACS 2002, 2003).

Employer training expenditures

A major element of 'instruction' outside educational institutions is that provided by employers. Table 7 gives an indication of the size of this expenditure. In 2001-02 the gross employer expenditure on the provision of structured training totalled just over $4,000 million. About $370 million of this expenditure was provided from non-employer funds—mainly government subsidies to employers of apprentices.

It may be noted first that these government subsidies are not included in the education expenditures reported in Tables 1 to 6, and second that the survey estimate of such funds is less than the Commonwealth allocated in 2001-02. The Commonwealth spent $505 million on programs in support of apprenticeships and traineeships—employer subsidies—and $26 million on departmental costs related to this (DEST 2002 p.53). State governments also make some commitments in this area though the expenditures in some cases are included with vocational education and training expenditures.

A small part of employer expenditure is made on courses provided by VET and higher education institutions and hence would also be included in the private expenditure on education institutions shown in the earlier tables.

The employer expenditure on structured training shown in Table 11 does not include any payments to employees for the time they are released from work to undertake training. In the 1996 survey the estimated value of the wages and salaries for employees during training was roughly equal to the expenditure on structured training (ABS 1997, 6353.0).

Table 11. Employer direct training expenditure Australia, 1996 and 2001-02 (current prices)

	1996	*2001-02*	*% increase*
Panel 1	*%*	*%*	
Net Direct Training Expenditure % of gross wages and salaries	1.3	1.3	0
Net Direct Training Expenditure % gross wages and salaries for employers providing structured training	1.7	1.5	-12
Panel 2	*$b*	*$b*	
Gross direct training expenditure excluding wages and salaries of dedicated trainers	1.431	2.982	108
Wages and salaries of dedicated trainers	1.088	1.037	-5
Total gross direct training expenditure	2.518	4.018	60
Subsidies, grants and payments from external attendees of internal training courses	0.122	0.366	201
Net direct training expenditure	2.397	3.653	52
Panel 3	*$*	*$*	
Net Direct Training Expenditure per employee (all employers) $	377	458	22
Net Direct Training Expenditure per employee for employers providing structured training $	545	579	6

Source: ABS 2003 6362.0

The top panel of Table 11 indicates that employer net direct training expenditure in 2000-01 was 1.3 per cent of the gross wage and salary bill, the same as it was in 1996. The 1996 percentage was lower than it was in 1993 (ABS 1997). Expenditure in 2001-02 was a lower percentage than in 1996 of the gross wage bill for those employers who provided training—but a greater proportion of employers were reported as providing training. The results in the top panel of Table 11 showed expenditure as a per cent of gross wages remains at 1.3 per cent. This might seem hard to reconcile with the data in the second panel where net direct expenditure is shown to increase 52 per cent and the third panel where expenditure per employee is seen to grow by 22 per cent. The explanation is that average weekly total earnings grew about 20 per cent in this period so that an increase of 22 per cent in training expenditure per employee means an almost constant share of the total wages going to training. The data in Table 7 imply that total employees grew by 25 per cent. Since average weekly total earnings grew 20 per cent the wage bill would have increased by 50 per cent (1.25*1.2), just about the percentage by which training expenditure is shown to increase [7].

[7] The 2001-02 survey was not weighted to provide an accurate estimate of total employment: The implicit total of employees in the 2001-02 survey appears to be greater than the number estimated in ABS labour force surveys.

Schools

Total school enrolments have been growing at less than one per cent per annum. Table 12 shows the growth in enrolments and distribution by school type. Total enrolments in government schools changed very little over about 15 years. There has been growth of about 1 per cent per annum in Catholic schools but 4 per cent per annum in other non-government schools. Government schools now enrol about 68 per cent of all school students, Catholic schools 20 per cent and other non-government schools about 12 per cent.

There are considerable differences in the reporting of financial information on government and non-government schools but in Table 13 data on both are combined to give a very rough indication of recent sources of funds.

About 60 per cent of total school funds come directly from the State and Territory governments (about 20 per cent from the Commonwealth), and about 20 per cent from private sources. About 95 per cent of funds for government schools and over 55 per cent of funds for private schools are provided by government. A rough estimate is that private funds received by government schools equals an average of about 4 per cent of public funds.

Table 14 shows the nominal amount of *public* expenditure per student in government schools to 1999-00 and an estimate in constant prices. Since there was virtually no change in student numbers in government schools, per student expenditure increased at the same rates—about 17 per cent from the early 1990s.

Table 12. Full-time enrolments in schools, Australia 1986 to 2002

	1986	*1991*	*1996*	*2001*	*2002*	*Proportion 2002*
	'000	*'000*	*'000*	*'000*	*'000*	
Government	2208	2217	2221	2248	2257	0.68
Catholic	581	598	616	649	657	0.20
Other Non-Government	213	260	306	371	387	0.12
Total Non-government	794	858	921	1020	1044	0.32
TOTAL	3001	3075	3143	3268	3302	1.00
Index 2001 = 100	92	94	96	100	101	

Source: ABS 4221.0

Table 13. Approximate sources of school funds (cash basis) Australia

	Government schools 1999-00		*Non-government schools 2000*		*All schools*	
	$b	%	$b	%	$b	%
Commonwealth	1.7	13	2.9	40	4.6	22
State and Territory	11.7	84	1.2	17	12.9	60
Fees and donations*	0.5	4	3.1	43	3.8	18
TOTAL	13.9	100	7.2	100	21.3	100

Source: based on data from MCEETYA.
Note: Rounding of numbers affects totals. * Rough estimate only for government schools. This table will be updated when more recent government schools data are released.

Table 14. Public expenditure per student, government schools 1987-88 to 1999-00

	1987-88	1991-92	1995-96	1999-00
	$	$	$	$
Current prices	3437	4421	5063	6358
1999-00 prices	5280	5467	5668	6358
Index at 1999-00 prices	0.97	1.00	1.04	1.17

Source: MCEETYA

Notes: cash basis and including expenditure on buildings and grounds; excludes employer contribution to superannuation, payroll tax, long service leave provisions, depreciation and sinking fund payments, interest on Commonwealth loans, teacher housing, student hostel provisions, and funds raised by schools, school councils or community organisations.

The changes in revenues of non-government schools are shown in Table 15. In recent years the Commonwealth's share has been increasing but the State and Territory share has been decreasing almost as much. Hence the growth in funding of non-government schools was provided almost equally by private and public funds. The largest proportionate increases have been in Catholic schools. These data pre-date the new system of Commonwealth funding of non-government schools that commenced in 2001. The changes being implemented 2001 to 2004 on average especially assist Other non-government schools.

Table 15. Income per student by source, Catholic and Other non-government schools, current and constant prices, Australia 1992 to 2000

Calendar Year	1992			1996			2000		
	Catholic	Other	All	Catholic	Other	All	Catholic	Other	All
Current prices	$	$	$	$	$	$	$	$	$
Fees and charges	735	3586	1602	996	4181	2047	1317	4975	2624
Donations and other private income	285	404	321	337	514	395	437	571	485
Total private income	1020	3990	1923	1332	4695	2442	1754	5546	3110
State government grants	854	779	831	1009	885	968	1235	1069	1175
Commonwealth government grants	1808	1192	1620	2335	1492	2057	3290	2182	2894
Total income	**3682**	**5961**	**4374**	**4676**	**7072**	**5467**	**6279**	**8797**	**7179**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Fees and charges	20	60	37	21	59	37	21	57	37
Donations and other private	8	7	7	7	7	7	7	6	7
Total private income	28	67	44	28	66	45	28	63	43
State government grants	23	13	19	22	13	18	20	12	16
Commonwealth government	49	20	37	50	21	.38	52	25	40
Total income	100	100	100	100	100	100	100	100	100
1999-00 prices	$	$	$	$	$	$	$	$	$
Fees and charges	898	4381	1957	1098	4611	2257	1292	4879	2573
Donations and other private	348	494	392	372	567	436	429	560	476
Total private income	1246	4875	2349	1469	5178	2693	1720	5439	3050
State government grants	1043	952	1015	1113	976	1067	1211	1048	1152
Commonwealth government	2209	1456	1979	2575	1645	2268	3226	2140	2838
Total income	**4498**	**7283**	**5344**	**5157**	**7799**	**6029**	**6158**	**8627**	**7040**
Index	1.00	1.00	1.00	1.15	1.07	1.13	1.37	1.18	1.32

Source: MCEETYA and DEST. Price index used in deflation—70% index Average weekly earnings of School Teachers and 30% GDP deflator. See Burke and Long 2002.

Student teacher ratios

A check on these estimates is provided by data on the main area of expenditure, employment of teachers. The average ratio of students to teachers as shown in Table 16 fell very slightly from 15.2 to 14.8 in government schools in the 1990s. It fell substantially in primary schools. It was higher in secondary schools at the end of the period mainly due to cuts in teacher employment in Victoria in the mid 1990s.

Table 16. Ratio of full-time students to full-time equivalent teachers by type of school, Australia 1986 to 2002

	1986	*1991*	*1996*	*2001*	*2002*	*Index 2002*
Government	14.9	15.2	15.4	14.8	14.8	101
Catholic	17.5	17.3	16.7	15.9	15.7	107
Other Non-Government	14.0	13.7	13.2	12.8	12.7	86
TOTAL	15.3	15.4	15.4	14.7	14.5	100

Source: ABS 4221.0

The average ratios fell more notably in non-government schools in the 1990s: from 17.3 to 15.7 for Catholic schools and from 13.7 to 12.7 for Other non-government schools. The decline in student teacher ratios is smaller than the increase in real expenditure suggesting that payments to teachers have absorbed only a part of increases in expenditure per student. In recent years, expenditure relating to computing may have absorbed a larger part of both government school and non-government school expenditures.

There is variation in student teacher ratios across States though there has been some convergence in recent years as shown for the largest states in Table 17. The ratios fell in the states that had the highest ratios in 1991—NSW, Qld And WA—and risen in those with the lowest—Vic and SA.

Table 17. Government school student teacher ratios, larger States and Australia 1991 to 2002

	NSW	*Victoria*	*Qld*	*SA*	*WA*	*Australia*
1991	16.4	13.5	15.8	14.3	15.9	15.2
1996	15.5	15.1	15.7	14.8	15.7	15.4
2001	15.1	14.7	14.6	14.5	15.0	14.8
2002	15.1	14.5	14.7	15.0	15.4	14.8

Source: ABS 4221.0

Table 18 shows that the earnings of school teachers appear to have increased in line with the average earnings in the community. However as already noted the increase in earnings is much greater than the CPI or the various GDP deflators. Earnings increased by about 3.5 per cent per annum whereas the deflator of GDP increased by about 2 per cent per annum.

Table 18 Average weekly total earnings, full-time adult non-managerial employees, Australia

May of year	*1996*	*1998*	*2000*	*2002*	*2002 Index*	*Increase from 1996 %*
	$	$	$	$		
2 Professionals	844	923	967	1032	1.07	22
223 Computing professionals	919	1059	1210	1197	1.24	30
229 Miscellaneous business and information professionals	795	896	929	1013	1.05	27
232 Nursing professionals	798	859	898	958	0.99	20
24 Education professionals	818	870	935	991	1.02	21
241 School teachers	**780**	**838**	**898**	**968**	**1.00**	**24**
242 University and vocational education teachers	987	1068	1116	1152	1.19	17
243 Miscellaneous Education Professionals	758	814	920	894	0.92	18
3 Associate professionals	755	839	864	971	1.00	29
4 Tradespersons and Related Workers	701	760	793	839	0.87	20
5 Advanced Clerical and Service Workers	618	658	715	764	0.79	24
6 Intermediate Clerical, Sales and Service Workers	584	622	671	715	0.74	22
7 Intermediate Production and Transport workers	700	748	773	860	0.89	23
8 Elementary Clerical, Sales and Service Workers	559	576	621	641	0.66	15
9 Labourers and Related Workers	557	604	666	702	0.73	26
All occupations	683	739	784	845	0.87	24

Source ABS Cat. no. 6306.0

Expenditure per student by level and resource category

There are official estimates of public expenditure on government schools by level of schooling including senior secondary and junior secondary. Table 19, based on accrual accounting, shows an operating expense per student across all school years in 1999-00 of $7,300, or $6,700 excluding the capital charge and depreciation. For senior secondary the figures were $9,100 or $8,300.

Table 19 also shows the main components of expenses, with employee expenses at nearly 70 per cent of operating expenses (over 75 per cent of the operating expenses less depreciation and capital charges).

Unlike VET and higher education, there is no information in the publicly provided financial data on the service categories or activities such as teaching and instruction, administration, student services and transport. However there is information for

government schools on in-school and out-of-school expenditures and by level of education: primary junior secondary and senior secondary, as shown in Table 19.

Table 19. Expenses from public funds per student by resource category government schools, Australia (accrual basis), 1999-2000

	In-School				Out-of-school	Total
	Primary	Secondary	Junior	Senior		
	$m	$m	$m	$m	$m	$m
- Teachers	5,022	4,335	2,881	1,454	0	9,357
- Administrative and Support Staff	930	718	471	247	495	2,144
- Redundancy Payments	4	3	2	1	4	11
Total Employee Related Expenses	5,957	5,057	3,354	1,702	499	11,512
Other Operating Expenses	1,160	889	585	304	301	2,349
Capital Charge	446	363	247	116	4	813
Grants and Subsidies	634	523	349	173	76	1,233
Depreciation	360	307	205	102	17	684
Total Operating Expenses	8,556	7,139	4,741	2,398	897	16,592
Investing Costs	446	333	213	120	24	803
TOTAL	9,002	7,472	4,954	2,518	921	17,395
	'000	'000	'000	'000	'000	'000
Students FTE	1,383	877	615	262	2,259	2,259
	$	$	$	$	$	$
Operating Expenses per student	6,188	8,143	7,715	9,146	397	7,344
Operating Expenses per student, less capital charge	5,865	7,729	7,313	8,703	395	6,984
Operating Expenses per student, less capital charge less depreciation	5,605	7,378	6,979	8,314	388	6,681

Source: MCEETYA
Note: *FTE is full-time equivalent. Capital charges have been estimated only for Victoria, Queensland and ACT and are listed as zero for other States and the NT. The NT operates on a cash basis.

Vocational Education and Training

Students and hours 1997 to 2002

Average growth in student numbers 1997 to 2002 has been around 3 per cent per annum with hours of training growing a little faster. Table 20 gives the broad overview of the size of the system. The vast majority of VET students are part-time and the average nominal hours per student were about 212 in 2002. A standard full-year full-time course could require around 720 hours, though there is considerable variation in the hours taken by full-time students.

Overseas student numbers have been growing faster than Australian numbers in publicly funded institutions. They made up less than 1.5 per cent of total students reported in the VET statistics for 2002. However, as the overseas students tend to be full-time, they involved about 3 per cent of total hours delivered. The data for all VET overseas students, including those with private providers, was presented in Table 7 above. The total numbers in public VET may have increased more quickly than in private providers in recent years.

Table 20. Students and hours in VET 1996 to 2002

	1997	*1998*	*1999*	*2000**	*2001*	*2002*	*% increase 1997 to 2002*
NCVER data:							
Hours, million	301	309	324	336	353	360	20
Students '000	1453	1514	1620	1713	1685	1690	16
Overseas students ‘000	15	15	17	20	21	23	48
AEI data:							
Overseas VET students ‘000	31	30	30	31	40	na	

Source: NCVER and Australian Education International (AEI 2001)

Note: This table excludes VET-in-schools data. AEI (2001) estimate is for all VET overseas students course enrolments including those with private providers. The AEI estimated that there were 10 000 overseas students in public VET institutions in 2000 compared with the estimate of 20,000 shown here.

VET financial data

The national VET data are presented in General Purpose Financial Statements prepared in accordance with Australian Accounting Standards and reported in NCVER *Australian Vocational Education and Training Statistics Financial Data*. Details of the framework are provided in NCVER *AVETMISS, The Standard for VET Financial Data*. All states and territories except the Northern Territory have adopted accrual accounting.

The nature of the NCVER data and the concepts are discussed in the Appendix to this paper. The NCVER data cover publicly funded institutions, and public funding in private institutions. This means that:

publicly funded VET in public institutions is included;

privately funded VET in public institutions is included;
publicly funded VET in private institutions is included; and
privately funded VET in private institutions is excluded.

This limit to the coverage of private institutions is important to note, though in the short term it may be very difficult to extend the coverage.

The VET financial statistics include an item for capital charges. Most States and Territories give a zero on this item. In contrast, the Productivity Commission (2003) in its annual review of VET applies an 8 per cent charge for the user cost of capital to all non-current physical assets and working capital, less costs of government capital charges and interest on borrowings.

The VET financial data are provided in current prices. They do not include any direct link to measures of output such as hours of training completed. However, as discussed below, the data have been used by ANTA in the provision of constant price measures of expenditure per unit of output.

Revenues

Revenues in VET, which were about $4,100 million in 1997, were approaching $4,500 million in nominal prices 2001, about 8 per cent higher. Table 21 reports VET revenues and expenditures from 1997 to 2001.

Two measures of the changes in constant prices are provided in Table 22. Deflating by the non-farm GDP deflator revenues in constant prices declined about 1 per cent. Deflating using an alternative index based mainly on the Wage Cost Index for education the revenues are shown to have declined 4 per cent. On all the measures the revenues had begun to grow again in 2001. These figures can be roughly compared with the growth in hours of training of 17 per cent shown in Table 20.

Governments provided about 86 per cent of revenue in the early 1990s, falling to 83 per cent in the late 1990s and to 80 per cent in 2001: about 50 per cent from the States and Territories and 30 per cent from the Commonwealth. It should be noted that the reduction from 1997 in the government share is due to the contraction in the Commonwealth specific programs.

Table 21. VET 0perating revenues and expenditures, Australia 1997 to 2001, current prices

	1997 $m	*1998 $m*	*1999 $m*	*2000 $m*	*2001 $m*	*% change 1997 to 2001*
Revenues						
Commonwealth General Purpose Recurrent	731	732	721	737	810	11
Commonwealth Capital	191	194	194	192	185	-3
Commonwealth Specific Purpose Programs – ANTA	106	53	54	55	55	-48
Commonwealth Specific Purpose Programs – Other	110	81	49	43	48	-57
State Recurrent	2004	2065	2109	2156	2246	12
State Capital	130	113	128	109	118	-10
Assumption of liabilities and Other Government	122	126	121	124	101	-17
Total Revenue from Government	3395	3364	3375	3415	3563	5
Fee for Service	351	323	342	427	445	27
Ancillary Trading	104	86	82	102	111	6
Student Fees and Charges	156	154	160	171	182	17
Other	102	107	114	155	141	38
Total Revenues from Ordinary Activities	713	670	698	855	879	23
Total Revenues	**4108**	**4034**	**4073**	**4271**	**4442**	**8**
Expenses						
Employee Costs	2457	2441	2398	2510	2630	7
Supplies and Services	811	868	846	926	945	17
Grants and Subsidies	197	176	191	184	179	-9
Payments to Non-TAFE Providers for VET Delivery	176	217	252	268	319	81
Depreciation and Amortisation	229	234	239	252	252	10
Other	84	13	13	22	34	-60
Total Expenses	**3954**	**3949**	**3939**	**4162**	**4358**	**10**

Source: Derived from data in NCVER 2002.

In part this contraction in specific purpose grants was due to the termination of some special programs or transfer of responsibility for them, so that the contraction may not have directly affected the funds for the delivery of training[8].

Commonwealth recurrent funds contracted slightly as a share of the total to 2000 but had begun to rise again in 2001 under the ANTA agreement for 2001-03. Commonwealth recurrent funds in 2001 were 18 per cent of revenues, the same percentage as in 1997 and State and Territory recurrent revenues were 51 per cent of the total, compared with 49 in1997.

[8] For example the cessation in the 1997-98 financial year of national program funding for the Australian Vocational Training System (AVTS) National Transitional Program of $22 million; cessation in the 1998/99 financial year of national program funding for the Australian Students Traineeship Foundation of $9.9 million; cessation in the 1998/99 financial year of national program funding for Work Placement Coordinators in Schools of $10 million.

Table 22. VET 0perating revenues and expenditures, Australia 1997 to 2001, constant prices – two measures

Deflation by non-farm GDP deflator	1997	1998	1999	2000	2001	
Revenues	$m	$m	$m	$m	$m	
Total Revenue from Government	3695	3631	3613	3514	3563	-4
Fee for Service	382	348	366	439	445	16
Total Revenues	4472	4354	4360	4393	4442	-1
Expenses						
Employee Costs	2675	2634	2567	2582	2630	-2
Total Expenses	4304	4262	4216	4282	4358	1
*Deflation by alternative deflator**						
Revenues						
Total Revenue from Government	3830	3698	3618	3547	3563	-7
Fee for Service	396	355	366	443	445	12
Total Revenues from Ordinary Activities	805	736	748	888	879	9
Total Revenues	4635	4435	4366	4435	4442	-4
Expenses						
Employee Costs	2772	2683	2570	2607	2630	-5
Supplies and Services	915	954	907	962	945	3
Total Expenses	4461	4342	4223	4322	4358	-2

Source: Derived from data in NCVER 2002.
* Alternative deflator: 67 per cent Wage Cost Index Education and 33 per cent Non-Farm GDP implicit deflator.

The other notable change is the growth in 'fee-for-service', which includes overseas student fees, payments by industry, full-fee payments by (or for) Australian students and payments by governments other than the regular funding to public institutions. This grew by 12 per cent in real terms.

Fee for service payments by governments totalled over $100 million in 2001, about 2 per cent of all VET revenues. Other fee-for-service payments totalled over $300 million or 7 per cent of total revenues. This includes full-fee payments by Australian students (a very small component), fees paid by overseas students and payments by industry. In 2001, 11 per cent of total subject enrolments were on a fee for service basis, varying from 1 per cent of subject enrolments in the Northern Territory 8 per cent for NSW and 17 per cent in Victoria (Kronemann 2003).

Data in Table 10, above, showed that fees paid for VET by overseas students exceeded $340 million. Clearly a substantial proportion of this must be paid to private providers and not covered in the NCVER financial data, though the proportion of the overseas students in publicly funded institutions has been growing. In line with data on the distribution across states in fee for service revenues, nearly 60 per cent of the overseas students in public institutions have been enrolled in Victoria (NCVER 2003).

There has not been much change in student fees for publicly funded courses. Most State and Territory authorities cap the level of tuition fees and provide some exemptions for low income or disadvantaged students. Fees were e notably very low in NSW and Victoria (e.g. Victorian maximum $500 for tuition for a full year course) for publicly

funded courses (Kronemann 2003). However NSW has recently moved to increase student fees. And Victoria has more full-cost courses which involve fees of some thousands of dollars. Victoria has easily the highest proportion of its revenue from fee-for service. .

Expenses

Tables 21 and 22 included details of operating expenses for the main resource categories from 1997 to 2001. The most notable features are

the growth in payments to non-TAFE providers and

the stagnation of employee costs.

Payments to non-TAFE providers increased from 4 to 7 per cent associated with user-choice for apprenticeships and traineeships. Employee costs fell from 62 per cent to 60 per cent of expenses. In constant prices employee costs fell 5 per cent in the period compared with a 2 per cent fall in total operating expenses. No regular staffing data are compiled for the VET sector and so it is not possible to provide information on student-teacher ratios as a 'reality check' on the expenditure on staff as it is for the other main sectors. There is some evidence of a shift to sessional from full-time staff (Malley *et al* 2000).

Table 23 shows the expenses by service or activity category. There was a marked increase in the allocation to property, plant and equipment services and a reduction in student services and other services. It does appear as if the stringency in overall funding meant a reduction in student support and there is pressure for increased funding for this area as VET is asked to improve its assistance to less advantaged youth.

Table 23. Operating expenses in VET by service category, Australia 1997-01

	1997	*1998*	*1999*	*2000*	*2001*
Current prices	*$'000*	*$'000*	*$'000*	*$'000*	*$'000*
Delivery Provision and Support	2,637	2,628	2,691	2,814	2,924
Administration and General Services	790	735	652	722	766
Property, Plant & Equipment Services	226	277	375	390	436
Other Services	41	107	63	80	70
Student services	165	134	96	97	88
Total	3,859	3,881	3,878	4,103	4,284
Constant 2001 prices					
Delivery Provision and Support	2975	2890	2885	2923	2924
Administration and General Services	892	808	699	750	766
Property, Plant & Equipment Services	255	305	402	405	436
Other Services	47	118	68	83	70
Student services	186	147	103	101	88
Total	4354	4267	4157	4261	4284

Source: Current price data from NCVER 2002 and current price estimates using index based on 67 per cent the Wage Cost Index and the non-farm deflator of GDP.

Expenditure per annual hour curriculum

ANTA (2002) reports public recurrent expenditure per 'annual hour curriculum' (AHC) delivered in government funded VET programs and cost per successful module completion. Changes in statistical systems mean that comparisons prior to 1997 are not feasible. Table 24 shows government funded recurrent expenditure in actual prices, at 2001 prices (deflated by the non-farm GDP deflator). It also shows the value in 2001 prices where the alternative index including the Wage Cost Index is used in the deflation. This is used since the Wage Cost Index is a better indicator of wage costs than the non-farm GDP deflator.

Total publicly provided hours of training increased by 22 per cent from 1997 to 2001. Expenditure per hour is shown to have declined by 9 per cent in actual dollars, 16 per cent in 2001 prices (19 per cent when the alternative deflator is used).

Table 24. Government recurrent expenditure per publicly funded annual hour curriculum, Australia 1997 to 2001

	1997	*1998*	*1999*	*2000*	*2001*	*Change 1997 to 2001*
	million	million	million	million	million	
Adjusted Annual Hours Curriculum (AAHC)	227.8	243.4	255.6	262.3	278.6	22
	$m	*$m*	*$m*	*$m*	*$m*	*%*
Government recurrent expenditure - actual prices	3114	3207	3218	3297	3460	11
Government recurrent expenditure - 2001 prices (adjusted by Non-farm GDP deflator)	3380	3433	3418	3439	3460	2
	$	$	$	$	$	
Government expenditure per AAHC, actual prices	13.7	13.2	12.6	12.6	12.4	-9
Government expenditure per AAHC, 2001 prices	14.8	14.1	13.4	13.1	12.4	-16
Government expenditure per AAHC, 2001 prices estimated using alternative Wage Cost Index and non-farm GDP deflator	15.4	14.5	13.5	13.1	12.4	-19
	1.00	0.94	0.87	0.85	0.81	

Source: ANTA 2002, Vol 3

Notes: Under the definition used by ANTA Government recurrent expenditure equals: total operating expenditure less: fee for service revenue, ancillary trading revenue, other operating revenue, revenue from specific purpose Commonwealth funds, VET-in-schools funding, redundancy payments external to VET budgets, and skill centre capital revenues. Note that this means that *student fees* and depreciation costs *are* included in the estimates of government recurrent expenditure. AAHC equals actual annual hours curriculum adjusted for invalid enrolments.

Table 25 shows the differences among the states and territories, reflecting differences in State management, funding and staffing policies and relative needs. The Grants Commission estimates that the Northern Territory requires twice the Australian average to provide a similar level of service per hour of training.

The theme of 'growth through efficiencies' was used in the VET sector in recognition of the need to use resources more effectively to achieve desired outcomes. One aspect of changed resource use was the decline in expenditure on personnel as a share of total expenses. The employment of a greater proportion of staff on casual or part-time contracts accompanied this. There is also the issue that funds obtained from fee for service, including international students may have helped provide resources for Australian students for whom public funding has declined.

A further factor is whether the measure of training delivered—annual hours curriculum—remains a valid measure of the effort of the VET system. With the development of training packages as the basis of training the actual hours of delivery have become less important and in the case of workplace delivery of training largely irrelevant.

Table 25. Government recurrent expenditure on VET per publicly funded annual hour of curriculum, Australia, States and Territories, 1997 to 2001, $

	1997	*1998*	*1999*	*2000*	*2001*	*2001 as % 1997*
2001 prices (estimated with non-farm GDP deflator)						
NSW	15.97	16.24	15.45	14.41	13.03	82
Vic	11.10	11.05	9.88	9.92	10.75	97
Qld	15.79	13.04	14.19	14.93	12.9	82
SA	16.55	14.42	12.49	12.73	11.36	69
WA	16.06	14.22	13.84	13.39	13.73	86
Tas	20.05	17.62	16.83	15.91	14.32	71
NT	30.54	29.45	20.85	21.56	19.73	65
ACT	18.28	18.18	16.07	13.67	11.98	66
Australia	14.84	14.10	13.37	13.11	12.42	84
2001 prices (estimated using alternative Wage Cost Index and GDP deflator)						
Australia	15.42	14.48	13.49	13.06	12.42	81

Source: ANTA (2002 Vol 3) and estimates for this paper

A number of factors have added to costs. The increased requirements for workplace assessment and the growing costs of compliance with regulations in VET and in business generally have been important. Against this the reduction in the need to provide as many hours in the classroom may have freed resources in some instances.

The figure of $12.4 per annual hour curriculum reduces to about $11.8 after deducting student fees. For a full time course e.g. 720 hours per year, this would imply government recurrent expenses of about $8,500. This is not very different from the estimated recurrent cost per senior secondary student for 1999-00, shown in Table 14 above.

Higher Education

A broad view of the dimensions of enrolments in the university sector is given in Table 26.

Student load measured in equivalent full-time student units rose by 18 per cent from 1992 to 1997 and then by 22 per cent to 2002.

Non-overseas EFTSU increased by 13 per cent in from 1992 to 1997 and then by 10 per cent in the 5 years to 2002.

Overseas EFTSU increased by 100 per cent in the years 1992 to 1997 and then by 110 per cent in the years 1997 to 2002.

Over the whole period non-overseas EFTSU rose by 75,000 and overseas EFTSU by 80,000. Overseas EFTSU made up 20 per cent of total EFTSU in 2002 compared with 7 per cent in 1992.

As will be considered later, publicly supported Australian student load has remained fairly constant in the last five years, with expansion occurring in fee paying postgraduate and undergraduate students. In 2002 there was a student load of fee paying Australian students of 51,000 (DEST 2003).

Table 26. Student load and student numbers in Universities 1992 to 2002, '000

	1992	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*
Non-Overseas load	403	411	410	423	436	454	460	466	464	478	498
Overseas load	30	30	34	39	52	61	68	78	94	110	128
TOTAL EFTSU	433	441	444	462	488	515	529	544	558	588	627
Students (head count)	559	576	585	604	634	659	672	686	695	726	nc

Source: DEST Selected Higher Education Statistics

Note. nc not comparable due to new scope and definition in 2002; load is measured in EFTSU, equivalent full-time student unit.

Universities receive their government grants almost entirely from the Commonwealth but nearly all are State owned institutions. This unusual status leads to their being classified as in a Multi-Jurisdictional Sector by the ABS. As a result the ABS provides data for the operating revenues and expenses of universities in the Government Finance Statistics (ABS 2002, 5512.0) whereas there are no separate operating statements for other education sectors. Table 27 provides the main features of this.

Table 27. Operating Statement, Universities, Australia 1998-99 and 2001-02

	1998-99		*2001-02*	
Revenue	*$m*	*%*	*$*	*%*
Current grants and subsidies	4397	50	4521	43
Sales of goods and services	3495	40	4871	47
Interest and dividend income	261	3	311	3
Other	572	7	757	7
Total	**8725**	100	**10460**	100
Operating expenses		0		
Employee expenses	4772	55	5580	53
Other operating expenses	2693	31	3284	31
Depreciation	580	7	688	7
Other interest expenses	20	0	37	91
Grant expenses n.e.c.	12	0	17	0
Subsidy expenses	6	0	9	0
Other current transfers	294	3	359	0
Other capital transfers	4	0	2	3
Total	**8381**	96	**9976**	0
Net operating balance	**344**	4	**483**	95
Less Net acquisition of non-financial assets				5
Gross fixed capital formation	736	8	1092	
less depreciation	-580	-7	-688	10
plus change in inventories	1	0	0	-7
plus Other transactions in non-financial assets	26	0	41	0
Sub total	183	2	445	0
Net lending	**161**	2	**38**	4

Source ABS Cat No 5512.0.

Note: 1998-99 was the first year of the presentation of government finance statistics on an accrual accounting basis.

Universities in 2001-02 received 43 per cent of their revenues directly from government grants. Revenue from Sales of goods and services of $4,871 million (or 47 per cent of revenues) includes full-fee payments by overseas students and some Australian students and also *implicit or actual fees* from students funded under HECS.

Some further insight into the revenues is given by Table 28, which is based on the reports made by DEST from returns by the universities. Table 28 shows revenues by level of government. Only about 2 percentage points of revenues is attributed to States and Territories with the Commonwealth, in calendar year 2001 providing about 43 per cent, excluding its support for HECS.

Table 28. Revenues and expenses of universities, Australia 2000 and 2001

	2000		2001	
Operating Revenue:	$m	%	$m	%
Government grants				
Commonwealth sub-total operating purposes excluding HECS	3,438	37	3,616	35
Special research assistance	431	5	447	4
Teaching Hospitals and Capital Development Pool	44	0	43	0
Other Commonwealth Government Grants	306	3	365	4
State Government	144	2	178	2
Sub-total	**4,363**	**47**	**4,649**	**45**
HECS:				
Commonwealth payments including repayments through tax system	1,392	15	1,481	15
Student up-front contributions	283	3	290	3
Sub-total	**1,675**	**18**	**1,771**	**18**
Fees and charges:		0		
Continuing education	58	1	74	1
From fee-paying overseas students	947	10	1,164	11
From fee-paying non-overseas postgraduate students	193	2	223	2
From fee-paying non-overseas undergraduate students	52	1	44	0
Other fees and charges (including fees for service)	448	5	515	5
	1698	**19**	**2,020**	**19**
Royalties, Trademarks and Licenses	15	0	21	0
Consultancy and contract research	483	5	494	5
Investment income	321	3	303	3
Other operating revenue	773	8	944	9
Total operating revenue	**9,328**	**100**	**10,202**	**100**
Operating Expenses				
Employee benefits	5,368	60	5,655	58
Depreciation and amortisation	643	7	697	7
Buildings and grounds	365	4	399	4
Bad & doubtful debts	27	0	26	0
Other	2,603	29	2,924	30
Total operating expenses	**9,006**	**100**	**9,702**	**100**
Operating Result	321	4	500	5

Source DEST 2003

Of the revenues actually received by universities under HECS, student upfront payments and repayments by former students provide over half. The remainder of the HECS receipts were funded by the Commonwealth advances and could be considered in the short term as additional government outlays: that is, the Commonwealth's payment makes up over 50 per cent rather than 43 per cent of total revenues shown in Table 28.

The main items in Table 28 that would be included in the item 'Sales of goods and services' in Table 27 are HECs which in 2001 provided 18 per cent of revenues and Fees and Charges, 19 per cent.
Overseas students who make up 19 per cent of student load paid over $1,164 million or 11 per cent of total university revenues. Full-fee Australian students provided less than 3 per cent of revenues.
Details of the main resources purchased by universities and the activities to which they are allocated are shown for 1997 and 2001 in Table 29. (Note that there is no 'capital charge' in the university operating expenses in the DEST data. A capital charge is included for some states in the VET and in the government schools financial data).
The published DEST data on resource categories are not very detailed. The categories on which data is published are ‘salary and salary related expenses’ and ‘depreciation and other expenses’. In 2001 about 58 per cent of expenses were for salary and salary related expenses (a little lower than for VET). Spending on both academic and non-academic staff has declined as a share of total expenses in recent years. In part this may be because of the outsourcing of some activities. The decline in spending on staff may be one factor contributing to the increase in ratio of students to staff from the mid 1990s shown in Table 30. Another factor is the decline in real resources per student as will be considered below (see Table 31). However the increase in student to staff ratios appears to be larger than can be explained by these factors and is a matter for further research.
There is more detail on activities to which expenditure is directed in higher education than for VET but the categories are aggregated in a way that limits the possibility of comparison across sectors. Some 69 per cent of VET expenses were shown in Table 23 as for 'Delivery provision and support'. For Universities in 2001 Table 29 shows Academic activities and research, Libraries and other academic support services total 71 per cent. For VET 'Administration and general services' absorbed 19 per cent whereas for universities 'Administration and other general institution services' take up 16 per cent of expenses.

Research and teaching

Universities have a major research function though identifying the precise size of the research activity is a complex matter. ABS surveys of R&D are conducted in accordance with guidelines promulgated by the OECD. The OECD (2002 Table B6.2) shows about 28 per cent of all expenditure on tertiary institutions in Australia directed to R&D. The expenditure on R&D includes both direct expenditure and an estimate for indirect (overhead) expenditure in support of R&D. Any estimate of the costs in universities that does not include some consideration of the resource costs of research is likely to overestimate the costs of tuition.

Table 29. Operating expenses by service category and resource type, universities, Australia 1997 and 2001

	Salaries and salary related costs		*Depreciation and other expenditure*	*Total*
	Academic Staff	*Non-academic Staff*		
1997	*%*	*%*	*%*	*%*
Academic activities	32	12	18	62
Libraries	0	3	3	5
Other academic support services	0	3	2	5
Student services	0	2	3	5
Public services	0	1	1	2
Buildings and grounds	0	2	4	6
Administration and other general institution services	1	7	6	14
Other expenses	-1	-1	0	-1
Deferred employee benefits for Superannuation	0	0	2	2
Total	33	29	38	100
Total $m	2,553	2,199	2,926	7,678
2001	*%*	*%*	*%*	*%*
Academic activities	30	12	19	60
Libraries	0	2	3	5
Other academic support services	0	3	2	6
Student services	0	2	3	5
Public services	0	0	1	1
Buildings and grounds	0	2	4	6
Administration and other general institution services	1	7	8	16
Other expenses	0	0	1	2
Deferred employee benefits for Superannuation	2	2	0	3
Total	31	27	41	100
Total $m	3.030	2.664	4,008	9,702

Source: DEST 2003

Table 30. Student-staff ratios in universities, Australia

1993	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*
15	15	15	15	16	17	18	19	19	20	21

Source: DEST and AVCC

Note: The Student-Staff ratios are derived from the quotient of university student and staff data collected by DEST. The staff FTE comprises staff in Academic Organisational Units (AOUs) both full-time and fractional full-time staff with work functions of "teaching" and "teaching and research" only, while the student load encompasses both non-overseas and overseas students excluding work experience load regardless of their mode of attendance.

Resources per student

One way of getting a closer understanding of the costs of teaching (and research joint with it as distinct from specifically funded research) is by giving attention to the base operating grant. Analysis of this grant *per publicly funded Australian EFTSU* has been undertaken by the AVCC and is provided in Table 31.

The base operating grant represented about 82 per cent of the total Commonwealth grants to universities in 2002. It excluded:

- main capital funding (capital roll-in) equalling about 4 per cent of the total grants;
- a range of special programs, 4 per cent; and
- the main specialist research funding (especially infrastructure grants and Australian Research Council grants) of about 10 per cent of the total. .

The base operating grant is shown in the third row of Table 31. The values are in 2002 price levels using DEST's Cost Adjustment Factor (CAF). The CAF, in DEST's words, 'does not reflect actual factor price movements but reflects the increase the Commonwealth provides to institutions each year towards the increases in salary and non-salary costs' (DETYA 2001 p.217). The notional salary component (75 per cent) is indexed on the on the Safety Net Adjustment (SNA) determined by the Australian Industrial Relations Commission and the remaining part on the CPI.

Table 31 also shows the base operating grant revalued with the deflator based on Wage Cost Index for the education industry and the non-farm deflator of GDP. This is likely to reflect more closely the costs in the sector than the CAF.

Table 31. Commonwealth base operating grants to higher education institutions, Australia 1997 to 2002

	1997	*1998*	*1999*	*2000*	*2001*	*2002*	*Change 1997 to 2002 %*
Planned EFTSU '000	419.6	412.3	413.0	410.9	412.3	415.3	-1.0
Actual EFSTU '000	451.5	451.8	457.2	430.3	437.2	447.4	-0.9
Base operating grant, Actual prices $m	4,597	4,565	4,663	4,735	4,915	5,075	10.4
DEST cost adjustment factor	0.91	0.93	0.94	0.96	0.98	1.00	9.7
Alternative deflator (.67 WCI +.33 Deflator non-farm GDP)	0.86	0.88	0.90	0.93	0.97	1.00	16.5
	$m	$m	$m	$m	$m	$m	
Base grant 2002 DEST prices	5,044	4,931	4,959	4,949	5,029	5,075	0.6
DEST CAF 2002 prices							
HECS liability	1,311	1,488	1,620	1,719	1,781	1,816	38.5
HECS receipts	731	883	934	1,001	1,088	1,168	59.9
Base grant minus HECS liability	3,733	3,443	3,339	3,230	3,247	3,259	-12.7
Base grant minus HECS receipts	4,314	4,048	4,025	3,948	3,941	3,907	-9.4
Alternative deflator 2002 prices							
Base operating grant	5,355	5,182	5,161	5,077	5,075	5,075	-5.2
	$	$	$	$	$	$	
Base grant per planned EFTSU:	12,764	12,569	12,499	12,358	12,310	12,221	-4.3
Base grant per actual EFTSU:	11,861	11,468	11,289	11,799	11,607	11,343	-4.4
Base grant minus HECS receipts pre actual EFTSU	10,143	9,415	9,163	9,412	9097	8732	-13.9
Base grant minus HECS liability per actual EFTSU	8,777	8,007	7,600	7,701	7,495	7,285	-17.0

Source: Expenditure data from AVCC Funding Tables 2003. DEST CAF deflator from DEST 2003 p.117. Alternative deflator, based on Wage Cost index (ABS 6345.0) and Non-Farm deflator of GDP (ABS 5206.0)

Note: EFTSU is equivalent full-time student unit. The 'base operating grant' is defined by AVCC differently to DEST. It excludes funding for Commonwealth Industry Places Scheme and excludes the capital roll-in; HECS receipts equal Up-front receipts, Repayments through the tax system and Voluntary payments.

The base operating grant in DEST 2002 prices grew 1 per cent in the period 1997 to 2002 but with prices measured by the alternative deflator it fell by 5 per cent. Actual EFTSU supported by these grants declined by 1 per cent. Hence, depending on the deflator used, the funds per student rose very slightly or declined by 4 per cent.

Teaching only costs

The base operating grant considered here excludes the main special research funding but it does include funds to cover the research time of academic staff. Hence, to this extent the base operating grant per EFTSU exaggerates the teaching cost in universities.

Cost to government

Table 31 also shows the increasing importance of HECS in funding the grants that come from the Commonwealth. HECS liabilities incurred by students rose from 26 per cent of the base grant in 1997 to 37 per cent in 2002. Funds actually received from upfront payments or repayments of debt were 14 per cent of the base grant in 1997 but 23 per cent in 2002.

The last two rows show the value of the base operating grants minus HECS receipts and HECS liabilities per actual student. The base grant minus the receipts could be considered as the operating cost to government—in 2002 this was about $8,700 per EFTSU. The base grant minus HECS liability is smaller again, about $7,300. This latter figure is an underestimate of the cost to government as some of the liabilities will not be repaid and no real interest is added to the debt.

Comparisons across sectors

Comparisons can be made of teaching costs across senior secondary school, VET and higher education. However the data across the sectors are not fully comparable. More important, schools, TAFE and universities have different functions. This may mean different requirements for class contact, class size and expenditures.

If comparison were attempted the following factors would need to be considered further:

- The data on operating expenses for VET include depreciation whereas these are not considered in the cash revenue data for higher education—Table 27 above shows depreciation costs at 7 per cent of operating expenditures in higher education.
- The relative costs of provision in the different sectors due to differences in course mix—universities do have a number of very high cost courses.

However the data to hand does suggest the average base operating grant a program for a full-time university student is somewhat higher than for schools and VET. However once HECS receipts are considered the cost to government could be somewhat lower in most university courses than upper secondary education in government schools or public VET institutions. This would clearly be so for the relatively low cost programs such as business studies.

Summing up

This paper has used ABS and administrative data for the main sectors to report on the size and trends in public and private education revenues and expenditures in educational institutions.

The proportion of the GDP has remained fairly constant. Education is labour intensive and, since labour costs rise faster than the general level of prices, the growth in resources devoted to education is slower than the growth in the volume measure of the GDP. Total resources in education are estimated to have grown by about 2 per cent per annum from 1994. At the same time there has been a marked shift to private spending but a considerable proportion of the private expenditure is financed by governments.

Nearly all the extra resources have gone to schools. The school sector has had little growth in enrolments so the increase in resources means increased resources per student, especially in the Catholic schools in the late 1990s.

Governments provide over 80 per cent of the funds for schools -- for about 95 per cent of expenditure by government schools and around 55 per cent of expenditure by non-government schools. The Commonwealth Government provides about 20 per cent of overall funds for schooling. It funds nearly 40 per cent of expenditure by non-government schools and directly only about 13 per cent for government schools.

Governments provide about 80 per cent of the revenues of VET institutions, a share that has fallen from over 86 per cent in the early 1990s. Private fee for service including overseas students is the main source of growth of private income. Fees from Australian students in publicly funded courses have not increased noticeably as a share of revenues. Hours of training delivered in VET grew about 3 per cent per annum in 1997 to 2001 while revenues in constant prices hardly changed. This has been accompanied by changes in the use of resources in the pursuit of efficiency. Revenues per hour of training may have risen since 2001 but data are not yet available to confirm this.

Universities now receive less than 45 per cent of their total revenues directly from government though the share of government is larger if the net addition to Commonwealth loans to HECS are included. Australian student numbers in publicly funded places have grown very little in recent years and revenue in constant price terms has declined about 1 per cent per annum in recent years (when measured with full allowance for pay increases). The most marked change in universities is the continuing rapid growth in overseas student numbers. By 2002 they made up 20 per cent of EFTSU and provided about 11 per cent of total revenues, compared with about 3 per cent of revenues in public VET institutions.

Comparisons among educational sectors are difficult to make. The data for the different sectors are not fully comparable. More important, schools, VET institutions and universities have different functions. This may mean different requirements for class hours, class size and expenditures.

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Appendix: The nature of the VET financial data

The national VET data are presented in General Purpose Financial Statements prepared in accordance with Australian Accounting Standards and reported in NCVER *Australian Vocational Education and Training Statistics Financial Data*. Details of the framework are provided in NCVER *AVETMISS, The Standard for VET Financial Data*. All State and Territories except for the Northern Territory have adopted accrual accounting
In addition to the Statement of Financial Performance the VET Financial Data includes

- Statement of Financial Position;
- Statement of Cash Flows,
- Operating expenses by activity
- Notes to those statements.

The main elements of the revenues and expenses, for public institutions and other public funding of VET, are shown in Table A1.

Concepts

The NCVER framework is in line with the ABS government finance statistics in general though there is no statement of Stocks and Flows in relation to assets.

Scope and definitions

The NCVER data cover publicly funded institutions, and public funding in private institutions. This means that:

- publicly funded VET in public institutions is included
- privately funded VET in public institutions is included;
- publicly funded VET in private institutions is included; and
- privately funded VET in private institutions is excluded.

This limit to the coverage of private institutions is important to note, though in the short term it may be very difficult to extend the coverage.
NCVER has reported variations across States and Territories in the valuation and revaluation of assets, methods of depreciation and in thresholds for inclusion in capital. Since the introduction of accrual accounting, depreciation is included as an operating expense in the operating statement.

Table A1. Major elements of the NCVER framework for VET financial data

Revenues	Expenses
Revenues from ordinary activities	***Expenses from ordinary activities***
Fee for service	**Employee costs**
Government agencies	Salaries, wages, overtime and allowances
Other- including overseas students	Superannuation
ACE	Payroll tax
Student fees and charges	Other salary and wage related costs
Ancillary trading	**Supplies and services**
Other revenues	Consumables
Profit on sale of non-current assets	Communications and energy
Investment income	Rent and leasing
Residential charges	Contracted services
Recoveries	Repairs and maintenance
Other	Travel and transfer
	Marketing and promotion
Revenue from government	Fees and charges
	Other
State government	**Other**
Recurrent	**Grants and subsidies**
Capital	Apprentice and trainees (not employer subsidies)
Commonwealth government	ACE (administration and infrastructure)
Recurrent	VET in schools
Capital	Skill centres
Specific purpose	Other VET programs
Government other	**Payments to non-TAFE providers for VET delivery**
	Private enterprise, community, industry and local government
	Secondary schools – public and private
	Other government providers
	Depreciation and amortisation
	Borrowing costs*
	Change in net assets before extraordinary items
	Extraordinary items
	Change in net assets
	Capital charge
	Net increase (decrease) in asset revaluation reserve
	Total changes in equity

Source: NCVER, *Australian Vocational Education and Training Statistics Financial Data*.
Starting in 2001 Borrowing costs area a separate line item not included in ordinary activities

The VET financial statistics include an item for capital charges. Most States and Territories give a zero on this item. In contrast, the Productivity Commission in its annual review of VET applies an 8 per cent user cost of capital to all non-current physical assets and working capital, less costs of government capital charges and interest on borrowings. The ABS *Government Finance Statistics* (5512.0) does not include a capital charge.

Links to output and constant price measures

The VET financial data do not include any direct link to measures of output such as qualifications or modules completed; or constant price estimates. However the data have been used in the provision of expenditure per unit of output, with the information in constant prices.

For instance, ANTA, in its *Annual National Report uses NCVER* data to estimate public expenditure per hour of publicly funded VET and per hour of successfully completed hours of VET[9]. ANTA presents the resulting estimates in constant prices using the deflators for Gross Non-Farm Domestic Product to adjust for changes (ANTA 2002 Vol 3). The use of the average level of prices in the community, such as the non-farm GDP deflator, provides an estimate in constant prices that represents the demands made on the resources of the community. But there is also a case for providing deflation by a price index that measures the actual costs in the education sector to give an indication of changes in resources used in the sector. The choice of price index is an important matter as there are large differences among price measures (National Center 2001). Expenditure deflators are the focus of a separate project for ANTA

[9] Note that this requires considerable unpublished data. The data used for the calculations are: publicly funded module hours with adjustments for invalid enrolments and enrolments directed at recognition of prior learning; publicly funded successfully completed module hours; total operating expenditure *less* fee for service revenue, ancillary trading revenue, other operating revenue, revenue from specific purpose Commonwealth funds, VET-in-schools funding, redundancy payment external to VET budgets, and skill centre capital revenues.

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