This chapter considers the options available for financing entry-level and continuing vocational education and training (VET) in an environment where there are competing demands for government resources to fund other government priorities. Government, employers and individuals all contribute towards financing vocational education and training, with government being the main contributor to financing entry-level vocational education and training, and employers being the major contributor to the cost of continuing vocational education and training. The exact quantum of expenditure on training in Australia is not known.

Significant resources are expended by governments to deliver education and training. As there are competing demands on governments to resource priorities such as health and welfare, defence and national security, in addition to education and training, it is important to scrutinise resource allocation in this major expenditure area. Governments are increasingly concerned about addressing the pressures of an ageing population (Department of Treasury 2004) which will cause upward pressure on health and welfare expenditures and constrain expenditure in other areas such as education and training. It is important to determine the relative contribution of individuals, industry and government to the costs of vocational education and training to inform the debate on resource allocation between competing government priorities. There are also competing resource demands between vocational education and training and the other educational sectors. In terms of the VET sector, there is a question over what proportion of expenditure should be privately funded compared with the publicly funded component.

Levin (2003) maintains that almost every country has a coherent system of compulsory education with a clear and consistent financing structure. On the other hand, financing structures of post-compulsory education systems are diverse, and the multitude of forms of financing arrangements can lead
to inefficiency, inequity and inconsistencies across the range of institutions providing post-compulsory education and training. Traditionally, economists such as Friedman argued that, because the benefits of post-compulsory education are largely vocational and therefore largely accrue to an individual or firm, the costs should be borne by the individual or the employer. The costs of post-compulsory education could be funded through an income-contingent loan repaid through income tax. More recently, economists who advocate endogenous growth theory have argued that society benefits from a highly educated workforce able to adopt technological advances and new work methods, and so the costs of post-compulsory education and training should be shared between government, the individual and the employer.

In Australia, there have been two main lines of argument in relation to striking a balance between public and private expenditure on post-school education. The first is that there are private and community benefits in public funding of tertiary education in terms of economic growth, innovation and human capital. The second is based on equity considerations, in that it is inequitable for those not attending higher education to have to invest in it through taxes. (Karmel 1999).

Ziderman (2001) outlined a number of reasons for governments to take a role in financing training. These are:

❖ externalities
❖ property rights in human capital, within the enterprise
❖ market imperfections
❖ inadequate enterprise training
❖ weak private training institutional capacity
❖ parity of treatment between trainees and students
❖ neglect of disadvantaged groups.

It is useful to distinguish between entry or initial post-compulsory education and training and continuing vocational training when considering the question of relative contributions of expenditure between individuals, employers and government.

Options for financing entry-level training

There are a variety of financing mechanisms employed in different countries in relation to entry-level training. The nature of the entry-level training system has implications for how it is funded. Systems that are predominantly school-based are overwhelmingly public-funded. In some countries, such as the United Kingdom, the state provides the training but leaves choices to individuals and employers, and in others, such as France, the state regulates the system (Gasskov 2001).

Employers in France pay two kinds of levy to finance entry-level training. The first is an apprenticeship tax, which is set at 0.5% of the gross wage bill, from which employers are exempted if they hire apprentices. The second is a
statutory training levy of 1.5% of the gross wage bill (on enterprises with ten or more employees), a proportion of which is allocated to entry-level training under ‘alternance’ contracts. Alternance training contracts describe training which alternates between the employer and training institutions (Keating et al. 2001, p.38).

In Sweden initial vocational training is undertaken while in school (Andersson 2000). Approximately half (46%) of all students in the upper secondary school system in 1997 followed one of 14 vocational programs. Those following a vocational program spend at least 15% of their time based in workplaces gaining on-the-job training and experience, with the remaining time spent in school. When workplace-based, they have a purely student status.

Entry-level training in Australia is predominantly school-based rather than work-based, as most people acquire skills sufficient to get them an entry-level job in a particular vocation by studying for a formal qualification at a technical and further education (TAFE) institution or similar organisation. The bulk of the costs for entry-level training are met by the government in provision of the training, and individuals in foregone earnings. Employers make a modest contribution by providing some financial support for about a quarter of those studying towards a vocational qualification and, to the extent that any cost is incurred, in employing apprentices and trainees (Cully 2002).

Financing continuing vocational training
Continuing vocational training which encompasses initial training, updating or upgrading skills and retraining is far less reliant on public spending than initial vocational training. Most employer-provided training takes the form of short courses or on-the-job training. In contrast to vocational education leading to a formal qualification, external training courses which do not lead to a qualification are much more likely to be employer-funded.

Rogers-Elson and Westphalen (2001) for the European Centre for the Development of Vocational Training (CEDEFOP) explored the various approaches to funding continuing vocational training in nine member states of the European Union. The continuum they use is state-led to demand-led, with social partnerships in the middle. Essentially they identified three models:

❖ state-led funding, where the government regulates and funds continuing vocational training
❖ social partner funding, where the funding of continuing vocational training is a joint responsibility between government, community and industry
❖ demand-led funding, involving funding incentive schemes and demand-side mechanisms.
Post-compulsory education and training expenditure

The post-compulsory education sector comprises senior secondary schooling, the VET sector and higher education. Comparisons with other Organisation for Economic Co-operation and Development (OECD) countries suggest Australia’s total expenditure on post-compulsory education and training is just below the middle of the all OECD countries. Australia ranks amongst the countries with highest levels of private expenditure. Australia has a higher rate of private expenditure than most European countries. Japan, Germany, Greece, Korea and the United States have higher rates of private expenditure (Burke 2001, 2002). On the other hand, government expenditure is near the lower end of all OECD countries.

Government outlays on education and training for all sectors make up about 14% of all government outlays. This has not changed in recent years. The gross value-added of education as a percentage of gross domestic product declined from 4.6% in 1996 to 4.4% in 2000. Demographic change has only had a minor effect on expenditure, and changes in participation rates have had an even smaller effect (Burke 2001, 2002).

General government outlays relative to gross domestic product have fallen from 37% in 1992–93 to 34% in 1999–2000. In recent years, growth in real expenditure per student has been confined to the school sector. There has been a decline in real expenditure per equivalent full-time student units in higher education, and in vocational education and training there has been a decline in government recurrent expenditure per publicly funded annual curriculum hour (Burke 2001, 2002).

Cross-sectoral issues

Watson, Wheelahan and Chapman (2002) point out that differences in funding, regulatory and accreditation systems define the post-compulsory education sectors to a greater extent than differences in the courses of study they offer. The sector-based differences in funding, regulatory and accreditation arrangements are a disincentive to all forms of cross-sectoral provision and the development of courses involving more than one sector. It is their view that it is unlikely that a new funding model could be put in place to encompass all sectors, because of the complexity of current funding arrangements, with each sector funded to a different degree by each level of government.

Funding levels per student in each sector vary because of differences in industrial awards, class sizes and student contact hours, all of which influence the average course delivery costs in each sector. A major problem posed by each sector being funded in different proportions by different levels of government is the incentive for cost-shifting by encouraging students to move to another sector which is funded by a different level of government (Watson, Wheelahan & Chapman 2002).
There are different methods for allocating funding to institutions across the post-compulsory education sectors. Schools are funded according to student (per capita) enrolments in a calendar year. VET providers are funded on the basis of teaching time, measured in terms of the number of student contact hours. Student load in universities is measured in terms of equivalent full-time student units. State funding to the adult and community education (ACE) sector is on the basis of student contact hours (Watson, Wheelahan & Chapman 2002).

There are also differences in student contributions across the post-compulsory sectors. Public school students contribute around 5% of course costs through voluntary contributions, while private school students contribute between 20% and 70% of their course costs. TAFE fees vary by state. Up-front fees range from 50c to $1.15 per student contact hour, and in some states may be up to $1000, although 20–30% of students obtain exemption from fees. In higher education, students pay about 33% of the cost either up-front with a 25% discount, or as a deferred income-contingent loan. In adult and community education most students pay the full course fees, except in government-funded programs (Watson, Wheelahan & Chapman 2002).

Financing vocational education and training in Australia

Reforms to make the training market function more effectively were introduced in Australia in the 1990s. Selby Smith et al. (2001) identified that the main policy instruments used to affect both supply and demand in education and training at this time were:

- putting more publicly funded education and training into competitive markets
- expanding charges in public education
- increasing the public subsidy to fee-charging public providers
- mandating or exhorting increased expenditure by employers
- restraining or cutting public funds
- developing a new structure for vocational education and training based on competencies and the recognition of training
- changing the management structure of public education.

There are no comprehensive data available that provide an accurate indication of total expenditure on training in Australia or the distribution of training expenditure by individuals, employers, and government (Cully 2002; Hall, Buchanan & Considine 2002; Long 2002). In particular, there is limited information available about training expenditure by employers, especially the cost to employers of wages paid to employees while training. The Royal Commission into the Building and Construction Industry identified the lack of data on training expenditure as a major information gap (Royal Commission into the Building and Construction Industry 2002).
Expenditure by government

By comparison with other OECD countries, the proportion of government expenditure on vocational education and training is near the lower end. However, the OECD key indicators reported in their publication, *At a glance*, do not capture the entire vocational education and training effort in Australia due to problems of reporting (Burke 2001).

From 1992 to 30 June 2005, the Australian Government and state and territory governments funded the national VET system under the Australian National Training Authority (ANTA) agreement. The funds ANTA allocated to states and territories were approved through the annual Directions and Resource Allocation Report considered by ministers at the ANTA Ministerial Council. This funding allocation also included funding for training apprentices and trainees who meet the criteria for user choice funding as determined by individual states and territories.

The Australian Government and state and territory governments also fund incentives to employers to train apprentices and trainees. The Department of Education, Science and Training advise that the 2002–03 estimate for Australian Government incentives for New Apprenticeships is $566.019 million, comprising $437.122 million in employer incentives; $17.874 million in personal benefits to New Apprentices (living away allowances); and $111.023 million in payment to the New Apprenticeships Centres for administration.

State government incentives predominantly relate to payroll tax exemptions or exclusion from payroll tax. New entrant New Apprentices are eligible for payroll tax exemptions or rebates in most states and territories. State and territory incentives also comprise accommodation and travel expenses for apprentices and trainees travelling to attend day or block release. Some states allow apprentices concession passes for travel on buses or trains between home and work and training provider to attend classes. It is not possible to cost the incentives provided by state and territory governments, as most of the incentives are payroll tax exemptions on wages paid to apprentices and trainees for which no costing is available.

Other government funding for training apprentices and trainees is provided through the Industry-Based Skill Centre program, which has been administered by the states and territories on behalf of ANTA. The program allows industry and community organisations incorporated as not-for-profit organisations to apply for assistance for the establishment of skill centres (Royal Commission into the Building and Construction Industry 2002).

Burke (2001) suggests that there is limited capacity for public funding to underwrite continued growth in vocational training as the trend for government funding in the 1990s has been to reduce the average amount spent per student. Student numbers grew considerably over the 1990s under the ANTA Agreement, which provided growth funding to the sector from 1993 to 1997. The 2001 ANTA Agreement re-introduced growth funding following a period of expansion. This was funded by a range of cost-saving measures (Haukka, Keating & Lamb 2005).
ANTA annual reports indicate that expenditure per hour declined by 16% in real terms between 1997 and 2001 from $15.5 (A$ as valued in 2003) per hour in 1997 to $13.0 (A$ as valued in 2003) per hour in 2001, before increasing by 6% between 2001 and 2003 to $13.8 (A$ as valued in 2003). Total adjusted annual curriculum hours delivered increased by 22% between 1997 and 2001 from 227.8 million hours in 1997 to 277.7 million hours in 2001 before declining to 276.0 million hours in 2003. Differences exist between states and reflect differences in state management, funding and staffing policies (ANTA 1997–2003).

The full extent of government funding for training is not captured in the VET financial accounts, as some state and territory agencies allocate funds to training as part of regional and special initiatives or as part of programs such as Farmbiz.

Expenditure by employers

The quantum of employer support for training in Australia is unknown. Employer support for training includes wages paid for time off work while training, and direct payments for fees, training materials and travel and subsistence payments. Industry also supports training through the resources provided for the development of national training packages in the form of time, travel and accommodation costs for industry representatives. The building and construction industry has industry-managed funds for training. Levies are collected from the industry and provided to industry training funds to finance training. With the exception of New South Wales and Victoria, all states and territories have some type of building and construction industry training fund (Royal Commission into the Building and Construction Industry 2002).

Most employer-provided training takes the form of short courses or on-the-job training. In contrast to vocational education leading to a formal qualification, external training courses which do not lead to a qualification are much more likely to be employer-funded.

There has been a persistent belief in Australian training policy circles that Australia is underperforming in relation to employer investment in training, especially since the abolition of the Training Guarantee Levy in 1996 (Smith & Billett 2003; Hall, Buchanan & Considine 2002). However, it is not possible to make any judgments about where Australia stands relative to other countries in total expenditure on vocational education and training, and employers’ contribution to it. It is by no means clear that Australian employers spend less on training than their counterparts in Europe (Cully 2002). Figures provided by the European Union, Eurostat—Continuing Vocational Training Survey (CVTS II) show that in fact, Australia lies towards the top end of the normal range of employer training expenditure of about 1 to 3% of payroll (Smith & Billett 2003).

Differences in survey definitions and methodology between Australian Bureau of Statistics (ABS) surveys make it problematic to measure employer funding of training. For example, the overall estimate of total hours of training for the ABS 1997 household-based Education and Training Experience Survey was 25 hours compared with 19.6 hours for the ABS 1996 employer-based
Training Expenditure Survey (Long 2002). In addition, comparability of the ABS 2001–02 Training Expenditure and Practices Survey with earlier training expenditure surveys was compromised by the decision to only collect data in 2001–02 on direct expenditure by employers and not to collect data on wages and salaries paid to employees while in training.

Training expenditure by employers, including wages and salaries paid to employees while in training, rose between 1989 and 1993, and then declined between 1993 and 1996. The decline coincided with the abolition of the Training Guarantee Levy. The ABS results on the 2001–02 Training Expenditure and Practices Survey suggest an increase in employer expenditure between 1996 and 2001–02. However, considering movements in real wages over this time, it would appear that there has been little change in the percentage of employers’ wage and salary bill devoted to training.

Surveys of training and development practices conducted by the Australian Graduate School of Management suggest that the percentage of organisations which spent more than 2.5% of payroll on training development and learning practice had declined between 1996 and 2001. However, there was an increasing trend for employers to pay tuition fees (Hall, Buchanan & Considine 2002).

Research conducted by Australian Centre for Industrial Relations Research and Training found that employee-funded training has been growing faster than employer-funded training (Hall, Buchanan & Considine 2002).

Nonetheless, access to training has become more widespread, but fewer resources are being devoted to skill development. More employees are taking part in employer-funded training courses. In 2001, 74% of external courses completed by employees were financially supported (Hall, Buchanan & Considine 2002).

Based on work by Wooden (cited by Cully 2002), there was a fall in average training hours for in-house training courses from 50.6 in 1989 to 36.2 in 1997. Between 1997 and 2001 there was an increase in the incidence of training, but a fall in training intensity. The 2001 Survey of Education and Training Experience suggests both trends have continued, with a fall in aggregate hours of 3.5% between 1997 and 2001, and a fall in average hours of training of 15.5% (Cully 2002).

International comparisons of training intensity are problematic because of differences in training systems across countries. For example, Sweden has a high incidence of rate of training but a low intensity, with middle-aged, well-qualified professionals predominately receiving training (Cully 2002).

Employers fund the training of apprentices and trainees directly through direct training expenditures and indirectly through wage payments to apprentices and trainees while they are undertaking training. A high proportion of training expenditure by employers can be attributed to firms with apprentices and trainees. In 2001–02, 13% of firms employed apprentices and trainees. Firms which employed apprentices and trainees contributed 46% of all training expenditure by employers (ABS 2001–02).
The ABS 2001–02 Training Expenditure and Practices Survey collected information on direct training expenditure by employers and the reasons employers provided training. Table 1 shows direct expenditure on structured training between 1993 and 2001–02 in current and constant 1993 dollars. Total training expenditure during 2001–02 was $3652.7 million, including wages and salaries of dedicated trainers, and accounting for offsets to training expenditure, which represented a 52.4% increase in total expenditure in nominal dollars. The increase in real terms is $834.6 million, a 37% increase from 1996. This increase can be attributed to an increase in the number of employers offering structured training, the growth in the labour force, changes within industry, legislative requirements and increases in the real cost of training an employee.

Table 1: Direct expenditure on structured training 1993, 2001–02 ($m)

<table>
<thead>
<tr>
<th></th>
<th>1993¹ ('000)</th>
<th>1996² ('000)</th>
<th>2001–02³ ('000)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current dollars</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wages &amp; salaries of dedicated trainers</td>
<td>1036</td>
<td>1087.7</td>
<td>1036.7</td>
</tr>
<tr>
<td>Direct training expenditure (excluding wages &amp; salaries to dedicated trainers)</td>
<td>1339.2</td>
<td>1430.5</td>
<td>2981.5</td>
</tr>
<tr>
<td>Gross training expenditure</td>
<td>2375.2</td>
<td>2518.1</td>
<td>4018.2</td>
</tr>
<tr>
<td>Offsets to training expenditure</td>
<td>110</td>
<td>121.5</td>
<td>365.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2265.2</strong></td>
<td><strong>2396.7</strong></td>
<td><strong>3652.7</strong></td>
</tr>
<tr>
<td><strong>Constant 1993 dollars</strong>³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wages &amp; salaries of dedicated trainers</td>
<td>1036</td>
<td>1031.9</td>
<td>882.2</td>
</tr>
<tr>
<td>Direct training expenditure (excluding wages &amp; salaries to dedicated trainers)</td>
<td>1339.2</td>
<td>1357.1</td>
<td>2537.3</td>
</tr>
<tr>
<td>Gross training expenditure</td>
<td>2375.2</td>
<td>2389.0</td>
<td>3419.5</td>
</tr>
<tr>
<td>Offsets to training expenditure</td>
<td>110</td>
<td>115.3</td>
<td>311.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2265.2</strong></td>
<td><strong>2273.8</strong></td>
<td><strong>3108.4</strong></td>
</tr>
</tbody>
</table>


Source: Colyer (2004, tables 1 & 2)

Colyer (2004) analysed the changes in direct training expenditure by employers between the 1997 and 2001–02 ABS Training Expenditure And Practices Surveys. The industries with the largest growth in numbers of employers providing training between 1997 and 2001–02 were accommodation, cafes and restaurants (54.8% in 1997 to 91.5% in 2001–02), cultural and recreational services (from 49.5% in 1997 to 80% in 2001–02) and construction (47% in 1997 to 75.7% in 2001–02). The increase in the provision of structured training in these industry sectors may be due to the relatively high level of job mobility in the accommodation, cafes and restaurants industry sector and growth in the number of employees in construction and cultural and recreational services.
The number of employees in construction increased 23% from 1998 to 2003, while cultural and recreational services increased by 16% over the same period.

The main reasons for employers providing structured training to employees in 2001–02 were:

- to maintain professional status and/or meet industry standards (55% of employers)
- to provide staff development or advancement (54%)
- to improve quality of goods or services provided (53%)
- to meet legislative or regulative requirements or for licensing arrangements (39%)
- to respond to new technology (36%).

The main reasons why employers provided training in 2001–02 differed markedly from those in 1994 and 1997. Individual development of staff was seen as more important in 2001–02 than in 1994 or 1997. In 1994, the reason reported most often for providing structured training was to improve the work performance of employees (80%), especially by public employers (94%). This is similar to the trend in 1997, where 53% of businesses supplying structured training did so to improve performance in current job; 39% found structured training important to respond to new technology; and 44% rated it important to improve the quality of goods or service.

The main reasons identified by employers as limitations to the provision of structured training in 2001–02 were:

- current employees adequately trained (43%)
- requirements met through unstructured methods (13%)
- cost constraints (9%)
- time constraints (7%)
- trained people recruited (6%).

Circumstances facing employers were quite different in 1994. The main reasons identified by employers as limitations to the provision of structured training in 1994 were time constraints (56%) and cost constraints (41%). Only 11% of employers felt that their current employees were adequately trained, and only 5% recruited trained people.

A number of alternative strategies have been mooted by Cully (2002) to encourage a higher contribution towards training expenditure by employers.

- Treat expenditure on structured training in the same manner as research and development expenditure. A deduction rate in excess of 100% would encourage more spending on ongoing training.
- Trial industry and region-specific levies modelled on construction industry schemes.
- Introduce an employer entitlement to training.
Expenditure by individuals

Investment by individuals in training in Australia, indicated by fixed student fees and charges, accounts for a very small proportion of private expenditure within public TAFE providers. The total share of individual expenditure on public vocational education and training has been consistently in the range of 4.1 to 4.4% over the period 1995 to 2003 (NCVER 1996–2003). Individuals’ investment in training among private providers is not known with any degree of accuracy. Although difficult to measure, individuals make a substantial investment in training through foregone earnings.

Research by Hall, Buchanan and Considine (2002), based on ABS Education and Training Experience Surveys from 1989 to 1997 shows there has been a considerable rise in the number of people taking part in externally provided non-employer-supported training. In 1989, 9.8% of all those who had participated in training in the previous year had taken an external course that was not supported by an employer. This figure had grown to 20% in 1997. Research by Dumbrell (2002), estimates that just over 750,000 individuals incurred personal expenses in paying for their own training during the 12 months prior to the 1997 ABS Education and Training Experience Survey, with more than 75% spending less than $500 on training. A large proportion (13.5%) of people not classified to an industry (unemployed or studying) have spent more than $5000 on their own training, while relatively high numbers of individuals employed in the communication, property and business services and wholesale industries spent between $1000 to $5000 on their own training. While employers are increasingly providing incentives to train by paying course fees and materials, employees are contributing more to external training by not receiving any wages or salary for the hours they spend in training (Long 2002).

A number of strategies have been suggested to increase the contribution made by individuals to the cost of their training. Individual learning accounts and income-contingent loans are alternative mechanisms being used in other countries to increase the share contributed by individuals to the cost of provision (Haukka, Keating & Lamb 2005).

Higher Education Contribution Scheme-type fees are an income-contingent loan. The current review of higher education has raised the prospect of a Higher Education Contribution Scheme-style system for diploma-level courses in vocational education and training. Some students undertake VET courses at low fees and then seek credit transfer to university. In 2001, 7% of students commencing bachelor degrees (or below) were admitted on the basis of prior TAFE study in Australia. However, entry to university on the basis of TAFE qualifications has been stable since 1995 and certainly there is no evidence to suggest an increase since the changes to the Higher Education Contribution Scheme introduced in 1997. Long and Burke (2002) suggest that a limit to credit transfer is imposed by the difference between vocational education and training and higher education courses. Currently this limit and the absence of one-to-one credit transfer arrangements impose costs on students, preserve vocational
education and training as an alternative pathway to university, keep Higher Education Contribution Scheme avoidance to a minimum and help maintain the integrity of VET programs.

Conclusions
There is a question over what proportion of expenditure on vocational education and training in Australia should be privately funded compared with that which is government-funded. Government, employers and individuals all contribute towards financing vocational education and training, with government being the main contributor to financing entry-level vocational education and training, and employers being the major contributor to the cost of continuing vocational education and training.

Although the exact quantum of expenditure on training in Australia is not known, there are some consistent trends in VET expenditure. Investment by individuals has been relatively low as a proportion of public expenditure for some time, accounting for only about 4% of expenditure within public TAFE providers. While access to employer-supported training increased over the 1990s, average hours of training or skill intensity fell. A high proportion of direct training expenditure by employers can be attributed to firms which employ apprentices and trainees. With limited capacity to increase expenditure on training by government, the trend was for government to reduce the average amount spent per student over the 1990s. Real expenditure per hour by government declined by 11% between 1997 and 2003.

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