

Vocational education and training providers in competitive training markets

Fran Ferrier

Tom Dumbrell

Gerald Burke

Monash University–ACER
Centre for the Economics
of Education and Training





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*Fran Ferrier
Tom Dumbrell
Gerald Burke*

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The views and opinions expressed in this document are those of the author/project team and do not necessarily reflect the views of the Australian Government, state and territory governments or NCVER

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Level 11, 33 King William Street, Adelaide SA 5000
PO Box 8288 Station Arcade, Adelaide SA 5000, Australia

ph +61 8 8230 8400 fax +61 8 8212 3436

email ncver@ncver.edu.au

<<http://www.ncver.edu.au>>

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About the research



Vocational education and training providers in competitive training markets

Fran Ferrier, Tom Dumbrell and Gerald Burke, Monash University–ACER Centre for the Economics of Education and Training

The training industry in Australia has been through a series of regulatory changes since the early 1990s, with the aim of making it more market-oriented. There are now several thousand private providers, typically small and serving niche markets, competing against one another and against about another 60 technical and further education (TAFE) institutes. They compete for the publicly funded training dollar, which is contestable to varying degrees across states and territories, and also for the business of employers and individuals who are willing to purchase training on demand.

Ferrier, Dumbrell and Burke have produced a report that explores how both public and private providers do business in today's market. They focus on three particular aspects of operating in a competitive environment: income sources and mixes; thin markets for vocational education and training (VET); and research and development activity. In an overall sense it is clear that competition has provided a tremendous spur to how providers operate, encouraging adaptability and creativity, and often collaboration. The study offers a number of interesting lessons for regulators.

Key messages

- Public and private providers are keenly interested in establishing and maintaining their financial security. They recognise that this means seeking out alternative sources of funds and reducing their reliance on one stream of income, especially when this comes from government sources of funding.
- VET providers earn income through diverse arrangements, including direct fee-for-service training, ancillary trading and by leveraging government funds to increase private investment. The variety of these arrangements is not well captured in current VET data collections.
- The extent of thin markets in VET may be overstated and sometimes used as a device to limit competition. Public and private providers argue that it is more costly to deliver training in thin markets.
- The number of providers who are engaged in research and development—beyond market research and innovation in teaching and learning—is very small. Those who are engaged report benefits, including in reputation, funding, staff development and better training.

Tom Karmel
Managing Director, NCVER

Contents

Tables and figures	6
Executive summary	7
Introduction	11
Context for the project	11
About the project	14
Structure of the report	17
Income sources and mixes	18
Incomes data	18
Provider experiences and initiatives	21
Summary	29
Thin markets	30
Types of thin markets	30
Management by the states and territories	31
Provider experiences and initiatives	34
Summary	37
Research and development	38
The role of VET in innovation	38
Provider experiences and initiatives in research and development	40
Summary	41
Conclusions	42
Thriving in a competitive and changing market	42
Implications for policy and further research	43
References	46
Appendix 1: Principles for leveraging profile funding, Victoria	48
Appendix 2: Thin market strategies of the states and territories	49
Appendix 3: ACPET's arguments against restrictions on private providers in thin markets in WA	50
Appendix 4: Examples of research and development in the VET sector	51

Tables and figures

Table 1	Main sources of funding for VET	13
Table 2	Income of VET providers by type, Australia, 1998–2005	20
Table 3	Income of VET providers at constant prices by type, Australia, 1998–2005	21
Table 4	Fee-for-service revenues by state and territory, 2005	21
Figure 1	Income of VET providers by type, Australia 1998, 2002 and 2005, \$ million at constant 2005 prices	20
Box 1	Example of a leveraging arrangement	25

Executive summary

Market reforms since the 1990s have created a new environment for vocational education and training (VET) providers, presenting opportunities and challenges, both of which arise from greater competition for funds, new clients and training demands.

This project aims to contribute to knowledge of the experiences and practices of VET providers in this new environment by exploring and highlighting some of the factors influencing provision.

Three specific areas where knowledge is limited were chosen for study; they were also chosen because of their relevance to the current reform environment:

- ✧ income sources and mixes
- ✧ thin markets for VET
- ✧ research and development.

Investigations for this project centred on provider experiences and initiatives in the selected areas and important contextual factors such as policy settings. We held discussions with 14 public and private providers across five states, with state and territory training agencies and with a number of industry skills councils and employer organisations. The project also drew on published findings of previous studies. It should be noted that these investigations revealed that the diversity in the activities through which VET providers earn income is poorly represented in current VET data collections.

Income sources and mixes

Data on funding for public VET providers show a decreasing reliance on government support and a growth in fee-for-service income, with especially strong growth in recent years in income from international students. The proportion of fee-for-service income varies across the states and territories. Surveys of private providers show a stronger reliance on non-government funding; however, some rely indirectly on government funding through incentive payments to employers and for other initiatives, such as the previous government's skills vouchers for individuals.

Both public and private VET providers obtain income from governments, enterprises and individuals. All are striving to diversify their funding sources and to reduce their reliance on any one source, especially government funding.

To be successful in a competitive funding environment, providers engage in ongoing market scanning and maintain close relationships with industry associations and individual enterprises to identify specialist or emerging training needs or other unmet demand. Timing is critical—it is essential to be 'ahead of the pack' in identifying opportunities. This work requires investments in staff development, resources and facilities, in marketing and in nurturing relationships with potential partners and clients. However, some providers express concern about the adequacy of their internal resources for supporting this work.

There is increasing collaboration between providers, including between public and private providers and between providers and other organisations, including with enterprises and industry associations. Such collaborations increase the capacity of providers to respond to opportunities

that arise in the competitive training market and enable access to facilities and expertise to meet client needs and allow for the sharing of costs (such as for marketing) and risks.

Using public funds as a means to increase their private income—leveraging—is an evolving area for both public and private providers. Governments see leveraging as a way to increase training delivery and to encourage private sector contributions. However, among providers and stakeholders there is uncertainty about how leveraging is best used, with the following suggestions being made.

- ✧ Leveraging should be restricted to specialist training.
- ✧ Leveraging may be particularly appropriate for labour market and similar programs in skills shortage areas.
- ✧ Tax reform might encourage industry to support leveraging arrangements.

Providers identify some formal restrictions on their activities and restrictive practices that discourage their participation in some markets, including government requirements for minimum class sizes and different requirements between states and territories vis-a-vis national provision.

Among the providers who participated in the study, cross-subsidisation of activities was indicated only in the use of private funds for public benefit, such as for staff development to improve the quality of training. Providers indicated that this practice had increased as government funding for VET had tightened.

Thin markets

Thin markets in VET are those in which the actual and potential number of learners may be too small to attract training providers. They are recognised as occurring in occupational, industry and geographic areas, alone or in combination. Industry skills councils consulted for the study noted that the existence of thin markets in their industries reflects factors such as industry structure, its geographical spread, traditional forms of training and low rates of labour turnover. Some industry stakeholders believe that, where there is considerable demand for training, but not for the type delivered by the formal VET system, thin markets may be ‘overstated’ or ‘artificial’. Artificial thin markets also arise out of a ‘silo mentality’ that fails to recognise synergies between training needs across industries or occupations. The atomisation of training as demand grows for smaller and more specific skill sets also contributes to thin markets. Industry skills councils point to a need for more accurate measures of demand for training before thin markets become recognised as such.

In their user choice arrangements for apprentices and trainees, most states and territories identify thin markets as mainly geographical and occupational. They manage the training market in these areas using two principal strategies: restricting the numbers and types of providers in the market; and looking at each case individually, taking state priorities into account in deciding whether or not to intervene. A third strategy—identified in two states—is to allow the market to sort out any issues. The first strategy is less likely to continue as markets mature, demand for skills increases, and more and more training takes place on the job.

VET providers have two main concerns about thin markets: costs and restrictions on provider activity. Both public and private providers argue for a higher price to be paid for training in thin markets and for all states to apply loadings for the higher cost of delivery in regional and remote areas. Where the price is too low, some providers choose not to enter the market, thus reducing

the options available to learners. Others enter it reluctantly—some public providers feel an obligation to deliver in thin markets, despite cost pressures and a limited ability to cross-subsidise.

Restrictions, such as limits on the provision of apprenticeship training in some jurisdictions, are of concern to private providers, who argue that state regulations are not keeping pace with the trends in the shift to workplace training and the use of new technologies. Employer and industry groups in the study stated that lifting such restrictions would result in an increased response to industry needs in thin markets.

Providers are considering and developing strategies to reduce costs in thin market areas, including delivering the first year of an apprenticeship as a traineeship, which enables more on-the-job assessment. As measures to ensure that delivery of training meets demand in thin markets, industry skills councils suggest flexible delivery, networks and partnerships, and a national focus.

Research and development

Engagement in research and development, defined as systematic work to increase the stock of knowledge and the use of this knowledge to devise new applications, is not traditionally expected of, nor undertaken by, VET providers. In recent years there has been a growing recognition of the potential role of VET in the national innovation system as the link between new knowledge and end users. This role has been recognised in some policy changes and initiatives at state and territory levels, many of which emphasise networks and partnerships between the VET sector and industry.

While the number of VET providers engaged in research and development is still very small and primarily confined to public providers, many more do undertake market research and innovations in teaching and learning, recognising these as vital to success in a competitive market. Those providers who are engaged in research and development do so to solve a problem or to increase their capability. They gain benefits in income, in staff development and in adding value to training.

Conclusions

VET providers are responding to changes in the competitive training market and they expect further change, including in funding sources. A primary concern in this environment is financial security. Providers are therefore seeking alternative sources of income to ensure long-term economic viability. They are also concerned about how best to meet the needs of learners, communities and client groups, recognising this as critical to their economic wellbeing. Consequently, providers are developing the following range of strategies to ease the pressures they are confronting.

- ✧ To overcome barriers to participation and success in some markets, such as formal restrictions, restrictive practices and limits to their capabilities, they are forming partnerships and alliances and targeting alternative market segments.
- ✧ To stretch their resources to cover activities such as market scanning and research, innovation and professional development, they are reducing costs and seeking additional income sources.
- ✧ To distinguish themselves from their competitors, they are offering innovative and distinctive products and services and co-branding with respected partners.
- ✧ To strengthen their capabilities, they are developing their own staff or forming alliances which give them access to additional capabilities.

- ✧ To market themselves effectively, they are forming alliances with partners able to provide assistance with marketing, seeking referrals from existing clients and maintaining close relationships with potential clients.

Overall, the work of VET providers who are successful in a changing competitive environment is characterised by application, adaptability and creativity.

Introduction

Context for the project

Market reforms in VET

Until the early 1990s public vocational education and training (VET) was provided almost entirely through technical and further education (TAFE) colleges and they received nearly all their funds from the state or territory training department or authority (Adams 2005, p.17).

Since that time, changes in government policies and in funding arrangements have profoundly altered the national VET system. Based on views that market reforms ‘would produce a range of beneficial outcomes not otherwise possible’ through the ‘centralised model of state planning, financing and provision of VET’, governments adopted ‘the concept of a competitive training market’, granting non-TAFE providers access to public recognition and funding and encouraging them to compete with TAFE institutes. Simultaneously, they encouraged TAFE institutes ‘to become more businesslike, entrepreneurial and reliant on private income from commercial training markets’. The roles of governments as both purchasers and providers of training were also separated, with governments assuming the role of purchaser of training places under competitive tendering (Anderson 2005, 2006).

Reforms continued from the late 1990s, with governments developing a focus on empowering ‘clients’ to exercise greater choice and influence over VET providers (Anderson 2005). A policy introduced nationally at this time was user choice, which applied to New Apprenticeships and traineeships from 1998. User choice enables employers and their apprentices and trainees to select a training provider—with government funding following the direction of choice—and to negotiate aspects of the training, such as its timing, content and delivery. Implementation of this policy represented a substantial break from the past. Also introduced in this period to increase the responsiveness in the VET system to the needs and concerns of industry were training packages, which today set out the skills and standards to be achieved in many training programs.

The consequence of these reforms is that VET providers now operate in a policy and funding environment very different from that described above. An increased proportion of public funds for VET is allocated through competitive processes and there are many more providers to compete for these funds: in 1994, there were 1200 registered training organisations in Australia; the number had grown to 4300 by 2001 and to 4500 by 2008 (Anderson 2005; National Training Information Service website). Public and private VET providers also compete to provide a range of training services for which they can charge a fee to clients, including individuals (such as international students), employers and industry bodies. They also engage in other activities to earn income, such as the marketing of products and the provision of non-training services.

Current funding sources and allocation mechanisms

Funds supporting VET are contributed by state and territory governments, the Australian Government, individual Australian and international students, industry bodies and employers and enterprises. Most contributions from governments are for recurrent and capital funds and are

negotiated and agreed between the Australian Government and the states and territories on a regular basis (currently the 2005–08 Commonwealth–State Agreement for Skilling Australia’s Workforce National Funding Framework).

States allocate funds for VET through purchasing agreements with individual providers for the delivery of specified training (profile funding agreements), competitive tendering processes and user choice. Each government sets the price it will pay for the training that it purchases, and there may be substantial differences in these prices, depending on the specific nature of the training and a range of local factors, including delivery methods and the total funding pool. While there are some differences between the states, the basis for setting prices is most commonly a nominated dollar amount per hour of training.

Government recurrent expenditure for ‘each nominal hour of training activity’ is ‘the standard measure for assessing efficiency performance’ in VET. In 2005, this amount was \$14.34 nationally, but ranged from \$12.26 in Victoria to \$26.26 in the Northern Territory (Department of Education, Science and Training 2006). The price is inclusive of training-related costs such as for the development and production of course-related materials and training resources and professional development for staff.

Outside the Commonwealth–State Agreement, both the Australian Government and state and territory governments fund special programs from time to time and some payments (incentive payments) or vouchers to employers or individuals, with the aim of encouraging participation in VET.

Individuals contribute to VET primarily through the payment of fees and charges. Fees for publicly funded VET for Australian students are regulated by the states and territories and discounts are available for some students (for example, those receiving a pension or other low-income students). Fees for international students are determined by the provider.¹ Fees and charges for programs that are not publicly funded are also determined by the provider—as are any discounts. Individual students receiving government vouchers for training may be able to use these to meet program fees.

Employers and enterprises may pay fees on behalf of their apprentices and trainees, or other staff—perhaps drawing on incentive payments received from governments. They may also contribute to VET indirectly through industry bodies, or more directly, through a fee-for-service agreement with a VET provider, such as for an enterprise-specific program (or part of a broader, more generic program). A number of enterprises are also registered providers in their own right and may receive some government funding.

Industry bodies also contribute funds for VET through service agreements with systems or providers. They may also contribute to the development of industry-specific training and associated materials.

Arrangements are summarised in table 1.

¹ There are some variations across states for public providers, for example, in New South Wales the state training authority, TAFE NSW, is the provider. In Victoria the separate TAFE institutes and universities providing publicly supported vocational education and training are the providers who set the fees.

Table 1 Main sources of funding for VET

Public funding				
Australian Government	Recurrent and capital funding agreed in Commonwealth–State funding agreement. Flows through states and territories	Funding for equity and special programs. Usually competitive tendering	Incentive payments to employers and individuals. Allocation criteria based on policy objectives	Other funding for specific purposes as determined from time to time e.g. ‘skills vouchers’
State and territory governments	Recurrent and capital funding agreed in Commonwealth–State funding agreement. Allocation by agreement with provider for the delivery of specified training (profile funding), by competitive tendering or by user choice arrangements	Funding for equity and special programs. Allocated by agreement with provider or by competitive tendering	Incentive payments or various concessions to employers and individuals. Allocation criteria based on policy objectives	Other funding for specific purposes as determined from time to time
Private funding				
Individual students	Fees and charges paid to a VET provider for publicly supported training	Fee-for-service paid by Australian students	Fees paid by international students for VET programs	
Employers and enterprises	Fees paid on behalf of apprentices and trainees or for other VET programs	Fee-for-service paid on behalf of employees	Fees or levies paid to industry bodies for training	

VET providers in a competitive environment

As larger proportions of government funding have become allocated through competitive processes—and competition for these funds has increased—the financial pressures felt by public (TAFE) providers have correspondingly increased. From a survey of VET providers Anderson (2005) describes how TAFE providers have responded to ‘a more competitive and unpredictable market environment’:

In a context where TAFE institutes are guaranteed considerably less government funding on a recurrent basis, a more market-oriented system has necessitated greater responsiveness and flexibility in organisational strategy and infrastructure, especially in relation to human, but also physical resources. At the same time, they have been refocusing their program profiles on commercial training markets, and vigorously pursuing a range of cost-reduction strategies in an effort to both manage the impact of declining government funds, and put themselves on a more competitive footing in all market segments.

(Anderson 2005, pp.34–5)

Ongoing efforts by governments to increase efficiency in the system by demanding more substantial outputs from each dollar of public funding spent on VET have further increased financial pressure on providers. Since the mid-1990s the trend has been for governments to reduce the average amount spent on VET per hour of training. For example, estimated publicly funded recurrent expenditure per hour on government-funded training fell 16% in constant prices from 1997 to 2001 (ANTA 2002). The latest analysis suggests there has been a further irregular fall in average spending to 2006 (Productivity Commission 2008 & table 2 below).

Adjusting and adapting to a competitive environment in which there is also ‘increased demand for higher quality and more relevant programs’ (NCVER 2004) has impelled VET providers

towards new ways of working. For senior managers within public providers, for instance, this has meant becoming more strategic in their work, with a stronger focus on the ‘external environment and building stronger links with clients’ (NCVER 2004), especially as it has become clearer: that ‘meeting industry requirements involves more than delivering training packages’; that more holistic and sophisticated services are being sought (Smith 2006); and that industry and enterprises are increasingly looking to the delivery of specialised work-based training.

To thrive in the new environment providers need to build:

- ✧ an enhanced client focus
- ✧ stronger partnerships or strategic alliances with individual employers and industry
- ✧ closer collaborations, enabling providers to meet the needs of industry, employers and communities
- ✧ increased flexibility in work practices (Clayton 2007).

However, the ability of some providers to adapt may be constrained. Clayton (2007) points to the impact of cultural and structural factors on public VET providers. She notes for instance a need to reconcile ‘competing cultures’, such as the tension between the public service role of these providers and their role as fee-for-service providers, and a need to review internal structures that have supported providers’ work in the past, but which may be less appropriate today (for example, internal divisions into functional units; the centralisation of decision-making; the formalisation of activities through rules and policies; the standardisation of work and processes; controls on outputs; and hierarchical lines of communication).

About the project

Objectives

Information about the scope and scale of VET provider activities and experiences in the competitive environment is limited. Current VET data collections fail to capture ‘information that reflects the versatile activities’ of VET providers (Smith 2006). For instance, ‘there is little recognition of [the] time and resources spent developing relationships, negotiating roles and services and administering workplace training’. In addition, while knowledge has grown of the barriers and constraints that VET providers face in a competitive environment, more remains to be learned. For instance, what strategies are providers adopting to survive and to succeed? What factors are driving them? And what are the implications for governance and funding arrangements in VET?

This project aims to contribute to greater knowledge in these areas by exploring the experiences and initiatives of VET providers in three areas:

- ✧ income sources and mixes, including winning competitive funds and some uses of funds
- ✧ ‘thin markets’ in VET
- ✧ research and development.

These three areas have been chosen for investigation because they are still evolving. There is evidence they are of current interest to policy-makers and there are indications of initiatives by providers and of some recent or impending policy changes. The three areas have yet to be the subject of focused research.

Activities

The project comprised four major activities conducted during 2006 and 2007.

- ✧ A review of the Australian literature on thin markets, income sources and mixes, and VET provider research and development activity was undertaken.
- ✧ Information about state and territory arrangements, practices and views for each of the three areas was collected through document examination and consultations.
- ✧ A small number of interviews were held with selected stakeholders: industry skills councils (3); industry and employer bodies (2); and TAFE Directors' Australia (TDA). Documents from these and other stakeholder groups were collected and analysed, including from the Australian Council for Private Education and Training (ACPET), which did not wish to participate in an interview.
- ✧ Interviews were conducted with 14 VET providers in five states: New South Wales (5), Victoria (2), South Australia (3), Western Australia (2) and Tasmania (2).² Documents were also collected from this group of providers and analysed. Although the number of providers was small, the group was diverse and comprised:
 - ◆ public providers based in metropolitan and regional areas
 - ◆ private providers in metropolitan and regional areas
 - ◆ enterprise providers
 - ◆ a group training company.

Semi-structured interviews were conducted with individuals nominated by the participating organisations and were face-to-face where possible, otherwise by telephone and/or email. In many cases, given the distinctive nature of the three areas under investigation, interviews with several different individuals were required for each participating organisation. For privacy reasons participating providers are identified in this report only where their identities cannot be sufficiently disguised and they have agreed to disclosure. Interviews focused on the issues of income sources and mixes, thin markets and research and development.

Income sources and mixes

Financial data indicate that in the competitive training market VET providers are increasingly earning income from fee-for-service and other entrepreneurial activities. However, it does not indicate the extent to which providers mix public and private funding, cross-subsidise activities from different types of funding and use public funding as leverage. This project explores these areas to gain a deeper understanding of these types of provider initiatives and experiences.

Interviews with providers sought to explore their income sources and mixes to gain a better picture of where and how they secure different forms of funding, the balance between funds from different sources and some of the ways in which providers use funds as leverage to gain additional income.

The project also sought information from states and territories about policy developments in relation to funding mixes, including leveraging arrangements.

Thin markets

In VET, 'thin markets' are those areas of the training market where there are few learners and/or VET providers. Thin markets can occur in geographic areas (particularly in remote or regional

² Providers in Queensland and the Northern Territory were approached to participate in the project, but did not agree.

areas) and in some industries or occupations. Geographic, industry and occupational thin markets can overlap.

Previous studies (for example, Anderson 2006; Blom & Clayton 2004; Ferrier & Selby Smith 2003a, 2003b; Kilpatrick, Hamilton & Falk 2001; Selby Smith 2005a, 2005b) exploring or touching on thin markets have pointed to a number of problems or difficulties associated with them:

- ✧ a poorer range of choices of training and training provider for learners and employers, particularly in regional and remote areas
- ✧ potential consequences for the quality of training resulting from lack of choice
- ✧ industry development hindered or delayed by lack of access to training or poor training choices
- ✧ stresses on providers in thin market regions, such as fewer opportunities for entrepreneurial activities and greater difficulties in recruiting staff.

Consultations for this project with state and territory agencies and examination of documents aimed to identify:

- ✧ whether they formally recognise thin markets for VET in the competitive training market in their jurisdiction and the criteria they use
- ✧ whether they manage the training market in thin markets and the reasons for doing so
- ✧ the strategies they use to manage thin markets and the effectiveness of these strategies.

Interviews with providers sought to:

- ✧ learn about the extent of their delivery in thin markets and the factors influencing it
- ✧ identify the challenges of delivering in thin markets and any strategies being adopted to address them
- ✧ obtain their views about the thin market strategies of the states and territories.

Consultations with stakeholders sought to identify their understanding of thin markets and their views about current arrangements for managing the training market within these areas.

Research and development

Research and development (R&D) is 'creative work undertaken on a systematic basis in order to increase the stock of knowledge and the use of this knowledge to devise new applications'. It is also part of a broader process of innovation.³

Previous studies of innovation and VET have particularly highlighted engagement by providers in innovation in curricula and teaching practice and have also identified a small number of providers with links to research organisations, such as cooperative research centres (Ferrier, Trood & Whittingham 2003; Ferrier 2005).

For this project consultations with the states and territories sought information about any policies or initiatives supporting research and development activities by VET providers or offering opportunities in this area, rather than in broader forms of innovation. They also sought views about VET provider involvement in research and development and related activities.

³ <http://www.smartstate.qld.gov.au/strategy/strategy05_15/glossary.shtm> viewed October 2007.

The selection of providers and individuals for interview sought out those with knowledge and experience in research and development, with the interviews attempting to elicit information about the extent to which VET providers engage in research and development and/or related activities, the factors that influence their involvement (especially about becoming involved and the choice of activities) and the types of activities undertaken and their outcomes, including benefits to the provider. Relevant published documents were also examined.

Stakeholders were asked what they knew about VET provider involvement in research and development. However, while being generally supportive of such activity, they had little information to offer.

Structure of the report

The following three sections of the report deal separately with income sources and mixes, thin markets and research and development, drawing on the various sources of data collected for the project. A final section draws overall conclusions about provider experiences and initiatives in a competitive funding environment.

Income sources and mixes

This section reports the findings of investigations into the sources from which VET providers obtain income, the balance between income from different sources, and provider initiatives and experiences in winning and using funds.

Findings are based on analysis of statistical data and interviews with VET providers and representatives of state and territory training agencies. The work was also informed by previous studies.

Incomes data

The National Centre for Vocational Education Research (NCVER) collects financial information on all types of income and expenditure from public VET providers, but only information from private providers that relates to any public funding they receive. Income statements identify four main types of funds:

- ✧ funds received from state and territory governments or the Australian Government
- ✧ funds received for 'fee for service' activity⁴ (the major form of commercial activity by public VET providers)
- ✧ funds received as student fees and charges for publicly funded VET
- ✧ funds received for 'ancillary trading', defined as: 'Amounts received for miscellaneous services, special projects, sales of materials, hospitality trading activities and contracting fees for commercial rather than training related purposes (NCVER 2006).

A fifth category, 'other' refers to income from any other sources.

Figure 1 provides a summary in constant prices of income from these sources from 1998 to 2005 for public VET providers and for public provision by private providers. Over this period, government funding for VET fell a little in real terms, while income from fee-for-service and student fees and charges increased.

Tables 2 and 3 provide further detail on changes in funds obtained from various sources from 1998 to 2005. The main changes are the following.

- ✧ Total revenues increased by 29% in actual prices but did not increase at all when measured in constant prices (that is, where the effects of changes in prices have been removed).
- ✧ Hours of training increased by 25% and student numbers by 9%.
- ✧ Government revenues declined as a proportion of VET revenues from 83 to 79% (and the value of the revenues declined in constant prices).

⁴ Fees received from individuals (other than regulatory student fees) and organisations, including government organisations, for award or non-award courses, for on- and off-the-job vocational education and training and for other training related purposes that are paid to and retained by the provider and have arisen through services provided under contracts or commercial arrangements. The fees are generally determined having regard to partial or full recovery of costs. Fee-for-service includes fees received from overseas students who come to Australia to undertake VET studies on a full fee-paying basis' (NCVER 2006).

✧ Fee-for-service revenue has increased from 8 to 12% of total revenues.

Separate detail on international student fees has only been provided from 2002. Prior to this, revenue from these fees is included in 'other'. Other fee-for-service, which now mainly represents the full-fee payment by employers and Australian full-fee students, made up 6% of all revenues in 2005.

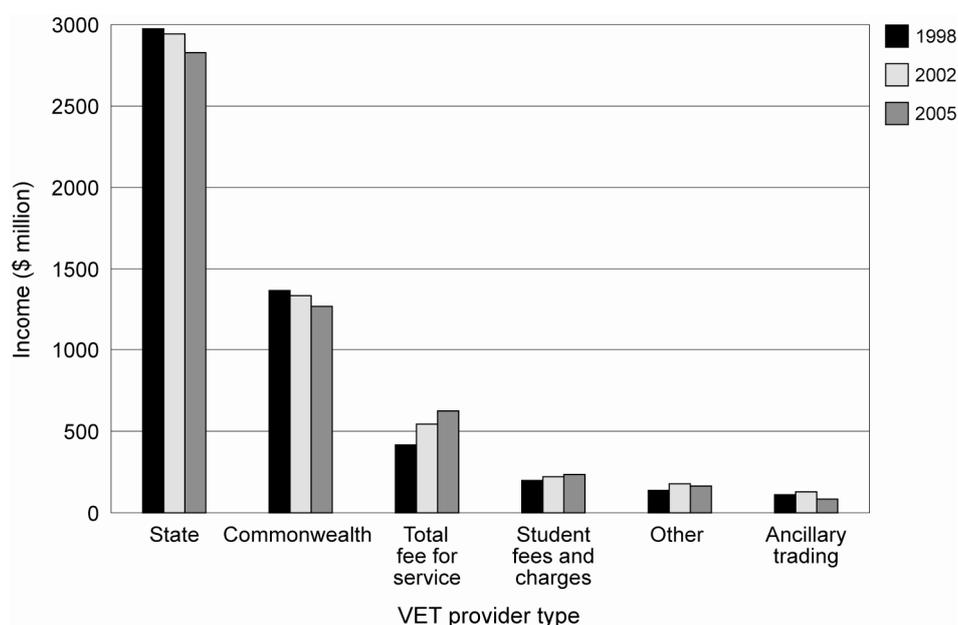
Table 4 shows fee-for-service revenues for public VET providers by state and territory for 2005. Income derived from fee-for-service activity as a proportion of all operating revenues was highest in 2005 in Victoria at 22%, with no other jurisdiction having receipts over 12% and the lowest being the Northern Territory at 3%. One factor behind these differences is the degree of devolution of governance and financial responsibility to public providers of VET in Victoria. Victorian public providers have been given considerable encouragement by the state training authority to seek fee-for-service revenues (Noonan 2005).⁵

Income and survey data show that private providers tend to be less reliant on government funding than are public providers, deriving a larger proportion of their income from employers and individuals. Of a survey of 283 private providers in Queensland, Smith (2005) found that more than 86% of the training they delivered was funded on a fee-for-service basis. Looking only at nationally accredited programs for Australian students, another survey of 330 private registered training organisations (Harris, Simons & McCarthy 2006) noted funding from three sources alone or in combination: government funding, non-government funding and self-funding. Only 26% of the providers received government funding alone. A larger proportion (39%) received no government funding, while the remaining 35% derived income from combinations of government funding, non-government funding and 'self-funding'. Differences in funding sources were also apparent across different types of private registered training organisations: those receiving government funding only for their nationally accredited programs tended to be adult/community providers, while those with self-funded students only or with a mix of government and self-funding were more likely to be commercial training organisations and adult/community providers.

Private providers do not necessarily seek public funding. McPhee (2005) interviewed 21 registered training organisations in Victoria and found that five which had received government funding in the past had not applied for it more recently. Reasons included the high costs of providing the required training and accountability issues. Among the remainder, government funding was only a very small proportion of total income. McPhee concluded that 'at least for many of these 21 providers, gaining Victorian government User Choice funding was not seen as either a desirable or necessary goal' and that 'this finding is particularly interesting in the light of "common sense" or folk-lore understandings which assume that access to government funds is a major rationale for private training companies seeking registration'.

⁵ Victoria commissioned and implemented a major business development strategy in the early 1990s, and Victorian TAFE institutes have the capacity to retain and reinvest profits in delivery and business improvement, creating an incentive for business development' (Noonan 2005).

Figure 1 Income of VET providers by type, Australia 1998, 2002 and 2005, \$ million at constant 2005 prices



See note to table 3.

Source: Derived from NCVET (2006) and ABS (2006a, 2006b).

Table 2 Income of VET providers* by type, Australia, 1998–2005

	1998	2000	2002	2004	2005	Increase 1998–2005	Share total 2005
	\$ m	%	%				
Fee-for-service							
Government agencies	80	113	111	132	160	100	3
Other	233	305	244	268	306	32	6
Overseas student fees	0	0	115	128	154		3
Adult and community education	10	9	9	7	5	-48	
Total fee-for-service	323	427	479	534	624	94	12
Other ordinary income							
Ancillary trading	86	102	114	97	85	-1	1
Student fees and charges	154	171	195	234	235	52	5
Other	107	155	156	173	164	54	3
Total other ordinary income	347	428	465	504	484	105	9
Total ordinary income	670	855	944	1038	1109	66	21
Revenue from governments							
Commonwealth recurrent	732	739	857	936	986	35	19
Commonwealth capital	194	192	211	178	180	-7	3
Total Commonwealth specific	134	100	109	114	105	-22	2
State recurrent	2065	2156	2351	2449	2650	28	51
State capital	113	109	126	121	69	-39	1
Other (mainly state-provided)	126	124	115	141	108	-14	2
Total revenue from government	3364	3419	3770	3939	4098	22	79
Total revenue	4034	4274	4713	4977	5207	29	100

*The income data include the total income of public providers and the public income of private providers but do not include the private income of private VET providers.

Source: NCVET (2006).

Table 3 Income of VET providers* at constant prices by type, Australia, 1998–2005**

	1998	2000	2002	2004	2005	Increase 1998– 2005 %
Total revenue at constant prices* \$m	5 205	5 216	5 351	5 219	5 207	0
Students '000	1 510	1 708	1 683	1 595	1 641	9
Hours '000	283 448	311 341	345 066	342 397	355 664	25
Income at constant price per hour \$	18.4	16.8	15.5	15.2	14.6	-20
Income at constant price per student \$	3 448	3 054	3 180	3 272	3 172	-8

*The income data include the total income of public providers and the public income of private providers but do not include the private income of private VET providers.

** Income at constant prices is the nominal income deflated by a price index comprising 0.7 of the wage price index for education (ABS 2006a) and the implicit deflator of the non-farm GDP (ABS 2006b). Data for 2006 are now available but changes in scope mean that they are not comparable with data prior to 2002.

Source: Derived from NCVET (2006); ABS (2006a, 2006b).

Table 4 Fee-for-service revenues by state and territory, 2005

	NSW	Vic.	Qld	WA	SA	Tas.	NT	ACT	Total
\$ million	189.3	279.5	54.1	42.1	37.3	12.1	3.0	7.1	624.5
% of operating revenues	11.8	21.5	7.1	7.6	10.6	11.1	3.0	7.6	12.6

Source: NCVET (2006).

Provider experiences and initiatives

Income sources and mixes

In discussing their incomes, VET providers interviewed for this project tended to differentiate between three main sources of funds: governments, enterprises and individuals. Within each of these broad categories they also pointed to several different types of programs and/or activities:

- ✧ governments—national and state and territory:
 - ◆ resource agreements (public providers, often referred to as ‘profile funding’)
 - ◆ user choice
 - ◆ other government programs, for example, short programs to meet a priority training need
- ✧ enterprises—mainly fee-for-service training for new or existing workers, often supported by government incentive payments to employers, but also ‘licensing arrangements’
- ✧ individuals—fee-paying:
 - ◆ people seeking to upgrade their existing skills or acquire new skills
 - ◆ international students.

In addition, a number of providers identified commercial services that they offered on the open market:

- ✧ sale of training materials and other resources
- ✧ advisory/consultancy (specialist) services
- ✧ hire of facilities or equipment.

Regardless of their status as ‘public’ or ‘private’, or the state or territory of their primary registration, the vast majority of providers indicated that they were striving to diversify their funding sources as far as possible to reduce their reliance on any one income source. While both TAFE and non-TAFE providers indicated that they were striving to reduce their reliance on government funding, it was the latter in particular who regarded the continuation of funding from this source as uncertain, asserting that government short programs will not necessarily be repeated and that government incentive payments—which in some cases support a considerable portion of their work—may cease or move to different categories of students or workers. Providers were in agreement that no income source can be relied on to continue unchanged, since industries and enterprises may also change their priorities, and individuals may seek new ways to extend and update their skills or may seek to extend them in new directions. They thus regarded diversification of funding as a means of securing some financial stability in a shifting environment.

Among public providers discussions confirmed that resource agreement (profile) funding continues to provide the bulk of their income, although it is a declining proportion. There is considerable variation in the income they obtain from other sources, with most providers pointing to their capabilities, factors in the local region such as population demographics and the structure of local industries, and constraints on their flexibility (such as government regulations) as impacting on their income mix.

- ✧ A large regional public provider in New South Wales indicated that about 22% of its business is commercial, with services including fee-for-service arrangements with enterprises, an educational resource development unit marketing resources externally and ‘First Track Recognition Services’ customised to individuals. Commonwealth programs are also a major source of funds, although the institute commented that these were of limited usefulness due to the requirement that they be spent within the year of allocation. The introduction by the Howard Government of vouchers for underskilled workers also had a major impact, with groups of new students enrolling in certificate II courses on referral from Centrelink.⁶
- ✧ A large metropolitan provider in New South Wales indicated that about 20% of its funding is from other than ‘core’ funding. Most comes from international students, short courses and contestable funding, while a smaller amount comes from student fees and administrative charges.
- ✧ A large public provider in metropolitan Western Australia indicated that the division of the institute into centres of specialisation in key industry areas, each with its own industry advisory board, promoted opportunities for earning additional income, such as through partnerships with industry. One specialist centre (aquaculture) was now generating 35–40% of its own income from activities, including the provision of short courses, fish-farming, expert consultancy services and research grants. This provider also has a substantial number of international students.
- ✧ Commercial activities provided just under a fifth of income for a specialty provider in hospitality and tourism within TAFE Tasmania (Drysdale Institute). While this institute indicated that resource agreement and user choice funding remained the most important sources of funding, it estimated that its commercial activities accounted for approximately 18% of its income and that this proportion is growing. The institute works closely with the industries it serves to provide both publicly funded accredited training and short non-accredited programs on a fee-for-service basis for specific skills, such as coffee-making. In contrast to the large New South Wales provider noted above, the institute indicated it had not yet been able to ‘make Skills Vouchers work’. However, international students were a ‘lucrative’ income source.

⁶ The Australian Skills Vouchers Program (ASVP) concluded on 31 March 2008.

Discussions with private providers confirmed that overall they receive a smaller proportion of their income from governments than do public providers, but some depend considerably on government funding flowing indirectly in the form of incentive payments to employers and/or skills vouchers for individuals. Like public providers, there are also differences between providers in income sources and mixes, which reflect differences in their capabilities, regional factors and barriers faced in competing:

- ✧ A small private provider in regional Western Australia delivering training for the mining industry indicated that it derived all of its income from 'individual subscribers'. In some cases individuals are sponsored; for example, some Aboriginal participants are sponsored by Aboriginal community bodies, with assistance from governments. The provider noted that it was unable to access any government funding directly (and that consequently some individuals unable to pay program fees were excluded from participation.)
- ✧ A large private provider based in Tasmania but delivering nationally indicated that it received the bulk of its income through fee-for-service arrangements with enterprises, usually supported by government training incentive payments. It was also expanding 'licensing arrangements' with enterprises which sought to deliver accredited training to their staff, but did not want to seek (or retain) registration as a training organisation.⁷ The provider saw licensing arrangements and the delivery of training offshore as increasingly important income sources for the future.
- ✧ A large private provider in South Australia indicated that it derived a substantial proportion of its income from user choice program funding. Skills vouchers were also becoming more important. The provider also delivers government short programs but these are usually for very limited periods.
- ✧ An enterprise registered training organisation in New South Wales provides mainly non-accredited training for its own staff at its own expense. However, government funding is also important. In 2005–06 the enterprise estimated that it spent \$872 per employee on training, with total training expenditure, excluding the wages of those attending training, estimated to be about \$650 000. It received \$94 000 from the Australian Government under the Better Skills for Better Care program—about 14% of total amount.

The income that providers obtain through fee-for-service activities reflects the charges they are able to impose. Providers indicated that as a general rule they charge what the market will bear. However, where providers judge fees to be a strong deterrent to participation in training delivered under fee-for-service arrangements, they may look for ways to reduce the impact. They might, for instance, try to identify potential forms of financial support available to participants.

Public providers indicated that as a general rule they strive to fund training through their resource agreements with governments—where they believe this would best serve the interests of particular industries and individual participants. For instance, this might occur where enterprises in an industry that is important to a local economy have small profit margins and thus little scope to fund training for their staff, even though they require new or additional skills. However, securing public funding is not always possible and thus several providers pointed to cases where they were obliged to deliver training on a fee-for-service basis, even though they were aware of the difficulties this would entail for some enterprises or individuals.

⁷ Enterprises were doing so to avoid audit and other regulatory requirements. An enterprise provider consulted for the project is also considering relinquishing its registered training organisation status when its current registration lapses in 2010 and will consider entering a partnership relationship with a private registered training organisation linked to the industry. The advantage would be to externalise audit costs associated with being an registered training organisation.

Leveraging practices

'Leveraging' is the use of borrowed funds as an investment to achieve a higher return. In the VET system it is used principally to refer to the use by public providers of government funding as leverage to increase their income from private sources, although private providers also indicate that they 'leverage funds'. For instance, one private provider observed that leveraging was 'common'—the provider operates as a group training company and has found that most employers are prepared to pay the difference between public funding and the actual cost of training.

Leveraging is supported as a way of expanding training delivery while securing increased contributions from the private sector, although, as one state training authority commented, '[leveraging] is not always easy'. Another state training authority, which observed that it had 'dabbled' without great success in leveraging nevertheless saw in it possible opportunities for quasi-labour market type programs for the unemployed in areas experiencing skills shortages.

Most states consider leveraging arrangements involving public providers on a case-by-case basis, with attention to the proper use of government funding and to any potential for cost-shifting from the private to the public sector. However, Victoria has put in place a leveraging policy, which has been applied to all new contracts since the beginning of 2005. The policy restricts how and how long public profile funds can be used (see appendix 1).

Box 1 describes a leveraging arrangement between Chisholm Institute of TAFE in Victoria and car manufacturer Toyota. Chisholm referred to this arrangement as a 'true partnership' as opposed to a client–supplier fee-for-service arrangement. Both partners made substantial contributions to the development of the program and training was delivered using profile funding, supplemented by funding from Toyota. Chisholm has been able to use resources developed through this partnership in other training programs so that there is a wider training benefit. It has also benefited from the new skills and capabilities that its staff have gained through their participation in the partnership.

While both partners were satisfied with arrangements, Chisholm indicated that they were initially of concern to the Victorian Government, with the state training authority suggesting minimum industry contributions at every stage, rather than to the project as a whole. Its concerns were based on the low initial contributions of the industry partner. However, Chisholm indicated that these grew substantially over the life of the agreement, so that, overall, the state's requirements were more than adequately met. The wording in Victoria's policy that 'the enterprise contribution should progressively increase to a payment equivalent to full cost recovery by the third year of the partnership' suggests that the difficulties Chisholm experienced are unlikely to recur.

From its experience with leveraging arrangements, Chisholm suggests there are cases where leveraging would not succeed. The first is in an industry such as polymers, which has a large proportion of small companies, little history of training and predominantly production work at certificate II level. In this industry small companies have low turnover and profit margins and cannot afford training. Secondly, Chisholm believes leveraging would not work for base-level training: 'the lower the qualification level the harder it is to apply leveraging'. Only 'specialist training' attracts sufficient interest and support from industry partners.

Discussions for this project with other providers revealed few similar arrangements—through a range of other partnerships with industry and enterprises. Closest to the Chisholm model was an arrangement between a large public provider in Western Australia and the marine pilots' association for the development and delivery of a training program delivered using profile funding.

A slightly different take on ‘leveraging’ was revealed by a large public provider in South Australia. This provider observed that it ‘leverages off the capabilities of staff’ of partner organisations to be able to deliver fee-for-service training. It also described another application of the ‘leveraging principle’, which links publicly funded qualifications at one level to higher-level qualifications offered under fee-for-service arrangements.

Overall, leveraging arrangements appear to be largely still in their infancy—and still evolving. A large metropolitan provider in New South Wales indicated that, while it does not have any current leveraging arrangements, it is currently looking at the Victorian model. Another indicated that more options for leveraging or other public/private partnership arrangements could be developed through more specific tax reforms in relation to training. In discussions for this project the Australian Industry Group agreed that leveraging has the potential to play an important role in developing training, but was unsure how it should be implemented. Leveraging is thus an area where wider scrutiny, coupled with exchanges of ideas and the lessons of experience could lead to more informed policy-making and practice.

Box 1 Example of a leveraging arrangement

Chisholm Institute and Toyota: ‘A true partnership ... not a service arrangement’

In 2004 Toyota approached Chisholm for enterprise-specific training in the use of new equipment. They did so on the advice of the equipment supplier, who had sold a ‘training cell’ to Chisholm. Toyota specified a three-month trial period to begin with and stipulated on-site training, with flexible hours to suit its shift arrangements. Chisholm informed Toyota that its staff did not have adequate experience with the technologies but had a willingness to work with them to build the necessary skills. Chisholm observed that its openness in admitting this was a significant factor in establishing a positive relationship with Toyota. Negotiations led to a full partnership agreement between Toyota and Chisholm under which:

- Toyota paid for the development of all resource materials.
- There was joint ownership of the intellectual property created. Chisholm could use this for training elsewhere but was not permitted to on-sell it.
- Chisholm released staff to work with Toyota on a part-time basis.
- Toyota co-funded these staff, including a project manager.

The delivery of training was profile-funded, with Toyota staff enrolled for an Advanced Diploma in Engineering. However, as Chisholm requires a minimum of 15 for a class and only 12 Toyota staff participated at a time, Toyota ‘topped up’ public funding by paying a sum to make up the difference.

After three years there is no longer a need for Chisholm to deliver the same training but the institute has an ongoing role in managing Toyota’s training centre. Chisholm identifies some substantial benefits from the arrangement.

- Staff have been able to learn skills in new technologies, which provides the institute with an enhanced capability to deliver training.
- Eight staff have experienced work placement.
- Resource materials have been developed which can be used for other training.
- An ongoing relationship with Toyota has been achieved which supports other activities.
- The institute was able to trial new methods of delivering training.

Chisholm maintains that the contribution of the industry partner should be measured over the life of the project, but encountered some resistance from the state training authority, which sought to apply its leveraging policy to each part of the project. Chisholm notes that, while Toyota’s contribution was small to begin with, this has grown as the project has progressed so that, overall, it far exceeds the minimum the policy requires.

Source: discussions with Chisholm Institute.

Cross-subsidisation practices

In discussions with providers there were no indications of the use of public VET funds to support activities for which they were not principally intended; that is, activities leading to a largely private benefit, or to a benefit outside the system, such as:

- ✧ cross-subsidisation of international students from public funding
- ✧ cross-subsidisation across sectoral boundaries in multi-sectoral institutions.

Further research focusing more specifically on this issue might provide a different picture, although providers are unlikely to disclose any practices that contravene government regulations or even the spirit of public funding arrangements.

On the other hand, public providers pointed to the use of private funds to subsidise a range of activities leading to public benefits, with many noting that this was increasingly essential due to the tightening of government funding over recent years. One large regional New South Wales provider indicated that its ability to access ‘external funding’, such as funding from commercial services, enabled it to ‘prop up its core business’, but, more commonly, providers commented that public funding was no longer sufficient to support activities indirectly related to training delivery (and the quality of training delivered), such as staff engagement in professional development, strategic planning, program development or other activities with a future focus. Thus they were increasingly looking for income from other sources to fill this gap.

Some providers also indicated that they received in-kind support from private sources to support the delivery of publicly funded training. A public provider in Tasmania, for instance, observed that it drew on the ‘goodwill’ of enterprises in the hospitality and tourism industry to deliver public programs, particularly the use of their facilities and the assistance of their staff. A large public provider in South Australia similarly relied on the donation of in-kind resources to support activities that it described as ‘adding value’ to publicly funded training.

Succeeding in a competitive environment

In order to be successful in a competitive funding environment providers indicated that they seek to identify and increase their capabilities and competitive advantage and to promote both in the marketplace. Success also requires ongoing market scanning and research (as one large public provider in metropolitan South Australia put it: ‘strategic intelligence gathering’) and the maintenance of close relationships with industry associations and individual enterprises in order to identify opportunities, such as specialist or emerging training needs or other forms of unmet demand. Timing is critical: a large private provider based in Tasmania noted the need to be ‘ahead of the pack’ in identifying funding opportunities or ‘you don’t survive’.

Providers noted that this work requires investments in staff development, in resources and facilities, in forging and nurturing relationships with potential partners and clients, and in marketing. However, public providers in particular observed that they have very limited funding available to support this work. Staff time is a major cost, but funding stringencies limit time release. Consequently, as a large public provider in South Australia observed, there is a tendency to be ‘reactive’ when it would be better to ‘get in earlier’.

Collaborations with other providers—public and private—are becoming more common as a strategy to secure fee-for-service work and/or to win competitive funding, such as from short-term government programs. These arrangements increase capability to meet client needs and reduce costs and risks for each of the providers concerned. For example:

- ✧ A large metropolitan provider in South Australia indicated that to be able to respond to a specialist training need it had entered into an agreement with a private provider whose staff had the required expertise to deliver the training. The TAFE institute offered the qualification within its scope and conducted the auditing process. The two providers shared marketing knowledge and support.
- ✧ A large metropolitan public provider in New South Wales indicated that it had ‘made some tentative steps to enter partnerships with private providers’. One relationship focused on the international student market for hairdressing and cookery training. TAFE was providing the classroom teaching and the private provider undertook marketing.

Although in some cases providers noted that such partnerships ‘didn’t amount to very much’, overall they indicated that through these kinds of arrangements they were able to extend their capabilities in ways encapsulated by the phrase ‘the whole is greater than the sum of its parts’.

Collaborative relationships with enterprises were also indicated by a number of providers. These differed from relationships for the delivery of short-term enterprise-specific fee-for-service training—they tended to be long-term relationships which had evolved with changing training needs and forms of government funding and may have helped to secure work from other clients. For instance, a large private provider in Tasmania noted that such ‘relationships are critical to the business’ and the importance of ‘referrals from existing clients’, including ‘firm to firm referrals’.

In at least two cases, provider–enterprise collaborations had a wider focus, aiming to benefit a whole industry rather than to serve only the needs of the partner enterprise. For example, Drysdale Institute referred to a ‘precious partnership’ with Federal Hotels, which was focused on the development of the hospitality industry in Tasmania. Most enterprises in the industry are micro-businesses, and skills shortages mean high wages for staff and very tight profit margins. Most have difficulties in securing trained staff and in meeting the costs of staff training. The partnership between the institute and Federal Hotels offers a range of open training options that make use of the facilities, staff and reputation (branding) of Federal Hotels to attract people to the industry and enable them to acquire the skills it demands.

Constraints and barriers

While both public and private providers indicated that they were working proactively to identify and harness opportunities in the competitive training market, both were able to point to constraints and barriers that impacted on their ability to respond effectively. Particularly mentioned were state-imposed requirements. For instance:

- ✧ A large New South Wales regional provider indicated that its ability to ‘cocktail’ funds from various sources was restricted by minimum class size requirements (15 students) in that state. It compared these unfavourably with those applying in regional areas in Western Australia (nine students), which, it argued, enable a higher degree of flexibility.
- ✧ A large Western Australia metropolitan provider observed that restrictions on purchasing and travel prevented it from ‘responding in a timely way’ to opportunities. For example, all international contracts had to be processed through a central office, which could delay them for several months. The work was described as tedious and time-consuming.
- ✧ This Western Australian provider also sought a mechanism for ‘income supplementation by private companies’. It had been embarrassed to be unable to accept an offer from a large enterprise of a valuable and expensive piece of equipment in return for assistance in up-skilling this firm’s workers in the use of the equipment. Under state regulations the offer was considered to be a purchase and thus a tender process was required.
- ✧ A large private provider delivering nationally noted the complications of working across state boundaries when there are differences between the regulations and requirements in each state/territory. It also pointed to reluctance on the part of some states to welcome interstate providers.

Other issues raised by public providers were:

- ✧ *Staffing costs and inflexibilities:* a large metropolitan provider in New South Wales noted that TAFE teachers are generally paid more than their counterparts in private providers, describing this as ‘one of the main constraints on an open, competitive market’. For example, a large metropolitan provider in Western Australia indicated difficulties in keeping valuable staff in an environment where alternative and more lucrative employment opportunities were available. This provider also sought greater flexibility in how staff could be used.

- ✧ *Inadequate resources*: a large public provider in South Australia noted that existing funding did not allow for any capacity to ‘invest in forward planning’. Areas where additional resources were needed included working with industries to identify skill and training needs; working with new industries to identify skills and match them against units of competence; and in evaluating initiatives.
- ✧ *Inability to cross-subsidise*: public providers noted that externally imposed regulations require them to offer fee-for-service programs at a price that reflects real costs; thus, they are unable to reduce fees through cross-subsidisation.

Do some providers have an advantage?

Discussions indicated that both public and private providers believe the other to have an advantage in the competitive training market. Private providers observed that public providers, because of their larger size and stable resources, are able to cross-subsidise activities and thus offer their services at a lower price. For instance, a large private provider based in Tasmania observed that it was ‘difficult to compete with TAFE’ to deliver trades training without ‘the financial backing to support bricks and mortar’. The provider ‘can’t compete on an hourly rate against TAFE ... We would have to charge double.’

On the other hand, public providers tended to have the view that, as one said, ‘high infrastructure costs impact on our flexibility’ and that, unencumbered by similar costs, private providers are able to be more flexible and responsive to opportunities. Private providers are also able to ‘pick off’ opportunities that are ‘low cost/high return’, while public providers, lacking the same degree of flexibility and carrying a public service role, are left to opportunities of ‘high cost/low return’. They also noted that their ability to cross-subsidise is restricted by government regulations.

Such comments suggest a common view that ‘the grass is greener on the other side’. The experiences of the providers in winning funds and the diversity of activities they reported pointed to a range of opportunities in the market for organisations with different structures and capabilities.

Discussions indicated that, in deciding whether to respond to a particular opportunity, the major considerations (for both public and private providers) are whether there will be a sufficient financial return to justify the costs and risks involved (without necessarily looking to a surplus in all cases) and whether they (alone or in partnership) have the capability to provide the required services. Thus the price that the client is prepared to pay and the resources available to support the work are key issues. Many other factors also come into play, such as whether the work would contribute to longer-term aims like building community or employer links or staff development. In this complex mix, perceptions of advantage/disadvantage can have an influence. If a provider believes that another has a significant advantage, it may choose not to compete; however, it is only one consideration among many. Previous experience more commonly has a stronger influence. For example, having found that it was unable to compete with TAFE on price and facilities for trades training, a large private provider ‘now takes no notice of what TAFE is doing’, but instead targets other opportunities such as enterprise-specific training, licensing arrangements and overseas delivery.

The growth of collaborations between providers, particularly between public and private providers, and the comments of providers in support of these point to the emergence of a new perspective on the strengths of other providers, one that emphasises the possibility of harnessing the advantages of others, rather than regarding them with jealousy or hostility.

Summary

This section has highlighted that government funding has fallen in real terms per student and hours of training, but that it remains the major source of income for public VET providers. It is a declining proportion of total income: revenue from fee-for service has grown in real terms and as a proportion of income. Government funding is also a comparatively minor source of income for private providers, although there are some differences between providers in the degree to which they rely on income from government and other sources.

There is a determination among VET providers to diversify their funding sources as far as possible in order to reduce their reliance on a small number of sources and to secure their survival in a shifting environment.

Most providers are working hard to be successful in the competitive training market. They are looking for new markets and funding opportunities and are seeking to advertise and extend their capabilities. They are forging new alliances, networks and partnerships to enable them to take advantage of opportunities that arise and to meet client needs.

However, they face some formidable challenges, including formal restrictions on their activities and some restrictive practices that discourage their participation in some markets. Internal resources and structures are also an issue.

Using public funding as leverage to increase private funding is an emerging and evolving practice. Although encouraged at a state policy level as a means of increasing the supply of training and private sector contributions, it can be difficult in practice. It may not be suitable for all levels of training. One provider's successful experience suggests that the practice is best suited to specialist training. However, others have suggested that tax reform might contribute to its wider adoption and success, and that it might be particularly useful for labour market type programs in skill shortage areas.

'Licensing arrangements' are also increasing and are seen as a potentially lucrative source of income in the future, along with international delivery and international students.

While both public and private providers perceive that the other has advantages in a competitive market, the evidence suggests that there is a range of opportunities in the market for organisations with differing structures and strengths. Growing collaborations between providers also point to the emergence of a more positive view of others, one which focuses on how their strengths might be harnessed to increase their own capabilities and competitive advantage.

Thin markets

This chapter presents the findings of investigations into thin markets in VET. It first notes the types of thin markets and the reasons they occur in particular regions, industries and occupations. The ways in which the state and territories define and manage thin markets are then discussed. A third section explores VET provider experiences and initiatives in thin markets and their views on the thin market management approaches of the states and territories.

The findings are based on interviews with VET providers, stakeholder bodies and state and territory training authorities and information gathered from published documents. They also draw on previous studies.

Types of thin markets

The term ‘thin market’ is used in VET to refer to parts of the training market where there are few learners (that is, there is low demand for VET) and/or VET providers (that is, there is limited supply of training). Thin markets occur in some occupational areas, industry areas and geographic regions (particularly in rural and remote locations) and can overlap.

- ✧ *Thin markets for training in occupational areas:* these occur where there are few people seeking training for a particular occupation and can include both traditional occupations that have declined (such as blacksmithing), as well as some new or emerging occupations for which demand for training is currently low but may grow in the future.
- ✧ *Thin markets for training in particular industries:* these occur where there are few people seeking training for employment in a particular industry. Geography can be a factor—some industries have a strong presence in some regions and very little in others (for example, mining, forestry, shipbuilding, seafood). Low levels of labour turnover in an industry can also be a factor as this can reduce the demand for training.
- ✧ *Thin markets for training within a geographic area:* these occur where populations are sparse and/or distances between towns are vast. For instance in Western Australia there may be only a small number of learners in a remote region seeking training, although there may be a large number seeking similar training in the capital city.

Industry skills councils interviewed for this project attribute thin markets in their industries to: the structure of the industries, their geographical spread, their traditional forms of training and low labour turnover; the costs of delivering training; and a failure to recognise synergies with training for other occupations and industries.

- ✧ The Forestry Industry Skills Council observed that the remoteness of many of its enterprises and the small non-integrated occupational structure were the main factors contributing to thin markets. It observed that, while technology and other changes in the industry in recent years have ‘thickened’ the skill market, low turnover in the industry—probably in part due to the limited range of alternative jobs in the regions where the forestry industry operates—continues to dampen demand for training.

- ✧ The Creative Arts Industry Skills Council covers a wide and diverse range of industries.⁸ It identified that a diversity of small and unrelated occupations within them is the major factor contributing to thin markets. Of particular concern is the small number of VET providers offering training for these occupations. It observed that, while the printing industry and some areas of the graphic arts and drafting are well supported by the public VET sector, most of the other sectors are ignored, possibly because the funding available for training in these sectors is inadequate for meeting the high unit costs involved in providing training. It suggested that this was a short-sighted approach that ignored relationships between skills sectors.

Another industry skills council and the employer groups consulted suggest that some thin markets may be 'overstated'. There are areas where demand for VET appears to be low, but considerable demand is disguised or overlooked. Both the Australian Industry Group and the Business Council of Australia observed that in some areas considered to be thin markets industries and enterprises are seeking training, but not of the kind offered by the public VET system. Consequently they look elsewhere for the training required, or conduct their own training. Thin markets thus reflect the failure of the public VET system to respond to the needs of industries and enterprises.

The Government Skills Industry Skills Council pointed also to the existence of 'artificial thin markets', which it attributed to a 'silo' mentality, which fails to recognise the synergies between training requirements for different occupations and industry sub-sectors. For instance, it noted the failure of local government to recognise the similarities between their training needs and those of other levels of government. Another contributing factor identified was the 'atomisation' of demand for training, flowing from the adoption of training packages and growth in enterprise requirements for more specific skill sets and declining demand for whole qualifications.

Discussions pointed to a need for more accurate measures of demand for training before these are identified as thin markets.

Management by the states and territories

Criteria for recognising thin markets

The existence of 'thin markets' in some areas was raised by several states and territories as an issue requiring attention during the process of market reform of the VET system. The major concern was that, in thin markets, demand and provision might be insufficient to justify or support competitive processes for the allocation of VET funding.

Such concerns prompted the adoption by some states and territories of special provisions applying to the operation of user choice in thin markets. Under user choice, three states currently identify specific thin markets within their jurisdiction.

New South Wales differentiates between 'robust' and 'thin markets' in geographical and occupational areas, based on work conducted in the 1990s. The ten most 'robust' trades within the Sydney/Newcastle/Wollongong region are *not* part of a thin market. Outside this region and these trades all other apprenticeship training (but not traineeships) is considered a 'thin market'.

Western Australia uses slightly different criteria for identifying thin markets for apprenticeships and traineeships. A thin market for apprenticeships is identified as occurring in metropolitan

⁸ Arts, entertainment TV, film, radio; live entertainment, interactive digital media (games, web design, services); print and print production; graphic arts, design including fashion and furniture; canvas making, geotextiles, tents, caravans, truck soft sidings, marine sails; copyright, intellectual property, architectural drafting; community cultural development; event management centres; libraries, museums, art galleries; footwear repair; laundry/dry cleaning.

areas where there are fewer than 100 annual commencements in a particular trade, or, in non-metropolitan regions, fewer than 50 commencements. In the case of traineeships, 'thin markets' are identified on a case-by-case basis annually, where numbers across an industry sector are considered too low to support a competitive training market. The number of thin markets for traineeships is very small.

Tasmania identifies five occupational areas as thin markets for apprentices and trainees: agriculture; automotive; building and construction; furniture; and metal trades. The identification of these areas is historic, dating back over ten years. The state is now reconsidering its position, with a view that developments in the training market, particularly the growth of demand and of workplace training and flexible delivery, mean that it is no longer justified.

Queensland's user choice program recognises that thin markets can occur in geographical regions and/or occupational/industry areas where there are few apprentices or trainees. In practice the state differentiates between thin and 'fluctuating' markets. Thin markets are those where low demand persists over a significant period of time. There are more 'fluctuating' than thin markets. In identifying thin markets, the state examines not only the number of apprentices/trainees in training but also the number of providers delivering the training and the risk of demand for training not being met.

Based on low population numbers and few providers, the Australian Capital Territory and the Northern Territory consider their jurisdictions as a whole to be thin markets. Neither Victoria nor South Australia has a formal procedure for identifying thin markets for VET.

Management strategies

Most states and territories articulate three main reasons for managing the training market to some degree in thin markets:

- ✧ to protect investments in public VET infrastructure, ensuring a return on public funding spent on facilities
- ✧ to ensure a continuity of training so that learners are not disadvantaged if a provider discontinues a program
- ✧ to ensure that apprentices/trainees have access to training, especially where the skills are of strategic importance to the state economy.

While states and territories engage in a diverse range of micro-practices, overall, two main types of strategies are favoured. Firstly, they place restrictions on the numbers and/or types of providers who can compete for public funding in thin markets. This strategy is apparent, particularly in New South Wales, Western Australia and Tasmania. In thin markets New South Wales funds only TAFE NSW to provide trade training. Hence, the apprenticeship market is still largely protected, with apprenticeship training in only 12 of the largest trades open to non-TAFE providers. In Tasmania, TAFE Tasmania is the sole publicly funded provider for apprentice and trainee qualifications in five occupational areas. In Western Australia only TAFE is funded to deliver apprenticeships and traineeships in thin markets. Training is purchased from private providers in 'sustainable markets' only.

Secondly, the states directly negotiate on a case-by-case basis with providers for the delivery of specific training, where there is a need that is not being met by the training market. This strategy now appears to be more widely used than the first. Case-by-case negotiations respond to local needs and conditions and thus can vary widely. Again there are variations from state to state, but many aspects of training may be covered, including in some cases the price that will be paid to providers, as well as arrangements for the timing and content of training, for block release or flexibly delivered programs. This strategy is adopted particularly in Queensland, the Australian Capital Territory and the Northern Territory, but is also used by the other states where

circumstances are believed to warrant specific intervention. In Victoria, for instance, demand for training is now so low in some occupations that no provider, or only one specialist provider, will offer it. Where there is no Victorian provider arrangements may be made with an interstate provider. For example, watchmaking now has a very small number of employers and apprentices in Victoria. Training used to be offered by the Royal Melbourne Institute of Technology, but now all Victorian training is done through arrangements with TAFE NSW at a negotiated rate. Additional costs of travel and accommodation are met by the employer or apprentice/trainee.

A third strategy also used, but to a much smaller degree, is to do nothing—and allow the market to respond. This strategy is sometimes part of a case-by-case approach, applied where there are insufficient risks or demands to justify intervention, but it is the most commonly used approach in South Australia and Victoria. In South Australia, difficulties associated with or arising from thin markets are very rarely brought to the attention of the state training authority and it is thus assumed that if any issues arise they are dealt with by providers. TAFE SA is noted to be the only or major provider delivering in some regional and remote areas.

Further information about each state/territory thin market strategy under user choice is provided in appendix 2.

How effective are these strategies?

Consultations for this project with the state and territory training authorities indicated that, among strategies restricting the numbers and types of providers able to compete for public funding in thin markets, there is some questioning of the continued appropriateness of this particular strategy. As one interviewee put it, since the introduction of user choice, the competitive market has had time to ‘mature’—for ‘consumers’ to become ‘educated’ and for VET providers to develop sufficient flexibility and responsiveness. Demand for training has also grown considerably, so that some thin markets have thickened. A previous reluctance to train has declined in an environment that recognises the value of higher-level skills and where employer incentives are having an impact. In addition, acting to protect investments in public (TAFE) infrastructure no longer makes sense, when employers primarily seek on-the-job, rather than off-the-job training, and consequently training increasingly relies on employer facilities rather than those of a VET provider.

For such reasons both Tasmania and Western Australia are reviewing their restrictions on competition in thin markets. In Western Australia this process has sought submissions from stakeholders. New South Wales, which also imposes restrictions, indicated that no explicit performance measures were used to assess the effectiveness of its thin market strategies and no evaluation had been undertaken, although one interviewee noted that there were probably better approaches than those currently being used, including more use of flexible delivery.

Strategies based on a case-by-case approach appear less controversial and thus more likely to continue. One reason is that this approach is comparatively recent and in some cases has followed the weakening or lifting of more formal restrictions on open competition. Another is that this approach fits a broader strategy for state development. Action can be taken to increase, or provide access to, training where skills are considered important, while funding can be diverted from support for training in other thin markets of lesser importance. A third reason is the flexibility of this strategy to respond to specific and local circumstances, tailoring solutions to fit. For example, Queensland introduced user choice reforms for 2006–09, so that the state’s current thin market strategies are comparatively recent in origin. The thin market strategy includes consideration of whether the training sought is ‘an economic priority for the state’.

Negotiations on a case-by-case basis often include arrangements for ‘block release’—where apprentices travel to a provider in another part of the state, or to another state, for extended periods of training. However, the states acknowledge that such arrangements do not meet

industry needs and create difficulties for employers and for the apprentices concerned, with unrealistically low financial assistance provided for travel and accommodation in addition to time off the job.

The two states adopting the most laissez-faire approaches to thin markets, Victoria and South Australia, expressed no concerns. Rather they observed that the approach seemed to be working well, with few to no problems brought to their attention.

Provider experiences and initiatives

Discussions for this project revealed that many providers—all of the public providers and many of the private providers—consulted deliver training in at least one thin market. While some providers would like to cease or reduce delivery in particular thin markets (mostly public providers who ‘felt obliged’ to service these areas), others (mostly private providers) would like the opportunity to compete in thin markets, but are currently denied the opportunity by formal restrictions or the restrictive practices of some state and territories.

Both public and private providers indicated they were most often discouraged from thin markets by the higher costs of delivering training in many of these areas, particularly where the state/territory has failed to consider higher costs in setting prices. Many argued that more realistic prices would encourage them and other providers to compete to provide training in thin markets, and that this would help to overcome problems associated with thin markets, such as lack of choice of provider and training.

Providers already delivering in thin markets where they consider prices to be low indicated that they attempt to reduce costs as far as possible and adopt a range of cost-reduction strategies. A number of providers also suggested that, as more training shifts to the workplace, special attention to ‘thin markets’ is no longer necessary or appropriate.

Costs and prices

All providers delivering in thin markets raised concerns about the higher costs involved, particularly in delivering in regional or remote areas. Principal cost areas were staffing (lower student–staff ratios in thin markets), including trainers and case managers; the development and provision of training resources; and travel and accommodation.

Higher costs were an issue everywhere, but especially where they were not factored into negotiated prices. Some public providers observed that they felt obliged or were expected to service thin markets, regardless of the higher costs involved or the pressures that cost issues placed on their internal budgets. Private providers, on the other hand, maintained that costs and returns were major factors in the decisions made about entering all markets, but especially thin markets.

A large TAFE institute in regional New South Wales drew attention to the practice in that state of funding training on an average-cost basis, without loadings for the higher unit costs involved in delivering in remote areas. The provider advocated a more sophisticated approach to funding, taking into account population levels and distance from major population centres, economic (dis)advantage of different regions and historical data, such as Year 12 completion rates. Overall, it argued for a more explicit recognition of the challenges of servicing thin markets in remote areas. It also noted an inconsistency, in that loadings are provided for schools, but not for VET.

This provider also raised the issue of cross-subsidisation. Funding on an average cost basis assumes that areas of high cost will be balanced out by areas of low cost. However, in the higher-

cost, more remote parts of the region, the institute faces little-to-no competition, since it is usually the only provider, while in the larger cities, where costs are lower, it faces considerable competition from other providers. Consequently, its capacity to cross-subsidise high-cost areas such as thin markets is very constrained.

Also in New South Wales a large metropolitan public provider pointed to the potential implications of average cost funding for some occupational thin markets. This provider observed that the term ‘thin market’ is becoming less commonly used, because TAFE NSW is regarded as a ‘universal supplier’ of training, but thin markets remain an issue. Funding approaches based on assumptions about average cost per student contact hour place pressure, particularly on low-enrolment/high-cost courses such as those addressed under the thin markets rubric. The continuation of publicly funded training for apprenticeships in areas such as watchmaking, millinery, bootmaking and blacksmithing might be uncertain.

Private providers delivering training in thin markets indicated similar cost concerns, but they also demonstrated the use of some innovative practices to ameliorate the higher costs in these areas and thus support a better return on their investment in training delivery.

A group training company operating in regional New South Wales observed that, as a private provider, ‘training delivery is always a matter of cost’. The provider delivers training in thin markets in some occupational/industry areas in regional New South Wales, describing them as areas in which the TAFE institute in the region ‘was not interested’. The provider addresses cost challenges by using some distance education options, or using a traineeship as the first year of an apprenticeship, so that training and assessment can occur fully on the job. These approaches to ameliorating the high costs of delivery in thin markets were proposed by another provider as being particularly cost-effective. Based on personal experience, the interviewee also argued that they were particularly appropriate for training for Indigenous learners in remote Western Australia.

A large private provider in South Australia drew attention to the absence of allowances for servicing apprenticeships in remote areas, despite higher costs. Case managers employed by this provider spend substantial time on the road visiting employers and apprentices, and the provider noted that the costs involved (such as for transport, accommodation, phones) are increasing and funding is being ‘stretched’. Increased efforts are thus being made to operate on a ‘lean’ basis. On-the-job training delivery is emphasised as more cost-effective—and preferred by most employers, although the provider noted that some older tradesmen in regional areas prefer their apprentices to attend a training centre on block release, because this is what they themselves had done. Costs are also being addressed through adjustments to the schedule of case manager visits, with attempts to cluster visits in particular regions in order to minimise travel costs, while still ensuring all apprentices are visited regularly.

Restrictions and restrictive practices

Restrictions on the types and numbers of providers able to compete for public funding in thin markets were primarily of concern to private providers, who regarded these constraints as unfair and inappropriate.

In Tasmania training delivery in five occupational areas has been restricted to TAFE Tasmania. A private provider based in the state but operating in all other states except Western Australia expressed strong views that such restrictions—justified by the state as necessary to protect investment in TAFE infrastructure—were outdated and irrelevant in a context where training demand had risen substantially and training delivery had largely shifted to the workplace. For similar reasons the restrictions are under review by the state.

This provider also argued that some mainland states, while not formally excluding private providers from the market, engage in practices that make it difficult or impossible for them to compete for funding, despite willingness and proven capability. Specifically mentioned were:

- ✧ requirements that the provider maintain a physical office in the state (a ‘cost inhibitor’)
- ✧ compulsory physical attendance at meetings; videolinks are not permitted (also a ‘cost inhibitor’)
- ✧ cut-off dates for required financial information that are unrealistic for a small business.

The provider described the attitudes of the states as ‘obstructive’ and such practices as ‘protective territorial behaviours’ whose aim was to exclude interstate providers and protect TAFE.

It referred also to difficulties in gaining ‘third party access’ to TAFE facilities. The provider observed that only lip-service is paid to the notion of TAFE as a ‘public resource’. In practice access is granted only on the payment of an ‘exorbitant fee’ and is very restricted, with the provider having to ‘fit in around’ TAFE business.

For such reasons this provider described the training market as ‘a Clayton’s competitive market’.

Australian Council for Private Education and Training’s view

Representing private providers, the Australian Council for Private Education and Training (ACPET) has also argued strongly against state intervention in the training market in thin market areas. For example, the submission by the Australian Council for Private Education and Training to the Western Australian review of the management of apprenticeships and traineeships maintains that:

A level playing field, genuine User Choice and a truly competitive market are key to producing a more responsive and performance driven training market, and easing the current capacity constraints that are contributing to ... skills shortages.

(Australian Council for Private Education and Training 2007)

The submission deals systematically with the main reasons put forward by this state and others for their interventions. Three of these reasons and the Australian Council for Private Education and Training’s counter-arguments are summarised in appendix 3. Many of the Australian Council for Private Education and Training’s arguments echo the comments of the private providers consulted for this project, especially in relation to costs and restrictive practices.

The council’s apparent keenness to participate in the debate on restrictions on competition in thin markets is in itself indicative of a high degree of interest on the part of private providers in delivering training in areas where demand is low, provided that ‘the price paid truly reflects the costs of delivery, sufficient to provide a return on investment’. It supports a view that the assumptions that low levels of demand in parts of the training market necessarily mean low levels of interest by providers in servicing these areas—and thus a need for market intervention—are incorrect. It follows that practices built on these assumptions are also open to question. Overall, the arguments point to the crucial role of price in determining the delivery of training in areas where demand is low.

The Australian Council for Private Education and Training’s position also supports a conclusion that, if the user choice price paid is too low to provide an adequate return in thin markets, private providers will not enter the market. Consequently, there is no need to exclude them from thin markets—unless the aim is to protect public providers from competition—or to compel public providers to deliver at a lower price.

Summary

This section has explored the phenomenon of ‘thin markets’ for VET, noting that they can exist in occupation, industry or geographic areas and that these three areas often overlap.

Industry skills councils highlight some reasons for the existence of thin markets for VET in their industries, including the structure of industries, their geographical spread, their traditional forms of training, low turnover and a failure to recognise synergies for training in other occupations and industries. However, employer organisations and one of the skills councils indicate that they believe the extent of ‘thin markets’ to be overstated. Considerable training is sought and delivered in thin markets, but goes unrecognised because it is not of the type delivered by the formal VET system.

The states and territories use a variety of criteria to identify thin markets in their regions. The thin markets they recognise are mostly a combination of the three types. A major concern is that demand and provision in these areas is too small to support competitive funding processes.

Most states and territories manage the training market to some extent in thin markets under user choice arrangements. Some place formal restrictions on provider activity in thin markets, some take a strategic case-by-case approach and two ‘leave it up to the market’. Formal restrictions are under review in two states and their effectiveness is questioned by a third. Some reasons for the original imposition of restrictions, such as protecting investment in public TAFE infrastructure, are no longer considered to be as valid as they were. Strategic case-by-case approaches appear to be gaining ground. These allow states to support thin markets in areas of state priority, leaving areas considered to be of less importance to the market. The two states which have chosen not to intervene in thin markets believe this approach to be successful. A third state looks to be moving toward this position.

VET providers have two main concerns about thin markets: costs and prices; and restrictions and restrictive practices by the states and territories. They argue that the price paid for training in thin markets should be more realistic and, at the very least, cover costs. This is not currently always the case and thus some providers delivering training in thin markets face cost pressures, while others choose not to enter the market in these areas, thus reducing the choices available to learners. Private providers in particular argue that restrictions and restrictive practices are inappropriate, particularly as demand for training grows and more training shifts to the workplace.

Research and development

This section presents the findings of work exploring VET provider engagement in research and development, defined as ‘creative work undertaken on a systematic basis in order to increase the stock of knowledge and the use of this knowledge to devise new applications’. This definition recognises research and development as part of a broader process of innovation. Thus the role of VET in the national innovation system is discussed first, followed by some recent changes in relevant policies and strategies. The remainder of the section focuses more specifically on research and development and on some provider experiences and initiatives in this area.

Findings are based on interviews with VET providers, state and territory training authorities and stakeholder groups, drawing also on published documents and previous studies.

The role of VET in innovation

While a proportion of government funding for universities is directed to support their research and development effort, and universities are expected to earn funds to support additional research effort, engagement in research and development has not been expected of public institutions within the VET sector and thus, with very small recent exceptions, has not been reflected in funding arrangements.

National policy-makers have also overlooked the VET sector’s contribution to the broader national innovation system. Toner (2006) describes the VET system as *terra incognita* in innovation policy in Australia, noting that it does not appear in the ‘multitude’ of reports on the Australian national system of innovation. However, over recent years there has been a gradual but growing recognition of the important contribution the sector can make to innovation, particularly in two ways:

- ✧ diffusing the new knowledge created by others—transferring it between research organisations, such as universities and end-users such as industries and enterprises (Ferrier, Trood & Whittingham 2003; Dawe 2004; Moodie 2006; Toner 2006)
- ✧ developing a workforce with the skills to work with the applications of this new knowledge and capable of ‘innovative local technical solutions’ (Ferrier, Trood & Whittingham 2003; Pickersgill 2005).

Drawing on international work by Rosenfeld categorising the contributions of vocational education to innovation, Moodie (2006) notes that VET institutions can act as a ‘technology intermediary’, by:

- ✧ operating a demonstration and teaching centre of advanced technology
- ✧ providing industry with technical help and advice
- ✧ acting as a hub for specialised industry education and training, information and services.

Differentiating between radical and incremental innovation, Toner (2006) observes a stronger role for VET in the second. Radical innovations give rise to major technological, economic and social change and flow from large long-term public and private investments and high-level scientific skills. Incremental innovation encompasses minor modifications and improvements to

existing products and processes, which may individually be of small significance but which cumulatively make a major contribution to productivity gains and improved product/service performance. Toner argues that 'that trade and technician occupations are central to incremental innovation in Australia'; that is, incremental innovation relies on VET-trained personnel.

State and territory initiatives

In recent years, state and territory governments have developed and implemented policies and strategies to support their economies to ensure that they are well placed to prosper in an era of fast and evolving technological change and other forms of innovation.

In many of the plans and initiatives these governments have introduced, the potential for the VET sector to contribute to the achievement of these goals has been recognised. In particular it has been acknowledged that technological change and innovation give rise to new skill requirements in the workforce and that the development and delivery of new forms of training to meet these requirements is primarily work for organisations in the VET sector.

While the objectives of the states and territories are similar, they have adopted some different routes to achieving similar goals. However, in general, initiatives that concern VET have tended to emphasise the creation of networks and partnerships or other arrangements that bring together representatives of the VET sector, industries, enterprises and other interested bodies (for example, local government, industry associations, skills councils) to accelerate the flow of knowledge and the development of new training provision (Ferrier 2005).

Some of the work required of the VET sector has been taken up through state training agencies, and other national and state bodies such as curriculum development centres, industry skills councils or industry associations. In Tasmania, for instance, the state training authority observed that it has its own 'research capability' and conducts 'small scale research and development' on 'trends' and 'capability building' and supports a range of projects being conducted with (and by) different bodies, with funding from sources such as industry bodies, trade unions and Australian Government departments. Most projects are expected to lead to a training outcome.

In addition, the states and territories have implemented a number of programs that offer opportunities for VET providers to engage in innovation-related activities. For example:

- ✧ In New South Wales, the state's Board of Vocational Education and Training initiated research that led to a Skills Ecosystem project, which the board now manages for the Australian Government. The project aims to foster strategies enabling VET providers to support regional and industry 'skill ecosystems', defined as 'interdependent clusters of skills within regions and/or industries that are shaped by the nature of firms, the nature of products and markets, and key regulatory and policy settings' (Ferrier 2005). The project has provided support for a number of projects, including three in the category, 'VET as innovation partner'. The project was reviewed in 2006 and is being reshaped in response to the review's recommendations.
- ✧ Victoria established an innovation fund and specialist VET centres. The aim of the fund was to encourage TAFE institutions 'to provide new forms of vocational education and training '... beyond standard products' and to take 'a new approach to the design, development and delivery of products and services'. Victorian TAFE institutions are able to divert a small proportion of their profile funding to innovation-related activities. Specialist VET centres were founded on a view that the 'TAFE system is not homogenous' and that each institute is 'uniquely positioned to engage with the innovation economy and community and educational needs in their own way'. Specialist centres are granted seed funding, after which they are expected to become self-supporting. In 2007 there were 23

centres in operation.⁹ South Australia has created 17 regional networks of industries, employers, local government, educational institutions (including VET) and other community groups to work together to promote regional development, including addressing skill shortages and new skills needs.

- ✧ For several years Western Australia operated a program of grants enabling VET providers to participate in collaborative science and technology projects (with industry, universities, government and other bodies) with training outcomes. More recently the state has moved to follow the Victorian model of promoting specialisation within TAFE institutes and allowing a small portion of profile funding (2%) to be diverted to innovation.

In addition to such major initiatives, the states provide small grants for providers to conduct projects of their own. For instance, Victoria offers grants of between \$4000 and \$25 000, with an expectation that recipients will contribute additional funds and in-kind resources. (The amount awarded to successful applicants depends on costings submitted by applicants.) The state training authority describes most of the projects supported as 'low-level research', focused on the providers' own needs, with the work primarily aiming to 'contribute to the providers' planning processes'. In Tasmania grants are awarded 'irregularly' on a 'case by case' basis, while in Western Australia the work supported by grants was considered to be too 'small scale', and the scheme is under review, with a view to supporting 'more strategic' work. In New South Wales consultations advised that some funding has been provided through the Board of Vocational Education and Training, primarily for projects focused on changing provider behaviour, but these also are regarded as having had limited success.

Provider experiences and initiatives in research and development

In discussions for this project very few providers could point to current activities that would fit the definition of research and development as 'creative work undertaken on a systematic basis in order to increase the stock of knowledge and the use of this knowledge to devise new applications'.

Typically, responses to questions about research and development highlighted provider engagement in market research to identify new and emerging skill needs and funding opportunities, together with activities leading to internal innovation, especially in teaching and learning and the development of new training programs. Providers also mentioned evaluations of programs and activities to collect feedback from learners and industry clients. For example:

- ✧ A large metropolitan public provider indicated that it has a small innovation fund which it uses mainly to provide training for staff in new capabilities and leadership and for individual coaching.
- ✧ A large regional public provider noted that it funds small innovation projects via surplus funds and has used funding under the Framing the Future program to develop satellite delivery.
- ✧ A group training company revealed that, apart from conducting regular surveys of clients, it does not undertake research and development.

Most providers did not appear to regard engagement in research and development (defined narrowly) as a high priority: it was not a critical element in their strategic plans. Rather their comments suggested it was something that would be 'nice to have', that would 'add value' to their

⁹ <<http://www.eduweb.vic.gov.au/specialistcentres20070712.doc>>, viewed 28 November 2007.

other work—if opportunities came their way, they had the capabilities to do the work required, and they could afford it. However, they had very different views about engagement in broader forms of research and innovation. Many noted how vital these activities were to their success in the competitive training market and in delivering training to meet real industry requirements. Consequently, they expressed substantial concerns about inadequate resources to support these kinds of activities. One public provider in South Australia noted that government funding provided ‘no research capacity at all’ and that any funds thus had to be generated from commercial activities. Another observed that much of the work of collecting information about industry requirements and in developing training to meet these falls to general managers in TAFE institutes, but they have ‘no time’ to do this work.

The few providers who were currently, or who had recently been, involved in research and development projects were all public providers and their involvement appeared to be the result of a convergence of factors:

- ✧ enabling and supportive policy settings—the absence of formal restrictions on research and development activity and the provision of some incentives to become involved (for example, seed funding)
- ✧ funding opportunities—the availability of grants and/or potential for consultancy work
- ✧ staff capabilities—having staff with the skills to do the work
- ✧ capable and willing partner organisations—others willing to contribute skills and resources to the work and include the provider in external projects.

These points are illustrated in the examples set out in appendix 4. Interviews with providers also revealed that involvement in research and development can ‘add value’ to the training they offer, especially through the provision of short programs for industry and opportunities for students to participate in cutting-edge work. Engagement in research and development also provides opportunities for staff development, for partnerships with other organisations, and for earning additional income. It enhances the provider’s status in the competitive training market by highlighting capabilities and an innovative culture.

Summary

Although the role of the VET sector in innovation is becoming increasingly recognised, the number of VET providers who are engaged in narrowly defined research and development is still very small. Many more are engaged in more broadly defined innovation and market research.

Research and development is occurring primarily among public providers in supportive policy settings, where there are financial incentives, where staff have the required capabilities, and where there are opportunities for partnerships. Organisational structures supporting specialisation also contribute to an enhanced capability.

Those providers engaged in research and development derive funding from many different sources, depending on the nature of the project, with many projects being commissioned to ‘solve a problem’.

There are benefits in income, in staff development and in adding value to training.

Conclusions

This project has focused separately on the experiences and initiatives of VET providers in the three areas of income sources and mixes, thin markets and research and development. In this final section of the report the findings from each separate stream of the work are viewed from a broader perspective in order to identify common themes and issues. In addition, some policy implications from the work are discussed.

Thriving in a competitive and changing market

In each of the three areas of research, discussions with VET providers have indicated that the vast majority of those participating in the study, both public and private, were *aware of change* occurring continuously in the competitive markets in which they were operating. They spoke often of discontinuities with the past and expectations of further change in areas that would affect their work, such as:

- ✧ policy settings, regulations, government programs and targeted initiatives
- ✧ the skill needs of industries and enterprises
- ✧ new knowledge and technology and their applications
- ✧ the aspirations and needs of individuals and communities.

Rather than hiding from or ignoring change, most providers were *engaging with change* in two ways:

- ✧ by actively striving to become—and remain—better informed about the nature of change through activities such as market scanning, networking and research
- ✧ by using the information collected to plan and implement appropriate responses. In particular, providers were focused on how they could act to take advantage of new opportunities.

In addition, while dealing with day-to-day imperatives and the changes expected in the near future, a number of providers were also *crystal-ball gazing*—trying to foresee where and what kind of needs and opportunities might arise in the market in the longer term. The aim of this work was primarily to assist them to prepare for the future and to profit from the opportunities it will offer.

In this work, providers indicate two major concerns:

- ✧ Financial security—how to get it and keep it: this is the case for both public and private providers, although private providers indicated greater urgency. Discussions indicated that providers expect some existing forms of income to decline or disappear and that they thus feel compelled to seek out and secure alternative sources of funds. They are also concerned to ensure that they can secure an income sufficient to enable them to do all they want or need and which will contribute to their long-term economic viability.
- ✧ Continuing to meet the needs of those they serve: including communities, individuals, enterprises and industries. For many providers the imperative to succeed in this regard is bound up with their economic wellbeing. Private providers in particular recognise that, if they fail to provide the kind of services or the quality of services required in the market, there will be financial consequences. In addition, providers are concerned about continuing

to fulfil an important and valuable social role that leads to both public and private benefits. Thus they seek to offer products and services that meet real (and changing) needs.

Under pressure in a number of areas, providers are developing strategies to ease these pressures such as:

- ✧ overcoming barriers to participation and success in some markets, such as formal restrictions, restrictive practices and limits to their capabilities, for example, through partnerships and alliances and targeting alternative market segments
- ✧ stretching their resources to cover activities such as market scanning and research, innovation and professional development, for example, through reducing costs and seeking additional income sources
- ✧ distinguishing themselves from their competitors, for example, by offering innovative and distinctive products and services, and by co-branding with respected partners
- ✧ strengthening their capabilities, for example, by developing their own staff or forming alliances which would give them access to additional capabilities
- ✧ marketing themselves effectively, for example, by forming alliances with partners able to provide assistance with marketing, by using referrals from existing clients and by maintaining close relationships with potential clients.

Overall, the research indicates that the work of VET providers is characterised by application, adaptability and creativity.

- ✧ *Application*: providers are making substantial and ongoing efforts to come to terms with and to succeed in a competitive and changing market.
- ✧ *Adaptability*: providers are consistently having to re-invent some of what they are doing and how they are doing it to meet changing needs and to take up new opportunities.
- ✧ *Creativity*: providers are creating and seeking innovative solutions to differentiate themselves in the market and to meet new and emerging needs.

Implications for policy and further research

In each of the three research areas a number of issues can be identified which may benefit from a policy response and/or which point to a need for further research.

Income sources and mixes

- ✧ The findings of this project indicate that the diversity in the activities through which VET providers earn income is poorly represented in current VET data collections. Further disaggregation of the three categories 'fee for service' 'ancillary trading' and 'other' income might provide a step towards a greater understanding of the scope and range of these activities. Revenues from fee-for-service work in particular are growing, and interviews with providers point to varied contributing activities including: applied research and development; leveraging and other arrangements with a single enterprise; and collaborative arrangements with other providers.
- ✧ There are mixed views about how leveraging can best be promoted, where it will work and won't work and how it should be regulated to ensure that there is no shifting of costs from the private to the public sector. Further evidence is required, particularly of instances where it works well, in order to draw any conclusions. Policy attention might also be given to ways of encouraging employers to participate in leveraging arrangements and to ensuring that these arrangements support substantial public benefit, while ensuring that providers have sufficient flexibility to make effective arrangements.

- ✧ With regard to cross-subsidisation, this project did not uncover any instances of practices that might cause concern to those keen to ensure that public funding is not used inappropriately to achieve private benefit. However, the project was confined to a small number of providers and these issues were only one part of the work. Broader, but more focused, efforts might achieve a different result. The use of private income by public providers to support ‘core business’ is of greater concern and points to funding stresses that require attention before they worsen. Private income is variable and cannot be relied on to support the essential work of public providers. Doing so puts this work at risk.

Thin markets

- ✧ Are they overstated? A number of project participants suggested that thin markets for VET may be overstated: that substantial training goes on that is not counted, and/or that the demand in areas considered to be thin markets may be for types of training not provided by the VET system. They expressed support for better data on the dimensions of demand before thin markets are identified as such. A case was also argued for the existence of ‘artificial thin markets’, created by a failure to recognise synergies between training needs across occupations and industries. Further investigation of these issues is required to clarify the existence and extent of the problems and to identify possible strategies in addressing them.
- ✧ In relation to cost/price and loadings, both public and private providers noted that the price paid for training in thin markets should better reflect the costs involved in developing and delivering it. Currently some states do not provide loadings in recognition of higher costs, for example, for training delivered in regional and remote areas, and, while others do, there are still cost issues. There is thus a case for consideration of more appropriate prices and loadings to encourage more diverse provision in thin markets and enhanced choices for learners.
- ✧ Intervention is an issue that requires reconsideration and monitoring. Many of the reasons put forward in the past to justify state intervention in thin markets are being questioned in light of developments in the training market, such as shifts to flexible and workplace delivery of training. Two states which do not intervene in thin markets report no problems, while some others impose elaborate restrictions to prevent any difficulties from arising. Some states acknowledge that they have not evaluated their thin market strategies in any depth and that there may be better approaches. Overall, there appears to be a shift to intervention only on a case-by-case basis or to non-intervention. In these circumstances is there any evidence of some types of training being no longer provided and if so, to what extent is this a concern? There is still much to be learned here.

Research and development

The number of providers who are engaged in narrowly defined research and development is very small, but those who are involved report benefits, including in reputation, in funding, in staff development and in adding value to training. Wider dissemination of information about these benefits might encourage other providers to take up research and development activities; however, this may be insufficient incentive, as there appear to be many reasons for provider reticence.

Many VET providers have capabilities that could be applied to research and development, and some of these are already used to undertake market research and broader forms of innovation. Why then are so few providers involved? This is an area where further investigations might be helpful. These could address:

- ✧ *Influence of cultural and structural factors*: cultural factors may reflect traditional views about the role and capabilities of VET organisations, particularly the perception that research and

development is work for the higher education sector. Structural factors may include internal arrangements, for example, their impact on specialisation and risk-taking.

- ✧ *Resource issues*: the internal resources of some providers are limited, especially where resources are already being used to full capacity.
- ✧ *Lack of research and development opportunities*: or knowledge of opportunities.
- ✧ *Need for external encouragement and support*: such as policy settings and financial incentives. While some policy changes have occurred in recent years, none has specifically sought to encourage VET providers to take up research and development.

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Appendix 1: Principles for leveraging profile funding, Victoria

TAFE institutes providing training directly to enterprises should normally do so on a full cost-recovery basis.

Leveraging of profile funds should be restricted to areas that can be demonstrated to clearly align with government priorities, including priority industries and cohorts. Institutes should seek fee-for-service funding to continue provision in lower priority areas.

Leveraging may only be used as part of a strategy to increase private investment in training to generate higher overall commercial return, not as an ongoing government subsidy for the cost of training.

Leveraging arrangements should be negotiated on a case-by-case basis between TAFE institutes and enterprises. However, these arrangements must recognise benefits accruing to industry from training, with industry making a co-payment or contribution at least equivalent to the contribution from profile funds.

Where a long-term partnership has been negotiated between an institute and an enterprise, the enterprise contribution should progressively increase to a payment equivalent to full cost recovery by the third year of the partnership.

Institutes must comply with the Victorian Government's competitive neutrality policy.

Source: Information obtained from the Office of Training and Tertiary Education, Victoria.

Appendix 2: Thin market strategies of the states and territories

State/territory	Description
<i>Restrictions applied</i>	
New South Wales	<p>Differentiates between 'thin' and 'robust' markets. 'Thin' markets are those where there is a risk of market failure where provider capacity to deliver training collapses and infrastructure disappears. The application of the 'robust' market definition means that, in New South Wales, user choice covers:</p> <ul style="list-style-type: none"> all entry-level traineeships from certificate II to certificate IV level major population areas for specific apprenticeships (Sydney, Illawarra, Lower Hunter) statewide coverage for specific apprenticeships limited to twelve areas of study.
Western Australia	<p>Thin markets exist where annual apprenticeship/trainee commencements fall below certain levels. In these areas user choice funding is generally restricted to TAFE. This practice is currently under review. Most thin markets are in rural areas but can also exist in the metropolitan area. In regional areas some thin markets are very thin and provision of trade training is regarded as unsustainable. There are few thin markets in traineeships, which is regarded as an 'almost perfect' competition model. Training is purchased from private providers only in sustainable markets.</p>
Tasmania	<p>Government policy has limited public funding to the Institute of TAFE Tasmania for some nominated qualifications funded under user choice. This policy is now being reconsidered.</p>
<i>Strategic approach (case by case)</i>	
Queensland	<p>Differentiates between 'thin' and 'fluctuating markets'. Thin markets exist where the number of apprentices or trainees falls below a certain level for a sustained period and there are few providers and thus there is a risk of market failure. In these cases the state training authority enters into direct negotiations with providers where the training is considered to be of strategic importance to the state. Thin markets attract 'special funding arrangements'. In some thin markets, user choice funding is restricted to a small number of preferred providers.</p>
Northern Territory	<p>The territory as a whole is considered to be a thin market due to its size and small population. The strategy adopted by the territory mirrors that of Queensland.</p>
Australian Capital Territory	<p>The territory as a whole is considered to be a thin market. The state training authority responds on a 'pragmatic basis' wherever demand for training arises. If training cannot be provided locally, one-off arrangements are made with interstate providers.</p>
<i>Market approach</i>	
Victoria	<p>Thin markets are not identified and generally it is left to the market to sort out any difficulties. Generally no training is purchased from private providers where numbers are very low. If required, some arrangements may be made to secure training where numbers are low.</p>
South Australia	<p>Thin markets are not identified and it is left to the market to respond to any thin market issues. Most training in thin markets is provided by TAFE and it is assumed that any problems are sorted out within TAFE.</p>

Sources: Based on published documents and information provided by state training authorities.

Appendix 3: ACPET’s arguments against restrictions on private providers in thin markets in WA

Western Australian Government’s argument

Australian Council for Private Education and Training’s counter arguments

Market viability—to ensure that the market is not diluted by too many providers to the point where individual providers cannot enrol enough students to cover their costs

Purchasing decisions should be made at a price that truly reflects the costs of delivery, sufficient to provide a return on investment for providers in priority areas.

The physical infrastructure costs for a new provider in traditional trade apprenticeship training makes ‘too many providers’ a highly unlikely outcome and presents a continuing challenge for encouraging additional capacity and/or new entrants.

The question of too few students/apprentices cannot be viewed in isolation, and providers have identified a shared responsibility with employers and government to encourage uptake and retention. Ongoing sector-wide promotion of traineeship and apprenticeship pathways, and the VET sector generally, are required.

The department foresees a risk that too many providers may enter an open market but a rational business decision will always be made on the basis of an assessment of financial viability.

To ensure maximum utilisation of public infrastructure

The use of both public and private infrastructure should be maximised and there should be clear guidelines, processes and a costing mechanism based on cost recovery to utilise resources where there is capacity.

Additional capacity is also created by the acceptance and growing preference for flexible training delivery, as opposed to institution-based training, and should be encouraged and appropriately resourced through a revised user choice funding model.

The existence of public infrastructure should not limit progress or opportunity for more flexible apprenticeship and traineeship training.

To ensure continuity of supply of training

Loss of experienced staff from a public provider can be as disruptive to a trainee or apprentice.

Private providers rely for their livelihood on a reputation for providing flexible, responsive training and quality training outcomes for their clients.

Private providers work within the AQTF and are closely monitored and accountable.

Through Australian Council for Private Education and Training private providers have a ‘tuition assurance scheme and are closely monitored’.

Source: Summarised from Australian Council for Private Education and Training (2007).

Appendix 4: Examples of research and development in the VET sector

Aquaculture Development Unit, Challenger TAFE

The Aquaculture Development Unit (ADU), part of the Western Australian Maritime Training Centre at Challenger TAFE, conducts applied research and development, particularly concerning marine finfish. Challenger's website indicates that the unit has been engaged in research since 1991 and has gained recognition not only for the work, but also for how it impacts on the vocational education and training offered by the institute. Examples of the unit's work are:

- ✧ Together with the Conservation Council of Western Australia, the MG Kailis Group and the Esperance Marine Institute, the Aquaculture Development Unit investigated overseas trends in order to support the introduction of marine fish farming on a large scale to Western Australia. The work also addressed community concerns about the need to manage environmental issues such as pollution. Funding was received from a Western Australian Government science and technology innovation grant.
- ✧ With Connor College of TAFE and Murdoch University, the Aquaculture Development Unit developed a fish culture technology system for sustainable cost-effective commercial production. The technology, a Semi-Intensive Floating Tank System (SIFTS), has been patented. Funding was provided at different stages of the project by AusIndustry, the Western Australian Government, the Australian Government Department of Agriculture and Fisheries, the Fisheries Research and Development Corporation and the National Aquaculture Council.

In discussions for this project, Challenger indicated that institute's structure—based on a business unit model of 'centres of specialisation' in key industry areas—is a key element in the success of groups such as the Maritime Training Centre because it supports a close relationship between the institute and industry partners and offers opportunities for commercial work. Applied research is considered to be 'another service' the institute can offer.

The training market in Western Australia is 'changing dramatically' and VET providers are having to look more closely at 'what industry wants' and to work more closely with industries and enterprises. Consultancy services are 'very successful' and demand for them is increasing.

The Aquaculture Development Unit described itself as working at the 'government/private interface' and indicated that it is able to generate 40–45% of its own funds from sources such as:

- ✧ short training courses
- ✧ competitive grants
- ✧ private consultancies
- ✧ biological services (for example, fish farming).

It is now moving away from competitive grants towards more direct funding and to increasing its commercial revenue further. Private consultancy work has expanded in the last couple of years

and an aim is to secure more international consultancies and longer-term funds (ten years or more).

In the range of its activities the unit believes it has reached a 'plateau': 'we are stuck where we are'. There are some activities 'we want to do ... but TAFE doesn't want us to', such as more work with PhD students. However, being situated within the institute has advantages: space; resources; and close links with industry. In addition, all activities lead to professional development payoffs for staff.

The Aquaculture Development Unit observed that, while research and development isn't 'traditional TAFE work', operating within TAFE keeps the work 'grounded' and responsive to 'industry needs'. There is also no imperative to 'publish or perish', as there would be in the university sector. However, there is a university-TAFE divide which means that, while the unit works collaboratively with universities, it is a 'continual battle for TAFE to get recognition'. It can be assumed that 'TAFE isn't up to it'. Consequently, the unit is not always included in projects to which it believes it could make a contribution.

Retaining staff is a major concern, with the capability of the unit dependent on the capabilities of staff. Most staff would be able to earn considerably more if they were employed in industry, but the unit is unable to pay them more. This means offering them more interesting and attractive work, with opportunities for professional development.

Two specialist centres in Victoria

A scan of information published on a Victorian Government website about the 23 specialist centres in operation within Victorian TAFE institutes in 2007 reveals that only five (22%) specifically indicate research involvement, with a strong emphasis on applied research, particularly prototype development and problem-solving for industry clients. This work is enabled by advanced equipment for several of the centres.

Victorian specialist centres indicating research activity

Specialist centre	Research and development
CNC Design Centre, Holmesglen Institute of TAFE	The centre provides small-scale furniture manufacturers and designers with access to a facility for prototype development. It will also expose students to the processes of <i>practical research</i> and prototype development.
Specialist Centre in Textiles and Design, RMIT University (TAFE Division)	The centre is focused upon the development of innovative training and education products. The centre will provide assistance to industry with projects, <i>research</i> and the preparation of grant applications.
Centre for New Manufacturing, Swinburne University of Technology (TAFE Division)	This centre was established to provide leadership in the development of specialist training in new manufacturing. It focuses on the integration of mechanical engineering with electronics and computer-aided engineering in the design, prototyping and manufacture of products and processes. The centre engages with company clients and students on <i>applied research and development</i> projects.
National Centre for Sustainability (NCS)	A collaboration of five TAFE institutions, this centre provides educational leadership in program delivery, training resource development, and <i>applied research</i> , promoting sustainability and natural resource management.
Centre for Transport, Distribution and Logistics, Victoria University (TAFE Division)	The centre delivers programs to resource and grow the logistics and supply chain workforce capability of Victorian industry. [It can provide] whole-of-enterprise educational and <i>research</i> solutions.

Source: Summarised from <<http://www.eduweb - specialistcentres20070712.doc>> viewed October 2007.

Specialist centres receive seed funding only from the Victorian Government and are expected to become self-funding. At a seminar about the progress of the centres held in February 2006, funding issues were frequently raised by representatives of the centres, with many indicating they were under pressure within their host institutions to rapidly expand their commercial revenue (researcher's notes).

For this project discussions were held with the Specialist Centre for New Manufacturing and further desktop research was conducted to gain information about some of the many projects being conducted by providers in the National Centre for Sustainability and their funding sources.

Specialist Centre for New Manufacturing

The website of the Centre for New Manufacturing (Swinburne University, TAFE Division) indicates that this centre aims to assist manufacturers to take advantage of the new technologies to enable them to remain competitive and sustainable in a competitive global economy (<<http://www.tafe.swinburne.edu.au/eng/cnm/>> viewed 28 November 2007).

Much of the work of the centre depends on its substantial bank of state-of-the art equipment. This enables it to offer advanced training in robotics, micro and nano-technology, and lasers, and to offer services to industry that include: rapid prototyping; CNC/laser milling; wire cutting and laser scanning. The centre observes that having this equipment also enables 'teaching staff and students to have access to the latest technology'. This is essential to the centre's goal of ensuring that, by the time a new technology becomes mainstream, there will be trained people available to work with it and teachers ready to offer the required training.

The centre works with industry on applied research and development projects in partnerships and on a consultancy basis. A current focus is the development of 'rapid manufacturing'—quicker and less costly than traditional methods—and cost-effective 'green manufacturing' methods. The centre's staff carry out the projects; students are also involved in the work and benefit from their exposure to the new technologies and to the activities.

By comparison with the Aquaculture Development Unit at Challenger TAFE, much more of the centre's work is focused on the development and provision of training. The centre's website acknowledges that one of its major roles is 'to identify knowledge and skills required for existing and emerging technologies'. It thus provides consultancy services in:

- ✧ skills analyses and skills audits
- ✧ enterprise-specific training
- ✧ staff on-the-job training
- ✧ networking opportunities through seminars and course provision.

Among its recent projects it has developed:

- ✧ a new photonics module for integration into the Advanced Diploma of Engineering
- ✧ a laser operator course developed and delivered in association with Headland Machinery
- ✧ a computer-aided manufacturing (CAM) course in high-speed machining through a cooperative training venture with Camplex, a supplier of the software. It also delivered this course.

The centre was also part of a group assisting the Government of Singapore to move its curriculum-based precision engineering training framework to a competency basis.

More indicative of the centre's engagement in research and development is another recent project in which it worked with industry partners to develop new equipment safety control systems.

Funding is the main issue affecting the centre's further engagement in research and development. The amount the centre receives from its hosting institution is not sufficient to cover its costs, so it must make up the shortfall (mainly the cost of staff time) from other sources—mainly commercial work. The imperative to earn the required level of additional funding means that it responds to the opportunities it is offered and therefore must limit its engagement in other activities, which, so far, do not earn comparable income, but require valuable staff time. This may change in the future.

The centre puts considerable time and effort into the kind of 'market scanning' research noted by other providers, in this case, to locate new and emerging technologies. This work is also time-intensive, requiring (for example) attendance at trade shows, networking with professional bodies, and reading about recent and coming developments. It also conducts a number of unfunded activities to spread its message and to attract students and consultancy business. These include 'taster tours' for secondary schools and other groups.

National Centre for Sustainability

The centre is a collaboration of four Victorian TAFE institutes: Swinburne University of Technology (TAFE Division), Sunraysia Institute of TAFE, South West Institute of TAFE and University of Ballarat (TAFE Division). Challenger TAFE from Western Australia has also joined the group. The four Victorian partners tend to focus on different areas:

- ✧ Swinburne: research into corporate and community sustainability and incorporation of sustainability into educational programs
- ✧ Sunraysia: sustainable farming and land-management practices
- ✧ South West: the use of alternative energy and fuel technologies and sustainable management practices
- ✧ Ballarat: best practice in building design and environmental sustainability.

The centre partners are engaged in a range of applied research projects, with funding from many diverse sources, but frequently local governments, other local, state and Australian Government agencies, enterprises, and industry and community bodies. In general, the projects seek solutions to particular problems or aim to improve efficiency and effectiveness. Outcomes sought vary, but almost all include some training and community education. The production of resources and tools is also common. Many projects involve VET students and this is believed to enhance their training. Examples illustrating the range of activities and funding partners include:

- ✧ A project in which South West Institute of TAFE is working with Warrnambool City Council to research the use of compressed natural gas (CNG) as an alternative fuel. Forklifts at the Warrnambool Campus of South West Institute of TAFE were converted to run on CNG and two council vehicles were retrofitted with CNG tanks. Depending on the results of the project, full fleets of vehicles may be converted to CNG.
- ✧ A project to rehabilitate a rangeland grazing property to a state prior to white settlement. Initial funding has been provided by the Myer Foundation.
- ✧ A project commissioned by the City of Greater Dandenong to determine whether to build a community environmental centre. The role of the centre was to identify potential community and industry needs and develop options to fulfil them.
- ✧ A project collecting 'environmental memoirs' from people living in degrading ecological environments. The project is supported by the Australian National Commission for UNESCO through the International Relations Grants Program of the Department of Foreign Affairs and Trade and a range of local and international sponsors (mainly government and community organisations), and individual donations.

- ✧ A project funded by Sustainability Victoria to examine a rural community's energy and water consumption habits and attitudes to and awareness of sustainable energy and water conservation measures, including renewable energy generation options. This project also assisted in evaluating the effectiveness of strategies to provide practical information on saving energy at home and in the workplace, how to cut electricity and gas bills, create a more comfortable living environment, and help to reduce greenhouse gas pollution.
- ✧ A project sponsored by a regional authority to develop regional guidelines for the collection, storage, and management of native plant seed for regional project use. The project also undertook viability testing of collected and stored seed to support project applications and better inform seed viability challenges for the region.

Source: <<http://www.ncsustainability.com.au>> viewed October 2007.



The National Vocational Education and Training Research and Evaluation (NVETRE) Program is coordinated and managed by the National Centre for Vocational Education Research, on behalf of the Australian Government and state and territory governments, with funding provided through the Department of Education, Employment and Workplace Relations.

This program is based upon priorities approved by ministers with responsibility for vocational education and training (VET). This research aims to improve policy and practice in the VET sector:

Research funding is awarded to organisations via a competitive grants process.

**National Centre for Vocational
Education Research Ltd**

Level 11, 33 King William Street
Adelaide SA 5000

PO Box 8288 Station Arcade
South Australia 5000

Phone +61 8 8230 8400
Fax +61 8 8212 3436
Email ncver@ncver.edu.au

www.ncver.edu.au