RESEARCH REPORT

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Traditional trade apprenticeships: training activity, employer incentives and international practice

Josie Misko
National Centre for Vocational Education Research

INFORMING + INFLUENCING
THE AUSTRALIAN VET SECTOR

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About the research

Traditional trade apprenticeships: training activity, employer incentives and international practices

Josie Misko, National Centre for Vocational Education Research

This report is the first component of a larger study investigating training practices relating to traditional trade apprenticeships, with a view to developing policy directions on how to maintain their relevance and usefulness. This first phase of the study explores data on trends in training activity and completions, provides details on the application of incentives, and highlights international apprenticeship models and practice, as identified in the relevant literature.

Despite its broad scope, this report is unable, on its own, to offer comprehensive policy guidance on sustaining relevant and useful apprenticeships, although it does provide some contextual advice pointing to the role of fluctuations in economic conditions in affecting uptake and the extent to which incentives at federal and state levels can be used to encourage uptake or completion when the economy is experiencing a downturn.

An analysis of the data on traditional apprentices shows that the demand for traditional trade apprentices has been relatively stable over the last 15 years, with changes in demand generally aligned to the prevailing economic conditions. This stability is also partly attributable to government policy settings at the federal and state and territory levels, which have supported the traditional trades through the consistent prioritisation and application of incentives and training subsidies.

Our examination of government incentives for employers of apprentices in the traditional trades indicates that despite the numerous changes to the overall apprenticeship incentives scheme they have remained relatively stable. This is primarily because the traditional trades are aligned to the skill shortages identified in the National Skills Needs List. However, the value of the base incentives for the traditional trades has, in real terms, declined since 2012.

Our research identified some important lessons that Australia could glean from the dual systems of apprenticeship operating in Germany, Switzerland, Luxembourg, Denmark and Austria. These lessons include the need for: better synchronisation of knowledge acquisition and skills development in off-the-job and on-the-job training venues; higher levels of prescription and expectations about the nature and level of the qualifications required of teachers and trainers; regular monitoring of the market for apprenticeship training positions; and industry involvement in practical assessments.

Traditional trade apprenticeships: learnings from the field, a companion to this report, describes the experience of apprentices, tradespersons, employers, trainers and apprenticeship regulators with the apprenticeship system, along with their views on the aspects of the system that should be retained and those to be discarded or modified, the aim being to use this information to identify some broad directions for action.

Simon Walker
Managing Director, NCVER

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Executive summary

This report is the first component of a research study investigating the extent to which the traditional trade approach to apprenticeships still has merit or whether some changes are required to make it more relevant to current needs. In this report we present trends in commencements for the traditional trades for the period 2002 to 2018. Non-trade apprenticeships or traineeships are out of scope of this study.

We define eight groups of traditional trades: building; electrotechnology and telecommunications; engineering; food trades; motor mechanic, repairer and vehicle builder trades; other traditional trades; precision trades; and skilled animal and horticultural workers.

Changing patterns of apprenticeship uptake and completions

Over time, the training of apprentices in Australia, and internationally, has been affected by technological, regulatory and social change. However, the concept of novices (apprentices) learning from experts (skilled tradespersons) in productive work for significant periods of time continues to be well accepted.

The Australian apprenticeship system is usually viewed — and debated — as if it were a single, coherent entity. Yet, it is important to note that each state and territory has its own classifications and registers to distinguish between trade apprenticeships and non-trade apprenticeships, and traineeships. This means, for example, that a trade or a non-trade in one state may not be the same as in another state.

In 2002 there were 50 600 commencements for apprentices in the traditional trades. In 2009, at the time of the Global Financial Crisis, the numbers dipped significantly from the preceding two years, although they recovered in 2010 to around 81 000. For the following five years the numbers fluctuated between 71 000 and 76 000. Since 2016 they have stabilised at around 68 000.

Commencements in certain traditional trades (such as printing, and textile, clothing and footwear) have been slowly fading from the industrial landscape. This reflects the structural adjustment that has affected these industries, the introduction of advanced technologies (especially in the printing industry) and the movement off shore of manufacturing industries, which notably includes clothing and footwear and printing. Because there is still some activity in these trades, and other traditional trades continue to flourish, we have some reason for investigating the skills and qualifications being acquired by apprentices in traditional trades.

Apprenticeship incentives

Federal and state and territory governments are generally committed to ensuring the wellbeing of apprentices, achieved by providing them with some support (often in the form of financial allowances) to enable them to pursue and persist with their training. One incentive for apprentices is the Trade Support Loans scheme, which was established to provide assistance to eligible apprentices over the duration of their apprenticeship. A 20% discount to the loan is applied at the completion of the apprenticeship.

The bulk of government financial incentives, however, are intended for employers, and their aim is to encourage employers to take on apprentices and support them until such time as their qualification has been completed. Despite numerous changes to the employer incentives scheme over the years, the nature of the base employer incentives that apply to the traditional trades have remained relatively stable, although the value of the base incentives in real terms has declined since 2012.

What can Australia learn from systems overseas?

Although there is keen interest in Australia for learning from apprenticeship systems in other countries, it is important to recognise that systems that work in one socioeconomic and cultural environment may not be easily transported to another. While the German Dual System is often held up as an exemplar of good apprenticeship training, recently the dual systems that operate in Luxembourg, Switzerland, Austria and Denmark have also been promoted.

There are similarities between the dual system and the Australian apprenticeship system, including that both systems exist under government legislative arrangements; obligations are documented in formal training contracts between employers and apprentices; and learning is undertaken via a combination of off and on-the job training. However, some of the practices of the European systems differ markedly from those of the Australian system and include their having specific roles for competent bodies (representing relevant crafts and professions) in awarding qualifications; making decisions about which companies are eligible for taking on apprentices; and monitoring in-company training. In some Australian states and territories examinations for licensed occupations are set by external bodies representing specific occupations (for example, in the case of the capstone test for electricians), but these approaches are by no means applied consistently across the country.

In the European dual systems, the rules governing the qualifications and experience of teachers in the vocational schools and the trainers or supervisors in the company are more prescriptive than those applying in the Australian situation, where practices seem to be more flexible. Highly defined regulations on the activities taking place in the company and in the vocational school, as well as for the processes used to integrate in-company training and off-the-job learning, is a further feature of the approaches used in these dual systems. This does not occur to the same extent in Australia. In addition, the Australian system gives teachers and trainers more flexibility in making decisions on approaches to delivering and assessing the training.

Next steps

The information we have compiled in this report has the potential to provide a contextual background for a comprehensive overview of apprenticeships. On its own, it is unable to offer guidance on the desirable aspects of apprenticeships — that is, those worth retaining — and those elements of the system that need to be removed or improved. Guidance on these aspects of apprenticeships can best be obtained by listening to the key players: the apprentices, tradespersons and employers, relevant government officials, and training providers. In the second part of this study (reported in *Traditional trade apprenticeships: learnings from the field*) we identify the key themes from consultations with these stakeholders.

A third report, to supplement the findings of both publications, will analyse relevant data from the 2019 Apprentice and Trainee Destination and Experiences Survey in conjunction with relevant findings from the consultations. The survey has been distributed to apprentices and trainees across the nation who completed, cancelled or withdrew from their contract of training in 2018.

Introduction

This report reflects the first part of a larger study that looks more closely at the tangible and intangible benefits that accrue to traditional apprentices from their apprenticeship training. The aim of the study is to use the findings to guide policy designed to reinvigorate traditional apprenticeships, by retaining those aspects that appear to work successfully, removing elements not operating as intended, and introducing innovations to ensure that apprenticeship training remains up to date, relevant and useful. The goal in our exploration of these issues is to inform policy directions that address government and industry concerns that there is an adequate ongoing supply of skilled tradespersons to meet the needs of the Australian economy.

In this report, we present patterns of training activity between 2002 and 2018 years, mainly concentrating on contract[1] commencements, but also touching briefly on contract-completion rates, focusing on eight groups of traditional trades. We then give a brief discussion on the link between changes in apprenticeship numbers and changes in policy and funding environments, especially concerning employer incentives, and national and state and territory initiatives. Finally, we give information on recent developments in the dual systems of Germany, Luxembourg, Switzerland, Austria and Denmark to derive key learnings relevant to the Australian system.

In this report from phase 1 of the study the research questions are:

- How has the profile of students and their training activity in traditional trade apprenticeship programs changed over the period (2002-2018)?
- What are some of the key approaches gaining traction in apprenticeship training at home and abroad in response to changing economic times and technological advancements?

In answering these research questions, we elicit trends from unpublished data from the NCVER's Apprenticeship and Traineeship Collection for the years 2002 to 2018.

Here 'traditional trades' are classified as those that fall within the ANZSCO[2] sub-major group 3 occupations, according to our classification below, although there may well be some other traditional trades (for example, dental technicians)[3] that are not part of the ANZSCO sub-major group 3 list.

We have compiled our own scope for the trades that we judge to represent the traditional trades. To do this we have used, as guidance, information on the prescribed vocational education and training qualifications for Western Australia.[4] This information is useful

1 In Australia there are formal, documented contractual obligations between apprentices and their employers called contracts of training. The contract of training is between the employer and the apprentice (or his or her guardian if the apprentice is not of legal age). The contract stipulates the obligations in practice for the employer and for the apprentice.

2 Australian and New Zealand Standard Classification of Occupations.

3 Dental technician in Western Australia is done via an apprenticeship.

4 Western Australian Vocational Education and Training Act 1996.

because it spells out whether the training contract is for an apprenticeship or traineeship. We have chosen those trades that are associated with an apprenticeship only.

We have come up with a list of eight groups of traditional trades: building; electrotechnology and telecommunications; engineering; food trades; motor mechanic, repairer and vehicle builder trades; other traditional trades; precision trades; and skilled animal and horticultural workers.

A full list of the trades that fall under these classifications appears in appendix B.

A number of data issues need to be clarified in relation to our identification of these trades as the traditional trades. These concern the practice of back-casting the data to achieve a consistent reporting frame for trend data. Despite the names of the traditional trades undoubtedly referring us back to earlier occupational classifications, some of the activities of these trades are likely to have evolved in later years to encompass the technologies and technological changes occurring across industry sectors and occupation.

About the overall three phases of this study

This overall study is relevant to current government and industry concerns over the need to raise levels of apprenticeship training. Much has been written about the success of apprenticeship programs in developing workplace skills and their effectiveness as transition pathways from school to work.

This overall study of traditional trade apprenticeships has three phases:

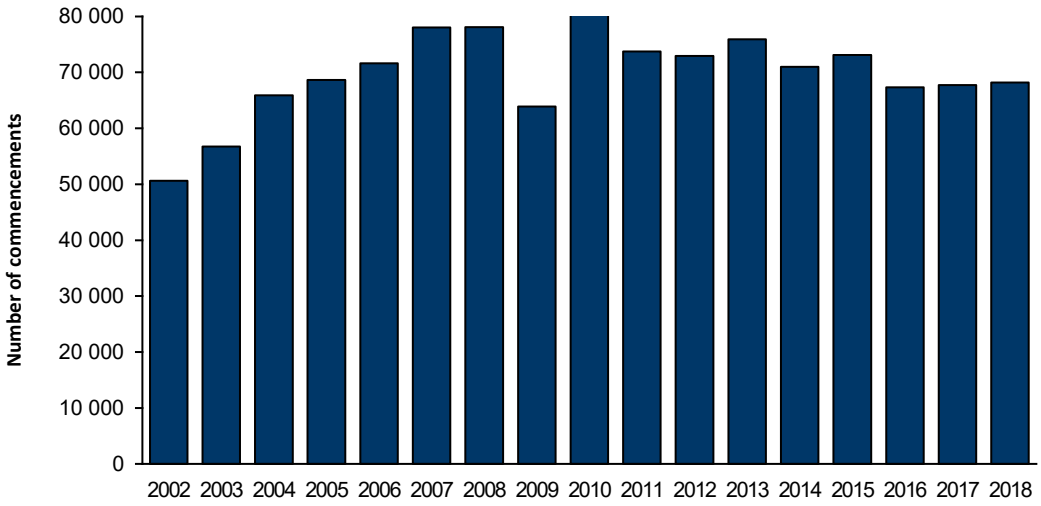
- Phase 1 provides a review of relevant literature and an analysis of historical trends in training activity.
- Phase 2 involves consultations with relevant participants in the system. Few studies have investigated the benefits for the apprentices themselves, both the tangible or extrinsic benefits, such as those related to pay and working conditions, and the social and psychological benefits of apprenticeship training, for example, the development of self-confidence, self-efficacy and social identity in apprentices. In this phase of the study we investigate these benefits. In addition, little investigation has been conducted on how the apprenticeship forms of work-based training can be used to upgrade the skills required for evolving occupations and jobs and advances in technology. This phase investigates this aspect.
- Phase 3 comprises an analysis of relevant findings from the national 2019 Apprentice and Trainee Experience and Destinations Survey and participant consultations.

A complete list of research aims and questions for all three phases appears in appendix A.

Patterns of traditional trade commencements and completions

In 2002 there were 50 615 commencements for apprentices in the traditional trades. In 2009, during the Global Financial Crisis, numbers dipped significantly from the preceding two years, recovering in 2010 to around 80 000. For the following five years they fluctuated between 71 000 and 76 000. Since 2016 they have stabilised at around 68 000 (figure 1).

Figure 1 Number of commencements in the traditional trades, 2002–18

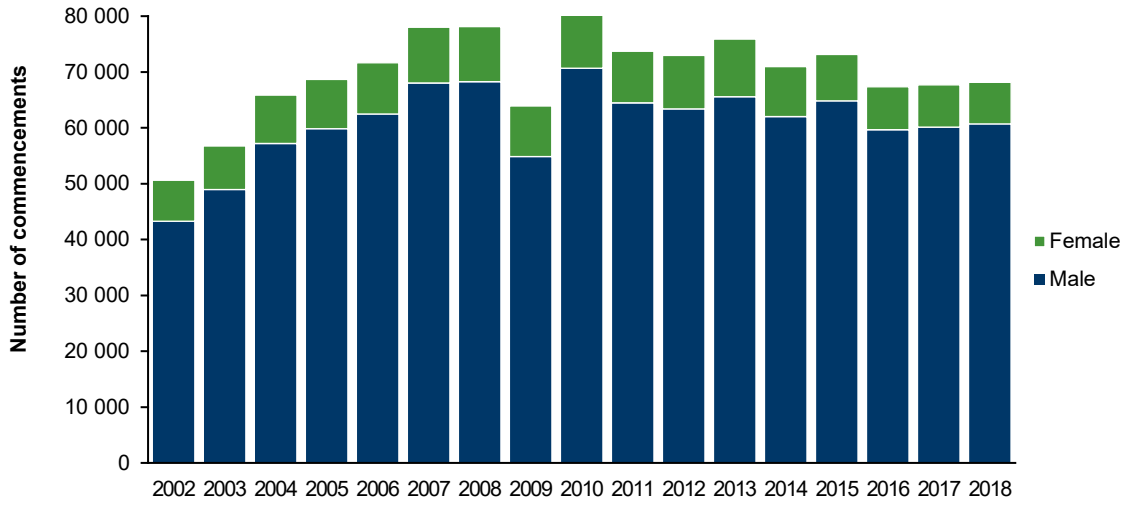


Source: NCVER Apprentice and Trainee Collection, 2002–18, unpublished data.

Participation of women in the traditional trades

Increased participation by women in the traditional trades has long been a focus of industry and government concern. Figure 2 demonstrates a gender difference in total commencements for the period, with males outnumbering females. Gender differences are also evident in the declining commencement levels from 2012, when commencements began to decline for both males and females. Over this period, the decline was far greater for females than males. Commencements for males from 2012 dropped by just 4.2%, while those for females fell by 22.2%.

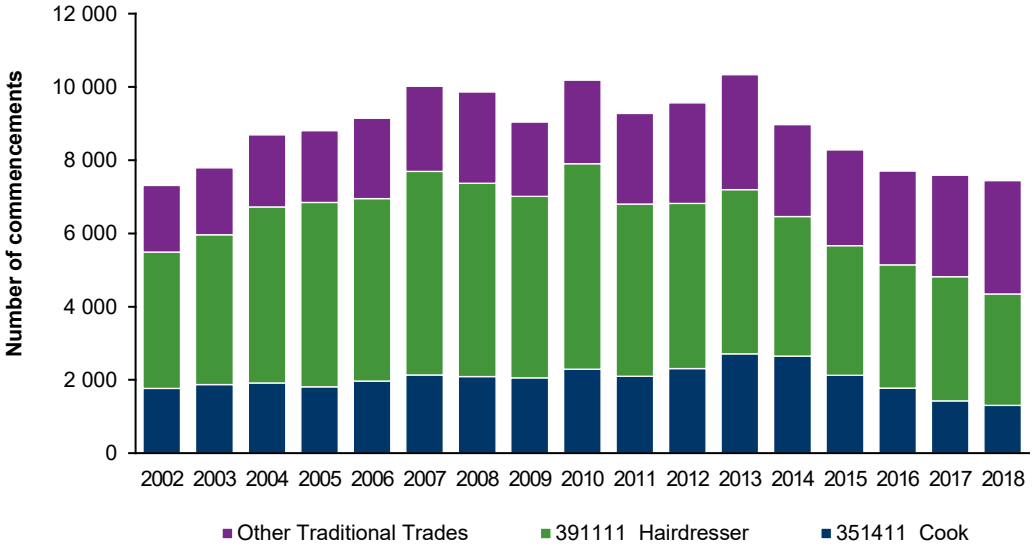
Figure 2 Number of male and female commencements in traditional trades, 2002–18



Source: NCVER Apprentice and Trainee Collection, 2002–18, unpublished data.

We look more closely at the female commencements, concentrating on two trades (cooks and hairdressers) with a historically high participation among females, and find that they account for a great majority of the traditional trade take-up among female apprentices (figure 3).

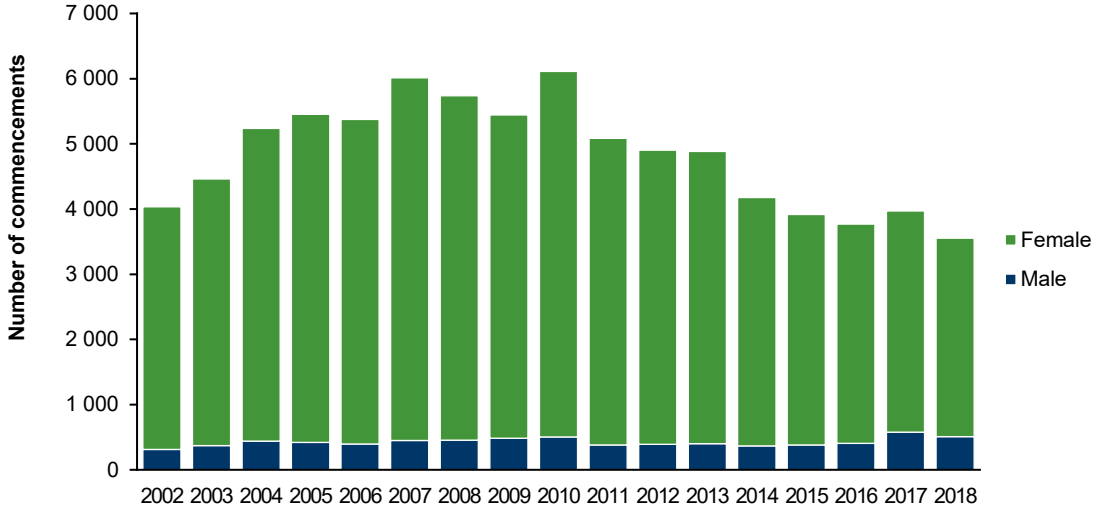
Figure 3 Number of female commencements in traditional trades of hairdressing and cooking, 2002–18



Source: NCVER Apprentice and Trainee Collection, 2002–18, unpublished data.

We also find that commencements between 2002 and 2018 continue to show that females outnumber males for hairdressing apprentices (figure 4). Between 2012 and 2018 commencements for hairdressing apprentices declined by 28%, with declines in females (48%) and increases in males (24%). However, males represented only a fraction of the total group, both in 2012 (8%) and in 2018 (14%).

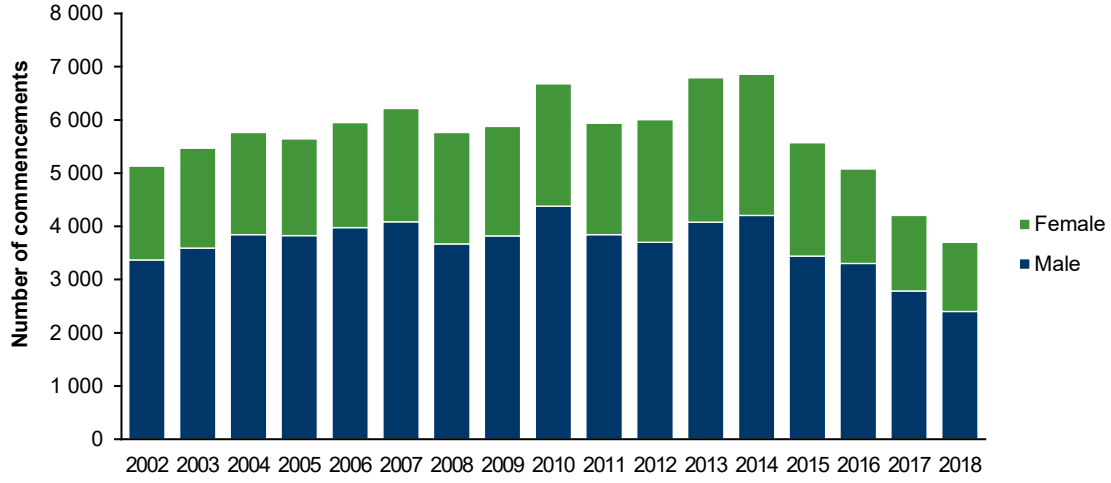
Figure 4 Number of male and female hairdresser commencements, 2002–18



Source: NCVER Apprentice and Trainee Collection, 2002–18, unpublished data.

Historically, the cooking trade has been popular among females, even though it has been dominated by males (figure 5). Between 2012 and 2018, however, the shares for both male and female cooks declined, more so for females than males (44% and 35% respectively).

Figure 5 The number of commencements for male and female cooks, 2002–18

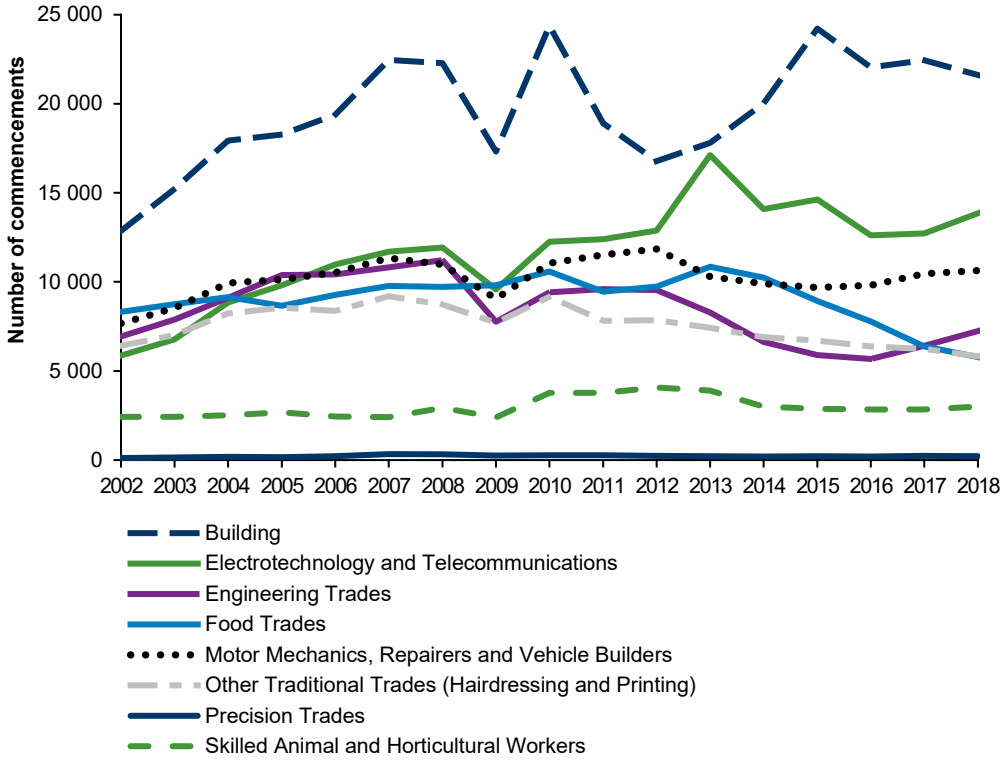


Source: NCVER Apprentice and Trainee Collection, 2002–18, unpublished data.

Occupational differences

Commencements across traditional trade occupations typically work on cycles of economic growth and decline. In a period of economic growth, jobs and projects are more plentiful, and employers may feel more confident about taking on apprentices, meaning that commencements increase. In a period of economic decline, they become more hesitant to engage apprentices and commencements decline. In Australia, the trades that stand most to gain during periods of economic growth have historically been the building and electrotechnology trades (figure 6). These trades also experience the steepest declines when the economy contracts.

Figure 6 Traditional trade commencements by trade occupations, Australia, 2002–18



Source: NCVER Apprentice and Trainee Collection, 2002–18, unpublished data.

Completion rates

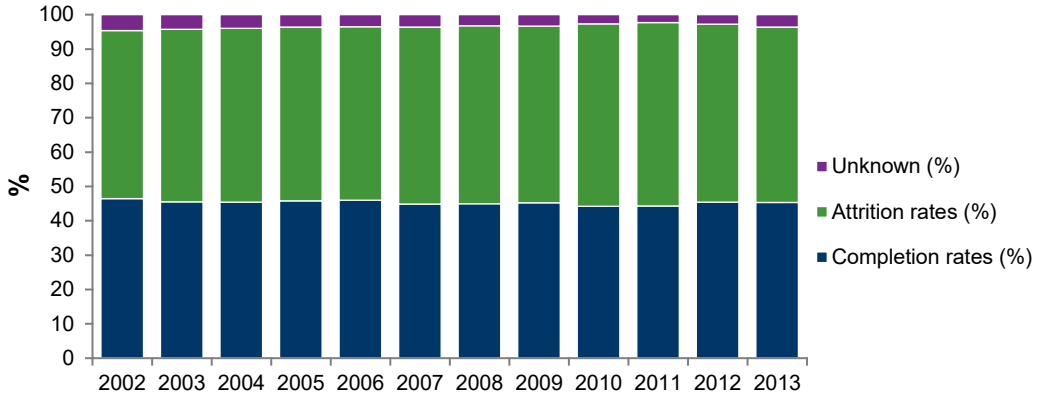
No investigation of apprenticeships can ignore the issue of completion rates.[5] This issue is of special interest in times of economic buoyancy, when skill shortages affect a range of industries and occupations. In contrast, during poor economic conditions, the issues relate to providing opportunities for apprentices to complete their apprenticeships when little work is available.

Recent rates of completions and attrition

Contracts of training for the trades (especially traditional trades) typically take around four years to complete. Between 2002 and 2013 the completion rates for traditional trade contracts of training remained relatively stable and ranged between 44.2% and 46.4% (figure 7).

5 Refers to the proportion of apprentices and trainees who have commenced a contract in a given period and who have since completed the requirements of training for that contract. For terms see <https://www.ncver.edu.au/__data/assets/pdf_file/0036/6481935/A-and-T-rates-Terms_and_definitions_2018.pdf>.

Figure 7 Contract completion, attrition and ongoing or unknown rates for traditional trades commencements 2002–13, %



Notes: Attrition rate refers to the proportion of apprentices and trainees who have commenced a contract in a given period and who have since cancelled or withdrawn from that contract; completion rate refers to the proportion of apprentices and trainees who have commenced a contract in a given period and who have since completed the requirements of training for that contract; unknown refers to the proportion of apprentices and trainees who commenced a contract in a given period and who have not yet completed the requirements of training for that contract or cancelled or withdrawn from that contract (see note 5, above).

Source: NCVER Apprentice and Trainee Collection, 2002–18, unpublished data.

Individuals may complete their apprenticeships under more than one training contract in instances where they decide to change their employer or take a break from the training. When we examine NCVER published data on individual and contract completion rates for occupations in the ANZSCO sub-major group of technician and trade workers who started their apprenticeship in 2013 the individual completion rates for technician and trade workers overall was 11.6% greater than it was for contract-completion rates. Higher individual completion rates than contract-completion rates may indicate higher apprentice mobility between employers, while lower differences may indicate that apprentices generally stay with their first employer.[6]

The following data compares individual completion rates with contract completion rates for the following groups of trades.

- automotive and engineering trades workers (61.0% vs 50.5% respectively)
- construction trades workers (54.7% vs 41.2% respectively)
- electrotechnology and telecommunications trades workers (70.1% vs 56.1% respectively)
- food trades workers (46.1% vs 34.9% respectively)
- skilled animal and horticultural workers (51.5% vs 46.6% respectively)
- hairdressers (50.6% vs 34.8% respectively)
- printing trades workers (66.8% vs 65.0% respectively)
- textile, clothing and footwear trades workers (50.5% vs 44.4% respectively)
- wood trades workers (44.1% vs 36.8 respectively)
- miscellaneous trades (56.2 vs 54.9% respectively).[7]

6 It may also indicate that there are fewer firms to move to.

7 Includes technicians and trade workers.

Jurisdictional differences

The various Australian states and territories all have separate, but largely similar, legislation that governs the implementation of their apprenticeship and traineeship systems. The term 'Australian Apprenticeships' has been applied to all training contracts, irrespective of whether they relate to traditional trade apprenticeships, non-trade apprenticeships or traineeships (generally of shorter duration). Nevertheless, each state and territory has developed its own classification or register to indicate which are defined as trade apprenticeships and which are defined as traineeships. This means that a trade or a non-trade (that is, a declared vocation) in one state may not be similarly defined in another state. For brevity, we report on the differences between a trade and non-trade apprenticeship in two states: South Australia and Western Australia.

South Australia

- In South Australia the Training and Skills Development Act 2008[8] is the legislative basis for apprenticeships and traineeships. It also underpins the establishment of the Training and Skills Commission, the body that makes the following distinctions between a trade and a declared vocation in that state:

> A trade means an occupation declared under section 6 to be a trade for the purposes of this Act; a trade occupation is usually achieved through an apprenticeship, integrating on-the-job training with an employer and off-the-job training with a registered training organisation. In South Australia, apprenticeships must be undertaken through training contracts, which are underpinned by bona fide industrial arrangements. Apprenticeships commonly lead to a nationally recognised Certificate III or IV level qualification.
>
> A declared vocation means an occupation declared under section 6 to be a declared vocation for the purposes of this Act; a declared vocation is a non-trade occupation, and may be achieved through a traineeship, involving fully on-the-job training by an employer or the integration of on-the-job training with an employer and off-the-job training with a registered training organisation. In South Australia, traineeships undertaken though a training contract must be underpinned by bona fide industrial arrangements. Traineeships lead to a wide range of nationally recognised qualifications, from Certificate I to Diploma level.
>
> (South Australian Training and Skills Commission 2010, p.2)

The Traineeship and Apprenticeship Pathways Schedule sets out the apprenticeship and traineeship pathways established by the Training and Skills Commission to link declared trades and vocations to relevant Australian Qualifications Framework (AQF) qualifications.[9] This schedule presents the occupational title that will be on the trade certificate or completion of training contract letter, issued by the Training and Skills Commission (of South Australia) and the Department of Innovation and Skills. The schedule also makes a

8 <https://www.legislation.sa.gov.au/LZ/C/A/TRAINING%20AND%20SKILLS%20DEVELOPMENT%20ACT%202008/CURRENT/2008.30.AUTH.PDF>.

9 <http://www.tasc.sa.gov.au/Guidelines/Apprenticeships-traineeships>.

distinction between an apprentice and a trainee, based on the title of the training contract. (T denotes a trade apprenticeship; and DV a declared vocation, that is, a traineeship.) In the main, longer durations tend to apply to trade apprenticeships (generally about 48 months). However, some declared vocations (traineeships) are also of the same length.[10] Although most of the traineeships are of between 12 and 24 months duration, there are substantial numbers that are of 36 months duration.

Western Australia

The Western Australian Department of Training and Workforce Development also publishes a register that lists the prescribed vocational qualifications that must be undertaken within a contract of training. As noted earlier, we used this register as a source document in our identification of the traditional trade apprenticeships for this study.

Typically, domestic students in Western Australia can gain a traditional trade qualification by undertaking an apprenticeship; that is, by 'fulfilling the obligations of an apprentice under a training contract'. In all but one case the title on the training contract says apprentice.[11] International students, however, are able to obtain the trade qualification via institutional training.

Industry incentives and training levies

Most states and territories have established specific levies (underpinned by legislation) to raise funds from businesses, which can then be reinvested into industry training. One of the key industries that makes use of training levies is the construction industry. In the main, an industry training board (or its equivalent) will administer the funds raised through levies. The various approaches used across the different states are described below:

- **Queensland**: Construction Skills Queensland administers the statutory training levy paid by businesses that have been awarded a project over a certain threshold. The businesses pay 0.1% of the total value of the project.[12]
- **South Australia**: The Construction Industry Training Fund levy is collected on building and construction activity in the state. The levy is set at .25% of the contract price for construction over $400 000 (including GST). In all other cases it is .25% of the estimated reasonable market price of the work.[13]

10 These include traineeships with occupational titles such as advanced technical specialist (refrigeration and air conditioning); advanced technical specialist (computer technology); animal technician; aquaculture technician; automotive maintenance technician; aviation maintenance manager (avionics); aviation maintenance manager (mechanics); building associate; building construction supervisor; building estimator; building site supervisor; carton manufacturing and corrugating operations; and clerical processing (office administration).

11 <https://www.dtwd.wa.gov.au/sites/default/files/uploads/class-a-b-register-dec2018.pdf>.

12 <https://csq.org.au/about-us>.

13 <https://citb.org.au/pay-a-levy/about-the-levy>.

- **Western Australia**: for all builds over the value of $20 000, the Western Australian Construction Training Fund applies a levy set at 0.2% of the value of the construction. There is no cap on the value of the project.[14]
- **Tasmania**: the Tasmanian Construction Industry Training Fund levy is set at 0.2% of the value of construction work costing more than $20 000.[15]
- **In all states and territories except the Northern Territory**: the Australian Brick and Block Foundation (ABBTF)[16] has been established as a voluntary levy to address skill shortages. The levy is calculated on the delivery of specified units of bricks or concrete masonry. For clay bricks it is calculated at $1.50 on a unit of 1000 bricks delivered, while on concrete masonry it is calculated at 7.5c per square metre. In Western Australia double-height clay bricks will attract a levy of $3.00 per 1000 bricks. There is no levy on the sale of concrete masonry. The Australian Brick and Block Foundation distributes incentives for employers to take on apprentices. There is an ABBTF Brick-start Subsidy for employers in all states and territories except the Northern Territory (presumably because this jurisdiction has decided not to participate). This provides up to $3000 over three years for employers employing a bricklaying apprentice. On satisfactory completion of each of the first three years of the apprenticeship, a sum of $1000 is paid. From July 2015, employers received a further subsidy (of $2000) if the apprentice was female, payable on completion of the first year of the apprenticeship. There are also subsidies of $2000 (on completion of first year) for employers employing an adult apprentice (that is, 21 to 24-year-olds).

State and territory patterns of commencements

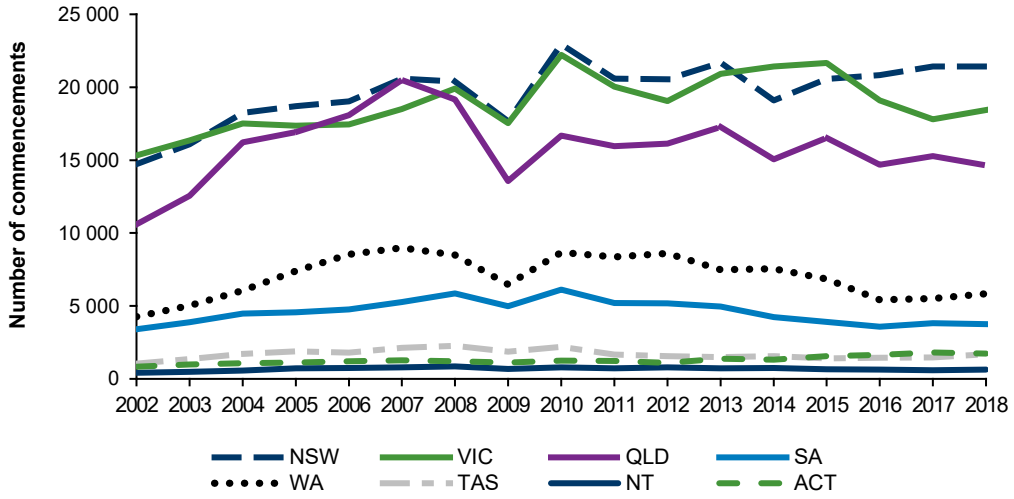
Across jurisdictions (figure 8) we see the same general pattern of commencements in the traditional trades; that is, a drop in 2009, a pick-up after that, and for some states, fluctuating patterns from 2012 onwards. Policy changes on incentives and other key reforms across jurisdictions appear to have had a roughly similar effect on traditional trade commencements.

14 Specific criteria apply to the construction work in the resources sector. <https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_98_homepage.html>; <https://ctf.wa.gov.au/wp-content/uploads/2018/10/V10_FAQ_Guidelines.pdf>; <https://ctf.wa.gov.au/>.

15 <https://www.tbcitb.com.au/levy/faqs/>.

16 <https://www.becomeabricklayer.com.au/abbtf/abbtf-funding/>.

Figure 8 Number of traditional trade apprenticeship commencements in 12 months ending 30 June by state and territory, 2002–18



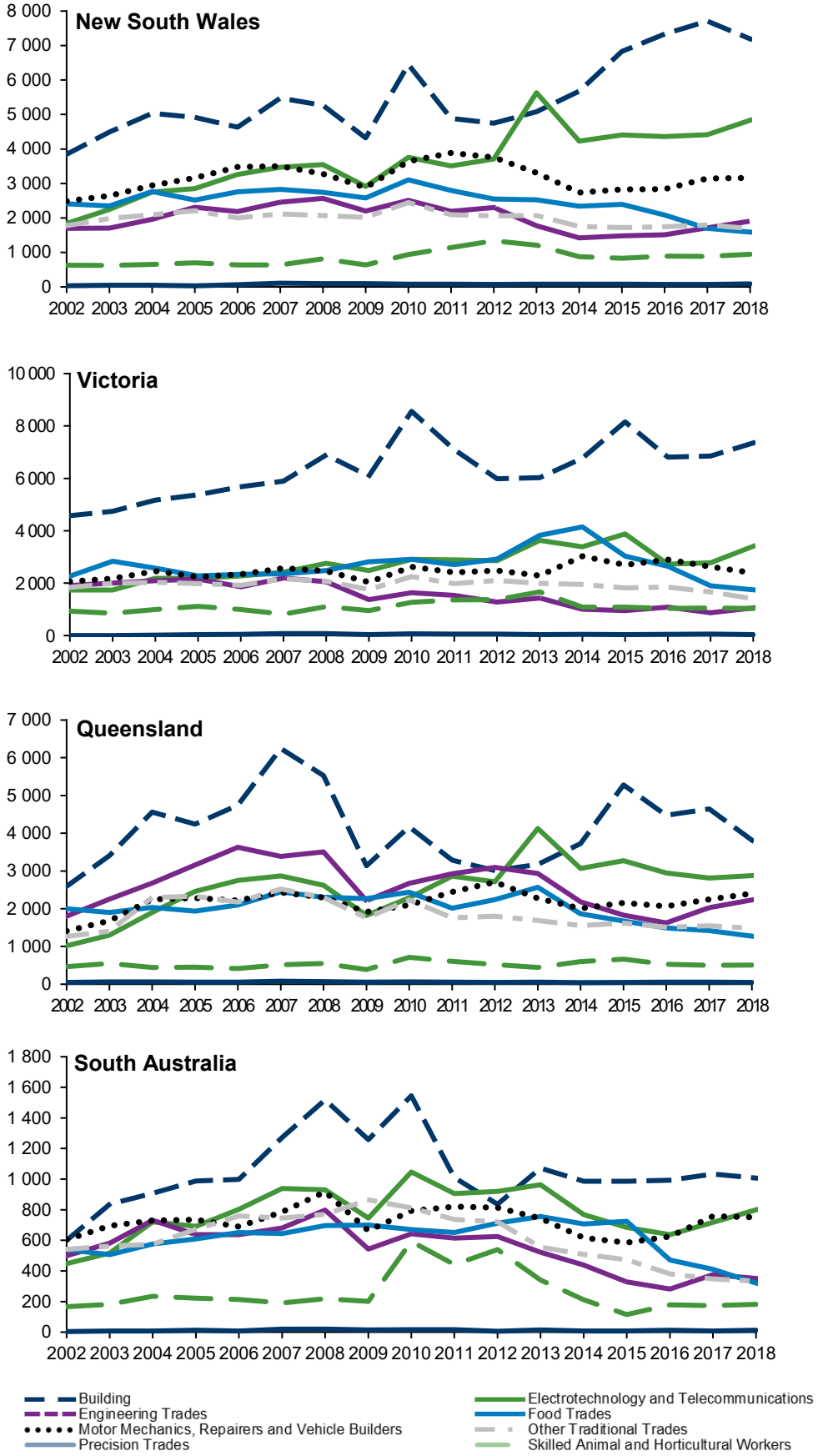
Source: NCVER Apprentice and Trainee Collection, 2002–18, unpublished data.

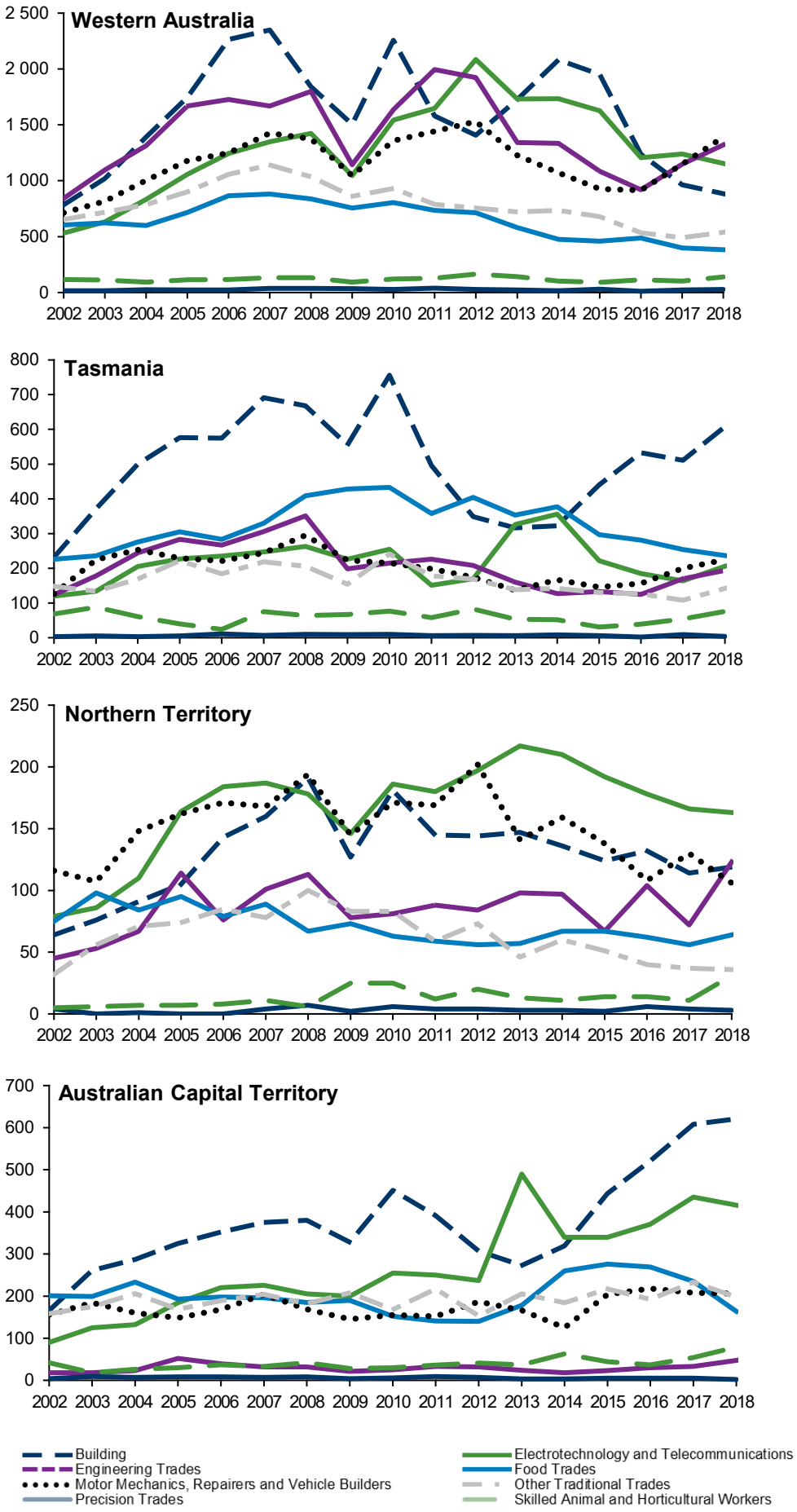
In figure 9, we track the fluctuations in commencements for each of the different traditional trades across jurisdictions. For traditional trades, commencements generally fell in line with the financial crisis in 2009 and mostly picked up in 2010 when a range of incentives were applied for employers to take on apprentices.

In focusing on the two largest trades (building, and electrotechnology and telecommunications), we see a sharp rise in building trade commencements in 2010 (across all states and territories). This is generally followed by a fall in commencements for the next few years, until 2014 or 2015 for most, when they pick up again and then begin to fall or stabilise. In Western Australia they keep falling from 2015 onwards, while in Queensland commencements keep falling from 2016 onwards. After a peak in 2010, commencements in South Australia drop until 2012, when they pick up; they have remained relatively stable in the years that follow.

In the electrotechnology and telecommunications trades we find that there is another boost to commencements in 2013 for all states and territories, with the exception of Western Australia, where the peak was experienced in 2012 and starts to fall in 2013.

Figure 9 Number of commencements of traditional trade apprenticeships across states and territories, 2002–18





Source: NCVER Apprentice and Trainee Collection, 2002–18, unpublished data.

Government financial incentives

Since the 1960s, the Australian Government and state and territory governments have demonstrated an enduring belief in the ability of incentives for employers and apprentices to encourage apprenticeship training. In 1962, the Country Apprenticeship Scheme was introduced in a bid to help stem the flow of country apprentices to the city. In 1973 this was followed by the Commonwealth's National Apprentice Assistance Scheme (NAAS), which provided financial assistance to employers to help meet the costs associated with apprentices having to leave work to attend technical education. The rate was based on that used in Victoria for first-year apprentice machinists. Employers were eligible for the subsidy if their ratio of apprentices to tradesmen was 1:4 or greater (Australian Government 1976). In 1977, the NAAS was replaced by the Commonwealth Rebate for Apprentices Full-time Training (CRAFT) Scheme. Through this scheme the federal government made contributions, by means of taxation incentives, to help meet the cost of apprentice training, mainly for commencements and completions. In 1996, these taxation exemptions were removed. CRAFT had on the whole applied to apprenticeships in the trades, but in 1998 it was replaced by the New Apprenticeship Incentives Program to enable employer incentives to apply to traineeships in other occupations (Australian Government 1997-1998).

Incentives for employers and apprentices

Where apprentices in medieval times were fed, clothed and sheltered by their masters, today there is also a general commitment from federal and state and territory governments to oversee the wellbeing of apprentices. This is done by providing them with some support (often in the form of financial allowances) to help them pursue and persist with their training. Allowances have also been made available for apprentices to help them buy tools for their trade and pay for travel and accommodation expenses when attending training away from home. In more recent times eligible apprentices have been able to access the Trade Support Loans scheme over the duration of their apprenticeship. A 20% discount applies to the loan on completion of the apprenticeship. The bulk of government financial incentives, however, are for employers, where the aim is to encourage employers to take on and support apprentices to the completion of their qualification. [17]

In addition to incentives and allowances, state and territories have also supported their traditional trade apprenticeship systems by consistently according a high priority and value on access to, and pricing of, subsidies for trade training providers under user choice arrangements.

Although there have been numerous changes to the employer incentives scheme over the years, the employer incentives that apply to the traditional trades have remained relatively stable, mainly because they are aligned with the trades identified with the National Skills

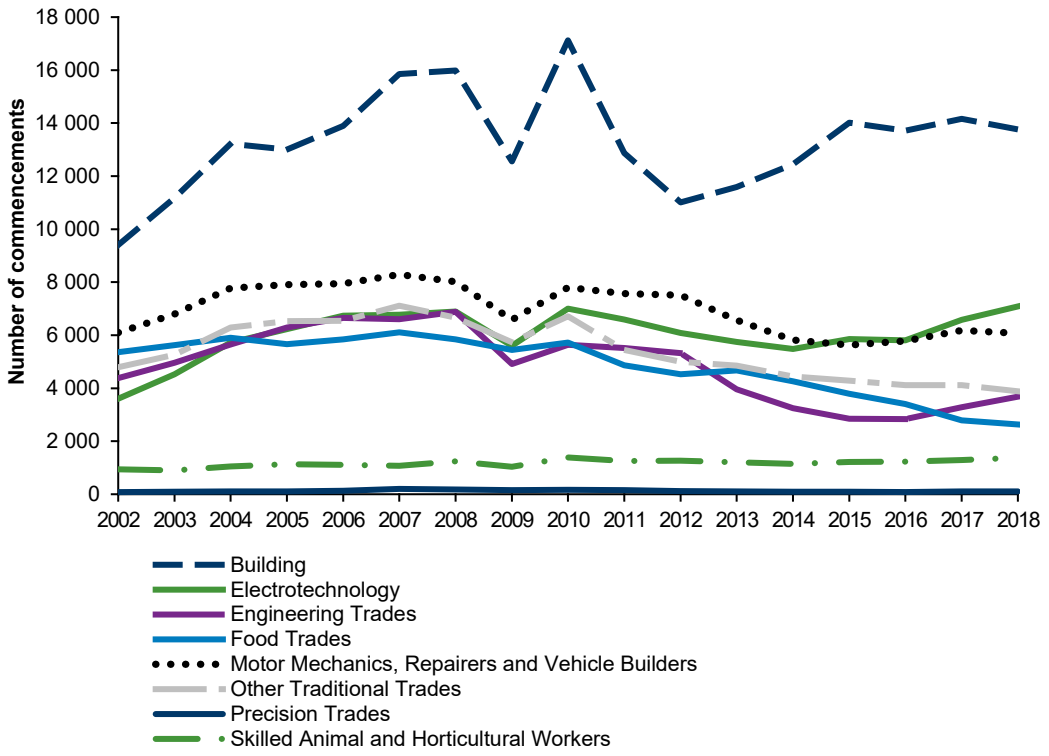
17 More information about the incentives being made available by each of the jurisdictions for employers and apprentices can be found at <http://www.apprenticeshipsupport.com.au/Employers/Incentives-and-Funding>.

Needs List. However, the value of the base or standard incentives in real terms has declined since 2012.

Over the last decade or so, the nature of government employer incentive schemes at national and jurisdictional level have been impacted by the effects of the 2007—09 Global Financial Crisis and occupational skill shortages in traditional trades as well as emerging and growth industries. The aim for the traditional trade incentives throughout has been to encourage commencement, retention and completion of apprenticeships by recalibrating incentives to apply to qualifications leading to occupations in areas of national skill shortage (as listed on the National Skill Needs List, current list appears in appendix D).[18]

A Kick Start Bonus was initiated between December 2009 and February 2010 (Australian Government 2009) to encourage employers to take on apprentices in the traditional trades (as listed on the National Skills Needs List), and between December 2012 and April 2013 for employers of apprentices in the building and construction and engineering trades (Energy Skills Queensland 2013). We find a spike in commencements (especially for 15 to 19-year-olds, following the application of the Kick Start Bonus on both of these occasions (figure 10).

Figure 10 Number of apprenticeship commencements for traditional trades for 15 to 19-year-olds, 2002–18

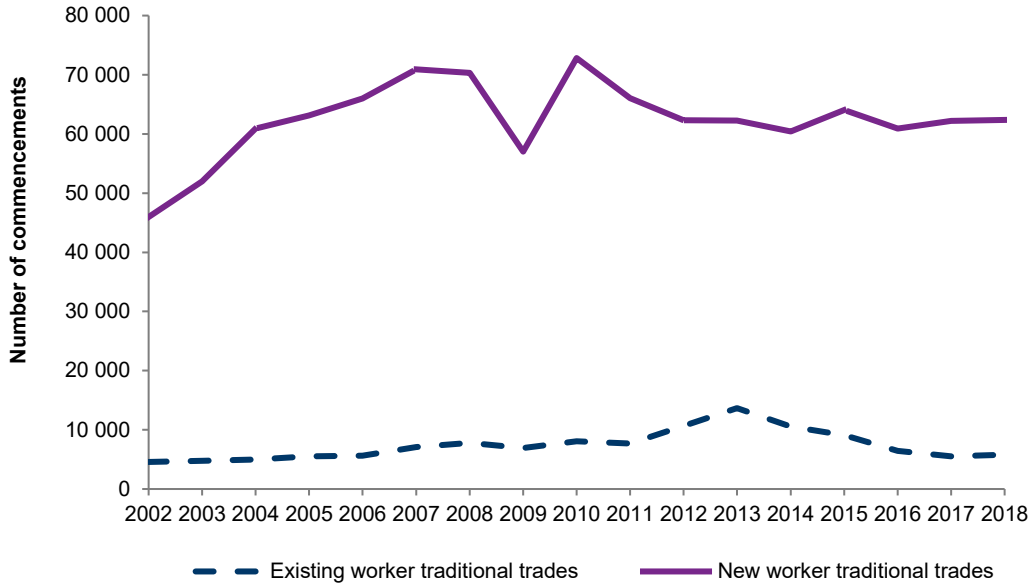


Source: NCVER Apprentice and Trainee Collection, 2002–18, unpublished data.

18 And non-NSNL priority occupations (aged care workers, childcare workers, disability care workers and enrolled nurses).

Prior to 2012 all apprenticeship commencements (whether for new or existing workers) attracted the same employer incentives. From 2012 incentives were divided into those for 'new workers' and those for 'existing workers' (Australian Government 2012). Both categories had to be undertaking a certificate III or IV qualification to attract an incentive. Because most of the traditional trades were on the NSNL, the incentive arrangements for these trades (for new or existing workers) remained relatively stable. Since peaking in 2010 the number of commencements for new worker apprentices in the traditional trades have declined. They have remained at above 60 000 apprentices, however, and have ranged between 60 400 and 66 000. The number of commencements for existing worker apprentices in the traditional trades peaked in 2013 at just over 13, 600; five years later they had more than halved (figure 11).

Figure 11 Apprenticeship commencements for new and existing workers in the traditional trades, 2002–18



Source: NCVER Apprentice and Trainee Collection, 2002–18, unpublished data.

Changes to employer and apprentice incentives in 2018, 2019 and 2020

The years 2018 and 2019 saw similar types of employer incentives as in 2011, 2012, 2013 and 2015 (see appendix C). The commencement, recommencement and completion incentives for employers continue to be categorised according to 'new worker', 'existing worker', level of qualification and, in terms of the traditional trades, whether the qualification led to occupations on the National Skill Needs List (Australian Government 2019). As already noted, these changes have not had any great impacts on the traditional trades as most of these trades appear on the NSNL.

Employer incentives are available for commencement and completions at any qualification level for mature-age workers (that is those aged 45 years and over), and school-based apprentices. A range of other employer incentives aimed at providing support for employers to take on apprentices from certain groups and in certain areas continue to be available. These include wage assistance (per week) for full-time and part-time apprentices with a disability undertaking any level of qualification, and support for adult apprentices and for

apprentices in rural and regional skill shortage areas undertaking certificate III/IV qualifications.

In addition to these employer incentives, benefits and incentives continue to be available for the apprentices themselves, including a living-away-from-home allowance, access to Trade Support Loans for those undertaking certificate III and IV qualifications and for those in rural and regional locations undertaking certificate III and IV qualifications in agriculture and certificate II qualifications in agriculture and horticulture. As in 2011, access to Youth Allowance, Austudy or ABSTUDY benefits is ongoing.

Registered training organisations will also continue to attract an incentive for the services they provide in off-the-job training. This is the off-the-job tutorial, mentor and interpreter assistance program, an incentive that applies to services provided for any training and any level of qualification.

From 1 July 2019 eligible apprentices and their employers can also apply for an Additional Identified Skills Shortage Payment for 10 traditional trades (carpenters and joiners, plasterers, plumbers, bakers and pastrycooks, hairdressers, vehicle painters, air-conditioning and refrigeration mechanics, wall and floor tilers, bricklayers and stonemasons, and arborists)[19]. Eligible apprentices will receive $1000 at 12 months after commencement and an additional $1000 on completion of the apprenticeship. Eligible employers of such apprentices will also receive $2000 at the 12-month point from commencement and an additional $2000 at the completion of the apprenticeship. These incentives are in addition to the Trade Support Loans and the standard incentives under the Australian incentives payment. To be considered eligible for these payments, apprentices must be new to the employer and be undertaking a certificate III or IV qualification.

Employers may also be able to access a 'Support for Adult Apprentices (SAAA)' payment if the apprentice is undertaking a full-time or part-time certificate III or IV qualification that leads to an occupation listed on the NSNL at the date of commencement or re-commencement and is receiving an 'actual wage' at this date which is equal or greater than the National Minimum Wage, as identified by the Fair Work Commissioner. An adult apprentice is someone who is aged 21 years or over when commencement was on or after 1 July 2019 or aged 25 years or older if commencement was prior to 1 July 2019.

Additional support is provided to Australian apprentices with a disability or who become disabled during the apprenticeship. Help is also available for employers to purchase work-related modifications, equipment, assistance and services.

An employer incentive in the form of an Apprentice Wage Subsidy[20] is currently being trialled with employers who sign up an apprentice from 1 January 2019, until such time as 1630 apprentices have signed up. The apprentice must be undertaking a full-time certificate III or IV qualification that leads to an occupation on the NSNL in a rural or regional workplace. Apprentices must be employed under the relevant award. An employer can only

19 <https://austapprent.govcms.gov.au/sites/default/files/2019-06/AISS%20Final.pdf>.

20 <https://austapprent.govcms.gov.au/sites/default/files/2019-06/AAWS%201%20July%20Final.pdf>.

receive this subsidy for one apprentice. In addition, the employer must meet all other eligibility requirements.

Some more changes have been announced to commence in July 2020 under a re-badged program called the Incentives for Australian Apprenticeships (IAA) program. The number of payment categories have been halved and categorised as base incentives or additional incentives. Apprentices must be undertaking certificate III or higher qualifications to attract the incentives. The minimum payment an employer may receive from July 1 2020 for hiring an apprentice in the traditional trades is $4000; when incentives for specific target groups and payments from other support programs are added, the maximum payment an employer may gain for hiring an apprentice in the traditional trades rises to $15 000.

Apprenticeship Reform Advisory Group

In 2015 the Apprenticeship Reform Advisory Group (ARAG)[21] was set up by the Minister for Education and Training of the time (Australian Government 2016). Among a range of suggestions for the restructuring of apprenticeships was a recommendation for the retention of the system of financial incentives, albeit modified to include changes on the timing of incentive payments. In a bid to increase apprentice numbers, the group made recommendations for investigations into other models of apprenticeship training, as well as arguing for a renewed focus on pre-apprenticeships and pre-vocational training, both to boost apprenticeship numbers (especially for disengaged and at-risk youth) and to provide formal and systemic programs and pathways to develop work-readiness skills in students. As well as recommending the use of brokers to facilitate commencements in these programs, the group also suggested that pre-employment, pre-vocational and pre-apprenticeship programs be included in work-based welfare programs as an alternative to Work for the Dole programs. The development of effective and appropriate pathways for these programs was to be conducted in consultation with industry.

Skilling Australians Fund

In the 2017–18 Budget, the Australian Government announced the Skilling Australians Fund (the Fund) to provide ongoing funding to support the training of Australians, prioritised towards apprenticeships and traineeships (apprenticeships) in priority industries and occupations in demand. The Fund is to bring a renewed focus on apprenticeships and boost the number of people who choose and succeed in this pathway, while helping businesses to gain the skilled workers they need to drive innovation and growth. From 2018–19, the Fund is managed through a four-year project based National Partnership with six participating states and territories (the states). Outcomes under the National Partnership are managed through state-based bilateral schedules.

21 <https://www.voced.edu.au/content/ngv%3A73811>.

Learning from overseas

In looking for ways to improve their systems, many countries examine policies and practices implemented overseas. However, it is important to note that, although some approaches can be imported and replicated with relative ease, it is difficult to transplant whole systems that work in one institutional context to another institutional framework. Educational systems have not evolved in a vacuum and reflect country- and region-specific cultural, historical and economic conditions. Although Australia can gain insights from international systems to inform its apprenticeship system, it is important to highlight one key difference that could make implementation in Australia more complicated. In many overseas VET systems, the apprenticeship system occurs at the secondary school level, in contrast to Australia, where the greatest proportion of apprenticeship training happens post-school.

Internationally, and for some time, the exemplar of effective apprenticeship approaches has been the dual system of apprenticeship training popular in Europe, including in Germany, Luxembourg, Switzerland, Denmark and Austria.[22] We concentrate on these, with additional detail provided in appendix E on Germany, Switzerland and Luxembourg.

Recent country developments

Over the last five years, Germany, Luxembourg, Switzerland, Denmark and Austria[23] have experienced demographic changes and declining numbers of students opting to go into or stay in apprenticeships. In response, the governments from these countries have all implemented programs for early school leavers, as well as programs designed to integrate migrant workers and refugees into the apprenticeship system and in education and training overall. There has also been an increased focus on ensuring that students have the basic skills to prepare them to make an effective transition into the dual systems. For some, namely, Switzerland and Germany, there has been an increased focus on internationalisation, both in terms of promoting their specific brand of dual-track apprenticeships and for participating in the international market for VET students. There are also arrangements for apprentices to undertake part of their training 'offshore' — in other EU countries — and to obtain credits for this training.

- **Germany** has experienced lower numbers of school graduates (due to demographic changes) but the country has also witnessed a declining interest in the dual system, especially from females. Increased demand for training places has been driven by increased interest by males and by refugees. Germany also wants to encourage support for the VET pathways and to have them considered equivalent to higher education pathways, in terms of entry into the labour market. The focus in Germany is on

22 Recently these countries have developed a searchable online tool (the Apprenticeship Toolbox) to promote dual-track apprenticeship pathways and to inform ongoing policy development and practice for countries with such pathways already in place and other countries that would like to implement the approach. The toolbox for each country provides brief outlines of the economic context, the apprenticeship system, the education and VET systems, and recent development over the last five years (European Union, Erasmus, <https://www.apprenticeship-toolbox.eu/>, viewed October 2018).

23 <https://www.apprenticeship-toolbox.eu/>

integrating refugees into the system, promoting internationalisation, and financing further education programs. Evaluating the Vocational Training Act has also been prioritised (<https://www.apprenticeship-toolbox.eu/Germany>).

  - The shared responsibility between Federal and Länder governments and the social partners has also made it easier for the system to remain current with emerging industries, advances in technologies, and the skills required for changing occupations. For example, the Federal Institute for Vocational Education and Training (BIBB) and the Federal Ministry of Education and Research (BMBF) and companies have implemented a new initiative, one designed to keep pace with recent technological changes. The VET 4.0 initiative for initial and continuing VET aims to ensure that the training system adapts to new technologies (specifically those associated with Industry 4.0 and Internet of Things). The aim of the initiative is to ensure timely and continuous dialogue between government, researchers, policy-makers and practitioners, 'to identify changing demands on the qualifications of skilled personnel and new types of qualifications'.

    The changes have regulatory consequences for both initial vocational education and further training. Companies will be engaged in pilot projects. A key consideration is the need for IT skills for entry into vocational education across the occupations, as well as a renewed and increased focus on monitoring the industrial landscape to identify the skills and qualifications required to operate in the new environment (Thiele 2017).

- **Luxembourg:** changes have been made to the assessment requirements for completing that country's Vocational Capacity Certificate. Instead of having to complete both an intermediate and a final integration project, apprentices are now required to complete only the final integration project. Changes have also been introduced to the system of learner progression through modules for their year levels. For those learners who have not been able to reach the required standard by the end of the academic year (that is, they have not achieved the required percentage of modules for that year), the system is exploring the possibility of having them repeat the modules in the following year. Other aims are to improve the quality of work-based learning without discouraging companies from offering places to apprentices and interns, and to channel (re-orient) students found not to be suitable for one VET program to other VET programs (<https://www.apprenticeship-toolbox.eu/luxembourg>).

  In 2015 Luxemburg implemented an external qualitative and quantitative evaluation of the VET system, with plans to repeat the exercise on a regular basis.

- **Switzerland**: arrangements have been made to streamline recognition of prior learning assessments (that is, related to validation and competence). A MatchProf[24] program has been introduced to match individuals to training places, the aim being to reduce the number of places that are not being filled, as well as to provide a suitable match. Incentives, by means of tax deductions, have been introduced for workers to undertake

24 <https://www.apprenticeship-toolbox.eu/programmes-pathways/access-guidance/69-access-guidance-in-switzerland>.

job-related continuing education. A new age requirement has also been introduced for hazardous occupations.

- Reforms to VET and professional education include the introduction of certificate and diploma supplements, improved articulation (permeability) between the pathways and the promotion of the Swiss system overseas, especially in some American states (<https://www.apprenticeship-toolbox.eu/switzerland>).
- **Austria**: keeping young people in Austria in compulsory training until the age of 18 years (either in school or in an apprenticeship) is a key focus of the Austrian education and training system. The state has implemented an education and training guarantee, and the Ministry of Employment and Labour's Labour Market Service has financed the creation of 11 000 supra-company training places.[25] A further initiative is to ensure that the Vocational Educating and Training Act takes account of current developments (for example, by updating the occupational profiles) and that the system concentrates on the development of competences (learning outcomes or competencies) and increases 'permeability' between training pathways; that is, the opening of student access to different pathways and programs (<https://www.apprenticeship-toolbox.eu/austria>).
- **Denmark**: strengthening the VET system and enabling students to have a more 'balanced choice' is Denmark's key aim. The country would like more students to undertake and complete VET programs after Years 9 and 10; it also expects that such programs provide students with challenges to enable them to fulfil their true potential. Also established are indicators of student wellbeing, to be monitored via a survey of all secondary students. Apprenticeship companies will also be surveyed to monitor their satisfaction with the cooperation they receive from schools. Denmark has also established a program for refugees, which is comprised of 20 weeks of in-company training (at a minimum salary). Once this program has been satisfactorily completed, participants are able to access unemployment benefits. Financial incentives are also given to companies to participate in the scheme (<https://www.apprenticeship-toolbox.eu/denmark>).
    - In 2017 Denmark introduced initiatives to encourage employers to create more internships to enable more young people to undertake and complete VET and to encourage enterprises to provide in-company training for apprentices. There has also been a push to provide training for individuals who want to acquire qualifications for their current trades or to change industries and trades.
    - A further initiative is the establishment of ten 'knowledge centres' to provide professional leadership in technological development and to give support to vocational schools. These centres are organised around the areas of: automation and robotics (two centres); welfare technology (two centres); process technology; crafts – design and architecture; crafts – sustainability,

25 'Supra-company training places' refers to government-funded programs that enable young people who are unable to find an apprenticeship to undertake apprenticeship training. They are targeted to disadvantaged groups (learners with learning difficulties, early school leavers and older teenagers). Young people can either undertake the whole apprenticeship, part of the apprenticeship, or just some components. This can enable them to move into a job with a regular company or transfer to an apprenticeship with a regular company, <http://www.cedefop.europa.eu/en/toolkits/vet-toolkit-tackling-early-leaving/resources/supra-company-training-uberbetriebliched>.

climate renovation and construction; digital trade; and database service and business development.

What can Australia learn from these overseas systems?

To some extent Australian apprenticeships reflect a number of the key features of the systems outlined above. In fact, some of the Australian reforms of the late 1980s and early 1990s were informed by the dual system in Germany, especially the expansion of the apprenticeship system to a larger range of occupations, via traineeships. The differences between the systems of the European countries and Australia appear to lie in the extent to which up-front prescription about the skills and knowledge to be covered at the course or qualification level is used as regulation and a form of quality assurance. However, there are some key features of these international systems that are generally not strongly reflected in the Australian system or are not prescribed. For example, in the overseas dual systems discussed, there are specific roles for competent bodies (representing relevant crafts and professions) in awarding qualifications, making decisions about eligibility of companies to be involved in apprenticeship training, and monitoring in-company training. Although in some states and territories in Australia examinations for licensed occupations are set by external bodies representing specific occupations (for example, in the case of the capstone test for electricians), these are by no means applied in a consistent manner across jurisdictions.

Tightly controlled regulations governing what takes place in the company and the vocational school and how to integrate in-company training and off-the-job learning are both features of the international sample, but this approach has not been adopted in the Australian system to the same extent. In addition, rules about the qualifications and experience of teachers in the vocational schools and those of the trainers or supervisors in the company are more prescriptive in the international systems described, while in Australia they appear to be more flexible.

The international dual systems support tightly defined course durations. In Australian states and territories, the duration of a training contract for the traditional trades is specified, however, there is also potential for some acceleration.

The training packages for different industry sectors in Australia provide an extensive list of requirements for the successful completion of units of competency for different levels of qualifications. Ordinances (regulations) in the international systems have a high level of prescribed requirements; however, there is more flexibility in the requirements listed in the training packages, both in relation to how training is delivered and how assessments are conducted.

In many overseas education systems students are stratified into different pathways at an early age, according to their educational achievement. This stratification occurs also at the end of compulsory schooling and may mean that students who would like to move into the dual-track pathway must also face a selective process. Australia also utilises some form of testing to assess a student's eligibility to undertake the learning in some traditional trades (for example, mechanical aptitude tests for relevant occupations, and numeracy and literacy tests for

others), but these tests take place at recruitment rather than in the schooling system. We can speculate that, as a result of the selection process, the students who do go into apprenticeship pathways overseas may have a higher level of academic achievement than those that move into apprenticeships in the Australian system.

Australia has some completion incentives in place for employers of apprentices undertaking specific programs. However, as yet, and unlike in Luxembourg, there are no learning bonuses for apprentices who complete their apprenticeships.

Way forward

The information in this report has been assembled via reviews of previous research, statistical analyses on traditional trade apprenticeship commencements, and national and jurisdictional employer incentive programs. This material, once collated, has enabled us to provide the context for understanding the Australian apprenticeship system and the role that government training and funding policy can play in the uptake of apprenticeships, especially for traditional trade apprentices and in times of poor economic conditions. Descriptions of overseas systems of apprenticeships can help us to make some meaningful comparisons of how training is regulated, implemented and evaluated.

Despite its usefulness, information such as this cannot necessarily provide us with meaningful and practical assessments on those features of Australian apprenticeships that work and those that do not; that is, those aspects that need to be retained and those that should be eliminated or improved. Advice in this area can be usefully elicited from the voices of participants: current apprentices, tradespersons and employers, government officials, and RTOs. The third and final report in this project will explore in more detail the experience of apprentices with the apprenticeship system by means of an analysis of data from the 2019 Apprenticeship Destination and Experiences Survey.

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Appendix A
The overarching study

About the overarching study

This project is relevant to current government and industry concerns over the need to raise levels of apprenticeship training. It is being undertaken in three phases:

- Phase 1 provides a review of relevant literature and an analysis of historical trends in training activity.
- Phase 2 involves consultations with relevant participants in the system.
- Phase 3 comprises an analysis of relevant findings from the national 2019 Apprentice and Trainee Experience and Destinations Survey.

The aims

This overarching study has five key aims, which are to:

1. Undertake an analysis of some recent historical trends in apprenticeship uptake in the traditional trades to provide some context about the volume and the type of training activity occurring in the Australian apprenticeship system.

The findings from the analysis are reported in this publication. Further investigations will reflect the following aims:

2. Explore the effectiveness of current approaches to apprenticeship selection and training with a view to understanding both the experienced benefits (including the social and psychological and extrinsic benefits) and the challenges, from the perspectives of apprentices, tradespersons, employers (including host employers), and field officers (in the case of group training apprentices).
3. Understand from trainers the key issues experienced in delivering apprenticeship training to ensure that it keeps abreast of evolving occupations and jobs and advances in technology.
4. Investigate the challenges that employers (including group training organisations, host employers and other enterprise employers) face in negotiating the apprenticeship system and taking up (or hosting) apprentices.

The findings associated with aims 2 to 4 will be provided in a forthcoming report on stakeholder consultations.

5. Investigate the destinations and experiences of apprentices in traditional three- and four-year trade apprenticeships, with a view to understanding the factors that explain these destinations, as well as the key intrinsic and extrinsic rewards gained by apprentices from their training and post-training experiences.

These findings will be provided in a separate final report, which also draws on relevant findings from the consultations.

The research questions

The specific research questions for the overall study are closely tied to the main aims of the study and aligned to one or more of the various phases. They comprise the following.

Phase 1: this report

- How has the profile of students and their training activity in traditional trade apprenticeship programs changed over the last 15 years?
- What are some of the key approaches gaining traction in apprenticeship training at home and abroad in response to changing economic times and technological advancements?
- In answering these research questions, we draw trend data from NCVER's Apprenticeship and Traineeship Collection, mainly focusing on the trades in the ANZSCO major group 3 classifications.
    - In identifying the traditional trades, we use as a reference document, the register of prescribed vocational qualifications for the Western Australian Department of Training and Workforce Development. From this register we choose those trades that can only be undertaken through a contract of training requiring an apprenticeship (rather than a traineeship).
    - We have used this method to arrive at the groups of traditional trades we will use for analysis.
    - A number of data issues need to be clarified in our identification of traditional trades. These are associated with the practice of back-casting the data to assist in achieving a consistent reporting frame for trend data. The names of the traditional trades certainly refer us back to earlier occupational classifications; however, we must understand that some of the activities of these trades would have evolved over time to encompass technologies and technological changes in line with those across industry sectors and occupations. In addition, there may be some traditional trades that may not have been captured using our method.

Phase 2 (reported in a second publication)

- How effective are current approaches to apprenticeship selection and training?
- What are the challenges faced by training providers in ensuring that training keeps abreast of industry and technological changes?
- What are the challenges for employers in negotiating the apprenticeship system, and what are the key mechanisms they use to find out about what is required?
- What are the social and psychological benefits experienced by current apprentices and tradespeople from their apprenticeship training?

To answer these questions, we conduct consultations with RTOs, employers, apprentices and qualified tradespersons, and employers. This will enable us to gain some current and practical insights on those aspects of the system to be retained and those to be removed or improved.

- We construct the sample by drawing random samples of employers and RTOs that have been involved in apprenticeships during the five years prior to 2017.

- We speak to focus groups of apprentices from the RTOs in the sample and tradesmen from the employer sample.

Phase 3 (to be reported in the future)

- How do the destinations and training and post-training experiences of apprentices responding to the Apprenticeship Destination and Experiences Survey for 2019 compare with those identified in the Apprenticeship and Traineeship Destination Survey of 2010?
- What are the key factors that explain completion and non-completion of apprentices in the different trades?
- What are the social and psychological benefits experienced by current apprentices and tradespeople from their apprenticeship training?

To answer these questions, we draw on findings from relevant questions from the Apprenticeship and Traineeship Destination and Experiences Survey for 2019 conducted by NCVER.

We use these findings in conjunction with relevant findings from our consultations to compile the report for phase 3 of the study.

Appendix B: Traditional trade occupational groups

Table B1 Traditional trade occupations by trade group

Occupation	Classification
321000 Automotive Electricians and Mechanics – nfd	Motor Mechanics, Repairers and Vehicle Builders
321111 Automotive Electrician	Motor Mechanics, Repairers and Vehicle Builders
321200 Motor Mechanics – nfd	Motor Mechanics, Repairers and Vehicle Builders
321211 Motor Mechanic (General)	Motor Mechanics, Repairers and Vehicle Builders
321212 Diesel Motor Mechanic	Motor Mechanics, Repairers and Vehicle Builders
321213 Motorcycle Mechanic	Motor Mechanics, Repairers and Vehicle Builders
321214 Small Engine Mechanic	Motor Mechanics, Repairers and Vehicle Builders
322000 Fabrication Engineering Trades Workers – nfd	Engineering Trades
322113 Farrier	Engineering Trades
322211 Sheetmetal Trades Worker	Engineering Trades
322300 Structural Steel and Welding Trades Workers – nfd	Engineering Trades
322311 Metal Fabricator	Engineering Trades
323000 Mechanical Engineering Trades Workers – nfd	Engineering Trades
323100 Aircraft Maintenance Engineers – nfd	Engineering Trades
323111 Aircraft Maintenance Engineer (Avionics)	Engineering Trades
323112 Aircraft Maintenance Engineer (Mechanical)	Engineering Trades
323113 Aircraft Maintenance Engineer (Structures)	Engineering Trades
323211 Fitter (General)	Engineering Trades
323215 Textile, Clothing and Footwear Mechanic	Motor Mechanics, Repairers and Vehicle Builders
323299 Metal Fitters and Machinists nec	Engineering Trades
323311 Engraver	Precision Trades
323313 Locksmith	Precision Trades
323314 Precision Instrument Maker and Repairer	Precision Trades
323315 Saw Doctor	Precision Trades
323316 Watch and Clock Maker and Repairer	Precision Trades
324111 Panelbeater	Motor Mechanics, Repairers and Vehicle Builders
324211 Vehicle Body Builder	Motor Mechanics, Repairers and Vehicle Builders
324212 Vehicle Trimmer	Motor Mechanics, Repairers and Vehicle Builders
324311 Vehicle Painter	Motor Mechanics, Repairers and Vehicle Builders
330000 Construction Trades Workers – nfd	Building
331111 Bricklayer	Building
331112 Stonemason	Building
331200 Carpenters and Joiners – nfd	Building
331211 Carpenter and Joiner	Building
331212 Carpenter	Building
331213 Joiner	Building
332000 Floor Finishers and Painting Trades Workers – nfd	Building
332111 Floor Finisher	Building
332211 Painting Trades Worker	Building

Occupation		Classification
333111	Glazier	Building
333200	Plasterers – nfd	Building
333211	Fibrous Plasterer	Building
333212	Solid Plasterer	Building
333311	Roof Tiler	Building
333411	Wall and Floor Tiler	Building
334000	Plumbers – nfd	Building
334100	Plumbers – nfd	Building
334111	Plumber (General)	Building
334112	Airconditioning and Mechanical Services Plumber	Building
334114	Gasfitter	Building
334115	Roof Plumber	Building
340000	Electrotechnology and Telecommunications Trades Workers – nfd	Electrotechnology and Telecommunications
341111	Electrician (General)	Electrotechnology and Telecommunications
341112	Electrician (Special Class)	Electrotechnology and Telecommunications
341113	Lift Mechanic	Electrotechnology and Telecommunications
342111	Airconditioning and Refrigeration Mechanic	Electrotechnology and Telecommunications
342200	Electrical Distribution Trades Workers – nfd	Electrotechnology and Telecommunications
342211	Electrical Linesworker	Electrotechnology and Telecommunications
342212	Technical Cable Jointer	Electrotechnology and Telecommunications
342311	Business Machine Mechanic	Electrotechnology and Telecommunications
342313	Electronic Equipment Trades Worker	Electrotechnology and Telecommunications
342314	Electronic Instrument Trades Worker (General)	Electrotechnology and Telecommunications
342315	Electronic Instrument Trades Worker (Special Class)	Electrotechnology and Telecommunications
342400	Telecommunications Trades Workers – nfd	Electrotechnology and Telecommunications
342411	Cabler (Data and Telecommunications)	Electrotechnology and Telecommunications
342412	Telecommunications Cable Jointer	Electrotechnology and Telecommunications
342414	Telecommunications Technician	Electrotechnology and Telecommunications
351000	Food Trades Workers – nfd	Food Trades
351100	Bakers and Pastrycooks – nfd	Food Trades
351111	Baker	Food Trades
351112	Pastrycook	Food Trades
351211	Butcher or Smallgoods Maker	Food Trades
351311	Chef	Food Trades
351411	Cook	Food Trades
361112	Horse Trainer	Skilled Animal and Horticultural Workers
362200	Gardeners – nfd	Skilled Animal and Horticultural Workers
362211	Gardener (General)	Skilled Animal and Horticultural Workers
362212	Arborist	Skilled Animal and Horticultural Workers
362213	Landscape Gardener	Skilled Animal and Horticultural Workers
362411	Nurseryperson	Skilled Animal and Horticultural Workers
391111	Hairdresser	Other Traditional Trades
392000	Printing Trades Workers – nfd	Other Traditional Trades
392100	Print Finishers and Screen Printers – nfd	Other Traditional Trades
392111	Print Finisher	Other Traditional Trades

Occupation	Classification
392112 Screen Printer	Other Traditional Trades
392211 Graphic Pre-press Trades Worker	Other Traditional Trades
392300 Printers – nfd	Other Traditional Trades
392311 Printing Machinist	Other Traditional Trades
393114 Shoemaker	Other Traditional Trades
393213 Dressmaker or Tailor	Other Traditional Trades
393311 Upholsterer	Other Traditional Trades
394100 Cabinetmakers – nfd	Other Traditional Trades
394111 Cabinetmaker	Other Traditional Trades
399100 Boat Builders and Shipwrights – nfd	Other Traditional Trades
399111 Boat Builder and Repairer	Other Traditional Trades
399112 Shipwright	Other Traditional Trades
399411 Jeweller	Precision Trades
399611 Signwriter	Other Traditional Trades

Appendix C: Financial incentives for employers and apprentices

When the country's economic conditions are poor, there is a tendency to increase the financial support available to both employers and apprentices. Over the last decade new incentives have emerged to counteract the effects of major economic downturns such as the 2008—10 Global Financial Crisis (GFC). Although various incentives are available for the employment of certain groups of people, qualifications, and occupations, we are mainly interested in the incentives that apply to traditional trade apprenticeships. Some modification of incentives has occurred to better target incentives for specific skills shortage occupations. Here we concentrate on incentives for apprentices only.

Government incentives for employers and apprentices from 2009

In 2009, the Commonwealth and state and territory governments provided various incentives for employers to help encourage apprenticeship commencements, recommencements and completions at all qualification levels and to address national skill needs, as well as industry requirements for a highly skilled workforce:

- Incentives were provided to help boost training places in areas of skill shortages and innovation in emerging and traditional industries. Incentives were provided to support mature-aged workers, school-based apprenticeships and training in regional and rural areas (to address skill shortages).
- Incentives were initiated to top up apprenticeship wages and to support wages and assistance for tutorial, interpreter and mentor services for apprentices with a disability.
- Commonwealth incentives were established to give apprentices access to various programs, including: Youth Allowance, Austudy for those over 25 years and ABSTUDY for Indigenous apprentices; support for mid-career and mature-aged apprentices; trade scholarships (Commonwealth Trade Learning Scholarships); financial support for tools; and living-away-from-home allowances. Incentives are made available to support out-of-trade apprentices to stay connected to the workforce and complete their apprenticeship. Financial support for the 2009 academic year was also available.
- A partnership between Commonwealth and state and territory governments was established to ensure that states and territories give priority access to government-funded infrastructure construction to businesses that have shown they are committed to adding or retaining apprentices.
- In 2009—10 the Commonwealth Government made funding available to add another 5500 pre-vocational training and support places for job seekers to gain an apprenticeship or undertake further training.

Australian Government incentives for organisations from 2009

In 2009, Commonwealth incentives were provided for secondary schools to construct or operate trade training centres enabling students to undertake certificate III or above qualifications in skill shortage trades or emerging industries. In partnership with the states and territories, the Australian Government provided funds for group training organisations to develop strategies to raise their apprenticeship commencements and completion rates in national priority areas. Incentives were also available for group training organisations to implement pre-vocational trade training. Funding was provided to registered training organisations to work with employers and industry to accelerate or fast-track apprenticeship completions. Incentives were also available for the provision of 9500 training and support places per year. A program titled Support for Mid-Career Apprentices was also available. It ceased on 31 December 2009 and was replaced by the Support for Adult Australian Apprentices, which commenced on 1 January 2010.

State and territory incentives

A raft of different but sometimes converging state and territory incentives was also in place for employers and for apprentices in 2009, with an additional set of initiatives established for dealing with the downturn following the Global Financial Crisis (Australian Apprentices Taskforce 2009). The converging approaches tended to be concerned with providing rebates or exemptions for payroll taxes, assistance to group training organisations, access to government infrastructure projects for businesses that demonstrated a commitment to the employment of apprentices and implementing strategies (including a register of out-of-trade apprentices) to help such apprentices complete their training. Another commonly applied approach was to provide travel allowances for apprentices to help meet the costs of travel to and from work and training, as well as travel and accommodation allowances for them to attend block training, if required.

If we look solely at the additional strategies that states and territories put in place for dealing specifically with the GFC, we find that they all included assistance to group training organisations and to out-of-trade and unemployed apprentices (for example, creating lists or registers of out-of-trade apprentices and providing funding for these apprentices to complete their trade or their qualifications). Some states and territories adopted initiatives already in place in other states and territories as part of their regular incentive regime. This indicates that some of the experiences from the earlier recessions of the 1990s, may have already influenced the type of incentives that states and territories provided.

Changes to employer incentives between 2011 and 2012

It is between 2011 and 2012 that the change in incentives becomes more apparent. In 2011, employers who took on new or existing workers as an Australian Apprentice to undertake a certificate III or IV, diploma or advanced diploma qualification received the standard financial incentives available for these commencements. At that time the Australian Government did not differentiate between the incentives employers could receive for these two groups of workers (Australian Government 2011). Employers could get incentives to take on:

- apprentices or trainees in rural and regional skill shortage areas and areas affected by drought
- adult apprentices, apprentices aged 45 years and over and apprentices with a disability.

Incentives applied not only to employers but also to the apprentices themselves, and to the RTOs that provided the off-the-job tutorial, mentor or interpreter assistance services. In 2011 the National Skills Needs List, which identified trades experiencing national skills shortages, was used to determine eligibility for incentives such as the Rural and Regional Skills Shortage Incentive, Tools for your Trade payment initiative and support for adult apprentices.

Changes were also introduced to eligibility for completion incentives and they became available for:

- all full-time 'new worker' apprentices undertaking certificate III or IV qualifications
- part-time new apprentices only if they were in certificate III/IV level qualifications leading to an occupation on the NSNL or in a school-based apprenticeship
- full and part-time apprentices who were 'existing workers' would only attract a completion incentive if they were undertaking a certificate III/IV qualification on the NSNL.

Changes to employer incentives between 2012 and 2015

In October 2012 the Australian Government removed many of the government's employer incentives for commencement, recommencement, and completion of apprenticeships for existing workers unless these apprentices were undertaking certificate III/IV qualifications on the National Skill Needs List (Australian Government 2012).

In 2015, commencement, recommencement and completion incentives for 'new' and 'existing worker' apprentices continued to be available for apprentices in certificate III/IV qualifications leading to occupations on the NSNL.

However, completion incentives were available for 'existing worker' apprentices, but only if they were undertaking certificate III/IV qualifications. There were no completion incentives for 'existing worker' apprentices undertaking any level of qualification in non-NSNL and non-priority occupations.

Commencement and completion incentives (albeit a small amount of $750) were available to employers for 'new' and 'existing' worker apprentices from declared drought areas, mature-age workers (45 years and over), Australian school-based apprenticeships, and Australian apprentices with a disability (wage support) undertaking any level of qualification. School-based apprentices only attracted a commencement incentive and a retention incentive.

Support for adult apprentices and for apprentices in rural and regional skill shortage areas was only available for certificate III/IV qualifications. These changes underscore the importance of the certificate III/IV qualifications and occupations on the NSNL.

Incentives current at 2018 and 2019

In 2018 these employer incentives included payments for:

- apprenticeship commencements, recommencements and completions in NSNL occupations for both part-time and full-time new and existing worker apprentices undertaking certificate III/IV qualifications.

A range of further incentives are available and are aimed at providing support for employers to take on apprentices from certain groups and in certain areas. These include:

- support for adult apprentices in certificate III/IV qualifications
- rural and regional skill shortage incentives for apprentices in certificate III/IV qualifications
- commencement and completion incentives, irrespective of the level of qualification, for mature-age workers (for apprenticeships for those aged 45 years and over)
- commencement and retention incentives, irrespective of the level of qualification for school-based apprenticeships
- wage assistance (per week) for full-time and part-time apprentices with a disability.

In addition to these employer incentives, there are also incentives and benefits for apprentices, including a living-away-from-home allowance and Trade Support Loans, for those undertaking certificate III/IV qualifications and for those undertaking certificate II qualifications in agriculture and horticulture.

Incentives available from July 1 2020

The employer incentives to commence on July 1 2020 are divided into base and additional incentives.

The base incentive payments that an employer of a traditional trade apprentice may receive is a $1500 commencement incentive (paid at six months after commencement) for apprentices that are new to the employer and training for occupations on the National Skills Needs List. On the completion of the apprenticeship the employer of such apprentices will receive a $2500 completion incentive.

The additional incentives available to employers of apprentices in Additional Identified Skills Shortage (AISS) occupations include a $2000 commencement incentive (paid at the 12-month point) and $2000 paid on completion.

Employers may also receive a $4000 incentive under the Support for Adult Apprentices scheme if the apprentice is undertaking a certificate III or IV qualifications; this is paid after 12 months of training.

There are also employer commencement and completion incentives each of $750 if a mature aged person who is 45 years and older from a disadvantaged background is hired as an apprentice.

Commencement and completion incentives of $750 respectively are available to employers of Australian school-based apprentices.

A recommencement incentive of $750 is paid three months after an apprentice transfers to a new employer to continue their training.

Appendix D: Trades on the NSNL list

The trades included on the National Skills Needs List (NSNL) given below.

- Airconditioning and Mechanical Services Plumber
- Airconditioning and Refrigeration Mechanic
- Aircraft Maintenance Engineer (Avionics)
- Aircraft Maintenance Engineer (Mechanical)
- Arborist
- Automotive Electrician
- Baker
- Binder and Finisher
- Boat Builder and Repairer
- Bricklayer
- Butcher or Smallgoods Maker
- Cabinetmaker
- Carpenter
- Carpenter and Joiner
- Cook
- Diesel Motor Mechanic
- Drainer
- Electrical Linesworker
- Electrician (General)
- Electrician (Special class)
- Electronic Equipment Trades Worker
- Fibrous Plasterer
- Fitter (General)
- Fitter and Turner
- Fitter-Welder
- Floor Finisher
- Furniture Finisher
- Gasfitter
- Glazier
- Hairdresser
- Joiner
- Landscape Gardener
- Lift Mechanic
- Locksmith
- Metal Fabricator
- Metal Machinist (First class)
- Motor Mechanics (General)
- Motorcycle Mechanic
- Optical Mechanic
- Painting Trades Worker
- Panel Beater
- Pastrycook
- Picture Framer
- Plumber (General)
- Pressure Welder
- Printing Machinist
- Roof Plumber
- Roof Tiler
- Screen Printer
- Shearer
- Sheetmetal Trades Worker
- Signwriter
- Small Engine Mechanic
- Solid Plasterer
- Stonemason
- Telecommunications Linesworker
- Telecommunications Technician
- Toolmaker
- Upholsterer
- Vehicle Body Builder
- Vehicle Painter
- Vehicle Trimmer
- Wall and Floor Tiler
- Welder (First class)
- Wood Machinist

Source: 2019, Australian Apprenticeships, About the National Skills Needs list, <https://www.australianapprenticeships.gov.au/sites/d8ausapps/files/201905/About%20the%20National%20Skills%20Needs%20List.pdf>.

Appendix E: Apprenticeships in European dual systems

In this section we look in more detail at the dual systems of Germany, Luxembourg and Switzerland.

Germany

For many years now, the German Dual System has been regarded internationally as an example of success. The development of the Australian Vocational Training System in the late 1980s and early 1990s itself drew heavily from some of the key elements of the German system (especially in extending the apprenticeship approach to a range of non-trade occupations). Today reference to the dual system is made by countries trying to revitalise their own systems of apprenticeship (for example, the United States and the United Kingdom), or to benchmark their own operations.

In the German Dual System, educational institutions (part-time vocational schools) and enterprises (companies) collaborate to provide the theoretical education and the practical training required for different occupations. The overarching governance of the system is shared by the Federal Government, the 16 states (Länder) and the social partners (that is, the organisations that represent the interests of employers (the Chambers of Industry and Commerce and Chambers of Trades and Crafts), and employees (the unions). The Länder have primary responsibility for education, science and culture, so the governance of the vocational schools and the curriculum falls to them.

The Federal Government regulates the in-company component of the training through the Vocational Training Act. The Act states that initial vocational education and training must provide students with the 'capabilities, knowledge, and skills (vocational capacity) necessary for the exercise of a qualified vocational activity in a changing working environment in a well-regulated course of training'. The Act sets out the rights and duties of the parties to the training contract and the requirements relating to the suitability of the training centres and the training staff. The Act also establishes the duties of the agencies responsible for monitoring the training. The training regulations legislate the:

- designation of the training occupation and the typical skills, knowledge and capabilities that will be required
- duration of the training (normally programs take between two and three years)
- training curriculum, which describes the content to be taught, as well as the time to be spent
- procedures for examinations.

The competent bodies (Chambers of Industry and Commerce or Chambers of Trades and Crafts) will award the qualifications, which acknowledge that the apprentice has achieved the skills, knowledge and attributes to the required occupational standards. Such an approach ensures that all apprentices are provided with training and assessment that is consistent across the nation for their specific occupation. These bodies are also responsible

for quality assurance and monitor the training companies to ensure that the training standards are met.

The system also has standards in place for teachers in the vocational schools and trainers in the companies. Teachers in the vocational schools are required to hold a relevant university degree, while trainers in companies must hold a certificate of suitability. However, where the vocational school teachers are legally bound to have such qualifications, the trainers and supervisors in companies are not.

Young people in the dual system will sign a training contract with a company to train in a 'government-recognised occupation'. Students can choose from around 330 such training occupations, with most of these legislated by the Vocational Training Act and some (for example, in the health professions) regulated by other legislation. The program of training is divided into theoretical learning and practical training, with students spending about 30% of the time at the vocational school and the remainder of the time at the workplace. There is a focus on making sure that the theoretical training received in the vocational school aligns with the practical experience in the in-company training (Euler 2015).

Luxembourg

The concept of governments and social partners collaborating in apprenticeship training is also a key feature of the Luxembourgish system. This system supports three vocational pathways for secondary school students. Access to these pathways is dependent on the academic achievement of the student prior to Year 10. Apprentices are paid a state-decreed apprenticeship allowance, which varies according to level of qualification. This allowance is paid to them by employers. Completion enables students to enter the labour market at different levels of remuneration and to access higher qualifications by satisfying some further preparatory training.

- The Certificate of Professional Capacity (the CPP) is undertaken in Years 10—12 and is of three years duration. This is an apprenticeship program whereby the apprentices acquire general education and the theory of his or her profession in technical school, with practical skills gained through in-company training under an apprenticeship contract. The CPP certifies that the holder has the knowledge and skills of a semi-qualified worker. When apprentices have completed the CPP, they are able to access the Vocational Aptitude Diploma (DAP) in the same field.
- The Vocational Aptitude Diploma is available in Years 10—12 and is also of three years duration. The DAP enables the apprentice to enter further studies to become a master craftsman or to access higher studies on completion of some bridging modules in mathematics and languages. The DAP can follow the dual-track pathway (where the apprentice has an apprenticeship contract) and undertake general education in the technical school and practical training in a company. Alternatively, the DAP can be gained in a mixed-track pathway or full-time pathway. In the mixed-track pathway the education is undertaken full-time for the first year and the remainder is completed under an apprenticeship contract with a training company. In the full-time pathway, training occurs in the technical school and students are involved in internships with companies for a minimum of 12 weeks over the three-year period.

- The technician's diploma (DT) is undertaken in Years 10—13 and is of four years duration. This is aimed at preparing students for access to jobs that require a higher and diverse range of competencies. Generally undertaken through a full-time school pathway with internships in companies of a minimum 12 weeks over the four years, these qualifications provide access to higher education studies when some bridging course in languages and mathematics are taken.

In a bid to encourage apprenticeship uptake and persistence, Luxembourg has adopted a modularised curriculum for VET. Learning outcomes are established for each module and each module is separately assessed.

Financial incentives have also been initiated to encourage employers to hire apprentices (including adults) and to provide in-company training. However, employers are eligible for a partial refund from the government's employment fund to cover non-wage labour costs and an additional amount based on the level of qualification. Employers will receive 40% of the allowance paid to apprentices for the basic qualification (CPP) and 27% for that paid to those undertaking DT and DAP qualifications. Employers who hire adult apprentices will also receive a refund for the non-wage labour costs.

A learning bonus is available for apprentices who successfully complete a year of training. The learning bonus, too, varies according to the level of qualification, with the higher-level DAP and the DT qualifications attracting more than the basic CCP.

An online tool, developed by the Chamber of Trades and the Chamber of Employees, is used to evaluate a student's suitability for specific apprenticeship programs. Students are assessed for linguistic, mathematical and practical knowledge, and spatial ability. The online tool does not replace the results of a student's academic performance for determining access to apprenticeship programs.

Switzerland

The Swiss vocational education and professional education (VPET) system is based on close collaboration between the Federal Government (the Confederation), the 26 cantonal governments, professional organisations, companies and other social partners, including unions and experts. The Vocational and Professional Education Act (revised in 2002) establishes the legal framework and sets out the values, principles, rights and standards for action. The associated Ordinances prescribe the detailed requirements, standards and procedures to be followed for qualifications, according to level and field. The revised Act also stipulates that the system is to be of a high quality and that the separate sectors of education are to be given equal recognition. The collaboration between governments and the social partners has been instrumental in the development of VPET 2030, the Swiss vision for Vocational and Professional Education.

In prescribing standards and requirements, the Ordinances act not only as key regulatory reference points and guidance for teachers and trainers, they also establish standards for quality assurance. There are standards for training and assessment, accreditation requirements, credentials of teachers, development of training plans and arrangements for maintaining the currency of skills, including:

Training and assessment: included are the requirements for qualified workers in the field, the content and structure of the curriculum, the duration of training (including the learning

hours to be spent in different employment and training locations), and the assessment approaches and qualifications procedures (including the calculation of grades for achievement in vocational subjects and practical work activities).

Accreditation of host companies: the requirements for the accreditation of host companies (and host company networks) and the role of government inspectors are also spelled out. The inspectors are to determine the company's suitability to take on apprentices and make regular visits to accredited companies to ensure that they are complying with the Ordinances. If companies are found to be non-compliant, their accreditation may be cancelled, or they undergo coaching to make the necessary improvements.

Credentials of teachers and trainers: the Ordinances also prescribe the qualifications of vocational school teachers (including those delivering general education subjects) and examiners, and the training to be completed by apprenticeship trainers and instructors in industry training centres prior to training apprentices. The apprenticeship supervisor or trainer and the VET teacher or training centre instructor must undergo training in a federally recognised institution to learn the pedagogy skills required for their roles.

Development of training plans: the construction of training plans for each specific occupation is another main feature of the Swiss system, with requirements spelled out in the Ordinances. These plans are followed in the development of in-company training plans, which provide guidance and regulation on what is to be covered and how it should be done, including the curriculum to be followed. The in-company training plan will also detail the tasks to be performed and the duration of training. In addition, the training plan is also used to help synchronise or integrate what is learnt and done in the company with what is learnt and done in the classroom and vice versa.

Maintaining the currency of skills: for each apprenticeship qualification there is an 'Occupation development and quality committee', whose role is to take the general training plan given in the Ordinance and ensure that it reflects the current needs of the labour market. This committee is comprised of members representing the Federal Government (Confederation), the cantons and the relevant professional organisations.

A demand-driven system

The Swiss apprenticeship system prides itself on being a demand-driven system, with cantons (government) having responsibility for assessing the number of apprenticeship positions available locally and in their regions, providing career guidance and information, and mentoring and coaching.

Adults of all ages can also participate in the apprenticeship system and acquire VET qualifications. For some this might mean engaging in structured and regulated training; for others it might mean undergoing formal recognition of prior learning assessments for the same qualifications.

The system has some key indicators for assessing demand, including:

- An **apprenticeship barometer**, based on a questionnaire survey of business and telephone surveys of young people (14—20 years), is conducted twice a year. Such approaches help the government to monitor how its system is faring at the end of compulsory education as students move into the labour market by taking up an apprenticeship.

The cantons also conduct a monthly survey of their apprenticeship labour market to develop the 'list of apprenticeship positions' (Lehrstellennachweis, LENA). This list is used to match supply to demand.

- **A VET graduate barometer** is used to monitor how the system is faring in getting apprentices who complete their apprenticeship into the labour market. In 2010—12 two-thirds of VET qualification completers entered directly into the market on completion of their qualification and two out of every five stayed with their apprenticeship company on completion.

Companies pay the salaries of apprentices; they do not receive any government incentives for their participation. Where they belong to a host company network (generally for small organisations that cannot provide the broad range of work activities for an occupation), the companies in the network share the apprentice and the cost of the apprentice's salary. Some government funding is provided to set up the network.

The case management approach is generally used to provide general access to individualised tutoring and guidance, with a specialised form of case management (VET case management) used to ensure that students with multiple difficulties have access to one case manager to help them to navigate the various services and agencies involved.

The system also provides access to a range of preparatory courses to enable graduates of different VET pathways to switch pathways or progress to and move between lower- and higher-level programs and institutions. Two-thirds of young people enrol in VET (including the apprenticeship pathways) on completion of the compulsory years of schooling.

Apprenticeship and pre-apprenticeship pathways

Two key pathways are available for apprentices and pre-apprentices in the Swiss system — the Federal VET Diploma and the Federal VET Certificate. A further VET pathway for graduates is the Professional Education and Training (PET) pathway.

- The Federal VET Diploma is a dual-track VET qualification and is undertaken by students in upper secondary education. This apprenticeship program is of three or four years duration and involves students finding an accredited company to take them on as apprentices, signing an apprenticeship contract and engaging in on- and off-the-job training. The apprentice will spend most of the week in the company and around one or two days a week in off-the-job learning in the vocational school classroom. Apprentices may also spend time learning in industry training centres. At the company the apprentice will engage in actual work activities, while in the vocational school classroom apprentices will learn the technical, procedural and social skills required for the chosen occupation and undertake studies in languages, communication and society subjects. At the industry training centre apprentices will learn the practical and technical skills required for their specific occupations and industries. At the end of the apprenticeship the apprentice will be awarded a grade for his/her performance in practical activities and in exams undertaken in the vocational school.
- Extra preparatory studies (in general education subjects) may enable graduates from these programs to complete the Federal Vocational Baccalaureate (FVB). This qualification then provides graduates with access to a University of Applied Sciences (UAS) without having to sit for an entrance exam. If the graduate aspires to enter a

university or Federal Institute of Technology, they would need to take the University Aptitude Test (UAT).

- The Federal VET Certificate is a qualification undertaken by students of lower academic attainment who may be having difficulties either getting an apprenticeship or have difficulties with learning. This enables them to get training in a lower-level occupation. This program is of two years duration and, with extra preparatory studies, graduates can enter the three- or four-year Federal VET Diploma programs.
- Pre-apprenticeships (for trying out an occupation) are also available to students, as are individual skills certificates (issued by cantons and professional organisations) for those who have difficulties completing a full qualification.
- The Professional Education and Training (PET) pathway is a VET tertiary education pathway available to VET graduates to upgrade their qualifications. It prepares students for complex technical and managerial jobs. These programs combine theory and practical training, based on and closely related to the needs of the labour market. They can be undertaken in professional colleges or by individual study for examinations.

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