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Work-based Learning for Youth at Risk: Getting Employers on Board

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WORK-BASED LEARNING FOR YOUTH AT RISK: GETTING EMPLOYERS ON BOARD

OECD Education Working Paper No. 150

By Viktória Kis, OECD

This working paper has been authorised by Andreas Schleicher, Director of the Directorate for Education and Skills, OECD.

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ABSTRACT

Work-based learning can provide a bridge into careers and its potential benefits are particularly noticeable for youth at risk – those most likely to face difficulties in accessing jobs and learning opportunities. If this potential is to be fully realised, work-based learning programmes must be attractive to employers. Achieving this requires a closer look at the costs and benefits for employers when they offer work-based learning. This paper looks at tools designed to help get employers on board for work-based learning, with an emphasis on work-based learning for youth at risk. International experience suggests that financial incentives, such as subsidies and tax breaks are not the answer. Attention should be focussed instead on non-financial measures that improve the cost-benefit balance of apprenticeship to employers. These include adjusting key parameters of apprenticeship schemes, better preparing youth at risk for apprenticeship and providing support (e.g. remedial courses, mentoring) to youth at risk during apprenticeship.

RÉSUMÉ

La formation en alternance peut favoriser l'insertion professionnelle et ses avantages potentiels sont particulièrement remarquables pour les jeunes en difficulté - ceux qui sont le plus susceptibles d'avoir des difficultés à trouver du travail et à bénéficier de possibilités d'apprentissage. Pour que ce potentiel se concrétise pleinement, il faut que les programmes de formation en milieu professionnel soient attrayants pour les employeurs. Pour ce faire, il importe d'examiner de plus près les coûts et les bénéfices, pour l'entreprise, de l'alternance en milieu professionnel qu'elle assure. Le présent document s'intéresse aux outils destinés à encourager les employeurs d'offrir des places d'alternance, en mettant l'accent sur la formation des jeunes en difficulté. L'expérience internationale montre que les incitations financières telles que les subventions et les crédits d'impôt ne sont pas la solution. Il conviendrait plutôt de centrer l'attention sur des mesures non financières qui améliorent le rapport coût/bénéfice de l'apprentissage pour les employeurs. Il s'agit notamment d'adapter les paramètres clés des programmes d'apprentissage, de mieux préparer les jeunes en difficulté à l'alternance et de leur apporter une assistance (cours de soutien, encadrement individuel) au cours de leur alternance.

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SUMMARY AND POINTERS FOR POLICY DEVELOPMENT

Work-based learning is a promising way of re-engaging young people at risk and providing them with a smoother transition into work, while also developing their skills. Work-based learning provides young people with an alternative way to learn that is sometimes more appealing than more academic programmes. It can provide a bridge into careers, equip young people with skills that are in demand in the labour market, and connect them to potential employers.

The potential benefits of work-based learning are particularly noticeable for youth at risk, as they are most likely to face difficulties in connecting to the labour market and accessing good learning opportunities. For the purposes of this paper, youth at risk are defined as young people who are not in employment, education or training (NEET), and those at risk of becoming NEET.¹ Across OECD countries, there are around 40 million young people who are NEET (OECD, 2016a). Although in principle their prospects could be improved by work-based learning, in practice this often remains a distant possibility.

Even when policy makers and practitioners see the potential of work-based learning for youth at risk, it cannot take place unless employers are willing to offer work-based learning opportunities. Therefore, finding ways to make work-based learning more attractive to employers, and encouraging them to offer places to youth at risk, is a key challenge for policy makers.

Although employers may want to help youth at risk, they also need to run business and make a profit. Therefore, if the potential of work-based learning is to be fully realised, programmes must not only provide an opportunity for employers to show social responsibility, but also be well aligned with their business objectives. This requires a closer look at the costs and benefits for employers when they offer work-based learning.

There is rich research evidence on the different costs and benefits of work-based learning to firms, and how these are affected by the design of work-based learning programmes and the context in which they are provided (e.g. employment regulation, firm size). However, costs and benefits also depend on the characteristics of the individual learner.

Many countries have implemented initiatives to cater for out-of-school youth and those at risk of dropping out. This international experience can be harnessed to inform policy development and ensure that the potential benefits of work-based learning for youth at risk are fully realised.

This report focuses on policy tools designed to help get employers on board for work-based learning, with a particular emphasis on providing work-based learning for youth at risk and other vulnerable populations. It focuses on work-based learning programmes with explicit learning outcomes that typically lead to a qualification. In most countries, such schemes are called apprenticeships or dual vocational education and training, but other terms are also used (e.g. traineeships in Ireland and Australia). In

1. Unless otherwise stated, data in this paper refer to young people aged 16-29 years-old.

the United States, registered apprenticeships engage a relatively small share of young adults, but various other forms of work-based learning are available, such as internships or co-operative education.

Apprenticeships as a form of work-based learning provide a particularly useful way of analysing the different parameters affecting the costs and benefits of work-based learning, and there is a rich evidence base to draw on. For this reason, this report will use the apprenticeship model to draw out policy implications, although the policy tools can also be applied to other forms of work-based learning.

This report is one of a series on work-based learning, prepared as part of a broader OECD project (see Box 1). The series includes in-depth analyses of specific topics (modules) leading to a set of policy pointers backed by analysis. This paper contributes to the module on work-based learning and school-to-work transition for youth at risk, funded by the United States.

Box 1. Work-based learning in vocational education and training: The broader OECD project

The OECD launched this study in 2015 with the aim of delivering policy messages about how to use work-based learning in vocational education and training (VET) to achieve better economic and social outcomes. It builds on in-depth analytical work on six topics and a series of workshops held in 2016. Six reports will be published:

- Striking the balance: The costs and benefits of apprenticeship
- Work-based learning: Incentives and implementation
- Work, train, win: Work-based learning design and management for productivity gains
- Work-based learning for youth at risk: Getting employers on board
- Recognising skills acquired through work-based learning
- Work-based learning and career guidance.

A synthesis report drawing together all six modules will be published in 2017. All reports will be published on the following website as they become available: www.oecd.org/edu/skills-beyond-school/work-based-learning.htm.

Australia, Canada, Germany, Norway, Scotland (UK), Switzerland, the United Kingdom, the United States and the European Commission have provided voluntary contributions towards the work, either through sponsoring specific modules or contributing to the project as a whole.

Box 2. Summary of policy pointers

Shift the cost-benefit balance of apprenticeships for employers who engage youth at risk

- Design apprenticeship schemes so that they work for both youth at risk and employers. Employers need to break even by the end of the apprenticeship, while youth at risk need to develop targeted skills. However, providing direct financial incentives to employers who hire youth at risk as apprentices (e.g. subsidies or tax breaks) is not the answer. Universal financial incentive schemes have limited impact and can involve significant deadweight loss (i.e. they finance provision that would have been offered anyway). Targeted incentives for youth at risk are hard to get right, and they risk reducing apprenticeship provision among non-targeted individuals.
- Focus attention on non-financial measures that improve the cost-benefit balance of apprenticeships to employers. Resources dedicated to encouraging apprenticeships among youth at risk should support non-financial measures, these include adjusting the parameters of apprenticeship schemes, programmes that prepare youth at risk for apprenticeship, and initiatives that support youth at risk during apprenticeships. These can build on insights from national and/or international empirical evidence.

Adjust parameters of apprenticeship schemes

- Key parameters to adjust in the design of apprenticeship schemes include:
 - Duration of apprenticeship: In general, the duration should allow employers to recoup their initial investment in training apprentices, taking into account how the productivity of apprentices evolves over time. The optimal duration varies across occupations; typically, schemes would be longer when productivity gains are achieved more slowly.
 - For youth at risk, offering apprenticeship schemes in occupations for which the optimal duration is shorter (i.e. apprenticeships targeting a smaller skill set) could help achieve higher completion rates. Schemes targeting youth at risk may allow for some flexibility, giving apprentices additional time to complete if needed.
 - Apprentice wage: In general, apprentice wages should be allowed to vary across occupations and sectors, reflecting how apprentices' productivity changes over time and taking into account the wages of skilled and unskilled workers in the targeted occupation. Schemes targeting youth at risk may offer below-average wages, reflecting apprentices' productivity, but wages should be high enough to ensure that apprenticeships remain attractive for youth at risk.
 - Balance of time spent with the firm versus at school or college: In general, time spent with the firm should be long enough to ensure that apprentices contribute to production, which allows employers to recoup their investment. Schemes should take into account the fact that some youth at risk need additional instruction time at school or college (e.g. remedial courses for literacy and numeracy).

Better prepare youth at risk for apprenticeships

- Encourage and offer financial resources to support initiatives that successfully prepare youth at risk for apprenticeships. Such initiatives may prepare participants for apprenticeships in a specific occupation, or offer preparation towards various potential occupations. Youth at risk should receive guidance regarding options available to them and how to progress towards their option of choice.
- International evidence suggests that pre-apprenticeship programmes can be successful. However, given the diversity of approaches in this area, further evidence on factors of success and failure would help inform policy development. Emerging local innovations that use work-based learning to re-engage youth at risk should be documented, their effectiveness evaluated and the most promising initiatives rolled-out.

Box 2. Summary of policy pointers (continued)**Provide support to youth at risk during apprenticeships**

- Provide support to youth at risk who undertake apprenticeships, including, for example, remedial courses (in particular in literacy and numeracy), mentoring and coaching. This should improve the cost-benefit balance to employers by helping apprentices complete their training, and by building their skills more effectively along the way.
- Additional measures consist of assisting firms to build capacity to provide apprenticeships to youth at risk, including how to handle difficulties that may arise with apprentices and how to deliver training effectively on-the-job. This may include, for example, encouraging targeted training for apprentice supervisors, and offering tools and resources (e.g. website, online forum for instructors) that help firms effectively manage apprentices and overcome any difficulties.

PART I. KEY ISSUES IN WORK-BASED LEARNING FOR YOUTH AT RISK

Why focus on work-based learning for youth at risk?

The transition from education to work is a crucial time

One in six young people in OECD countries are not in employment, education or training (NEET), and over two-thirds of these young people are not actively looking for work (OECD, 2016a:19). Although this has been a long-standing structural issue for countries, soaring unemployment rates following the great recession of the late 2000s hit youth particularly hard in a number of countries.

This raises both immediate and longer-term challenges. Early labour market experiences are crucial. Those who go through spells of joblessness at early stages of their careers tend to suffer from a “scarring effect”, which leads to higher chances of unemployment and lower earnings later on in life than their peers with similar backgrounds and abilities (e.g. Bell and Blanchflower, 2011; Gregg and Tominey, 2005; Möller and Umkehrer, 2014; Helbling and Sacchi, 2014).

The high share of NEETs is also damaging to economies, as their skills and time remain unused. Estimates suggest that costs in terms of the income that NEETs could command if they were employed amount to around USD 560 billion for OECD economies (even accounting for the fact that NEETs may have a lower earning potential than those in employment), which is on average 0.95% of GDP across OECD countries. Other costs could include more crime and worse health, and direct financial costs such as out-of-work benefits paid to some who are NEET (OECD, 2016a: 23).

Work-based learning shows promise in improving job and life prospects for youth at risk

Work-based learning has attracted increasing attention worldwide as a tool for facilitating school-to-work transition and tackling high youth unemployment and inactivity rates. Compared to other educational pathways, work-based learning, and apprenticeships in particular, is distinctive as it offers learning opportunities that are directly connected to employers, their current skill needs, technology, and working environment.

Evidence suggests that work-based learning can be a promising pathway towards better employment outcomes for young people. A review of a diverse range of work experience programmes in the United States (Sattar, 2010) found that vocational training combined with work placements can improve employment, earnings and academic outcomes for young people. However, it also found that some work experience programmes failed to improve young people’s prospects. This suggests that the quality of local implementation is an important factor that can make or break programme success – several studies found impacts at some sites but not others. Overall, countries with a high share of youth in apprenticeships have lower rates of disconnected youth and youth experiencing difficult transition to employment (Quintini and Manfredi, 2009).²

2. This study compares the labour market situation of young people across various countries and at various points of time.

Work-based learning programmes can also have wider benefits. For example, a recent study (Gelber, Isen and Kessler, 2014) of New York City's Summer Youth Employment Program (SYEP) found that while the programme did not improve subsequent earnings or college enrolment, it did keep youth "out of trouble" and reduced incarceration and mortality rates. Similarly, various studies reviewed by Satter (2010) found a positive impact in terms of arrest, conviction and incarceration rates.

Understanding the costs and benefits of work-based learning to employers

Employer engagement is essential to make work-based learning happen

Successfully engaging more employers and getting them to offer work-based learning is necessary for realising the potential benefits of work-based learning, allowing existing initiatives to be scaled up, and making work-based learning accessible for young people without jobs or learning opportunities. However, finding high-quality work-based learning opportunities is often difficult, particularly for youth at risk. Those living in underprivileged areas will have fewer job opportunities nearby and being surrounded by family members and friends without a job or with low-skilled jobs reduces the scope for informal connections to employers. Even if these barriers were tackled and contacts were built with employers nearby, one major hurdle remains: employers will not systematically offer work-based learning unless they see it as helping their business.

Work-based learning needs to align with business interests, as well as the social responsibility of employers

Some firms may offer young people work-based learning opportunities through a desire to help young people or foster social cohesion in the community. However, this motive is unlikely to generate the widespread provision of work-based learning opportunities, as most jobs are in the private for-profit sector, (OECD/ILO, 2012) and firms in this sector, understandably, are primarily concerned with generating profits. Some employers may care about the future of young people but cannot afford to hire an apprentice if that would generate losses for their business. Therefore, encouraging the large-scale provision of work-based learning opportunities requires programmes that are carefully designed in a way that works for businesses. This can help ensure that work-based learning is both an opportunity to demonstrate support for young people, and is also beneficial for a business' bottom line.

Providing work-based learning has both costs and benefits for firms

A better understanding of the costs and benefits of work-based learning can help identify how to shift the balance to make it more attractive for employers to offer work-based learning opportunities to youth at risk. There is rich research evidence on the costs and benefits of apprenticeships to firms (see Muehleemann, 2016 for an overview). Relevant empirical data are available from repeated surveys of firms that have provided apprenticeships in Germany since the 1970s, in Switzerland since 2000, and more recently in Austria (Schlögl and Mayerl, 2016).

What are the main components of costs and benefits to employers?

A number of components of costs and benefits are considered in the research literature (see Muehleemann, 2016 for how these are estimated empirically). The largest cost component is apprentice pay and other related expenditure (e.g. reimbursement of travel costs, social security benefits). The time and salary of instructors (i.e. those who guide and supervise the work and training of apprentices) is another major source of costs. Additional costs include tools and equipment used by apprentices, as well as administrative costs.

There are two major sources of financial benefits to firms that provide work-based learning. First, apprentices contribute to productive work during their apprenticeship. Already starting on day one these benefits can be realised through unskilled tasks and, as apprentices learn, through increasingly skilled tasks. Second, employers can recruit the best apprentices upon completion. During work-based learning, employers can assess the skills of apprentices and evaluate whether the person is a good match for the job, a process that can take years following external recruitment (Lange, 2007). This can help companies save on recruitment costs (e.g. job advertisements and interview costs, training new recruits, risk of mistaken recruitment). This is particularly valuable in rigid labour markets, where making the wrong recruitment decision can be very costly; and to firms that need highly specialised technical skills, where external recruits need a great deal of training.

The cost-benefit balance for firms depends on various factors

A range of factors have been shown to affect the cost-benefit balance for work-based learning in general (see Muehleemann [2016] for relevant empirical evidence and Kuczera [forthcoming]), these are:

- **Occupation:** The costs and benefits of apprenticeships to employers depend on the occupation to which the apprenticeship leads, reflecting factors such as how long it takes for an apprentice to become good at a job (see Figure A.1 in Annex A on the relative productivity of apprentices) or the cost of equipment involved. For example, data from Germany show higher net costs to employers in technical occupations than in commercial occupations (Muehleemann, 2016).
- **Firm size:** Larger firms can have a more favourable cost-benefit balance by exploiting economies of scale (e.g. several apprentices can use the same training equipment), and through better opportunities to train apprentices while involving them in productive activities. Firm size is linked to other factors that affect the cost-benefit balance. For example, larger firms tend to train more in technical occupations, while smaller firms often hire apprentices in the crafts sector. This has an opposite effect on the cost-benefit balance, as training costs are higher in technical occupations than in the crafts sector.
- **Apprenticeship duration:** Initially, apprentices tend to contribute little to productive work, and often cost more than they produce. Employers make an investment and as apprentices' skills develop over time they can contribute more and more to skilled productive work. In some apprenticeship systems, apprentice wages gradually increase over the period of the apprenticeship, reflecting higher apprentice productivity. At the final stages, apprentices are nearly as productive as skilled workers, but still cost less (as long as the apprentice wage is still lower than a skilled worker wage). This benefit is important, as it compensates for the initial investment made by employers. How exactly the cost-benefit balance evolves through the duration of an apprenticeship depends on how apprentice productivity and wages progress over time.
- **How an apprenticeship is organised:** The mix of time spent on-the-job and off-the-job affects the costs and benefits to employers. While apprentices are off-the-job they develop job-relevant skills, but do not contribute to productive work at the firm. What apprentices do while on-the-job (i.e. a mix of skilled and unskilled productive work, as well as non-productive activities, which may include instruction time) is also important. Productive work always benefits employers, whereas non-productive instruction time (e.g. learning a new technique in a practice workshop in the company) normally brings benefits later when the new skills are applied through skilled productive work. With care, learning can often be integrated into productive work, which yields higher benefits for firms, while maintaining learning quality (see Kis, 2016).

- **Incentives:** Financial incentives, such as tax breaks or subsidies offered to firms engaging apprentices, can reduce net costs. Other types of incentives include linking the award of public procurement contracts to the provision of apprenticeships, as in Switzerland.
- **Institutional context:** Apprenticeships will be a financially more appealing option for employers if there is a large difference between the wages of apprentices and those of skilled workers. Minimum wage laws and collective bargaining agreements are often important as they affect the wage costs of workers and apprentices. Employment protection and labour market tightness are also important: when finding good recruits is hard and hiring the wrong person is costly, offering apprenticeships becomes financially more attractive.

How youth at risk affect the cost-benefit balance

Apprentice characteristics are also important for the cost-benefit balance to employers. Apprentices with stronger skills will be more productive throughout the apprenticeship than those with weaker skills, and will generate higher benefits for the employer. Employing youth at risk as apprentices is likely to be less appealing financially to firms as many have weaker skills than their peers. On average, NEETs tend to have weaker literacy or numeracy skills than young people who are in education, employment or training (see Figure 1). Research suggests that many NEETs also have weaker soft skills than their peers. Studies have found that high school dropouts in the United States, and those who dropped out and completed high school through a second chance programme (GED), had lower non-cognitive skills (e.g. conscientiousness, persistence) than those who never dropped out (Heckman and Rubinstein, 2001; Heckman, Stixrud, and Urzua, 2006).

Figure 1. NEETs face more difficulties with basic skills

Source: OECD (2016c), *OECD Survey of Adult Skills (PIAAC)* (Database 2012, 2015), www.oecd.org/site/piaac/publicdataandanalyses.htm.

If all other things are equal, taking on youth at risk for an apprenticeship will be more costly for a firm than an average young person for two main reasons. First, the productivity of apprentices with weaker skills will start from a lower point. For example, an apprentice in car mechatronics will contribute less to business in a garage if they struggle to browse the vehicle manufacturer's technical portal or if they arrive

late to work sometimes. Second, the productivity of youth at risk is likely to increase more slowly than that of better prepared candidates. It is easier to learn with sound literacy and numeracy skills, and these young people can build on existing technical skills and strong soft skills, which will help them to build a good relationship with colleagues and clients.

PART II. MAKING WORK-BASED LEARNING FOR YOUTH AT RISK MORE ATTRACTIVE TO EMPLOYERS

Introduction

Policy makers face the challenge of designing policy tools that unlock employer engagement by shifting the cost-benefit balance for employers. This should make work-based learning an attractive approach for businesses, and help youth at risk access and succeed in work-based learning opportunities. The following three sections focus on potential policy levers designed to shift the cost-benefit balance for firms that engage youth at risk as apprentices. Box 3 describes the economic framework that underpins the rationale for these potential policy tools.

Box 3. The simple economics of apprenticeship for youth at risk, and potential policy tools

Costs and benefits of apprenticeship for employers in the absence of policy interventions

This figure depicts a simple case – during work-based learning, the benefits for the firm increase (reflecting gains in apprentices' productivity) and costs also increase (reflecting rising apprentice wages). At the early stages, costs are usually higher than benefits, generating net costs for employers (shaded area on lower left hand side). At later stages, benefits are higher than costs, generating net benefits for employers (shaded area on upper right hand side). Employers will find the apprenticeship financially attractive if the overall benefits outweigh the costs – if the shaded area on the upper right hand side is larger than the shaded area on the lower left hand side.

When apprentices are youth at risk, the costs are more likely to outweigh the benefits than in the case of apprenticeships for average young people. This is because the benefit curve tends to start at a lower point and increase more slowly, and because costs will be higher for employers (e.g. need for more instruction time).

Financial incentives given to employers

This policy tool reduces costs for employers. If the firm receives financial incentives (e.g. subsidy or tax break), the costs of apprenticeships are reduced from their initial level (black dotted line) to a lower level (line with black dashes). This reduces net costs borne at the beginning and increases net benefits reaped at later stages. After the introduction of financial incentives, overall benefits outweigh overall costs for the firm by the end of the apprenticeship.

Box 3. The simple economics of apprenticeship for youth at risk, and potential policy tools (*continued*)

Better preparing youth at risk to undertake work-based learning

This policy tool aims to prepare young people for apprenticeships (e.g. strengthen literacy, numeracy, technical or soft skills). Following the policy intervention, the productivity of apprentices, and therefore benefits for the firm, will in theory have a higher starting point (line with black dashes). Even if the learning speed of apprentices remains unchanged (the benefit lines before and after are parallel to each other), this helps the firm achieve a more favourable cost-benefit balance by the end of the apprenticeship.

Providing support to youth at risk during work-based learning

This policy tool aims to target apprentices' productivity and thereby benefits for firms during work-based learning. Support given to apprentices (e.g. remedial courses, mentoring, coaching) helps increase apprentices' productivity gains throughout the apprenticeship, which moves the benefit curve from the line with black dashes to the dotted line. This reduces net costs borne by employers at the beginning and increases net benefits at later stages, creating a more favourable cost-benefit balance for the firm.

1. Financial incentives: Subsidies and tax breaks

Financial incentives may be used to reduce the costs of apprenticeships to employers

In theory, the cost-benefit balance of apprenticeships for employers can be improved through financial incentives, which reduce net costs through subsidies and tax breaks, or which ease their expenses related to apprenticeships in other ways. These incentives may target apprenticeship provision for youth at risk by tying eligibility criteria to apprentice characteristics. Typically, the aim is to ensure that employers can at least break even by the end of the apprenticeship period.

Targeted financial incentives include tax breaks or subsidies that focus on specific groups of apprentices

Several countries use financial incentives to encourage firms to offer apprenticeships, including some that target youth who find it particularly hard to find a placement (see Box 4). Existing schemes target those with disabilities, weaker school performance, migrants, specific ethnic groups etc. (for further analysis on financial and non-financial incentives for apprenticeships see Kuczera, [forthcoming]).

Box 4. Country examples of financial incentives targeting youth at risk

Austria

Various financial measures exist to support companies that provide apprenticeships, including a subsidy for all companies that engage apprentices. The measures below target disadvantaged apprentices and those with learning difficulties:

- Apprentices that transition from apprenticeship outside a company (*überbetriebliche Ausbildung*) to a regular apprenticeship: EUR 1 000 per apprentice is given to the company at the end of the first year of apprenticeship completed with the company.
- Apprentices with learning difficulties: Financial support is available to cover the costs of the apprentice attending additional courses (e.g. literacy support). This covers all course costs up to EUR 3 000 per apprentice. In addition, if the apprentice has to repeat the year, employers will be compensated for the resulting extra costs (e.g. apprentice wage).
- Apprentices in integrative apprenticeships (IBA):
 - Higher basic subsidy: Companies receive subsidies equivalent to three monthly gross apprentice wages for each year of training throughout the programme. In regular apprenticeships, the subsidy decreases over time: it is equivalent to three months of gross monthly wages in the first year, two months in the second year, and one month in the third and fourth years of training.
 - Further training for apprentices: 75% of course costs up to EUR 2 000 per apprentice over the entire apprenticeship in each company.
 - Further training for in-company trainers: 75% of course costs up to EUR 1 000 per trainer and calendar year.
 - Measures for apprentices with learning difficulties: 100% of course costs up to EUR 2 000 per apprentice over the entire apprenticeship.

Source: WKO (2016), Wirtschaftskammer Österreich (Austrian Economic Chambers), "Überblick der Lehrlingsförderungen", www.wko.at.

Australia

The Nominated Equity Groups Commencement Incentive offers AUD 1 250 for an employer who engages an apprentice who belongs to a nominated equity group at the Certificate II level qualification. These nominated equity groups include, for example, indigenous Australians, job seekers with severe barriers to employment, school-based apprentices, apprentices working in a rural or regional area, or apprentices with disabilities.

Source: Australian Government (2016), Apprenticeships website, www.australianapprenticeships.gov.au.

France

Firms benefit from a higher tax break (EUR 2 200 instead of EUR 1 600 per apprentice) if the apprentice is disadvantaged and is in the first year of their training programme. Eligible apprentices include those who are disabled, unqualified youth aged 16-25 who receive support through their transition into professional life, and youth aged 18-22 who have signed a voluntary integration contract (*contrat de volontariat pour l'insertion*) that targets youth most disconnected from employment.

Source: Service-Public-Pro (2016), "Crédit d'impôt apprentissage", www.service-public.fr/professionnels-entreprises.

The effect of universal subsidies for apprenticeships is probably modest

Various evaluations have explored the impact of universal subsidies (subsidies given to all employers who take on an apprentice) for apprenticeships. Westergaard and Rasmussen (1999) found a positive effect of subsidies in Danish firms, but only in manufacturing, office and retail. In Austria, the subsidies appear to have had a limited impact (Wacker, 2007). Schlögl and Mayerl (2016) show that even with the subsidy, employers face, on average, net costs by the end of apprenticeship. In Switzerland, where there are no subsidies of this type, a simulation exercise suggested that subsidies would have an impact on firms that are not involved in apprenticeships, but would have no effect on the supply of apprenticeship training in firms that train already (Mühlemann, 2016). An evaluation of the Australian scheme showed that the subsidy had only a small impact on the decision of employers to train. This was mainly because the subsidy covered only a small part of the company cost of offering an apprenticeship (Deloitte, 2012). One potential response to the mixed evidence on universal subsidies is to implement subsidies that target specific groups who would not otherwise have been able to access apprenticeships. However, targeting specific groups of potential apprentices leads to other challenges.

Effective targeting is hard and there is a risk of subsidising training that would have been offered anyway

While targeted financial assistance seems appealing, it is hard to get right. One challenge is to successfully identify those in the target group to ensure that the financial incentives result in expanding work-based learning to youth at risk who otherwise would not have been able to access opportunities. At the same time, incentives should not be subsidising places that would have been offered to young people anyway.

The German experience with training bonuses for companies offering work placements to disadvantaged apprentices shows some of the challenges. A training bonus scheme (*Ausbildungsbous*) was introduced by the federal government in 2008 and discontinued in 2010. It targeted youth who had unsuccessfully applied for an apprenticeship, had lower secondary schooling or less, or had learning difficulties or a disability (Bonin et al., 2013). Training companies received between EUR 4 000 and 6 000 per additional apprentice, half of which was paid after a four-month probationary period and half when the apprentice took their final exam (Wenzelmann, 2016). For hiring disabled apprentices, a firm could receive an additional 30% on top of the training bonus. The bonus was available to companies where the number of apprenticeship positions, including disadvantaged apprentices, was higher than on average during the preceding three years.

The evaluation of the bonus (Bonin et al., 2013) found that the scheme was an inefficient use of public spending, as over 90% of subsidised apprentices would have been hired even without the bonus. Companies reported that better basic skills among applicants and more support for weaker apprentices during training would be more helpful than a subsidy (Wenzelmann, 2016). While the federal scheme was discontinued in 2010, some states still have similar subsidy schemes. Mühlemann (2016) argues that the design of the scheme is to blame: the bonus for disadvantaged apprentices was too low to make a difference. Even with the bonus, firms faced net costs by the end of the apprenticeship – even more so given that disadvantaged apprentices need more instruction time than average apprentices. As a result, firms were offering work placements to individuals they intended to hire after the end of apprenticeship to compensate for the net costs incurred during the apprenticeship. These individuals would have been offered an apprenticeship place even without the subsidy.

Improved access among the target group should not result in lower access for others

One challenge associated with targeted incentives is that it can lead to undesired substitution effects across groups. For example, in the late 1990s the Netherlands implemented a tax law designed to

encourage companies to provide training to employees aged over 40. In response, companies increased training for this age group, but reduced training among younger employees, with a negative effect on overall training provision (Leuven and Oosterbeek, 2004).

Improving the cost-benefit balance of apprenticeships in general may do more to promote apprenticeships among youth at risk

Given the difficulties involved in effectively targeting subsidies at participants who otherwise could not access apprenticeships, it might be more efficient to design apprenticeships in a way that work for employers, including those who employ youth at risk as apprentices. Research from Switzerland (Mühlemann, Braendli and Wolter, 2013) suggests that firms are willing to invest extra instruction time into apprentices with poor school results, but only in occupations where they expect to reap net benefits during the course of the apprenticeship (e.g. retail, administration). In these occupations, firms tend to compensate for weaknesses in apprentice skills. The study argues that designing programmes in a way that allows firms to reap net benefits by the end of the apprenticeship is important for ensuring that young people with weaker school results can access apprenticeships.

A study from Australia (Dickie, McDonald and Pedic, 2011) found that subsidies were most important to employers who were least able to support an apprentice, while employers with the highest completion rates in apprenticeships tended to see financial incentives as less important. The implication of both studies is that rather than offering subsidies, apprenticeships may be best promoted by designing schemes that work in cost-benefit terms for employers. This means that one size does not fit all, and adjustments may be needed to fit occupations, institutional contexts and apprentice characteristics.

An apprenticeship scheme for youth at risk is likely to work if employers can break even by the end of the apprenticeship

The cost-benefit balance of apprenticeships to employers depends on various factors, some of which can be subject to the policy influences listed in section 2 (e.g. duration, off-the-job vs. on-the-job time, wages). The appropriate choice regarding these factors may be different depending on the country's institutional context, apprentice characteristics and related constraints. For example, a teenage apprentice without work experience and living with their parents will probably be willing to accept a lower wage than an adult apprentice in their late 20s with family responsibilities. In countries where data are available on the costs and benefits of apprenticeships, including information on firm characteristics, occupation concerned, apprentice characteristics, and how training is organised, there is an empirical foundation on which programmes can be built and adjusted.

Even in countries where relevant national data are not available, international evidence can be used to inform policy development. For example, simulations conducted for Spain using Swiss data (e.g. on how quickly apprentices become skilled in different occupations) (Wolter and Mühlemann, 2015) show that, in theory, it is always possible to design a programme and set framework conditions in a way that allows a firm to train apprentices without incurring net costs. These simulations suggest that if the apprenticeship duration and apprentice wages are set appropriately, firms will be able to break even by the end of apprenticeship. The simulation for Spain assumes that the relative productivity of Spanish apprentices evolves in the same way as Swiss apprentices³ - an assumption that would not hold if Spanish companies took longer to train apprentices up to the level of their country's skilled workers. National data on the costs

3. Relative productivity reflects the productivity of an apprentice compared to a skilled worker – for example if a skilled electrician takes one hour to complete a task, while an apprentice takes two hours, the relative productivity of the apprentice will be 50%.

and benefits of apprenticeships are also necessary to provide a more precise evidence base for policy making.

Some countries have designed specific apprenticeship schemes for youth at risk, and in Switzerland, employers break even by the end of the scheme

Austria established a specific apprenticeship scheme (integrative apprenticeship, IBA) for youth with learning difficulties (see Box 5). The scheme defines a special wage scale for IBA apprentices (apprentice wages are defined by collective agreements), allows participants to take longer to complete (five or six years instead of four), and is complemented with targeted subsidies. The combination of lower wages in each year of training and targeted subsidies aims to create a more favourable cost-benefit balance for companies and encourage them to take on IBA apprentices.

Evidence shows that it is possible to design a programme for youth at risk that works for business, even without subsidies. In Switzerland two-year apprenticeships leading to an EBA qualification (*Grundbildung mit Eidgenössischem Berufsattest*) are designed for youth who face difficulties at school, struggle to find a three or four year apprenticeship, or risk dropping out (SBFI, 2014). Research shows that, on average, companies that offer EBA apprenticeships break even by the end of the apprenticeships. They achieve this while offering good learning opportunities to youth at risk. Nearly half of EBA completers proceed to higher-level apprenticeships, and among those who do not, 75% find a job upon completion (see Box 5).

Box 5. Apprenticeship schemes designed to serve youth at risk

Two-year apprenticeships in Switzerland

Two-year apprenticeship programmes are designed for young people aged at least 15 who have completed lower secondary education, who are at risk of dropping out from education and training, or who struggled to find a three or four-year apprenticeship and have dropped out.

EBA is provided in around 60 occupations, such as retail sales assistant, healthcare assistant and hairdresser (SDBB, 2016). EBA programmes follow a similar structure to longer apprenticeships, including on-the-job training and time spent in a vocational school. Typically, one day per week is spent in school, with the optimal class size considered to be 12 EBA students. EBA apprentices benefit from support measures, such as individual tutoring, remedial courses and support from in-company supervisors (SBFI, 2014).

Upon completion of an EBA apprenticeship, progression to three or four year apprenticeships is possible (based on national or canton level regulations). Typically, apprentices can join the second year of a three or four-year apprenticeship. Evaluations show that 41% of EBA apprenticeship graduates progress into a three or four-year apprenticeship within two years of completion. Among those who do not pursue further training, 75% find employment within six months of completion (SBFI, 2014).

Research evidence shows that it is possible to design schemes for youth at risk that also work for employers. Cost-benefit analysis of EBA apprenticeship show that, on average, firms that offer EBA apprenticeship manage to break even financially by the end of the programme (Fuhrer and Schweri, 2010).

Sources: Fuhrer, M., and J. Schweri (2010), "Two-year apprenticeships for young people with learning difficulties: A cost-benefit analysis for training firms", *Empirical Research in Vocational Education and Training*, Vol. 2/2, pp. 107–25; SBFI (2014), "Zweijährige Berufliche Grundbildung mit Eidgenössischem Berufsattest", Staatssekretariat für Bildung, Forschung und Innovation, www.sbfi.admin.ch/berufsbildung; SDBB (2016), Career guidance website "EBA-Beruf – 2-jährige Lehre", www.berufsberatung.ch.

Box 5. Apprenticeship schemes designed to serve youth at risk (*continued*)

Integrative apprenticeships in Austria

Integrative apprenticeships were introduced in 2003 in Austria and accounted for 6% of apprentices in 2014 (Dornmayr, 2012). It is designed for learners with special needs, disabled persons and those without a basic school leaving certificate (BMWFW, 2016). Characteristics of integrative apprenticeships include:

- Longer completion or partial qualification: Participants can take longer to complete (by one or two years), or can obtain a partial qualification in one to three years.
- Training assistance: Supporting apprentices throughout their training, both during placement with the training company, at school and supporting the apprentice in case of difficulties, is at the heart of the IBA initiative (see Box 8).
- Delivery in schools adapted to IBA apprentice needs: IBA apprentices attend regular classes at vocational schools. Teachers of IBA apprentices can attend courses preparing them to respond to the needs of IBA apprentices. Additional assistance is available to support teaching, and class sizes are reduced. Those in the partial qualification pathway follow individualised curricula and attend small classes (maximum five apprentices).

Sources: BMWFW (2016), "Lehrausbildung in verlängerter Lehrzeit und in Teilqualifikation", Federal Ministry of Science, Research and Economy, www.bmwfw.gv.at/Berufsausbildung/; Dornmayr, H. (2012), Berufseinmündung von AbsolventInnen der Integrativen Berufsausbildung, Ibw-Forschungsbericht, No. 167, Institut für Bildungsforschung der Wirtschaft, Wien, www.bmwfw.gv.at/Berufsausbildung/LehrlingsUndBerufsausbildung.

Policy pointers

Shift the cost-benefit balance of apprenticeships for employers who engage youth at risk

Design apprenticeship schemes so that they work for both young people at risk and employers. Employers need to break even by the end of the apprenticeship, while youth at risk need to develop targeted skills. However, providing direct financial incentives to employers who hire youth at risk as apprentices (e.g. subsidies or tax breaks) is not the answer. Universal financial incentive schemes have limited impact and can involve significant deadweight loss (i.e. they finance provision that would have been offered anyway). Targeted incentives for youth at risk are hard to get right, and risk reducing apprenticeship provision among non-targeted individuals.

Focus attention on non-financial measures that improve the cost-benefit balance of apprenticeships to employers. Resources dedicated to encouraging apprenticeships among youth at risk should support non-financial measures, these include adjusting the parameters of apprenticeship schemes, programmes that prepare youth at risk for apprenticeships, and initiatives that support youth at risk during apprenticeships. These measures can build on insights from national and/or international empirical evidence.

Adjust parameters of apprenticeship schemes

Key parameters to adjust in the design of apprenticeship schemes include:

- **Duration of apprenticeship:** In general, the duration should allow employers to recoup their initial investment in training apprentices, taking into account how the productivity of apprentices evolves over time. The optimal duration varies across occupations; typically, schemes would be longer when productivity gains are achieved more slowly.

Policy pointers (*continued*)

For youth at risk, offering apprenticeship schemes in occupations for which the optimal duration is shorter (i.e. apprenticeships targeting a smaller skill set) could help achieve higher completion rates. Schemes targeting youth at risk may also allow for some flexibility, giving apprentices additional time to complete if needed.

- **Apprentice wage:** In general, apprentice wages should be allowed to vary across occupations and sectors, reflecting how apprentices' productivity changes over time and taking into account the wages of skilled and unskilled workers in the targeted occupation. Schemes targeting youth at risk may offer below-average wages, reflecting apprentices' productivity, but wages should be high enough to ensure that apprenticeships remain attractive for youth at risk.
- **Balance of time spent with the firm versus at school or college:** In general, time spent with the firm should be long enough to ensure that apprentices contribute to production, allowing employers to recoup their investment. Schemes should take into account that some youth at risk need additional instruction time at school or college (e.g. remedial courses for literacy and numeracy).

Policy levers may target other factors that affect the cost-benefit balance for employers, in particular apprentices' skills and the skills of instructors in the workplace. These are discussed in the following two sections.

The following two sections focus on measures that aim to improve the cost-benefit balance of apprenticeships to employers without the use of direct financial incentives, such as subsidies or tax breaks.

2. Better preparing youth at risk to undertake work-based learning

This section looks at initiatives that prepare young people for apprenticeships and offer them a springboard from joblessness to training or a bridge between schools and apprenticeships. The term pre-apprenticeship will be used for simplicity to refer to a wide range of programmes designed for this purpose. Pre-apprenticeships can, in principle, facilitate access to work-based learning: better prepared youth well-matched to an employer should be more easily recruited for apprenticeships, more productive at work and less likely to dropout.

Pre-apprenticeships can improve skills and reduce dropout

Participating in a pre-apprenticeship should, in principle, help young people improve their skills by addressing potential weaknesses in literacy or numeracy, developing initial vocational skills, and improving their soft skills. These should make them more attractive candidates and increase their chances of obtaining an apprenticeship position. For employers, better prepared apprentices mean that an apprenticeship is more likely to be a worthwhile investment as apprentices will have higher levels of initial productivity and be able to learn faster than if they had not completed a pre-apprenticeship. They will also need less support to help remedy initial weaknesses, creating lower costs for employers.

Young people who completed a pre-apprenticeship should be less likely to drop out because they have made their choice based on a better knowledge of the occupation or industry, and because they are better prepared to successfully complete the apprenticeship. This reduces the risk of employers facing dropout, which is similar to the costs of wrong recruitment. Employers tend to invest in training at the early stages

and reap benefits that compensate for this at later stages, but if the apprentice leaves, employers are left without the means to recoup the initial costs.⁴

Pre-apprenticeship initiatives are commonly used across OECD countries

Across OECD countries, many programmes aim to create a bridge to work-based learning. This report refers to these programmes as pre-apprenticeship. A variety of terms are used for such programmes, including bridging programmes (Switzerland), transition programmes (Germany), traineeships in (England [United Kingdom]) or pre-apprenticeship programmes (e.g. Australia, United States). Table 1 provides an overview of relevant initiatives in selected OECD countries.

Pre-apprenticeship programmes aim to develop skills that enable young people to find and successfully complete a work-based learning opportunity. They usually target the following skills:

- **General skills:** Programmes typically include literacy and numeracy instruction, and sometimes foreign language training.
- **Vocational skills:** In some programmes, participants develop foundation skills related to a particular industry or apprenticeship occupation. In others, the focus is on career exploration, with participants learning about various occupations.
- **Soft skills:** This includes the skills that young people need to find and obtain a work-based learning opportunity (e.g. job search, CV writing and interview skills), as well as the skills needed to succeed in the workplace (e.g. time-keeping, team work, resilience) (UK Department for Education and Department for Business, Innovation and Skills, 2015).

Another key aim of pre-apprenticeship programmes is to improve the matching of young people to work-based learning opportunities. There is often a career guidance component in these programmes and the vocational component, especially if it includes work experience, allows participants to test out an occupation before engaging in an apprenticeship.

4. This is less the case in apprenticeship schemes where dropout from an apprenticeship does not necessarily mean quitting the employer.

Table 1. Pre-apprenticeship programmes in selected OECD countries

Country	Programme name	Target group	Duration	Content	Regulatory framework
Australia	Pre-apprenticeship		Typically 6-12 months	General employability skills, trade skills specific to a particular apprenticeship occupation.	No national definition or regulatory framework, currently no Commonwealth funding (previous funding programmes were ceased).
England (UK)	Traineeship	Youth aged 16-24 qualified below level 3 with little work experience and not in employment (not intended for the most disengaged young people, who require intensive support).	6 weeks to 6 months	Work experience placement (100-240 hours); work preparation training (including soft skills); English and mathematics if needed.	Framework for delivery defines core content and eligibility criteria. Funded by the Education Funding Agency for 16-19 year-olds and by the Adult Skills Budget for 19-24 year-olds. Exact content to be agreed between training provider and employer.
Germany	Introductory training (<i>Einsiegsqualifizierung</i>), including a variant called "EQ Plus".	Youth aged 16-25. EQ Plus targets youth with learning difficulties and those socially disadvantaged.	6-12 months	Work-based learning under a contract concluded with a training company. Optional school-based component. Under EQ Plus: social and educational support, additional school-based and company-based tutoring, mentoring.	Regulatory framework provided by the National Training Pact. Funded by local employment agencies and job centres.
	Preparatory VET year (<i>Berufsvorbereitungsjahr, BVJ</i>).	Youth aged under 18 who completed compulsory education (including those without a lower secondary qualification).	1 year (may be extended to 18 months)	General subjects (German, mathematics, English) at vocational school (leading to a lower secondary qualification). Exploration of three occupational fields through theory and practice (including work placements).	
	Basic vocational year (<i>Berufsgrundbildungsjahr, BGJ</i>)	Youth who have obtained a lower secondary qualification.	1 year	Vocational theory and practice in a particular field taught at a vocational school, with an element of work placement (either in a block or alternating 2 days at school and 3 days at work).	

Table 1. Pre-apprenticeship programmes in selected OECD countries (*continued*)

Country	Programme name	Target group	Duration	Content	Regulatory framework
Scotland (UK)	Certificate of Work Readiness	16-24 year-olds	10-12 weeks	3-4 weeks of off-the-job training (e.g. Dealing with Work Situations, Responsibilities of Employment, Personal Development Self and Work and Skills for Customer Care). 190 hours of work experience.	It can be funded by the Employability Fund – Scottish Government funding administered through Skills Development Scotland.
Switzerland	SEMO (motivational semester)	Youth under the age of 25 who completed compulsory education.	6 months (may be extended to 9.5 months)	1-2 days per week at a vocational school.	Regulated by the Swiss State Secretariat for Economic Affairs, funded through unemployment insurance. Co-ordinated by cantonal labour offices. Programmes organised/delivered by sponsors (e.g. associations, foundations, labour offices etc.).
	Bridging measures	Youth who have finished lower secondary education.	1 year	Language skills, mathematics, motivation and career guidance. Either school-based or combined school and work-based training. Some participants have a pre-apprenticeship contract with their training company. A special programme targets migrants.	Funded by cantons and communities.
United States	Pre-apprenticeship		Not specified.	Literacy, mathematics, English and work-readiness skills delivered through classroom instruction and industry-based training.	No mandatory framework. The Employment and Training Administration defined a pre-apprenticeship quality framework that aims to build a broader understanding of pre-apprenticeship programmes.

Sources: Ausbildung.info (n.d.), "Berufsvorbereitende Maßnahmen", Ver.di Jugend, <http://ausbildung.info/berufsvorbereitende-bildungsmassnahmen> (accessed 13 June 2016); Ausbildungspark (2016), "Das ABC der Ausbildung: Berufsvorbereitungsjahr (BVJ)", Ausbildungspark Verlag, Offenbach, www.ausbildungspark.com/ausbildungs-abc/berufsvorbereitungsjahr-ausbildung-bvj/; BMBF (n.d.), "Informationen zur Einstiegsqualifizierung Plus (EQ Plus)", Bundesministerium für Bildung und Forschung, www.bmbf.de/files/arbeitspapier_einstiegsqualifizierung.pdf (accessed 13 June 2016); Foley, P. and D. Blomberg (2011), Pre-apprenticeship training activity, National Centre for Vocational Education Research, www.ncver.edu.au/data/assets/file/0011/2630/2352.pdf; Landert, C. and D. Eberli (2015), "Solutions Transitoires Au Moment de La Transition I – Etat Des Lieux", Landert Brägger Partner Sozialforschung Evaluation Konzepte, www.iiz.ch; SDS (2016), Responses to the OECD questionnaire on work-based learning, Skills Development Scotland, unpublished; SEMO (n.d.), Motivationssemester website, www.ch-semi.ch; UK Department for Education and Department for Business, Innovation (2015), Traineeships: Framework for delivery 2015 to 2016, www.gov.uk; US Department of Labor (2016), Pre-Apprenticeship website, www.doleta.gov/OA/preapprentice.cfm.

Pre-apprenticeship enrolments tend to be larger in countries where youth apprenticeships are common

In countries where upper secondary vocational education and training (VET) is commonly delivered through apprenticeships (e.g. Germany, Switzerland), failure to find an apprenticeship position means few routes to skilled jobs and a high risk of becoming disconnected from jobs and learning opportunities. Access to apprenticeships is, therefore, a matter of equity, and pre-apprenticeship programmes act as a bridge between lower secondary school and apprenticeships. The role of pre-apprenticeship programmes is different in countries where apprentices tend to be adults who, in many cases, may have completed upper secondary education (e.g. the United Kingdom and the United States) and apprenticeships are a tool for upskilling the workforce, rather than one of the pathways within initial education.

This size of the pre-apprenticeship sector and the profile of participants reflect these different roles. For example, in Germany, for 100 new apprentices there were 52 new pre-apprentices in 2013 (Autorengruppe Bildungsberichterstattung, 2016). In Switzerland, there were 22 new pre-apprentices for 100 new apprentices in 2012 (Landert and Eberli, 2015). In England, where apprenticeships enrol a smaller share of young people and apprentices tend to be older, there were only two pre-apprentices (i.e. traineeship participants) in 2013 for every 100 new apprentices (UK Department for Education and Skills Funding Agency, 2016).

Frameworks for pre-apprenticeship programmes vary within individual countries

At one end of the spectrum, a national framework regulates pre-apprenticeships, sometimes with national funding sources. The framework often leaves room for implementation by sub-national entities. For example, in England (UK), there is a countrywide budget and framework for delivery for traineeships that prepare young people for apprenticeships. The framework for delivery specifies individual eligibility criteria (e.g. age, qualification level) and core content (e.g. level below which English and mathematics instruction is needed, and minimum and maximum duration of work experience component in the programme). However, there is considerable room for training providers to define the content of a traineeship within that framework. In Scotland (UK), the Certificate for Work Readiness is a Scottish qualification designed to develop workplace skills, behaviours and attitudes. It includes four off-the-job training units that target generic employability skills, followed by a work placement. Courses leading to this certificate may be funded by the Employability fund of the Scottish Government (SDS, 2016). In Germany, each federal state is responsible for provision under the transition system (*Übergangssystem*), which caters for those who leave lower secondary education and do not manage to enter an apprenticeship. In Switzerland, some programmes (motivational semesters) are regulated at federal level and funded by unemployment insurance, while others (bridging measures) are funded by cantons and communities.

At the other end of the spectrum, some countries have programmes that prepare for apprenticeships, which are not subject to federal or state regulation. For example, pre-apprenticeships in Australia are not regulated at the Commonwealth level and do not receive funding from the Commonwealth (although various funding programmes were implemented in the past, see Box 6). Similarly, in the United States, pre-apprenticeship programmes are not subject to mandatory federal regulations, but the Department of Labour has defined a “Quality Pre-Apprenticeship Program and Related Tools and Resources” to inform public workforce systems and support high-quality programmes (US Department of Labor, 2016) (see Box 6).

Box 6. The pre-apprenticeship quality framework in the United States

Pre-apprenticeship is defined by the Employment and Training Administration (ETA) as a programme or set of strategies designed to prepare individuals to enter and succeed in a registered apprenticeship programme and has a documented partnership with at least one, if not more, registered apprenticeship programme(s). A quality pre-apprenticeship programme is one that incorporates the following elements:

- **Approved training and curriculum.** Training and curriculum based on industry standards and approved by the documented Registered Apprenticeship partner(s) that will prepare individuals with the skills and competencies needed to enter one or more Registered Apprenticeship programme(s).
- **Strategies for long-term success.** Strategies that increase Registered Apprenticeship opportunities for under-represented, disadvantaged or low-skilled individuals, such that, upon completion, they will meet the entry requirements, gain consideration, and are prepared for success in one or more Registered Apprenticeship programme(s).
- **Promotes greater use of registered apprenticeship to increase future opportunities.** To support the ongoing sustainability of the partnership between pre-apprenticeship providers and Registered Apprenticeship sponsors, these efforts should collaboratively promote the use of Registered Apprenticeship as a preferred means for employers to develop a skilled workforce and to create career opportunities for individuals.
- **Meaningful hands-on training that does not displace paid employees.** Provides hands-on training to individuals in a simulated lab experience or through volunteer opportunities, when possible, neither of which supplants a paid employee but accurately simulates the industry and occupational conditions of the partnering Registered Apprenticeship sponsor(s) while observing proper supervision and safety protocols.
- **Facilitated entry and/or articulation.** When possible, formalised agreements exist with Registered Apprenticeship sponsors that enable individuals who have successfully completed the pre-apprenticeship programme to enter directly into a Registered Apprenticeship programme and/or include articulation agreements for earning advanced credit/placement for skills and competencies already acquired.

Source: US Department of Labor (2016), Pre-apprenticeship website, www.doleta.gov/OA/preapprentice.cfm.

There is a rich field of innovation in programmes that use work-based learning to engage youth at risk, sometimes without links to pre-apprenticeship frameworks

Programmes that offer work-based learning to youth at risk are often developed and implemented by state or local level stakeholders, creating opportunities for innovation. In some countries diverse initiatives are implemented both by government and non-government organisations without direct links to apprenticeships or pre-apprenticeship frameworks. Box 7 describes three initiatives that have recently emerged in the United States. Room for local implementation means that each state, municipality and sometimes institution can become a test-bed for new ideas. Making the most of the potential of these innovations requires monitoring and documenting emerging initiatives, evaluating their effectiveness and scaling up the most promising initiatives.

Box 7. Innovative approaches using work-based learning to engage youth at risk in the United States

12 for Life Program at Southwire, Carrollton, Georgia

A partnership between Southwire, the Carroll County School System in Georgia, the Florence City Schools in Alabama, 12 for Life is an innovative programme that places at-risk students in real jobs at Southwire, allowing them to earn wages while earning credit toward a diploma. 12 for Life combines traditional classroom instruction with jobs inside a real manufacturing plant. Students work regular hours, earn actual wages, and learn valuable skills they will need after they graduate. Southwire employees share their time and experience through a mentoring programme that provides one-on-one support. Students rotate from workstation to workstation, gaining experience throughout the manufacturing process. They learn a variety of job skills, including machine operation, logistics, product and reel assembly, shipping, quality assurance and data entry. Guest speakers and tours of various Southwire facilities give students an even broader grasp of the range of jobs available and a personal glimpse of what those jobs entail. By mid-year in 2015, more than 1 100 students had graduated from 12 for Life. 40% of those went on to post-secondary education, while another 30% joined the military. Another 20% went to work for Southwire or other employers. The State of Georgia's Great Promise Partnership is based, in part, on the 12 for Life model and other companies and communities have formed similar partnerships of their own.

Source: Southwire (2016), 12 for Life website, www.12forlife.com (accessed 23 November 2016).

Urban Alliance

This initiative targets high school seniors from distressed communities. It aims to help youth move on to higher education or employment through a high school internship programme. The programme's key components are: 1) paid internship in an office setting (Monday to Thursday after school and full-time during the summer); 2) soft and hard skills job training for four to six weeks after school at the start of the programme, followed by ongoing training after school each Friday; 3) coaching and mentoring provided by Urban Alliance programme co-ordinators and job mentors at the internship site; and 4) alumni services consisting of individual coaching, alumni reunions and events, and a paid internship opportunity during the summer break from college.

A six-year randomised controlled trial evaluation of the initiative is on the way. Interim evaluation results show a positive impact on college attendance among male participants and a positive impact on four-year college attendance among middle-performing students (those with 2.0 to below 3.0 grade point average).

Source: Theodos, B., et al. (2016), *Embarking on College and Career, Interim Evaluation of Urban Alliance*, Urban Institute, www.urban.org/research/publication/embarking-college-and-career-interim-evaluation-urban-alliance.

This Way Ahead

This Way Ahead is Gap Inc.'s paid internship programme for low-income youth. Youth are recruited by a local non-profit that runs a job training programme. Store employees volunteer to lead store tours and skill-building workshops. Youth receive supplemental online training. Those interested may apply for paid internships, which involve working 12 hours per week for 10 weeks. During the internship participants receive ongoing support from non-profit job coaches, store managers and store colleagues.

The programme has offered internships to over 2 600 low-income youth. In 2016, over 70% of interns received job offers upon completing their internships. Participants stay with the company twice as long as their peers and have higher engagement than their colleagues. Evaluations suggest participants improve their confidence and on-the-job skills.

Source: Gap Inc. (n.d.), "Be What's Possible" webpage www.bewhatspossible.com/thiswayahead (accessed 21 November 2016).

Some countries have established programmes that allow young people to start an apprenticeship outside firms

An alternative approach to a pre-apprenticeship programme is to allow young people to start their apprenticeship without a work placement, and to encourage the transition into a regular apprenticeship after an initial period of training. For example, Austria and Germany have established such programmes (see Box 8). These programmes act as a pre-apprenticeship if participants do transition into a regular apprenticeship. For those who cannot transition into an apprenticeship, the programme is similar to a school-based training programme. For young people who cannot immediately find a regular apprenticeship place, such programmes have some advantages, such as allowing them to earn a training wage and obtain a qualification. However, these programmes lack some of the benefits of regular apprenticeships. For example, participants do not have the same opportunities to develop soft skills (e.g. working with colleagues, handling clients) as regular apprentices. In addition, the availability of a regular apprenticeship training place is usually an indicator of labour market relevance, which is not present in these programmes (Hoeckel, 2010).

Box 8. Dual programmes outside of firms

Austria: überbetriebliche Ausbildung (ÜBA)

ÜBA courses allow young people who are unable to find a regular apprenticeship placement to obtain an apprenticeship qualification in accredited training centres. Since ÜBA courses were launched in 2008, around one quarter of participants have transitioned into a regular apprenticeship. Courses are delivered in two modalities:

- ÜBA I allows young people to participate in an apprenticeship programme delivered by an accredited training provider, with workshops that simulate an in-company environment or short in-company internships.
- ÜBA II places greater emphasis on practical work experience in a company. Training in a company is based on a short-term apprenticeship training contract and is combined with theoretical courses at an accredited training centre (Ecorys et al., 2013; Hofbauer, Kugi-Mazza and Sinowatz, 2014). In ÜBA II, trainees typically spend one day at school, one day in the ÜBA training centre and three days in their training company. If trainees are unable to transfer to a regular apprenticeship, they can obtain their qualification by passing the final apprenticeship exam (Eurofund, 2012).

Source: Eurofound (2012), *NEETs - Young people not in employment, education or training: Characteristics, costs and policy responses in Europe*, Publications Office of the European Union, Luxembourg, www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1254en.pdf; Ecorys, IES and IRS (2013), *Apprenticeship and Traineeship Schemes in EU27: Key Success Factors*, http://ec.europa.eu/education/policy/vocational-policy/doc/alliance/apprentice-trainee-success-factors_en.pdf; Hofbauer, S., E. Kugi-Mazza, L. Sinowatz (2014), "Erfolgsmodell ÜBA: Eine Analyse der Effekte von Investitionen in die überbetriebliche Ausbildung ÜBA auf Arbeitsmarkt und öffentliche Haushalte", WISO, Linz, www.isw.linz.at/themen/dbdocs/LF_Hofbauer_Kugi_Sinowatz_03_14.pdf.

Germany: BaE training programmes (Berufsausbildung in einer außerbetrieblichen Einrichtung)

BaE is available to socially disadvantaged youth and those with learning difficulties who are unable to enter a regular apprenticeship. Transition into a regular apprenticeship is encouraged, preferably during the first year of the programme. If participants fail to find an apprenticeship, they may complete their training in BaE. The school-based component is delivered at a vocational school, similar to regular apprenticeships. Additional teaching support is provided to participants, with trainers targeting occupational skills. There is also socio-pedagogical assistance to help with challenges in participants' lives more broadly, and remedial support to help participants catch up with any gaps. Practical training takes place at a training provider or a provider of youth social services. This programme is available in a limited number of occupations, mostly in construction, woodwork, hotel and restaurant, gardening, care for elderly and housekeeping.

Source: ZEW, RAMBOLL and INFAS (2010), *Vorstudie zur Evaluation von Fördermaßnahmen für Jugendliche im SGB II und SGB III*, www.bmas.de/SharedDocs/Downloads/DE/PDF-Publikationen/fb-fb405-evaluation-sgblII-sgblIII.pdf?__blob=publicationFile.

Often implementation involves a diversity of stakeholders at different levels

Programmes that create a bridge into apprenticeships are often at the intersection of education, employment and social policy. Diverse stakeholders may be involved in the funding, regulation and delivery of programmes, including federal, regional and local government, and private entities (e.g. associations, foundations). For example, in Germany, courses that are part of the transition system can be delivered in vocational schools, in private institutions or in firms. In Switzerland, federal funding for “bridging programmes” is provided to cantons. There is substantial freedom in terms of implementation at the canton level. Federal influence is limited to recommendations, and the role of inter-cantonal education authorities is also limited. Most courses as part of bridging programmes are provided by public institutions (cantons, municipality or several municipalities), with 12% of the provision delivered by private entities (Landert and Eberli, 2015). In England, 68% of traineeships were delivered by independent training providers and 26% by colleges (Burke, 2016).

Careful co-ordination is essential to avoid confusion in the mix of provision

The diversity of programmes and actors involved can be a challenge as provision is sometimes fragmented and can lead to a confusing variety of isolated measures. In response to this challenge, Germany provided federal funding between 2008 and 2013 to an initiative to improve the co-ordination of transition offers at the regional level (*Perspektive Berufsabschluss - Regionales Übergangsmanagement*). This initiative included implementation strategies regarding networking, transparency of provision, parental involvement, and school-company co-operation (Aram et al., 2014). The “Educational chains” (*Bildungsketten*) initiative, launched in 2010, encourages a coherent and structured approach in career orientation and the transition system (German Federal Ministry of Education and Research, 2016).

Evaluations are essential to identify what works

Pre-apprenticeship programmes tend to be costly, and an important challenge is to identify which approaches work best. Evaluations have been conducted in Australia, for example, where various Commonwealth-funded programmes were implemented over the past decade (Box 9).

There are various challenges to obtaining solid evaluation evidence. First, within each country, state or region, the programmes offered tend to vary considerably in terms of content, duration, funding and mode of delivery. This means that average results may inadequately capture the quality of individual programmes.

Second, indicators such as the transition rate into apprenticeships or subsequent completion need to be compared with what would have happened to those young people in the absence of the programme, and this is often hard to determine unless there has been a randomised controlled trial. However, such trials are rare in these programmes, as in most countries, all eligible youth willing to enter a programme are provided access.

Available data on some outcomes (e.g. completion rate in apprenticeships) do not allow firm conclusions to be drawn. For example, in Germany, apprentices who had participated in a pre-apprenticeship programme (*Übergangsmassnahmen*) prior to an apprenticeship face an above-average dropout rate, although dropout rates vary with the type of pre-apprenticeship programme (Autorengruppe Bildungsberichterstattung, 2016: 290). In Australia, the link between pre-apprenticeship participation and apprenticeship completion varies between trades. Pre-apprenticeship participants had higher completion rates of apprenticeship in some trades (e.g. construction, electro-technology), while the opposite was true in others (e.g. hairdressers, engineering trades) (Karmel and Oliver, 2011).

Data from various countries suggest that pre-apprenticeship participants tend to be more disadvantaged and have weaker skills and prior qualifications than those who choose other learning pathways or jobs at the same age (Autorengruppe Bildungsberichterstattung, 2016; Karmel and Oliver, 2011). Therefore, higher dropout rates among those who completed a pre-apprenticeship may reflect weaker skills at the outset, rather than poor quality pre-apprenticeships.

Third, various outcome measures may be envisaged, such as the transition into an apprenticeship, other education or training programmes, or employment. But a participant not entering an apprenticeship is necessarily a negative outcome, especially if the aim of the programme is to allow young people to test out whether an occupation suits them. The costs and benefits of these programmes need to be compared with those of alternative scenarios (e.g. higher chance of reliance on unemployment benefits), and these are hard to estimate.

Box 9. The recent history of Commonwealth-funded pre-apprenticeship programmes in Australia

The Commonwealth previously funded several pre-apprenticeship programmes, although currently it does not directly fund pre-apprenticeship training through a funding programme.

Apprentice Kickstart Programme

The programme ran between 2009 and 2012 and provided AUD 20 million to states and territories through a National Partnership, supporting about 5 000 pre-apprenticeship participants.

Factors that appeared to encourage completion included: 1) high level industry support and involvement in programme development; 2) mentoring and support; 3) the involvement of trainers with relevant industry experience; and 4) relevant work placement for participants. However, given the diverse range of projects undertaken in the different jurisdictions, it was difficult to obtain an overall quantitative analysis of the effectiveness of the programme in preparing individuals for an apprenticeship. An internal interim report on outcomes for Kickstart was prepared in November 2011 and reflected a wide variation in results across the states and territories.

Australian Apprenticeships Access Programme

This programme ran between 2009 and 2014, with funding of around AUD 27 million per year with a target of 9 500 eligible job seekers entering the programme every year. It was designed to provide vulnerable job seekers with pre-vocational training, job search assistance and post-placement support to help them find and keep an apprenticeship, or to enter employment or further education and training. Training was accredited and delivered by registered training organisations. The programme covered basic vocational skills for a particular industry, as well as general employability skills (e.g. communication, time management, team work) and occupational health and safety.

The evaluation of the programme (Ernst and Young, 2013) found that it struggled to achieve its target outcome rate (for apprenticeship or employment) of 40%, with outcome rates decreasing from 39% in 2007/08 to 27% in 2010/11. It also noted that these outcome rates were in line with similar programmes. The evaluation identified examples of good practice, including strong connections with industry and employers, industry and employer involvement in planning and delivering programmes, prior identification of apprenticeship opportunities, job search and post-placement support, mentoring, and using funding and payments to drive performance.

Box 9. The recent history of Commonwealth-funded pre-apprenticeship programmes in Australia (*continued*)**Group Training in the Trades Programme**

The Group Training in the Trades Programme (GTTP) ran between 2005 and 2012 and provided pre-vocational training to prepare participants for general employment outcomes. The programme wasn't limited to a specific apprenticeship. GTTP targeted trade areas that were experiencing skill shortages. It received approximately AUD 5 million in funding per year.

In 2009, GTTP was rebadged as the Group Training in the Trades Pre-vocational Programme (GTTPP). Participants received at least 150 hours of training. This included on-the-job training, employability skills modules, occupational health and safety, workplace communication and workplace induction training. In contrast to the Kickstart Programme, GTTP had a smaller number of required hours of training, could focus on traineeships and was specifically targeted at group training organisations.

The outcomes from GTTP (2005 to 2009) were that out of 3 744 of participants in the trades component, 839 moved into an apprenticeship (22%). The outcomes for GTTPP (2009 to 2012) were that out of 2 137 participants, 594 moved into an apprenticeship (28%).

Sources: Australian Government Department of Education and Training (2016), personal communication 21 July 2016; Ernst and Young (2013), *Australian Apprenticeships Access Program Review: Final Report*, Department of Industry, Innovation, Science, Research and Tertiary Education, Canberra, www.voced.edu.au/content/ngv%3A68383.

The quality and relevance of pre-apprenticeship programmes are important

If a pre-apprenticeship programme does not develop useful skills it risks becoming stigmatising for participants rather than a pathway to good jobs. Initiatives targeting youth at risk must be careful to avoid the risk of creating social stigma – where participation in the initiative may signal to potential employers that the person had struggled in school or in the labour market. To avoid this, it is important that pre-apprenticeship programmes effectively develop skills that are useful to participants and create pathways to successful careers. Evaluation evidence can help to identify whether this is achieved so that promising initiatives can be expanded and unsuccessful ones discontinued.

Policy pointers**Better prepare youth at risk for apprenticeships**

Encourage and offer financial resources to support initiatives that successfully prepare youth at risk for apprenticeships. Such initiatives may prepare participants for apprenticeships in a specific occupation, or offer preparation towards various potential occupations. Youth at risk should receive guidance on the options available to them and how to progress towards their option of choice.

International evidence suggests that pre-apprenticeship programmes can be successful. However, given the diversity of approaches in this area, further evidence on factors of success and failure would help inform policy development. Emerging local innovations that use work-based learning to re-engage youth at risk should be documented, their effectiveness evaluated and the most promising initiatives rolled-out.

3. Providing support to youth at risk during work-based learning*Access to work-based learning is an important first step, but it does not guarantee completion*

For many youth at risk, successfully completing the coursework associated with an apprenticeship, including academic and technical subjects, will be challenging. Learning skills on-the-job requires working

with clients, colleagues and on-the-job instructors, and overcoming difficulties that may arise with the employer, colleagues or clients. Extra support, such as remedial courses, coaching and mentoring, can help youth at risk to successfully complete the programme.

Youth at risk face a particularly high risk of dropout from apprenticeships

Achieving successful completion is a major challenge, especially for youth at risk. Data from various countries show that apprentices with a minority background, weak school results and learning difficulties have a lower chance of completion. Data from England show that apprentices from ethnic minorities, those with a learning difficulty or disability, and those with lower levels of education have higher chances of dropping out (Gambin and Hogarth, 2016). In the Bern canton of Switzerland, around one third of non-Swiss nationals drop out from apprenticeships, while among Swiss nationals, about one fifth drop out. Weak results at vocational school are also a common cause for dropout from apprenticeships. Soft skills matter too, with employers reporting that a lack of effort on the part of the apprentice as a common cause for dropping out (Stalder and Schmid, 2006). In Germany, dropout rates among foreign apprentices were up to 50% higher than among German apprentices (Autorengruppe Bildungsberichterstattung, 2016).

Some of those at risk of dropping out have accessed apprenticeships through a pre-apprenticeship programme. In some countries, those who have completed a pre-apprenticeship face a higher dropout rate than average apprentices. This is not surprising, as disadvantaged youth tend to be over-represented in pre-apprenticeship programmes compared to other vocational programmes (Autorengruppe Bildungsberichterstattung, 2016; Karmel and Oliver, 2011).

The availability of support benefits employers and encourages them to take on youth at risk as apprentices

From an employer's point of view, engaging youth at risk in work-based learning is likely to be less appealing than engaging an average young person, but this may change depending on the availability of support. Weaker academic and social skills mean that youth at risk tend to need more instruction time (creating higher costs for employers), will develop skills more slowly than an average apprentice (generating fewer benefits for the firm), and are more likely to dropout. Offering additional support to youth at risk during their apprenticeship can help them learn faster and overcome any difficulties, get on better with their employer and school, and have better chances of successful completion. This means a more favourable cost-benefit balance for employers.

The possibility of receiving additional support can encourage employers to hire youth at risk as apprentices. For example, a master carpenter may be reluctant to offer an apprenticeship to a young person with weak basic skills who has struggled at school. They may worry about the apprentice not being able to cope with the academic content of the programme, for example, mathematics is needed to work out the rise and run for a staircase. They may also be concerned about the risk of the apprentice arriving late or not getting on with colleagues and clients. Extra support offered throughout the apprenticeship can help tackle such challenges. It may include remedial mathematics courses offered outside of work. In case a conflict were to emerge between the employer and the apprentice, or if difficulties arose in the apprentice's personal circumstances, targeted assistance, mediation or mentoring can help the apprentices overcome any difficulties. With challenges better handled, the apprentice will be more likely to complete.

Various OECD countries have implemented initiatives that offer additional support to apprentices

Across OECD countries, various measures aim to support young people throughout apprenticeships and other work-based learning programmes. For example, in Austria, Germany and Switzerland, apprentices may benefit from coaching and assistance designed to encourage successful completion

(see Box 10). Implementation is often the responsibility of the state, regional or local authorities. Common components of support include:

- **Academic support for apprentices:** Additional instruction offered typically at school or college that helps apprentices to tackle weaknesses in literacy, numeracy or other academic subjects. This may include, for example, additional lessons in groups or individual assistance with homework.
- **Vocational support for apprentices:** Additional instruction addressing difficulties with the vocational content of the apprenticeship.
- **Broader support to apprentices and the training company:** This may include individual mentoring, coaching or assistance that is offered to the apprentice to help with everyday problems, or mediation in case of difficulties with the training company, school or college. Assistants sometimes also help the training company prepare for the apprentice's arrival.

Box 10. Work-based learning assistants

Austria

Training assistance is at the centre of the integrative VET programmes (*Integrative Berufsausbildung*, IBA). These programmes target young people with special needs (two-thirds of participants), disabled youth and those without a school-leaving certificate.

Training assistance has both a co-ordinating and support function. Most training assistants have a special education background and come from organisations for disadvantaged youth. When IBA takes place at a training company, training assistants are in charge of administrative tasks, define the content of the training contract between the apprentice and the training company, prepare/sensitise the company employees for the arrival of the apprentice and find a person of trust, and register the apprentice at the vocational school. Subsequently, training assistants act as mediators, provide tutorial support and design the final exam for the partial qualification pathway. When IBA takes place at a supra-company training centre, training assistance is provided by the centre's social workers. This is less demanding as the liaison work with training companies is not necessary.

Source: Heckl, E. et al. (2008), *Evaluierung der integrativen Berufsausbildung (IBA): Endbericht*, Austrian Institute for SME Research, www.bmfwf.gv.at/Berufsausbildung/LehrlingsUndBerufsausbildung/Documents/Endbericht_IBA.pdf.

Germany

Apprenticeship assistance (*Ausbildungsbegleitende Hilfen*) is available free of charge to young people taking an apprenticeship or *Einstiegsqualifizierung*, as well as those who dropout of an apprenticeship, and supports the transition into another apprenticeship (or training programme). Assistance includes remedial education (language skills, theoretical and practical instruction) and support with homework and exams, which helps to overcome learning difficulties. Socio-pedagogical assistance (including mentoring) is also offered, including support with everyday problems and mediation with the training company, school trainers and family.

The service is provided following a support plan, which is established in partnership with the young person concerned. It is delivered through individual assistance at least three hours per week; there are also small group sessions. The aim is to effectively reach out to youth with learning difficulties and those disengaged from school.

Source: ZEW, RAMBOLL and INFAS (2010), *Vorstudie zur Evaluation von Fördermaßnahmen für Jugendliche im SGB II und SGB III*, www.bmas.de/; BA (2014), Bundesagentur für Arbeit, *Ausbildungsbegleitende Hilfen*, www.arbeitsagentur.de.

Box 10. Work-based learning assistants (continued)**Scotland (UK)**

Skills Development Scotland offers support to young people at risk of disengaging from learning towards a Certificate of Work Readiness through My Work Coach Service. Work coaches identify opportunities for young people and act as a facilitator between the young person and the employer. The responsibilities of work coaches include undertaking an initial evaluation of the young person; assisting them as they receive career guidance; offering advice to the learning provider (e.g. college) on a suitable work placement; meeting with the employer and/or learning provider before the start of the work placement to clarify what is expected of the young person and coaching the young person based on these discussions; and liaising regularly with the employer and the learning provider to support the young person throughout their learning journey.

Source: SDS (2014), Certificate of Work Readiness, Skills Development Scotland, www.sqa.org.uk/sqa/files_ccc/CWR_arrangements_document_for_SQA-1.pdf.

Switzerland

Young people enrolled in two-year apprenticeships can receive individual coaching (*Fachkundige individuelle Begleitung*) designed to help them improve their academic, technical and social skills. Swiss cantons are responsible for implementation under a national framework and guidelines. Around half of two-year apprentices take up this opportunity (SBFI, 2014), mostly to tackle weak language skills, learning difficulties or psychological problems. Most coaches are former teachers (of vocational or special needs education), learning and speech therapists or social workers (Häferli, Hofmann and Studer, 2012). They receive targeted training, which may vary across cantons. For example, in Zürich they must attend a 300-hour course and participate in regular team-coaching sessions (Kanton Zürich, 2016). Apprentices may also attend remedial lessons at vocational schools, for example, in Vaud canton, apprentices may take time off during their work placement to attend school for remedial classes.

Sources: Häfeli, K., C. Hofmann, M. Studer (2012) (eds.), *Evaluation der fachkundigen individuellen Begleitung in der Bildungsregion Zentralschweiz – Schlussbericht*, Interkantonale Hochschule für Heilpädagogik Zürich, Zürich, <http://edudoc.ch/>; Kanton Zürich (n.d.), "Zweijährige Grundbildung EBA", www.mba.zh.ch/ (accessed 18 May 2016).

Some studies suggest that support offered to apprentices can improve the chances of completion

There is limited rigorous research evidence on the impact of initiatives that offer support to apprentices, which is partly due to methodological difficulties. For example, in countries where such initiatives are offered (e.g. Austria, Germany, Switzerland), all apprentices who seek support receive it, which makes random allocation studies hard to implement. In addition, there are diverse support initiatives on offer, even within individual countries.

Available studies on this topic suggest that support offered to apprentices may help promote successful completion. The lack of support in case of difficulties appears to be a factor leading to dropout. An Australian study of apprenticeship completion found that many apprentices felt a lack of support and did not know who to contact for assistance, leading them to drop out (Snell and Hart, 2008). The interim evaluation of the Australian Apprenticeships Mentoring Package (Deloitte Access Economics, 2014) found that a credible party, independent of the employer and apprentice, can help address issues that may lead to dropout, such as problems in personal life, health issues and problems in the workplace.

Improved capacity within firms to effectively manage apprentices can increase completion rates

Integrating apprentices into a company's daily work activities and ensuring that they develop the targeted skills, while tackling problems and conflicts that may arise on the way, requires management capacity in firms. Such capacity is likely to vary across countries and sectors. In some sectors, apprenticeships have traditionally been an important pathway to occupational skills, and much of that

knowledge is implicitly present in firms and their workers, many of whom were trained as apprentices themselves. In others, there is limited implicit knowledge within firms about how to handle apprentices.

Several OECD countries have initiatives that develop firms' capacity to manage apprentices. Many are developed and implemented with active industry involvement. Box 11 describes training initiatives for employees who supervise apprentices; such training is optional in Norway, but compulsory in Germany and Switzerland. Evidence suggests that better prepared apprentice supervisors can increase the chances of the successful completion of an apprenticeship. In Germany, the temporary suspension of compulsory training for apprentice supervisors was associated with higher apprentice dropout rates and more complaints on behalf of companies about the performance of apprentices. In light of this experience, mandatory training for apprentice supervisors was reintroduced in 2009 after a six-year suspension (BIBB, 2009a).

Box 11. Country examples of training for apprentice supervisors

Germany

Holders of an upper-secondary qualification have to pass the trainer aptitude exam, while those with an advanced VET qualification (e.g. master craftsperson) already fulfil the requirements (BIBB, 2009a).

In the trainer aptitude exam (*Ausbildereignungsprüfung*), candidates demonstrate their ability to assess educational needs, plan and prepare training, assist in the recruitment of apprentices, deliver training and prepare the apprentice to complete their training (BIBB, 2009a). To prepare for the exam, candidates typically attend "Training for trainer" courses (*Ausbildung für Ausbilder*). These preparatory courses are provided by the chambers of commerce and normally last for 115 hours (BIBB, 2009b). Average costs are EUR 180 for the trainer aptitude exam and up to EUR 420 for the preparatory course. Candidates may be supported by their employers and can seek financial support from the State through schemes such as the training credit (*Bildungsprämie*) (TA Bildungszentrum, 2015).

Sources: BIBB (2009a), *Ausbilder-Eignungsverordnung* Vom 21 Januar 2009, Bundesgesetzblatt Jahrgang 2009 Teil I Nr. 5, www.bibb.de/dokumente/pdf/ausbilder_eignungsverordnung.pdf; BIBB (2009b), "Empfehlungen des Hauptausschusses des Bundesinstituts für Berufsbildung zum Rahmenplan für die Ausbildung der Ausbilder und Ausbilderinnen", www.bibb.de/dokumente/pdf/HA135.pdf; TA Bildungszentrum (2015), "Ausbildungseignungsprüfung IHK (AEVO)", www.ta.de/ausbildereignungspruefung-ihk-aevo.html.

Norway

Optional training is offered to employees involved in supervising apprentices. Some counties provide the training themselves, others ask schools or training offices (which are owned by companies collectively) to ensure its provision. The courses are free to participants since counties provide the course, learning material, subsistence and travel expenses. However, the firm is responsible for the supervisor's pay during the course.

Typically, the duration of the training is two days (or four half days) per year. Often there is a time interval between each training session, so that supervisors may practice what they have learnt and prepare a report, which is then presented at the next session. National guidelines, developed in co-operation with VET teacher training institutions, are available on the Internet and can be adapted to local needs. The form of training typically includes role-play and practice. Supervisors learn to cover the curriculum, complete evaluation procedures and administrative forms, prepare a training plan for apprentices, and follow through the plan.

Source: Norwegian Directorate for Education and Training (2009), personal communication (22 January 2009).

Switzerland

Apprentice supervisors are required to complete a targeted training programme, in addition to having a vocational qualification and at least two years of relevant work experience. Cantons are in charge of training, either by offering courses themselves or by delegating them to accredited training providers. They also subsidise these courses, which are offered in two formats leading to different qualifications (40 hour course costing Swiss Franc [SFR] 600 or 100 hour course costing SFR 2 300). The training courses cover information about the Swiss VET system, vocational pedagogy and how to handle potential problems that may arise with young people (e.g. drugs, alcohol).

Sources: ABB (n.d.), "Lehraufsicht", Amt für Berufsbildung und Berufsberatung, Thurgau, Amt für Berufsbildung und Berufsberatung, www.abb.tg.ch/xml_63/internet/de/application/d10079/d9739/f9309.cfm (accessed 26 February 2016); SBFI (n.d.), "Berufsbildungsverantwortliche", Staatssekretariat für Bildung, Forschung und Innovation, www.sbf.admin.ch/berufsbildung/ (accessed 26 February 2016).

Apprentices in small companies may find external support particularly helpful

Smaller companies and employers with less experience of apprenticeships may be more in need of external assistance during the apprenticeship, perhaps because they are less able to provide support to apprentices themselves. A study in Australia found that in larger companies, mentoring services and buddy schemes were more common than in smaller firms (Bednarz, 2014). If conflict arises during an apprenticeship, in small firms there is no dedicated human resources department for the apprentice to discuss a grievance with (Dickie, McDonald and Pedic, 2011).

Policy pointers

Provide support to youth at risk during apprenticeships

Provide support to youth at risk who undertake apprenticeships, such as remedial courses (in particular in literacy and numeracy), mentoring and coaching. This should improve the cost-benefit balance to employers by helping apprentices complete their training, and by building their skills more effectively along the way.

Additional measures consist of assisting firms to build their capacity to provide apprenticeships to youth at risk, including how to handle difficulties that may arise with apprentices, and how to deliver training effectively on-the-job. This may include, for example, encouraging targeted training for apprentice supervisors and offering tools and resources (e.g. website, online forum for instructors) that help firms effectively manage apprentices and overcome any difficulties.

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ANNEX A

Figure A.1. How does apprentices' relative productivity evolve in different occupations?

Apprentices' relative productivity in skilled tasks in the first and last year of apprenticeship by occupation

Notes: Relative productivity reflects how productive a trainee is in skilled tasks compared to an experienced skilled worker in the same occupation. This may reflect the time it takes to complete a task or the quality of what is produced – a trainee cook might need more time to clean and cut fish, or might do it less neatly than an experienced cook. Reference year 2009 for Switzerland, 2012/13 for Germany.

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