



Toolkit

Apprenticeships

Financial Incentives

What are they?

Apprenticeships are positions of paid work in a firm including training provided by the employer, typically leading to a formal qualification or title. They are provided in different forms across a variety of countries. 'Financial incentives' can refer to the wage paid to the apprentice during training or to subsidies given to employers to hire and train apprentices. Subsidies given to the employer may also be passed on to the apprentice in terms of a higher training wage.

We consider the effects of financial incentives for general employment training in a separate toolkit.¹

How effective are support measures?

The available evidence suggests that increasing training wages relative to alternative employment can have a positive effect on completion rates. Both studies that consider training wages show positive effects for some apprenticeships. But higher training wages may not affect completion rates if the apprenticeship itself delivers a high wage bonus upon completion. For example, an Austrian study found no effect for apprenticeships in 'trades' which pay a higher wage at completion than 'non-trades' (where there is a positive effect).

Employer subsidies may positively affect hiring of apprentices, but effects may vary across industries and may not occur if the subsidy is passed on to the apprentice in the form of a higher training wage. Two out of three studies that consider employer subsidies find positive effects for some apprenticeships, but one study finds that employer subsidies have no impact on apprenticeship completion.

In comparison to general employment training, additional financial incentives appear less likely to improve the take-up, or completion, of apprenticeships (see our employment training toolkit).² These differences may arise because some employment training programmes combine financial incentives with sanctions, which apprenticeship programmes typically wouldn't use. However, workers also have multiple reasons to undertake apprenticeships (higher wage job at the end, respected qualification etc.) so the effect of any additional financial incentive may be swamped by these. This conclusion is supported by the finding that there are positive effects on completion rates for apprenticeships that do not deliver a high wage premium upon completion.

How secure is the evidence?

This toolkit summarises the available ex-post (i.e. after introduction) evaluations on the impact of financial incentives. We focused on evaluation evidence from OECD countries, in English and included any evidence that scored 2 or higher on the Maryland Scale.³ We therefore considered any study that provided before and after evidence; or cross-sectional studies that compared individuals receiving support to those not receiving support (or that compared those receiving different levels of support). We also included more robust studies that compared changes to participants with a suitable control group.

Generally, the evidence base on financial incentives for apprenticeships is weak. More rigorous studies are required. We found no systematic reviews of effectiveness and no meta-analysis.

We found five studies that looked at the impact of financial incentives on completion or drop-out rates and the take up of apprenticeships. Two studies come from Australia, two from Germany and one from Denmark. Two studies look at the impact of the training wage (one Australian and one German) and the remaining three examine subsidies or bonuses paid to the employer.

Are wages and subsidies cost-effective?

There is a lack of discussion of cost effectiveness in the five studies considered here. However, in the three studies that examine employer subsidies, the cost of subsidies is typically around 20% of the apprentice wage. For the German apprenticeship bonus, this implies a cost of around £3,700 per apprentice. Since there are no persistent effects on take up, this programme does not appear to be cost effective.

Things to consider

- *How should training wage levels be set to encourage apprentices to finish their programme?*
Evidence from one study suggests that the training wage matters less for completion rates in trades where completion of the apprenticeship offers a large expected wage gain. Incentivising

2 <http://www.whatworksgrowth.org/resources/employment-training-toolkit>

3 <http://www.whatworksgrowth.org/resources/the-scientific-maryland-scale/>

completion through the training wage is therefore likely to be more cost effective for apprentices in occupations where the eventual wage premium is lower.

- *How can financial incentives be designed to improve apprenticeship take-up and completion?* One study finds that bonuses paid to the employer do not improve apprenticeship completion rates. Another study finds that a programme where the subsidy is passed on in the form of higher training wages does not improve take-up by firms. This suggests that the incentive structure may need to be carefully designed to deliver specific policy aims. For example, completion rates might be better achieved by providing completion bonuses to the apprentice, and take-up by firms might be better achieved by hiring bonuses for the businesses.
- *How should employer subsidies be designed to increase take-up of apprenticeships?* Evidence from one study suggests that employer subsidies increase take-up only in industries where apprentices are substitutable for other forms of low cost labour or when domestic-owned firms are prevalent. This finding suggests that employer subsidies could be targeted at the specific industries where they are likely to be effective, although this would raise concerns over displacement of other low-wage workers.

Annex: Financial Incentives for Apprenticeships

What kind of evidence do we consider?

The aim of our toolkits is to summarise the available ex-post (i.e. after introduction) evaluation evidence on particular aspects of policy design. We consider a wider range of evaluations than for our evidence reviews. But we continue to focus on finding and summarising evaluations that identify effects which can be attributed, with some degree of certainty, to the support provided.

Our objective is to assess the quality of, and summarise the lessons from, the available evaluation evidence in a way that can help inform policy decisions. We focus on summarising the findings from available evaluations, while recognising that additional sources of evidence may play an important role in making good decisions around support provided in any specific context.

This toolkit examines the impact of financial incentives for apprenticeships. These include the wage paid to the apprentice during training and subsidies given to employers to hire and train apprentices. Subsidies given to employer may also be passed on to the apprentice in terms of a higher training wage. No studies were found which examined wage subsidies paid directly to apprentices.

We focused on evaluation evidence from OECD countries, in English and included any evidence that scored 2 or higher on the Maryland Scale.⁴ We therefore considered any study that provided before and after evidence; or cross-sectional studies that compared individuals receiving support to those not receiving support (or that compared those receiving different levels of support). We also included more robust studies that compared changes to participants with a suitable control group.

Using these criteria, we found five studies that looked at the impact of financial incentives on completion or drop-out rates and take up of apprenticeships. Two studies come from Australia, two from Germany and one from Denmark. Two studies look at the impact of the training wage (one Australian and one German) and remaining three examine subsidies or bonuses paid to the employer. It is not clear from

the studies of two German subsidy programmes, whether they are passed through to the apprentice wage. However, for the Danish subsidy programme there is a specific programme requirement that the apprentice wage should be increased.

This toolkit sits alongside toolkits which review other elements of apprenticeship policy design as well as a toolkit on financial incentives for general employment training.⁵

How effective are wage and subsidies?

Increasing training wages relative to alternative employment can have a positive effect on completion rates. But higher training wages may not affect completion rates if the apprenticeship itself delivers a high wage bonus upon completion.

Study AP22 (SMS 3) examines the factors which affect the probability of dropping out of an apprenticeship in Germany. In doing so, it looks specifically at how the ratio between the apprenticeship wage and the regional wage for unskilled workers in the same sector affects decisions to drop out of an apprenticeship. The paper looks at apprenticeships as part of the German 'dual system', which normally consists of in-firm training at the workplace and classes at a vocational school, and lasts between 2 and 3.5 years. The study finds that higher apprenticeship wages relative to wages for unskilled workers in the same sector lead to a lower probability of dropping out. When the results are split by gender, the impacts of a higher apprentice wage with respect to regional wages are greater for males than for females.

Study AP19 (SMS 2) examines the effect of the wage paid during an apprenticeship on completion rates in Australia between 2008 and 2010. The study finds that the level of training wage (relative to alternative employment) has a positive effect on completion rates in 'non-trades' but no effects in 'trades'. In contrast, the expected wage on completion (relative to alternative employment) positively impacts completion rates in trades but has no effect in non-trades. The results imply that trade apprentices place less importance on the training wages than on the impact of the apprenticeship on their earnings in the long run. For non-trades on the other hand, it is the training wage that is important. This is likely due to the fact that there is a greater completion wage bonus in trades than in non-trades. Apprenticeships that do not deliver large wage bonuses upon completion are more similar to regular employment training programmes. Therefore, these findings are consistent with our toolkit on employment training that finds financial incentives to be an important determinant of completion and enrolment.

Employer subsidies may positively affect take-up of apprentices, but effects may vary across industries and may not occur if the subsidy is passed on to the apprentice in the form of a higher training wage.

Study AP75 (SMS 2) examines the links between an apprenticeship rebate scheme and take-up of apprenticeships in Australia over 1972-1980. Employers are given a subsidy of £7.44 per day per full time apprentice. Using industry level data, they find that subsidies positively impact on apprentice take-up in metal trades but not in electrical, building, printing or motor trades. The study provides an explanation for this finding based on the idea that apprentices cannot substitute the work of full tradesmen but they may be able to substitute the work of assistant tradesmen. Reducing the relative cost of apprentices is expected to only have an effect on their demand in industries where assistant tradesmen are widely used (e.g. in Metals).

Paper AP25 (SMS 2) analyses the effect of the Danish Adult Apprenticeship Subsidy (AAS) on vocational education attendance rates in Denmark between 1995 and 2003. The AAS is offered to workplaces hiring people 25 years and older (and with low schooling), and subsidises the employer so that the adult apprentice receives a regular wage, rather than a student wage. In 1997, the first AAS for an employer hiring someone previously unemployed was 40 DKK (approximately £4.60) per hour in addition to the base wage. The AAS for hiring someone already employed was 35 DKK (approximately £4.00) per hour in addition to the base wage. The employer received the AAS (equal to 40 – 50 percent of minimum hourly wage) for the first 2.5 years of employing the apprentice. In 2003, the AAS was reduced so that all employers received a wage subsidy of 35 DKK an hour in addition to the base wage, regardless of whether the apprentice was unemployed or whether they were previously employed. Using a sample of low educated 25-year-old men, the study found the scheme had a positive effect (2.7 percentage points) on the probability of starting an apprenticeship, in the first year of operation. However, no longer term effects are found.

One study finds that employer subsidies have no impact on apprenticeship completion.

Study AP20 (SMS 2) explores the impact of the German Apprenticeship Bonus programme upon apprenticeship completion rates between 2008 and 2010. The programme provided a €4,000 – 6,000 (approximately £3,500 - £5,200) subsidy to employers that employed someone who had been unsuccessfully looking for an apprenticeship for at least one year. The subsidy was split into two equal payments. The first payment was conditional on the apprentice's completion of the probationary period, typically three to four months after the start of the apprenticeship. The second payment was conditional on the registration of the apprentice for his or her final examination, typically two to three months before the end of the training period. The study finds that the Apprenticeship Bonus had no effect on dropout rates 12 months after the start of apprenticeship training.

References and study numbers

Ref No	Reference
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