Do apprenticeships increase earnings?

Is there an earnings differential for starting an apprenticeship over and above the pay of young people who have already had a full-time school or college-based education? Our research looks at people who finished their GCSE exams in 2003 and who were therefore 28 years of age in 2015. We use administrative data to follow them from 2003 through their education and into the labour market.

About 17 per cent of this cohort had started an apprenticeship by the time we observe them in the labour market at age 28, all of them starting within five years of their GCSE exams. Although many of them did not complete, we focus primarily on the earnings differential from starting an apprenticeship because the potential benefit is derived not only from certification but also from on-the-job training, achievement of some (if not all) of the aims, and potential connections made through the apprenticeship programme.

We compare those who start an apprenticeship with those with similar ‘level 2’ qualifications – GCSE or the vocational equivalent – or ‘level 3’ qualifications – A-levels or the vocational equivalent. In each case, comparisons are made for those whose highest qualification is at these levels. For the cohort who finished their GCSE exams in 2003, higher apprenticeships did not exist and very few individuals with an apprenticeship subsequently went to university. Of course, things are slowly changing.

Our approach involves netting out other things that make those who started an apprenticeship different from those who did not. For example, men who start an advanced apprenticeship are only half as likely to have been eligible for free school meals when at school (compared with the average for the cohort).

There are other characteristics we can control for: prior attainment at primary and secondary school; demographics, such as ethnicity and economic disadvantage; the secondary school attended; and post-education experience in the labour market. Thus, we compare the earnings of individuals with and without an apprenticeship after taking account of all these different factors.

The approach isn’t perfect because we don’t observe important qualities that matter to employers such as motivation, perseverance and social skills. So we shouldn’t interpret the earnings differential as being attributable to the apprenticeship alone.

The earnings premium to starting an apprenticeship

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Our research finds that by the age of 28, men whose highest educational qualification is GCSEs (with at least one GCSE result of A*-C) earn £19,709. After taking account of other factors, men who start an apprenticeship earn 23 per cent more than those who left school with only GCSEs and roughly 16 per cent more than those who left education with a level 2 vocational qualification.

For women, those who leave education with at most GCSEs earn £13,621. Those who start an apprenticeship earn 15 per cent more than those who left school with only GCSEs and about 4 per cent more than those who left education with a level 2 vocational qualification.

For those educated up to level 3, the baseline earnings for men who leave education with at most A-levels are £22,464 by the age of 28. Those who start an apprenticeship earn 37 per cent more than those who left education with A-levels (and who did not progress further) and 35 per cent more than those who left education with a level 3 vocational qualification.

Women who leave education with at most A-levels earn £18,500 by the age of 28. Those who start an apprenticeship earn about 9 per cent more than those who completed their education with A-levels by the time they are age 28 and roughly 15 per cent more than those who left education with a level 3 vocational qualification (without progressing any further).

Even if the estimated earnings differentials partly capture individual characteristics that we can't control for (for example, better 'soft skills' of those accepted on to an apprenticeship programme), they are suggestive of high potential returns to an apprenticeship.

But some apprenticeships lead to better prospects than others. Here the gender difference is particularly striking, especially for those educated to level 3, where the earnings differential is over three times larger for men than for women. Much of this is attributable to the sector of learning.

Most men with advanced apprenticeships are classified within Engineering and Manufacturing Technologies (53 per cent) or Construction, Planning and the Built Environment (26 per cent).

For women, the most important sectors for advanced apprenticeships are Health, Public Services and Care (35 per cent), Retail and Commercial Enterprise (23 per cent) and Business, Administration and Law (28 per cent). The table below shows the 10 most popular sectors for men and women respectively, along with their average earnings.

Table 1. Detailed sector composition of intermediate and advanced apprenticeships

Panel A. 10 most popular sectors of apprenticeships for men (click to enlarge)

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Intermediate apprenticeships	Number of apprentices	%	Average earnings	Advanced apprenticeships
Building and Construction	4,806	24%	£19,562	Engineering
Administration	2,779	14%	£19,095	Building and Construction
Engineering	1,841	9%	£23,378	Transportation Operations & Mainte
Transportation Operations & Maintenance	1,771	9%	£19,182	Administration
Hospitality and Catering	1,143	6%	£17,573	ICT Practitioners
Retailing and Wholesaling	1,099	5%	£17,580	Foundations for Learning and Life
Warehousing and Distribution	908	4%	£20,859	Accounting and Finance
Health and Social Care	770	4%	£17,862	Hospitality and Catering
Sport, Leisure and Recreation	752	4%	£19,262	Manufacturing Technologies
ICT for Users	723	4%	£19,679	Sport, Leisure and Recreation

Panel B: 10 most popular sectors of apprenticeships for women (click to enlarge)

Intermediate apprenticeships	Number of apprentices	%	Average earnings	Advanced apprenticeships
Administration	6,806	32%	£14,438	Child Development and Well Being
Service Enterprises (e.g. Hairdressing)	3,563	17%	£11,218	Administration
Health and Social Care	2,118	10%	£12,211	Service Enterprises (e.g. Hairdressin
Child Development and Well Being	2,079	10%	£10,715	Health and Social Care
Retail and Wholesaling	2,079	10%	£12,554	Accounting and Finance
Hospitality and Catering	1,249	6%	£12,446	Travel and Tourism
Foundations for Learning and Life	495	2%	£12,836	Hospitality and Catering
Animal Care and Veterinary Services	418	2%	£13,287	Nursing and Vocations Allied to Medi
Sport, Leisure and Recreation	394	2%	£14,585	Foundations for Learning and Life
Business Management	351	2%	£15,093	Retail and Wholesaling

Strikingly, men who complete an advanced apprenticeship in engineering earn more on average than men with a degree in engineering at age 28 (although this differential disappears after taking account of all observable characteristics and post-education labour market experience).

At the other extreme, there are apprenticeship sectors that have a negligible or lower premium than alternatives for people educated to the same level. This includes having an apprenticeship in service enterprises (such as hairdressing) for women educated to level 2 or level 3 and childcare at level 3 (also generally affecting women). Thus, much like university degrees, potential returns to an apprenticeship vary across subject specialisms.

What does all this mean for policy?

First, there is indeed a strong case for creating incentives for apprenticeship provision for young people. It is unfortunate that they have not been the major beneficiaries of the policy drive to increase numbers in recent years. Most new apprenticeships are for adults, and this might not be as beneficial for those who have already been in the labour market for some time (especially if the training is not for a new role).

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Second, there needs to be better appreciation of different potential earnings across sectors. Apprenticeships should not be thought of as equal to each other with regard to potential returns. There needs to be a greater effort to attract women to sectors such as Engineering where they are under-represented, despite high potential returns.

Third, there appears to be inequality of opportunity when it comes to who can get on to an apprenticeship. For example, those from economically disadvantaged backgrounds and from ethnic minority groups are much less likely to start an advanced apprenticeship. The barriers to access need to be understood and addressed.

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Notes:

- *This article appeared originally on CentrePiece, the magazine of LSE's Centre for Economic Performance (CEP), in its Spring 2014 edition. It's based on the authors' paper Apprenticeships for Young People in England: Is there a Payoff?, LSE's Centre for Vocational Education Research (CVER) Discussion Paper No. 10. The research was co-funded by CVER and the Sutton Trust, and forms part of the Sutton Trust report 'Better Apprenticeships'.*
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Chiara Cavaglia joined LSE's Centre for Economic Performance (CEP) and Centre for Vocational Education Research (CVER) as research economist in September 2016. Her research at the Centre focuses on vocational education. In particular, she is involved in research projects investigating the labour market outcomes of apprentices, the role of minimum wage, and the implications of education for social mobility. Chiara obtained her PhD from the University of Essex in January 2017, with a thesis on intergenerational and occupational mobility. She is currently involved in a couple of projects on job polarisation.

Sandra McNally is professor of economics at the University of Surrey, director of CVER and director of CEP's education and skills programme.

Guglielmo Ventura is a research assistant at CVER and in CEP's education and skills programme. His research interests include education, labour markets and policy evaluation.

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