

## **Written evidence submitted by Centre for Vocational Educational Research LSE**

The Centre for Vocational Education Research is funded by the Department of Education (2015-2020). It is funded to produce high quality and policy relevant research on vocational education, with a particular focus on large-scale quantitative research in an economic framework. Our website is <http://cver.lse.ac.uk/>

We intend to address the following questions of specific interest to the inquiry:

What are the benefits of adult skills and lifelong learning (ASALL) for productivity and upskilling the workforce?

What are the benefits of ASALL for social justice, health and well-being?

Who currently participates in and benefits from lifelong learning?

### **Benefits of Adult Skills and Lifelong Learning for Productivity and Upskilling the Workforce**

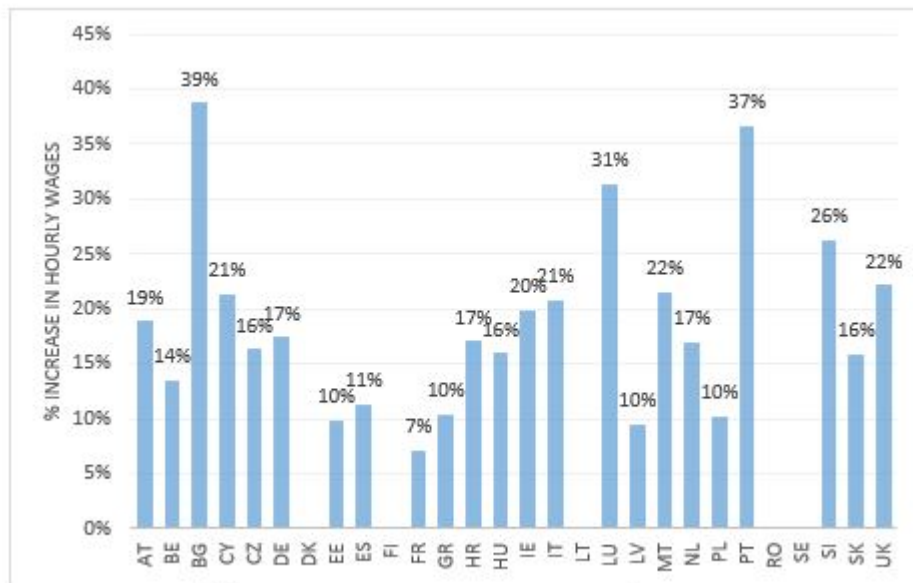
1. Education and skills are crucial for the productivity of individuals and of the broader economy. This is well attested in economic research and is emphasised the LSE Growth Commission I and II. Estimates<sup>1</sup> from the US suggest that increasing levels of human capital over the second half of the last century accounted for approximately one third of productivity growth (Griliches, 1997).
2. Given that the labour market changes throughout a person's working life (often in ways that are not foreseeable), it is important that individuals have sufficient initial education to facilitate further learning as adults and that opportunities are available for adult learning and re-skilling.
3. Given that wages (at least partially) reflect productivity, it is useful to consider the relationship between acquisition of education/skills and earnings. Researcher by Stefan Speckesser and colleagues with Cedefop (2017) estimates how completed intermediate vocational or general education ('Level 3') benefits the adult population (in terms of earnings) compared to having low-level skills ('Level 2' and below)<sup>2</sup>. The estimates shown in Figure 1 show the association between having a level 3 qualification and earnings for individuals aged between 25 and 65 for all European countries using recent data (EU-SILC from 2012).

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<sup>1</sup> <http://www.lse.ac.uk/researchAndExpertise/units/growthCommission/documents/home.aspx>

<sup>2</sup> The estimates are based on regression models explaining the relationship between education and hourly cash and near-cash income per year adjusted to working hours. Since earnings can be observed for people in employment and self-employment, we further account for the selectivity of people observed in employment at different levels of skills using a two-step Heckman selection model. This model incorporates a number of observable characteristics affecting labour supply, in particular gender, age, marital status, whether there are any children under the age of 18 in the household, the use of paid childcare and childcare by relatives and the spouse's employment status and level of education (in ISCED-classification).

#### 4. Figure 1: Earnings benefits of adults (25+) from investing in a Level 3 qualification



Source: Cedefop on EU-SILC 2011, own estimates

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5. For the UK adult population, our estimates exhibit benefits at the higher end of the spectrum across European economies. There is a skills premium of about 22% for the 25+ year olds, higher than in Germany (17%) or France (7%) and similar to Italy, the other major economy in Europe with low labour productivity (when measured in per hour value contribution). Although associations are not the same as causality, this analysis suggests that investment in adult skills is beneficial. As was discussed in depth in our study, the extent to which an individual is able to recover the costs of an investment depends on how much longer they remain in the labour force. The acquisition of skills may involve direct costs (e.g. tuition fees) and foregone earnings (if people need to spend time out of paid employment for attendance at college).

6. In the UK, apprenticeships have become one of the ways people can acquire skills as adults. CVER research by McIntosh and Morris (2018) uses administrative data on all apprenticeship starts between 2004 and 2013 to examine the labour market value of apprenticeship training and how this varies by age group (focusing on 19-24 year olds versus those aged 25+). Labour market value is measured as daily earnings differentials between a treatment group of individuals who completed an apprenticeship, and a control group of individuals who started an apprenticeship at the same level, but did not complete. We compare the change in earnings before and after the apprenticeship for the completers, to the change in earnings before and after the apprenticeship for the non-completers. In this way, we allow for any differences in characteristics between the two groups that existed before they began their apprenticeship.

7. A summary of the key results for the estimated earnings differentials is shown in Table 1.

**8. Table 1: Earnings Differentials to Apprenticeships by Age Group, Gender and Level**

	19-24 Age group	25+ Age Group
Males, Intermediate Level	15.0%	6.9%
Females, Intermediate Level	12.7%	6.0%
Males, Advanced Level	22.5%	7.7%
Females, Advanced Level	11.9%	5.3%

9. Although apprentices of all ages receive positive returns to completing an apprenticeship, these are considerably higher for 19-24 year olds compared to those aged over 25. The reasons for this are partially related to the different sectors in which those from different age groups complete their apprenticeship. Older apprentices are more likely to undertake apprenticeships in Business Administration, Health and Social Care, Customer Service and Retail. Younger apprentices are more likely to undertake apprenticeships in higher earnings sectors such as Automotive, Construction, Electro-technical, Plumbing and Engineering. However, even within the same sector, older apprentices have lower earnings differentials from completing an apprenticeship compared with their younger counterparts. This is particularly the case in 'office-based' sectors such as Business Administration, IT and Accountancy. Working in different sectors is a particularly important part of the explanation for males with advanced apprenticeships. For the three other categories, earnings differences within the same sector are more relevant. We can't know (from this data) what the explanation might be. However, we know from other research and data sources (e.g. the Apprenticeship Evaluation Learner Survey) that older apprentices are more likely to have worked for the training employer before starting their apprenticeship (and so more likely to be engaging in top up training rather than learning a new trade or set of skills), more likely to be doing an apprenticeship of shorter duration, and less likely to receive 'formal training' or training with a training provider.

10. It is questionable whether apprenticeships are an appropriate mechanism to facilitate top up training. As shown below, firms' investment in training has declined. One policy response is to incentivise firms to invest in the training of their workers through other mechanisms. In a CVER briefing note, Costa et al. (2018) make the case for human capital tax credits (that might operate in a similar way to R&D tax credits). There are are in operation in some European countries and in several US States (see Torres 2012; Fitzpayne and Pollack, 2017).

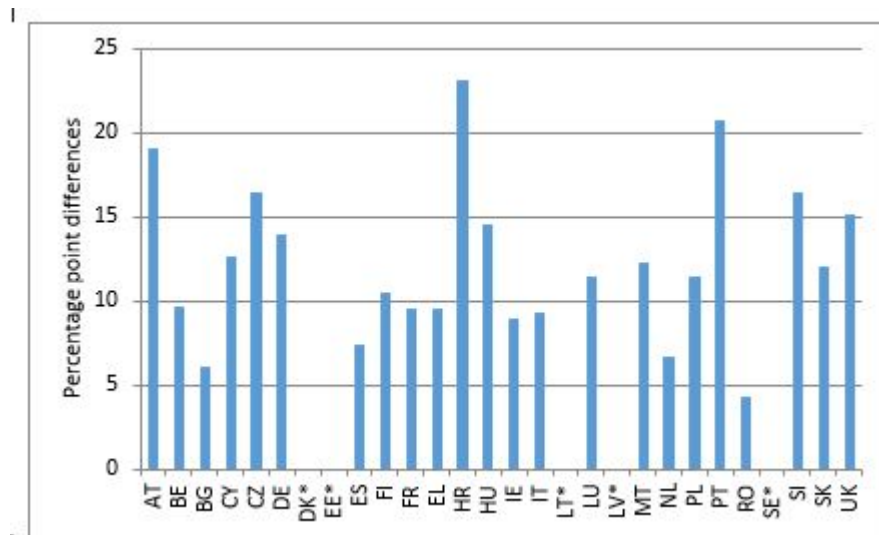
#### **What are the benefits of ASALL for social justice, health and well-being?**

11. Numerous studies have shown that education correlates strongly with health outcomes (see Grossman, 2006, or Cutler and Lleras-Muney for, 2012, for a survey). Research by Stefan Speckesser and colleagues on this topic (Cedefop, 2017) was based on data for the adult population across Europe, which – because of the lack of suitable data – could only study associations between education and health.<sup>3</sup> Using data from EU-SILC data, we compared a number of health outcomes for the low-skilled 25-65 year olds (ISCED 0-2) and the group with marginally higher skills (ISCED 3). Figure 2 show the difference between skill groups reporting good or very good health. Specifically, it shows the difference in the proportion who report that their health is either good or very good between adults with intermediate skills and those with low skills. In most countries, those with

<sup>3</sup> See also the CVER blog: <http://cver-blog.blogspot.com/2017/09/the-benefits-of-intermediate-level.html>

intermediate skills show better health outcomes. Amongst the larger European economies, the UK shows the highest difference (15 percentage points), about twice the difference observed in Spain and about 50 per cent higher than in Italy and France. Although this analysis is not causal, it shows results that are consistent with the broader literature. We also find strong correlations between skill levels and health for other outcomes (such as incidence of long lasting or chronic illness and limitations in activities because of health problem).

**Figure 2 : Percentage point difference between intermediate and low skilled 25+ reporting good or very good health**



## 12. Not statistically significantly different from zero

Source: Cedefop on EU-SILC 2011

## Who currently participates in and benefits from lifelong learning?

In this section, we will highlight key trends in the level and composition of training for adults.

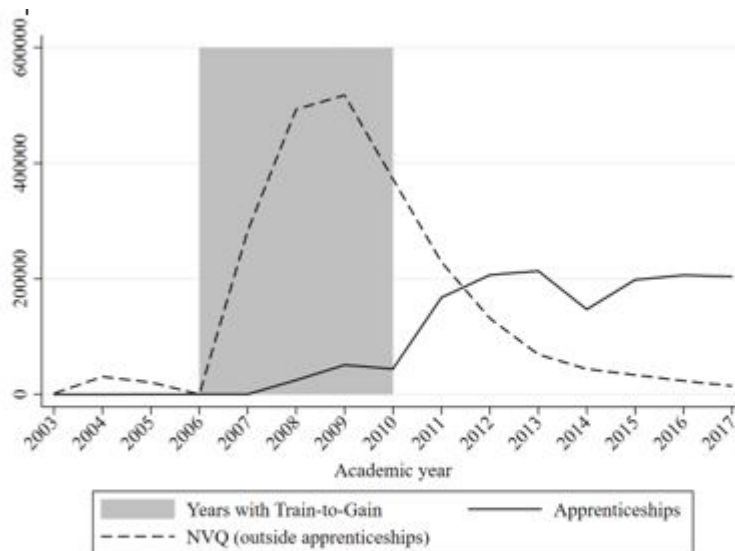
### Publicly provided training in the workplace

13. Figure 3 shows trends in adult participation in the two main types of publicly funded workplace training: apprenticeships and NVQ delivered in the workplace. This data comes from the Individualised Learning Record (ILR) and records every instance of publicly provided training. We show this for adults over the age of 25 and where training is defined as 'workplace training' (i.e. excluding publicly provided training delivered outside of that context).

14. The Figure shows that few adults were participating in publicly-funded workplace training at the beginning of the 2000s. This is not surprising as apprenticeships were not available for over 25 and, unlike general training courses, the budget for workplace adult training was not particularly large at the time. In the aftermath of the Leitch review (which lamented the low level of skills of the English workforce), the government launched the 'Train to Gain' (TTG) initiative in 2006. The purpose of this programme was to encourage firms to upskill their workforce by subsidising training courses. As a result, in the following years the number of workers (over 25) starting an NVQ course increased dramatically. However, evaluation of the policy suggested it did not benefit the earnings of workers (BIS, 2011). The programme was discontinued in 2010 with the stated intent of diverting the TTG budget to fund adult apprenticeships instead. As a consequence, starting from 2010, provision of NVQs (outside apprenticeships) has been steadily declining whereas more adult workers started

apprenticeships in that period. Overall, the volume of publicly-funded workplace training has declined from its peak in 2008. The trends suggest some degree of substitution across the two types of training. Finally, the trends suggest high responsiveness of both firms and workers to changes in the availability of subsidised training, although it is difficult to ascertain how much publicly provided training substitutes for what firms would otherwise fund themselves.

15. **Figure 3: Number of publicly-funded adult workplace training**



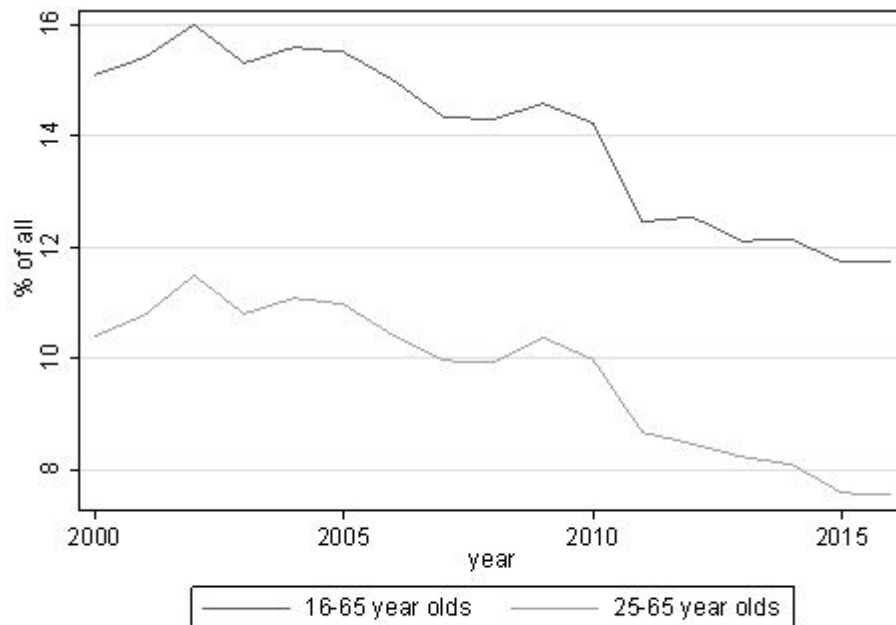
Notes: Own figures from ILR, adults are defined as individuals aged between 25 and 64

### Broader trends in adult training

16. We can consider the broader trend in adult skills training using data from the Labour Force Survey. Whether we consider 16-65 year olds or those between the age of 25 and 65, there is a strong decline in training towards a recognised qualification (Figure 4).

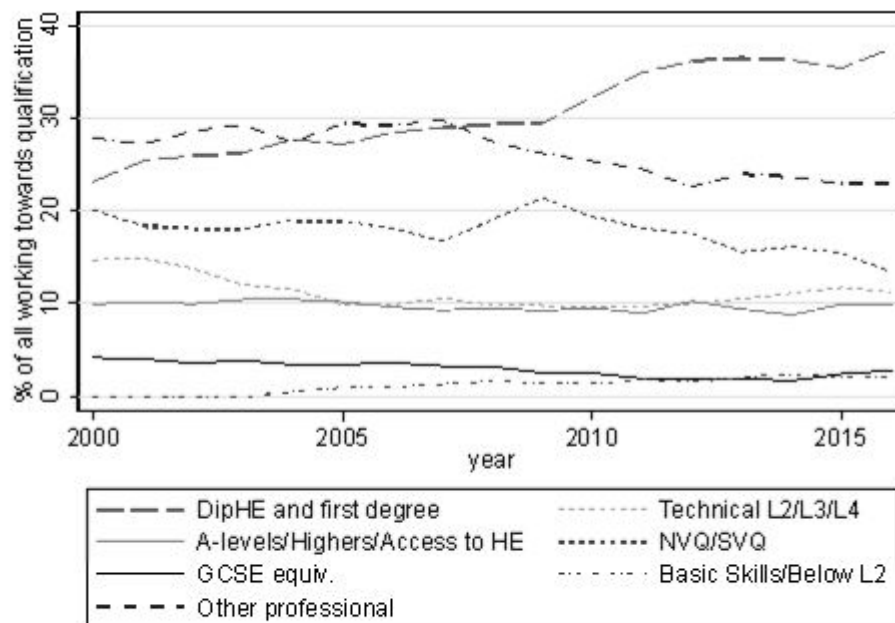
17. Figure 5 shows trends in the type of qualification being studied for amongst employees aged between 25 and 65. In line with the general expansion of participation in higher education the share of the 25-65 year old employees aiming for university degrees and diplomas has reached almost forty percent of the older age group, an increase of fifteen percentage points since 2000. In contrast, participation in technical education below degree level has declined for both accredited training (NVQs and other technical, including e.g. BTECs) and other technical and professional education.

18. Figure 4: People in dependent employment age 16-65 working towards a recognised qualification



Source: UK Labour Force Survey data, spring quarters

19. Figure 5: People in dependent employment age 25-65 working towards a recognised qualification



20. Source: UK Labour Force Survey data, spring quarters

## Concluding comments

21. Education and training is important for individuals' earnings and wellbeing (as reflected in health) and overall productivity of the economy. In a changing labour market, it is vital that individuals have the opportunity to re-skill through their working life. Recent trends in the type of training (e.g. away from NVQs delivered outside of apprenticeship and towards apprenticeships) suggest that individuals and firms do react to incentives put in place by the government. However, the overall level of adult training has declined over the last 20 years.

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