

# Making apprenticeships work

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## EXECUTIVE SUMMARY

### The importance of high value apprenticeships

Done right, apprenticeships can deliver a significant boost to the UK economy by providing the technical skills that it needs and helping address the UK's woeful performance on productivity. High quality vocational education supports incomes and job prospects. Apprenticeships can also ensure that there are valuable training opportunities for those who do not pursue an academic path, whether that is to enable them to enter work or to progress their career.

The Government has set out its aim to achieve 3 million apprenticeship starts by the end of the decade. But, as important as the number of apprenticeships is their quality and their ultimate value to the economy. Getting this wrong, risks wasted investment. It also imperils the brand of 'apprenticeships' themselves: if we want people to aspire to undertake apprenticeships, they need to deliver sound returns and be a good career prospect for young people entering the labour market and for established workers to up-skill and progress.

This report assesses the factors that affect the value of apprenticeships, and the emerging evidence on whether the current policy will deliver high value apprenticeships. It concludes that there are insufficient safeguards against poor-quality training and inadequate incentives for the pursuit of high value schemes. It argues that government needs to do more to steer the market towards apprenticeships that will deliver good returns and that are resilient to change in the wider economy.

### What apprenticeships are undertaken: the low value problem

The report's findings indicate that policymakers should continue to worry about the value of many apprenticeship schemes that are undertaken.

- **Wage returns to apprenticeships are on average much greater for young apprentices, but most apprentices are older.**
  - SMF analysis of the Labour Force Survey suggests that undertaking a Level 3 apprenticeship has no statistically significant impact on wages for those aged over 25. Those aged under 19 achieve a wage return of 32%. CVER research finds a modest positive effect on wages for older apprentices who complete a Level 3 apprenticeship (8% for men, 5% for women), but also shows that younger apprentices (19-24) see a higher earnings boost (23% for men, 12% for women).<sup>1</sup>
  - However, the average age of apprentices is now much higher than it used to be, with the proportion of young apprentices nearly halving this decade. While the proportion of those aged 25 and over has dipped, four in ten (41%) are 25 and over.
- **Wage returns are strong in some sectors such as engineering and manufacturing, but many apprenticeships are undertaken in sectors where wages are comparatively low and where returns to undertaking an apprenticeship are typically weak.**
  - Completing an apprenticeship at Level 3 in manufacturing translates into 34% higher hourly earnings, when compared to employees in manufacturing who only obtained a Level 2 qualification. The figure is also 23% for construction.
  - Analysis by the CVER shows that a man undertaking an apprenticeship in engineering can expect to be paid as well as someone who has taken an engineering degree. In contrast,

- hairdressing and childcare apprenticeships deliver lower wage returns than alternatives for people educated to the same level (GCSEs for Level 2 or A-Levels for Level 3).
- The ten most popular apprenticeship standards in 2017/18 include apprenticeships in care, hairdressing, customer service and hospitality.
- Apprenticeships in care and retail have persistently been criticised for their quality.
- SMF analysis shows that Level 3 retail schemes deliver comparatively low returns whereas Level 3 apprentices in education or health and social care do not on average receive a pay premium when compared to those on the skill level below.
- In 2017, only a minority of apprentices reported that undertaking training in education (33%), leisure (37%), health (40%) or retail (42%) report receiving a pay rise afterwards. This compares to 71% in construction and 65% in engineering.
- **Despite a reduction in their share of apprentices, 43% are undertaking intermediate (Level 2) schemes which have on average delivered zero wage returns. In contrast, SMF analysis shows that having a Level 3 apprenticeship compared to having no apprenticeship increases wages by 20%.**
- **A high proportion of apprenticeship starts are in fields such as customer services and care which Bank of England analysis suggests are at high risk of automation in the future.**
- **There is a risk that some employers may reclassify employees as apprentices, as this can save employers £8,000 per year in wages per apprentice.**
- **Employers have incentives to design and run schemes that meet their own specific skill needs rather than develop skills that would be of economic value to other employers, sectors and occupations. Depending on how myopic firms are, schemes may also be designed with insufficient concern for future labour market developments – such as the decline of some occupations as artificial intelligence and robotics are increasingly used.**

### The risks of poor-quality training

Overall, we may expect the average amount of training per apprenticeship to increase given the fact that the all apprenticeships now require a minimum of 20% off-the-job training, and some apprenticeships historically included extremely low volumes of training (below 20%).<sup>2</sup> This assumes that this minimum requirements is being fulfilled – the National Audit Office noted that the ESFA ‘has limited assurance’ that this is taking place.

However, it is also the case that there are insufficient safeguards to protect against poor-quality training, and to effectively monitor and enforce regulations related to apprenticeships. The research reveals that:

- Of those providers approved to supply training under the Apprenticeship Levy, our analysis of ESFA data shows that performance varies markedly: whilst top performers get average satisfaction scores of 100% from their learners, some providers get scores as low as 27%.
- There is very limited price negotiation among employers for the training they purchase: agreeing to a lower price may be interpreted as training being sub-optimal so the final price is the limit of the relevant funding band. In turn, this means that there are no price signals to guide quality other than the broadly defined band limits.

## What to do

The report puts forward four major steps to drive high value apprenticeships:

### ‘Apprenticeship Value Premiums’

The outcomes from apprenticeships that benefit society comprise employment opportunities, and workers who are more productive (and better paid) because they possess skills that are valuable to the economy. Employers should be positively encouraged to offer apprenticeships in sectors and occupations that can demonstrate that they deliver these outcomes. Employers in sectors where apprenticeship schemes have weak returns should be disincentivised from pursuing them.

The report recommends that ‘Apprenticeship Value Premiums’ should be calculated for each occupation. Premiums should be paid as additional financial grants to employers who offer apprenticeships that are high value, in the same way that they can receive grants for taking on a young apprentice or a care leaver. For schemes that systematically perform poorly on these metrics, the Institute for Apprenticeships and Technical Education (IFATE) should cut the maximum government contribution to training and assessment costs (i.e. reduce the funding band).

This approach could be delivered as a cost neutral exercise, with additional monies made available for high value schemes from low value schemes. If the Government wished to operate this only as a system of incentives, then the funding could come from any unspent (expired) Levy funds or from additional funding allocation.

The ‘Premiums’ would be calculated by reviewing the following metrics:

- Productivity gains as measured principally by average **wage returns** to apprentices.
- Levels of **employment or progression** into higher-level training.
- Proportion of apprentices reporting that they have acquired **transferrable skills** that they could apply to other jobs and sectors.

We accept that this is likely to make some schemes less attractive to employers and providers, and to make some uneconomic. However, if schemes are not delivering skills that improve the employability or productivity of apprentices, then it is right that we question whether alternative training or jobs should be pursued instead.

In relation to our proposals set out above, we note the National Audit Office’s recommendations that the Department should ‘set out clearly how it measures the impact of the programme on productivity’, and that the Department and the ESFA ‘should assess whether they would secure better value for money by prioritising certain types of apprenticeship, rather than delivering a programme for apprentices at all levels, in all sectors’.<sup>3</sup>

### ‘Apprenticeship Excellence Ratings’

Given the variable quality of current training providers and a history of very mixed quality training, there is a strong case for more systematic and meaningful performance data. This could help employers choose the best and avoid the worst training providers; and help candidates choose the best employers and apprenticeship schemes. This would build on the feedback tool being developed by the Government.<sup>4</sup>

To this end, the IFATE, assisted by the ESFA and DfE should develop ‘Apprenticeship Excellence Ratings’, based on the Teaching Excellence Framework in higher education. Ratings would be provided annually and reflect apprentice outcomes across employment, further training, wage returns, learner satisfaction scores and Ofsted/OfS ratings. These should be converted into a headline score of Gold, Silver or Bronze.

This information on providers, employers and standards should be made available through the government’s ‘Find An Apprenticeship’ online service; local hubs; and third-party channels such as ‘ratemyapprenticeship’.

### **Managing the risks of automation**

The Government’s Industrial Strategy was unambiguous about the implications of automation for the economy and low skilled jobs, as well as the need to ensure workers had the right skills to maximise their earning potential.

It is concerning that many apprenticeship schemes are being taken forward in sectors which experts such as the Bank of England identify as being at high risk of automation. It would be disastrous for individuals themselves, and for the apprenticeship brand, if apprentices found that they had spent time and effort acquiring skills which could soon become redundant.

We argue that, as a matter of urgency, the IFATE, with advice from the National Retraining Scheme, should assess the risks and implications of automation for apprenticeship schemes. Interventions that should be considered include: assessing the level of risk from automation for each occupation during the approval and reappraisal process for Standards, with the intention of making alterations or discontinuing Standards where the risk is high; and making information on these risks transparent to employers and candidates. Consideration should also be given to linking this policy explicitly to ‘Apprenticeship Value Premiums’ and reducing the funding for apprenticeship standards where there is a high risk of automation.

### **Developing a simple labelling system**

Currently, it can be difficult for candidates and employers to distinguish between different levels of apprenticeships. This is in stark contrast to the academic pathway, where the label ‘graduate’ is widely understood. The consequence is that candidates may not easily observe the benefits to undertaking advanced apprenticeship training, and employers may not receive easily comprehensible signals of a candidate’s skill level.

We are aware that the IFATE has been seeking to categorise apprenticeship standards as either ‘Technical’ (usually at Levels 2/3), ‘Higher Technical’ (typically Levels 4/5) or ‘Professional’ (where there is a clear career progression from Higher Technical occupations, as well as occupations where a degree apprenticeship exists) as part of the 15 occupational maps.<sup>5</sup> This work is welcome. We suggest that labels are given further consideration so that they can gain popular currency and can act as simple signals to candidates and employers. This exercise could learn lessons from past descriptors as well as labels used in countries such as Germany (e.g. ‘master craftsman’).

## CHAPTER 1: INTRODUCTION

*'Economic benefits are generated when education and training helps individuals to achieve a higher level of qualification, increasing their employment prospects, productivity and wages'*

Department for Education, *English Apprenticeships: Our 2020 Vision (2015)*

### Context

Apprenticeships in England are at a critical juncture – with the current system of provision subject to criticism on several fronts.

Since the introduction of the Apprenticeship Levy in April 2017, there has been a substantial decline in the number of new apprenticeships taking place in England. This has raised questions around the extent to which the new funding scheme for apprentices, based on the Apprenticeship Levy, is providing desirable outcomes – delivering the right number of apprenticeships which the UK needs to meet future skill requirements in the labour market.

As well as concerns about *quantity*, there have been persistent questions about *quality*. As well as multiple past studies revealing the mixed quality of many apprenticeship schemes, analysis suggests that some apprenticeships deliver very poor returns, with little-to-no gains to wages and employment prospects from undertaking them. It has been suggested that apprenticeships are being used by some employers as merely a low-cost form of labour, rather than a tool for training, with short-term business benefits prioritised over the long-term career prospects of apprentices.

Done right, apprenticeships can provide a significant boost to the UK economy, and provide high quality vocational education which supports incomes and job prospects. Evidence shows that apprenticeships can reduce unemployment, increase employment and boost wages.<sup>6</sup> There is also a link between vocational skills and economic growth; an indicator produced by the European Centre for the Development of Vocational Training estimated that, for the UK, a 1% increase in vocational skills leads to a 0.75% increase in GDP.<sup>7</sup>

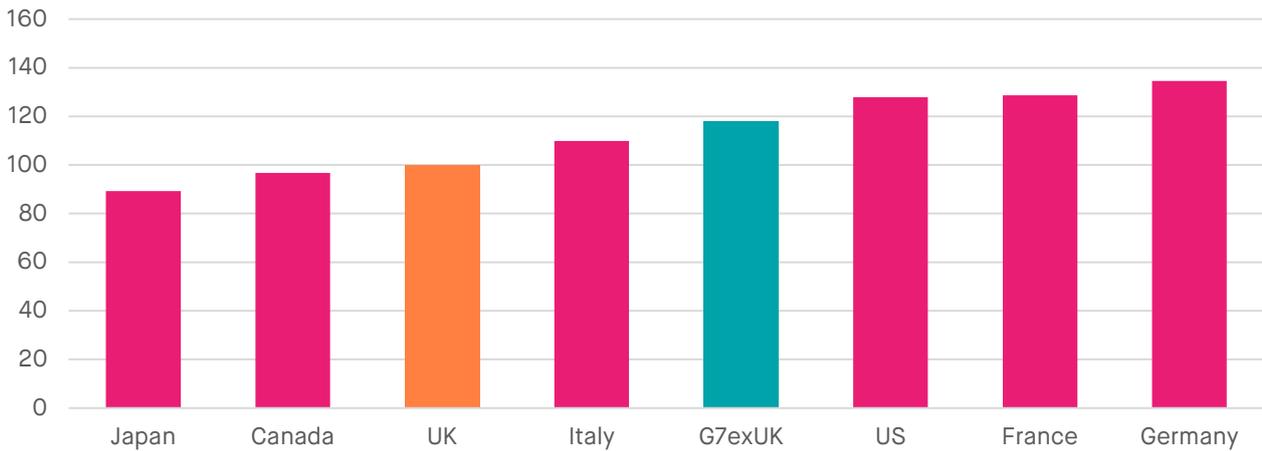
OECD research identifies more than a quarter of the workforce in England (adults aged 16-64) as low skilled when it comes to literacy, numeracy, or both. This translates to around 9 million working age adults struggling with basic quantitative or written reasoning.<sup>8</sup> A high proportion of the low-skilled in England are young workers: 16-24 year-olds do not have better literacy and numeracy skills than older workers approaching retirement (those in the 55-65 age band). Compared to OECD averages, low basic skills are more common among 16-34 year-olds in England at every qualification level. Additionally, a third of those aged 16-19 have low basic skills, partially due to the tendency to leave formal education and training earlier than in many other OECD countries.<sup>1</sup>

The Government has identified a critical need for high numbers of new technical and professional skilled workers.<sup>9</sup> Skills shortages at higher technician level (levels 4 and 5) and in sectors such as construction, engineering and manufacturing are prominent.<sup>10</sup>

The education system in England itself is very different from its equivalents in other countries: whilst we are among the leaders in Higher Education<sup>11</sup>, we are 'lacking clearly identifiable and dedicated institutions' to focus on non-academic education such as tertiary technical and vocational training.<sup>12</sup>

Better quality apprenticeships, by creating a more skilled workforce, could play a key role in narrowing the UK’s education and productivity gap compared with other major economies. At present workforce productivity in the UK is substantially behind that seen in Germany, the US, France and Italy – weighing on economic growth and, in turn, living standards. UK employers find it difficult to match available talent to job vacancies<sup>13</sup> and hire appropriately skilled workers, particularly in the skilled trades, construction, and finance<sup>14</sup>. They cite the lack of specialist knowledge (or knowledge needed to perform the job role) as the key driver behind 64% of skill-short vacancies.

**Figure 1: Index of productivity (GDP per hour worked), 2016, UK=100**



Source: ONS

It is crucial that we ensure that England’s apprenticeship regime delivers the highest quality training opportunities possible. In this report, we explore the role that policymakers can play in supporting apprenticeship quality and creating a vocational training regime well-equipped for driving up productivity, wages and employment in the country.

The structure of the report is as follows:

- **Chapter 2** provides a brief overview of the apprenticeships policy landscape in England;
- **Chapter 3** outlines the current trends in apprenticeship numbers;
- **Chapter 4** evaluates whether recent and current apprenticeship regimes are delivering good outcomes;
- **Chapter 5** examines the role for policymakers in delivering higher quality apprenticeships

### Research methods

Our analysis included:

- Two roundtable events which brought together businesses, providers, local and national policymakers and experts, one held in 2017 and one in 2018.
- New updated analysis of the earnings outcomes for apprentices using the Labour Force Survey. For more detail please see Annex 1.
- Interviews with apprenticeship policy leads from Local Enterprise Partnerships.
- Analysis of other publicly-available data from the Department of Education.
- A review of UK and international literature on quality and high value apprenticeships, and of lessons from other parts of the education system.

## CHAPTER 2: THE APPRENTICESHIP LEVY AND POLICY REFORMS

This chapter provides a brief overview of recent trends in apprenticeship numbers in England, examining how the nature of apprenticeships has changed over the past 15 years.

### The Apprenticeship Levy and reforms

In June 2015, the UK Government announced plans to create 3 million apprenticeships by 2020<sup>15</sup> - something that would require 600,000 apprenticeship starts each academic year to achieve. The Apprenticeship Levy, which came into effect in April 2017, was meant to create additional incentives for employers to create apprenticeships and help move the country closer to the three million target. Under the Apprenticeship Levy, all employers operating in the UK with an annual pay bill exceeding £3 million are obliged to invest 0.5% of said excess towards apprenticeships, regardless of sector. Contributions enter an employer's individual digital account and remain at the employer's disposal in the form of digital vouchers that can be used to finance apprenticeship training and assessment; these vouchers expire 24 months later. A range of financial incentives are available, such as a wavier-style levy allowance of £15,000 per year, which acts as an assurance that only employers with pay bills over £3 million are liable to pay the levy, and a 10% top-up to levy contributions, which will be applied as money enters each employer's digital account.

Other financial incentives have been introduced alongside the Levy. In order to promote taking on younger apprentices, the Government is exempting employers from paying National Insurance Contributions for all apprentices aged under 25 earning below £43,000 per year. Employers who hire 16-18 year-olds also receive a payment of £1,000 per young employee. Additionally, the Government pledged to increase the funding band maximum by 20% for sponsoring apprentices who are aged 16-18 and are undertaking a traditional framework programme. Small employers who hire fewer than 50 workers do not have to pay for training costs for apprentices aged 16-18. As such, costs are covered solely by the Government.

Non-levy payers enter a co-investment with the Government, and only need to pay for 10% of the cost of training and assessment of an apprenticeship, with the options to split these costs over the duration of the apprenticeship and/or pay directly to the provider. The Government covers the additional 90% of the cost, dependent on pre-determined funding bands for each framework and standard, and availability of funding. However, rather than increasing the number of apprenticeship starts, starts have declined substantially since the implementation of the Apprenticeship Levy and other financial incentives.

### Apprenticeship standards and frameworks

In addition to the Apprenticeship Levy, the government is currently in the process of changing the structure of apprenticeships provided. Employers now have a choice between sponsoring a traditional apprenticeship *framework*, which awards work-related vocational and professional qualifications via a mixture of workplace- and classroom-based training, and the newly developed apprenticeship *standard*, where a group of employers design a scheme to cover a specific occupation. In an attempt to 'put employers in the driving seat' by 2020, the Government is planning to phase out frameworks, which are broadly defined in nature, in favour of employer-led apprenticeship standards.

The shift away from apprenticeship frameworks and towards apprenticeship standards aims to improve the quality of apprenticeships. The Institute for Apprenticeships and Technical Education (IFATE) has argued that, because frameworks have been developed by sector bodies rather than employers themselves, they are primarily qualification focused and not necessarily closely aligned to what employers need.<sup>16</sup> The main aim at the end of a framework is to have achieved a competency-based qualification, such as an NVQ, and a technical qualification, such as a BTEC. Consequently, it's possible for an apprentice to achieve all the qualifications in the framework but not actually have the right skills to carry out their job. This means some apprentices may need further training from their employer.

In a framework, apprentices are assessed throughout their apprenticeship. They have to obtain a number of qualifications during the apprenticeship. Once they've completed a unit, it is ticked off and they won't necessarily need to demonstrate the skill again. There is no overall end assessment, which means no one is actually checking if the apprentice has the right skills to do their role.

In contrast, apprenticeship standards are occupation-focused rather than qualification-led. The learning happens throughout the apprenticeship. The apprentice is assessed at the end and they need to prove that they can carry out all aspects of their job. Standards are being developed by groups of employers known as "trailblazers". Trailblazers develop the standards for their relevant occupation themselves. According to the Institute of Apprenticeships and Technical Education, this means that the standards are related to what is needed in the workforce and what skills an apprentice will need to be capable and qualified in future job roles.

Data for the 2017/18 academic year show just over two fifths (44%) of apprenticeship starts being undertaken under the new standards, with the remaining starts being on "traditional" apprenticeship frameworks.

### Other policy developments

In addition to the creation of "trailblazer" groups of employers to develop new apprenticeship standards, in 2013 the Government defined core principles of quality for an apprenticeship that must be adhered to<sup>17</sup>:

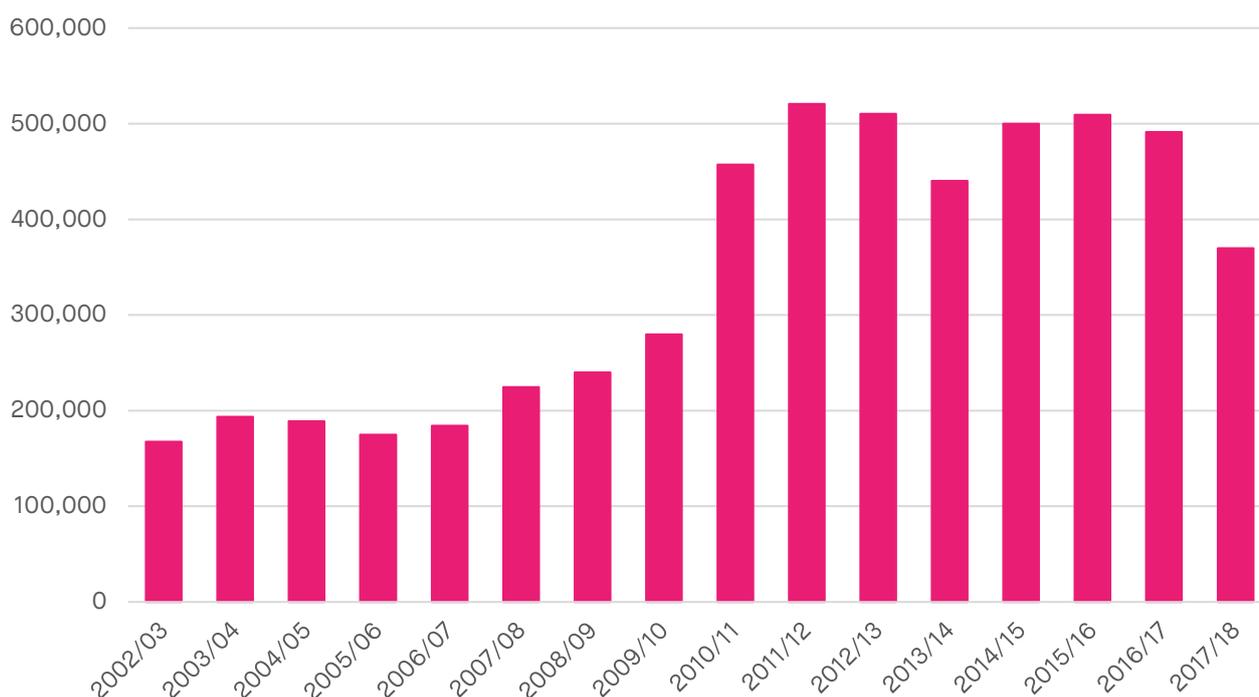
- It is a job in a skilled occupation
- It requires substantial and sustained training, lasting a minimum of 12 months and involving at least 20% off-the-job training.
- It develops transferable skills, and English and maths, to progress careers.
- It leads to full competency and capability in an occupation, demonstrated by achievement of an apprenticeship standard.
- It trains the apprentice to the level required to apply for professional recognition where this exists.

## CHAPTER 3: CURRENT TRENDS IN APPRENTICESHIP NUMBERS

### Apprenticeship starts in the UK

In the early 2000s, the number of apprenticeship starts in England increased significantly, rising from about 168,000 in the 2002/03 academic year to a peak of 521,000 in the 2011/12 academic year – an increase of 210%. However, since this recent peak, apprenticeships have lost momentum. As Figure 2 below shows, the number of apprenticeship starts showed a relatively flat trend between the 2011/12 and 2016/17 academic years.

**Figure 2: Number of apprenticeship starts in England, by academic year**



Source: Department for Education, SMF analysis

Department for Education data show that the number of apprenticeship starts fell significantly in the 2017/18 academic year. The National Audit Office has concluded that the government is ‘very unlikely’ to meet its target of 3 million apprenticeship starts by 2020.<sup>18</sup>

### What types of apprenticeship are being undertaken?

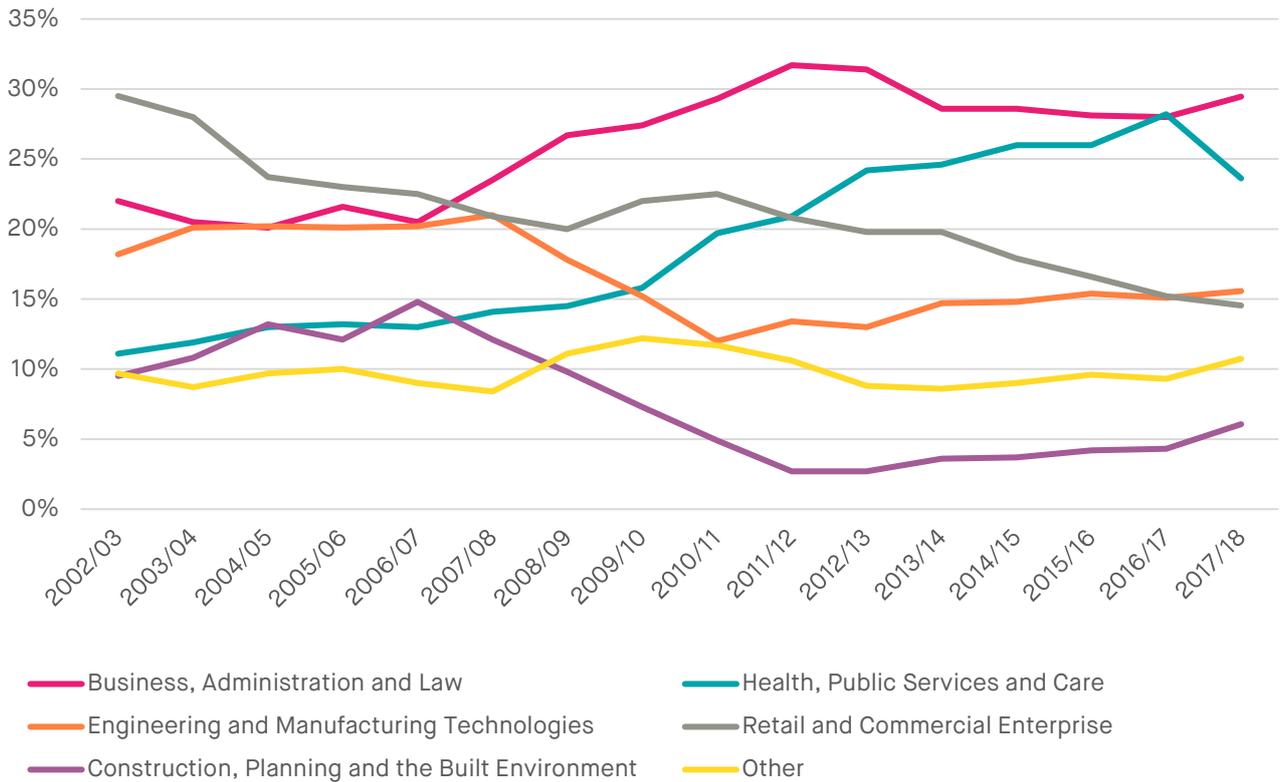
Ultimately, a key driver of apprenticeship quality is likely to be the types of apprenticeship being undertaken, including level, subject and sector. As a joint report by the Business, Energy and Industrial Strategy and Education Committees Select Committees noted, ‘a wider question is whether the growth in starts will take place in sectors of the economy where it will do the most good, and if more should be done to make it does’.<sup>19</sup>

In the mid-1990s, the OECD noted that most of the apprenticeships were in more traditional trade fields such as construction and engineering, which is no-longer the case.<sup>20</sup> Analysis of Department for Education data show that there has been a substantial change in the types and levels of apprenticeships undertaken since the early 2000s. While in the 2002/03 academic year, “retail and commercial enterprise” accounted for about three in ten apprenticeship starts in

England, this has fallen to 15% in the 2017/18 academic year – the largest percentage point decline of all subject areas. In contrast, there has been a significant increase in the proportion of apprenticeship starts in the fields of “business, administration and law” and “health, public services and care” since the early 2000s, as Figure 3 shows.

As we discuss in the next chapter of the report, a significant proportion of apprenticeships undertaken are likely to be in subject areas where returns are relatively low. The Government’s stated vision for apprenticeships ‘to be available across all sectors of the economy, in all parts of the country and at all levels’<sup>21</sup> risks being a charter for low value schemes unless effective safeguards are put in place.

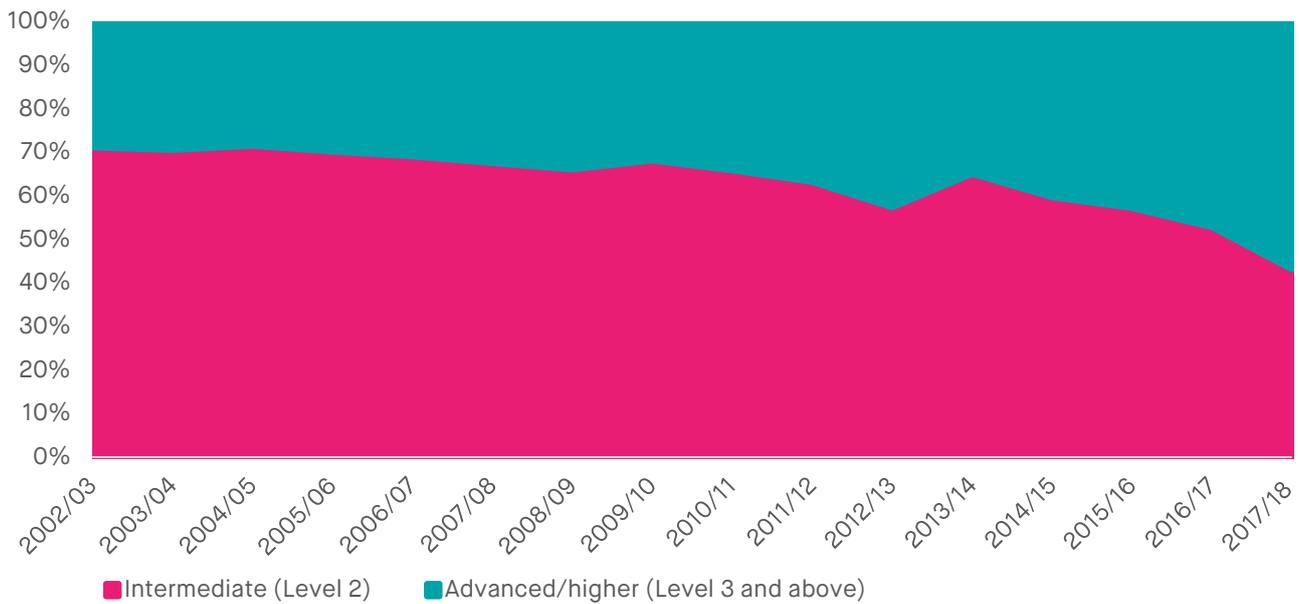
**Figure 3: Percentage of apprenticeship starts, by sector subject area**



Source: Department for Education, SMF analysis

In addition to a changing mix of apprenticeship starts by subject area, the level of apprenticeship being undertaken has also changed significantly over time. The National Audit Office has noted the fall in Level 2 apprenticeships especially in recent years, and that the introduction of standards has increased the number of higher-level apprenticeship starts.<sup>22</sup> Advanced/higher level apprenticeships accounted for just under three in ten (29%) of apprenticeship starts in 2002/03 – a proportion which increased to 57% in 2017/18. This trend is positive, but the large volume and proportion of Level 2 apprenticeships remains very concerning.

**Figure 4: Percentage of apprenticeship starts, by level**



Source: Department for Education, SMF analysis

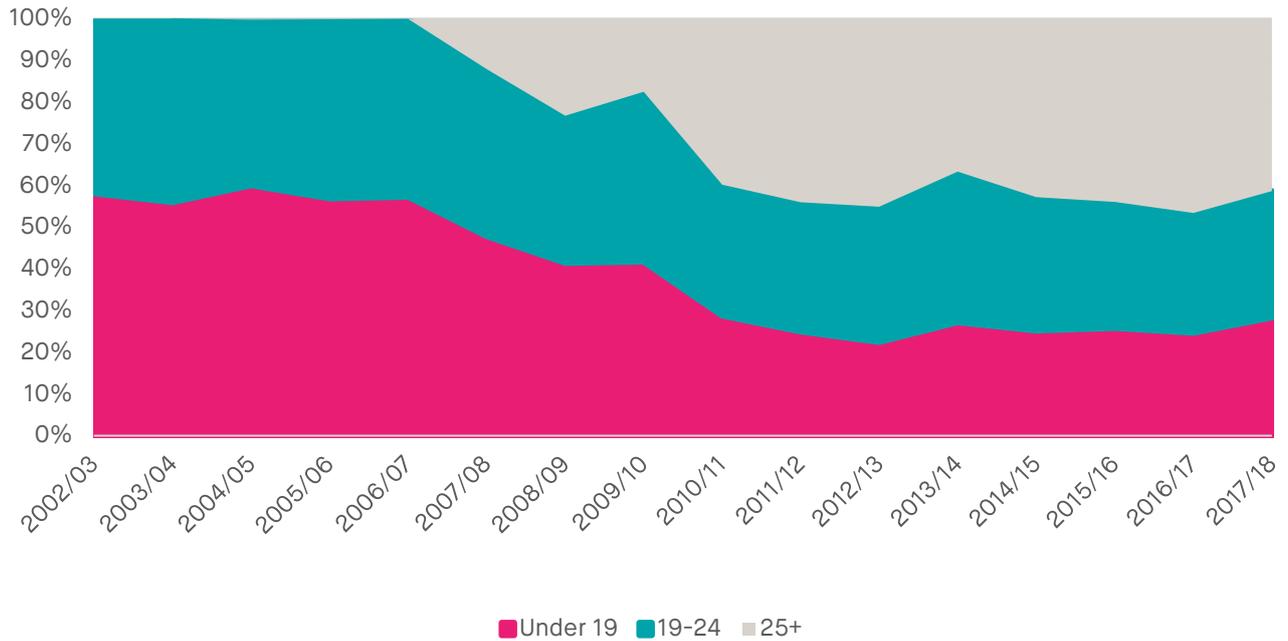
### Who is undertaking apprenticeships?

As well as changes to the types of apprenticeship being undertaken in England, are changes to the types of *individuals* undertaking apprenticeships.

In recent years, there has been substantial change in the age profile of apprentices driven principally by growth in the number of older apprentices. In 2002/03, close to three in five apprenticeships in England were started by those under the age of 19, whereas the latest data suggest people in this age group now account for about three in ten apprenticeship starts. In contrast, the number of people aged 25 and over starting an apprenticeship has increased from zero to about two fifths of all apprenticeship starts. Before the 2004/05 academic year, apprenticeships were not available for people over the age of 24; the removal of this age restriction has dramatically changed the nature of who typically undertakes apprenticeships in England.

As we discuss in the next chapter of this report, there are significant differences in apprenticeship returns across age groups, meaning that the changing age profile of apprentices will have a bearing on the returns from apprenticeships.

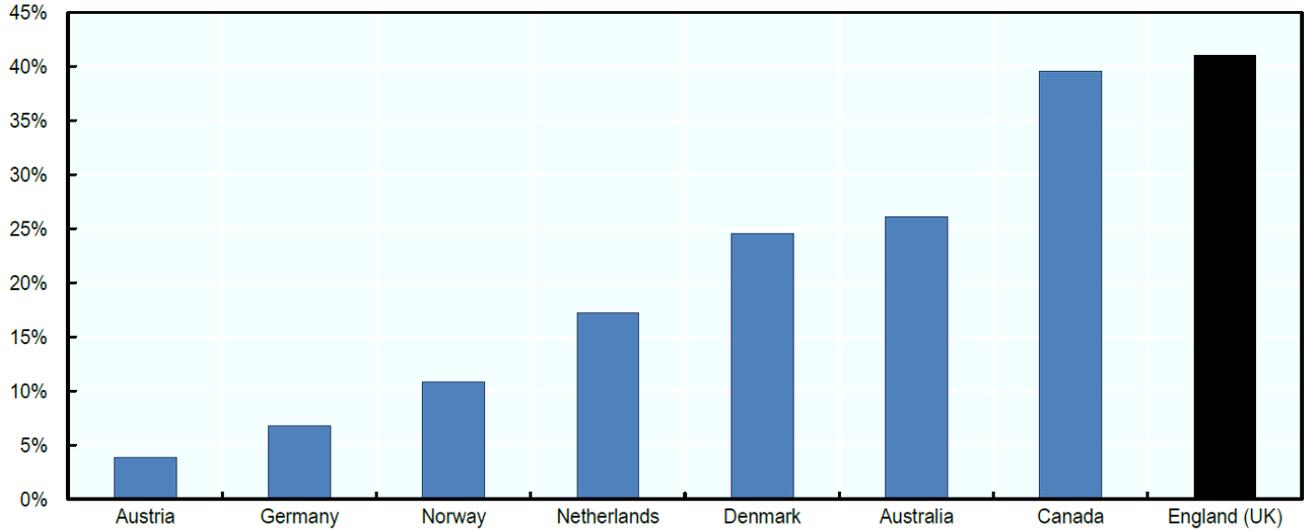
**Figure 5: Percentage of apprenticeship starts, by age of apprentice**



Source: Department for Education, SMF analysis

As Figure 6 below shows, this phenomenon of a large share of apprenticeships being carried out by older workers is unusual internationally, especially in comparison to European neighbours.

**Figure 6: Share of 25-year-olds and older among current apprentices (2012, 2014)**



Source: OECD 2018

## CHAPTER 4: ARE APPRENTICESHIPS DELIVERING VALUE?

The previous chapter of the report showed a broadly flat growth picture for apprenticeship starts between 2011 and 2016, followed by a sharp fall in starts since the introduction of the Apprenticeship Levy in April 2017. Arguably, this might be an acceptable position if there has been a substantial increase in the quality of apprenticeships being undertaken; better economic and social outcomes might be achieved with a smaller number of higher quality apprenticeships, than with a larger number of poorer quality ones.

Here, we examine the evidence base around apprenticeship quality in recent years, including recent SMF analysis. The data presented here shows widespread variation in apprenticeship quality. Furthermore, we find that recent developments identified in the previous chapter – such as the rise of older apprentices and apprenticeships in sectors such as social care – may be undermining the economic returns associated with apprenticeships.

### Evidence from the old regime (pre-Apprenticeship Levy)

A number of studies published before the introduction of the Apprenticeship Levy point to concerns about quality. The Richard review called for an overhaul of the system, seeing new apprenticeship qualifications as a fundamental first step to enforce the credibility and quality of apprenticeships.<sup>23</sup> A 2015 report by Ofsted names quality of apprenticeship programmes as the main determinant of the success, outcomes, and even interest in an apprenticeship.<sup>24</sup> The report illustrates a clear divide in apprenticeship quality by sector. High-quality programmes, usually offered by the construction sector and the engineering industry, attracted a large number of strong applicants between the ages of 16 and 24 due to the efficient provision of their apprenticeships. Apprenticeship frameworks in the technical and professional industries, which have a historical dependence on using apprenticeships to acquire the expertise needed in their production processes, were also found to enable apprentices to develop new skills and progress to higher salaries, promotion and further learning.

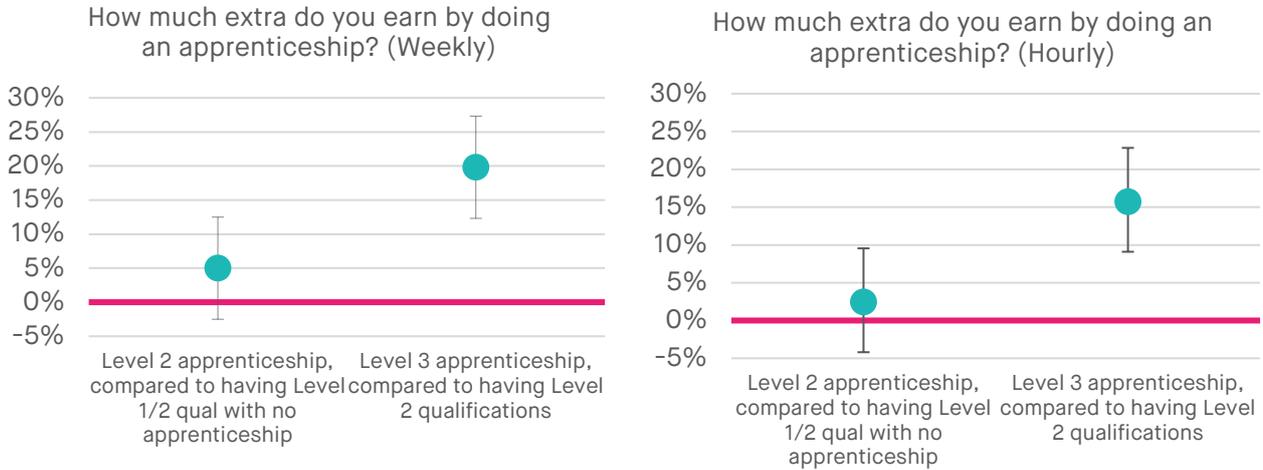
However, such high-quality apprenticeships are not the ones which have been driving the increase in the number of apprentices in recent years. Low-quality programmes in sectors such as care have been on the rise, as we showed in the previous chapter of this report. A 2015 Ofsted report found that as many as one third of 45 training providers failed to offer high-quality apprenticeship programmes, with the leaders of apprenticeship provision not assessing the value of the frameworks offered either to the learners undertaking them, or to businesses and the wider economy.<sup>25</sup> Furthermore, some apprentices in sectors of food production, care, and retail were found to be tasked with activities such as “making coffee, serving sandwiches or cleaning floors’ which cannot effectively tackle the skills gap in those sectors.

### Returns on apprenticeship by level

Previous SMF research has evaluated the value of undertaking an apprenticeship by looking at the wages apprentices receive upon completion of the programme.<sup>26</sup> We showed that completing Level 3 apprenticeships delivers high wage returns to apprentices and helps fill skill gaps in industries. However, the growth in apprenticeships has not been proportionate to the areas most affected by skills shortages and to the areas where apprenticeships are likely to add the most value in terms of wages and productivity. A sole exception to this statement is the manufacturing sector, which has responded to shortages in skills by providing high value

apprenticeships both at Level 2 and 3. Additionally, the same research identifies that, on average, Level 2 apprenticeships do not produce a statistically significant increase in wages upon completion.

**Figure 7: Wage premia by level, 2012-2014**



Source: Previous SMF analysis

Note: error bars indicate 95% confidence intervals. Where the error bar overlaps with the 0% line, this indicates that the estimated return is not statistically different from 0%.

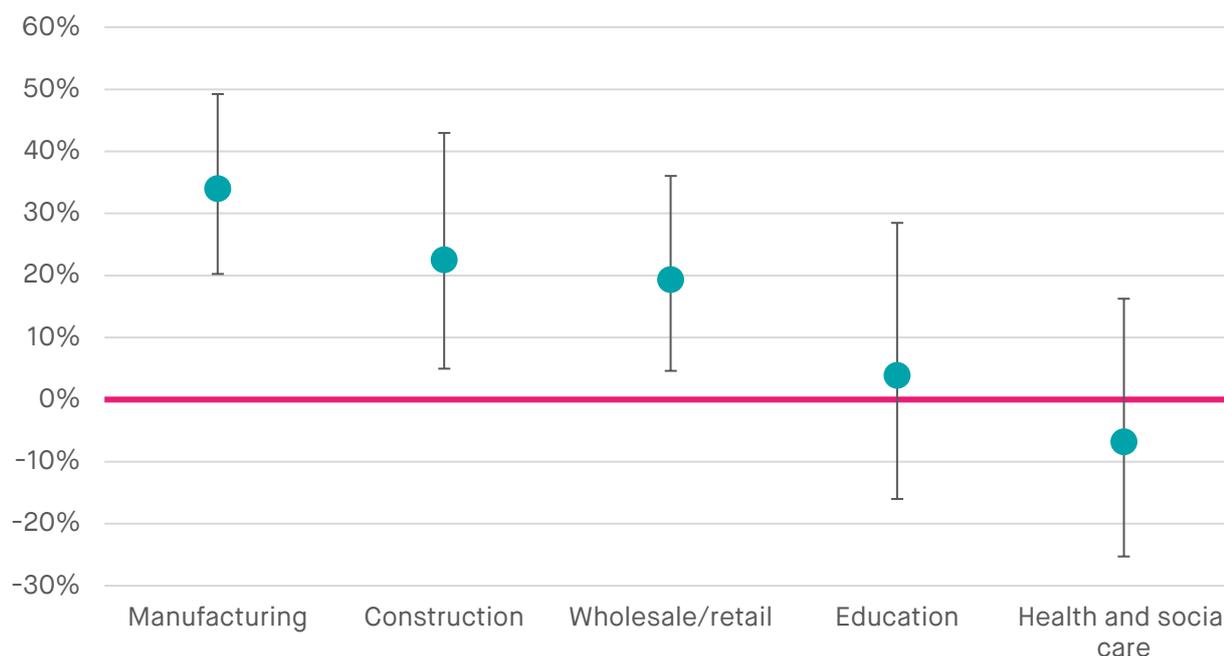
Aside from their weak wage returns, Level 2 apprenticeships have also come under scrutiny when it comes to quality. Research by the IPPR has shown that Level 2 courses fail to prepare a large proportion of 16 to 18 year-olds for either the jobs market or further study.<sup>27</sup> Level 2 apprenticeships are often very job specific, do not include much off-the-job training, and only last one year. Additionally, training providers are no longer required to include a recognised qualification as part of the programme, which puts in question the reasons 16 to 18 year-old candidates might have for undertaking Level 2 apprenticeships.

**Returns on apprenticeships by subject area**

Wage returns vary substantially by sector. Our analysis using the latest available data in the Labour Force Survey shows that apprentices in manufacturing, construction, and wholesale/retail also earned a significantly higher salary in 2015-2017. These findings corroborate our analysis of previous cohorts (2012-14).

As illustrated in Figure 8, completing an apprenticeship at Level 3 in manufacturing translates into 34% higher hourly earnings, when compared to employees in manufacturing who only obtained a Level 2 qualification. Similarly, Level 3 apprentices in construction could be expected to earn 23% more per hour than construction employees who do not hold a Level 3 qualification; employees who completed an apprenticeship in the wholesale/retail sector earn 13% more per hour. However, our analysis reveals that those undertaking an apprenticeship in education or health and social care do not on average receive a pay rise compared to those on the skill level below.<sup>28</sup>

**Figure 8: Hourly wage premium by sector: Level 3 apprenticeship holders compared to employees with Level 2 qualifications in the same sector (2015-2017)**



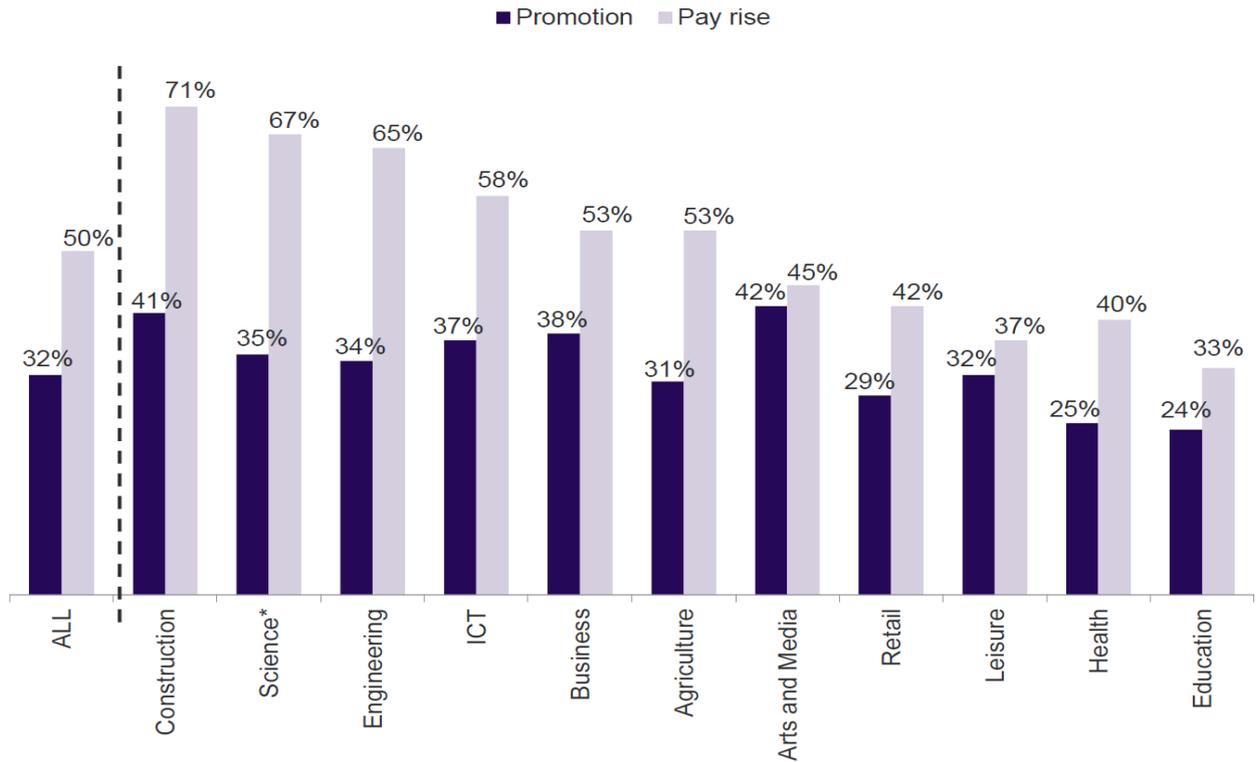
Source: SMF analysis of Labour Force Survey (2015-2017)

Note: error bars indicate 95% confidence intervals. Where the error bar overlaps with the 0% line, this indicates that the estimated return is not statistically different from 0%.

We know from other data that earnings vary by occupation. For instance, a study by CVER found that men undertaking an engineering apprenticeship can expect very high returns (exceeding that of those with an engineering degree). In contrast, women doing an apprenticeship in childcare at Levels 2 or 3 or in the service sector (such as hairdressing) at Level 3 can expect to be paid less than those who are educated to the same level through other training (GCSEs for Level 2 or A-Levels for Level 3).<sup>29</sup> The same research shows that there is a good payoff for women doing a healthcare apprenticeship at Level 2 but no payoff at Level 3.<sup>30</sup> The authors conclude that ‘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.’<sup>31</sup> A different study by the same authors queried: ‘One might also ask whether apprenticeships with no positive earnings differential have any advantage in terms of pedagogy/productivity’.<sup>32</sup> As the Education Select Committee has noted, advanced apprenticeships tend to offer significantly higher wage returns, and employers complain of severe skills shortages, particularly at levels 4 and 5.<sup>33</sup>

The proportion of apprentices who consider their career prospects to have improved since commencing on their apprenticeship also diverges significantly by sector. In 2015, the percentage was 94% in construction compared to 79% in business, 80% in retail, 82% in education and 83% in health and leisure.<sup>34</sup> Likewise, the share of apprentices who report that they have received a promotion or a pay rise varies hugely, the latter by more than a factor of two between sectors. Broadly speaking, many sectors that underperform in wage data also perform poorly in self-reported surveys (e.g. health and education).

**Figure 9: Whether apprentices had received a promotion or pay rise since completion, by subject area (Levels 2 and 3) (2017)**



Base (all L2 and L3 completed apprentices):

3,046    169    28    358    193    639    112    68    465    205    634    175

\* Caution – low base size for Science (28)

Source: Apprentice Learner Survey 2017

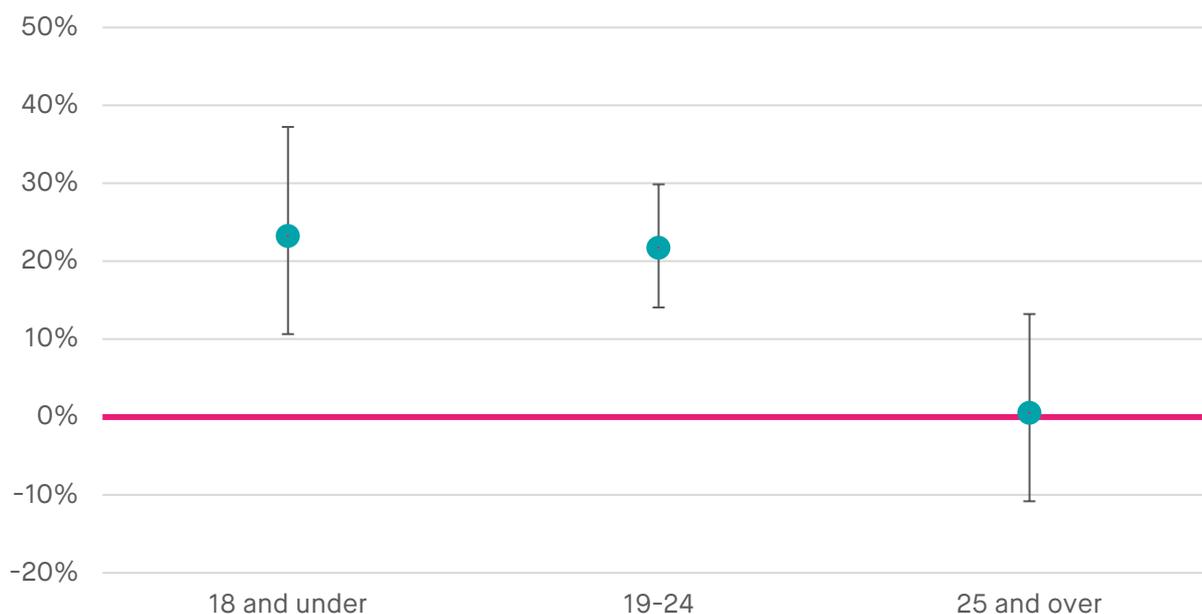
**Returns on apprenticeships by age**

As the latest apprenticeship starts figures reveal, apprenticeships attract more and more adults from older age groups; in 2017/18, 41% of new apprentices were aged 25 or older. On one hand, this might be a result of apprenticeships being attractive to workers who wish to retrain in order to work in a different occupation or sector. However, existing employees may benefit from other in-house training.

Our analysis (Figure 10) shows that younger apprentices receive a significant earnings uplift by dint of having completed a Level 3 apprenticeship. When compared to employees who only hold a Level 2 qualification, workers who completed an apprenticeship when they were 18 or younger earn 23% more per hour. These estimates fall slightly to 22% per hour and 26% per week if the apprentice was aged between 19 and 24 at the end of their apprenticeship. However, the average wage gain for older workers is zero.

This evidence is backed up by surveys of apprentices who have completed their training: 92% of those aged under 19 reported that the apprenticeship improve their career prospects, compared to 89% for those aged 19-24 and 77% of those aged 25 and over.<sup>35</sup> DfE data show that apprentices under 19 spend around twice the amount of time in some form of training than those aged over 25.<sup>36</sup> CVER research finds a small positive effect on wages for older apprentices who complete an Advanced (Level 3) apprenticeship (8% for men, 5% for women), but also shows that younger apprentices (19-24) see a higher earnings boost (23% for men, 12% for women).<sup>37</sup>

**Figure 10: Hourly wage premia by age: Level 3 apprenticeship holders compared to employees with Level 2 qualifications, 2015-2017**



Source: SMF analysis of Labour Force Survey (2015-2017)

Note: error bars indicate 95% confidence intervals. Where the error bar overlaps with the 0% line, this indicates that the estimated return is not statistically different from 0%.

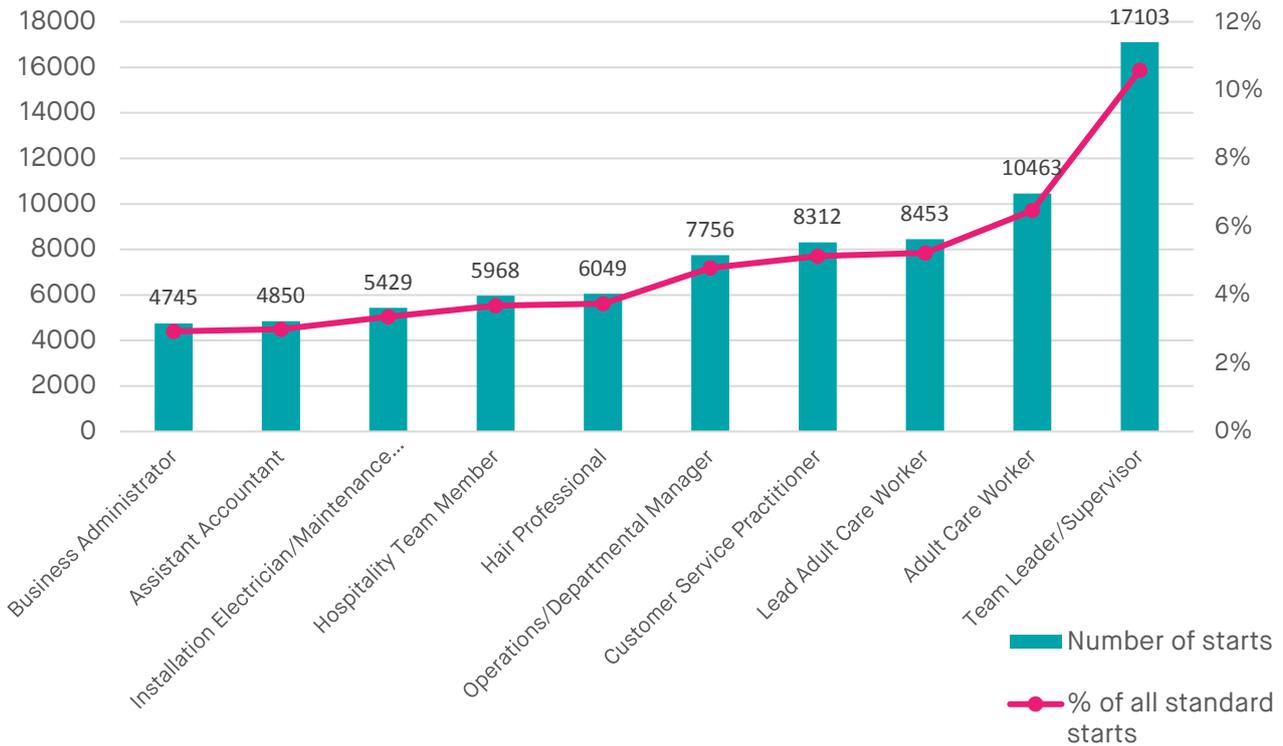
A number of factors may help explain the divergent impact by age: many young workers are likely to be first-time entrants in the labour market, whilst older apprentices are likely to have already been in work. There is a risk that an apprentice may simply accredit the skills an adult already has rather than adding to their skills. A recent study by the University of Sheffield found that younger apprentices (aged 19-24) receive a much larger increase in their daily earnings after completion than do those who started their apprenticeship at an older age (25 or over). Part of this is explained by the fact that older apprentices select schemes that on average deliver lower returns than the ones that young apprentices select. However, outcomes also vary significantly even when they undertake the same scheme.<sup>38</sup>

### Evidence from the new regime

#### Prevalence of apprenticeships in low-skilled, low-wage occupations

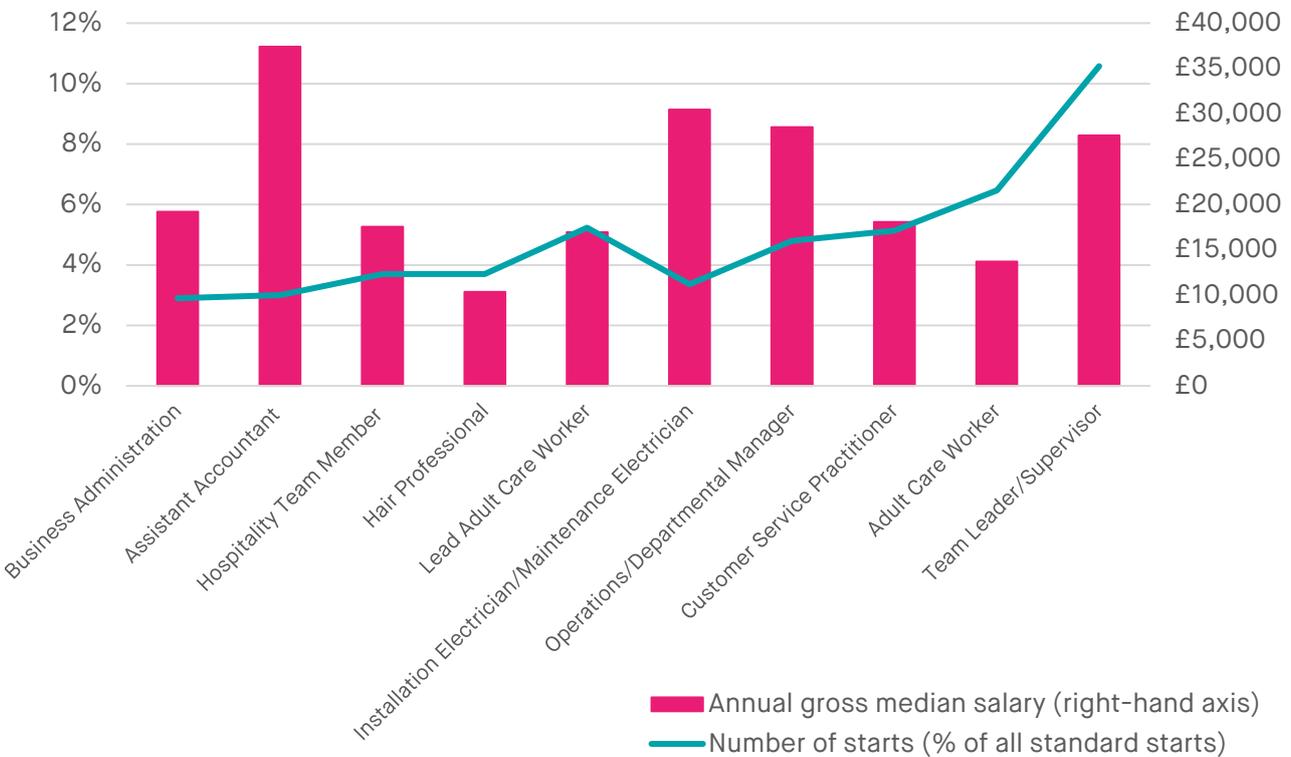
It is too early to say, conclusively, if the Apprenticeship Levy and the rollout of new apprenticeship standards are delivering much greater gains for apprentices, in terms of wages and job prospects. But there are reasons to suspect that issues related to quality remain. Many apprenticeship starts are in relatively low wage, low value-add parts of the economy, which poses questions about their likely benefits. Figure 11 below shows, the 10 most popular apprenticeship standards started in the 2017/18 academic year. These include apprenticeships in care, hairdressing, customer service and hospitality – all relatively low wage sections of the economy as shown in Figure 12 below.

**Figure 11: Top 10 apprenticeship standard starts, 2017/18**



Source: SMF analysis of Department for Education data

**Figure 12: Top 10 apprenticeship standard starts, 2017/18, % of all standard starts and median annual gross salary in related occupation (2017)**



Source: SMF analysis of Department for Education and ONS Annual Survey of Hours and Earnings data

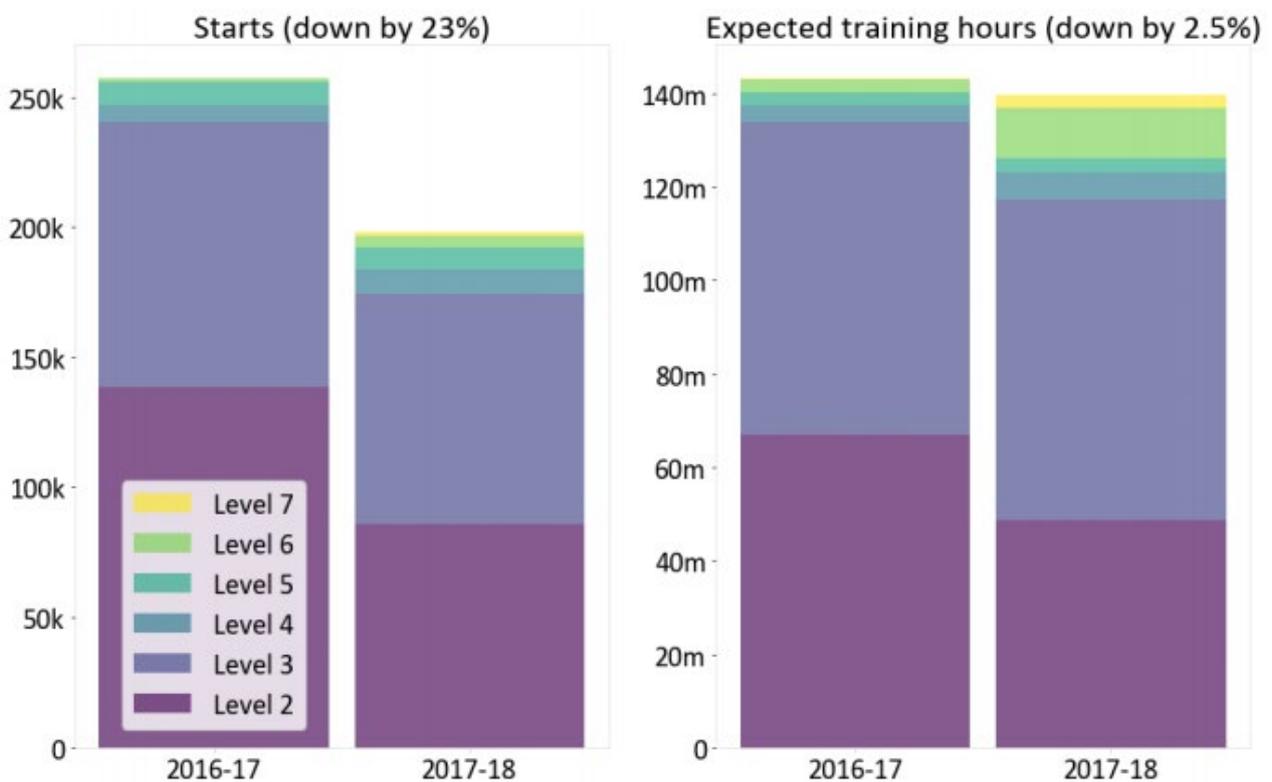
If the role of apprenticeships is to steer individuals towards careers that offer good long-term career prospects, this data raises questions about the extent to which this role is being fulfilled.

This reinforces arguments made by the think tank Reform previously. Their report noted that a number of low-skill and low-paid roles have been designated as suitable for apprenticeships, when such a definition is inappropriate and sets the UK apart from other countries such as Germany. Schemes in retail and customer service, the report argues, lack occupation-specific knowledge and skills. For instance, it argues that those pursuing training through a retail apprenticeship standard are at ‘serious risk’ of ending up ‘less skilled, less knowledgeable, less autonomous and with a much narrower training scheme’ than German counterparts.<sup>39</sup> Reform calculated that candidates training towards ill-defined and low-skilled roles account for 14% of apprenticeships.

Many are in sectors which were criticised by Ofsted as recently as 2015. In 2015, Ofsted also criticised apprenticeships in retail, care and food production sector where some employers were simply accrediting existing low-level skills.<sup>40</sup> It concluded that the ‘weakest apprenticeships’ were in care, customer service, administration and retail sectors.<sup>41</sup>

More reassuring are Department for Education estimates on the total volume of off-the-job training being undertaken under the new regime. Due to the fact that it has observed a shift to higher level apprenticeships and to subjects with greater training requirements, the analysis estimates that the reduction in training hours to be much less significant than the reduction in apprenticeship starts.

**Figure 13: Apprenticeship starts and estimated hours of off-the-job training**



Source: Department for Education, Apprenticeships: off-the-job training hours estimates, Ad-hoc notice (March 2018)

**Risks that apprenticeships are undertaken in occupations vulnerable to automation**

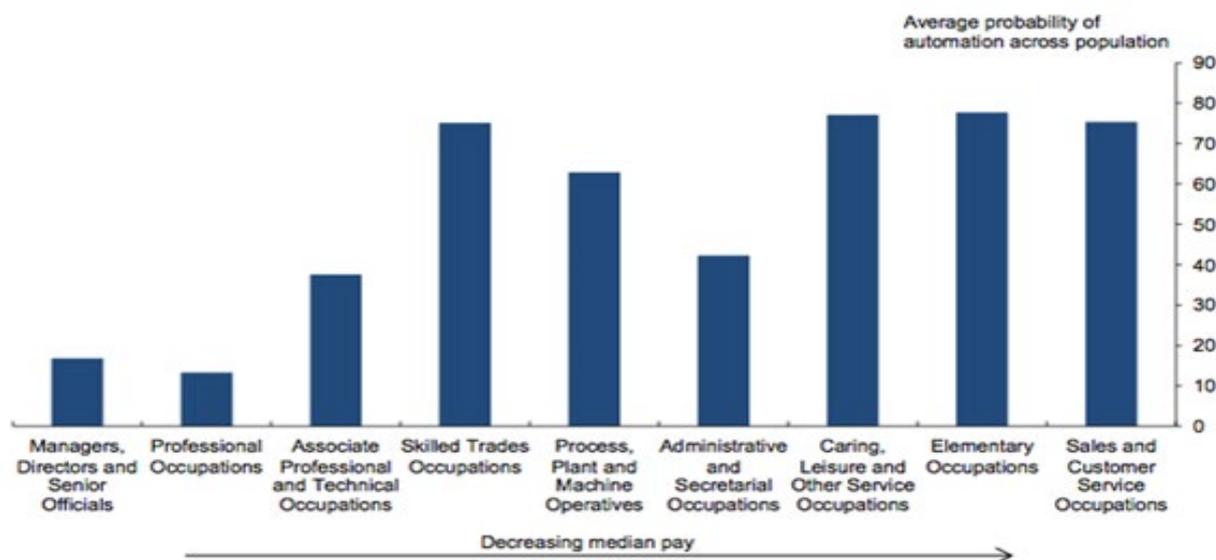
The “employer-led” approach adopted for the new apprenticeship standards may be prioritising the interests of businesses over the long-term career prospects of apprentices – raising further questions about whether the current approach is fit for purpose. Critically, there is a risk of apprenticeships being created with short-term needs of businesses in mind, such as the business cycle, rather than the long-term career prospects of apprentices and long-term skills requirements for the wider economy. While the government has talked up the merits of an employer-led approach to apprenticeship training, it is far from obvious that such an approach will generate the best outcomes for apprentices and society as a whole.

A particular economic concern at present is the threats posed by robotics and artificial intelligence on some careers and industries in the economy. The high proportion of apprenticeship starts being undertaken in fields such as customer service – which Bank of England analysis suggests are highly at risk of automation in the future – raises questions around the extent to which apprenticeships are being sufficiently future-proofed. In fact, the Government’s Industrial Strategy committed it to ‘equipping [individuals] with the skills they need to maximise their earning potential’ and acknowledged the importance of this in the context of ‘longer working lives, automation of low skilled labour and changes to the labour market.’<sup>42</sup>

While employers clearly need to play a role in determining the nature of apprenticeships, policymakers must also ensure that apprenticeships are well-placed to meet future skills requirements and the changing nature of the economy as robotics and artificial intelligence become increasingly commonplace.

According to the Bank of England, the risk of automation is much higher in lower-level occupations (see Figure 14). There is significant crossover therefore between the sectors of the economy where apprenticeships are most prevalent and the occupations that are most likely to have been made redundant by technology.

Figure 14: Probability of automation, by occupation



Source: Bank of England published in 'Labour's Share', Speech given by Andrew G Haldane, Chief Economist, Bank of England, Trades Union Congress, London, 12 November 2015

**Apprenticeship training being undertaken when other training would be more appropriate or cost effective**

Although the Government did engage in a formal consultation with employers when designing the Apprenticeship Levy, any changes in the behaviour of employers in regard to hiring more apprentices still remain to be revealed. Research with employers before the introduction of the Levy indicated that levy-paying employers were inclined to increase apprenticeship provision in order to reclaim their levy contribution.<sup>43</sup> The study found that in sectors where many employers already provide high-value apprenticeships, behaviours are likely to change little because their apprenticeship programmes are driven by the demand for skills. For instance, employers in engineering and construction are already reliant on high value apprenticeships as they have no viable alternative channel of hiring or training a skilled workforce. Instead, the levy is likely to have the largest effect in sectors such as business services where apprenticeships are low cost due to the availability of alternative means of training. Here, the obligation to pay the levy may cause employers to move towards adopting apprenticeship training instead of another training alternative, even if the result is sub-optimal for the firm.

Re-classifying training programmes as apprenticeships in order to use up levy contributions is a potential behavioural heuristic also identified in an inquiry by the Public Accounts Committee.<sup>44</sup> In the worst-case scenario, the introduction of the levy could lead to a decline in, or even an end to, other forms of more appropriate training at both ends of the spectrum of qualification levels, from traineeships and work placements at the lower end, to graduate schemes at the higher end. As the OECD noted in 2018, 'the strongest possible quality assurance measures will be needed to ensure that the replacement of other training by fundable apprenticeships genuinely adds value'.<sup>45</sup> A survey of employers carried out by the CIPD just after the introduction of the Levy found that a quarter of respondents (26%) reported that the Levy 'Means your organisation reduces investment in other areas of workforce training and development'.<sup>46</sup>

**Employees being reclassified as apprentices**

The new apprenticeship system gives employers an incentive to classify employees as apprentices.<sup>47</sup> Stylised examples are given in Box 1. Entry-level apprentices could be hired as ‘cheap labour’ for the duration of the apprenticeship programme so that the firm can claim back its levy contributions and take advantage of the exemption from National Insurance contributions and lower minimum wage in the first year of training.<sup>48</sup> Due to their motivations, such employers could be expected to put a low priority on the quality of training that their apprentices receive. Young new hires, especially those aged between 16 and 18, are most likely to be at risk of falling into this category. The Education Select Committee reported hearing evidence that the levy may be incentivising employers towards provision that accredits their employees’ existing skills rather than training them for new roles and responsibilities.<sup>49</sup>

**Box 1: Financial Incentives: Stylised Examples<sup>50</sup>**

The financial incentive to reclassify existing training as apprenticeships, existing employees as apprentices, or recruit new employees as apprentices even in a situation where apprenticeships on their own add little value comes from:

- The amount that can be drawn down for training an apprentice
- Lower minimum wages for apprentices in their first year
- Exemption from employer NICs for apprentices aged under 25 who earn below £43,000 per year (all under 21s are exempt from employer NICs)

*Stylised example: Decision to hire a 21-24 year-old apprentice versus a 21-24 year-old employee (or reclassify an employee as an apprentice):*

Financial Incentives		
	21-24 Apprentice	21-24 Employee
Annual NICs	zero	£823.45 <sup>51</sup>
First year	Minimum wage (1st year)	£7.38
	Annual Salary	£14,391
	Annual Cost Saving (1st year)	£7,999
Second year	Post-1st year Min Wage	£7.38
	Annual Salary	£14,391
	Annual Cost Saving	£823
Aggregate Cost Saving	<b>£8,823</b>	

*Stylised example: Decision to hire a 25 year-old apprentice versus a 25 year-old employee (or reclassify an employee as an apprentice):*

Financial Incentives		
	Over 25 Apprentice	Over 25 Employee
Annual NICs	£944.54	£944.54
First year	Minimum wage (1st year)	£7.83
	Annual Salary	£15,269
	Annual Cost Saving (1st year)	£8,054
Second year	Post-1st year Min Wage	£7.83
	Annual Salary	£15,269
	Annual Cost Saving	£0
Aggregate Cost Saving	<b>£8,054</b>	

Note: We note that the above calculations estimate the monetary cost saving of hiring an apprentice over an employee. By definition, apprentices work four days a week and attend off-

the-job training in the remaining day of the working week, whereas full-time employees typically work for five days. Therefore, we expect the *economic* cost of hiring an apprentice rather than an employee to be lower than our monetary estimates.

As the OECD notes, ‘in principle’, the use of apprentices as cheap labour might be prevented by the rule that stipulates that the apprentice ‘must have a job role (or roles) within the organisation that provides the opportunity for them to gain the knowledge, skills and behaviours needed to achieve their apprenticeship’ (SFA, 2017). But, it notes that ‘enforcing this rule will be hard.’<sup>52</sup>

### **Apprenticeship standards might be too narrowly defined**

An employer-led approach represents an opportunity to fill skill gaps across all sectors, as employers can specifically train an apprentice in a job where there is high demand for skills. However, it is yet to be seen whether employer-focused apprenticeship standards will truly lead to higher value programmes. Some standards may be too narrow, which restricts transferrable skills learned and gained by apprentices.<sup>53</sup> The Institute of Fiscal Studies has noted concerns that ‘many of the new standards are highly specific and it is not clear whether they will be of economic value outside the occupation they apply to. This may make people completing these apprenticeships vulnerable to economic changes.’<sup>54</sup> In summer 2018, the OECD highlighted worries that the number of Standards was swelling: ‘apprenticeship qualifications need to be sufficiently broad, and therefore few in number. This means keeping the total number of apprenticeship standards well under one thousand, in common with the approach of other countries.’<sup>55</sup>

As of October 2018, there were 572 ‘Standards’ approved or in development.<sup>56</sup> This is already around double the number in countries such as Austria, Switzerland and Germany, which each has between 200 and 300.<sup>57</sup> And, many, many more ‘Standards’ are expected to be developed in the UK.

Employers in a specific sector have an incentive to develop skills needed in their niche of the economy. They also have a disincentive to give workers transferrable skills as these make the workers more mobile. Therefore, the employers risk losing the skills. It is similarly in the interests of employers in a niche sector to draw the qualification narrowly, so as to reduce its currency to wider employers. In more corporatist economies, other stakeholders, such as trade unions provide some counterweight to employer interests. However, as Simon Field has argued, there is insufficient counterweight to the employers developing schemes that work in their own narrow interests and this is contributing to narrow standards.<sup>58</sup>

The latest survey of apprentices found that: 89% of Level 2 and 3 apprentices in 2017 report that they gained skills/knowledge for a range of jobs / industries. However, the proportion not agreeing ranges from 8% in some sectors through to 16% in others.<sup>59</sup>

It is also worrying that a metric which the Department for Education is using to ‘measure how our efforts to increase the quality and relevant of apprenticeships were working for employers’ has dipped. The proportion of employers who report being satisfied with their apprenticeship was 84% in 2017 and 87% in 2015.<sup>60</sup>

We note the importance of ensuring an appropriate balance is struck between providing apprentices with transferable skills versus making apprenticeships sufficiently specific to

provide highly-valued skills appropriate to real jobs. Very broad, “transferable” apprenticeships might be of little value if they do not equip apprentices with niche, in-demand skills which command high wage premiums.

### Continuing questions over the consistency of provider quality

As discussed above, there have been well-established concerns about the consistency of quality of apprenticeship training providers. The Richard Review, Ofsted and reports by parliamentary committees and the NAO have criticised the presence of poor quality provision in the market.<sup>61</sup> A study by Ofsted in 2015 found that a third of the 45 providers assessed did not provide high quality training.<sup>62</sup> Of the 110 providers inspected in 2017/18, Ofsted rated six in ten (58%) of established providers as ‘outstanding’ or ‘good’. However, a third of apprentices covered in inspections in 2017/18 were being trained by providers rated by Ofsted as ‘inadequate’ or ‘requires improvement’.<sup>63</sup>

There are currently multiple mechanisms to regulate provider quality. The Education and Skills Funding Agency (ESFA) is responsible for the administration of the register of apprenticeship training providers and the register of assessment organisations. The ESFA notes that organisations that are listed on the register ‘have been through an application process with the ESFA that considers due diligence, capability, quality and financial health to assess their capability to deliver high-quality apprenticeship training’.<sup>64</sup> Ofsted inspects training providers and carries out a sample inspection of employers. In addition, the policy intention is that employers will have an incentive to seek out the highest quality training providers.

However, it is not clear that these mechanisms will ensure that the only the highest quality training providers are engaged by employers. The Education Select Committee has concluded that ‘we need stronger, clearer oversight of apprenticeship training and assessment’.<sup>65</sup>

Data published by Ofsted in its annual report reveal that of the apprenticeship training providers it inspected in 2016-17, half (51%) required improvement or were inadequate. Among institutions it inspected, it found that 37,000 apprentices were trained by ‘inadequate providers’ (20%); 52,000 were with providers judged ‘requires improvement’ (28%).<sup>66</sup> As Ofsted uses a risk-based approach to carry out inspections, the absolute number of apprentices being training in underperforming providers is likely to be an underestimate; whilst the proportion is likely to be an overestimate.

### Lack of price negotiation and price signals

In August 2018, the DfE reported that although they ‘expect employers to negotiate prices with training providers’, ‘we have seen limited price negotiation in the market, with many employers telling us that they do not feel they are able to negotiate on price or that they consider the funding band upper limit to be the “rate” set by the government.’<sup>67</sup> This is hardly surprising: the employer has little incentive to negotiate down the price because they are not bearing the cost.

This has multiple worrying effects. First, setting prices correctly is extremely difficult in any market. Unless the IFATE’s estimate for the costs of training for each Standard is exactly right, detriment is caused. Set a band too generously and the government contribution to training costs will be higher than it should be. Set the band too low, as the Education Select Committee has argued the IFATE has done in some cases, and it is uneconomic to provide high quality training.<sup>68</sup>

Second, as the Institute for Fiscal Studies has argued, the effect of the ‘bunching of providers at the band maxima is that it will make it difficult for employers to use price signals as a guide to quality.’<sup>69</sup> So, we might expect quality as well as price effects from the banding.

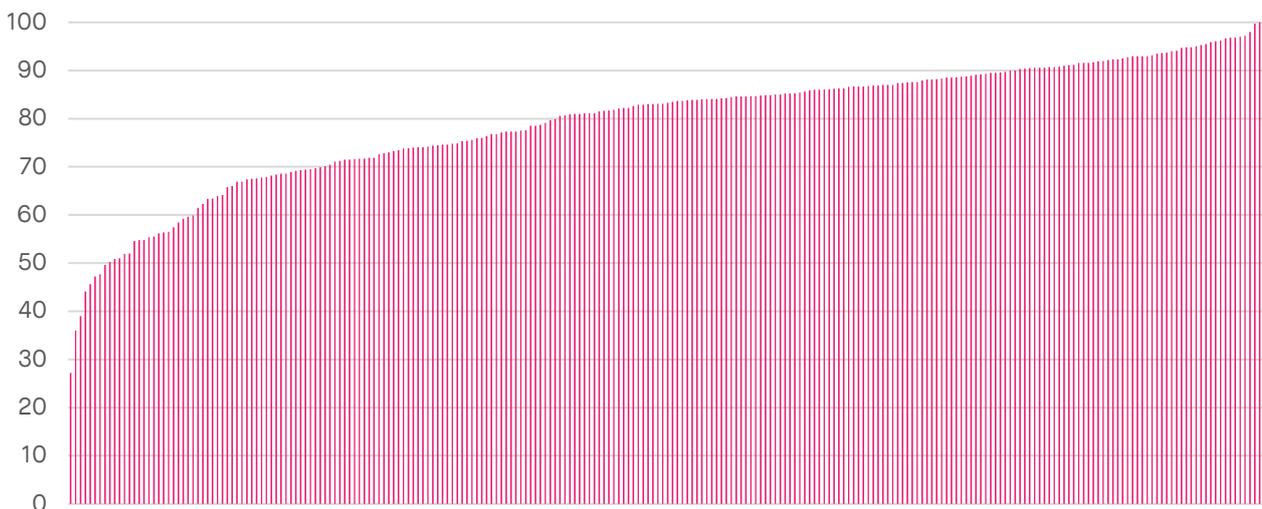
The Government has decided to increase the number of funding bands from 15 to 30 ‘in order to support negotiation between employers and providers on price’.<sup>70</sup> It is not clear how this will help promote price competition. In fact, the opposite: narrower funding brackets are likely to result in increased reliance by employers on the regulated price caps and even less negotiation and competition on price.

**Evidence of inconsistent quality among training providers**

The data available from apprenticeship learners in 2017-18 reveals the variable quality of providers who appear on the ESFA’s register of approved providers.<sup>71</sup> Figures 15 and 16 show the distribution of average ratings by apprenticeship learners of their training providers and how likely they would be to recommend them. For each question there is marked variation in the average scores across training providers – ranging from 27% for one question and 32% for the other through to 100% for both. While these survey-based questions are just one method for understanding performance, they do indicate extremely variable quality.

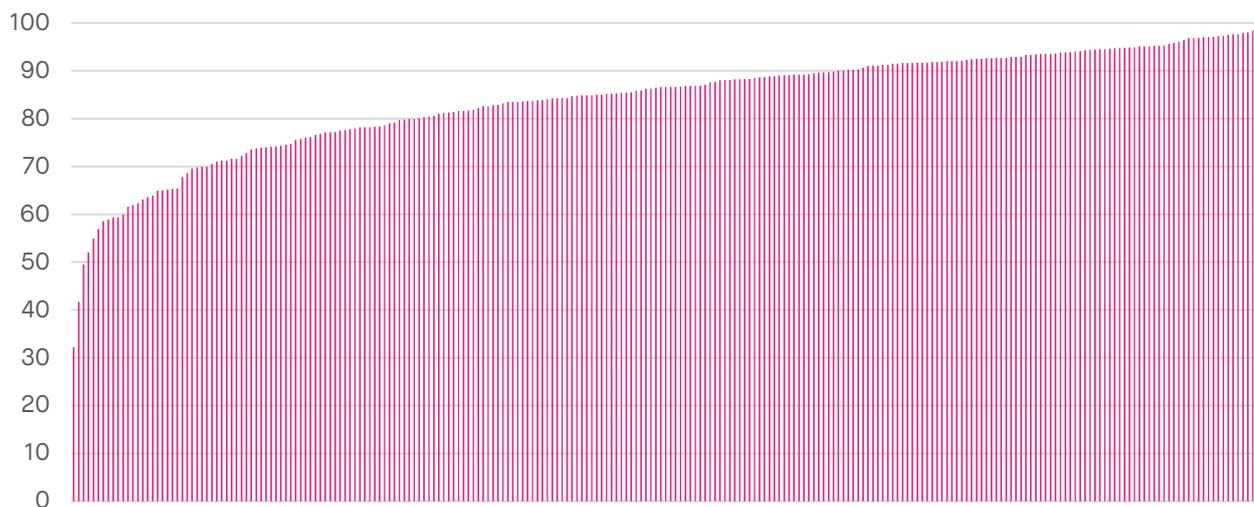
In November 2018, the Department for Education and Education and Skills Funding Agency announced that they are introducing ‘tougher’ rules for organisations applying for and securing a place on the Register of Apprenticeship Training Providers. These reforms require all providers (including sub-contractors) to register, the funding available to subcontractors is capped and main providers must act as main providers unless they register as supporting providers.<sup>72</sup>

**Figure 15: Average percentage score given by learners for each provider on the ESFA register for the question ‘How satisfied or dissatisfied are you with the teaching on your course or activity?’ (all training providers with more than 100 responses from apprentice learners)**



Source: DfE, Details file: FE Choices learner satisfaction survey July 2018; ESFA register of providers, <https://roatp.apprenticeships.sfa.bis.gov.uk/download>.

**Figure 16: Average percentage score given by learners for each provider on the ESFA register for the question ‘How likely is it that you would recommend the learning provider to friends or family?’ (all training providers with more than 100 responses from apprentice learners)**



Source: DfE, Details file: FE Choices learner satisfaction survey July 2018; ESFA register of providers, <https://roatp.apprenticeships.sfa.bis.gov.uk/download>.

## CHAPTER 5: POLICIES TO DRIVE HIGH-VALUE APPRENTICESHIPS

The last chapter showed that despite the reforms to the apprenticeship funding and regulation, more needs to be done to ensure that apprenticeships that undertaken are high value to the economy. In this chapter we ask: how can the government steer employers towards high value apprenticeships?

### I: Funding for value: ‘Apprenticeship Value Premiums’

#### Summary and rationale for policy

From society’s perspective, apprenticeships are important because they increase skill levels, enhance productivity in firms and in the economy, provide an entry route into employment and increase wages of workers. However, the previous chapter showed that there is huge variance in terms of whether different apprenticeship schemes deliver these outcomes.

We argue here that funding mechanisms and incentives should reflect the outcomes that society wants to see. Employers should be positively encouraged to offer apprenticeships in sectors and occupations that have a history of delivering good returns in the form of employment opportunities and productivity-enhancing skills. This should be done by offering such employers an additional cash grant (‘Premium’) for each apprenticeship undertaken. Employers in sectors where apprenticeship schemes have weak returns should be disincentivised from pursuing them. This should be done by reducing the government’s maximum funding contribution to the costs of training and assessment.

The IFATE has acknowledged the importance of recognising the variation in the returns across apprenticeships. In a 2017 report on ‘quality’, the IFATE noted that it will ‘explore options for building a better understanding of the social and economic impact of individual standards so that it can include a greater recognition of the strategic return from the apprenticeship in its funding advice to government.’<sup>73</sup> More recently, the IFATE has acknowledged that ‘some types of apprenticeship might cost a lot to provide, but can offer relatively poor labour market returns, for a variety of reasons’. It has stated its intention to explore the ‘option for building a better understanding of the social and economic impact of individuals standards so that it can include a greater recognition of the strategic return from the apprenticeship in its funding advice to government’.<sup>74</sup>

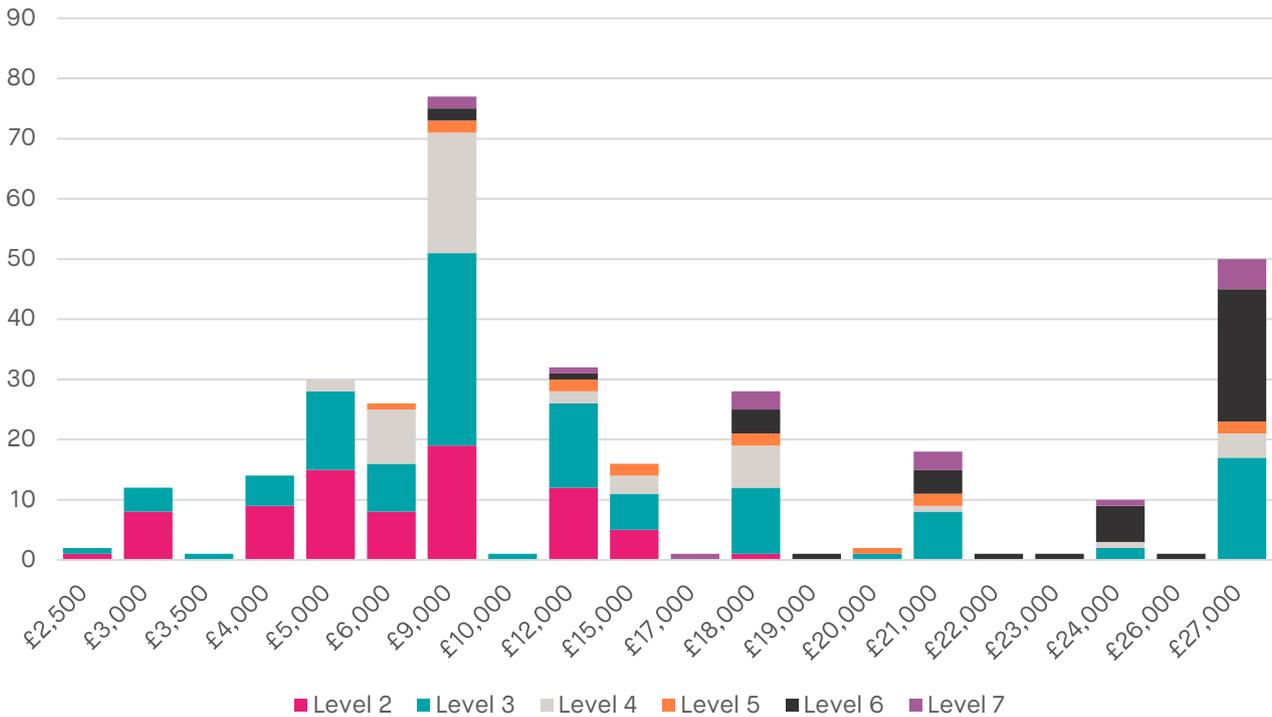
#### The current funding model

Under the current funding approach, the Government makes available a maximum funding contribution towards the costs of training and assessment for each apprenticeship route. The employer makes up any difference in the costs of provision of training and assessment, as well as paying the apprentice. The Government, following recommendations from the IFATE, allocates each Standard to one of 30 funding bands.<sup>75</sup>

Government funding is ‘largely cost driven’ and reflects the underlying costs of provision. The model ‘largely assumes that the higher the cost of the training provision, the higher the quality and value of the apprenticeship’.<sup>76</sup> The initial funding band is set by ‘an estimate of the amount of training needed to complete the apprenticeship standard (based on the length of the apprenticeship standard and the requirement that 20% of an apprentice’s time is spent on off the job training), the Sector Subject Area of the training and an allowance for end-point

assessment'.<sup>77</sup> The final funding band is set by the Secretary of State after any further information is submitted by proposers and the IFATE. Figure 17 sets out the funding bands as of August 2018. The Government is currently reviewing the funding available for a small number of Standards and trailblazers have been asked to validate the actual costs of delivery. This is resulting in a reduction in the amount of funding available for some apprenticeships (e.g. Rail Engineering Technician) and an increase in others (Senior Healthcare Support Worker), while others remain the same.<sup>78</sup> The basis for such amendments has not been made public yet.

**Figure 17: Funding bands for apprenticeship standards (August 2018)**



Source: <https://www.gov.uk/government/publications/apprenticeship-funding-bands>

Figure 17 above sets out the funding bands and how these are distributed across different apprenticeship levels. The funding available varies significantly by sector and occupation. For instance, 32 out of the 50 standards funded at a maximum of £27,000 are in the engineering and manufacturing routes. Meanwhile, higher-level apprenticeships are more likely to be in the higher maximum contribution bands. This is because training and assessment in these occupations is considered more expensive to deliver.

**How funding incentives reflect value in other sectors**

Variation in outcomes across different training schemes is an accepted policy dilemma in other sectors and countries. Studies in the USA have shown that the subject studied at university has a significant impact on the earnings that graduates can expect to receive. Analysis recently completed by the Institute for Fiscal Studies revealed that students studying medicine and economics in the UK higher education market achieved around twice the earnings of those studying agriculture, creative arts or social care. Part of this may be explained by the characteristics of those studying these courses. However, even having controlled for such factors, compared to the average graduate 5 years after graduation, female and male medical

graduates earn 31% and 25% more respectively; creative arts students earning 14% less (women) and 18% less (men).<sup>79</sup>

This has spurred debate about how to incentivise take-up of the highest-value courses and how to distribute the costs fairly. Experts have argued both ways: some like Dean Machin that courses that offer better employment outcomes should be more expensive (so as to recoup some of the gain from the better-paid student); others like Robert Halfon MP that those courses with better average labour market should have lower fees (so as to encourage more students to take up these courses).<sup>80</sup>

Australia has introduced differential fees for university courses, varying both the amount that the Government contributes to the cost of the course and the maximum contribution that the student contributes. This is set out in Figure 18. Students contribute more for courses that deliver higher labour market returns.

**Figure 18: Total resourcing for a Commonwealth supported place by discipline - 2018<sup>81</sup>**

Funding cluster	Part of funding cluster	Maximum student contribution amounts	Australian Government contribution	Total resourcing
<b>Funding cluster 1</b> Law, accounting, commerce, economics, administration		\$10,754	\$2,120	\$12,874
<b>Funding cluster 2</b> Humanities		\$6,444	\$5,896	\$12,340
<b>Funding cluster 3</b> Mathematics, statistics, behavioural science, social studies, computing, built environment, other health	Mathematics, statistics, computing, built environment or other health	\$9,185	\$10,432	\$19,617
	Behavioural science <sup>(1)</sup> or social studies	\$6,444		\$16,876
<b>Funding cluster 4</b> Education		\$6,444 <sup>(3)</sup>	\$10,855	\$17,299
<b>Funding cluster 5</b> Clinical psychology, allied health, foreign languages, visual and performing arts	Clinical psychology <sup>(2)</sup> , foreign languages, or visual and performing arts	\$6,444	\$12,830	\$19,274
	Allied health	\$9,185		\$22,015
<b>Funding cluster 6</b> Nursing		\$6,444 <sup>(3)</sup>	\$14,324	\$20,768
<b>Funding cluster 7</b> Engineering, science, surveying	Engineering, science, surveying	\$9,185	\$18,240	\$27,425
<b>Funding cluster 8</b> Dentistry, medicine, veterinary science, agriculture	Dentistry, medicine or veterinary science	\$10,754	\$23,151	\$33,905
	Agriculture	\$9,185		\$32,336

We note potential objections to steering the market through differential funding for apprenticeships.<sup>82</sup> Those undertaking engineering and higher-level apprenticeships already reap a productivity benefit, as do their employers. Therefore, employers arguably already have an incentive to undertake such apprenticeships. A further potential argument against weighting funding towards higher value training is that some of these same apprenticeships have higher

training costs in any case. Therefore, the government is arguably already subsidising them more generously than other apprenticeships, and the sector is already receiving a transfer from other sectors.

However, there are compelling arguments in favour of incentives for high-value schemes. First, Chapters 4 and 5 revealed a range of forces that may steer employers away from the highest value apprenticeships. Likewise, apprenticeship candidates do not have sufficient information to steer the market towards the highest-value apprenticeships. Indeed, knowingly promoting schemes that typically offer zero returns to young aspirant candidates looking for a career path is insidious.

Finally, the accepted purpose of apprenticeships is to deliver good employment opportunities and the skills that make workers and the economy more productive. If schemes are not doing this, then the case for investment is shattered.

### **How performance data is used to inform funding in other service areas**

Many sectors are already making greater use of historic data to steer the market. For instance, the Teaching Excellence Framework (TEF) in higher education provides each institution with a score. These relate to how many students continue their course from one year to the next, graduate-level employment outcomes, and students' views about their experience, the latter gathered in the annual National Student Survey.<sup>83</sup> The TEF scores are used for two purposes. First, they are intended to inform students' choices about where they study and which courses they take. The DfE has also started publishing more comprehensive data on graduate outcomes. These include whether the graduate is in sustained employment and average salaries, by institution and by subject.<sup>84</sup> Second, the scores are used to regulate the maximum fee levels that institutions can charge. Under the TEF regime, institutions that receive a Gold Award can increase their fees by a given margin (currently £250). Institutions that do not receive the Gold Award are not allowed to increase fees.

National and local governments have experimented with funding systems that have made payments and funding contingent on specific outcomes. Often these are used to incentivise providers to deliver the best outcomes, whether this is in employment support, skills provision or offender rehabilitation. In such cases, at least a portion of the payments to the provider is dependent on them achieving pre-determined outcomes. For instance, the GLA is hoping to use HMRC RTI information on earnings to inform whether trainees are in sustained employment and therefore whether training providers should be reimbursed for their services.<sup>85</sup>

### **What to fund?**

We recommend that incentives should reflect outcomes for apprentices on three core metrics:

- Wage growth – as a proxy for productivity.
- Employment or progression in training – a high value apprenticeship should lead to employment / continued employment or progression into higher-level training.
- Transferability of skills – an apprenticeship that is valuable to the economy will provide the individual with skills which they can apply not only in their current job and at their current employer but also in other jobs with other employers.

## Identifying the right outcomes and data to track

The Department for Education published a comprehensive report in March 2017 setting out how it would evaluate the overall success of the apprenticeships reform and programme. This document provides a useful framework for conceptualising and measuring value. As the report noted, understanding the impact of the programme can be achieved most accurately by measuring the long-term outcomes for apprentices and comparing these to similar individuals who did not undertake apprenticeship training.<sup>86</sup> However, such data can take many years to capture and this must be complemented with survey data to give an earlier view of outcomes.

Table 1 sets out which measures could inform the funding model include. Each outcome would be reported by Standard and Level; occupation; sector; and region.

**Table 1: Measuring value across apprenticeships**

Measure of value	Method	Source
<b>Employment or training outcome</b>	Proportion of learners who have progressed to sustained employment or advanced learning destination.	DfE measure. Adult Further Education Outcome Based Success Measure, LEO
<b>Productivity</b>	<p>Average percentage growth in wages per apprenticeship.</p> <p>The Skills Index estimates the total value-added of learners who complete courses. Value is assessed based on employment and earnings progression. The Index is broken down by sector, level and learning type so that it is possible to understand which types of apprenticeships are delivering the greatest value.</p> <p>We recommend that the results from the Skills Index should be considered alongside long-term earnings outcomes, using matched administrative data, which assesses earnings 1, 2, 3 and 4 years after completion. Information on wage premia, employment status, and productivity gain needs time to surface as achievement needs 2 to 3 years to settle.</p> <p>Where possible, earnings and employment outcomes should also be considered in the broader context of regional economic performance.</p> <p>In some instances, a further aspect to consider is any change in social value associated with completing an apprenticeship. For instance, when evaluating apprenticeships in sectors which are important for delivering public services such as education and health and social care, raw data and empirical models may fail to capture fully the full extent of the benefit of the programme, which may flow to consumers through higher quality services</p>	Skills Index
<b>Transferability of skills</b>	<p>Proportion of apprentices who report that their training has improved their career prospects.</p> <p>Proportion of apprentices who report that their training has prepared them well with transferrable skills and that they feel confident undertaking a role with other employers.</p>	Apprenticeship Learner Survey

We envision a collaboration between the Department for Education, the Department for Business, Energy and Industrial Strategy, and HM Treasury to collect and match data on these measures to follow individuals throughout their training and labour market participation.

**How should employers receive the incentives: ‘Apprenticeship Value Premiums’**

There are multiple potential mechanisms for applying such incentives. Our analysis suggests that the following approaches would be most likely to have an effect whilst remaining simple to administer:

- Employers should be given an additional cash grant for each apprenticeship undertaken in sectors and occupations that have a history of delivering good returns in the form of employment opportunities and productivity-enhancing skills.
- Employers in sectors where apprenticeship schemes have weak returns should be disincentivised from pursuing them, by reducing the government’s maximum funding contribution to the costs of training and assessment.

Our rationale is explained in more detail below.

There are multiple ways of applying the incentives. Table 2 discusses the advantages and disadvantages of different approaches, including our preferred solution of providing a direct grant to employers.

**Table 2: Options for distributing funding**

Funding distribution method	Advantages	Disadvantages
<b>Varying the government’s maximum funding contribution to the costs of training and assessment</b>	<ul style="list-style-type: none"> <li>▪ This would stimulate interest among training providers which may in turn encourage interest among employers.</li> </ul>	<ul style="list-style-type: none"> <li>▪ It could result in an excessive amount of government funding going to training providers.</li> <li>▪ Employers are not applying competitive pressure to the costs of training.</li> <li>▪ Indirect incentive.</li> </ul>
<b>Providing a top-up to the employer’s apprenticeship voucher account</b>	<ul style="list-style-type: none"> <li>▪ Re-cycles the money into the training budget and therefore may encourage further investment in training.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Unlikely to act as a strong incentive on employers in many cases given some may not have spent all their available Levy allocation.</li> <li>▪ Not applicable to smaller employers.</li> </ul>
<b>Granting special regulatory exemptions, e.g. by permitting a lower regulated wage</b>	<ul style="list-style-type: none"> <li>▪ Directly incentivises employers by reducing the costs of engaging apprentices.</li> </ul>	<ul style="list-style-type: none"> <li>▪ May mean fewer candidates are attracted to high value apprentices.</li> <li>▪ Introduces complexity for employers and candidates.</li> <li>▪ Undermines remuneration of apprentices.</li> </ul>
<b>Providing a cash payment or tax relief to the employer (preferred option)</b>	<ul style="list-style-type: none"> <li>▪ This would act as a direct financial incentive for take-up.</li> <li>▪ There are already similar incentives payments for employers to take on younger people and care leavers as apprentices. To the extent that these work as incentives we may expect other incentives to work.</li> <li>▪ Simple to understand.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Likelihood of deadweight costs (some employers are likely to have undertaken apprenticeships anyway).</li> <li>▪ Evidence on impact is mixed.</li> </ul>

The OECD has reported how financial incentives are used in a range of countries to steer the market towards apprenticeship schemes of greatest value to society:<sup>87</sup>

- UK – Grants for employers who engage apprentices who are care leavers and / or aged below 18.
- Austria – Grants are provided to employers who take on apprentices, with additional grant available to employers whose apprentices excel on final assessment, to employers whose apprentices face learning difficulties and to employers who support equal access across the genders.<sup>88</sup>
- Norway – Direct subsidies per apprentice are weighted according to the apprentices' characteristics and sector (small crafts, such as shoemaker, pottery art and silversmith art, which are “protected” for historic or social reasons).
- In Australia – additional subsidy for employers providing apprenticeships that lead to an occupation from the National Skills Needs List.<sup>89</sup>

Research suggests that the effects of incentives in apprenticeships are not necessarily straightforward:<sup>90</sup> the impact may be felt differently across sectors and size of firm; they may affect employers who are not involved in apprenticeships but not encourage those already involved to take on more apprentices. Similar evidence also emerges from the Youth Contract (which offered payments of up to £2,275 to employers when they recruited an 18–24-year-old from the Work Programme).<sup>91</sup>

We propose, therefore, that the scheme is trialled before being rolled so as to have the greatest effect on employer behaviour.

### **Where should the funding come from?**

These reforms could be run as a cost neutral exercise. However, if additional funding is needed, we propose that funding for ‘Apprenticeship Value Premiums’ should be found from within the existing Apprenticeships Levy pot. There is likely to be an underspend initially, and other premiums are paid out of the scheme.

### **Implications for sectors, regions and the overall volume of apprenticeships**

We are aware that this reform is likely to have negative implications for sectors in which apprenticeship schemes typically offer minimal value.

There may also be implications in sectors where wage rises are inherently constrained. This may occur where services are publicly funded, where government rations the amount it will pay for a given unit of service (irrespective of quality) and where it is difficult for the employer to switch from labour to capital. For instance, in social care, a majority of spending comes from the government.<sup>92</sup> Given significant funding shortfalls, there is essentially a cap on the amount of funding for a given unit of care; and it is hard in social care to make a switch from labour to capital. The consequence is that if an apprenticeship were to increase the productivity of a carer it still might not lead to a wage increase. Using wage growth as a proxy for productivity may, therefore, be an inadequate measure.

This does not mean, however, that we should worry any less about whether apprenticeship schemes in these sectors are delivering value. Indeed, as noted above, there are reasons to be concerned about the quality of apprenticeships in care (for instance, poor prospects of promotion reported by apprentices).

Additional weight can be put on other measures such as impact on employment (or further training), and views of apprentices and employers on whether schemes are helpful in boosting productivity.

Finally, we note that this problem is a symptom of the underfunding of social care and if this was resolved then this issue would not arise. It remains an open question whether the government should be encouraging people to take apprenticeships in social care if it is confident that their doing so will not improve their wage prospects.

## II: 'Apprenticeship Excellence Ratings'

### **Rationale for 'Apprenticeship Excellence Ratings' and purpose of reform**

The reforms discussed above would encourage employers to offer high value apprenticeships. They should result in a market where it is less economic for employers to take forward apprenticeships that deliver zero or negative returns to apprentices. However, Chapter 4 also showed that the quality of approved training providers is very inconsistent, and that the market alone cannot be expected to drive quality because of a lack of price signals. Minimum training requirements are fundamentally important as a baseline, but more is needed to drive quality.

Below we set out how information can also help steer the market towards higher value apprenticeships, and drive competition in apprenticeship quality. This applies both to employers engaging high-quality providers to supply the training and also to prospective candidates choosing apprenticeships that deliver the best returns.

Currently, there is insufficient information for either candidates or employers to make informed decisions about quality.<sup>93</sup> To address this gap, we propose 'Apprenticeship Excellence Ratings', which would provide high-level and detailed information on outcomes to aid better decision-making. Making such information available in a systematic way is particularly necessary in the UK, because there is less regulation of employers and their actions and of minimum qualification requirements for training providers.<sup>94</sup> This would build on the ESFA's stated intention to integrate more frequent learner and employer feedback into the digital service,<sup>95</sup> as well as the proposal of the Education Select Committee that there should be a kitemark system for good apprentice employers.<sup>96</sup>

### **What information should be measured and made available**

Ratings systems are applied in a range of other education markets. Over time, policymakers have made efforts to refine the measures presented so that they reflect the value added by the training undertaken rather than the characteristics of the pupils or students undertaking the training.

- School comparison tool: the DfE runs a comparison site which allows parents and pupils to judge the relative performance of selected schools. Outcome measures that can be compared include Progress 8 score; Attainment 8 Score; and employment and continued training outcome.<sup>97</sup>

- The Teaching Excellence and Student Outcomes Framework: the TEF currently provides information at an institution level. However, it is piloting how subject-level outcomes can be assessed and scored. This includes the option of only providing a rating for subjects where these differ from the institution’s overall rating or providing a rating for each subject at each institution.<sup>98</sup>

The table below gives details on what information could be useful to employers and to candidates. We should be realistic about the volume and type of information that candidates and employers can digest and usefully base decisions on. In addition, sample size issues are likely to limit commentary on employers and training providers that are very small.

The Department for Education is currently rolling out a live feedback tool, which publishes information on other employers’ experience with training providers. Using the ‘Find an Apprenticeship’ service, employers can access information on the overall rating of training providers, as well as their areas of strengths and future improvements. We propose that this tool could be built no to develop ‘Apprenticeship Ratings’.

**Table 3: Apprenticeship ratings measures**

Information measure	Audience	
	For employers	For candidates
Earnings uplift from undertaking training	By Provider, Standard, Level and occupation	By Employer, Standard and Region
Employment and further training outcome	By Provider, Standard, Level and occupation	By Employer, Standard and Region
Learner satisfaction ratings of employers and providers	By Provider, Standard, Level and occupation	By Employer, Standard and Region
Employer satisfaction ratings of providers	By Provider	
Hours of training off-the-job		By Employer, Standard and Region
Hours of training off-the-job (as assessed by Learners)		By Employer
Ofsted score	By Provider	

**Presentation and communication of ‘Apprenticeship Ratings’**

This information should be combined into an aggregate score: one rating on employers aimed at prospective candidates; and one rating on providers aimed at employers. This could learn from the TEF where institutions are rated between Gold, Silver or Bronze.

This data should be made available via:

- The government’s ‘Find An Apprenticeship’ online service and in due course via the proposed UCAS-style portal.<sup>99</sup>
- The new Digital Service through which employers will purchase training from 2020.
- Local apprenticeship hubs run by LEPs.

- The IFATE's own channels.
- Other third-party advisors and channels such as 'ratemyapprenticeship'.<sup>100</sup>

The data could also be used to inform the Government's regular awards to top apprenticeship employers.<sup>101</sup>

### **Minimum training requirements**

Apprenticeship standards require minimum off the job training of 20%. There have been calls for this minimum threshold to be relaxed.<sup>102</sup> We are not convinced. Research by Simon Field published by the Gatsby Foundation has found that under the old system nearly 40% of Level 2 and 3 apprenticeships offered less than 20% of off the job training. International evidence indicates that in most countries the proportion of time spent on off the job training is higher than 20%. In fact, the proportion is much higher in other European countries (where data is available). Often, such as Germany, apprentices spend time in college and additional time with the employer doing training.<sup>103</sup> In addition, it is notable that those apprenticeships which have historically provided low hours of off the job training have also included comparatively low hours of other training.<sup>104</sup> We agree that it should be treated as a bare minimum. Enforcement is also important. The National Audit Office's recent report noted that the ESFA 'has limited assurance' that the minimum training is taking place.<sup>105</sup>

### **Regulation of providers**

Greater information should help drive up quality, but there may still be instances where other measures are also necessary. For instance, some providers may have a monopoly in a locality. Further consideration therefore should be given to whether there should be minimum requirements for providers. For instance, in Austria and Germany, vocational teachers must have qualifications in both the occupation and as teachers.<sup>106</sup> Germany requires employers to have a minimum of one qualified 'in-company trainer'. This person must be competent both within the relevant profession as well as competent as a trainer.<sup>107</sup>

Finally, the ESFA should consider how it can develop a transparent and vigorous exercise for excluding under-performing providers from the Register. The performance of providers should be assessed across the measures described in Table 3 and benchmarked against providers offering similar schemes.

## **III: Automation risk: Weighting apprenticeships for future value**

### **Rationale for future proofing and purpose of reform**

Part I highlighted the risk that employers undertake apprenticeships that are of short-term value but are not resilient to future changes in the economy. Our analysis has revealed that many apprenticeships are in occupations where there is significant risk of automation. In other words, there is a significant risk that individuals undertake apprenticeships and find that their training soon becomes redundant.

We are not the only organisation to have noted this risk. The business body, London First, noted in a recent report 'concerns about the pace that Apprenticeship Standards come on stream, and the ability of the Institute for Apprenticeships and Technical Education to update Standards,

bearing in mind the pace of technological change including digitalisation and automation. Apprenticeships must be fit for purpose today and tomorrow.<sup>108</sup>

### **Reassessment of Standards**

The Government's Industrial Strategy was unambiguous about the implications of automation for the economy and low skilled jobs, as well as the need to ensure workers have the right skills to maximise their earning potential.

We argue that, as a matter of urgency the IFATE, with advice from the National Retraining Scheme, should assess the risks and implications of automation for apprenticeship schemes. Interventions that should be considered include: assessing the level of risk from automation for each occupation during the approval and reappraisal process for Standards, with the intention of making alterations or discontinuing Standards where the risk is high; and making information on these risks transparent to employers and candidates.

This would mean that apprenticeships could be more resilient to future changes.

## **IV: Labels: Distinction between apprenticeships**

### **Rationale for incorporating apprenticeship labels and purpose of reform**

Candidates and employers require greater information to help them navigate the expanded world of apprenticeships. Although there is a vast difference across apprenticeships from Level 2 through to Level 7, they still come under the title 'apprenticeship'. Higher level apprenticeships deliver much higher wage returns, but a large volume of apprenticeships are Level 2 schemes.

Currently, apprenticeship standards are classified formally by level of qualification: Level 2 apprenticeships are Intermediate, Level 3 are Advanced, Higher apprenticeships span across Levels 4 to 7, whereas some Level 6 and 7 apprenticeships are also referred to as Degree apprenticeships.<sup>109</sup>

Whilst these qualification levels have clearly defined educational equivalents, we argue that referring to apprenticeships simply by their level and not a formal label falsely presumes that knowledge of these qualification levels is wide-spread; in turn, this makes the parity of esteem of apprenticeships with academic education harder. For instance, an individual who has completed a Bachelor's degree is widely referred to as a graduate, whereas an apprentice can refer to anybody who has undertaken an apprenticeship, regardless of level.

### **Labelling apprenticeships appropriately**

We are aware that the IFATE has been seeking to categorise apprenticeship standards as either 'Technical' (usually at Levels 2/3), 'Higher Technical' (typically Levels 4/5) or 'Professional' (where there is a clear career progression from Higher Technical occupations, as well as occupations where a degree apprenticeship exists) as part of the 15 occupational maps.<sup>110</sup> This work is welcome. However, this terminology is already widely used in describing occupations and is unlikely to be adapted exclusively to describe apprentices. We suggest that labels are given further consideration so that they can gain popular currency and can act as simple signals to candidates and employers.

When apprenticeships were first introduced in England in the middle ages, apprentices trained to become a 'Journeyman' under the supervision of a 'Master Craftsman'.<sup>111</sup> Whilst we do not suggest that the apprenticeship system should revert to its earliest vocabulary, many European countries have successfully incorporated more gradation into the terminology of their apprenticeship structure to distinguish the most accomplished apprentices from entry-level apprentices.

In Austria and Germany, individuals who complete their apprenticeship have an option to obtain a master craftsperson qualification.<sup>112</sup> In Luxembourg, some trades offer a master craftsperson certificate after initial education, which enables self-employment in the craft industry and the training of apprentices.<sup>113</sup>

We recommend that the Institute for Apprenticeships and Technical Education should explore the option for introducing similar terminology. This would act as a signal in the labour market to distinguish apprentices who excelled at a high-level apprenticeship. A more clearly labelled progression system would be easier to understand, and it could motivate prospective apprentices to undertake apprenticeships in their chosen occupation at a higher level.

Further work should also be undertaken to ensure that relevant trade bodies and professional associations are involved in the design of apprenticeship standards and qualifications so that candidates can be certified appropriately on qualification.

## ANNEX 1: EMPIRICAL RESEARCH METHODS

The analysis we have undertaken using the Quarterly Labour Force Survey is an expansion of our previous work on apprenticeship wage returns.<sup>114</sup> In 2015, the SMF used a similar methodology and the same data source used by the National Audit Office in its 2012 report on adult apprenticeships.<sup>115</sup> However, our data was more recent: the NAO findings are based on 2004 to 2010 data, whereas our findings were based on the 2012 to 2014 period. In turn, this report uses data from 2015 to 2017.

As in our previous report:

- We have compared the earnings of those who have completed an apprenticeship against those with similar characteristics who have not. The “wage premium” that we have measured is an average over the course of a career.
- By “similar characteristics”, we mean factors such as age, gender, ethnicity, geographic area, family and household type, and type of work.
- We look at Level 2 apprenticeships (equivalent to getting A\*-C GCSEs) and Level 3 apprenticeships (equivalent to A-levels).
- We look at those in full-time work only.

## ENDNOTES

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- <sup>2</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/697657/Apprenticeships-off-the-job\\_training\\_hours\\_estimates.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/697657/Apprenticeships-off-the-job_training_hours_estimates.pdf)
- <sup>3</sup> National Audit Office, *The apprenticeships programme* (2019)
- <sup>4</sup> See “Find apprenticeship training” website.
- <sup>5</sup> <https://www.instituteforapprenticeships.org/about/occupational-maps/>
- <sup>6</sup> What Works Centre, *Evidence Review 8: Apprenticeships* (2015)
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- <sup>9</sup> Cited in House of Commons, Business, Energy and Industrial Strategy and Education Committees, *Apprenticeships* (2017)
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- <sup>11</sup> See Times Higher Education World University Rankings, QS World University Rankings, etc
- <sup>12</sup> Education Policy Institute, *Remaking Tertiary Education: can we create a system that is fair and fit for purpose?* (2016)
- <sup>13</sup> *The HAYS Global Skills Index 2016: United Kingdom*
- <sup>14</sup> UKCES, *UK Employer Skills Survey, 2015* (2016)
- <sup>15</sup> <https://www.gov.uk/government/news/government-kick-starts-plans-to-reach-3-million-apprenticeships>
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- <sup>20</sup> OECD, *Apprenticeship in England, United Kingdom* (2018)
- <sup>21</sup> HM Government, *English Apprenticeships: Our 2020 Vision* (December 2015)
- <sup>22</sup> National Audit Office, *The apprenticeships programme* (2019)
- <sup>23</sup> *The Richard review of apprenticeships* (2012)
- <sup>24</sup> OSFTED, *Apprenticeships: Developing skills for future prosperity* (2015)
- <sup>25</sup> Ofsted, *Apprenticeships: developing skills for future prosperity* (2015)
- <sup>26</sup> SMF, *Briefing: The value of apprenticeships - wages* (2015)
- <sup>27</sup> IPPR, *Earning and learning: Making the apprenticeship system work for 16-18-year-olds* (2016)
- <sup>28</sup> Our findings are broadly in keeping with past analysis by the CEBR, which revealed huge variance in outcomes. <http://www.southampton.gov.uk/moderngov/documents/s17298/Appendix>
- <sup>29</sup> Chiara Cavaglia, Sandra McNally, and Guglielmo Ventura, *Apprenticeships for Young People in England: Is there a Payoff? Research Discussion Paper 010* (2017).
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- <sup>47</sup> Salary calculations based on minimum wage levels as of April 2017, 7.5 hour work days, and 253 work days in 2017. Employer's NICs calculated using <http://www.icalculator.info/employer-NIC-calculator.html>
- <sup>48</sup> OECD, *Apprenticeship in England, United Kingdom* (2018)
- <sup>49</sup> House of Commons Education Select Committee, *The apprenticeships ladder of opportunity: quality not quantity* (2018)
- <sup>50</sup> Provided the employer has vouchers to draw on, and the costs of foregone working hours due to training is lower than this saving, it makes sense to take on an apprentice, regardless of whether the apprenticeship adds value to the business. For an employer without vouchers, there is an extra cost, 10% of apprenticeship training cost, but for a Band 9 apprenticeship programme (the most popular band), this would only be £900 (10% of £9000). Note: These estimates use the latest (April 2018) minimum wage rates and are calculated on the basis of 37.5 work hours per week for 52 weeks per year. We recognise that many employers do not pay their apprentice the minimum wage and offer a competitive salary in order to attract talent.
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