Apprenticeships for the Future
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Authorship and acknowledgements

This report has been produced by Cebr, an independent economics and business research consultancy established in 1992. The study was led by Scott Corfe, Cebr Managing Economist with analytical and research support from Cebr Senior Economist Rob Harbron. The views expressed herein are those of the authors only and are based upon independent research by them.

This study has been commissioned by the Association of Accounting Technicians (AAT).

London, November 2014
AAT (Association of Accounting Technicians) is a professional membership body offering qualifications in accountancy and finance. We have had a long involvement with apprenticeships, providing a well-trodden non-graduate entry route into the accountancy profession for school leavers and beyond.

It is not just accountancy we are concerned with though. We strongly believe that apprenticeships should have a valued place in society. The rise of university tuition fees has meant that young people have to explore alternative options - if only so they are armed with the right information to make major life choices.

We are now in the fortunate position to be emerging from a recession, which also brings new challenges. We need to consider that if the recovery continues, how do we best plan for the future? How do we ensure we have a workforce with the right skills?

Apprenticeships, while not necessarily the answer to filling all skills gaps, have proven to be a good vehicle for individuals and UK business.

With that in mind, AAT commissioned the Centre for Economics and Business Research (CEBR) to examine the current apprenticeship programme and how it could be built on post-recession.

We feel there is capacity to develop the system allowing it to contract and expand depending on areas of skills shortages. This would offer increased opportunities to people of all ages to develop skills in roles that are needed and have successful working lives, whilst ensuring we are also supporting growth of the future economy.
Executive Summary

This report examines the future of apprenticeships in the UK and considers how the successes of the current apprenticeship system can be built on to continue to deliver better outcomes for individuals, businesses and the future needs of the UK economy.

The key findings of the research are as follows:

- **The number of apprenticeship starts has grown dramatically over the past decade.** In the 2013/14 academic year there were over half a million apprenticeship starts in England alone, over double the number seen in 2007/08. Compared with 2002/03, the number of apprenticeship starts has trebled. However, the number of apprenticeship starts dipped slightly between 2011/12 and 2012/13.
- **Despite overall gender equality, there are significant gender imbalances in certain apprenticeship frameworks.** Some 98% of Construction apprenticeship starts in England in 2012/13 were men, while 95% of Children’s Care, Learning and Development apprenticeship starts were female. The most gender-balanced popular apprenticeship frameworks are Retail, Accountancy, Management, Hospitality and Catering, and Active Leisure and Learning.
- **Apprenticeships are now offered to a wide range of age groups participation in apprenticeships has spread across age groups in society, rather than being concentrated on a younger audience.** Government funding for apprentices aged 25+ was introduced in 2007/08, and starts among this group grew by a factor of eight between 2007/08 and 2012/13. In 2012/13, those aged 25 or over accounted for over two fifths (45.1%) of apprenticeship starts in England. Some 3,260 apprenticeship starts in this academic year were among those aged 60 or over.
- **Studies show that apprenticeships offer individuals routes into employment and further education.** There is evidence that apprenticeships offer individuals a solid route into employment and further education. An ICM survey of 500 employers’ showed that respondents were more likely to offer apprenticeships than those with other qualifications, on average.

As well as supporting individuals into employment, government studies also show that apprenticeships offer a solid route into further education. Research by the Department for Business, Innovation and Skills (BIS) for England showed that 18.8% of the 2005-06 tracked apprentice cohort progressed on to higher education when monitored for a total of seven years. The higher education progression rate is particularly high amongst accountancy apprentices. Over three quarters (76.2%) of accountancy apprentices in the 2009-10 cohort progressed on to higher education - much higher than other frameworks.

- **Many young people see apprenticeships as a desirable alternative to university.** An Ipsos Mori survey of 2,796 young people conducted for the Sutton Trust between February and April 2014 showed that more than half (55%) of young people aged 11-16 said they would be interested in an apprenticeship rather than going to university if it was available in a job they wanted to do.
- **Data suggests that apprenticeships may be underprovided in London, the South East and Scotland and that there is scope to expand apprenticeships in these regions in particular.** London accounted for 13% of employment in the UK in the three months to May 2014, but the capital accounted for just 8% of apprenticeship starts in 2012/13 (the latest full year of data).
- **Overall, apprenticeships have been successful in recent years in rebalancing to meet the changing nature of the UK towards an increasingly service-based economy.** We have seen a significant expansion in services sector apprenticeships with, for example, the number of Business, Administration and Law starts in England rising by 124,000 between 2002/03 and 2012/13 – an increase of 33.5%. While this subject area accounted for 22% of apprenticeship starts in 2002/03, this had risen to 31% in 2012/13.
- **However, although the overall picture suggests some positive rebalancing in the apprenticeship offer, some subject areas have seen a decline in apprenticeship starts despite their importance to the UK economy.** Information and Communication Technology (ICT) apprenticeship starts in England declined by 28% between the 2010/11 and 2012/13 academic years, while Construction, Planning and Built Environment apprenticeship starts stood at a more than ten year low in 2012/13.

The decline in Construction apprenticeship starts is likely a result of the challenging economic conditions the sector has faced in recent years after being heavily impacted by the financial crisis.

- Recent business surveys illustrate a growing skills shortage across the economy as a whole - but especially in the construction and technology sectors, where new initiatives may be required to reverse the decline in apprenticeships. According to the Federation of Small Businesses (FSB) Voice of Small Business Index, in Q2 2014 nearly three in ten small companies (29.9%) reported skills shortages as a barrier to growth, up from 25.4% in Q1 2014. Skills shortages are particularly being felt in the construction and computer services sectors, where 44% and 43% of small firms respectively reported this problem.
- **The total number of apprenticeships will need to expand further over the coming years to meet the needs of businesses, and the industry mix of apprenticeships will need to change to reflect the changing nature of the economy.** There is a strong case for continuing to expand business services and health and social care apprenticeships to meet future demand for skills, while other industries will need to step up a gear and provide more apprenticeships as they become more important. Technological industries, in particular, are likely to expand strongly over the coming years and there is significant scope to expand the capacity for Information and Communication Technology apprenticeships, which accounted for just 2.8% of apprenticeship starts in England in 2012/13 despite the high growth potential of the sector.
- **Professional and associate professional and technical occupations make up a growing share of the UK workforce - administrative and secretarial occupations, sales and customer service occupations and process, plant and machine operative occupations made up a lower share of the workforce in 2013/14 than in 2004/05.** Overall, recent trends, which we expect to continue, suggest that education policy should have a focus on equipping individuals with the skills needed to enter professional and associate professional and technical occupations.
- **A large number of jobs over the coming years will be created in sectors where vocational qualifications such as apprenticeships are important.** For example, there are set to be over 1.6 million professional and technical occupations to meet future demand for skills, while other industries will need to step up a gear and provide more apprenticeships as they become more important. Technological industries, in particular, are likely to expand strongly over the coming years and there is significant scope to expand the capacity for Information and Communication Technology apprenticeships, which accounted for just 2.8% of apprenticeship starts in England in 2012/13 despite the high growth potential of the sector.

Policy recommendations

In light of the research findings in this report, AAT has the following recommendations for policymakers:

1. **Young people should be enabled to make an informed choice about all the opportunities available to them.** Only 31% of young people say that teachers have ever discussed the idea of apprenticeships with them, which suggests that attitudes in the teaching profession need to change. Independent and comprehensive careers advice on apprenticeships must be provided to school pupils.
2. **Funding policy should reflect the changing needs of the economy.** As the system moves towards employer contributions, it should differentiate between types of apprenticeship, offering greater funding incentives for places that address identified skills shortages. A one-size-fits-all percentage for employer contributions is unlikely to close skills gaps, or maximise the number of apprenticeships places on offer, particularly where the shortages relate to places that cost more to deliver. Consequently, employer contributions may be sustainable where needs are already being met.
3. **Better data is required below regional level to allow skills shortages and certain types of unemployment to be targeted.** Government departments and agencies should examine how they currently record data and seek to use business surveys, and other techniques, to map skills shortages at a local level.
4. **Regional disparities in apprenticeship numbers should be addressed through the greater focus on the local ownership of skills funding and education.** Local Enterprise Partnerships (LEPs) have a major role to play, but there is currently too much regional variation in their capacity and capability to ensure effective delivery. It may be necessary to vary the employer contribution according to the location of an apprenticeship, as well as its type.
5. **The Government should further consult employers and providers about the details of its new funding mechanism before going ahead.** A one-size-fits-all approach to target incentives at those subjects and locations where additional places would provide the greatest economic benefit. The impact of the changes should also be monitored closely after introduction.
2 Introduction

Cebr’s research for AAT in March 2014 showed that apprentices delivered £1.8 billion of net benefits to organisations in the UK in 2012/13. There is significant scope to expand these benefits further over the coming years.

The number of apprentices in the UK has grown strongly over the past decade. Between 2002/03 and 2012/13, the number of apprenticeship starts in England more than trebled, rising from 167,700 to 510,200. Growth has been even stronger than this in subject areas such as Business, Administration and Law.

Having said that, following a period of strong growth the number of apprenticeship starts dipped slightly in the 2012/13 academic year and there have been noteworthy declines in two subject areas that are important to the UK economy - construction and technology. There is a strong case for reversing this decline and expanding numbers, as these are sectors in which businesses are reporting a significant and growing skills shortage. As the UK economy continues to grow, more skills shortages are expected to result. This represents a new opportunity for the apprenticeship programme in place, which could address what will otherwise be a constraint on the UK’s growth potential.

Overall, the number of apprenticeships will need to expand over the coming years to meet the needs of businesses, and the industry mix of apprenticeships will need to change to reflect the changing nature of the economy. The rise of business services apprenticeships reflects the growing importance of this sector to the UK economy - something that is likely to continue going forward. In addition, there is significant scope to expand the number of Information and Communication Technology apprenticeships, which accounted for just 2.8% of apprenticeship starts in 2012/13 despite the skills shortage and high growth potential of the sector. We examine these issues in more detail in this report.

The structure of this report is as follows:

Section 3 examines recent trends in apprenticeship numbers. The section also looks at the regions and subject areas which have seen the most significant growth in apprenticeship starts.

Section 4 examines trends in inclusivity and social mobility among apprentices, and considers the extent to which apprenticeships offer a route into employment and additional educational qualifications for different segments of society.

Section 5 considers the current sector/subject mix of apprenticeships and whether this is sufficient to meet the needs of businesses - both now and in the future.

Section 6 considers how policy changes may impact on the future of apprenticeships.

Section 7 draws conclusions from the preceding analysis.
3 The rise of apprenticeships

The number of apprenticeship starts has more than trebled over the past decade.

Take-up of apprenticeships has grown sharply over the past five years, as shown by Skills Funding Agency data illustrated in Figure 1 (below). In the 2012/13 academic year there were over half a million apprenticeship starts in England alone, over double the number seen in 2007/08. Compared with 2002/03, the number of apprenticeship starts has trebled. However, the number of apprenticeship starts in England dipped slightly between 2011/12 and 2012/13.

Figure 1: Number of apprenticeship starts in England

3 Source: Skills Funding Agency
The number of apprenticeship starts in 2012/13 was spread across the UK's regions, as shown in Figure 2 (below). There were 84,180 starts in the North West of England - the highest of the English regions. The lowest number of starts in England was in the North East, at 35,870. There were lower start numbers in Wales (28,030), Scotland (25,691) and Northern Ireland (6,338). Funding for apprenticeship training provided off the job varies across the UK as England, Scotland, Northern Ireland and Wales are in charge of their own training budgets. These funding differences may impact the regional distribution of apprentices across the UK and explain why regions such as Scotland appear to be relatively underrepresented in terms of apprentice numbers (something examined later in this report).

Interestingly, despite the capital’s economic dominance, London had the second lowest number of apprenticeship starts of the English regions, at 45,070.

By sector subject area, the most popular subject for apprenticeship starts in 2012/13 was Business, Administration and Law, with 160,410 starts in England. The next most popular subject areas in England were Health, Public Services and Care (123,370 starts) and Retail and Commercial Enterprise (101,240 starts).

Despite a common perception that apprenticeships relate to manual work, the majority of apprenticeship starts are now in the services sector, which accounts for about three quarters of UK economic output.
4 Inclusivity, gender balance and opportunities

Here, we examine how the rise of apprenticeships has benefited different genders, age groups and other segments of society, providing a gauge of the extent to which apprenticeships are inclusive and offer opportunities to everyone.

There are significant gender imbalances in certain apprenticeship frameworks. The expansion of apprenticeships in recent years has been paired with a rise in the share of female apprentices. From a recent low of 45.8% of apprenticeship starts in England in 2006/07, the share of starts that were female rose to 54.7% by 2012/13. This likely reflects strong growth in the number of services sector apprenticeships in recent years. Provisional estimates for the 2013/14 academic year suggest a fall in the female apprentice share towards parity at 51.0%, as shown in Figure 4 (below).

Despite this overall picture of gender equality, there are significant gender divides for certain apprenticeship subjects. Some 98% of Construction Skills apprenticeship starts in England in 2012/13 were male, while 92% of Children’s Care, Learning and Development apprenticeship starts were female. The most gender-balanced popular apprenticeship frameworks are Retail, Accountancy, Management, Hospitality and Catering and Active Leisure and Learning. This is shown in Figure 5 (below).

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7. Source: Skills Funding Agency, Cebr analysis.
Apprenticeships are now offered to individuals of all ages. Participation in apprenticeships has spread across age groups, rather than being concentrated on a younger audience. Government funding for apprentices aged 25+ was introduced in 2007/08, and starts amongst this group grew by a factor of eight in England between 2007/08 and 2012/13.

In 2012/13, those aged 25 or over accounted for over two fifths (45.1%) of apprenticeship starts in England, as shown in Figure 6 below. Some 3,260 apprenticeship starts in this academic year were among those aged 60 or over.

The number of apprenticeship starts with learning difficulties and disabilities stood at an all-time high in 2012/13. Nearly 43,000 apprenticeship starts in England in 2012/13 had a learning difficulty/disability - an all-time high.
Studies show that apprenticeships offer individuals routes into employment and further education.

There is evidence that apprenticeships offer individuals a solid route into employment and further education. An ICM survey of 500 employers\(^\text{10}\) showed that qualified apprentices are perceived as more employable than those with other qualifications on average. Employers were asked to rate the employability of people with different qualifications on a scale of 1-10. All forms of intermediate, advanced and higher apprenticeships scored an average of 7.36; 15% higher than the 6.38 average given to all other qualifications.

As well as supporting individuals into employment, government studies also show that apprenticeships offer a solid route into further education.

Research by the Department for Business, Innovation and Skills (BIS)\(^\text{11}\) shows that 18.8% of the 2005-06 tracked apprentice cohort in England progressed to higher education, when monitored for a total of seven years, an increase on the seven year rate of 15.4% found for the 2004-05 cohort. 11.7% progressed immediately in the three years following the start of their apprenticeship.

The higher education progression rate is particularly high among accountancy apprentices, as shown in Figure 8. Over three quarters (76.2%) of accountancy apprentices in the 2009-10 cohort progressed on to higher education - much higher than other frameworks.

Data suggests that many young people see apprenticeships as a desirable alternative to university. An Ipsos Mori survey of 2,796 young people conducted for the Sutton Trust between February and April 2014 showed that more than half (55%) of young people aged 11-16 say they would be interested in an apprenticeship rather than going to university if it was available in a job they wanted to do - this is illustrated in Figure 9.

Despite the interest in apprenticeships among young people, the same Ipsos MORI survey suggests that there is room to improve the extent to which young people are informed about the apprenticeships on offer in the UK and the benefits that could arise from undertaking them. Just under a third (31%) of young people said that teachers had ever discussed the idea of apprenticeships with them, which suggests that attitudes in the teaching profession need to change. Independent and comprehensive careers advice on apprenticeships must be provided to school pupils.

![Figure 8: Higher education progression rates by apprenticeship framework, England (2009/10 cohort) \(^\text{12}\)](image)

![Figure 9: Thinking ahead to when you leave school, if an apprenticeship were available for a job you wanted to do, how interested would you be in doing an apprenticeship rather than going to university? \(^\text{13}\)](image)

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AAT policy recommendation 1

Young people should be enabled to make an informed choice about all the opportunities available to them. Only 31% of young people say that teachers have ever discussed the idea of apprenticeships with them, which suggests that attitudes in the teaching profession need to change. Independent and comprehensive careers advice on apprenticeships must be provided to school pupils.

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12. Source: Department for Business, Innovation and Skills

13. Source: Ipsos Mori
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5 Are we delivering apprenticeships in the right subjects, in the right parts of the UK?

So far, so good, for the most part. The number of apprenticeships has grown drastically, there are more female apprentices than a decade ago and there is clear evidence that apprenticeships offer routes into employment and further education for individuals across the country.

Nevertheless, there are questions to be asked about the right number and variety of apprenticeships required to meet the needs of businesses. Critically, these questions need to be considered with a view to the future - in particular, the regions and sectors of the economy which are likely to see the most economic growth and job creation over the coming years.

Are apprenticeships meeting the current needs of businesses?

For the most part, yes. As Cebr’s previous research has shown, apprenticeships yielded net benefits of almost £2 billion for businesses in 2012/13. A BIS survey of businesses\(^\text{14}\) showed that the vast majority of businesses hiring apprentices - over four fifths (84%) - were either very satisfied or quite satisfied with apprenticeship programmes. A majority of businesses identified that apprenticeships helped improve product and service quality, productivity and ability to attract good staff. Nearly three quarters (72%) of businesses surveyed for BIS stated that involvement in an apprenticeship programme had improved product and service quality, while 68% said that apprentices had improved productivity. Hiring apprentices has also often brought additional benefits, such as improved staff morale, staff retention and organisational image. Overall, this suggests that in a majority of cases hiring apprentices leads to tangible economic benefits for employers.

\(^\text{14}\) Department for Business, Innovation and Skills, Apprenticeships Evaluation, August 2013.
However, the regional distribution of apprentices is uneven. London, the South East and Scotland look underrepresented in terms of apprenticeship start numbers, as shown in Figure 10. These regions account for a smaller share of apprenticeship starts than their employment shares would suggest. London accounted for 13% of employment in the UK in the three months to May 2014, but the capital accounted for just 8% of apprenticeship starts in 2012/13 (the latest full year of data). Similar conclusions can be drawn when comparing the regional distribution of apprenticeship starts with the size of regional working age populations, as shown in Figure 11 - London, the South East and Scotland appear underrepresented when it comes to apprenticeship starts.

Overall, the data suggest that apprenticeships may be underprovided in London, the South East and Scotland and that there is scope to expand apprenticeships in these regions in particular, at least from an employment perspective. Another way of looking at apprenticeships is (in part) to provide opportunities to young people in areas of high youth unemployment. Even on this basis, London has an underprovision of apprentices, as Figure 12 shows. Over the three months to May 2014, the capital accounted for 12% of total youth (18-24) unemployment in the UK - notably higher than its 8% share of apprenticeship starts in 2012/13. The entry requirements for apprenticeships varies depending on the training provider and employer, and consequently in some parts of the UK a lack of qualifications may be preventing unemployed individuals from undertaking an apprenticeship. There is insufficient data to allow us to quantify the extent to which this is an issue - and consequently more research on the matter should be undertaken - though it has been acknowledged as a problem in some parts of the country.17

Figure 10: Apprenticeship starts by region as a share of total starts (2012/13), and regional employment as a share of total employment (three months to May 2014) 15

Figure 11: Apprenticeship starts by region as a share of total starts (2012/13), and regional working age population as a share of the total UK working age population (2014 estimate) 16

Figure 12: Apprenticeship starts by region as a share of total starts (2012/13), and regional youth (18-24) unemployment as a share of total youth unemployment (three months to May 2014) 18

15. Source: Skills Funding Agency, ONS, Cebr analysis
16. Source: Skills Funding Agency, ONS, Cebr analysis
17. See, for example, FE Week research here: http://feweek.co.uk/2013/09/06/apprentice-hopefuls-face-gcse-barrier/
The evidence of regional disparity in apprenticeship opportunities is clear - some parts of the country underrepresented in terms of apprentice numbers. This underrepresentation could be addressed through a greater focus on local ownership of skills, education and funding - for example, Local Enterprise Partnerships (LEPs) could play a major role in this. Policymakers should also ensure that there is better data on regional skills needs - for example on the skills demanded by employers - to ensure there is a better match between skills provision and skills demand across the country.

From an industry mix perspective, apprenticeships have been successful in recent years in rebalancing to meet the changing nature of the UK towards an increasingly service-based economy. We have seen a significant expansion in services sector apprenticeships with, for example, the number of Business, Administration and Law apprenticeship starts in England rising by 124,000 between 2002/03 and 2012/13 - an increase of 335%. While this subject area accounted for 22% of apprenticeship starts in 2002/03, this had risen to 31% in 2012/13.

However, although the overall picture suggests some positive rebalancing in the apprenticeship offer, some subject areas have seen a recent decline in apprenticeship starts despite their importance to the UK economy. Information and Communication Technology (ICT) apprenticeship starts declined by 28% between the 2010/11 and 2012/13 academic years, while Construction, Planning and Built Environment apprenticeship starts stood at a more than ten year low in 2012/13 - likely to reflect the fact that the sector was severely hard-hit by the economic downturn and this probably goes some way to explaining the decline in apprenticeship numbers.

Overall, business surveys suggest that skills shortages are increasingly becoming a barrier to growth in the UK, highlighting the importance of expanding vocational education programmes such as apprenticeships to address these skills gaps. Skills shortages have become more of an issue across industry as a whole during the economic recovery, and appear particularly acute in construction and computer-related activities.

Recent business surveys illustrate a growing skills shortage across the economy as a whole - especially in the construction and technology sectors, where new initiatives may be required to reverse the decline in apprenticeships. According to the Federation of Small Businesses (FSB) Voice of Small Business Index, as the economy continued to expand in Q2 2014, nearly three in ten small companies (29.9%) reported skills shortages as a barrier to growth, up from 25.4% in Q1 2014. Skills shortages are being particularly felt in the construction and computer services sectors, where 44% and 43% of small firms respectively reported this problem. This is shown in Figure 15 below.

Apprenticeship starts in these subject areas have declined in recent years, but the findings shown above suggest that without a return to growth in apprenticeship numbers (and increased provision of training more broadly) economic growth in these sectors could start to slow. Since the downturn, many businesses have relied on a pool of unemployed but skilled individuals from which to recruit new staff. However, as unemployment continues to fall back, reliance on this pool of workers cannot go on indefinitely and businesses will need to look to train individuals with the right skills. Sectors such as construction were particularly hard-hit by the economic downturn and this probably goes some way to explaining the decline in apprenticeship numbers. Now the sector is seeing more favourable business conditions return, it will be important that companies in the industry start to invest in skills provision to ensure future expansion.

Funding policy should reflect the changing needs of the economy. As the system moves towards employer contributions, it should differentiate between types of apprenticeship, offering greater funding incentives for places that address identified skills shortages. A one-size-fits-all approach is unlikely to close skills gaps, or maximise the number of apprenticeship places on offer, particularly where the shortages relate to places that cost more to deliver. Conversely, higher employer contributions may be sustainable where needs are already being met.
Meeting future needs of businesses

As well as changing to meet the current needs of businesses and address the skills requirement across the UK, apprenticeships will need to evolve over the coming years to reflect the changing composition of the UK economy. We’ve already seen a dramatic change in apprenticeships towards more of a service sector focus - reflecting the growing importance of this sector to the UK economy - but there will need to be further changes over the coming years. In particular, there is likely to be a rebalancing of apprenticeships within the services sector towards higher skill occupations.

The sectors of the economy which are most likely to see strong job creation over the coming years will be those that are likely to see the greatest expansion in economic terms. Figure 16 below presents Cebr’s industry economic growth forecasts and provides insights into the sectors of the economy which are likely to lead to job creation over the coming years. Output in the mining and quarrying sector is expected to decline as North Sea oil reserves are depleted, while growth in manufacturing will be moderated by ongoing competitiveness pressures in an age of globalisation. The professional, scientific, administrative and support services sector is expected to see the strongest growth over the time period 2014-2020, followed by health and social work and transport, storage and communications.

The total number of apprenticeships will likely need to expand over the coming years to meet the needs of businesses, and the industry mix of apprenticeships is likely to change to reflect the evolving nature of the economy. There is a strong case for continuing to expand business services and health and social care apprenticeships to meet future demand for skills, while other industries will need to step up a gear and provide more apprenticeships as they become more important. Technological industries, in particular, are likely to expand strongly over the coming years and there is significant scope to expand the number of information and communication technology apprenticeships, which accounted for just 2.8% of apprenticeship starts in 2012/13 despite the skills shortage and high growth potential of the sector.

With sectors such as business services, technology, health and social care growing more rapidly than other parts of the economy, the skill level mix of the economy is likely to change significantly over the coming years. Overall, professional, associate professional and technical jobs are likely to make up a growing share of employment, as technological change and the competitive pressures of globalisation suppress demand for low skill occupations. As Figure 17 and Figure 18 below show, professional, associate professional and technical occupations make up a growing share of the workforce. Administrative and secretarial occupations, sales and customer service occupations and process, plant and machine operative occupations made up a lower share of the workforce in 2013/14 than in 2004/05. Overall, recent trends, which we expect to continue, suggest that education policy should be focused on equipping individuals with the skills needed to enter professional and associate professional and technical occupations.

Figure 16: UK economic growth, 2014-2020, by sector

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</tbody>
</table>

Figure 17: Distribution of UK employment by skill level

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Elementary occupations</td>
<td>30%</td>
<td>31%</td>
<td>32%</td>
<td>33%</td>
<td>34%</td>
<td>35%</td>
<td>36%</td>
</tr>
<tr>
<td>Process, plant and machine operatives</td>
<td>28%</td>
<td>28%</td>
<td>28%</td>
<td>28%</td>
<td>28%</td>
<td>28%</td>
<td>28%</td>
</tr>
<tr>
<td>Sales and customer service occupations</td>
<td>26%</td>
<td>26%</td>
<td>26%</td>
<td>26%</td>
<td>26%</td>
<td>26%</td>
<td>26%</td>
</tr>
<tr>
<td>Caring, leisure and other service occupations</td>
<td>24%</td>
<td>24%</td>
<td>24%</td>
<td>24%</td>
<td>24%</td>
<td>24%</td>
<td>24%</td>
</tr>
<tr>
<td>Skilled trade occupations</td>
<td>22%</td>
<td>22%</td>
<td>22%</td>
<td>22%</td>
<td>22%</td>
<td>22%</td>
<td>22%</td>
</tr>
<tr>
<td>Administrative and secretarial occupations</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
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<tr>
<td>Associate professional and technical occupations</td>
<td>18%</td>
<td>18%</td>
<td>18%</td>
<td>18%</td>
<td>18%</td>
<td>18%</td>
<td>18%</td>
</tr>
<tr>
<td>Professional occupations</td>
<td>16%</td>
<td>16%</td>
<td>16%</td>
<td>16%</td>
<td>16%</td>
<td>16%</td>
<td>16%</td>
</tr>
<tr>
<td>Managers, directors and senior officials</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
</tr>
</tbody>
</table>

Figure 18: Professional and associate professional and technical occupations as a share of total UK employment

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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Share</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
<td>25%</td>
</tr>
</tbody>
</table>
A large number of jobs over the coming years are likely to be created in sectors that tend to rely on vocational education and qualifications. For example, there are set to be over half a million associate professional and technical jobs created over the years between 2014 and 2020, based on Cebr’s forecasts. As other research shows, areas of the economy continue to demand mid-level technical skills, as opposed to general degree-level qualifications. Many strong sectors of the British economy - such as pharmaceuticals, digital technology, advanced manufacturing and green technology - require a large number of ‘technicians’, who typically hold Level 3 and Level 4 vocational qualifications. Vocational qualifications such as apprenticeships are also fairly common in parts of the services sector - for example in health and social care and accountancy.

As Figure 19 shows, Cebr expects higher-skill jobs to account for a growing share of total employment over the years to 2020. Employment in professional and associate professional and technical occupations is forecast to rise from 34% of total employment in 2014 to 37% by 2020. Employment in these occupations will increase by 1.6 million over this time period, with professional occupations increasing by about 1.1 million and associate professional and technical occupations increasing by just over 500,000.

Figure 19: UK employment by skill level, %

The number of elementary occupations is forecast to increase by just 150,000, while employment declines are expected for process, plant and machine operatives and administrative and secretarial occupations - Figure 20 illustrates.

**AAT policy recommendation 3**

Better data is required below regional level to allow skills shortages and certain types of unemployment to be targeted. Government departments and agencies should examine how they currently record data and seek to use business surveys, and other techniques, to map skills shortages at a local level.

**AAT policy recommendation 4**

Regional disparities in apprenticeship numbers should be addressed through the greater focus on the local ownership of skills education and funding. Local Enterprise Partnerships (LEPs) have a major role to play, but there is currently too much regional variation in their capacity and capability to ensure effective delivery. It may be necessary to vary the employer contribution according to the location of an apprenticeship, as well as its type.
Thus far, we have examined how the subject mix of apprenticeships is likely to change over the coming years and also how economic developments are likely to drive demand for individuals with vocational qualifications such as apprenticeships. Given the findings of our earlier analysis, it is important to now consider how actual apprentice numbers are likely to change going forward. This is uncertain and highly dependent on how businesses respond to changes in apprenticeship funding in the future.

While continued job creation in the economy - as well as government efforts to encourage vocational training - should increase demand for apprenticeships, there have been concerns raised in some quarters about the likely impact of funding changes on apprentice numbers.

In the 2013 Autumn Statement, George Osborne announced that apprenticeship funding would be reformed to “put business at the centre of the apprenticeship system by enabling employers to receive funding for the training costs of apprentices through an HMRC-led system and ensuring that employers contribute.”

This contrasts with the current system where the government pays a training provider for delivering an apprenticeship. The employer currently chooses their training provider but is only directly responsible for employing the apprentice, with all the responsibilities that go with that, and providing the apprentice with work experience and skills development. The training provider deals with all the administrative tasks, including ensuring the apprentice is eligible, whilst delivering the training and assessment for the apprentice.

Under the new system the employer will be required to purchase training and assessment for their apprentices from registered training providers. The government will part-fund these costs but the employer will be required to make a cash contribution. Once an employer has selected providers to deliver training and assessment, which are separate, they will need to negotiate a cost and a payment plan with the provider.

There are significant merits to the proposed changes, in particular in how they will empower employers and allow them to take more responsibility for their own apprenticeship programme. By making a direct contribution towards the cost of training, employers would have a greater incentive to demand relevant high-quality training and good value - helping to drive up apprenticeship quality. Positioning employers as buyers of training would increase training providers’ incentives to respond to business needs, ensuring that training meets the requirements of businesses and helps them to address the skills shortages they face.
However, some concerns are also evident with the changes as they stand. There is a risk that the additional bureaucracy and paperwork associated with claiming funding may deter employers from taking on apprentices. This is likely to be particularly true for smaller businesses, where this additional administrative burden could represent a significant share of employee time. Official data - shown below in Figure 21 - show that smaller employers are less likely to take on apprentices than larger ones.

Changes that increase the administrative burden on employers could lead to an even lower share of smaller businesses taking on apprentices. By anticipating this reluctance within the SME market, training providers may be able to package their offers in ways that simplify the process.

Nevertheless, uncertainty about the funding mechanism for apprenticeships has the potential to put opportunities at risk. It is important, therefore, that policymakers assure businesses that reforms to apprenticeships are positive, will remove potential barriers to taking on apprentices and ensure that apprenticeship training better meets the skills requirements of businesses.

It has been argued that some employers may be deterred from taking on apprentices because of the prospect of Ofsted inspections if they take direct responsibility for training - there are clear reputational risks for businesses if their training quality is found to be inadequate. On the other hand, however, a clear positive consequence of such changes is that employers would be incentivised to provide high-quality training to apprentices. Likewise, it may encourage greater innovation from providers.

It is difficult to know exactly what will happen to apprenticeships until more details about the changes are provided.

**AAT policy recommendation 5**

The Government should consult employers and providers about the details of its new funding mechanism before going ahead. A new system provides a crucial opportunity to target incentives at those subjects and locations where additional places would provide the greatest economic benefit. The impact of the changes should also be monitored closely after introduction.

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**Case studies**

I started an apprenticeship in the Finance Systems Team at Oldham Council in 2013. I was 24 at the time. As part of my apprenticeship, I was supported to study for my Level 3 AAT Accounting Qualification.

After finishing my AAT Level 3, a vacancy became available at a higher level. I am now an Assistant Accountant and my new role involves providing financial advice and support to schools in the Oldham Borough. I will be studying for my AAT Level 4. This will enable me to further develop my financial skills in order to progress in my career.

My apprenticeship gave me a fantastic opportunity and the support I needed, as well as opening doors into a full-time permanent role.

**At Pinsent Masons, it’s very important to us that people have the right support and opportunities for career development and that everyone takes responsibility for their personal learning.**

We know that our commitment to supporting professional development contributes heavily to our attraction as a leading employer and means we get the best candidates through our doors.

Over the last five years Pinsent Masons has supported more than fifty people studying for vocational qualifications across a range of departments. The firm’s UK finance department has approximately ninety employees, around a third of which have studied for a vocational qualification ranging from AAT to ICAEW and IILFM.

Pinsent Masons is an accredited AAT employer and those choosing to follow the AAT Accounting Qualification are able to benefit from improved knowledge which assists our employees’ understanding of the business environment and the impact their work has on delivering the firm’s overall strategy.

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**Figure 21: Proportion of businesses by size employing and offering apprenticeships**

<table>
<thead>
<tr>
<th>Size of business by number of employees</th>
<th>Any start undertaking apprenticeships</th>
<th>Ever undertaken apprenticeships</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-9</td>
<td>20%</td>
<td>10%</td>
</tr>
<tr>
<td>10-24</td>
<td>30%</td>
<td>20%</td>
</tr>
<tr>
<td>25-99</td>
<td>40%</td>
<td>30%</td>
</tr>
<tr>
<td>100+</td>
<td>50%</td>
<td>40%</td>
</tr>
</tbody>
</table>

Source: UK Commission’s Employer Perspectives Survey 2012
This report illustrates a number of significant successes associated with the apprenticeship system. Apprentice numbers have increased dramatically over the past decade, the gender divide has closed (though there are still significant divides in many subjects) and apprenticeships have rebalanced to take account of the changing shape of the UK economy, with a significant increase in business services and health and social care, for example.

But, at the same time, this report identifies some sources of concern and large areas of opportunity for the future – particularly with a view to ensuring sustained economic growth and a continued downward trend in unemployment in the UK.

Survey research shows that skills shortages have risen up the agenda for businesses and are now a notable barrier to growth for many firms. Skills shortages are particularly acute in the construction and information and communication technology sectors. Yet, according to data for the 2012/13 academic year, Construction, Planning and Built Environment apprenticeship starts in England were at a more than ten year low while ICT apprenticeship starts have declined for two consecutive years. Without an increase in the number of skilled employees - something that could potentially be provided through apprenticeships - the whole economy and these sectors in particular could run into some growth constraints.

Beyond the short term, policymakers need to consider the changing nature of the UK economy, where high-skill jobs will make up a growing share of the total workforce over the coming years. This means that education and training will be more important than ever. Professional occupations are expected to see the strongest increase in numbers between 2014 and 2020, increasing by 1.1 million, while associate professional and technical occupations will increase by just over half a million. Apprenticeships could provide individuals with the skills for these occupations - particularly the technical occupations.

In delivering further change, policymakers will also need to ensure that future changes to apprenticeship funding have the backing of businesses. The willingness of firms to take on apprentices, and indeed to train staff more broadly, will be crucial for the high-skilled UK economy of the future.