

Identifying sectors with prospects for expanding the number of Apprenticeships

Final report

April 2009

Of interest to everyone involved in improving
skills and learning opportunities across England

Identifying sectors with prospects for expanding the number of Apprenticeships

Final report

Contents

Executive summary	i
Introduction	1
1 Factors influencing the successful deployment of apprenticeships: a review of literature	3
2 Modelling employer engagement: methodology	13
3 Employer apprenticeship potential: targets for growth	19
4 Apprenticeship supply and potential supply: learner analysis	31
5 Apprenticeship demand/supply imbalances: GIS mapping of employer apprenticeship demand and learner apprenticeship supply	50
6 Achieving apprenticeship growth: conclusions	69
Appendix A: Regression Model Technical Detail	82
Appendix B: Sector Skills Council definitions	89
Appendix C: About Experian	100

Executive summary

Identifying sectors with prospects for apprenticeship expansion: context

- The National Apprenticeship Service (NAS) will from April 2009 spearhead the drive towards Apprenticeship delivery and take-up targets as part of the machinery of government changes in education and skills. This will be supported by the work of related bodies including the UK Commission for Employment and Skills and the 25 Sector Skills Councils to identify and address apprenticeship requirements in their sectors.
- Growth in the apprenticeship offer and take-up will depend in large part on stimulating employer involvement across sectors – ensuring those that are currently offering apprenticeships continue to do so and expand their offer, and engaging new employers to offer apprenticeships.
- This project was commissioned by the LSC to provide assistance to the National Apprenticeship Service in understanding the scope and potential of different sectors to contribute to the meeting of the challenging apprenticeship targets and developing a sector engagement strategy.
- To do this Experian were asked to identify those SSC sectors and geographic areas that had the greatest potential for engagement, to document how this process of segmentation was undertaken and to explain why these factors are significant determinants of engagement.

Which sectors are most likely to offer apprenticeship expansion opportunities and why?

- The target sectors for apprenticeship expansion – offering the strongest opportunities – are:
 - Skillsmart Retail (retail)
 - Construction Skills (construction)
 - Summit Skills (building services engineering)
 - People 1st (hospitality and catering)
 - SEMTA (engineering)
 - Automotive Skills (motor industry)
 - Cogent (chemicals and pharmaceuticals, nuclear, oil and gas)
 - Skills for Care and Development (social care, children and young people)
 - the public sector through Government Skills, Skills for Health and Skills for Justice
 - sectors not covered by an SSC (e.g. education; hair and beauty)
- The majority of the target sectors (sectors not covered by an SSC; Skillsmart Retail; Construction Skills; Summit Skills; People 1st; SEMTA; Automotive Skills; Cogent; and Skills for Care) have been identified through a model assessing their potential for apprenticeship expansion. This is based on the sector having a large base of businesses of the type likely to take up apprenticeships.
- In addition to the modelled target sectors, there is an untapped potential for apprenticeships in the public sector, mainly in health and central government. These are sectors with a current low penetration of apprenticeships, but where the government has strong leverage and control over the expansion of apprenticeships.

Modelled target sectors

- The highest modelled potential for apprenticeship growth is in the 'No SSC' sector i.e. amongst employers in sectors such as Hairdressing and Primary and Secondary Education that are not presently covered by a Sector Skills Council (SSC).¹ The frameworks favoured by this group of sectors are in the majority sector specific (hairdressing and children's care learning and development), although there is also a smaller take up of generic frameworks (business administration and customer service).
- The potential of the 'No SSC' employer base is a function of the size of the 'sector' in respect of the scale of the employee base and current apprenticeship delivery. Model outputs indicate that many of the employers in the 'No SSC' sector take on a greater than average number of apprentices. Despite the lack of SSC coverage, it is still possible to target the large employers within this sector to encourage expansion of apprenticeship take-up through the National Employer Service (NES), and small employers through standard setting bodies such as Habia and the Training and Development Agency for Schools (TDA).
- Skillsmart Retail is particularly suitable for apprenticeship expansion. It has a proven capacity to deliver apprenticeships, and has a large employee base. A relatively high proportion of apprenticeships within the sector are at smaller sites, providing opportunities across local authorities to expand apprenticeship numbers. NES affords opportunities to influence the larger retailers and cascade apprenticeship take-up across their stores located England-wide. The retail sector favours its sector specific framework, although customer service is also widely taken up.
- People 1st (the SSC for hospitality and catering), like Skillsmart Retail has a proven capacity to deliver apprenticeship, and a large employee base. A relatively high proportion of apprenticeships within the sector are at smaller sites and distributed around England, again providing scope for many local authorities to expand their apprenticeship provision in this area. Considering the preference of the sector for its sector specific frameworks, the majority of the apprenticeship expansion is likely to be in the area of hospitality and catering supported by some customer service framework take up.
- ConstructionSkills, SummitSkills, SEMTA, Automotive Skills and Cogent are sectors that have a high proportion of craft and skilled workers – the traditional groups that have taken up apprenticeship training – and they continue to feature as target sectors – sectors with the potential to expand apprenticeship take up. These sectors, apart from Cogent, all have a strong preference for sector specific frameworks. One third of Cogent employers do take up the engineering framework, but they also have a strong take up of more cross-cutting frameworks such as retail, business administration and customer service.
- Skills for Care is the sole sector with a high public sector make-up that the model flags as a target sector for expansion. It also has a relatively high take-up of apprenticeships at present, compared to other public sector SSCs. The sector mainly favours its sector specific framework (health and social care).
- The target sectors (defined by Sector Skills Council coverage) has been determined by logistic and regression modelling of apprenticeship versus non apprenticeship take-up across the employer establishment (i.e. business site) base. Data sources were the ILR 06/07 W12 return

¹ Many of these sub-sectors are covered instead by Standard Setting Bodies (SSB) such as Habia or the Training and Development Agency for Schools (TDA), but the fact that they are not covered by the SSC network may have an impact as policy is increasingly focusing on this network. The apprenticeships within the employers not currently represented by an SSC are primarily located within the Standard Setting Bodies of Habia (36%) and the Training and Development Agency for Schools (18%).

Identifying sectors with prospects for expanding the number of apprenticeships

and Experian's National Business Database (NBD) which were linked using employer name and postcode. A 63% match between the two sources was obtained.

Target public sector SSCs

- Across SSCs where the public sector dominates (apart from Skills for Care) – Skills for Health, Lifelong Learning, Government Skills and Skills for Justice – the government can exert considerable leverage to bring about take-up. There is also untapped potential for apprenticeships, particularly in the Skills for Health and Government Skills sectors. Skills for Health is the only of these SSCs that favours sector specific frameworks (albeit with 17 per cent take up of generic frameworks). The other public sector SSCs' framework preference is strongly for the generic frameworks (business administration and customer service).
- A concerted government policy focus could result in apprenticeships expanding above current expectations within the public sector SSC, making them target sectors.
- The relatively poor take-up of apprenticeships within the public sector has been well recognised and government has committed funding to improving this. Recent initiatives implemented to increase the number of apprentices in central government also demonstrate this commitment. The picture is therefore likely to change in the short to medium term as a consequence of these policy interventions.

The table below highlights the different predicted take up of apprenticeships by sector but this is driven primarily by current take up. The different colours highlight distinctly different challenges and opportunities which need to be addressed.

SSC	Predicted Apprentices Index
No SSC	1.00
Skillsmart Retail	0.96
ConstructionSkills	0.92
SummitSkills	0.88
People 1st	0.84
SEMTA	0.80
Automotive Skills	0.76
Cogent	0.72
Skills for Care	0.68
Skills for Health	0.64
Skills for Logistics	0.60
Asset Skills	0.56
Skills Active	0.52
Skillfast UK	0.48
Improve	0.44
e-Skills UK	0.40
Financial Services Skills Council	0.36
Lifelong Learning	0.32
Proskills	0.28
Go Skills	0.24
Lantra	0.20
Creative and Cultural Industries	0.16
Government Skills	0.12
Energy and Utility Skills	0.08

Identifying sectors with prospects for expanding the number of apprenticeships

Skillset	0.04
Skills for Justice	0.00
Source: ILR, Experian.	

Green

- As mentioned previously these sectors are those which have a tradition of apprenticeships where take up is already relatively strong. These sectors could see numbers improved by delivering more of the same. However, the high take up may be the result of high staff turnover caused by other issues in the industry so its net impact on skills may not be realised.
- Employers in SSCs which have a relevant occupational framework should not only be offered this framework but presented with the wide variety of cross cutting frameworks which they may not currently understand the relevance. This positions apprenticeships as a whole workforce offer to complement the existing and established occupation specific routes.
- The state of the economy must also be taken into account. Some regions have been particularly hit by the recession in certain sectors and this should not be ignored.

Amber

- These are sectors where there is some take up of apprenticeships but it is more patchy. It will be important to identify where there is currently untapped potential. Typically these sectors already use the cross cutting skills frameworks. For example Skills for Logistics has many cross cutting apprenticeships representing the majority of apprentices
- The importance of cross cutting skills frameworks to all sectors must be understood as for many sectors this is where the majority of take up exists. This also suggests that this may be a quicker route to engaging sectors with low take up in general and the first opportunity to expand in sectors with moderate take up.
- Many of the sectors rely strongly on cross cutting frameworks and the benefits of these should be made clear to employers not currently offering apprenticeships.
- It is important for an understanding of where take up of apprenticeships is particularly good among these sectors and other regions can learn from highlighted good practice.

Red

- These are the sectors with traditionally low take up of apprenticeships but have potentially the greatest long term impact on numbers due to the current limited take up.
- The National Apprenticeship Service will need to ensure that the relevant occupational frameworks are developed for the sector. In the meantime these employers should be targeted with cross cutting frameworks which are not occupation specific.
- Many of the SSCs in this band are dominated by the public sector which should mean that encouraging employers to offer apprentices should be possible more quickly.

What are the wider considerations that may impact on the apprenticeship expansion opportunities?

- Evidence from the wider literature, labour market data, and policy documents indicates that employer propensity to take-up apprenticeships is influenced by a range of factors including:
 - Tradition of apprenticeship take-up, and awareness of apprenticeship offer
 - Employer size – with medium and large companies more likely to have apprentices
 - Presence of skills gaps and shortages – as this generates a clear business need for up-skilling
 - Qualification profile – an employee requirement at a qualification level to which apprenticeships deliver (S/NVQ Levels 2 and 3)
 - Employment trends – growth is associated with skills and training
 - Availability of appropriate apprenticeship frameworks

Identifying sectors with prospects for expanding the number of apprenticeships

- The current economic climate is likely to negatively influence employer willingness to engage with apprenticeships – profits will be hit resulting in less discretionary spend for training, and employment will contract.
- Many of the SSCs that are target priorities – Construction Skills (construction), Summit Skills (building services engineering), SEMTA (engineering), and Automotive Skills (motor industry) – are already experiencing contraction and employment losses as the UK recession takes hold.
- Recent action by government to support apprenticeships through linking apprenticeships to procurement contracts and commitments to increased apprenticeship numbers by major employers should alleviate the effect of the downturn on apprenticeships within the Construction Skills, Skillsmart Retail and Improve (food and drink) sectors.
- To secure apprenticeships during the downturn, it will also be very important to monitor the movements of the largest employers. The top 20 apprenticeship employers, excluding the Armed Forces, provide over 10,000 apprenticeships. Should these businesses feel the impact of the economic downturn, this could have a significant negative effect on apprenticeship numbers.
- SSCs that are predominantly public sector tend to be less affected in times of economic recession, but public spending is not immune. However, the government has tasked the public sector with raising their apprenticeship take up and committed funding for this.
- Strategically, therefore, while many ‘public sector’ SSC employers have a poor track record of apprenticeship take-up, a concerted government policy focus is likely to result in them expanding above current expectations. For example, Government Skills SSC (central government) is a sector where the government can exert considerable leverage to bring about take-up (as the government is the employer), whereas in the target SSCs mainly in the private sector the government can only persuade employers to engage.
- Many training providers are also seeing the public sector – especially local government – as largely untapped and having great potential. A concerted government policy focus may thus result in apprenticeships expanding above current expectations, making the public sector a target sector.
- Figure A show sectoral opportunities for apprenticeship expansion based on five of the key influences on apprenticeship take up.

Figure A: Summary of the top sectors with opportunities to expand apprenticeships

1. Training offered to young recruits	2. Training offered to upskill adult workforce	3. Ageing workforce	4. Conversion of standalone NVQs from Train to Gain	5. Influenced by public policy levers
Automotive Skills	Skillsmart Retail	Skills for Care	Skills for Care	Government Skills
Construction Skills	People 1 st	SEMTA	Skills for Health	Skills for Justice
Summit Skills	Skills for Care	Public sector SSCs	Skillsmart Retail	Skills for Health

What apprenticeships are undertaken in the target SSC sectors?

- Apprenticeship delivery is concentrated across a small number of frameworks. Of a total of 128 frameworks featuring in the ILR, just 10 frameworks account for 69% of all apprenticeship delivery. Of these ten, two are generic and used across a range of SSCs.

Figure B: Ten largest apprenticeship frameworks (Level 2 and 3)

Construction
Hairdressing
Engineering
Customer service
Business administration
Children's care learning and development
Hospitality and catering
Electrotechnical
Health and social care
Vehicle maintenance and repair

- Employers across different SSC sectors draw on various apprenticeship frameworks driven by their occupational make-up and skills needs. In targeting certain SSC areas for apprenticeship expansion, the LSC and partners will need to consider whether there is capacity for training provision growth in appropriate frameworks, and whether these apprenticeship frameworks are being offered in appropriate geographical areas to meet employer demand.
- On the basis of current apprenticeship delivery, and given the modelled target sectors own the majority of the top 10 frameworks, employer expansion is likely to be on the basis of greater provision of these frameworks. This is in addition to the supply of generic apprenticeship frameworks that are also relevant to the sectors concerned. Section 4.2 of the report provides further detail of the framework take up by employers in each of the SSC sectors.

Where are the apprenticeship expansion opportunities on the ground?

- The local authorities with the business base that afford the greatest potential for expanding their apprenticeship offer are shown in figure B. These are local authorities that have a good mix of businesses in the 'target' SSC sectors – those that have a high modelled apprenticeship potential – and consequently are the areas as a whole predicted to perform well. There are a number of local authorities located in the North West, Yorkshire and the Humber and West Midlands which have a large expansion potential in most target sectors.
- Although figure C only shows local authorities in seven of the nine English regions, there are target local authorities in all regions, which can be identified through the full complementary tables to this report.

Figure C: Top 20 local authorities for expansion

Local Authority	Region
Leeds	Yorkshire and the Humber
Birmingham	West Midlands
Sheffield	Yorkshire and the Humber
Liverpool	North West
Kirklees	Yorkshire and the Humber
Nottingham	East Midlands
Bradford	Yorkshire and the Humber
Manchester	North West
Bristol, City of	South West
Dudley	West Midlands
Wakefield	Yorkshire and the Humber
Newcastle upon Tyne	North East
Sandwell	West Midlands
Kingston upon Hull, City of	Yorkshire and the Humber
Doncaster	Yorkshire and the Humber
Wigan	North West
Wirral	North West
Westminster	London
Salford	North West
Stoke-on-Trent	West Midlands

Source: Experian, based on rankings of modelled predicted apprenticeship indexes

- The sectoral mix of businesses varies across England. Service sector industries – such as Skillsmart Retail (retail), People 1st (hospitality and catering) and Skills Active (sport and leisure), together with Skills for Care (Care), Skills for Health (Health) and Lifelong Learning (work-based learning, further and higher education; libraries; youth and community work) – are typically more evenly distributed around England according to population densities. Sectors such as SEMTA (engineering), Automotive Skills and Cogent (oil and gas) are geographically more concentrated, associated with resource availability and historic location patterns.
- This is reflected in a high apprenticeship expansion potential across most local authorities for sectors such as Skillsmart Retail (retail) and People 1st (hospitality and catering), and a more variable modelled apprenticeship potential for a sector such as Cogent (oil and gas).
- Amongst local authorities with lower potential for apprenticeship expansion – i.e. a low predicted apprenticeship index – there is often scope to expand apprenticeships in a more limited range of SSC sectors (i.e. those with relatively high modelled potential within the local authority). Often, but not exclusively, this is in the No SSC (range of sectors not covered by an SSC), Construction Skills (construction) and Summit Skills (building services engineering), Skillsmart Retail (retail) and People 1st (hospitality and catering) sectors.
- Any strategic changes to the target expansion SSC sectors – for example a greater than expected public sector expansion of apprenticeships – will result in a change to the target local authorities as well, as the indices are based on the mix of sectors in the locality.

- An analysis of the target sectors and localities shows that apprenticeship expansion will be most effective if aimed at the target sectors across all local authorities, rather than refining the targeting too much by geographical areas. However, supporting evidence is available for local areas who wish to further refine their targeting.

Where are apprenticeships being delivered? Are these being delivered in the ‘right areas’ to meet employer needs?

- The regions with the largest volume of apprenticeship take up are the North West and the South East. Take up in the North West, Yorkshire and the Humber, and the North East is particularly high, whilst the South East, East of England and especially London all have lower than expected take-up compared to each region’s share of the population.
- The profile of apprenticeships in the target sectors for apprenticeship expansion across regions is remarkably even, with none of the target sectors being particularly dominant in a region – proportions of each of the sectors within a region broadly follow the region’s overarching apprenticeship profile.
- London – which has a significantly low take up of actual apprenticeships compared to its population – has the second largest take up of NVQs which could be converted to apprenticeships, in line with the population profile. The South East, which also has a lower level of apprenticeship take up than could be expected, has an even lower level of take up of NVQs that could be converted to apprenticeships.
- There should be particular opportunity for conversion of standalone NVQs to apprenticeships in regions and sectors where apprenticeship take up is relatively good, but where the potential apprenticeship take up is lower than the regional average.
- In most local authorities, there is a match between the expansion potential and level of apprenticeship take up (i.e. the local authority falls in the same quintile in both).
- In the majority of local authorities and sectors, the take up of apprenticeships is higher than the take up of NVQs that could be converted to apprenticeships (i.e. the local authority falls in the same or lower quintile for NVQs with conversion potential).
- London is the exception with low levels of apprenticeship take up, and consistently high levels of take up of NVQs that could be converted to apprenticeships, indicating that a conversion from standalone NVQs to apprenticeships has been less successful in the region.
- Cogent has very low levels of apprenticeship take up across most of the country, despite its expansion potential.²

What may constrain employer expansion of apprenticeships?

- Current patterns of apprenticeship learning across SSCs suggest that policies to target employer expansion of apprenticeship take-up will require different apprenticeship offers to different sectors to be successful, with a level and age differentiation.

² Frameworks that Cogent is responsible for include: Chemical, Pharmaceutical, Petro-Chemical Manufacturing & Refining Industries; Polymer Processing and Signmaking; Signmaking; and Oil & Gas Extraction.

Identifying sectors with prospects for expanding the number of apprenticeships

- The various sectors have different preferences for the age group of apprentices they take on. For example, Automotive Skills, No SSC sectors, Construction Skills and Summit Skills all have a majority of young people (16 to 18) on apprenticeships, reflecting the tradition of recruiting young people into the sector and 'growing your own'. Skillsmart Retail, People 1st and Skills for Care – all strongly people-focused (care or strongly customer facing) sectors – have mostly people aged 19 and above on apprenticeships, accounting for two-thirds of learners within the sectors.
- The above also needs to be taken into account when considering the offer to employers, as age-differentiated funding of apprenticeships will impact differently on employer engagement across sectors, and may have a negative impact in sectors where the preference is for older learners, and hence where greater employer contributions are expected.
- The age profile of the workforce is equally important to consider – sectors such as Skills for Care, SEMTA and public sector SSCs all have a large proportion of the workforce aged above 50, and with this ageing workforce will have a demand for younger recruits into the sectors.
- The preference of a sector for apprenticeships or advanced apprenticeships will be important to consider when putting forward an apprenticeship offer to the expansion target sectors, as some may require advanced apprenticeships, whilst for others apprenticeships at Level 2 may suffice.
- The balance of Level 2 (apprenticeships) and Level 3 (advanced apprenticeships) between sectors varies, indicating the sector's preference. For example, of the employer expansion target SSCs identified through modelling, Skillsmart Retail SSC (retail) and People 1st (hospitality and catering) have a concentration of apprenticeships (NVQ Level 2) and relatively low take-up of advanced apprenticeships (NVQ Level 3); conversely, SEMTA has a higher profile of advanced apprenticeships.
- There may also be some constraints if considering expanding apprenticeships through the conversion of standalone NVQs, as it may affect other funding streams, and also particular types of providers. Learners on NVQs which could form part of an apprenticeship framework within the SEMTA, Skills Active, Summit Skills, e-Skills UK and Go Skills sectors are in the main not funded through Train to Gain, they are funded through FE. Many of these learners are likely to be in colleges, and moving these learners towards apprenticeships may have a particularly strong impact on further education colleges.
- In contrast, Skills for Care, Skills for Health and Skillsmart Retail have nearly all learners with conversion potential funded through Train to Gain, which means that in these sectors, there should perhaps be a strong co-operation with Train to Gain to ensure that learners are encouraged to convert onto a full apprenticeship once the NVQ is completed.
- It should be noted that the employment forecast data and analysis presented in section 3.3.1 were current at the time of writing (November 2008). Consideration should therefore be given to the rapid movements in the economic climate during the final months of 2008 and early 2009 prior to publication when interpreting the findings at a later date. It is likely that this would also have some impact on the ease with which expansion of Apprenticeships can be achieved and this will be taken into account when defining regional strategies.

How the findings will be used

The findings of the research will be a key piece of evidence feeding into sector expansion strategies which will be developed over the next few months by the National Apprenticeship Service and their partners. These regional strategies will include the following:

- Through partnership working not least between the National Apprenticeship Service and SSCs we will identify the case for expansion of apprenticeships within each different sector and a realistic timescale for doing this
- Assessing the likely balance of the sectoral growth in terms of level and age groups for expansion
- Identify the actions which are required to be taken to drive forward expansion in the sector and the roles of different stakeholders in achieving this.

Introduction

The Leitch Report set the stage for a demand-led system of education and training to meet the needs of employers and learners for appropriate, fit for purpose learning that would raise skills levels to increase the UK's economic competitiveness, and raise participation.

Central to the Leitch ambition for world class skills is the Apprenticeship offer, and the government's strategy for the future of apprenticeships is detailed in 'World-class Apprenticeships: Unlocking Talent, Building Skills for All'. The targets are challenging. To meet the Leitch 2020 ambition requires over 250,000 starts and 190,000 successful completions. Furthermore, in the spirit of a demand-led system, if employer requirement surpasses this, resources will have to be found within existing budgets to service this demand.

To achieve the Leitch ambition, interim targets require Apprenticeship starts to rise from around 184,000 in 06/07 to 207,000 in 10/11; with completions planned to rise from 110,000 in 06/07 to circa 140,000 in 10/11 thereby enabling the PSA target of 130,000 framework achievements in 10/11 to be exceeded. In addition to meeting these targets through the Apprenticeship entitlement for 16 to 18 year olds which will be operational in 2013, the government is also committed to substantial growth in the offer of Apprenticeships to those aged 25 or over (an area where there is particular employer demand and support).

Going forward and associated with imminent machinery of government changes, the National Apprenticeship Service (NAS) will from April 2009 spearhead the drive towards Apprenticeship delivery and take-up targets. This will be supported by the work of related bodies including the UK Commission for Employment and Skills and the 25 Sector Skills Councils to identify and address apprenticeship requirements in their sectors.

Growth in the apprenticeship offer and take-up will depend in large part on stimulating employer involvement across sectors – ensuring those that currently offering apprenticeships continue to do so and expand their offer, and engaging new employers to offer apprenticeships.

This project was commissioned by the LSC to provide assistance to the National Apprenticeship Service in understanding the scope and potential of different sectors to contribute to meeting the apprenticeship targets and developing a sector engagement strategy.

To achieve this Experian were asked to identify those industries and areas that had the greatest potential for engagement, to document how this process of segmentation was undertaken and to explain why these factors are significant determinants of engagement.

The LSC's specific identified needs were to:

- Establish the potential take-up of apprenticeships by sector and geographical area for the 25 SSC sectors.
- Segment employers on the basis of their likelihood to take on apprentices (drawing on appropriate sources) and to articulate this in visual and easily accessible way (by Local Authority area).
- Establish learner numbers within sectors – articulating this in a visual and easily accessible way.

Identifying sectors with prospects for expanding the number of apprenticeships

- Establish whether the constraints to the sector expansion of apprenticeships is supply or demand side driven, through a matching of demand and supply for apprenticeships.
- On the basis of this, identify the top 10 sector subject areas and geographic areas the LSC should prioritise.

Report contents

The structure of this report broadly answers these questions chapter by chapter:

- Chapter 1: Reviews the existing evidence on why employers do or do not engage, primarily through examination of existing literature.
- Chapter 2: Documents the methodology used to translate these findings into an index of employer engagement through use of available data.
- Chapter 3: Tests these hypotheses using logistic and regression modelling and goes on to present the final results of the index of propensity to engage by SSC and Local Authority.
- Chapter 4: Analyses the ILR to understand the numbers of apprentices working towards different qualifications
- Chapter 5: Draws together and synthesises the above sections to provide a clear understanding of the sectoral/geographical/provider context in which apprenticeships are successfully deployed, and therefore where resources can be targeted effectively to contribute to targets.

1 Factors influencing the successful deployment of apprenticeships: a review of literature

1.1 Overview

This section reviews the evidence available to inform an understanding of which sectors might have the potential for expansion. The key sources are previous work undertaken to identify sectors that have the potential for expansion by the Skills for Business Network (SfBN) and the Sector Skills Councils (SSCs), previously commissioned research into apprenticeships and academic papers.

1.2 A brief history of apprenticeships

1.2.1 Historical context

The decline in take-up of apprenticeships from the late 1960s through to the 1990s is well documented. Initiatives such as the Industrial Training Boards could not fully address the challenges created by changes to the industrial structure of the UK, the associated decline in trade union membership (and organisational framework), increasing technological complexity and increasing diversity.³ Legislation also disappeared and the legal and social contractual arrangements that underpinned apprenticeships began to break down.⁴ Some of the attempted remedies, such as Youth Training Schemes, also began to devalue vocational training. They became associated with 'cheap labour, social engineering and the massaging of employment statistics'.⁵ Between 1968 and 1990 apprenticeship numbers decreased from 171,000 to 34,500, and were increasingly limited to sectors with a tradition of supporting apprenticeships, such as manufacturing, construction, engineering and catering.

In the mid 1990s a solidly public sector controlled structure for apprenticeships began to emerge and replace significant elements of what remained. The publicly accredited apprenticeship system emerged from the National Vocational Qualification (NVQ) reforms of the 1980s.⁶ In 1994 Modern Apprenticeships were set up as Level 3 qualifications within this framework, and following a series of reforms, currently operate as Apprenticeships (Level 2) and Advanced Apprenticeships (Level 3). There are continuing debates about the balance and emphasis on technical knowledge, but the number of schemes has expanded, new entry routes are available through Entry2Employment, young apprenticeships begin at 14 and the upper age limit of 25 has now been removed. However, by 2005 the proportion of 16 to 18 year olds in work-based learning (as opposed to vocational education generally) had dropped to just 7.5%, down from 11.3% in 1994.⁷

³ LSC (2008) *Research into Expanding Apprenticeships*.

⁴ Nuffield Review of 14-19 Education and Training (2008) *Issues Paper III, Apprenticeships I: Prospects for Growth*.

⁵ LSC (2008) *Rapid Research Review on Apprenticeships*.

⁶ LSC (2008) *Research into Expanding Apprenticeships*.

⁷ Nuffield Review of 14-19 Education and Training (2008) *Issues Paper III, Apprenticeships I: Prospects for Growth*.

1.2.2 Policy commitment to apprenticeships

Despite this, apprenticeships have become increasingly important to central government's understanding of how a step change in the skills of the current and future workforce can be achieved⁸. In 2004 the government commissioned Lord Leitch to lead a wholesale review that would 'identify the UK's optimal skills mix for 2020 to maximise economic growth, productivity and social justice, set out the balance of responsibility for achieving that skills profile and consider the policy framework required to support it.'⁹ The majority of the final recommendations of the Leitch Review have been enthusiastically endorsed, and a dramatic increase in apprenticeships are seen as a key, clear and distinct part of the drive to improve intermediate skills, shift the balance of training from Level 2 to 3 and enable access to higher education through non-academic routes, at least for certain high skill sectors¹⁰. This is further evidenced by supportive statements from other elements of central government, such as the House of Lords Committee on Economic Affairs.¹¹

A variety of overlapping and interlocked targets have been set and the volumes show the level of government commitment:

- 130,000 apprenticeship completions a year in England by 2013 (up from 98,000 in 2007/8)
- 500,000 apprentices in learning by 2020 in the UK (400,000 in England)

These targets are accompanied by a review of the apprenticeship blueprint to be completed by 2008, a national roll out of the apprenticeships vacancy matching service and a new entitlement to an apprenticeship place for any suitably qualified young person by 2013.¹² They will also contribute to a wider goal to raise the educational participation rate of all 16 to 18 year olds.

1.2.3 Progress towards targets

In 2007 the Skills for Business Network was asked to respond to the Leitch targets, on behalf of and with the SSDA and the SSCs, and to state whether, where and how the targets would be achieved. They stated that they believed the figures are achievable, and envisage that around half of the targets for apprenticeship places will be from current places, while 14% will be new places with those same employers and over a third will come from new places, with new employers, often in sectors where there isn't a great tradition of apprenticeships.¹³ A significant proportion of this increase will still be achieved by achieving gradual growth of places in new employers in sectors with a tradition of apprentices such as business administration, construction, electro-technical and retail. But a significant proportion of the new places are expected to come from high growth new courses in sectors without a strong tradition of apprenticeships.

⁸ Nuffield Review of 14-19 Education and Training (2008) *Issues Paper III, Apprenticeships I: Prospects for Growth*.

⁹ www.hm-treasury.gov.uk

¹⁰ Lord Sandy Leitch (2006) *Leitch Review of Skills – Final Report, Prosperity for all in the Global Economy: world class skills*. HM Treasury.

¹¹ Nuffield Review of 14-19 Education and Training (2008) *Issues Paper III, Apprenticeships I: Prospects for Growth*.

¹² DIUS (2008) *World Class Skills, Implementing the Leitch review of Skills in England*

¹³ Skills for Business Network (2007) *SfBN and other Bodies Contribution Towards Meeting the Apprenticeship Entitlement and Leitch*.

Identifying sectors with prospects for expanding the number of apprenticeships

Several projections for the increases exist, but the SSDA and LSC predict approximately 927,000 starts amongst 16 to 18 year olds between 2007/8 and 2013/14. This is based on the LSC target of 151,500 starts being attained by the LSC in 2011/12 and maintained for two years afterwards.¹⁴ There will also be a growth in the number of places for 19 to 24 and 25+ year olds, but there is still some work to be done to translate the targets for starts and places into completions.¹⁵

The Nuffield Review is cautious about the possibilities for success. The analysis showed that the volume of learners on an apprenticeship dropped last year and may have reached a plateau. The numbers starting an advanced apprenticeship remained relatively steady between 2001/2 and 2006/7, while the numbers starting apprenticeships has decreased from its 2003/4 peak. The number on apprenticeships at Level 2 increased fairly rapidly up to 2005/6, however it decreased last year.¹⁶ This is primarily a reflection of changing cohort sizes, however demand from learners remains high (see below). The House of Lords Select Committee on Economic Affairs also point out that much of the increase in apprenticeship numbers that occurred in the late 1990s has been a result of converting other work-based learning to Level 2 apprenticeships. While total numbers in work based learning have increased somewhat, this makes the apparent increase in apprenticeship numbers appear larger than they might. They concluded that this was likely to be evidence of weak employer demand.¹⁷

There are a number of key challenges that make the Leitch targets for expansion of apprenticeships stretching and ambitious, however the Skills for Business Network believe they are achievable.¹⁸

The success of the apprenticeship work-based learning system is governed by three factors: demand for places from learners; demand for trainees and thus places by employers; and the appropriateness of the provider and funding mechanisms that allow these two to be matched. A number of broad thematic challenges to increasing the number of apprentices can be identified in the literature, namely:

- A lack of clarity in the conflicting drive to increase numbers in apprenticeships, diplomas, and higher education
- Quality and relevance of apprenticeship frameworks, and the associated delivery infrastructure
- Provider quality and capacity
- Employer demand and barriers to engagement

This research focuses on employer demand for apprenticeships. The following section (1.3) reviews the multiple factors that influence employer willingness to take on apprenticeships.

1.3 Employer engagement

From the literature, the following factors are identified as key determinants of variations in employer propensity to engage with apprenticeships (and training more broadly):

- Employer size
- Tradition of apprenticeship engagement
- Awareness of apprenticeship offer

¹⁴ LSC Grant Letter, 2008

¹⁵ Nuffield Review of 14-19 Education and Training (2008) *Issues Paper III, Apprenticeships I: Prospects for Growth*.

¹⁶ Nuffield Review of 14-19 Education and Training (2008) *Issues Paper III, Apprenticeships I: Prospects for Growth*.

¹⁷ House of Lords Select Committee on Economic Affairs (2007) *Apprenticeship: A Key Route to Skill, Volume I: Report*.

¹⁸ Skills for Business Network (2007) *SfBN and other Bodies Contribution Towards Meeting the Apprenticeship Entitlement and Leitch*.

Identifying sectors with prospects for expanding the number of apprenticeships

- Presence of skills gaps and shortages
- Qualification profile of the sector
- Availability of appropriate apprenticeship framework
- Employment trends
- Wage returns
- Policy focus (and investment of resources)

We address each of these factors in more detail below and explore their relationship to different industry sectors, where information is available.

1.3.1 Employer size

Larger companies are more likely to invest in training and more likely to take on apprentices. Research for the LSC found that in the West Midlands, North East and South East 25% of medium or large companies (50+ employees) use apprentices compared to just 5% of micro (>5 employees) businesses.¹⁹ Smaller businesses also take on fewer apprentices, with an average of 10 apprentices taken on a year in large firms compared to an average of 1 in those with less than 25 employees.

The impact of company size on propensity and future potential to engage apprentices has several dimensions:

- Funding and administration costs are more of an issue for smaller businesses because
 - they don't have as much administrative resource
 - it may be harder to replace administrators
 - they are more likely to rely on one staff member to deliver training but can lose these workers, and
 - it is less expensive to spread the costs over several apprentices.
- But many newer, high-growth potential apprenticeship frameworks are in sectors with a greater volume of smaller businesses.
- Larger companies may choose to develop their own internal trainees without using government accredited training programmes.

For smaller organisations there are significant issues around the financial risk of taking on an apprentice. They are less likely to have the flexibility of cash flow to make funding available short term for the employee and do not have the volumes of administration staff to minimise the additional cost of dealing with paperwork. As shown, smaller companies are likely to take fewer apprentices on per year, but many costs are fixed so it is more expensive per trainee than for a larger organisation.

There is little evidence in the literature to suggest that these issues vary across sectors, but many policy solutions are primarily sectoral based and at different stages of development. For this reason smaller employers in certain sectors may still have a reasonably high chance of expanding the number of apprentices they take on.

An approach which is emerging in parts of the construction sector is for a large employer to perform 'over-trains', where apprentices are placed in companies involved in their supply chains. So far this is most advanced in the construction sector, and to a lesser extent the automotive sector. A similar risk

¹⁹ LSC (2008) *Research into Expanding Apprenticeships*.

sharing solution is also group training associations where companies club together to share apprentices between a stronger and weaker partner.²⁰ However, this would require analysis of the provider base and is only developing at the moment, so will be addressed in other reports.²¹

Other solutions mooted are financial incentives, but these are only likely to be made in high risk sectors, so the degree of risk by sector needs to be determined at some future stage.²² It will be a while before any policy is put in place to achieve this, and as this does not currently impact on employers' engagement with apprenticeships this report does not provide an in depth analysis of these solutions.

Awareness is lower amongst small employers, but as the programme rolls out this may be overcome. When small employers are engaged they are also more likely 'to be fully committed to the apprentices' development, to be hands on in the process and more likely to benefit from the additional skills'.²³

Apart from the two sectors mentioned above, it is necessary to consider whether smaller businesses in those sectors which have been identified as target sectors can support the high growth potential frameworks identified by Skills for Business (see section on prioritisation).

Geographically there is some limited evidence of differences between regions, but only that in London micro firms appear to hire more apprentices (an average intake of one and a half employees compared to one in other regions per year)²⁴. It isn't clear from the research what the reasons are for this.

For medium or larger sized companies there is more variation in the issues faced and sectoral and geographical needs. Funding and administration are less of an issue, and large employers are more likely to have heard of apprenticeships, and to have made a decision not to take on apprentices based on a fuller analysis of the potential costs and benefits.²⁵ This is particularly true of those sectors with a tradition of apprenticeships. Meanwhile, although many more firms have apprentices, not all of these schemes are externally accredited with government qualification systems, because the organisation sees the primary benefits as being able to inculcate workers with their own internal 'way of doing things', and the costs, content and administration don't match the funding available.²⁶ Piloting work is currently underway to understand how and if employer training can be recognised within national frameworks, but there is currently no way to understand the volume of non-government apprenticeships taking place.²⁷

1.3.2 An apprenticeship tradition

The concept of apprenticeships is one that goes back centuries, but one of the major barriers facing government plans for expansion of supply is generating employer interest in sectors without a tradition of apprenticeship²⁸. There are several factors that differentiate how this affects propensity to engage:

- Some sectors have long traditions of apprenticeships and are fully aware of the offer available;

²⁰ DIUS (2008) *World Class Apprenticeships: unlocking Talent, Building Skills for all*.

²¹ The National Apprenticeship Service has also been given a seed fund to support such organisations.

²² Although survey evidence such as the 2006 BCC survey confirms that small businesses need more support additional funding can only go so far, because there is a limit to how many apprentices can be supervised, funding can be used to widen existing training for staff into full apprenticeships²². This is discussed further in the workforce section.

²³ LSC (2008) *Rapid Research Review on Apprenticeships*.

²⁴ LSC (2008) *Research into Expanding Apprenticeships*.

²⁵ LSC (2008) *Research into Expanding Apprenticeships*.

²⁶ LSC (2008) *Research into Expanding Apprenticeships*.

²⁷ DIUS (2008) *World Class Apprenticeships: unlocking Talent, Building Skills for all*.

²⁸ Fuller, A. and Unwin, L. (2008) *Towards Expansive apprenticeships*. Teaching and Learning Research Programme, ESRC.

Identifying sectors with prospects for expanding the number of apprenticeships

- Other sectors do not have a long-standing tradition. This creates challenges for generating awareness of potential benefits, designing suitable qualifications and ensuring programmes are of sufficient quality;
- Diversity can be a challenge in traditional sectors, for example encouraging female take up in engineering. Conversely, it is a specific objective of setting up apprenticeships in certain non-traditional sectors that they encourage diversity e.g. Creative and Cultural to bring in non university graduates.

The sectors that have long-standing traditions of apprenticeship are manufacturing, engineering and construction while programmes are comparatively well developed and pervasive in retail, catering, and business administration. Long-standing traditions of apprenticeship stem from the historical reliance on intermediate technical skills, often as a route to higher skills. While this means they may have potential for expansion, they are also more likely to be aware. It is those sectors with a tradition of apprenticeships, but with persistent intermediate skills gaps that have the greatest potential for increased engagement with employers.

1.3.3 Awareness of apprenticeship offer

As mentioned above, companies in sectors with a tradition of apprenticeships are more aware of apprentices, so more likely to engage. However, in their analysis of where places would come from to meet Leitch targets, approximately two-thirds of new places were in new employers and a significant proportion of these will be in high growth courses in sectors with a comparatively short history of apprenticeships.²⁹ But issues of awareness go wider than simple historical associations, to cover the methods used by providers to place apprentices, particularly marketing to employers.

The LSC survey of employers in the West Midlands, North East and South East showed that of the 83% of employers who have never participated in apprenticeships, over two-thirds do not know where to go for advice, less than one-fifth are aware of specific programmes in their sector and less than one-fifth have ever been contacted about an apprenticeship programme.³⁰ There is little difference in regional knowledge, other than that explained by a lower awareness amongst ethnic minorities of apprenticeship programmes. This might suggest that areas with a high volume of black minority ethnic (BME) owned businesses may have greater potential for awareness development, although the literature doesn't go so far as to make this explicit.

Size is another determinant of the ability of awareness-raising to generate returns. While smaller companies are less likely to be aware or have detailed knowledge of apprenticeships, they are less likely to be amenable to recruitment drives. Smaller employers who aren't aware of government apprenticeships are the least likely to be amenable to additional marketing drives, even with bespoke offers by providers.³¹

The form of contact is highly important in determining how successful engagement activities are, but this is more a question of solutions and for another report into understanding the provider base. Employers are more likely to get involved if contacted by a provider with a bespoke offer than if they hear about it through advertising. This is less marked for businesses in the South East and smaller businesses. Solutions might cover, for example, the capacity of providers for marketing, because it is

²⁹ Skills for Business Network (2007) *SfBN and other Bodies Contribution Towards Meeting the Apprenticeship Entitlement and Leitch*.

³⁰ LSC (2008) *Research into Expanding Apprenticeships*.

³¹ LSC (2008) *Research into Expanding Apprenticeships*.

far harder for a 16 year old to approach employers than a trained professional.³² Furthermore, many providers cannot manage the resources to work across multiple frameworks.³³

1.3.4 Skills gaps and shortages

Clearly those sectors with intermediate skills gap and skills shortages should have the potential to increase the number of apprentices. In sectors where there are skills gaps and shortages at intermediate skill levels, employers are more likely to use apprenticeships as a route for filling these.³⁴ There is broad agreement across the literature that, as quoted in a House of Lords Select Committee 'Apprenticeships are a prime source of intermediate skills in craft, technician and associate professional occupations.'³⁵ While there are many debates about whether all employers are motivated to actually develop a skilled workforce, who understand multiple aspects of the business, what is not disputed is that expansive apprenticeships provision leads to higher levels of retention and completion rates.³⁶ Skills gaps should not be considered in isolation, because they intersect with other factors. As mentioned, they are a particularly good indicator of need where there is a tradition of apprenticeships.

1.3.5 Age of workforce

Many sectors where the workforce profile is younger and where a large share of 16 to 18 year olds are employed, such as retail and hospitality and catering, also have a strong engagement in Apprenticeships, reflecting the strong focus of the programme on young people. Many of the strongly engaged sectors also have a tradition of bringing in young people and training them in a workplace environment, such as construction and the automotive sector. Such sectors, where the workforce is ageing will continue to offer an opportunity to expand places for apprentices. Industries where the average age is high, or a significant section of the intermediate skilled workforce are ageing, are likely to be high potential growth areas for a dedicated programme that would help replace these workers.³⁷

The public sector is an example of a sector with an ageing workforce, with a third of the workforce over 50 years old, and nearly two thirds over 40 years old.³⁸ Yet the overall proportion of employees aged 16-24 who are apprentices across the entire public sector is 3%, compared to 4.9% in the private sector.³⁹ Government Skills (the central government Sector Skills Council) is currently carrying out an internal audit of its current activity and ability to deliver apprenticeships, while the other relevant SSCs have set targets for expansion.⁴⁰ Initially, the main growth areas are identified as being in dental nursing, health and social care, community justice and housing.⁴¹

³² LSC (2008) *Rapid Research Review on Apprenticeships*.

³³ LSC (2008) *Research into Expanding Apprenticeships*. This would suggest prioritising - areas where there is evidence of provider collaboration across frameworks, or possibly multiple large providers with the ability to market themselves extensively - should have greater potential to place apprentices from multiple frameworks in a single business.

³⁴ Cap Gemini (2008) *Apprenticeship project for LSC National – strand 2*.

³⁵ House of Lords Select Committee on Economic Affairs (2007) *Apprenticeship: A Key Route to Skill, Volume I: Report*.

³⁶ Fuller, A. and Unwin, L. (2008) *Towards Expansive apprenticeships*. Teaching and Learning Research Programme, ESRC, and Hogarth, T., Hasluck, C. and Daniels, W. W. (2005) *Employing Apprentices: the Business Case*

³⁷ House of Lords Select Committee on Economic Affairs (2007) *Apprenticeship: A Key Route to Skill, Volume I: Report*.

³⁸ APS/LFS 4 quarter average (July 2007-June 2008) for Government Skills, Skills for Care, Skills for Health, Skills for Justice and Lifelong Learning UK.

³⁹ DIUS (2008) *World Class Apprenticeships: unlocking Talent, Building Skills for all*.

⁴⁰ Cap Gemini (2008) *Apprenticeship project for LSC National – strand 2*.

⁴¹ Skills for Business Network (2007) *SfBN and other Bodies Contribution Towards Meeting the Apprenticeship Entitlement and Leitch*.

Although many employers prefer not to employ 16 to 18 year olds as they believe they are not sufficiently mature or work ready and lack basic skills, this potential effect of the take up of apprenticeships has been addressed with the opening up of apprenticeships to all age groups, with adult apprenticeships now being a major growth area⁴².

1.3.6 Qualification profile

The qualification profile of the sector is also of importance to its use of apprenticeships. In sectors where the majority of the workforce holds intermediate qualifications (at Level 2 or Level 3), whilst a lower share holds degree level qualification or have low qualifications, the take up of apprenticeships is greater.

1.3.7 Availability of appropriate frameworks

In total there are 188 frameworks currently in existence, of which 59 require a full review and 21 are to be withdrawn and replaced. While there are plans to speed up the framework approval process and reduce the burden this places on providers, the sectors covered by these 21 frameworks under review still face barriers to expansion.⁴³ Furthermore, provider capacity is *inadequate* in multiple sectors, and unless this improves it may not be possible to significantly expand training.⁴⁴

Questions of quality are also important, particularly for increasing completion rates, but are mentioned only in passing here. It is important for all sectors that training experiences are of sufficient quality to meet employers' needs and that they are sufficiently expansive to give a well rounded education to young people. This also helps to generate loyalty amongst young people and increases their contribution to the business.⁴⁵

Certain sectors where apprentices are a newer phenomenon are currently looking at how they can develop suitable frameworks, particularly in the Government, IT and Creative and Cultural sectors.

In some sectors, although industry specific frameworks are available, take up is mostly for 'generic' frameworks such as business administration and customer service, resulting in apprenticeships not reaching the core workforce of the sector. One example is the public sector – health and care in particular – where reasons quoted in relation to the availability of appropriate frameworks include frameworks not being appropriate for the sector; and the difficulty of getting current frameworks adapted and new frameworks introduced.⁴⁶

1.3.8 Future trends

A key determinant of ability to engage apprentices will be what happens to the economy in the future. This is likely to result in contradictory drivers from different components of the apprenticeship equation: workers or prospective workers may seek to shore up their position in a precarious labour market by investing in skills and qualifications; conversely, tough economic conditions are typically associated with employer contraction in costs as profits drop, which in practice results in the contraction of training budgets and a reluctance to release staff for training.

⁴² LSC (2008) *Rapid Research Review on Apprenticeships*.

⁴³ Skills for Business Network (2007) *SfBN and other Bodies Contribution Towards Meeting the Apprenticeship Entitlement and Leitch*.

⁴⁴ See SfBN report or Cap Gemini (2008) *Apprenticeship project for LSC National – strand 2*.

⁴⁵ Fuller, A. and Unwin, L. (2008) *Towards Expansive apprenticeships*. Teaching and Learning Research Programme, ESRC.

⁴⁶ Ipsos MORI and Cambridge Policy Consultants (2008) *Expanding Apprenticeships in the public sector*.

Identifying sectors with prospects for expanding the number of apprenticeships

The tension between increased learner demand (in the last recession overall adult training increased), coupled with decreased employer interest in apprenticeship has been flagged by Elaine McMahon, principal of Hull College and until recently the head of the 157 Group, who comments that “areas that might get hit are apprenticeship programmes, where employers don't want to release people for training... We have to look at the industries that have been affected by the downturn and look at putting on more full-time provision in those areas.”⁴⁷ The potential lack of employment places would suggest that programme-led apprenticeships may grow faster, at least in the short term, increasing the emphasis on provider capacity to meet learner demand. Further detail on the effect of the economic downturn on sectoral take up is included in section 3.4.1.

There is a risk associated with the level of resources available to train staff in smaller firms, and the ability to take the financial burden of training apprentices. If overall expansion of supply of employer based places is to increase, larger firms may need to be encouraged to take a more paternalistic approach to training through over-trains, and other placements within their smaller suppliers. Carillion in the construction sector are a good example of this sort of initiative, while there are examples of placements in non-owned dealerships in the automotive industry.⁴⁸

1.3.9 Wage returns

There are numerous studies on the wage returns to apprenticeships, which although unable to delineate between oversupply of talent (cherry picking) and genuine returns and lacking full coverage of sectoral difference in wage returns, clearly show that there is a significant lifetime benefit or at least a significantly higher probability of employment.⁴⁹ In sectors where there is a clear wage return from apprenticeships, this would suggest that it is a qualification employers value.

1.3.10 Sector prioritisation

Some work has already been carried out by government examining which sectors are priorities for expansion of apprenticeships. The sectors identified as a priority are primarily those where skills gaps exist, and the barriers to be overcome are the most easily solved, particularly institutional barriers such as employer size.⁵⁰ The review carried out of forecasts for apprenticeship expansion outlined the following priority groups for expansion, with Tier 1 the highest potential.

- Tier 1: agriculture; manufacturing; construction; and (small/medium) retail;
- Tier 2: wholesale; (large) retail; post and telecoms; property and business services; and public services sectors; and,
- Tier 3: (small/medium) motor trades; hotels and catering; transport; education; utilities.

The DIUS strategy reckoned that these sectors needed to reach penetration rates of 20% of employers (average is 10%).⁵¹

⁴⁷ The Guardian, September 2nd 2008, *Ready for the Crunch*.

⁴⁸ DIUS (2008) *World Class Apprenticeships: unlocking Talent, Building Skills for all*.

⁴⁹ See, for example, Jenkins, A. et al, (2007) *The Returns to Qualifications in England: Updating the Evidence Base on Level 2 and Level 3 Vocational Qualifications*. LSE, or DfES (2007) *A Cost-Benefit Analysis of Apprenticeships and Other Vocational Qualifications*.

Wage returns show how much more an individual can expect to earn than a similar individual not taking the course (the exact figure will be determined by what they are presumed to have done instead).

⁵⁰ DIUS (2008) *World Class Apprenticeships: unlocking Talent, Building Skills for all*.

⁵¹ DIUS (2008) *World Class Apprenticeships: unlocking Talent, Building Skills for all*.

1.4 A matrix of SSC apprenticeship engagement indicators

On the basis of the existing research into and evidence of factors influencing sectoral engagement in apprenticeships, a matrix of labour market intelligence (LMI) indicators was constructed for each Sector Skills Council (SSC) sector. It draws on a wide range of labour market, skills and education data sets including the Labour Force Survey, Working Futures, National Employer Skills Survey, and Individual Learner Records.

The matrix was used to provide a data driven understanding of labour market factors associated with apprenticeship engagement across SSC sectors. It was used to guide inclusion of variables into the modelling (though variables were not drawn from the Matrix) and was also used to interpret SSC based outputs from the model.

The matrix of SSC apprenticeship engagement indicators is available as a supplementary MS Excel spreadsheet.

2 Modelling employer engagement: methodology

2.1 Overview

This section outlines the methodology used for creating an **index of employer engagement**; identifying which sectors and business types are more likely to engage with apprenticeships and in which geographies these businesses are located.

2.2 Building an employer engagement model

2.2.1 Data

The data sources used for the creation of the index of employer engagement are:

- Individualised Learner Record (ILR) – to establish which employers currently engage in apprenticeships;
- National Business Database (NBD)

Learner data

There is no national data set that holds comprehensive information about employer engagement with apprenticeships. Broker data, held by the LSC, provides information around employer contact, training assessments, training proposals and referrals to providers but does not contain information on employers' interest in apprenticeships, only in Full Level 2 and Full Level 3 qualifications. Furthermore, it is based on sectoral information (4-digit SIC) rather than site information and lacks postcode information, which is a pre-requisite for detailed geographical mapping. While there were initial hopes that broker data would prove useful, in reality the information was insufficiently specific in relation to apprenticeships.

The only available source of information on employers holding apprentices is derived from the Individual Learner Record (ILR), which for each learner record has details of the occupation the learner is operating in, together with their employer. The name and the postcode of the employer are held on the ILR but there is no further information about the industry sector of the employer, or wider business details such as size of business, level of training etc.

For the ILR, the W13 return for 2006/07 was used, including all learners who were in learning at some point of the year. The records were filtered by the main funded NVQ aim of the learner to de-duplicate the file, creating a file with only one record per learner based on the main NVQ aim within the framework. In total there were 378,391 learner records. Fields A44 and A45 – employer description and postcode – are used to link to the NBD. Within this de-duplicated file, 93% of records have an employer name and 91% have an employer postcode, and there were 188,579 unique employer name/location combinations.

The ILR apprenticeship learner data was joined to the NBD by employer name and postcode. The match rate to the NBD was 63%.

National Business Database

The National Business Database (NBD), owned and maintained by Experian, provides the UK's largest and most detailed database of commercially active organisations ranging from single person businesses working at home, to multi subsidiary corporations. Covering 3.77 million business locations (sites) and 3.45 million businesses, the NBD contains a wide range of data covering general business information, site information, contact details at decision maker level, corporate structure, performance information and financial details.

The NBD was chosen because it can be matched to the ILR data (employer with which the learner is based) at a business site level, which provides an accurate view of the types of business in a local area. The NBD also has a multitude of additional business variables including business size (number of employees), business age, legal status, net worth, CCJs, assets, Commercial Mosaic segments and more. 117,789 sites in the NBD matched records in the learner data.

Figure 2.1: Availability of variables identified in literature review in the NBD

Variable	Availability in NBD
Size of firm.	Yes, at business and site level
Tradition.	Indicated by current number of apprentices
Awareness of programme.	Indicated by firm size and sector (SIC/Thomson Codes)
Age of apprentice.	N/A
Skills gaps.	Possibly indicated by sector/location
Workforce qualification profile.	N/A
Wage return.	Site level average pay
Propensity to train.	Indicated by current number of apprentices
Sectoral Trends.	Yes, Employee growth is available
<i>Source: Experian.</i>	

SSC Assignment

Some SICs (Standard Industry Code categories) are covered by more than one SSC. In these cases, numbers of apprentices were split between the relevant SSCs.

2.2.2 Modelling process

The NBD provided the independent variables in a predictive model, while existence of a match to the ILR apprenticeship data was used as the dependent variable. The model provides an expected number of apprentices for each site location on the NBD, forming an index of similarity to companies that take on apprentices.

Although we have data on the actual number of apprenticeships currently undertaken, and with which employer they are being undertaken, there are a number of reasons to model employer engagement in apprenticeships:

- To **adjust for biases** in the matching process i.e. weight by the profile of English business, not by the profile of apprenticeship providers.
- To put **more weight on sites that are similar** to ones that have apprentices i.e. have untapped potential to take on apprentices.
- To **identify which factors in the available data influence** the provision of apprenticeships, and to what extent.

Modelling process

A predictive model was built, using variables from the NBD to predict the number of apprentices working at every known site in England. Three indexes were built, based on the predictions:

1. **Predicted apprentices index (primary metric).** Describes companies already taking on apprentices and companies similar to them.
2. **Reliance on large sites index.** Indicates the reliance of the sector on large sites in the delivery of apprenticeships – the higher the index, the higher the reliance on large sites.
3. **Predicted apprentices per employee index.** Provides an alternative view of engagement by taking into account the number of people working in a sector and/or location.

A two-stage modelling process was adopted. The first stage comprised a logistic regression that predicted the probability of a site having an apprentice. The second stage predicted how many apprentices it would have. The results of these models were multiplied to produce the final estimates. Figure 2.2 shows the variables used, and which of the models they were used in.

Figure 2.2: Variables used for modelling (Interactions of these variables were also used in the logistic stage).

Variables Used	In Models
Thomson Category	Logistic Only
Number of Employees at Site	Both
Local Authority District	Logistic Only
Commercial Mosaic Category	Logistic Only
Overseas Parent	Logistic Only
Average Employee Remuneration	Both
SIC (one-letter-level code)	Logistic Only
Number In Family Tree	Both
Corporate Position	Both
County Court Judgements	Both
UK Turnover	Both
Employees In Business	Both
Small or Home Office	Both
Age of Business	Both
Growth In Employees	Both

The reason for adopting the two-stage process was that the distribution of number of apprentices per site was too skewed to perform a linear regression without unacceptably heterogeneous error variance (i.e. there were many more sites with no apprentices than any apprentices, and many more sites with one apprentice than with two etc.). For the same reason, a multinomial logistic regression model was used for the second stage. The number of apprentices was binned, and group membership of those bins was predicted. The estimated number of apprentices at a site was taken to be the sums of the mean number of apprentices in each predicted bin multiplied by the modelled probabilities of being in those bins.

2.2.3 Model performance

The first part of the model (whether an organisation takes on apprentices or not) was more predictive than the second. The second (how many apprentices an organisation takes on) tended towards predicting low numbers, so predictions based on the output rolled up to SSC/local authority level will reflect the numbers of businesses similar to those that take on apprentices, which will tend to underestimate the effect of institutions that take on large numbers of apprentices.

Stage One: Predicting apprenticeship probability (logistic regression)

Figure 2.3 shows the variables used in the first part of the model, in descending order of the importance of their contributions.

Figure 2.3: Importance of variables to model

Explanatory Variables	Importance
Thomson Category	38%
Number of Employees at Site	14%
Local Authority District	10%
Commercial Mosaic Category	7%
Overseas Parent	5%
Average Employee Remuneration	5%
SIC (one-letter-level code)	4%
Number In Family Tree	2%
Corporate Position	2%
County Court Judgements	2%
UK Turnover	2%
Employees In Business	2%
Small or Home Office	2%
Age of Business	2%
Growth In Employees	1%

KI is a quality indicator that corresponds to the proportion of information contained in the target variable that the explanatory variables are able to explain. **KR** is a robustness indicator that signifies the capacity of the model to achieve the same performance when it is applied to a new data set exhibiting the same characteristics as the training data set.

Both KI and KR have a maximum value of 1 – the nearer to 1 both of these numbers are, the better the model. A model with a KR of more than 0.95 is considered robust. As figure 2.4 shows, both the quality indicator and the robustness are high, and the model is robust.

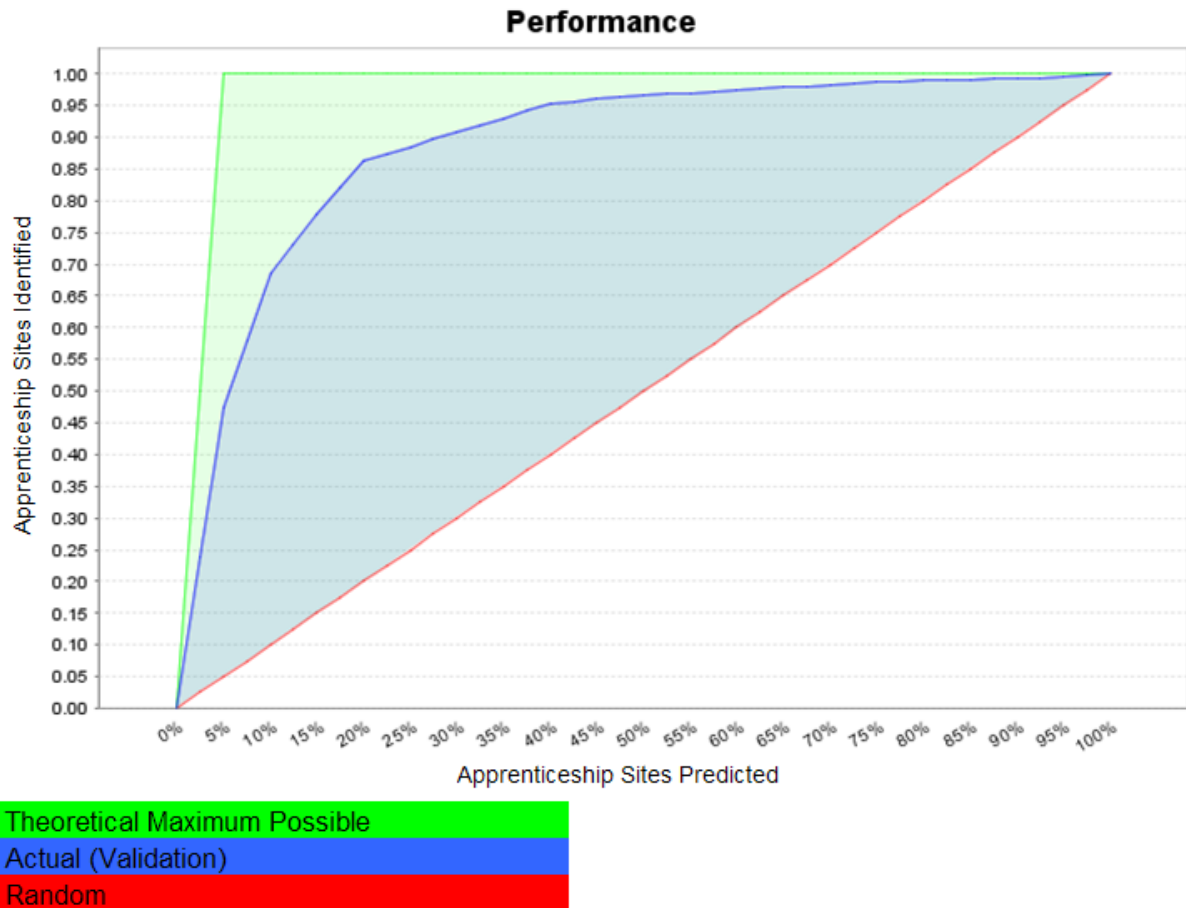
Figure 2.4: Logistic model fit

Indicator	Value
Model KI (quality indicator)	0.801
Model KR (robustness indicator)	0.988

Identifying sectors with prospects for expanding the number of apprenticeships

Figure 2.5 illustrates the model performance. A **theoretical model** which discriminates perfectly between sites that do have apprentices and those that don't is shown by the green line. The result of **randomly guessing** is shown in red. The **model** used is illustrated in blue. It shows that, for example, 85% of the sites with apprentices could be identified by setting a prediction cut-off so that 20% of sites are predicted to have apprentices.

Figure 2.5: Logistic model performance



Stage Two: Predicting number of apprenticeships (predictive model)

The second stage was built using all the data where the ILR matched to the NBD, i.e. only sites where there was at least one apprentice.

Figure 2.6 describes the extent to which the model can explain how many apprentices there are at each site.

Figure 2.6: Importance of explanatory variables in predictive model

Explanatory Variables	Importance
Number of Employees at Site	857
Average Employee Remuneration	341
Corporate Position	294
Age of Business	107
Employees In Business	104
Small or Home Office	91
Growth In Employees	86
UK Turnover	63
Number In Family Tree	49
County Court Judgements	12

The output is provided in the form of indices. The function of the prediction is to provide a number for comparison purposes that adjusts for skews in the joining process and weights towards SSCs and local authorities that have companies similar to the types of companies that take on apprentices.

The use of indices will ensure the output of the model is understood in a way that compares the relative natures of sectors and areas, and doesn't allow misinterpretation of the output as a prediction of numbers of apprentices that can be expected following intervention.

The indices are summarised to Local Authority Area and SSC level to show where there are companies similar to those that already have apprentices. The expected numbers at site level are grouped by SSC and local authority area to provide an index of similarity to the types of company that already have apprentices.

2.3 Model output spreadsheets

Priority ranked listing of all sectors and local authority areas in England are available as MS Excel spreadsheets, showing:

- A traffic light coded ranking of priority sectors for expansion, based on the level of predicted apprenticeships in the sector
- A traffic light coded ranking of priority local authorities for expansion, based on the level of predicted apprenticeships in the area
- Predicted apprenticeships indices for each sector within a local authority
- An explanation of how to interpret the data
- Notes on SIC codes split between SSCs, and the make up of the No SSC sector

2.3.1 How to use the spreadsheets

The MS Excel spreadsheets detail full listings of local authority positions together with details of sectoral breakdowns. The spreadsheets can be used to look more in-depth into the modelled potential for sectors within for example a region or a local authority. They can also be used to determine which sectors have the greatest expansion potential within a local authority.

3 Employer apprenticeship potential: targets for growth

Key messages

- The nine SSC sectors with the highest modelled potential for apprenticeship expansion are in order of target: sectors not covered by an SSC; Skillsmart Retail; Construction Skills; Summit Skills; People 1st; SEMTA; Automotive Skills; Cogent; and Skills for Care.
- Despite the lack of SSC coverage in the top sector, it is still possible to target the large employers to encourage expansion of apprenticeship take-up through the National Employer Service (NES), and small employers through standard-setting bodies such as Habia and the Training and Development Agency for Schools (TDA). The effect of the non-coverage however needs to be considered if government is moving towards a system where frameworks have to be approved by SSCs.
- Albeit not recognised through the model, the public sector – with its large workforce – is where the government can exert considerable leverage to bring about take-up. Skills for Health and Government Skills are sectors with very low predicted apprentices to workforce ratio. This indicates that there could be an untapped potential for apprenticeships in these sectors.
- A concerted government policy focus can result in apprenticeships expanding above current (modelled) expectations within the public sector SSC, making them target sectors.
- Forecasts show that the vast majority of sectors will experience a downturn over the next couple of years, but many will recover after 2011.
- Some of the sectors identified as targets for expansion through the model are also forecasted to do well through the downturn, including education (No SSC); hotels and catering (People 1st); retailing (Skillsmart Retail); and health (Skills for Care, Skills for Health).
- Recent action by government and major employers should alleviate the effect of the downturn on apprenticeships within the Construction Skills, Skillsmart Retail and Improve (food and drink) sectors.
- Sectors such as Skillsmart Retail, Construction Skills, Summit Skills and People 1st are more likely to have a high take up of apprenticeships compared to sectors where the workforce are qualified to very high or low levels. There is, however, scope for upskilling the workforce below Level 2 in Skillsmart Retail, People 1st, Skills for Logistics, Skillfast UK, GoSkills and Lantra.
- The local authorities with the highest apprenticeship expansion potential are those that have a good mix of businesses in the 'target' SSC sectors and consequently are the areas as a whole predicted to perform well. Many of these are located in Yorkshire and the Humber, the North West and the West Midlands
- Service sector industries are typically more evenly distributed around England according to population densities. This is reflected in a high modelled apprenticeship potential across most local authorities for sectors such as Skillsmart Retail and People 1st (hospitality and catering).
- Sectors such as SEMTA (engineering), Automotive Skills and Cogent (oil and gas) are geographically more concentrated, associated with resource availability and historic location patterns, which is reflected through a more variable modelled apprenticeship potential for a sector such as Cogent (oil and gas).
- The model also shows that targeting apprenticeship expansion based on target sectors will be more effective than targeting based on the top local authorities.

3.1 Overview

This chapter reviews the outputs of the logistic and regression modelling process to identify the target SSC sectors and the target local authorities that afford the best opportunities for encouraging employer engagement in apprenticeships. It also outlines other factors impacting on which sectors to target, to provide a balanced view of expansion potential.

How to interpret the indices

A high **predicted apprentices index** indicates a high potential to expand apprenticeships in the sector, as there are many businesses similar to those taking on apprentices. These are the sectors marked as green.

A high **reliance on large sites index** indicates there may be relatively few larger companies driving the supply, whilst a low reliance on large sites index indicates that there are many companies that could potentially take on apprentices, although the majority of these are likely to be SMEs.

Where the **predicted apprentices per employee index** is high, this is indicative of high employer engagement with apprenticeships in the sector, and the reverse is true where this index is low. For example, the engagement is high in the Construction sector, but very low in the part of the public sector covered by Government Skills (inc. local government).

The traffic light system is applied on the basis of the predicted apprentice index, but it is suggested that the additional indices provided are used to help clarify understanding of each sector's potential.

3.2 Modelled apprenticeship expansion potential by SSC sector

The nine SSC sectors with the highest modelled potential for apprenticeship expansion are, as shown in figure 3.1: sectors not covered by an SSC; Skillsmart Retail; Construction Skills; Summit Skills; People 1st; SEMTA; Automotive Skills; Cogent; and Skills for Care. This is based on the sector having a large base of businesses of the type likely to take up apprenticeships.

Identifying sectors with prospects for expanding the number of apprenticeships

Figure 3.1: Target sectors for employer apprenticeship targeting – predicted apprenticeship indexes by Sector Skills Council

SSC	Predicted Apprentices Index	Matched Apprentices Index	Reliance on large sites Index	Predicted Apprentices/Employee Index	Employees (Matched)
No SSC	1.00	1.00	0.92	0.64	8,713,407
Skillsmart Retail	0.96	0.96	0.28	0.75	2,594,800
ConstructionSkills	0.92	0.80	0.76	0.91	1,337,335
SummitSkills	0.88	0.76	0.80	0.95	1,011,916
People 1st	0.84	0.84	0.56	0.95	1,576,383
SEMTA	0.80	0.88	0.68	0.85	1,639,288
Automotive Skills	0.76	0.36	0.84	1.00	561,335
Cogent	0.72	0.44	0.64	1.00	610,731
Skills for Care	0.68	0.60	0.72	0.94	799,024
Skills for Health	0.64	0.92	0.44	0.13	2,086,310
Skills for Logistics	0.60	0.64	0.40	0.73	809,076
Asset Skills	0.56	0.72	0.32	0.57	918,088
Skills Active	0.52	0.20	0.88	1.00	452,138
Skillfast UK	0.48	0.28	0.04	0.92	465,664
Improve	0.44	0.32	0.16	0.73	546,693
e-Skills UK	0.40	0.52	0.48	0.70	670,995
Financial Services Skills Council	0.36	0.68	0.52	0.22	895,670
Lifelong Learning	0.32	0.56	0.96	0.38	764,278
Proskills	0.28	0.12	0.20	0.86	320,219
Go Skills	0.24	0.40	0.24	0.50	572,725
Lantra	0.20	0.16	0.60	0.80	352,752
Creative and Cultural Industries	0.16	0.24	0.36	0.75	456,266
Government Skills	0.12	0.48	1.00	0.33	659,806
Energy and Utility Skills	0.08	0.00	0.08	1.00	84,286
Skillset	0.04	0.08	0.00	1.00	164,600
Skills for Justice	0.00	0.04	0.12	1.00	153,735

Source: ILR, Experian.

The highest modelled potential for apprenticeship growth is in the 'No SSC' sector, of which the employee and apprentice breakdown is as follows:⁵²

- Manufacturing – 11% employees and 7% apprentices;
- Real estate, renting and other business activities – 46% employees and 28% apprentices;
- Education – 18% employees and 18% apprentices; and
- Other service activities – 18% employees and 44% apprentices.

However, employers in sectors such as Hairdressing (that accounts for the majority of apprentices within 'other service activities') and Primary and Secondary Education are not presently covered by a Sector Skills Council (SSC). Many of these sub-sectors are covered instead by Standard Setting Bodies (SSB) such as Habia or the Training and Development Agency for Schools (TDA), but the fact that they are not covered by the SSC network may have an impact as policy is increasingly focusing on this network.

⁵² A full split of this group by SIC is presented in appendix B.

Identifying sectors with prospects for expanding the number of apprenticeships

The potential of the 'No SSC' employer base is a function of the size of the 'sector' in respect of current apprenticeship delivery and the scale of the employee base. Model outputs indicate that many of the employers in the 'No SSC' sector take on a greater than average number of apprentices, but also that the sector is – for apprenticeships – mainly reliant on a few larger employers. Despite the lack of SSC coverage, it is still possible to target the large employers to encourage expansion of apprenticeship take-up through the National Employer Service (NES), and small employers through standard setting bodies such as Habia and the TDA. The effect of the non-coverage however needs to be considered if government is moving towards a system where frameworks have to be approved by SSCs.

Skillsmart Retail (the SSC for retail) also has high potential for apprenticeship expansion. It has a proven capacity to deliver apprenticeships, and has a large employee base. A relatively high proportion of apprenticeships within the sector are at smaller sites, providing opportunities across local authorities to expand apprenticeship numbers. NES affords opportunities to influence the larger retailers and cascade apprenticeship take-up across their stores located England-wide.

People 1st (the SSC for hospitality and catering), like Skillsmart Retail, has a proven capacity to deliver apprenticeship, and a large employee base. A relatively high proportion of apprenticeships within the sector are at smaller sites and distributed around England, again providing scope for many local authorities to expand their apprenticeship provision in this area. The majority of the apprenticeship expansion is likely to be in the area of catering and generic apprenticeship frameworks including customer service.

ConstructionSkills, SummitSkills, SEMTA, Automotive Skills and Cogent are sectors that have high proportion of craft and skilled workers – the traditional groups that have taken up apprenticeship training – and they continue to figure highly as sectors with the potential to expand apprenticeship take-up.

Skills for Care is the sole sector with a high public sector make-up that the model flags as having a high potential for expansion. It has a relatively high take-up of apprenticeships at present.

Across remaining SSCs where the public sector dominates – Skills for Health, Lifelong Learning, Government Skills and Skills for Justice – the apprenticeship expansion potential is deemed to be greatest for Skills for Health, and least likely for Skills for Justice and Government Skills. The relatively low take-up of apprenticeships within the public sector has been well recognised and government has committed funding to improving this. This picture may therefore change in the short to medium term as a consequence of policy intervention, as further outlined in section 3.4.2.

Also, among the sectors with the lowest predicted apprentices to workforce ratio are two public sector SSC areas: Skills for Health and Government Skills. This indicates that there could be an untapped potential for apprenticeships in these sectors, although factors such as qualification levels in the sector will also impact.

Skillfast and Skills Active provide an interesting contrast. They are similar to each other in predicted numbers of apprentices and number of employees but Skills Active has a higher reliance on large sites index, suggesting that it has a few larger sites causing it to appear more engaged, while Skillfast is relying on smaller sites to provide its apprenticeships.

Many of the sectors identified through the model as target sectors for apprenticeship expansion were also identified by DIUS as priority sectors in its apprenticeship strategy (see section 1.3.10). However, agriculture; post and telecoms; property and business services; public services sectors; transport; and utilities were identified in the apprenticeship strategy, but do not feature very high in the predictive model.

3.3 Factors impacting on sectoral apprenticeship expansion

The model predicts the level of apprenticeship engagement potential for sectors based on previous engagement. However, a number of external factors also impact on the sectoral potential for expansion. The two main factors to impact on potential are: the economic downturn and current financial crisis; and public policy (impacting in particular on the public sector). The former could have an impact on some of the sectors with a higher modelled potential, while the latter could move sectors in the lower priorities further up the table.

3.3.1 Economic climate

The economic downturn and current financial crisis pose a risk to the expansion of apprenticeships as it is likely to negatively influence employer willingness to engage with apprenticeships; profits will be hit resulting in less discretionary spend for training, and employment will contract. The recent research into the apprenticeship provider base⁵³ also shows that some 39% of providers have already had apprentices laid off.

Many of the SSCs that are target priorities – Construction Skills (construction), Summit Skills (building services engineering) SEMTA (engineering) and Automotive Skills (motor industry) – are already experiencing contraction and employment losses as the UK recession takes hold. However, there is also a strong replacement demand in these sectors, requiring new workforce entry.

Recent Experian employment forecasts, which take the economic downturn into account, show that the vast majority of sectors will experience a downturn over the next couple of years, but many will recover after 2011. Figure 3.2 shows that over the next six years, all sectors will either experience a decrease in employment or a low level of employment growth. Some of the sectors identified as target for expansion through the model are also forecasted to do well through the downturn, including education (No SSC); hotels and catering (People 1st); retailing (Skillsmart Retail); and health (Skills for Care, Skills for Health).

It should be noted that the employment forecast data and analysis presented were current at the time of writing (November 2008). Consideration should therefore be given to the rapid movements in the economic climate during the final months of 2008 and early 2009 prior to publication when interpreting the findings at a later date. It is likely that this would also have some impact on the ease at which expansion of apprenticeships can be achieved and this will be taken into account when defining regional strategies.

⁵³ Experian (2008) *Apprenticeships: understanding the provider base*. LSC.

Figure 3.2: Average annual percentage change in FTE employment 2009-2015

Sector	Average annual change (%)	Sector	Average annual change (%)
Banking and insurance	0.94	Machinery and equipment	-0.78
Education	0.92	Minerals	-0.95
Hotels and catering	0.34	Food, drink and tobacco	-1.27
Retailing	0.24	Transport equipment	-1.34
Health	-0.07	Electrical and optical equipment	-1.53
Other	-0.07	Paper, printing and publishing	-1.62
Communications	-0.08	Agriculture, forestry and fishing	-1.91
Wholesaling	-0.12	Metals	-2.20
Business services	-0.19	Rubber and plastics	-2.41
Transport	-0.33	Other manufacturing	-2.59
Fuel refining	-0.51	Wood and wood products	-2.84
Public administration and defence	-0.55	Chemicals	-2.96
Gas, electricity and water	-0.57	Textiles and clothing	-3.34
Other financial and business services	-0.63	Oil and gas extraction	-3.36
Construction	-0.74	Other mining	-3.68

Source: Experian, October 2008.

To secure apprenticeships during the downturn, it will also be important to monitor the movements of the largest employers. The top 20 apprenticeship employers, excluding the Armed Forces, provide over 10,000 apprenticeships. Should these businesses feel the impact of the economic downturn, this could have a significant negative effect on apprenticeship numbers.

The section below outlines some measures taken by the government which will alleviate the impact of the downturn on the construction sector. In a recent press release from DIUS,⁵⁴ a number of national retailers and supermarkets note their support for apprenticeships and their intention to further expand the programme. This initiative should alleviate some of the impact of the economic downturn on apprenticeships within the Skillsmart Retail and Improve (food and drink) sectors.

3.3.2 Qualification profile

As noted in section 1.3.6, sectors where the majority of the workforce hold intermediate level qualifications (i.e. levels 2 and 3) are more likely to have a high take up of apprenticeships compared to sectors where the workforce are qualified to very high or low levels.

This is evident when considering the sector qualification profile of SSCs with a high and low predicted apprentice index. For example Skillsmart Retail, Construction Skills, Summit Skills and People 1st all have a relatively high proportion of their workers qualified to either Level 2 or 3 (around 50%). In contrast Lifelong Learning, Energy and Utility Skills and Skillset have relatively low proportions of workers employed at Level 2 or 3 (around 25%).

There are also a number of SSCs where there is considerable scope for up-skilling of the workforce through apprenticeships, evidenced by the high proportion (between 40% and 50%) of workers who are qualified below Level 2. Principle amongst these is Skillsmart Retail, People 1st, Skills for Logistics and Skillfast UK, and also SSCs with a lower Predicted Apprentices Index, such as GoSkills and Lantra (both 38%).

⁵⁴ DIUS (8 December 2008) *Employers and public sector to create 10,000 apprenticeship places.*

Figure 3.3: Target sectors for employer apprenticeship targeting – qualification profile

SSC	Predicted Apprentices Index	% workforce qualified below Level 2	% workforce qualified at Level 2	% workforce qualified at Level 3
No SSC	1.00	22%	18%	16%
Skillsmart Retail	0.96	38%	27%	20%
ConstructionSkills	0.92	28%	22%	27%
SummitSkills	0.88	31%	24%	30%
People 1st	0.84	38%	26%	22%
SEMTA	0.80	26%	21%	24%
Automotive Skills	0.76	34%	27%	31%
Cogent	0.72	26%	18%	19%
Skills for Care	0.68	20%	25%	23%
Skills for Health	0.64	17%	15%	13%
Skills for Logistics	0.60	40%	25%	18%
Asset Skills	0.56	37%	20%	18%
Skills Active	0.52	27%	27%	23%
Skillfast UK	0.48	49%	23%	12%
Improve	0.44	37%	24%	16%
e-Skills UK	0.40	15%	14%	18%
Financial Services Skills Council	0.36	17%	23%	22%
Lifelong Learning	0.32	10%	10%	11%
Proskills	0.28	35%	25%	21%
Go Skills	0.24	38%	23%	19%
Lantra	0.20	38%	24%	17%
Creative and Cultural Industries	0.16	16%	15%	14%
Government Skills	0.12	17%	20%	19%
Energy and Utility Skills	0.08	33%	19%	17%
Skillset	0.04	13%	17%	18%
Skills for Justice	0.00	20%	23%	23%

Source: ILR, Experian, Labour Force Survey.

3.3.3 Public policy levers

Many sectors which currently do not offer high levels of apprenticeships, where the number of apprenticeships per employee and the modelled potential for the sector is low, are currently the target for public policy initiatives to raise the proportion of apprenticeships. This is the case for some smaller sectors where the impact on overall apprenticeship numbers may not be vast – for example Creative and Cultural Skills – but also for some sectors with a very large workforce, for example the public sector (Government Skills, Skills for Justice and Skills for Health SSCs).

The recent pre-budget report⁵⁵ also announced the use of public policy levers to increase apprenticeship delivery in other sectors. The government intends to fund major public sector building projects, for example within the health and education sectors (Building Schools for the Future):

‘In letting contracts for construction projects, Government Departments and their Agencies will now consider, on a case-by-case basis, making it a requirement that successful contractors have apprentices as an identified proportion of their workforce.’

⁵⁵ HM Treasury (November 2008) *Pre-budget report. Facing global challenges: Supporting people through difficult times.*

The report also stated that government will consider whether there is scope to extend this approach to other sectors, for example the IT sector. These measures will most certainly alleviate the impact on apprenticeship take up of the economic downturn and recent financial crisis.

SSCs that are predominantly public sector tend to be less affected in times of economic recession, but public spending is not immune. The modelled scenario for apprenticeship expansion shows that most public sector SSCs are not – with Skills for Care as an exception – expected to have great expansion potential and many ‘public sector’ SSC employers have a limited history of apprenticeship take-up. For example, Government Skills SSC (central government) has historically had low apprenticeship engagement and is not predicted to afford apprenticeship expansion opportunities. However, the public sector – with its large workforce – is where the government can exert considerable leverage to bring about take-up (as the government is the employer), whereas in the top target SSCs the government can only persuade private employers to engage.

Government has indeed tasked the public sector with raising their apprenticeship take up and committed funding for this. In January 2008, civil service employers committed to expand apprenticeships within their organisations by 500 new places, beginning in September 2008. In an announcement in October 2008, this was expanded to 1,000 new places – a doubling of the initial commitment. The recent research into the apprenticeship provider base also shows that many training providers are seeing the public sector – especially local government – as largely untapped and having great potential. A concerted government policy focus may thus result in apprenticeships expanding above current (modelled) expectations, potentially also making public sector a target sector.

3.4 Modelled apprenticeship expansion potential by local authority

3.4.1 Highest modelled potential

The local authorities with the business base that afford the greatest potential for expanding their apprenticeship offer are shown in figure 3.4. These are local authorities that have a suitable mix of businesses in the ‘target’ SSC sectors – those that have a high modelled apprenticeship potential – and consequently are the areas as a whole predicted to perform well. The rankings in the table are based on the predicted apprentices index for the local authority.

To some extent, the size of the local authority also plays a role in determining the potential for apprenticeship expansion, as naturally larger local authorities will afford greater expansion potential based on the size of the business base and workforce.

Although this figure shows local authorities in seven of the nine English regions, there are target local authorities in all regions, which can be identified through the full complementary tables to this report.

The sectoral mix of businesses varies across England. Service sector industries – such as Skillsmart Retail, People 1st (hospitality and catering) and Skills Active (sport and leisure), together with Skills for Care (Care), Skills for Health (Health) and Lifelong Learning (work-based learning, further and higher education; libraries; youth and community work) – are typically more evenly distributed around England according to population densities. Sectors such as SEMTA (engineering), Automotive Skills and Cogent (oil and gas) are geographically more concentrated, associated with resource availability and historic location patterns.

This is reflected in a high modelled apprenticeship potential across most local authorities for sectors such as Skillsmart Retail (retail) and People 1st (hospitality and catering), and a more variable modelled apprenticeship potential for a sector such as Cogent (oil and gas).

Identifying sectors with prospects for expanding the number of apprenticeships

There are some interesting variations here. Dudley is highly engaged, but has a low reliance on large sites, indicating that a lot of engagement is coming from small companies, whereas Wigan and the Wirral are highly engaged and have relatively high reliance on large site index, suggesting that they are more reliant on fewer, larger sites.

Westminster has a large number of apprentices due to the sheer volume of people working in the area, but the low reliance on large sites index in this case – in combination with a very low index for predicted apprentices per employee – is more likely due to extremely low engagement in apprenticeships. Conversely, there are some local authorities like Richmondshire (in Yorkshire), and Wear Valley (in North East) that are highly engaged in apprenticeships, but the modelled apprentice count is low, as the total workforce size is small.

The qualification profile of the population shows that there are also important opportunities for up-skilling the workforce in LADs that also have a high modelled potential for apprenticeship expansion. This is in areas with relatively high proportions of the population that are qualified below Level 2, including Sandwell, Stoke-on-Trent and Kingston upon Hull (47%, 46% and 45% respectively).

3.4.2 Lowest modelled potential

The 20 local authorities with the lowest modelled potential for apprenticeship expansion are shown in figure 3.5. Not surprisingly, many of these areas have a very small workforce. However, even amongst lower ranking local authorities there is often scope to expand apprenticeships, although in a more limited range of SSC sectors (i.e. those with relatively high modelled potential within the local authority). Often, but not exclusively, this is in the No SSC (range of sectors not covered by an SSC), Construction Skills (construction) and Summit Skills (building services engineering), Skillsmart Retail (retail) and People 1st (hospitality and catering) sectors.

Any strategic changes to the target expansion SSC sectors – for example a greater than expected public sector expansion of apprenticeships – will result in a change to the target local authorities as well, as the indices are based on the mix of sectors in the locality.

Opportunities for expanding apprenticeships do exist in localities with a relatively low qualification profile. This is most evident in the LADs of West Somerset, Wansbeck and Castle Point where around half of the population are qualified below Level 2.

Figure 3.4: Top 20 local authorities with high modelled potential for apprenticeship expansion

Rank	LAD	Region	Predicted Apprentices Index	Matched Apprentices Index	Reliance on large sites Index	Predicted Appr/ Employee Index	Employees	% population qualified below Level 2	% population qualified at Level 2	% population qualified at Level 3
1	Leeds	Yorkshire/Humber	1.00	1.00	0.64	0.16	725,795	38%	27%	20%
2	Birmingham	West Midlands	1.00	1.00	0.89	0.16	672,296	40%	26%	18%
3	Sheffield	Yorkshire/Humber	0.99	0.99	0.19	0.63	315,141	39%	26%	19%
4	Liverpool	North West	0.99	0.99	0.39	0.69	258,297	44%	27%	18%
5	Kirklees	Yorkshire/Humber	0.99	0.98	0.28	0.83	216,938	38%	27%	20%
6	Nottingham	East Midlands	0.99	0.97	0.47	0.57	225,572	41%	26%	19%
7	Bradford	Yorkshire/Humber	0.98	0.99	0.84	0.38	269,172	41%	26%	18%
8	Manchester	North West	0.98	0.98	0.63	0.21	355,690	38%	26%	20%
9	Bristol, City of	South West	0.98	0.96	0.39	0.31	289,695	36%	26%	20%
10	Dudley	West Midlands	0.97	0.93	0.15	0.99	140,899	43%	28%	18%
11	Wakefield	Yorkshire/Humber	0.97	0.94	0.31	0.91	152,520	43%	27%	17%
12	Newcastle upon Tyne	North East	0.97	0.97	0.60	0.48	215,262	37%	27%	21%
13	Sandwell	West Midlands	0.97	0.91	0.14	0.69	171,615	47%	24%	14%
14	Kingston upon Hull	Yorkshire/Humber	0.96	0.94	0.46	0.83	149,397	45%	26%	17%
15	Doncaster	Yorkshire/Humber	0.96	0.97	0.80	0.67	163,857	44%	27%	16%
16	Wigan	North West	0.96	0.96	0.73	0.90	136,175	43%	27%	17%
17	Wirral	North West	0.95	0.96	0.75	0.89	131,015	40%	29%	19%
18	Westminster	London	0.95	0.73	0.01	0.02	790,072	30%	25%	22%
19	Salford	North West	0.95	0.92	0.43	0.67	152,072	41%	27%	19%
20	Stoke-on-Trent	West Midlands	0.95	0.95	0.74	0.61	157,330	46%	27%	16%

Source: Experian, based on rankings of modelled predicted apprenticeship indexes; Labour Force Survey

Figure 3.5: Bottom 20 local authorities with low modelled potential for apprenticeship expansion

Rank	LAD	Region	Predicted Apprentices Index	Matched Apprentices Index	Reliance on large sites Index	Predicted Appr/ Employee Index	Employees	% population qualified below Level 2	% population qualified at Level 2	% population qualified at Level 3
335	Tandridge	South East	0.05	0.09	0.64	0.17	43,389	36%	29%	20%
336	Bridgnorth	West Midlands	0.05	0.13	0.81	0.43	26,791	37%	28%	20%
337	Adur	South East	0.05	0.04	0.31	0.39	28,226	39%	27%	20%
338	Uttlesford	East of England	0.05	0.12	0.85	0.14	46,996	36%	27%	19%
339	Epsom and Ewell	South East	0.04	0.00	0.04	0.19	37,893	34%	28%	21%
340	Surrey Heath	South East	0.04	0.16	0.93	0.09	53,703	34%	27%	22%
341	Castle Point	East of England	0.04	0.08	0.69	0.36	28,896	44%	27%	16%
342	South Bucks	South East	0.03	0.05	0.54	0.13	45,263	36%	28%	20%
343	Rushmoor	South East	0.03	0.07	0.67	0.07	55,395	42%	29%	17%
344	Three Rivers	East of England	0.03	0.03	0.45	0.14	44,584	37%	27%	20%
345	Hart	South East	0.03	0.06	0.72	0.07	53,032	34%	28%	22%
346	Purbeck	South West	0.02	0.01	0.77	0.28	21,762	39%	27%	22%
347	South Shropshire	West Midlands	0.02	0.02	0.86	0.32	20,693	38%	27%	19%
348	Wansbeck	North East	0.02	0.16	0.99	0.24	21,842	44%	29%	18%
349	Berwick-upon-Tweed	North East	0.01	0.01	0.91	0.48	13,641	41%	30%	19%
350	West Somerset	South West	0.01	0.02	0.96	0.12	26,001	46%	28%	16%
351	Alnwick	North East	0.01	0.02	0.97	0.40	13,407	41%	29%	20%
352	Rutland	East Midlands	0.01	0.07	1.00	0.11	19,764	37%	29%	20%
353	Teesdale	North East	0.00	0.01	0.98	0.34	10,981	43%	34%	16%
354	Isles of Scilly	South West	0.00	0.00	0.00	0.29	1,817	*	*	*

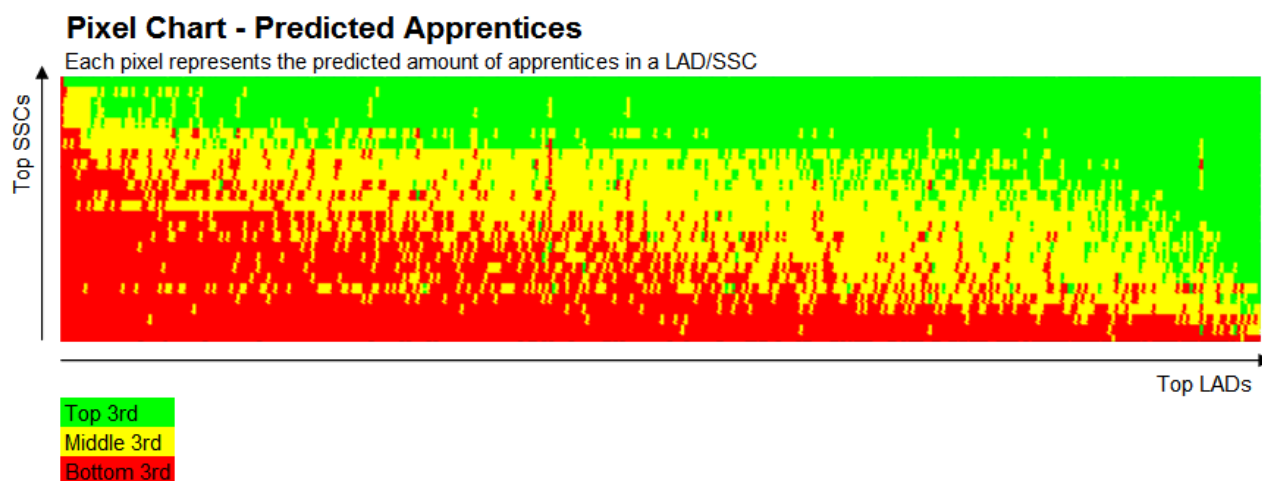
Source: Experian, based on rankings of modelled predicted apprenticeship indexes; Labour Force Survey

3.5 Establishing sector and geography priorities for targeting

As target sectors and local authorities with the most potential for apprenticeship expansion have been identified, the question arises whether it is better to target businesses on mainly a sectoral or geographical (local authority) basis. Figure 3.6, where the colours show whether a SSC sector/local authority combination is in the top (green), middle (yellow) or bottom (red) third in terms of predicted apprentices, illustrates this choice. Each pixel in this figure is a combination of an SSC and a local authority (e.g. Skillsmart Retail in Dudley). It shows that:

- **Only a few local authorities are highly engaged across a wide range of sectors.** As a column, or vertical slice, of this chart, indicates one local authority, if it is green from top to bottom, it means that it has a high expansion potential in all sectors – conversely, if it is mostly red it means that most sectors have a lower expansion potential. This can be seen to the right hand of the figure, where – if vertically slicing the chart – it is mostly green (i.e. the top sector/locality combinations). Very few local authorities have a lot of green pixels in their column.
- **Targeting apprenticeship expansion based on target sectors will be more effective than targeting based on top local authorities.** The SSCs run along the X axis of the chart, and as can be seen, the top ones are green for most local authorities. This shows that top-slicing by the top SSCs (horizontally) in the graph will produce a more solid green block, with less yellow and red ‘noise’ than if top-slicing the top local authorities (vertically) i.e. targeting the top SSCs across the country is likely to produce the best result, as they are green – or have the highest expansion potential – in most local authorities.

Figure 3.6: Predicted apprentices for each SSC sector and local authority combined



4 Apprenticeship supply and potential supply: learner analysis

Key messages

- The sectors which have the greatest modelled potential for expansion are also in general the sectors with the largest number of apprenticeship learners. Sectors with a tradition of taking on apprentices are also the sectors with the highest proportions of apprenticeship delivery.
- In general, over half of all frameworks undertaken in sectors with a high modelled potential for apprenticeships are sector specific, although the generic frameworks of business administration, customer service and management are also evident within these sectors in small numbers.
- Apprenticeship take up is concentrated to a limited number of frameworks – the 10 largest frameworks account for two-thirds of provision. The majority of the 10 largest frameworks are linked to one of the target expansion sectors.
- However, there are variations in the success rates of individual frameworks, overall and by level, which is an important consideration for expanding apprenticeship provision.
- The largest age group for apprenticeship learners is 19 to 24 year olds, accounting for nearly half of apprenticeship learners, closely followed by the 16 to 18 age group. Over the last year (2006/07 to 2007/08), the main increase has been in older learners (19+).
- There are clear differences in sectoral take up of apprenticeships by age, suggesting that this will need to be a consideration in any offer presented to employers within a given sector.
- Automotive Skills, No SSC sectors, Construction Skills and Summit Skills all have a majority of young people (16 to 18) on apprenticeships, reflecting the tradition of recruiting young people into the sector and 'growing your own'. Skillsmart Retail, People 1st and Skills for Care – all strongly people-focused (care or strongly customer facing) sectors – have mostly people aged 19 and above on apprenticeships, accounting for two-thirds of learners within the sectors.
- The balance between Level 2 (apprenticeships) and Level 3 (advanced apprenticeships) varies between expansion priority SSC sectors. For example, Skillsmart Retail, People 1st (hospitality and catering) and the No SSC sector have a concentration of apprenticeships (NVQ Level 2) and relatively low take-up of advanced apprenticeships (NVQ Level 3); conversely, SEMTA – as the only sector – has a higher profile of advanced apprenticeships.
- The preference of a level and framework by sector will be important to consider when putting forward an apprenticeship offer to the expansion target sectors, as sectors may require Level 2 or Level 3 frameworks, and generic or sector specific frameworks.

- The regions with the largest apprenticeships take up are the North West and the South East. The North West, Yorkshire and the Humber, and the North East all have particularly high take up whilst in the South East, East of England and London this is lower than could be expected compared to each region's share of the population. London particularly would be expected to have a higher level of delivery.
- The profile of apprenticeships in the target sectors for apprenticeship expansion across regions is remarkably even, with none of the target sectors being particularly dominant in a region – proportions of each of the sectors within a region broadly follow the region's overarching apprenticeship profile.

Key messages – NVQs which could also form part of a framework

- The two SSCs with the largest number of learners on standalone NVQs which could be part of a framework are SEMTA and Skills Active, followed by SummitSkills and ConstructionSkills, Skills for Care and No SSC.
- Learners within the SEMTA, Skills Active, Summit Skills, e-Skills UK and Go Skills sectors are in the main not funded through Train to Gain. In contrast, Skills for Care, Skills for Health and Skillsmart Retail have nearly all learners with conversion potential on Train to Gain (93%, 90% and 95% respectively) which means that in these sectors, there should perhaps be a strong co-operation with Train to Gain to ensure that learners are encouraged to convert onto a full apprenticeship once the NVQ is completed. There should be co-ordination between brokers who are involved with Apprenticeships and those with Train to Gain.
- The distribution of frameworks which standalone NVQ learners could take up is heavily concentrated to: Engineering; Health and Social Care; and Construction.
- The 25+ age group has by far the greatest number of learners on standalone NVQs which could be part of a framework, reflecting the large number of Train to Gain learners on these qualifications.
- The 'people-focused' sectors (Skills for Care, People 1st and Skillsmart Retail) along with the No SSC sector have mostly learners on standalone NVQs which could be part of a framework above 19 years old. Cogent and Automotive Skills have the highest proportion of young people, with just over half of learners in the 16 to 18 age group.
- Cogent – which for apprenticeships has mainly Level 2 learners – has three-quarters of learners on standalone NVQs which could be part of a framework at Level 3. This poses a question of whether appropriate framework options at Level 3 are available for employers, or if there are other reasons why learning at this level is so high outside apprenticeships. SEMTA also has a relatively high number of learners on standalone NVQs which could be part of a framework at Level 3, which echoes the sector's strong Level 3 engagement for actual apprenticeships. Skillsmart Retail and People 1st have a low uptake of Level 3 for both apprenticeships and standalone NVQs which could be part of a framework, raising the question of how relevant Level 3 qualifications are found within this sector.

4.1 Overview

This chapter will analyse the actual and potential supply of apprenticeships using data derived from the Individual Learner Record (ILR). The total number of apprenticeships⁵⁶ for the year 2007-08 is 404,000 according to the ILR, which is 7% increase from the previous year.

Some 68% of apprenticeship frameworks that learners are studying are assigned to specific Sector Skills Councils (SSCs). The remainder are mainly for cross-sectoral frameworks such as customer service and business administration, and are not assigned to individual SSCs in the ILR. However, using a four quarter average of the occupational profile of SSCs, we have been able to use these estimates to allocate learners to SSCs based on the occupational data on the ILR record. This enhances the analysis and gives a more sensitive sectoral representation of the breakdown of apprenticeships, especially within sectors where specific frameworks may not exist and mainly cross-sectoral frameworks are used.

A substantial number of learners are undertaking standalone NVQs that could be part of a framework. This means that the NVQ undertaken is listed on the Learning Aims Database as an aim which can be taken as part of an apprenticeship framework. For the purpose of this analysis, these will be referred to as *potential* apprenticeship learners. This includes learners both on Train to Gain funded qualifications as well as other routes. The division between potential apprenticeship learners on Train to Gain and those who are not on Train to Gain is emphasised to highlight the areas where a conversion from NVQs to apprenticeships is likely to come at a cost to Train to Gain. In 2007/08 there were 665,000 learners studying standalone NVQs which could be part of a framework – 45% of which were part of Train to Gain. Some NVQs can be part of multiple frameworks, in which case they are counted against all the potential frameworks in the analysis. 'Potential' apprenticeships on the WBL returns of the ILR have been allocated to SSC sectors based on the occupational profile (as above), whilst aims on the FE returns have been allocated according to the organisation responsible for the framework (as no occupational information is completed for these aims). Some 102,500 aims could not be assigned to an SSC as they are cross-sectoral and the occupational matching could not be applied.

The profile of apprenticeships is analysed according to age, region, level, framework and sector. The distribution of apprenticeships for each of these groups is presented along with analysis of the relationship between the variables.

4.2 Sector

The sectors with the highest modelled potential for apprenticeship expansion are also on the whole the sectors with the greatest number of apprenticeships, as illustrated by figure 4.1. Within the top nine sectors for expansion potential, only Cogent is not also in the top nine for actual number of apprenticeships in 2007/08.

SSCs that represent traditional apprenticeship occupations, as per the literature review in chapter 1, are also the sectors with the highest proportion of apprenticeships, with Construction Skills, SEMTA and Summit Skills represent a large share of apprenticeship provision. These, together with the No SSC group, make up 48% of apprenticeships in 2007/08. People 1st, Skills for Care and Skillsmart Retail – each with over 6% of learners – also provide a large share of apprenticeships. The remaining SSCs jointly provide only a third of apprenticeships.

⁵⁶ Defined as framework learners who were recorded to be in at some point in the 2007/08 academic year.

Figure 4.1: Apprenticeships by sector

SSC	Apprenticeships (numbers)	Apprenticeships (%)
No SSC	76,839	19.02%
Construction Skills	44,372	10.98%
SummitSkills	41,943	10.38%
SEMTA	31,255	7.73%
Skills for Care	29,346	7.26%
Skillsmart Retail	27,819	6.88%
People 1st	27,428	6.79%
Automotive Skills	17,818	4.41%
Skills for Health	13,160	3.26%
Government Skills (inc. local govt)	12,018	2.97%
Skills Active	9,898	2.45%
Skills for Logistics	8,984	2.22%
Cogent	7,781	1.93%
Financial Services Skills Council	7,362	1.82%
Improve	6,964	1.72%
e-Skills UK	6,129	1.52%
Lantra	5,960	1.48%
Skillfast-UK	5,942	1.47%
GoSkills	5,145	1.27%
Energy and Utility Skills	4,412	1.09%
Lifelong Learning UK	3,477	0.86%
Asset Skills	3,421	0.85%
Proskills	2,672	0.66%
Creative and Cultural Industries	1,752	0.43%
Skills for Justice	1,576	0.39%
Skillset	625	0.15%
<i>Source: ILR 2007/8 W12.</i>		

Apprenticeship numbers increased by 7% from 2006/7 to 2007/8, with some expansion – albeit unevenly – in each of the SSCs. The largest growth occurred in the Skills for Care, Skillsmart Retail and SEMTA sectors. A number of the smaller SSCs only increased their apprenticeship levels very slightly, most noticeably Proskills and Skillset.

Frameworks

Further manipulation of the ILR – drawing on Experian's National Business Database to match an industry (SIC) code to each of the apprenticeship employers, aggregating these SIC codes to an SSC, and then running crosstabs for each SSC against the its framework profile – illustrates whether framework coverage within each SSC is predominantly sector specific or generic.

In general, over half of all frameworks undertaken in sectors with a high modelled potential for apprenticeships are sector specific, although the generic frameworks of business administration, customer service and management are also evident within these sectors in small numbers. In contrast, business administration accounts for 42% of frameworks undertaken within Government Skills employers.

Figure 4.2: Leading apprenticeship frameworks for each SSC

(Top five frameworks, as measured by number of apprentices)

SSC	Framework				
	1.	2.	3.	4.	5.
No SSC	Hairdressing (39%)	Children's care learning and development (22%)	Business administration (8%)	Construction (7%)	Customer service (4%)
Construction Skills	Construction (61%)	Engineering (10%)	Plumbing (7%)	Electrotechnical (6%)	Business administration (4%)
SummitSkills	Electrotechnical (64%)	Plumbing (24%)	Heating, ventilation, air conditioning and refrigeration (5%)	Engineering (3%)	Business administration (1%)
SEMTA	Engineering (50%)	Business administration (8%)	Vehicle maintenance (6%)	Customer service (6%)	Electrotechnical (5%)
Skills for Care	Health and social care (67%)	Communications technologies (telecoms) (6%)	Business administration (6%)	Carry and deliver goods (4%)	Hospitality and catering (2%)
Skillsmart Retail	Retail (51%)	Customer service (25%)	Management (7%)	Business administration (3%)	Engineering (2%)
People 1st	Hospitality and catering (75%)	Customer service (11%)	Travel and tourism (5%)	Management (3%)	Business administration (2%)
Automotive Skills	Vehicle maintenance (59%)	Automotive industry (9%)	Vehicle body and paint operations (9%)	Vehicle fitting (7%)	Vehicle parts operations (3%)
Skills for Health	Health and social care (50%)	Dental Nursing (17%)	Business Administration (10%)	Customer Service (7%)	Hospitality and catering (3%)
Government Skills (inc. local govt)	Business Administration (42%)	Engineering (13%)	Customer Service (8%)	Accountancy (6%)	Construction (6%)
Skills Active	Active leisure and learning (41%)	Customer Service (11%)	Equine Industry (10%)	Hospitality and Catering (9%)	Sporting excellence (8%)
Skills for Logistics	Engineering (19%)	Business Administration (13%)	Customer Service (13%)	Public services (13%)	Vehicle Maintenance (5%)
Cogent	Engineering (34%)	Retail (16%)	Business Administration (12%)	Customer Service (7%)	Chemical, pharmaceutical, petro-chemical manufacturing & refining industries (6%)
Financial Services Skills Council ⁵⁷	Business Administration (37%)	Customer Service (27%)	Accountancy (6%)	Management (4%)	Insurance (2%)

⁵⁷ 13% of frameworks for Financial Services Skills Council have been mis-labelled as 346.

Identifying sectors with prospects for expanding the number of apprenticeships

	Framework				
SSC	1.	2.	3.	4.	5.
Improve	Engineering (35%)	Business Administration (10%)	Management (7%)	Customer Service (7%)	Accountancy (6%)
e-Skills UK	Customer Service (34%)	Contact Centres (13%)	Business Administration (10%)	Sales and Telesales (8%)	IT services and development (7%)
Lantra	Veterinary Nursing (33%)	Animal Care (15%)	Amenity Horticulture (11%)	Agricultural Crops (10%)	Land-based Services (7%)
Skillfast-UK	Customer Service (40%)	Retail (18%)	Business Administration (14%)	Management (7%)	Engineering (4%)
GoSkills	Engineering (26%)	Vehicle Maintenance (21%)	Customer Service (10%)	Transport engineering and maintenance (9%)	Business Administration (9%)
Energy and Utility Skills	Engineering (19%)	Business Administration (19%)	Electrotechnical (14%)	Electricity Industry (11%)	Customer Service (10%)
Lifelong Learning UK	Business Administration (27%)	Construction (13%)	Children's Care Learning (10%)	Customer Service (8%)	Engineering (4%)
Asset Skills	Business Administration (23%)	Property Services (20%)	Construction (19%)	Customer Service (11%)	Plumbing (6%)
Proskills	Printing (25%)	Rail Transport Engineering (19%)	Engineering (15%)	Business Administration (13%)	Customer Service (7%)
Creative and Cultural Industries	Public Services (47%)	Customer Service (11%)	Retail (10%)	Business Administration (10%)	Hospitality and Catering (5%)
Skills for Justice	Business Administration (37%)	Customer Service (34%)	Security Industry (8%)	Rail transport engineering (4%)	Community justice (4%)
Skillset	Customer Service (40%)	Retail (17%)	Business Administration (11%)	Management (10%)	Construction (5%)
Source: ILR 2007/8 W12.					

Standalone NVQs which could be part of a framework

The two SSCs with the largest number of learners on standalone NVQs which could be part of a framework are SEMTA and Skills Active, followed by SummitSkills and ConstructionSkills, Skills for Care and No SSC.

Figure 4.3: Standalone NVQs which could be part of a framework by sector⁵⁸

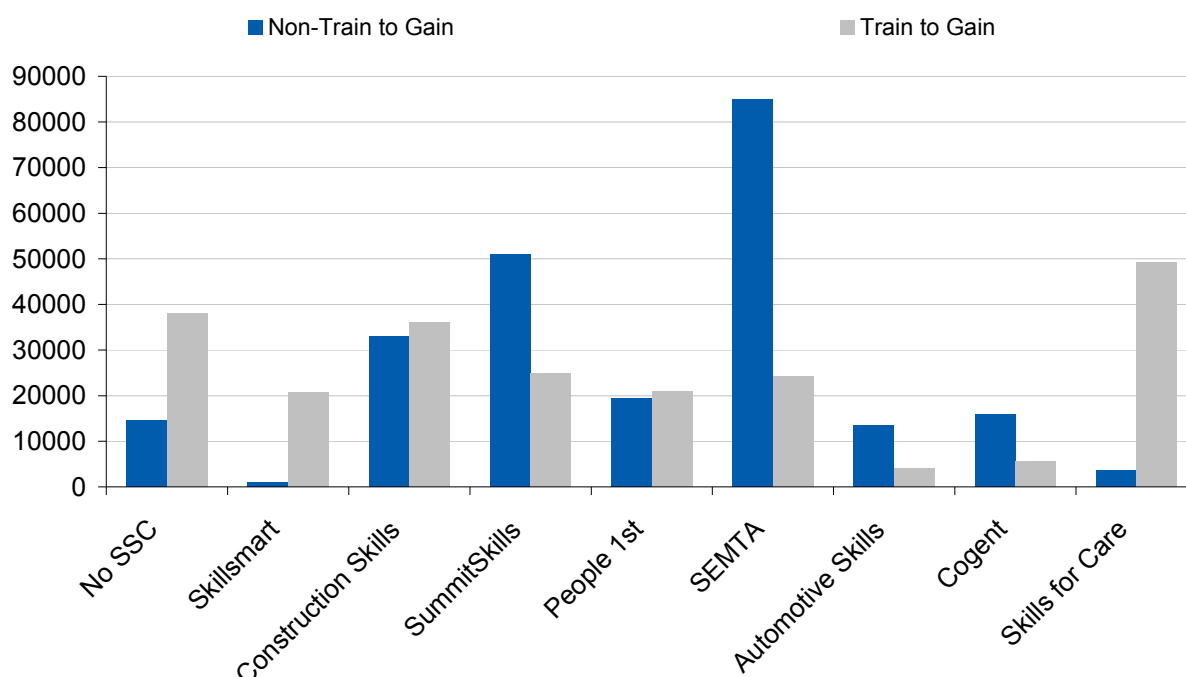
SSC	Standalone NVQs (numbers)	of which Train to Gain (%)
SEMTA	109,189	22%
Skills Active	90,826	6%
Summit Skills	75,845	33%
Construction Skills	68,897	52%
Skills for Care	52,787	93%
No SSC	52,539	72%
e-Skills UK	48,927	17%
Skills for Health	48,005	90%
People 1st	40,459	52%
GoSkills	22,088	27%
Skillsmart Retail	21,773	95%
Cogent	21,627	26%
Automotive Skills	17,497	23%
Skills for Logistics	17,406	94%
Improve	13,859	86%
Asset Skills	12,420	68%
Energy and Utility Skills	10,700	31%
Lantra	9,078	39%
Skillfast-UK	8,294	97%
Proskills	8,178	64%
Government Skills (inc. Local govt)	6,545	95%
Financial Services Skills Council	5,312	66%
Lifelong Learning UK	3,681	74%
Skills for Justice	1,812	86%
Creative and Cultural Industries	1,525	92%
Skillset	1,375	35%
Unassigned (cross-sectoral)	102,459	32%

Source: ILR 2007/8 F04 and W12.

Some sectors have a strong bias towards learners not funded through Train to Gain, for example SEMTA, Skills Active, Summit Skills, e-Skills UK and Go Skills (67%, 83% and 73% respectively). For Construction Skills around half of learners on standalone NVQs which could be part of a framework are Train to Gain learners, whilst half are not. In contrast, Skills for Care, Skills for Health and Skillsmart Retail all have nearly all 'potential' apprenticeship learners on Train to Gain (93%, 90% and 95% respectively) which means that in these sectors, there should perhaps be a strong co-operation with Train to Gain to ensure that learners are encouraged to convert onto a full apprenticeship once the NVQ is completed. Figure 4.4 shows the Train to Gain proportions by the target sectors for expansion identified in chapter 3.

⁵⁸ Note that as an NVQ can be part of multiple frameworks, and potentially multiple sectors, aims are here double counted where this is applicable.

Figure 4.4: Standalone NVQs which could be part of a framework by top sectors with potential for expansion



Source: ILR 2007/08 F04 and W12.

4.3 Framework

The majority of the top 10 frameworks delivered are linked to one of the expansion sectors. Health and social care is the main exception (owned by Skills for Health), and the two main cross-sectoral frameworks – business administration and customer service – also feature.

Although there were learners on a total of 128 different apprenticeship frameworks in 2007/08, learners are heavily concentrated in a relatively small number of frameworks. This is illustrated by figure 4.5 which shows that the top 10 frameworks together account for over two thirds of all apprenticeships. Frameworks within traditional apprenticeship sectors such as Construction, Engineering, Hospitality and Catering, and Vehicle Maintenance and Repair, feature heavily amongst these.

An important consideration for expanding apprenticeship provision within each of the largest frameworks is the success rates of the provision. Firstly, there are variations between Level 2 and Level 3, where for example success rates in vehicle maintenance and repair, construction and business administration at Level 3 are significantly higher than at Level 2. In contrast, an apprenticeship in children's learning and development or electrotechnical has higher success rates at Level 2.

Further analysis shows that, overall, health and social care frameworks have the lowest success rates (of the top 10 frameworks) at Level 2 and children's care learning and development at Level 3.

Figure 4.5: Ten largest apprenticeship frameworks

Framework	Apprenticeships (numbers)	Apprenticeships (% of total)	Success rates	
			Level 2	Level 3
Construction	39,956	9.8 %	44%	54%
Hairdressing	33,284	8.2%	49%	50%
Engineering	33,218	8.2%	51%	48%
Customer service	30,828	7.6%	54%	57%
Business administration	29,130	7.2%	53%	61%
Children's care learning and development	27,844	6.8%	46%	41%
Hospitality and catering	26,172	6.4%	47%	48%
Electrotechnical	21,148	5.2%	50%	44%
Health and social care	19,695	4.8%	39%	46%
Vehicle maintenance and repair	18,531	4.6%	59%	74%

Source: ILR 2007/8 W12. including timely success rates

Standalone NVQs which could be part of a framework

An understanding of the frameworks which learners on standalone NVQs, which could be part of a framework, could take up gives a more detailed indication of areas where further promotion (and ensuring appropriate frameworks are in place) could materialise into apprenticeship take up.

The distribution of standalone NVQs is heavily concentrated in three frameworks: engineering; health and social care; and construction (all with over 10% of standalone NVQs which could be part of a framework). Following these, there is a greater spread between frameworks with only hospitality and catering accounting for over 5% of standalone NVQs which could be part of a framework.

Figure 4.6: Ten largest frameworks of which standalone NVQs could be part

Framework	Proportion of standalone NVQs
Engineering	10.52%
Health and Social Care	10.47%
Construction	10.43%
Hospitality and Catering	5.13%
Engineering Construction	4.94%
Active Leisure and Learning	4.61%
Customer Service	3.82%
Electrotechnical	3.58%
Business Administration	3.00%
Management	2.84%

Source: ILR 2007/8 F04 and W12.

4.4 Age

The vast majority of apprenticeships are undertaken by learners aged between 16 and 24, equating to 91% of apprenticeships, as can be seen in figure 4.7. There is also a bias towards the 19 to 24 age group, significant considering the programme has until recently been strongly focused on the younger age group and this would therefore be expected to be more prominent.

Identifying sectors with prospects for expanding the number of apprenticeships

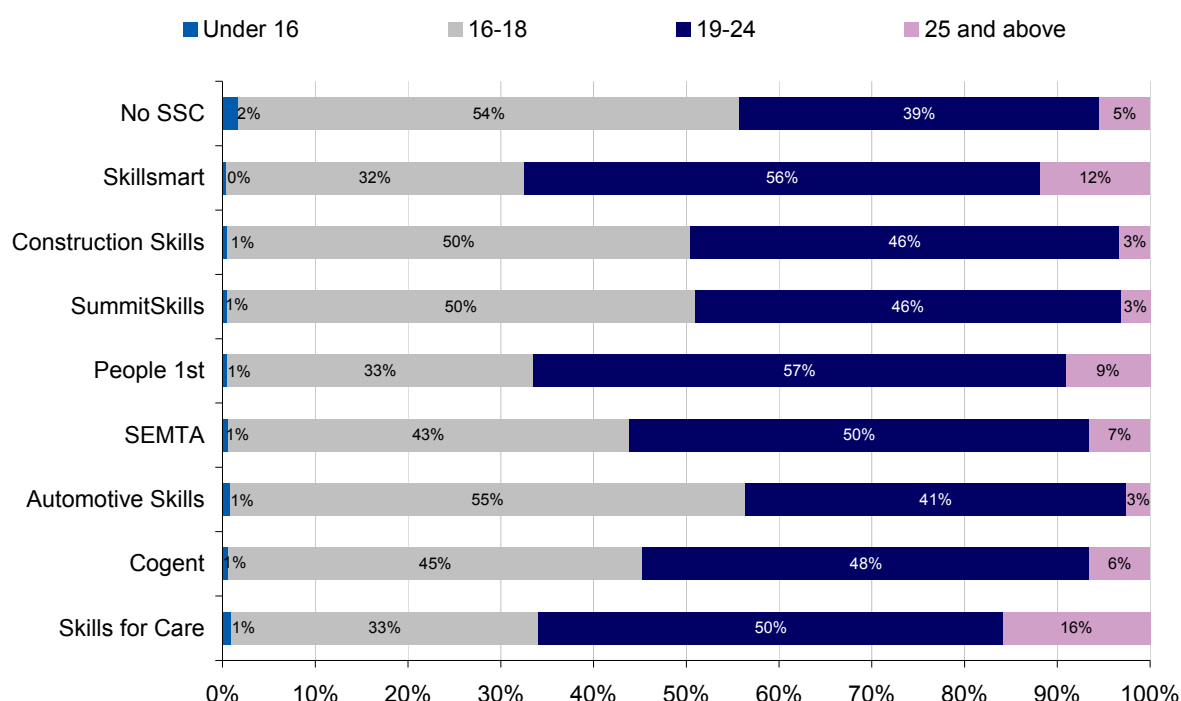
Figure 4.7: Distribution of apprenticeships according to age group

Age Band	Apprenticeships (%0
Under 16	0.9%
16-18	43.7%
19-24	47.6%
25 and Above	7.8%
Source: ILR 07/08 W12.	

From 2006/07 to 2007/08 there was a shift in the age profile of apprenticeships, with a reduction in young learners with a more than compensating increase in both the 19 to 24 and 25 and above age groups (particularly the latter). The reason for this change is mainly the opening up of apprenticeship funding for the older age groups.

There are clear differences in sectoral take up of apprenticeships by age, as figure 4.8 shows. Automotive Skills, No SSC sectors, Construction Skills and Summit Skills all have a majority of young people (16 to 18) on apprenticeships, reflecting the tradition of recruiting young people into the sector and 'growing your own'. In contrast, Skillsmart Retail, People 1st and Skills for Care – all strongly people-focused sectors – have mostly people aged 19 and above on apprenticeships, accounting for two-thirds of learners within the sectors.

Figure 4.8: Apprenticeships by sector and age



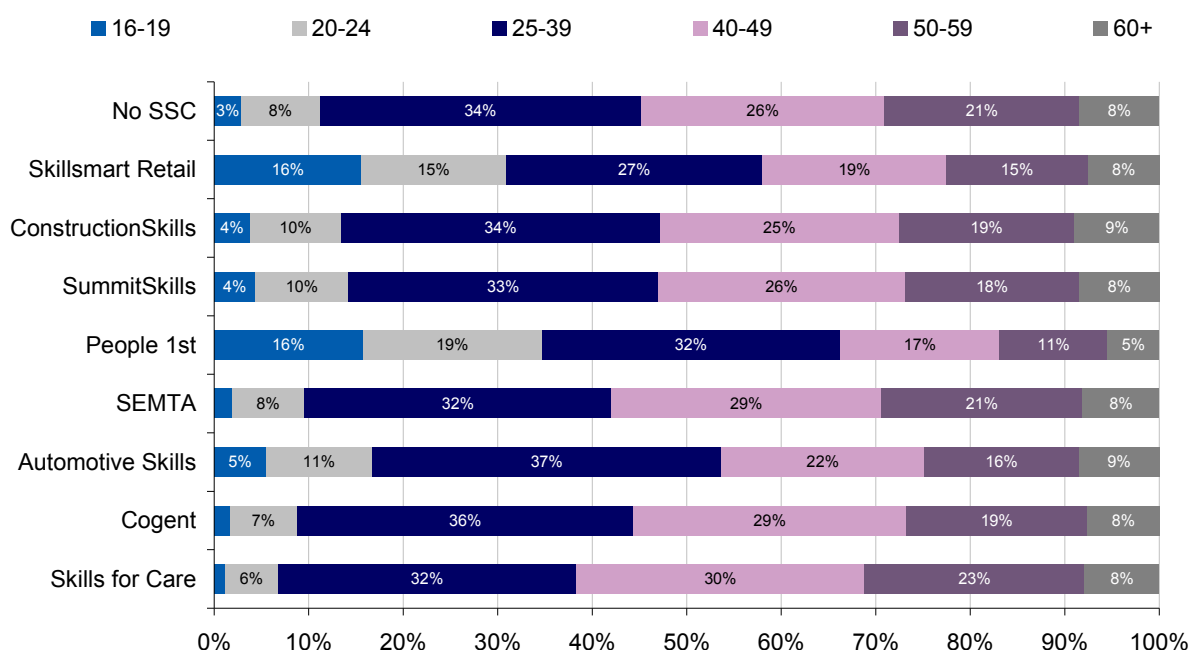
Source: ILR 0708 W12.

The shift between 2006/07 and 2007/08 from 16 to 18 year olds to the 25 and above age groups has been most marked in People 1st, Skills for Care, Skills for Health, Skillsmart Retail and the No SSC groups, however, all sectors have felt this effect to some extent. The strong take up of the older apprenticeships by the people-focused sectors – whether in health and care or with a strong customer facing element – indicates that life experience may be valued in these sectors, and that this could be an important factor in any expansion in these sectors.

Identifying sectors with prospects for expanding the number of apprenticeships

As well as the age profile of the apprentices, the age profile of the workforce also plays a role in any expansion strategy, as noted in chapter 1. In sectors with an ageing workforce, as well as sectors that employ a large share of 16 to 18 year olds, there is a strong potential to expand apprenticeships. Figure 4.9 shows that Skills for Care, SEMTA and the No SSC sectors have the largest proportion of the workforce aged above 50 years old, potentially providing a demand to replace this ageing workforce. A closer study of the public sector SSCs shows that they demonstrate a similar pattern, with a third of the workforce aged above 50 years old, also confirming that these target SSCs are key sectors for expansion based on the workforce age profile.

Figure 4.9: Sector workforce age make up



Source: LFS/APS 4 quarter average (July 2007-June 2008).

Standalone NVQs which could be part of a framework

The age profile here is very different from that of actual apprentices, with the 25+ age group having by far the greatest number of learners on standalone NVQs which could be part of a framework (56%), reflecting the large number of Train to Gain learners on these qualifications. The 19 to 24 group, however, has relatively few learners on standalone NVQs which could be part of a framework (17%).

The policy emphasis that has been placed on increasing the number of 16 to 18 year olds on apprenticeships⁵⁹ seems to have strong potential within the LSC funded post-16 sector, as a considerable number of 16 to 18 year olds are still undertaking standalone NVQs which could be part of apprenticeships (27% of standalone NVQs).

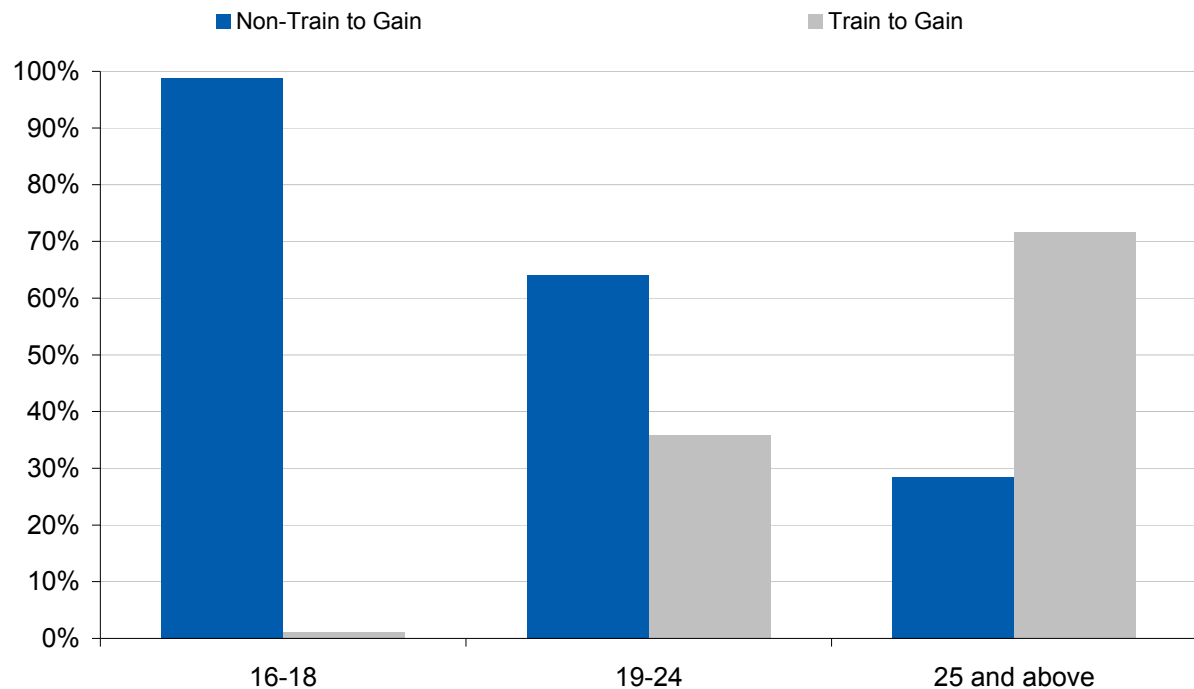
As expected, the older age groups have a much greater propensity to be Train to Gain funded, as illustrated by figure 4.10. Hence, there is greater potential to encourage younger age groups to

⁵⁹ Through e.g. the LSC Grant Letter for 2009-10, which has targets for expansion, and the recently introduced Children, Skills and Learning Bill, which sets out an entitlement to an apprenticeship place for any suitable qualified young person from 2013.

Identifying sectors with prospects for expanding the number of apprenticeships

undertake apprenticeships in place of standalone NVQs, whilst in the older age groups, the focus should perhaps be on conversion to apprenticeships once the NVQ is completed.

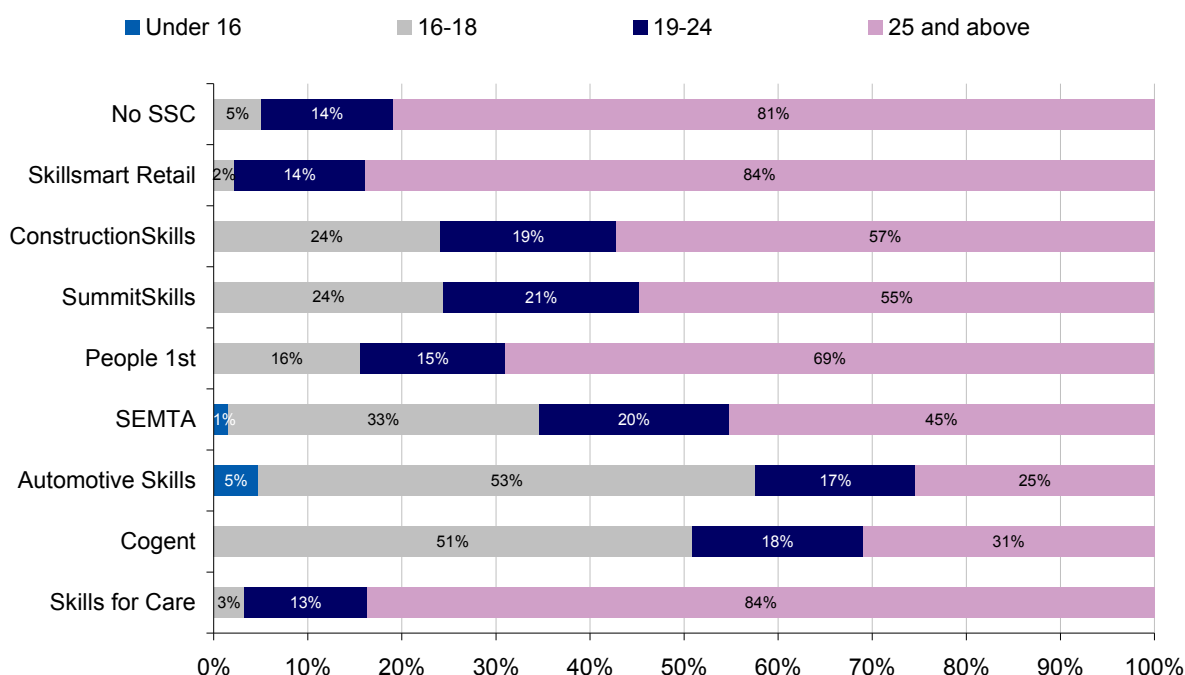
Figure 4.10: Proportion of Train to Gain funded standalone NVQs by age



Source: ILR 2007/08 F04 and W12.

Sectorally, the age profile of learners on standalone NVQs which could be part of a framework is even more differentiated than the apprenticeship profile, as shown in figure 4.11, although there are still some common themes. For example, the people-focused sectors (Skills for Care, People 1st and Skillsmart Retail) along with the No SSC sector have mostly learners above 19 years old. Cogent and Automotive Skills both have a more balanced age profile, with just over half of learners in the 16 to 18 age group.

Figure 4.11: Standalone NVQs which could be part of a framework by sector and age



Source: ILR 2007/08 F04 and W12.

4.5 Level

As set out in figure 4.12, nearly two-thirds of apprenticeships are delivered at Level 2 (apprenticeships) with the remaining third at Level 3 (advanced apprenticeships). Few apprenticeships are delivered as higher apprenticeships.

Figure 4.12: Apprenticeships by level of study

Level	Apprenticeships (number)	Apprenticeships (%)
Apprenticeship	260,876	64%
Advanced Apprenticeship	145,520	36%
Higher Level Apprenticeship	143	0.04%

Source: ILR 2007/8 W12

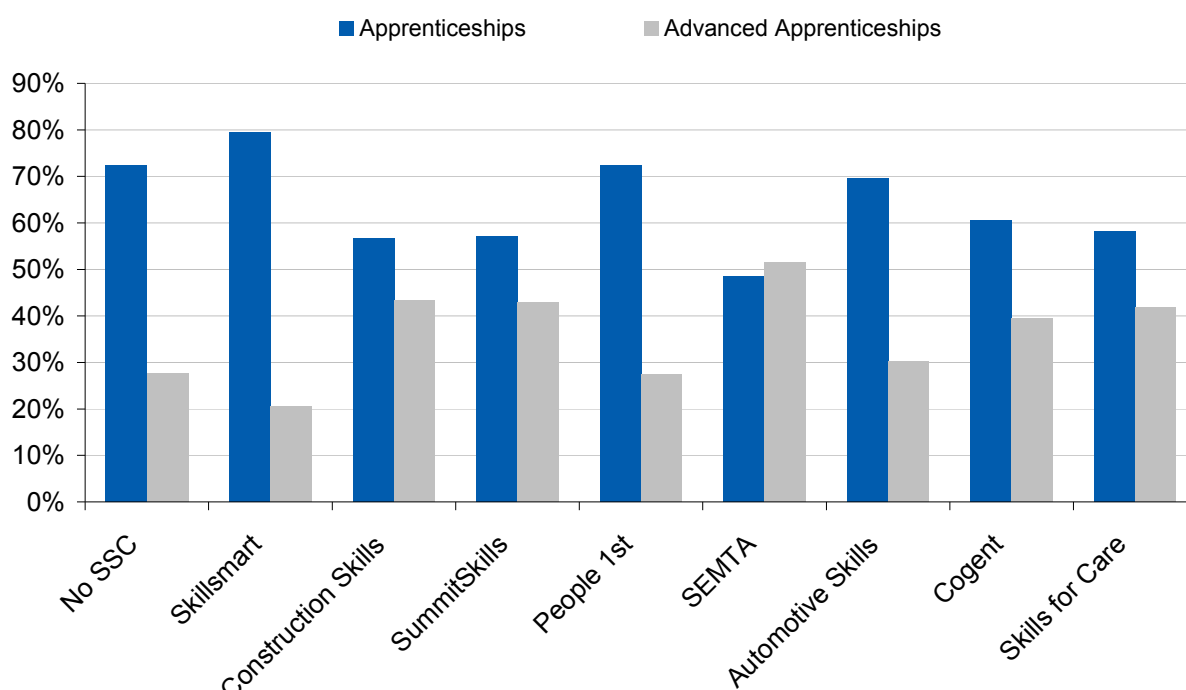
The increase in apprenticeships between 2006/07 and 2007/08 has mainly occurred at Level 2 (apprenticeships), which accounted for 10% of the increase, whilst Level 3 (advanced apprenticeships) only accounted for 2% of the increase. All sectors apart from Skills Active (where figures remained static) increased the number of Level 2 apprenticeships from the previous year, some by as much as a third. For advanced apprenticeships, there was more of a differentiation between sectors, where for example Automotive Skills decreased the number of learners by 28%, whilst Skills for Health, Skills for Care and Skills Active all experienced increases above 20%.

Identifying sectors with prospects for expanding the number of apprenticeships

The balance between Level 2 (apprenticeships) and Level 3 (advanced apprenticeships) varies between expansion target SSC sectors. For example, Skillsmart Retail SSC (retail), People 1st (hospitality and catering) and the No SSC sector have a concentration of apprenticeships (NVQ Level 2) and relatively low take-up of advanced apprenticeships (NVQ Level 3); conversely, SEMTA – as the only sector – has a higher profile of advanced apprenticeships, as shown in figure 4.13.

The Level preference of the sector will be important to consider when putting forward an apprenticeship offer to the expansion target sectors, as some sectors may require advanced apprenticeships, whilst for others apprenticeships at Level 2 may suffice.

Figure 4.13: Apprenticeships by sector and Level of study



Source: ILR 0708 W12.

Standalone NVQs which could be part of a framework

The numbers of learners on standalone NVQs which could be part of a framework by level are very similar to the apprenticeships with two-thirds of standalone NVQs that could be part of apprenticeships being delivered at Level 2 and the remaining third at Level 3, as shown in figure 4.14.

Figure 4.14: Potential apprenticeships by level of study

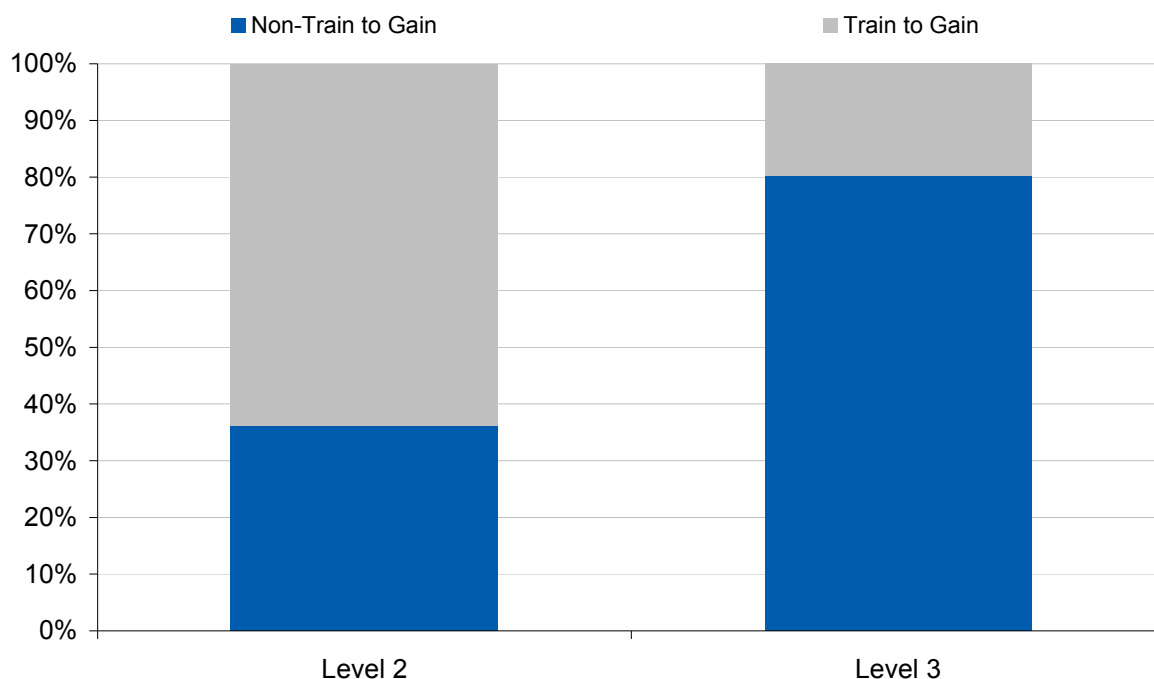
Level	Apprenticeships (%)
Apprenticeship	68%
Advanced Apprenticeship	32%

Source: ILR 2007/8 F04 and W12

Identifying sectors with prospects for expanding the number of apprenticeships

As figure 4.15 shows, the majority of learners on standalone NVQs which could be part of a framework at Level 2 are Train to Gain funded, whilst the reverse is true for Level 3. Learners on standalone NVQs which could be part of a framework who are not Train to Gain funded study at Level 2 and Level 3 in equal measures (50% at each level), whilst Train to Gain funded learners are overwhelmingly undertaking learning at Level 2 (88%), which is consistent with the aims of this funding stream.

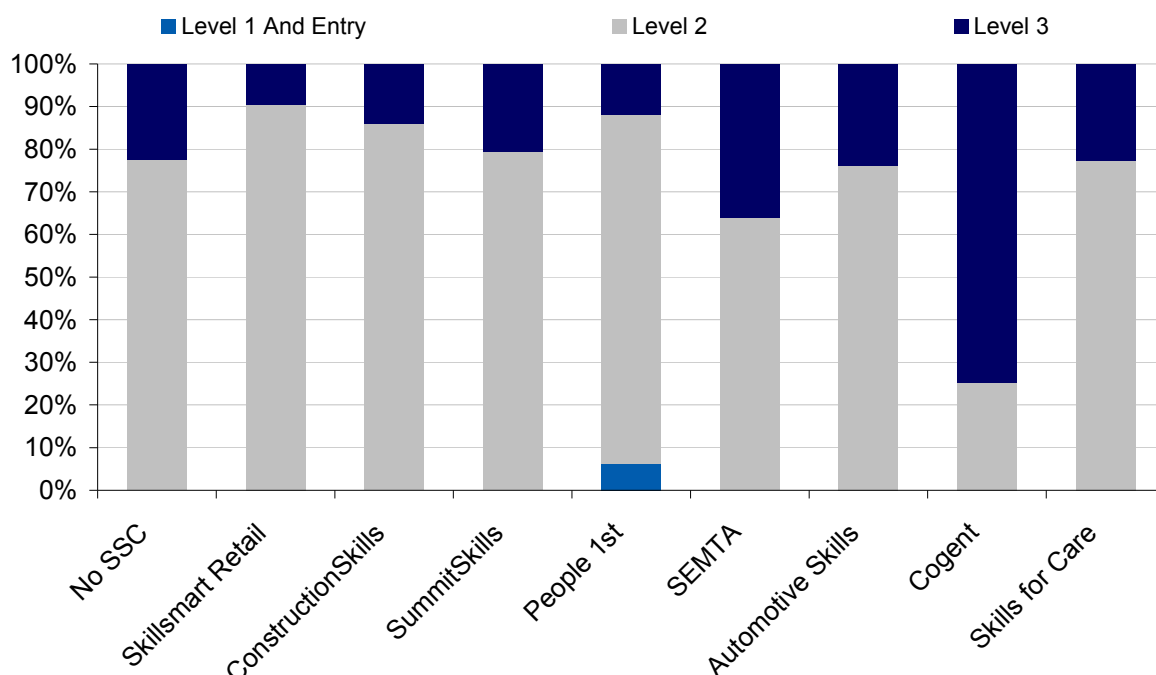
Figure 4.15: Proportion of Train to Gain funded standalone NVQs by level



Source: ILR 2007/08 F04 and W12.

The balance between Level 2 and Level 3 study for standalone NVQs which could be part of a framework also differs between sectors, as shown in figure 4.16. Cogent – which for apprenticeships has mainly Level 2 learners – has three-quarters of learners on standalone NVQs which could be part of a framework at Level 3. This requires a further review of the appropriate framework options at Level 3 available for employers, or if there are other reasons why learning at this level is so high outside apprenticeships. SEMTA also has a relatively high number of learners on standalone NVQs which could be part of a framework at Level 3, which echoes the sectors strong Level 3 engagement for apprenticeships. Similarly, Skillsmart Retail and People 1st have a low uptake of Level 3 not only for apprenticeships, but also for standalone NVQs which could be part of a framework, raising the question of how relevant Level 3 qualifications are found within this sector.

Figure 4.16: Standalone NVQs which could be part of a framework by sector and level of study



Source: ILR 2007/08 F04 and W12.

4.6 Region

The regions with the largest apprenticeship take up are the North West and the South East, which together provide 30% of apprenticeships (based on learner residence). In figure 4.17, levels of apprenticeships are compared to the regional population, showing that the North West, Yorkshire and the Humber, and the North East have a higher proportion of apprenticeship take up than the proportion of the English population. Conversely, the South East, East of England and London have a lower apprenticeship take up compared to the population. London particularly would be expected to have a higher level of delivery considering its population is the second highest of the English regions – however, factors such as the qualification levels of the population may have an impact on the level of take up.

Figure 4.17: Apprenticeships by home region of the learner

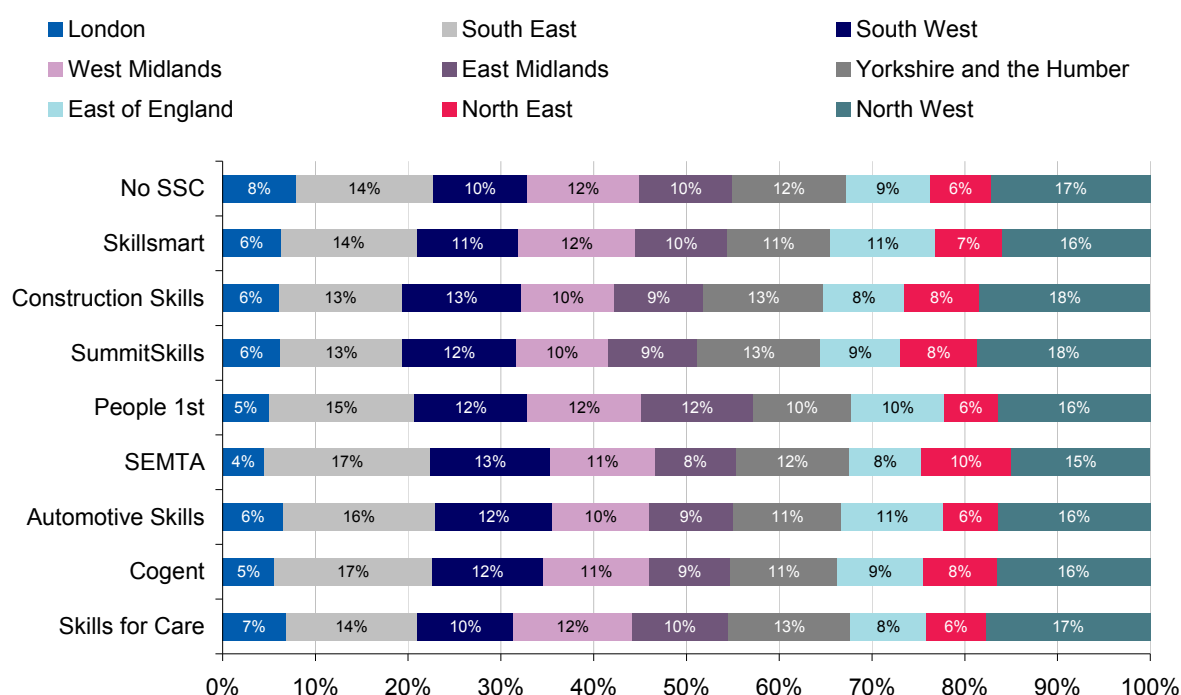
	Apprenticeships (numbers)	Apprenticeships (%)	Population (%)
North West	66,767	16%	13%
South East	58,507	14%	16%
Yorkshire and the Humber	51,479	13%	10%
South West	45,911	11%	10%
West Midlands	45,797	11%	11%
East Midlands	38,176	9%	9%
East of England	36,360	9%	11%
North East	28,943	7%	5%
London	25,704	6%	15%
Region not known	8,895	2%	

Source: ILR 2007/08 W12, ONS mid-year population estimates 2007.

Identifying sectors with prospects for expanding the number of apprenticeships

The profile of apprenticeships in the target sectors for apprenticeship expansion across regions is remarkably even, as illustrated by figure 4.18, with none of the target sectors being particularly dominant in a region – proportions of each of the sectors within a region broadly follow the region's overarching apprenticeship profile as set out in figure 4.16. Sectors where there are slight differentiations (more than 2 percentage points higher or lower than the regional average) include: SEMTA, for which the share of apprenticeships in the South East and North East are slightly higher than the regional average; People 1st, which is higher than average in the East Midlands and lower than average in Yorkshire and the Humber; and Skillsmart Retail which is higher than average in East of England.

Figure 4.18: Apprenticeships by sector and home region of the learner



Source: ILR 2007/08 F04 and W12.

Standalone NVQs which could be part of a framework

There is a shift of regional balance as regards the take up of standalone NVQs which could be part of a framework, as illustrated by figure 4.19. Although the North West is still the region with the highest level of take up, London – which has a low take up of apprenticeships compared to its population – has the second largest take up of standalone NVQs which could be part of a framework, which is more in line with the population profile. The South East, which also has a lower take up of apprenticeships compared to its population, has an even lower level of take up of standalone NVQs which could be part of a framework.

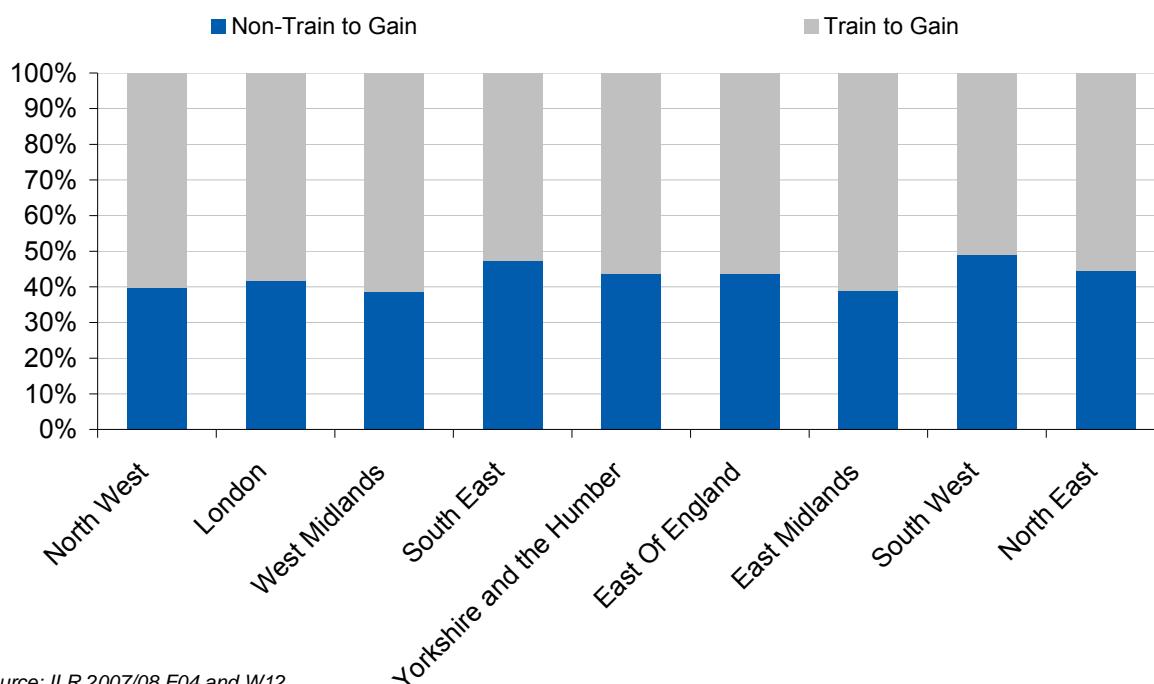
Figure 4.19: Standalone NVQs which could be part of a framework by home region of the learner

	Standalone NVQs (numbers)	Standalone NVQs (%)	Population (%)
North West	100,058	15%	13%
London	90,461	14%	15%
West Midlands	82,870	12%	11%
South East	79,912	12%	16%
Yorkshire and the Humber	66,306	10%	10%
East Of England	63,784	10%	11%
East Midlands	61,900	9%	9%
South West	59,883	9%	10%
North East	42,888	6%	5%
Region not known	17,572	3%	

Source: ILR 2007/08 W12, ONS mid-year population estimates 2007.

In all regions, Train to Gain funded provision account for more than half of all take up of standalone NVQs which could be part of a framework, as shown in figure 4.20. The regions with the highest proportion of Train to Gain funded standalone NVQs are the North West, West Midlands and the East Midlands.

Figure 4.20: Proportion of Train to Gain funded potential apprenticeships by home region of the learner



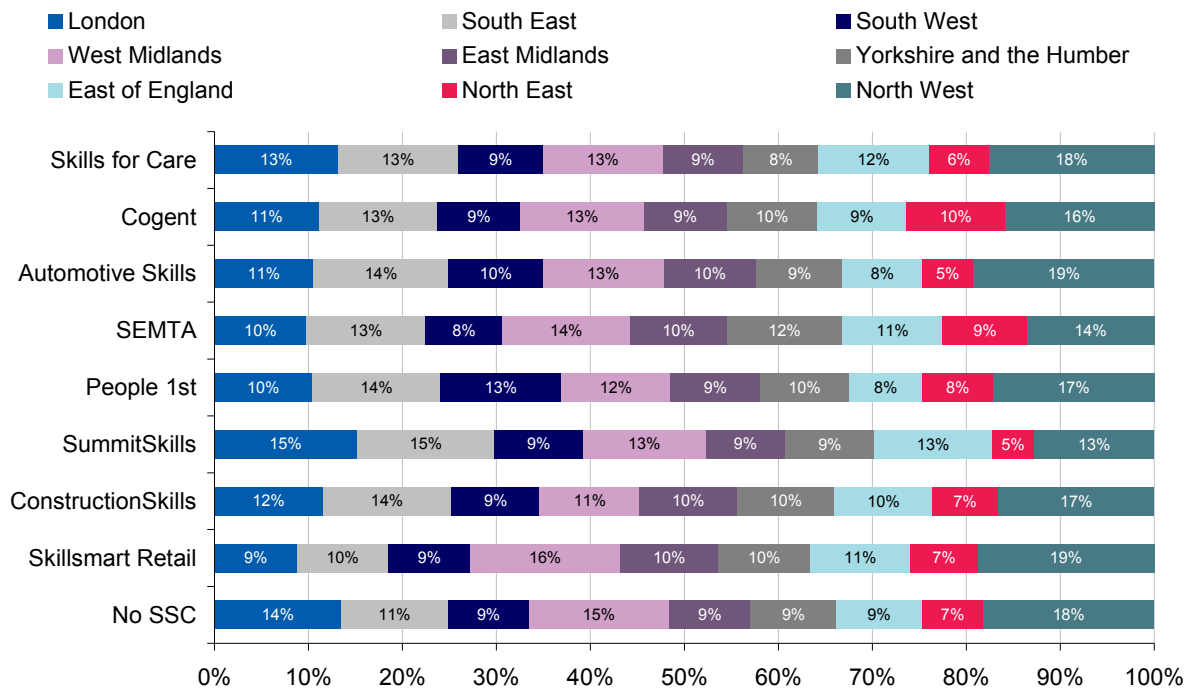
Source: ILR 2007/08 F04 and W12.

Identifying sectors with prospects for expanding the number of apprenticeships

The sectoral take up of standalone NVQs which could be part of a framework is more differentiated than the take up of apprenticeships, as figure 4.21 shows. In London, the take up of most of the target expansion sectors is lower than the regional average take up (13%) – and particularly for Skillsmart Retail, People 1st and SEMTA. Conversely, in the North West, the take up of standalone NVQs which could be part of a framework in the target expansion sectors is in most cases higher than the regional average (15%), particularly for Skillsmart Retail and Automotive Skills. No SSC sectors and Skillsmart Retail are higher than average in West Midlands; Summit Skills has a higher than average take up in East of England, but lower than average in North East and North West; People 1st has a higher than average take up in the South West, but lower than average in East of England; SEMTA and Cogent have a higher than average take up in the North East; and Skills for Care has a lower than the regional average take up in Yorkshire and the Humber.

There should be particular opportunity for conversion of standalone NVQs to apprenticeship in regions and sectors where apprenticeship take up is relatively good, but where the take up of standalone NVQs which could be part of a framework is lower than the regional average.

Figure 4.21: Potential apprenticeships by sector and home region of the learner



Source: ILR 2007/08 F04 and W12.

5 Apprenticeship demand/supply imbalances: GIS mapping of employer apprenticeship demand and learner apprenticeship supply

Key messages

- There are a number of local authorities located in the North West, Yorkshire and the Humber and West Midlands which have a large expansion potential in most target sectors.
- In most areas there is a match between the expansion potential and level of apprenticeship take up (i.e. the local authority falls in the same quintile in both).
- In the majority of local authorities and sectors, the take up of apprenticeships is higher than the take up of standalone NVQs which could be part of a framework (i.e. the local authority falls in the same or lower quintile for standalone NVQs).
- London is the exception with low levels of apprenticeship take up, and consistently high levels of take up of standalone NVQs which could be part of a framework, indicating that a conversion from standalone NVQs to apprenticeships has been less successful in the region.
- Cogent has particularly low levels of apprenticeship take up across most of the country, despite its expansion potential.

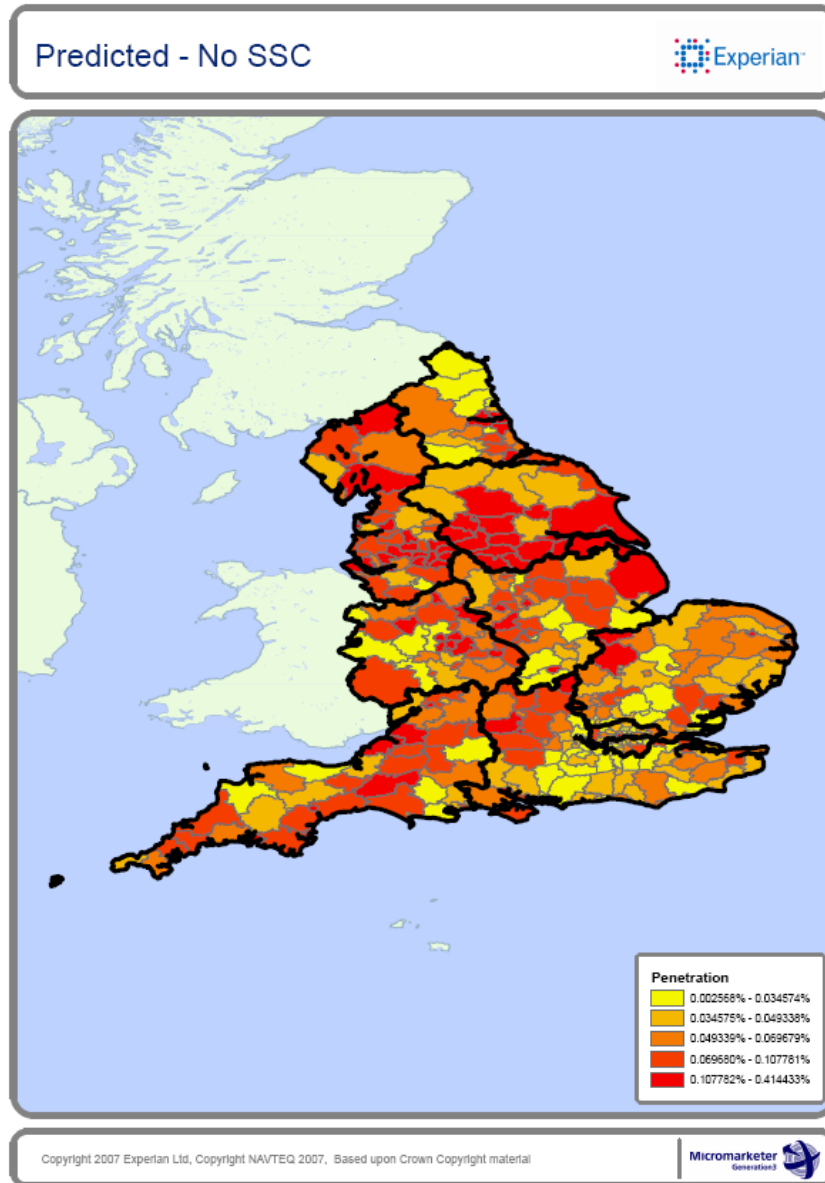
5.1 Overview

This section provides a visual representation of the penetration of the target sectors with potential for apprenticeship expansion; and actual and potential apprenticeship learners, at a local authority level. The maps aid gap analysis – areas with opportunity but currently low take up by learners – and can provide a rapid review of opportunity areas. They provide an overview, where detail can be followed up through the more detailed data tables. Maps are available in pdf format not only for the sectors and geographies shown, but also for additional sectors, and for the nine English regions.

This section shows the maps for the nine modelled target sectors, with accompanying narrative analysis, to show how the maps can be used. The penetration bands on the maps are displayed by quintile, which means that the bands are different for each sector.

To aid further detailed analysis, ranking reports for the mapped sectors are available as MS Excel spreadsheets. These can be used to see in closer detail the ranking of individual local authorities for a particular sector, and therefore allow a more nuanced analysis.

Figure 5.1a: Apprenticeship expansion potential for the No SSC sector



- As the No SSC sector – SIC codes not covered by a sector skills council – includes a diverse mix of industries, and is dominated by geographically evenly distributed sectors such as hair and beauty and primary and secondary education, there is a strong expansion potential to some extent in all regions.
- The strongest potential can be found in Yorkshire and the Humber, particularly in the parts west of – and including – Leeds and Doncaster, with other top ranking local authorities being spread across other regions.
- London and the South East have relatively few local authorities with a high expansion potential for the No SSC sector, compared to other regions.
- The current take up by learners, as shown on the next page, is largely matching the areas with growth potential.
- Most areas fall in the same or a higher quintile for actual apprenticeships than for standalone NVQs which could be part of a framework. However, London has a higher level of standalone NVQ delivery than apprenticeships, particularly in the central London boroughs. The north east part of East of England and the south east part of the East Midlands also display the same pattern.
- The South East and South West in particular have some areas which are in the top quintile for expansion potential, but have a lower current take up of apprentices in the No SSC sector.
- The City of Westminster in London is another area which is in a lower quintile for apprenticeship take up than for its expansion potential.

Figure 5.1b: Actual Apprenticeship learners for the No SSC sector

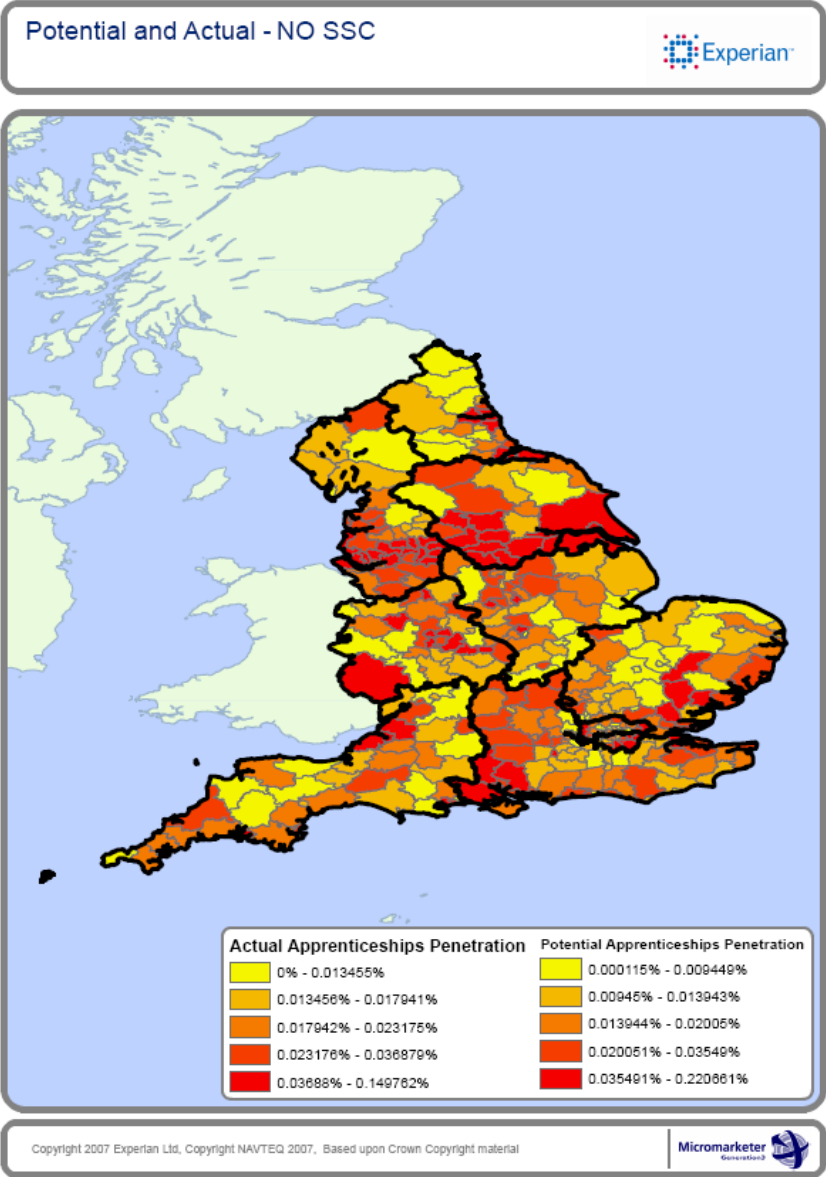


Figure 5.1c: Standalone NVQ learners for the No SSC sector

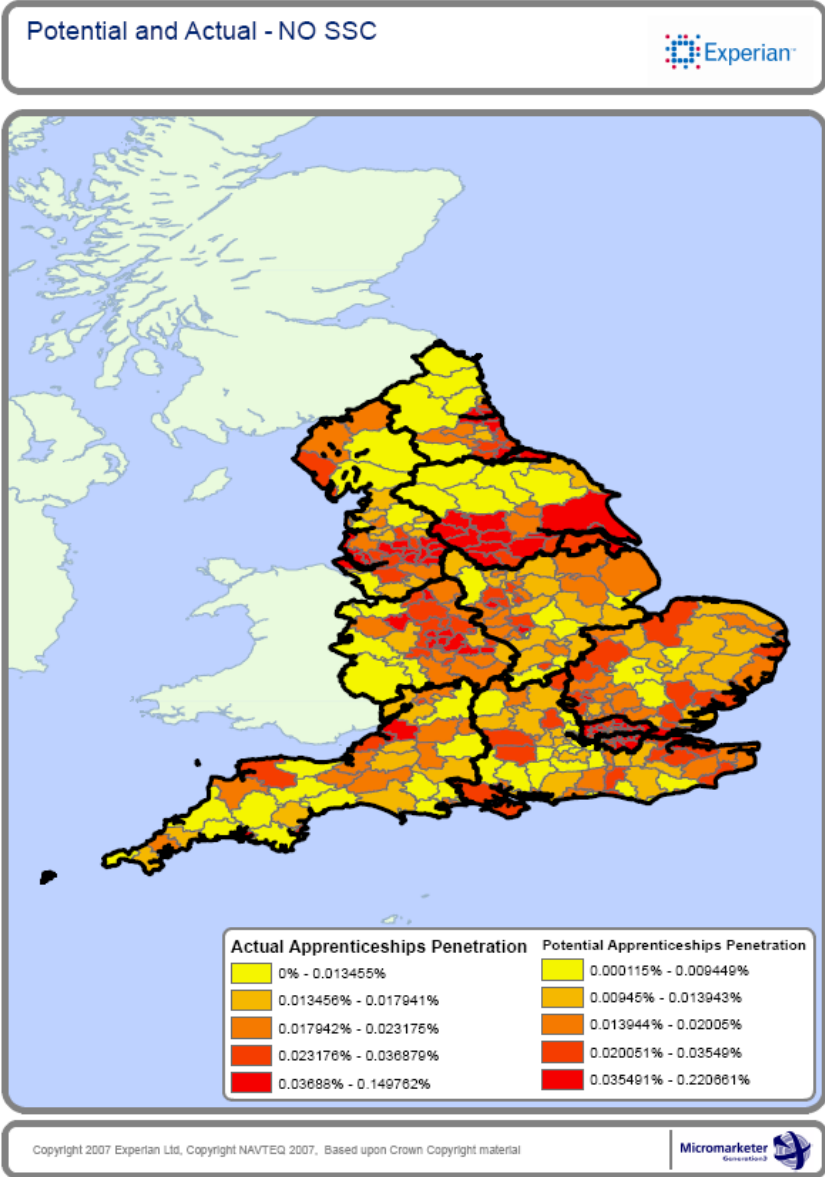
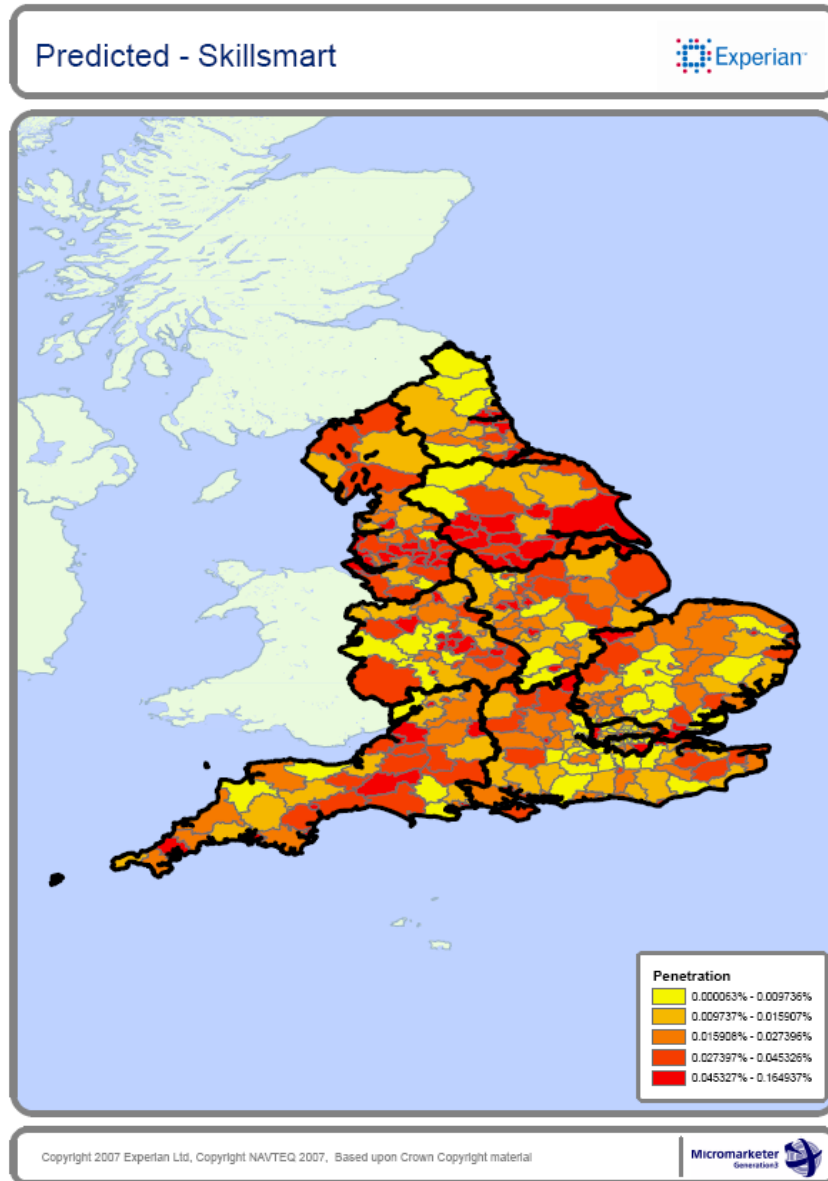


Figure 5.2a: Apprenticeship expansion potential for the Skillsmart Retail sector



- Just as the No SSC sector, the Skillsmart Retail sector (retail) is well distributed across local authorities. This is reflected in the broad coverage of local authorities with strong expansion potential across the regions.
- The highest concentration of local authorities with expansion potential can be found in the North West, Yorkshire and the Humber, the area around Birmingham, and in the South West.
- With only a few exceptions, actual apprenticeships are in the same or a higher quintile than standalone NVQs which could be part of a framework in local authorities across England.
- There is a relatively good match of provision to expansion potential, with a high penetration of apprenticeships in areas which are also prime targets for apprenticeship expansion.
- However, many local authorities in East of England appear to be – relative to other local authorities – stronger on apprenticeship take up than on expansion potential, where they are falling in lower quintiles.
- Conversely, London has a lower take up than its potential, with no local authorities in the top quintile for apprenticeships (but three for expansion potential). Here, for example, City of Westminster is in the top quintile for expansion potential, but in the bottom quintile for apprenticeship take up as well as standalone NVQs.
- Another example of where a local authority's expansion potential is in a much higher quintile than its current take up is Erewash in East Midlands, which is in the top quintile for expansion potential, but only in the fourth quintile for apprenticeship take up (it is in the middle (third) quintile for standalone NVQs which could be part of a framework).

Figure 5.2b: Actual Apprenticeship learners for the Skillsmart Retail sector

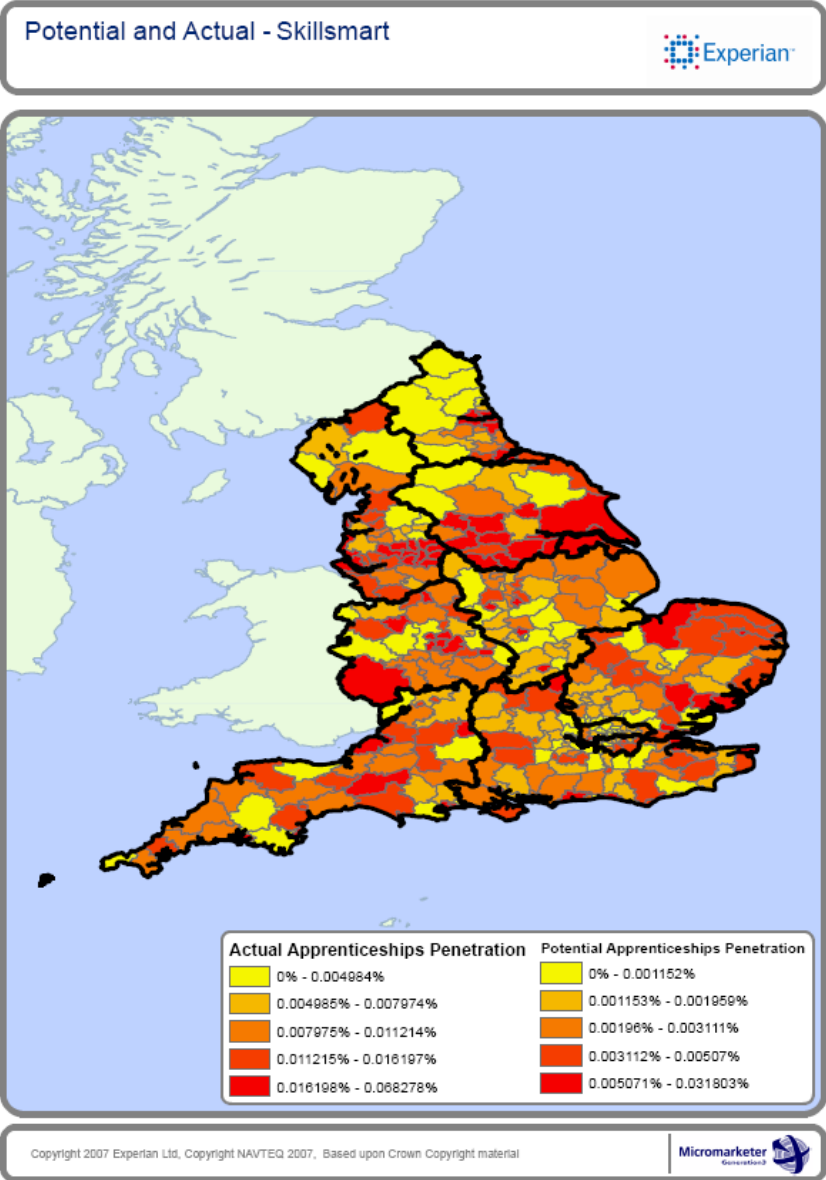


Figure 5.2c: Standalone NVQ learners for the Skillsmart Retail sector

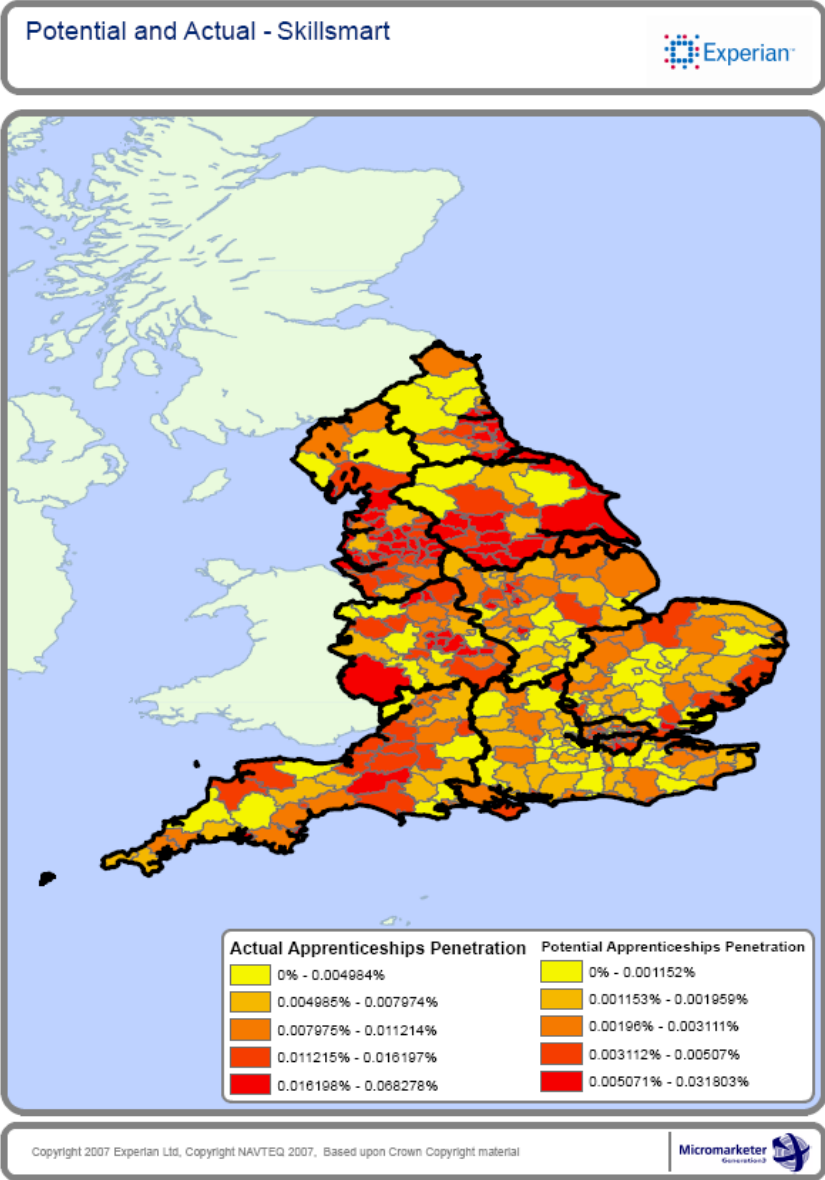
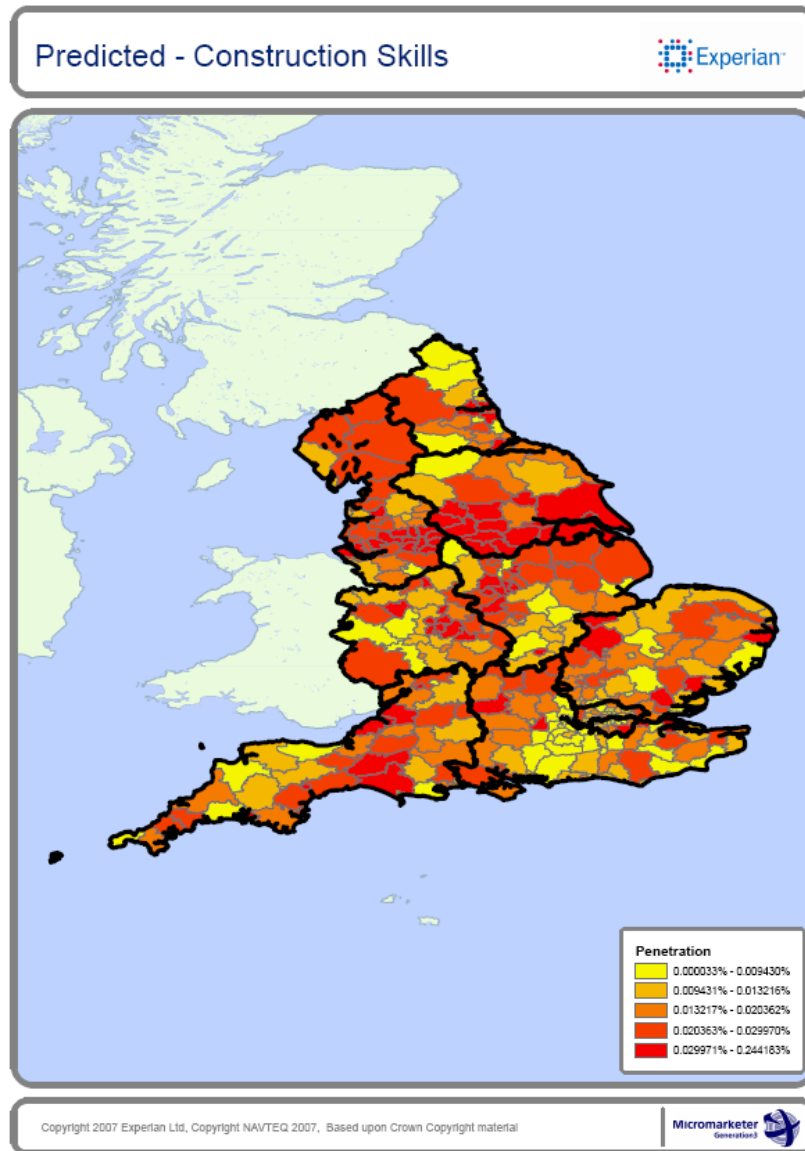


Figure 5.3a: Apprenticeship expansion potential for the Construction Skills sector



- The strongest expansion potential for the Construction Skills sector can be found in Yorkshire and the Humber, where two-thirds of local authorities are in the top quintile. The following region, the North West, only has one third of its local authorities in the top quintile.
- There is also a strong expansion potential in the East and West Midlands, as well as the North East.
- London and the South East have lower expansion potential in the construction sector, with 10% and 20% respectively in the first and second quintiles (top 40%). It should however be kept in mind that the construction sector is very mobile, and the predictions are based on business sites, which is not necessarily where the jobs are taking place in this sector. For example, many contractors travel into London to work.
- The strongest take up of apprenticeships can be found in the three northernmost regions: Yorkshire and the Humber; the North West; and the North East, who all have a substantial share of local authorities in the top quintile for apprenticeships.
- There is thus a good match between the areas with the most expansion potential, and those with a current strong take up of apprenticeships.
- The lowest take up of apprenticeships, with a substantial share of local authorities in the fourth and fifth (bottom) quintiles, can be found in East of England (56% of local authorities), the South East (63%), and London (76%).
- The areas noted as having the lowest take up of apprenticeships are the only areas where a majority of local authorities fall in higher quintiles for take up of standalone NVQs which could be part of a framework. For example, 45% of the London boroughs fall into the top quintile for standalone NVQs. Here there should be a good potential for conversion to apprenticeships.

Figure 5.3b: Actual Apprenticeship learners for the Construction Skills sector

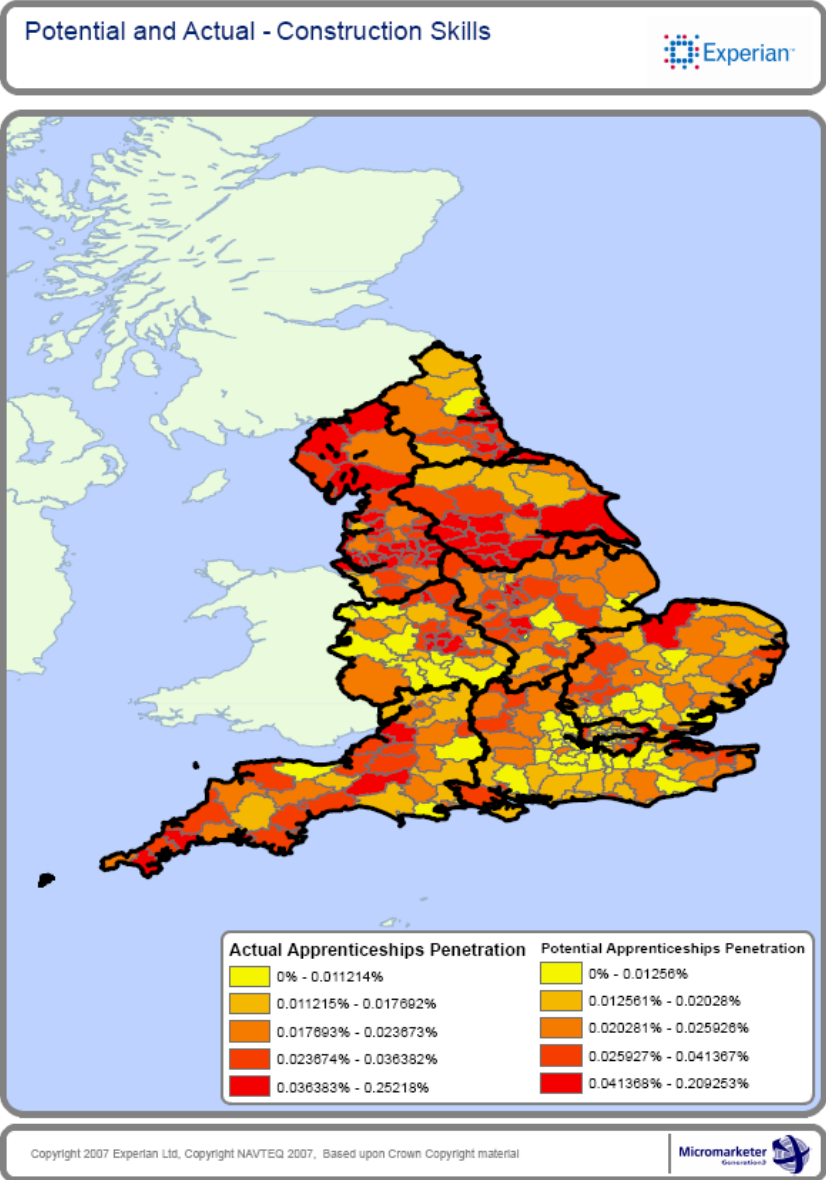


Figure 5.3c: Standalone NVQ learners for the ConstructionSkills sector

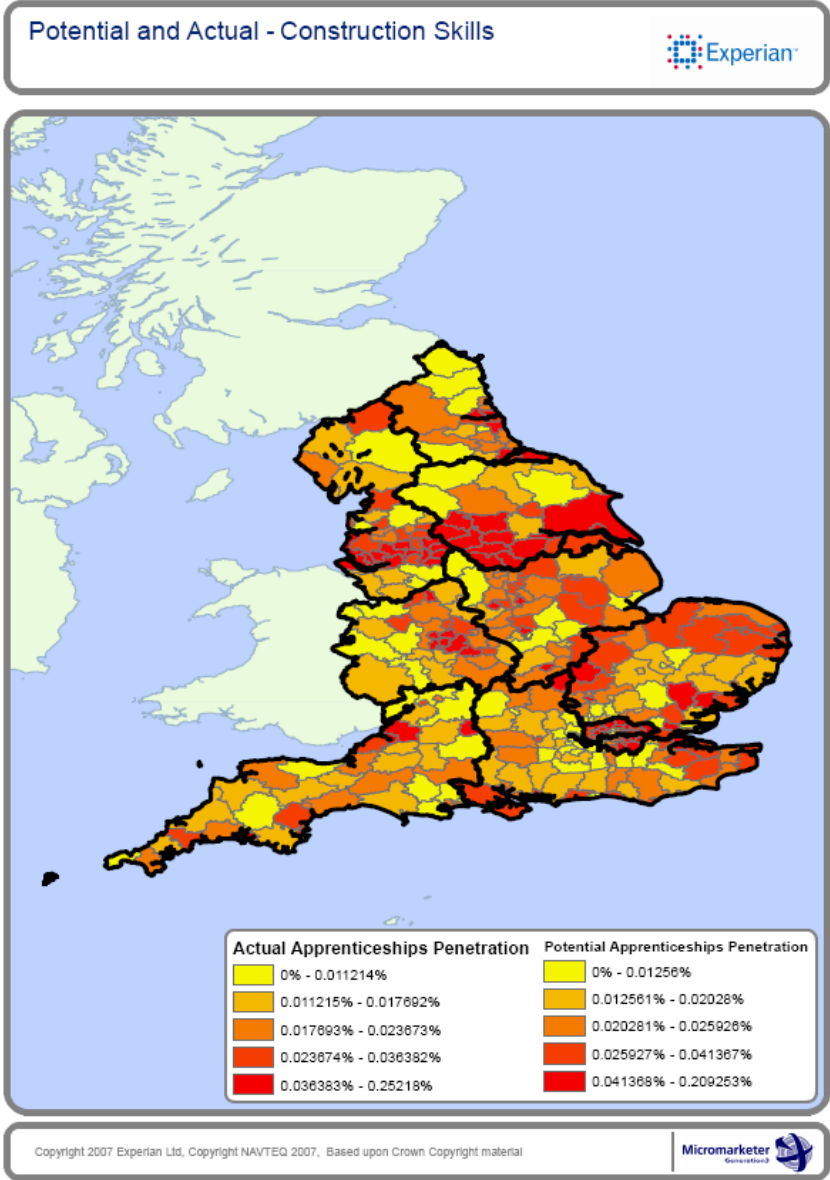
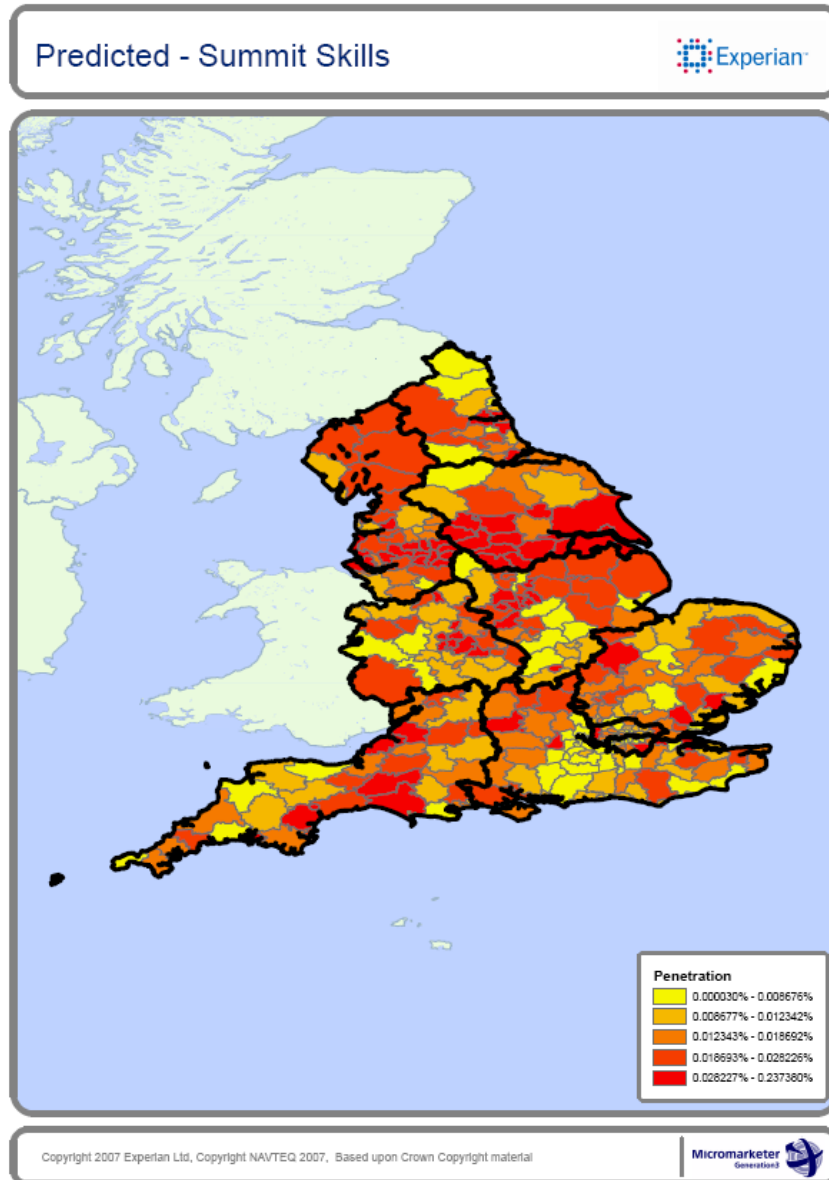


Figure 5.4a: Apprenticeship expansion potential for the SummitSkills sector



- A closely related sector to the Construction Skills sector, SummitSkills also shows a similar geographic profile for expansion potential, with over two-thirds of its local authorities in the top quintile for predicted apprenticeships. Similarly, the North West also has a high potential with a third of its local authorities in the top quintile.
- As for the Construction Skills sector, the North East and East and West Midlands also have a high expansion potential within the SummitSkills sector.
- The lowest expansion potential can be found in the south west of the East Midlands; London; and a belt stretching south west from London to the coast, through the South East.
- There is a good match between local authorities with expansion potential, and those with a good take up of apprenticeships, with the North East and north Yorkshire and the Humber being the main regions where there is a concentration of areas where current take up is in lower quintiles than the expansion potential.
- As for the Construction Skills sector, most local authorities have a lower penetration of standalone NVQs which could be part of a framework than apprenticeship take up. Where the level of standalone NVQs is high, it tends to follow a high expansion potential as well as a high take up of actual apprenticeships.
- London has a substantially higher penetration of standalone NVQs than apprenticeships, with three-quarters of local authorities in the top quintile. Similarly, the local authorities in the south and west of East of England have higher levels of standalone NVQs which could be part of a framework.

Figure 5.4b: Actual Apprenticeship learners for the SummitSkills sector

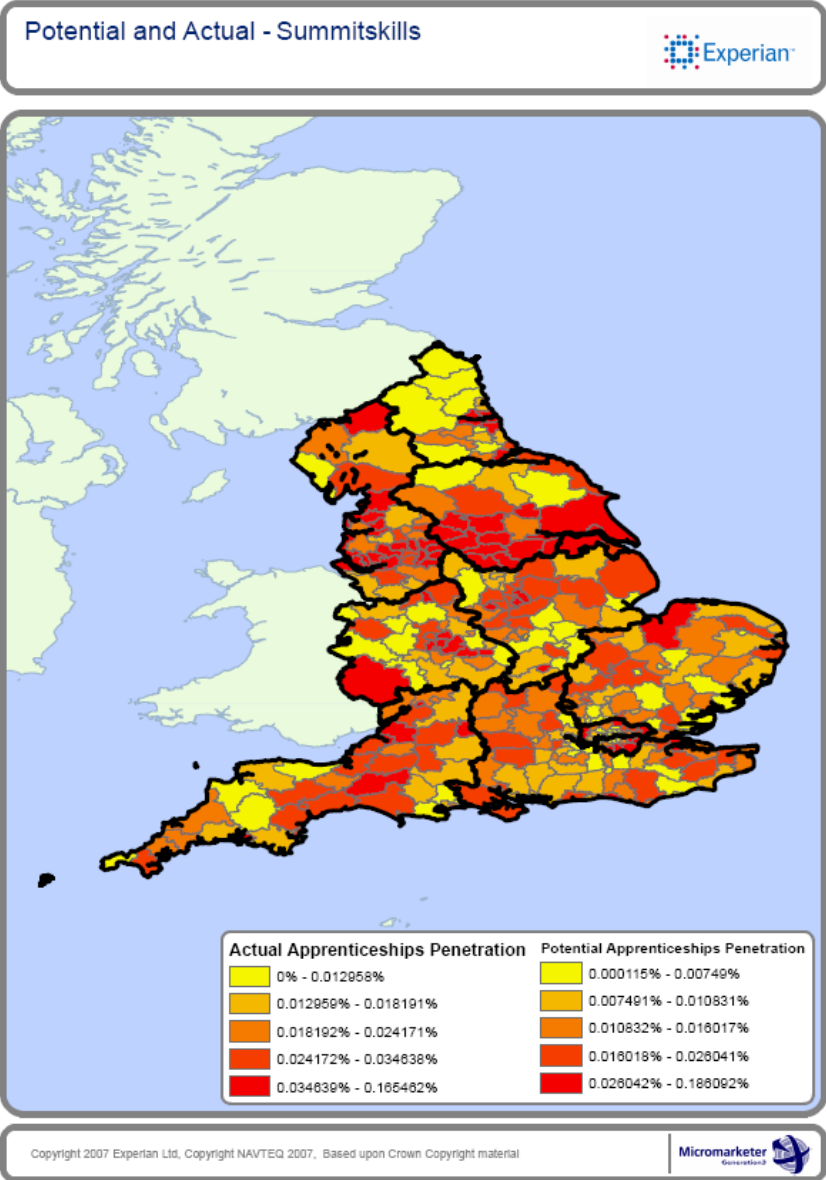


Figure 5.4c: Standalone NVQ learners for the SummitSkills sector

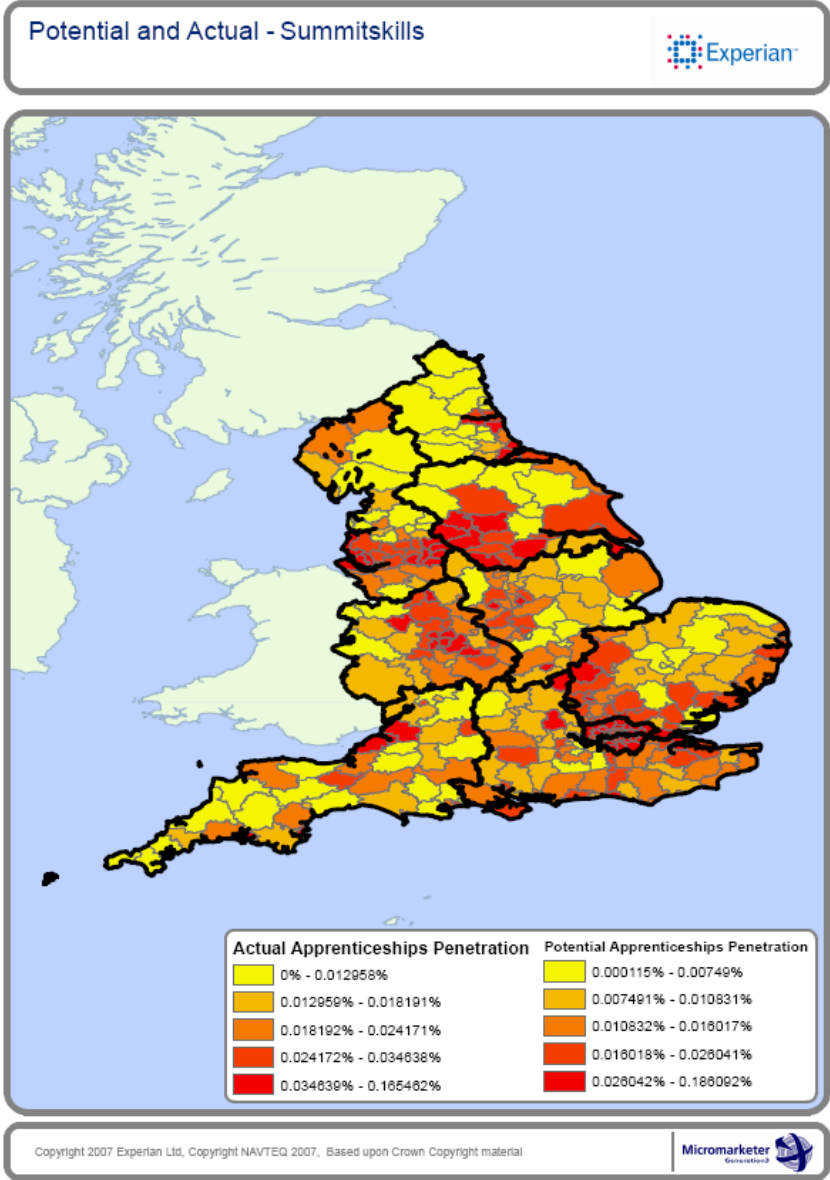
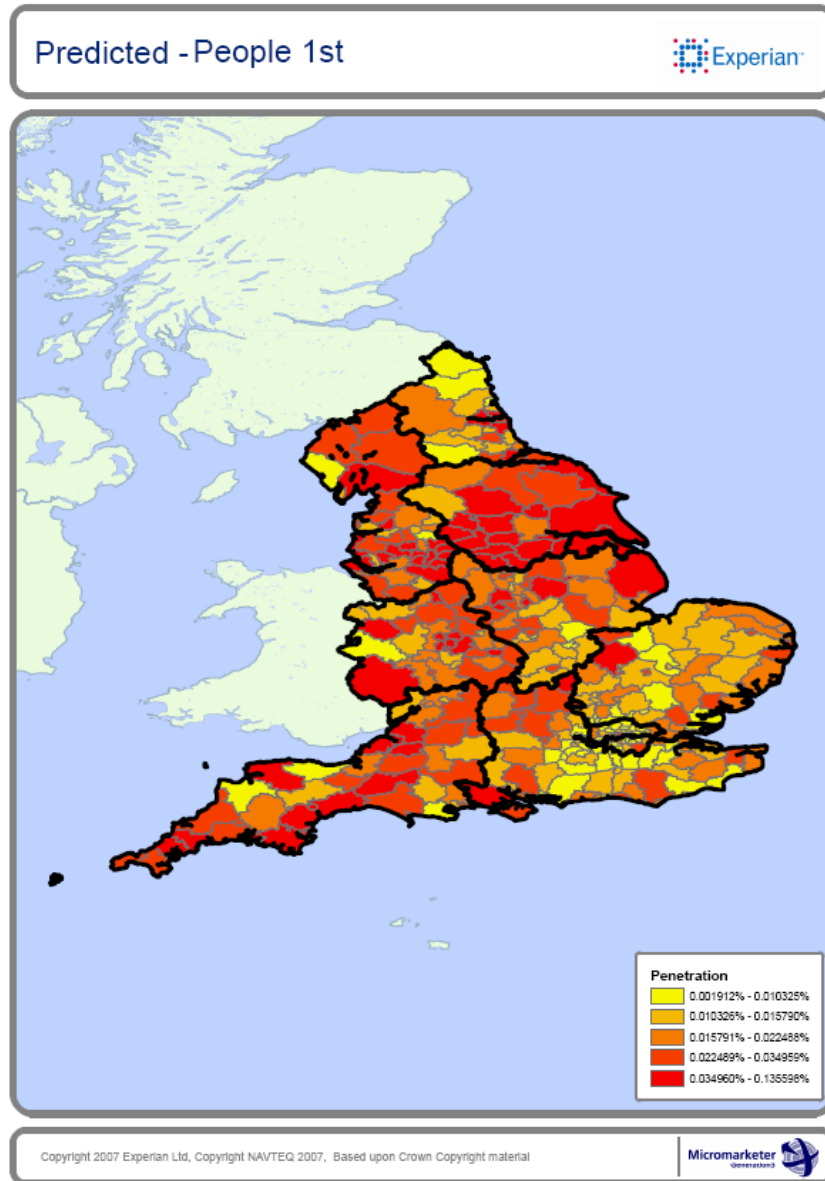


Figure 5.5a: Apprenticeship expansion potential for the People 1st sector



- People 1st, covering hospitality and catering has a broad coverage across local authorities in England, and therefore provide great potential for expansion in most regions.
- The areas with a lower level of expansion potential are mainly in the South East and London; East of England and the North East have most local authorities in the third and fourth quintiles for expansion potential, signalling a relatively low potential for the sector.
- The South West has a noticeably stronger level of predicted apprenticeships in the People 1st sector than in many other sectors.
- The distribution of take up of apprenticeships is similar to the distribution of expansion potential, especially in the north regions; the Midlands and the South West.
- An example of an area with a strong mismatch between expansion potential and current take up – both of apprenticeships as well as standalone NVQs which could be part of a framework – is Chichester in the South East, where the expansion potential is predicted as one of the lowest in the country, however, the current delivery is in the second quintile.
- In this sector, the level of apprenticeship take up is in most cases higher than take up of standalone NVQs which could be part of a framework.
- However, London is again an example of an area where the standalone NVQs which could be part of a framework are in much higher quintiles (top quintile) than the apprenticeship take up (bottom quintile).

Figure 5.5b: Actual Apprenticeship learners for the People 1st sector

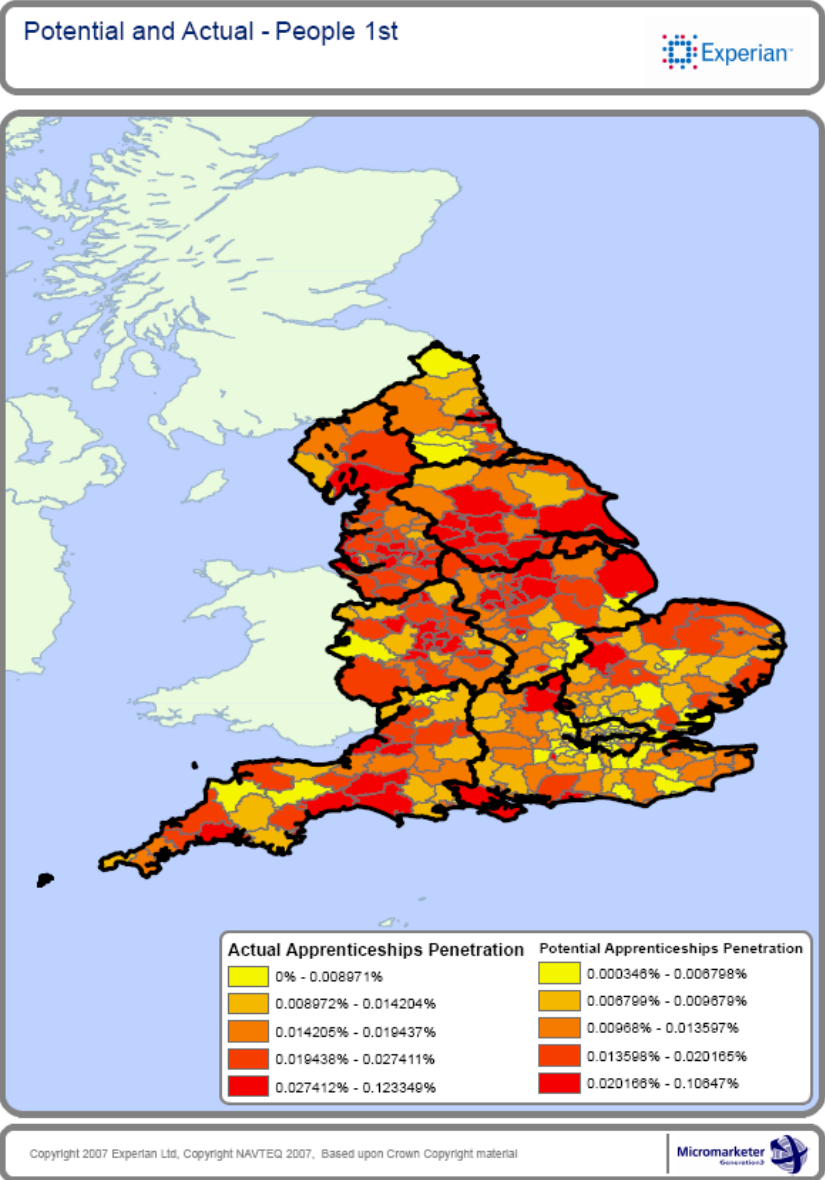


Figure 5.5c: Standalone NVQ learners for the People 1st sector

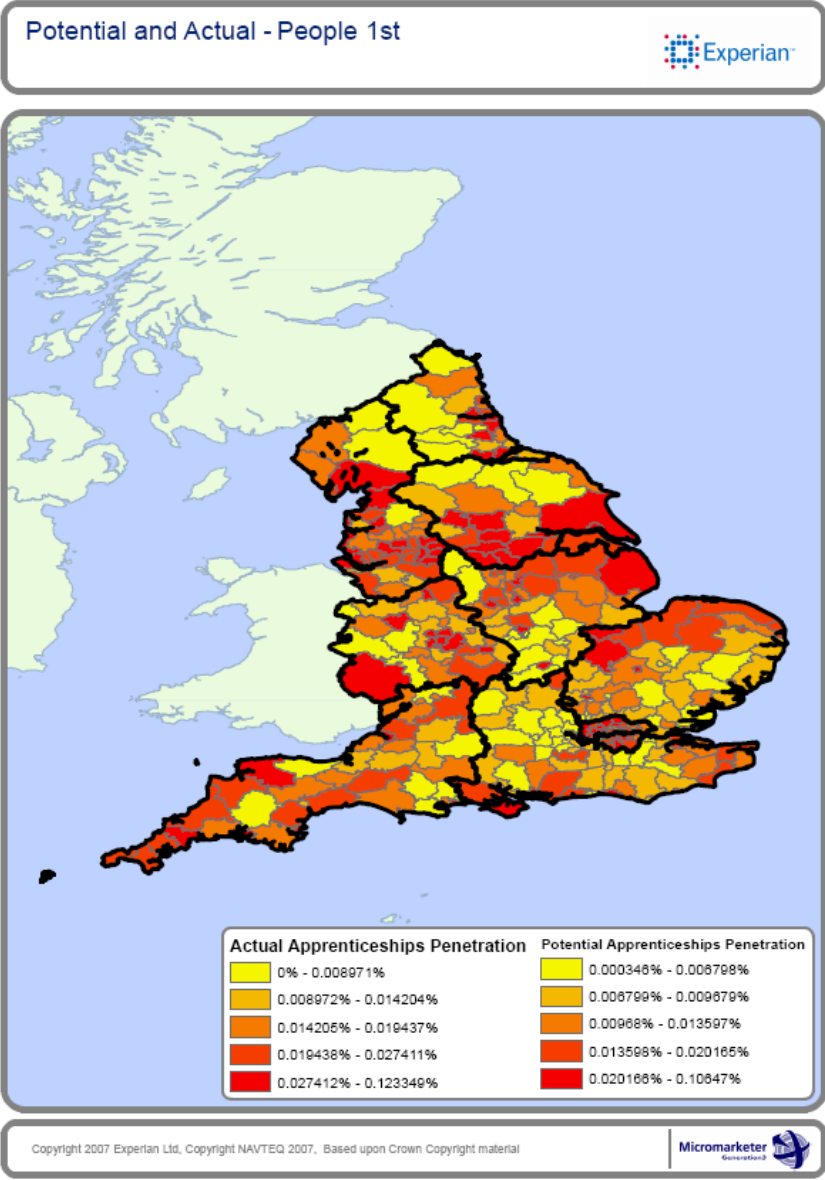
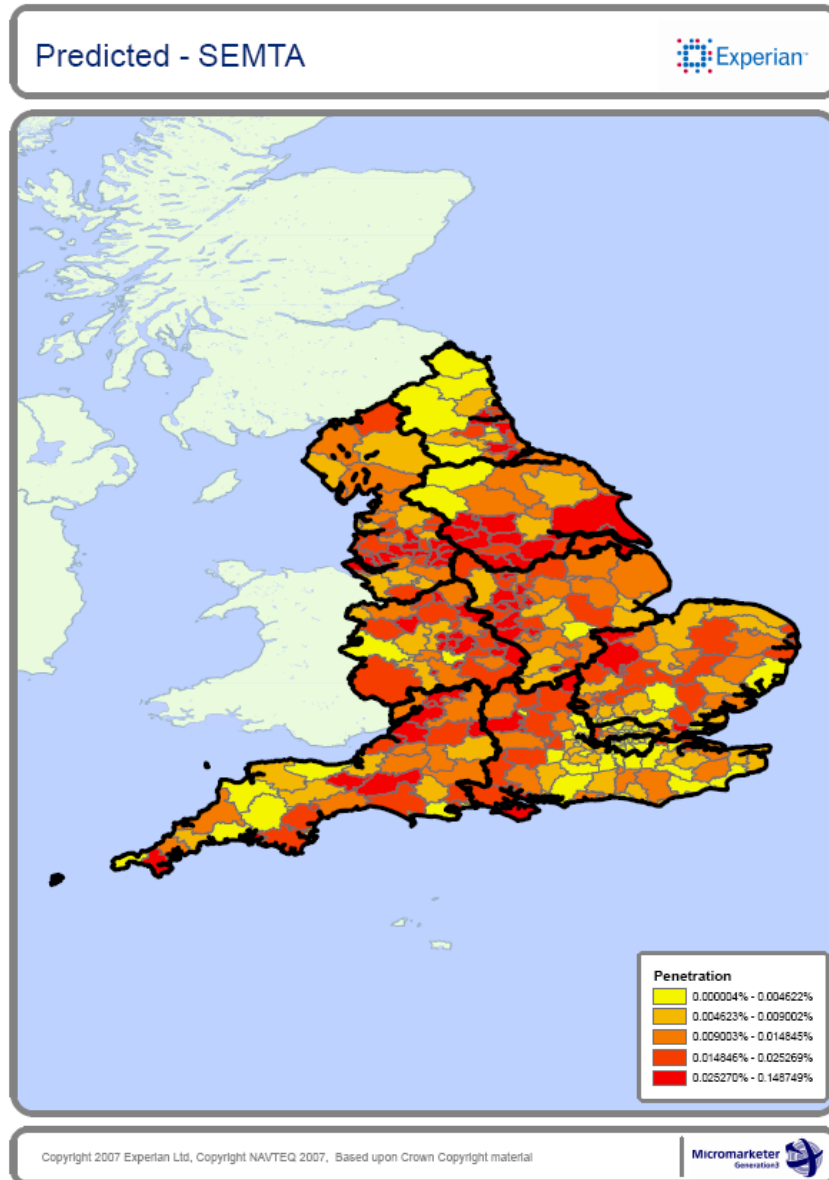


Figure 5.6a: Apprenticeship expansion potential for the SEMTA sector



- The major areas with expansion potential in the SEMTA sector are located around the large cities in the north of England, and the Midlands, such as Sheffield, Leeds, Birmingham, Nottingham and Manchester. Yorkshire and the Humber in particular has strong expansion potential, as over half of its local authorities are in the top quintile.
- There is also strong expansion potential in the South West, particularly north of (and including) Bristol and around Taunton, and in the North East around Newcastle and Sedgefield.
- The areas with a high expansion potential for the SEMTA sector also tend to have a take up of actual apprenticeship learners in the top quintile.
- To some extent, the take up of apprenticeships is in higher quintiles than the expansion potential in the north of the North West; the North East; north Yorkshire and the Humber; and East of England.
- In the South West, Gloucestershire and Kerrier in Cornwall have strong expansion potential, with areas in the top quintile. However, the current apprenticeship take up is substantially lower in the area, being in the third quintile.
- The take up of standalone NVQs which could be part of a framework in the sector is relatively low; the main areas that focus are those that also have a very high expansion potential as well as a high level of take up of apprenticeships.
- Again, London has a very high take up of standalone NVQs in the sector, having over a third of its boroughs in the top quintile, while none of the region's boroughs are in the top quintile for expansion potential or apprenticeship take up.

Figure 5.6b: Actual Apprenticeship learners for the SEMTA sector

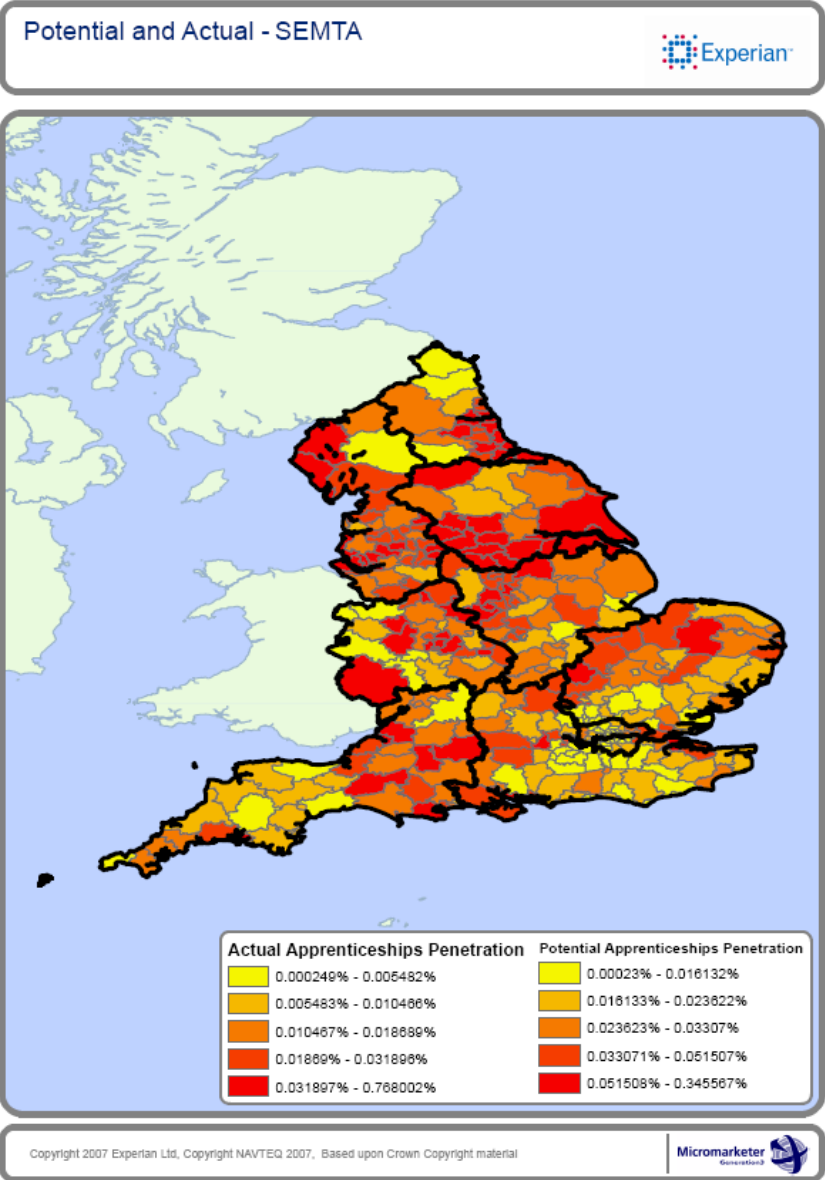


Figure 5.6c: Standalone NVQ learners for the SEMTA sector

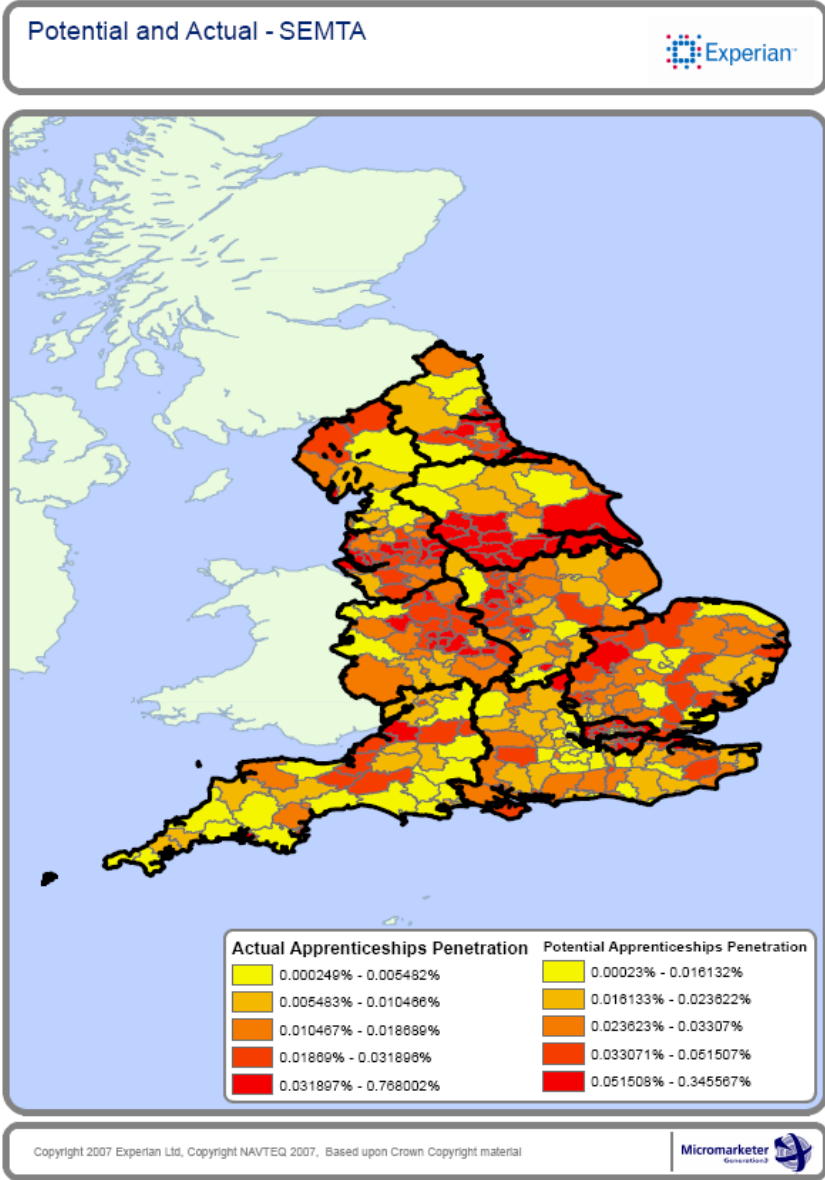
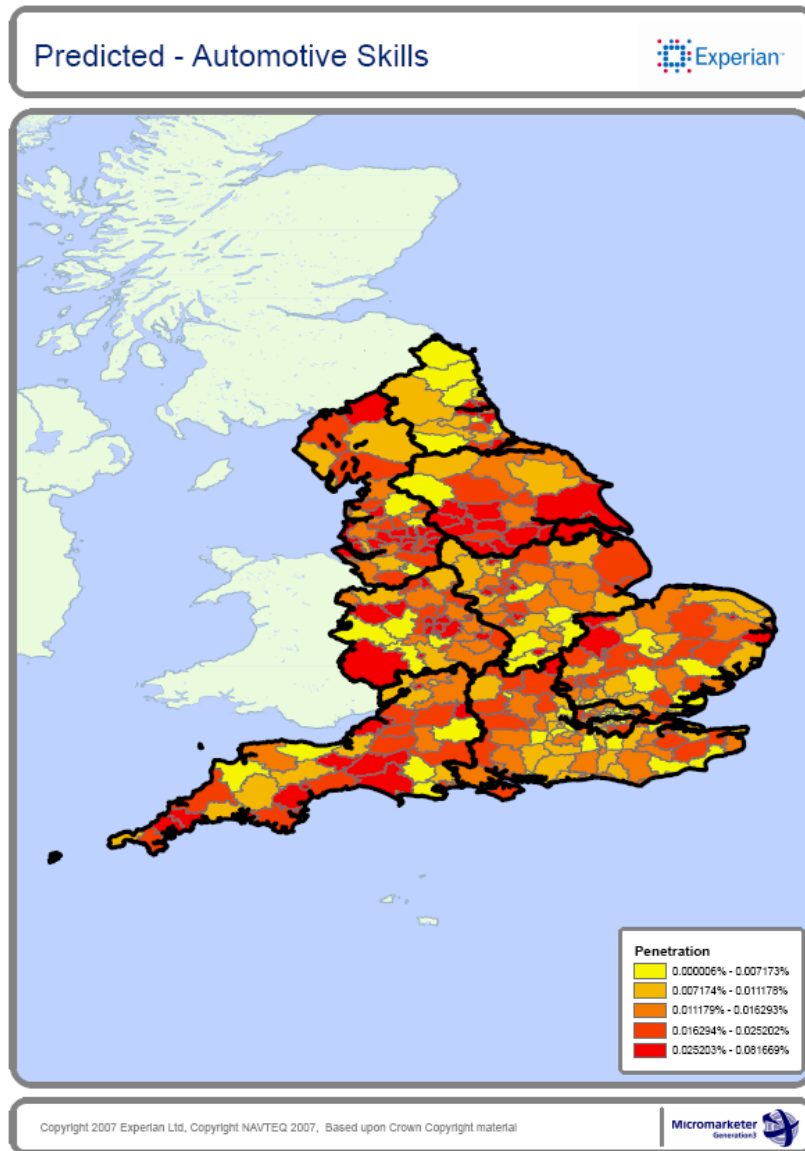


Figure 5.7a: Apprenticeship expansion potential for the Automotive Skills sector



- Expansion potential within the Automotive Skills sector is less concentrated in clusters than for example the SEMTA sector, with the South West, West Midlands, North West, Yorkshire and the Humber and the North East all having a substantial proportion of local authorities in the top quintile for expansion potential.
- There is however less growth potential in the East of England, East Midlands, and particularly the South East and London for the Automotive Skills sector with few if any local authorities in the top quintile, although these regions do all have a number of local authorities in the second and third quintiles.
- There is a close match between local authorities that are in the top quintile for expansion potential and those that are in the top quintile for apprenticeship take up.
- Some of the areas which have a high expansion potential, but are in significantly lower quintiles for apprenticeship take up include Scarborough (Yorkshire and the Humber), Boston (East Midlands), Carrick (South West), Bedford (East of England) and Canterbury (South East).
- For Automotive Skills as for many other expansion sectors, most local authorities have standalone NVQs which could be part of a framework within the same quintile or lower than its apprenticeship take up.
- In London, the outer boroughs have a high level of apprenticeship take up in the Automotive Skills sector (in the first and second quintiles), complemented by a high level of standalone NVQs which could be part of a framework. The inner London boroughs have a low level of apprenticeship take up, but a higher level of standalone NVQs.

Figure 5.7b: Actual Apprenticeship learners for the Automotive Skills sector

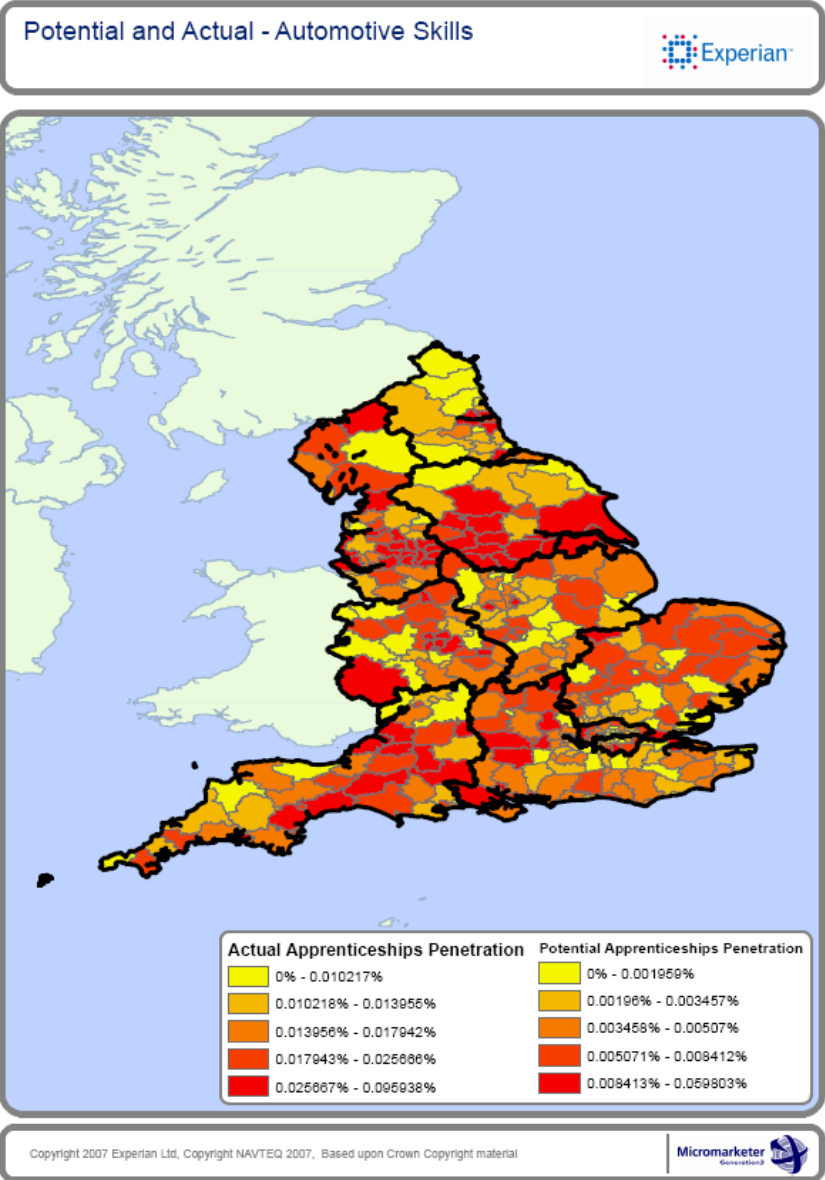


Figure 5.7c: Standalone NVQ learners for the Automotive Skills sector

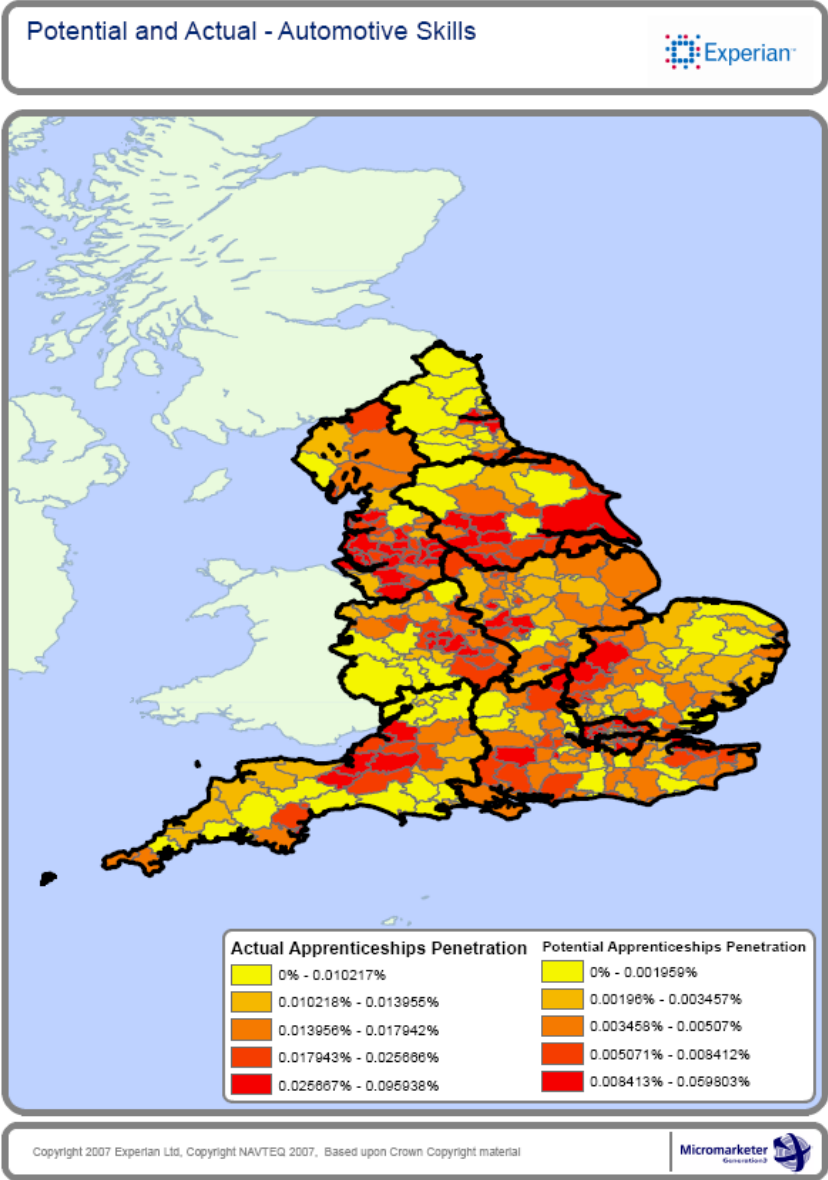
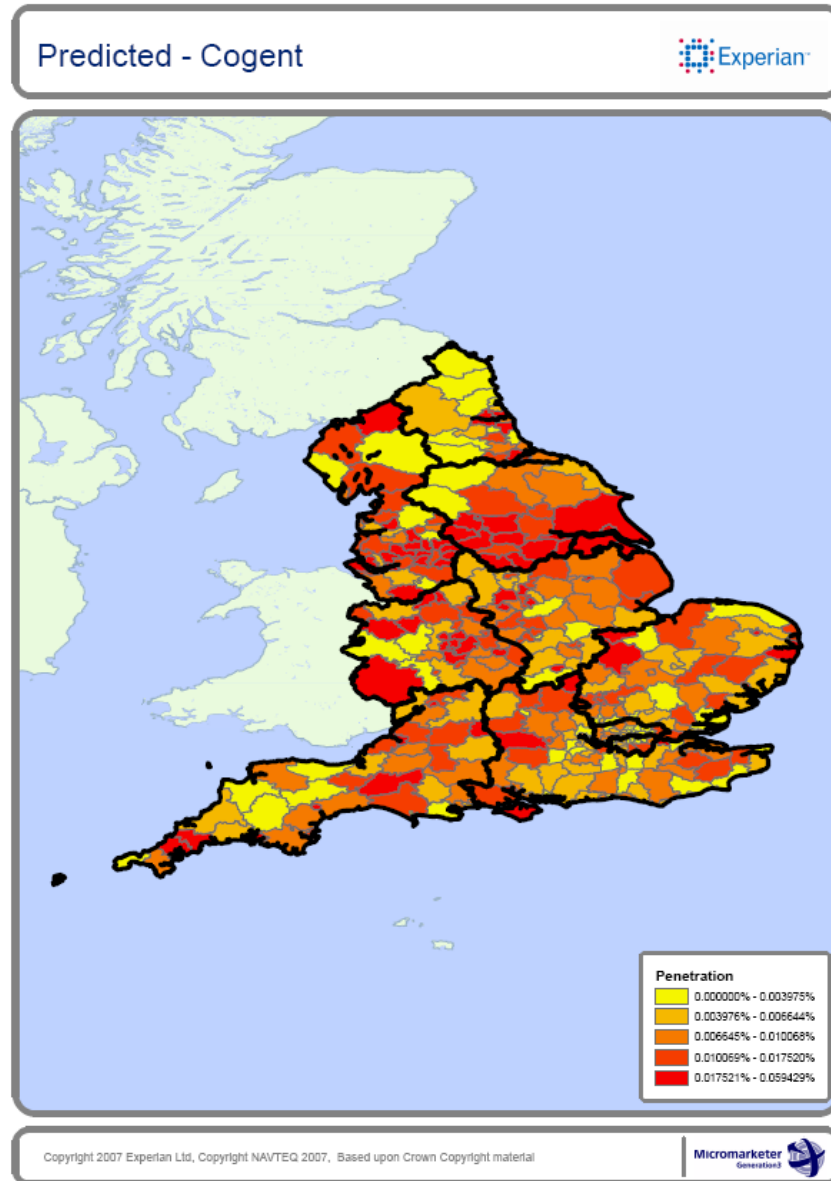


Figure 5.8a: Apprenticeship expansion potential for the Cogent sector



- For the Cogent sector, the main areas of expansion potential are located in Yorkshire and the Humber, the North West and the West Midlands, which all have a large share of local authorities in the top quintile for expansion. Here, the potential is located in areas such as Liverpool, Oldham and Bolton in the North West; Sheffield, Leeds and Kirklees in Yorkshire and the Humber; and Dudley, Sandwell and Stoke-on-Trent in West Midlands.
- All regions have some potential for expansion in the Cogent sector, with eight out of the nine regions (all apart from London) having some local authorities in the top quintile, and London still having a number of boroughs in the south and east of the region in the second quintile.
- The Cogent sector has a low take up of apprentices across England, with 75% of local authorities having no resident apprenticeship learners within the sector.
- The only regions with any levels of apprenticeship take up to mention are Yorkshire and the Humber, the south west and north west of the North West and the southern part of the North East. The potential for the West Midlands for expansion in the sector is not being met by the current apprenticeship take up in the region.
- The map of standalone NVQs which could be part of a framework shows that the sector has a much higher take up of standalone NVQs than of apprenticeships, with only 1% of local authorities not having any take up in the sector.
- This is particularly clear in the Midlands, the South West and the greater South East (South East, London, and East of England).

Figure 5.8b: Actual Apprenticeship learners for the Cogent sector

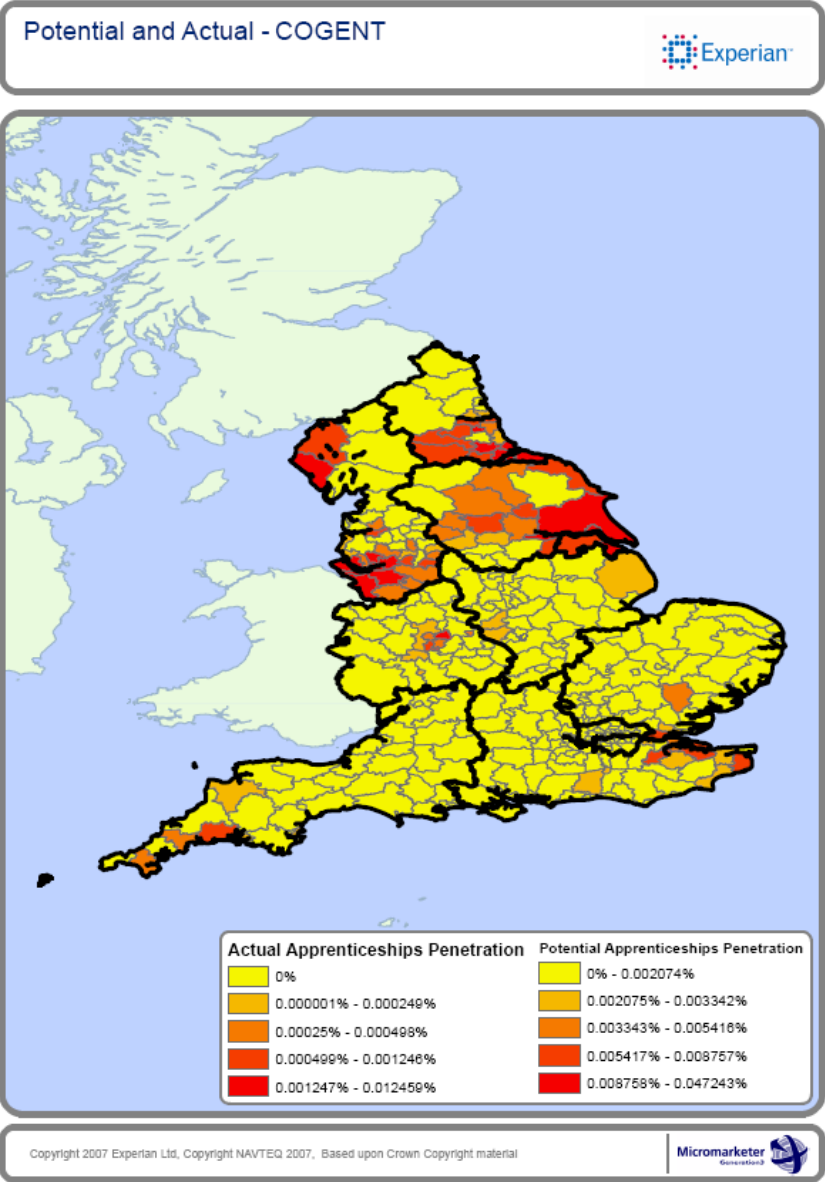


Figure 5.8c: Standalone NVQ learners for the Cogent sector

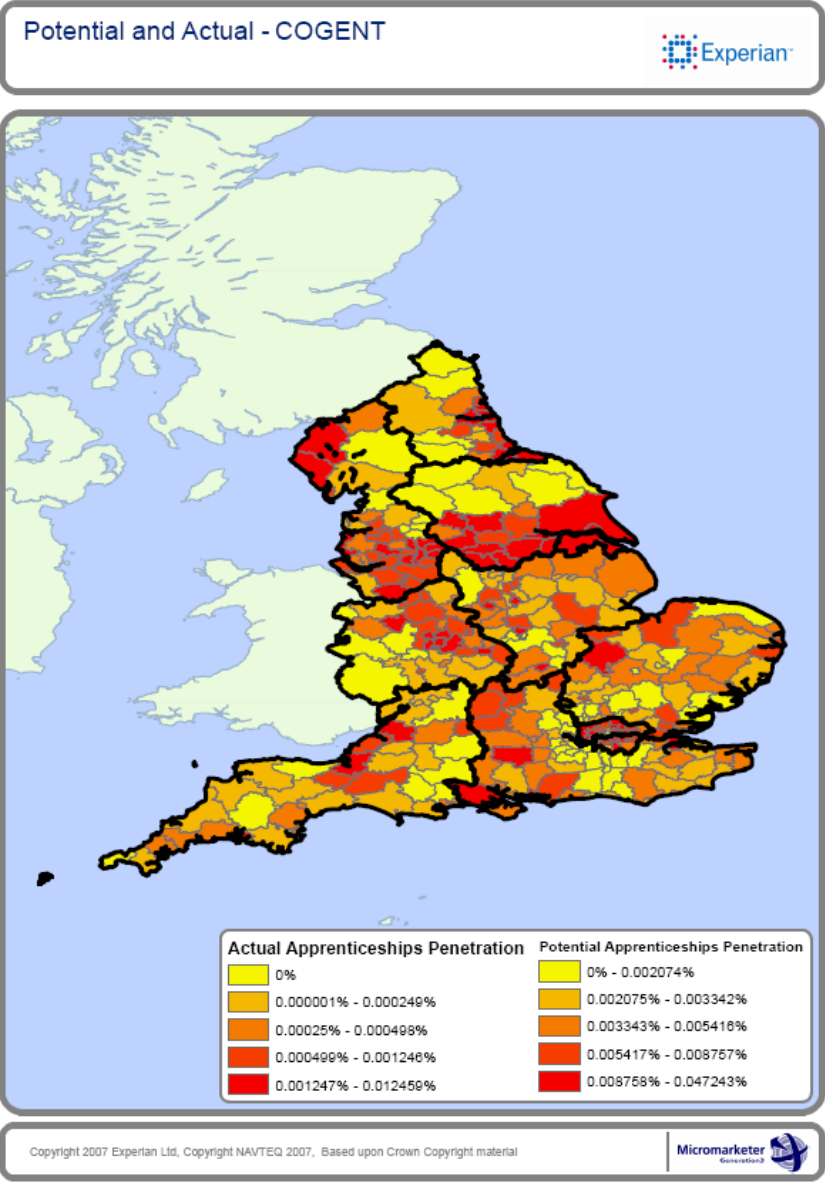
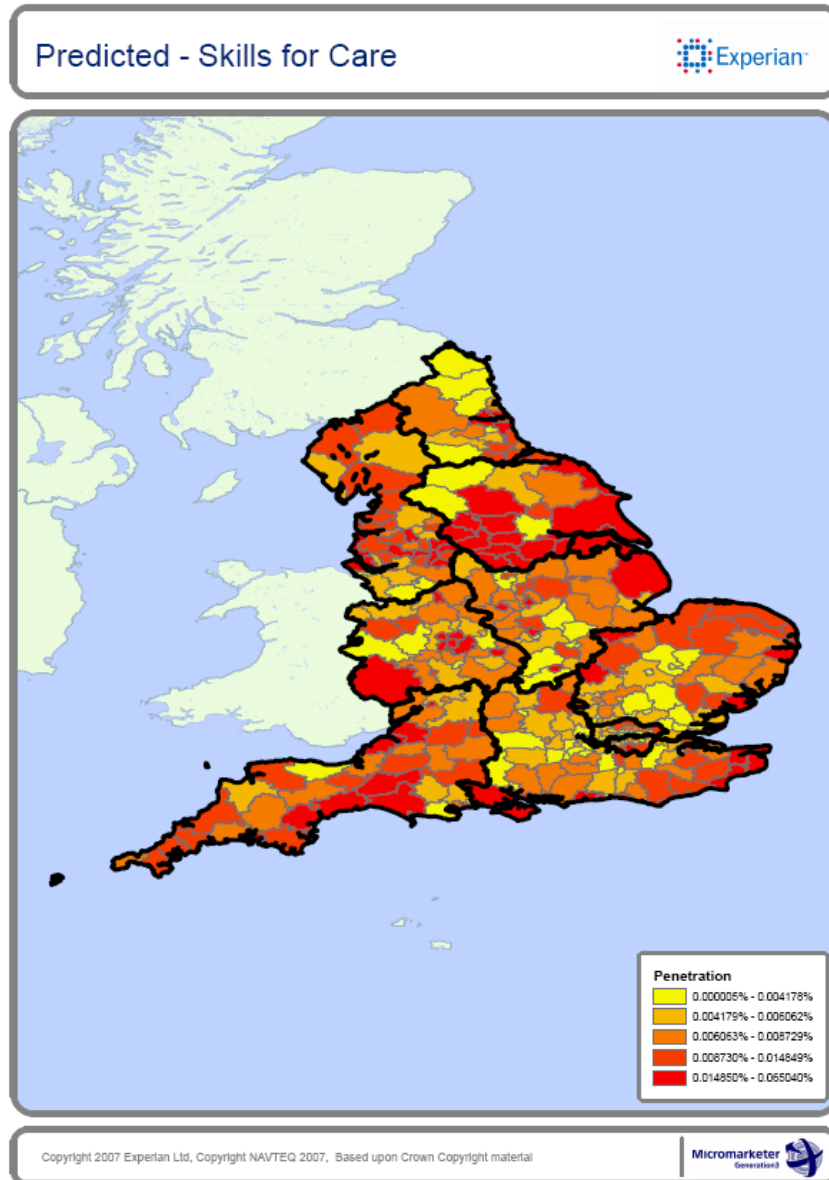


Figure 5.9a: Apprenticeship expansion potential for the Skills for Care sector



- Skills for Care is a sector with a broad spread across the country, which is demonstrated by its high expansion potential in all regions. Every region appears to have a number of local authorities that could be key expansion areas for the sector.
- The whole south coast, Norfolk and the band across south Yorkshire and the Humber into the North West are key areas with a large concentration of local authorities in the upper quintiles for expansion potential.
- Areas with a high level of apprenticeship take up include west Yorkshire and the Humber, the North West, north East Midlands, parts of West Midlands, north South East, and London.
- A few regions host a concentration of local authorities with apprenticeship take up in significantly lower quintiles compared to their expansion potential, for example the North East (e.g. Sedgefield and Tynedale); the South West (e.g. Teignbridge; West Dorset); and east South East (e.g. Canterbury, Dover and Shepway).
- Conversely, some areas have a high apprenticeship take up compared to the expansion potential (i.e. in higher quintiles), including north South East (Wycombe, West Berkshire and Wokingham) and the London boroughs along the north bank of the Thames.
- The local authorities in the east of the South East demonstrate a lower apprenticeship take up, but have a higher take up of standalone NVQs which could be part of a framework, than the east part of the South West.
- There is a very low level of standalone NVQs which could be part of a framework in north North West and east East of England. Take up of standalone NVQs are also low in the north South East, where there is a high take up of apprenticeships.

Figure 5.9b: Actual Apprenticeship learners for the Skills for Care sector

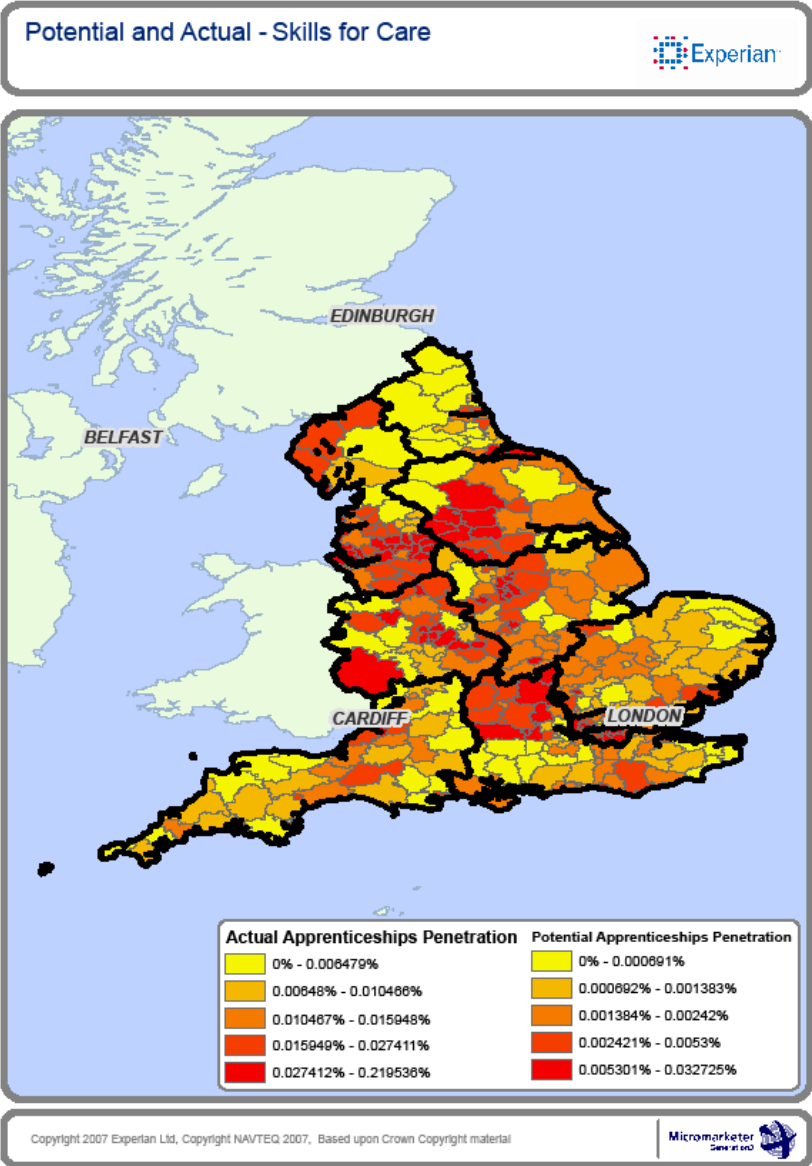
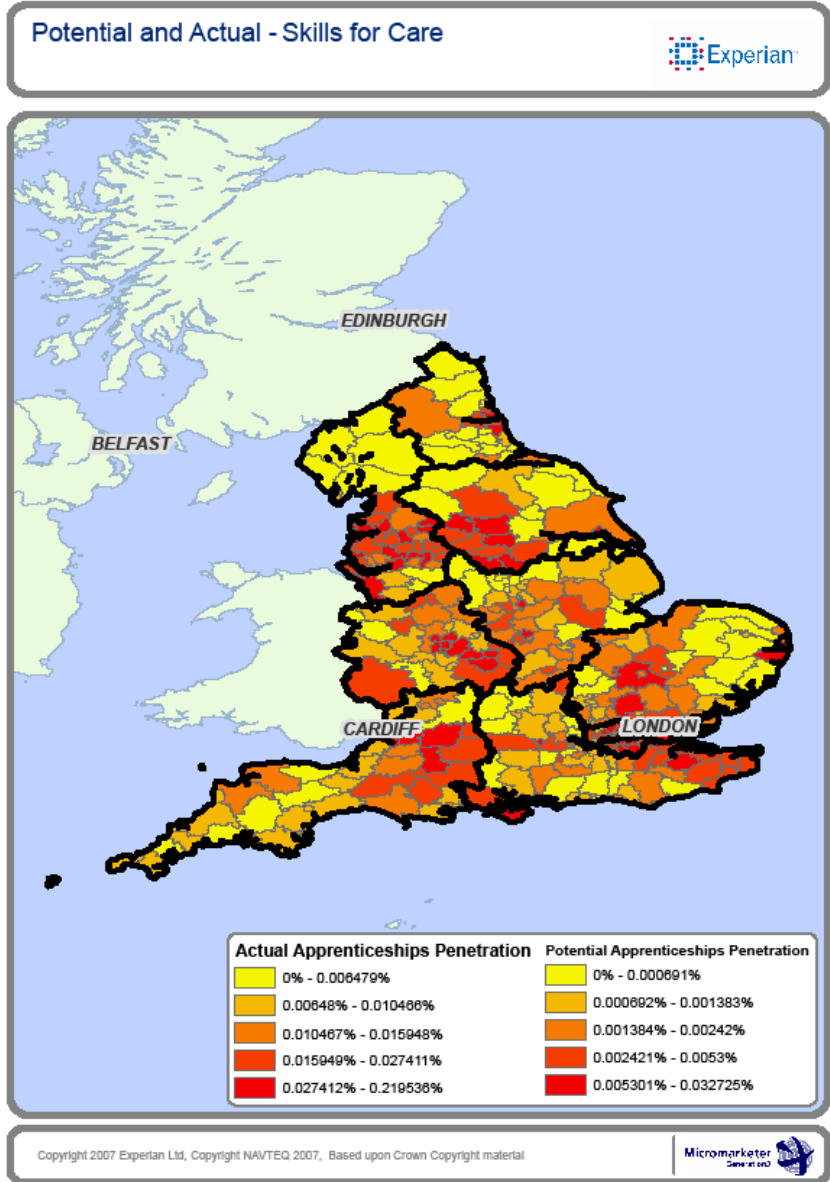


Figure 5.9c: Standalone NVQ learners for the Skills for Care sector



6 Achieving apprenticeship growth: conclusions

6.1 Overview

Here we set out the key outcomes of the report, including the factors that impact on sectoral engagement in apprenticeships; the profile of engagement of current apprenticeship learners and those who are on NVQs which could be converted to apprenticeships; the target sectors for apprenticeship expansion; areas for expansion; and some ways to support sectoral expansion of apprenticeships.

6.2 Key influences for sectoral engagement in apprenticeships

6.2.1 Propensity of take up

Evidence from the wider literature, labour market data, and policy documents indicates that employer propensity to take up apprenticeships is influenced by a range of factors including:

- **Employer Size**
Larger companies are more likely to invest in training and more likely to take on apprentices. The impact of company size on propensity and future potential to engage apprentices has several dimensions, including funding and administration costs; and financial risk to the organisation.
- **Tradition of apprenticeship engagement**
The sectors that have long standing traditions of apprenticeship are manufacturing, engineering and construction while programmes are comparatively well developed and pervasive in retail, catering, and business administration. Long standing traditions of apprenticeship stem from the historical reliance on intermediate technical skills, often as a route to higher skills.
- **Awareness of apprenticeship offer**
Companies in sectors with a tradition of apprenticeships are more aware of apprentices, so more likely to engage. Smaller companies are also less likely to be aware of apprenticeships.
- **Presence of skills gaps and shortages**
In sectors where there are skills gaps and shortages at intermediate skill levels, employers are more likely to use apprenticeships as a route for filling these. Skills gaps should not be considered in isolation, because they intersect with other factors. They are a particularly good indicator of need where there is a tradition of apprenticeships.
- **Age of the workforce**
Sectors where many 16 to 18 year olds are employed, such as retail and hospitality and catering have a strong engagement in apprenticeships, reflecting the strong focus of the programme on young people. Many of the strongly engaged sectors also have a tradition of bringing in young people and training them in a workplace environment, such as construction and the automotive sector.
- **Qualification profile of the sector**
In sectors where the majority of the workforce holds intermediate qualifications (at Level 2 or Level 3), whilst a lower share holds degree level qualification or have low qualifications, the take up of apprenticeships is greater.

Identifying sectors with prospects for expanding the number of apprenticeships

- Availability of appropriate apprenticeship framework
In some sectors, although industry specific frameworks are available, take up is mostly for 'generic' frameworks such as business administration and customer service, resulting in apprenticeships not reaching the core workforce of the sector. Certain sectors require a review of quality, e.g. retail, while other sectors where apprentices are a new phenomenon are currently looking at how they can develop suitable frameworks, particularly in the Government, IT and Creative and Cultural sectors.
- Employment trends
Tough economic conditions are typically associated with employer contraction in costs as profits drop, which in practice result in contraction of training budgets and a reluctance to release staff for training.

6.2.2 Current learner engagement

The sectors which have the greatest modelled potential for expansion are also in general the sectors with the largest number of apprenticeship learners. Sectors with a tradition of taking on apprentices are also the sectors with the highest proportions of apprenticeship delivery.

Apprenticeship take up is concentrated to a limited number of frameworks – the 10 largest frameworks account for two-thirds of provision. The majority of the 10 largest frameworks are linked to one of the target expansion sectors.

Age

The largest age group for apprenticeship learners is 19 to 24 year olds, accounting for nearly half of apprenticeship learners, closely followed by the 16 to 18 age group. Over the last year (2006/07 to 2007/08), the main increase have been in older learners (19+).

There are clear differences in sectoral take up of apprenticeships by age, suggesting that this will need to be a consideration in any offer presented to employers within a given sector.

Automotive Skills, No SSC sectors, Construction Skills and Summit Skills all have a majority of young people (16 to 18) on apprenticeships, reflecting the tradition of recruiting young people into the sector and 'growing your own'. Skillsmart Retail, People 1st and Skills for Care – all strongly people-focused (care or strongly customer facing) sectors – have mostly people aged 19 and above on apprenticeships, accounting for two-thirds of learners within the sectors.

The age profile of the workforce is equally important to consider – sectors such as Skills for Care, SEMTA and public sector SSCs all have a large proportion of the workforce aged above 50, and with this ageing workforce will have a demand for younger recruits into the sectors.

The age preference of the sector also needs to be taken into account when considering the offer to employers, as age-differentiated funding of apprenticeships will impact differently on employer engagement across sectors, and may have a negative impact in sectors where the preference is for older learners, and hence where greater employer contributions are expected.

Identifying sectors with prospects for expanding the number of apprenticeships

Level

The balance between Level 2 (apprenticeships) and Level 3 (advanced apprenticeships) varies between expansion target SSC sectors. For example, Skillsmart Retail, People 1st (hospitality and catering) and the No SSC sector have a concentration of apprenticeships (NVQ Level 2) and relatively low take-up of advanced apprenticeships (NVQ Level 3); conversely, SEMTA – as the only sector – has a higher profile of advanced apprenticeships.

The preference of a sector for apprenticeships or advanced apprenticeships will be important to consider when putting forward an apprenticeship offer to the expansion target sectors, as some sectors may require advanced apprenticeships, whilst for others apprenticeships at Level 2 may suffice.

Region

The regions with the largest apprenticeships take up are the North West and the South East. The North West, Yorkshire and the Humber, and the North East have particularly high take up, whilst that in the South East, East of England and London is below average when compared to each region's share of the population. London especially would be expected to have a higher level of delivery.

The profile of apprenticeships in the target sectors for apprenticeship expansion across regions is remarkably even, with none of the target sectors being particularly dominant in a region – proportions of each of the sectors within a region broadly follow the region's overarching apprenticeship profile.

NVQs with potential for conversion into apprenticeships

The analysis of learners on standalone NVQs which could be part of a framework shows where a conversion from standalone NVQs to apprenticeships may be possible.

The two SSCs with the largest number of learners on standalone NVQs which could be part of a framework are SEMTA and Skills Active, followed by SummitSkills and ConstructionSkills, Skills for Care and No SSC.

Learners within the SEMTA, Skills Active, Summit Skills, e-Skills UK and Go Skills sectors are in the main not funded through Train to Gain. In contrast, Skills for Care, Skills for Health and Skillsmart Retail all have nearly all learners on standalone NVQs which could be part of a framework on Train to Gain (93%, 90% and 95% respectively) which means that in these sectors, there should perhaps be a strong co-operation with Train to Gain to ensure that learners are encouraged to convert onto a full apprenticeship once the NVQ is completed.

The distribution of frameworks which learners on standalone NVQs which could be part of a framework could take up is heavily concentrated to: Engineering; Health and Social Care; and Construction.

The 25+ age group has by far the greatest number of learners on standalone NVQs which could be part of a framework, reflecting the large number of Train to Gain learners on these qualifications.

The 'people-focused' sectors (Skills for Care, People 1st and Skillsmart Retail) along with the No SSC sector have mostly learners on standalone NVQs which could be part of a framework above 19 years old. Cogent and Automotive Skills have the highest proportion of young people, with just over half of learners in the 16 to 18 age group.

Identifying sectors with prospects for expanding the number of apprenticeships

Cogent – which for actual apprenticeships has mainly Level 2 learners – has three-quarters of learners on standalone NVQs which could be part of a framework at Level 3. This poses a question of whether appropriate framework options at Level 3 are available for employers, or if there are other reasons why learning at this level is so high outside apprenticeships. SEMTA also has a relatively high number of learners on standalone NVQs which could be part of a framework at Level 3, which echoes the sectors strong Level 3 engagement for apprenticeships. Skillsmart Retail and People 1st have a low uptake of Level 3 not only for apprenticeships, but also for standalone NVQs which could be part of a framework, raising the question of how relevant Level 3 qualifications are found within this sector.

London – which has a significantly low take up of apprenticeships compared to its population – has the second largest take up of standalone NVQs which could be part of a framework, more in line with the population profile. The South East, where take up is also low compared to its population, has an even lower level of take up of standalone NVQs which could be part of a framework.

There should be a significant opportunity for conversion of standalone NVQs to apprenticeship in regions and sectors where apprenticeship take up is relatively good, but where the take up of standalone NVQs which could be part of a framework is lower than the regional average.

6.2.3 Summary

Figure 6.1 summarises where the sectoral opportunities for potential apprenticeship expansion exist, based on five of the key influences on apprenticeship take up.

Figure 6.1: Summary of the top sectors with opportunities to expand apprenticeships

1. Training offered to young recruits	Automotive Skills	Construction Skills	Summit Skills
2. Training offered to upskill adult workforce	Skillsmart Retail	People 1 st	Skills for Care
3. Ageing workforce	Skills for Care	SEMTA	Public sector SSCs
4. Conversion of standalone NVQs from Train to Gain	Skills for Care	Skills for Health	Skillsmart Retail
5. Influenced by public policy levers	Government Skills	Skills for Justice	Skills for Health

6.3 Conclusion: target sectors for apprenticeship expansion

6.3.1 Modelled target sectors

On the basis of a range of factors, the highest modelled potential for apprenticeship growth is in the 'No SSC' sector (figure 6.2) i.e. amongst employers in sectors such as Hairdressing and Primary and Secondary Education that are not presently covered by a Sector Skills Council (SSC).⁶⁰

⁶⁰ Many of these sub-sectors are covered instead by Standard Setting Bodies (SSB) such as Habia or the Training and Development Agency for Schools (TDA), but the fact that they are not covered by the SSC network may have an impact as policy is increasingly focusing on this network.

Identifying sectors with prospects for expanding the number of apprenticeships

The potential of the 'No SSC' employer base is a function of the size of the 'sector' in respect of current apprenticeship delivery and the scale of the employee base. Model outputs indicate that many of the employers in the 'No SSC' sector take on a greater than average number of apprentices. Despite the lack of SSC coverage, it is still possible to target the large employers to encourage expansion of apprenticeship take-up through the National Employer Service (NES), and small employers through standard setting bodies such as Habia and the Training and Development Agency for Schools (TDA). The nine SSC sectors with the highest modelled potential for apprenticeship expansion are: sectors not covered by an SSC; Skillsmart Retail; Construction Skills; Summit Skills; People 1st; SEMTA; Automotive Skills; Cogent; and Skills for Care. This is based on the sector having a large base of businesses of the type likely to take up apprenticeships.

Among the sectors with the lowest predicted apprentices to workforce ratio are two public sector areas: health and central government. This indicates that there could be an untapped potential for apprenticeships in these sectors, although factors such as qualification levels in the sector will also impact.

Figure 6.2: Target sectors for apprenticeship expansion, modelled

SSC	Predicted Apprentices Index	Reliance on large sites Index	Predicted Apprentices/ Employee Index
No SSC	1.00	0.92	0.64
Skillsmart Retail	0.96	0.28	0.75
ConstructionSkills	0.92	0.76	0.91
SummitSkills	0.88	0.80	0.95
People 1st	0.84	0.56	0.95
SEMTA	0.80	0.68	0.85
Automotive Skills	0.76	0.84	1.00
Cogent	0.72	0.64	1.00
Skills for Care	0.68	0.72	0.94
Skills for Health	0.64	0.44	0.13
Skills for Logistics	0.60	0.40	0.73
Asset Skills	0.56	0.32	0.57
SkillsActive	0.52	0.88	1.00
Skillsfast UK	0.48	0.04	0.92
Improve	0.44	0.16	0.73
eSkills UK	0.40	0.48	0.70
Financial Services Skills Council	0.36	0.52	0.22
Lifelong Learning	0.32	0.96	0.38
Proskills	0.28	0.20	0.86
Go Skills	0.24	0.24	0.50
Lantra	0.20	0.60	0.80
Creative and Cultural Industries	0.16	0.36	0.75
Government Skills	0.12	1.00	0.33
Energy and Utility Skills	0.08	0.08	1.00
Skillset	0.04	0.00	1.00
Skills for Justice	0.00	0.12	1.00
<i>Source: ILR, Experian.</i>			

Green

- As mentioned previously these sectors are those which have a tradition of apprenticeships where take up is already relatively strong. These sectors could see numbers improved by delivering more of the same. However, the high take up may be the result of high staff turnover caused by other issues in the industry so its net impact on skills may not be realised.
- Employers in SSCs which have a relevant occupational framework should not only be offered this framework but presented with the wide variety of cross cutting frameworks which they may

Identifying sectors with prospects for expanding the number of apprenticeships

not currently understand the relevance. This positions apprenticeships as a whole workforce offer to complement the existing and established occupation specific routes.

- The state of the economy must also be taken into account. Some regions have been particularly hit by the recession in certain sectors and this should not be ignored.

Amber

- These are sectors where there is some take up of apprenticeships but it is more patchy. It will be important to identify where there is currently untapped potential. Typically these sectors already use the cross cutting skills frameworks. For example Skills for Logistics has many cross cutting apprenticeships representing the majority of apprentices
- The importance of cross cutting skills frameworks to all sectors must be understood as for many sectors this is where the majority of take up exists. This also suggests that this may be a quicker route to engaging sectors with low take up in general and the first opportunity to expand in sectors with moderate take up. .
- Many of the sectors rely strongly on cross cutting frameworks and the benefits of these should be made clear to employers not currently offering apprenticeships.
- It is important for an understanding of where take up of apprenticeships is particularly good among these sectors and other regions can learn from highlighted good practice.

Red

- These are the sectors with traditionally low take up of apprenticeships but have potentially the greatest long term impact on numbers due to the current limited take up.
- The National Apprenticeship Service will need to ensure that the relevant occupational frameworks are developed for the sector. In the meantime these employers should be targeted with cross cutting frameworks which are not occupation specific.
- Many of the SSCs in this band are dominated by the public sector which should mean that encouraging employers to offer apprentices should be possible more quickly.

Identifying sectors with prospects for expanding the number of apprenticeships

Figure 6.3 overleaf summarises the key influences on apprenticeship delivery for the sectors with the highest modelled predicted index.

Skillsmart Retail (the SSC for retail) is a prime candidate for apprenticeship expansion. It has a proven capacity to deliver apprenticeships, and has a large employee base. A relatively high proportion of apprenticeships within the sector are at smaller sites, providing opportunities across all local authorities to expand apprenticeship numbers. NES affords opportunities to influence the major retailers and cascade apprenticeship take-up across their stores located England-wide.

People 1st (the SSC for hospitality and catering), like Skillsmart Retail, has a proven capacity to deliver apprenticeship and a large employee base. A relatively high proportion of apprenticeships within the sector are at smaller sites and distributed around England, again providing scope for many local authorities to expand their apprenticeship provision in this area. The majority of the apprenticeship expansion is likely to be in the area of Catering and generic apprenticeship frameworks including Customer service.

ConstructionSkills, SummitSkills, SEMTA, Automotive Skills and Cogent are sectors that have high proportion of craft and skilled workers – the traditional groups that have taken up apprenticeship training – and they continue to figure highly as sectors with the potential to expand apprenticeship take-up.

Skills for Care is the sole sector with a high public sector make-up that the model flags as having a high potential for expansion. It has a relatively high take-up of apprenticeships at present.

Across remaining SSCs where the public sector dominates – Skills for Health, Lifelong Learning, Government Skills and Skills for Justice – the apprenticeship expansion potential is deemed to be greatest for Skills for Health, and least likely for Skills for Justice and Government Skills. The relatively low take-up of apprenticeships within the public sector has been well recognised and government has committed funding to improving this. This picture may therefore change in the short to medium term as a consequence of policy intervention.

Figure 6.3: Summary of key influences on modelled target sectors

Top 10 sectors of predicted expansion	Employer size (% firms 50+ employees)	Employee base (% employees 50+ employees)	Tradition of apprenticeship offer	Presence of intermediate skills gaps (% skills gaps SOC 4 to 7)	Presence of intermediate skills shortages (% htf vacancies SOC 4 to 7)	Age of the workforce (% aged 16 to 24)	Qualification profile (% at Level 2 or 3)	Dominant apprenticeship framework	Employment trends (% employment growth, 2004-09)
1. Skillsmart Retail	3%	48%	√	83%	18%	31%	48%	Sector specific and generic	0.8
2. Construction Skills	1%	39%	√	60%	35%	13%	49%	Sector specific	-0.2
3. SummitSkills	1%	37%	√	88%	85%	14%	54%	Sector specific	-0.5
4. People 1 st	3%	29%	√	39%	43%	34%	48%	Sector specific	0.8
5. SEMTA	6%	65%	√	67%	52%	9%	45%	Sector specific and generic	-1.0
6. Automotive Skills	2%	28%	√	90%	68%	15%	55%	Sector specific	-0.3
7. Cogent	9%	67%	√	72%	18%	9%	37%	Sector specific and generic	-0.7
8. Skills for Care	6%	38%	√	78%	66%	11%	48%	Sector specific	1.1

Identifying sectors with prospects for expanding the number of apprenticeships

Top 10 sectors of predicted expansion	Employer size (% firms 50+ employees)	Employee base (% employees 50+ employees)	Tradition of apprenticeship offer	Presence of intermediate skills gaps (% skills gaps SOC 4 to 7)	Presence of intermediate skills shortages (% htf vacancies SOC 4 to 7)	Age of the workforce (% aged 16 to 24)	Qualification profile (% at Level 2 or 3)	Dominant apprenticeship framework	Employment trends (% employment growth, 2004-09)
9. Skills for Health	8%	74%	X	86%	68%	7%	28%	Sector specific and generic	1.2
10. Skills for Logistics	4%	50%	X	61%	16%	10%	44%	Sector specific and generic	-0.4

Identifying sectors with prospects for expanding the number of apprenticeships

Two key influences on the target sectors which can provide a more balanced view of sectors with the largest apprenticeship expansion prospects are the economic downturn, and the use of public policy levers.

Analysis of these show that although some of the sectors may be temporarily affected by the downturn, many are forecasted to grow through it (in employment terms), and measures have already been taken to alleviate some of the impact on apprenticeship take up. It also shows that the public policy drive to increase apprenticeships within the public sector combined with the sector's potential is likely to make the public sector SSCs key targets for expansion.

Economic downturn

The current economic downturn is likely to negatively influence employer willingness to engage with apprenticeships – profits will be hit resulting in less discretionary spend for training, and employment will contract.

Many of the SSCs that are target priorities – Construction Skills (construction), Summit Skills (building services engineering), SEMTA (engineering), and Automotive Skills (motor industry) – are already experiencing contraction and employment losses as the UK recession takes hold.

Recent Experian employment forecasts show that the vast majority of sectors will experience a downturn over the next couple of years, but many will recover after 2011.

Some of the sectors identified as targets for expansion through the model are also forecasted to do well through the downturn, including education (No SSC); hotels and catering (People 1st); retailing (Skillsmart Retail); and health (Skills for Care, Skills for Health).

Recent action by government to support apprenticeships through linking apprenticeships to procurement contracts and commitments to increased apprenticeship numbers by major employers should alleviate the effect of the downturn on apprenticeships within the Construction Skills, Skillsmart Retail and Improve (food and drink) sectors.

To secure apprenticeships during the downturn, it will also be very important to monitor the movements of the largest employers. The top 20 apprenticeship employers, excluding the Armed Forces, provide over 10,000 apprenticeships. Should these businesses feel the impact of the economic downturn, this could have a significant negative effect on apprenticeship numbers.

Public policy levers – public sector apprenticeship expansion

SSCs that are predominantly public sector tend to be less affected in times of economic recession, but public spending is not immune. However, the government has tasked the public sector with raising their apprenticeship take up and committed funding for this.

The relatively low take-up of apprenticeships within the public sector has been well recognised and government has committed funding to improving this. Recent initiatives implemented to increase the number of apprenticeships in central government also confirm this commitment. The picture is therefore likely to change in the short to medium term as a consequence of these policy interventions.

The public sector – with its large workforce – is also where the government can exert considerable leverage to bring about take-up. There is an untapped potential for apprenticeships especially in the Skills for Health and Government Skills sectors.

Identifying sectors with prospects for expanding the number of apprenticeships

The recent research into the apprenticeship provider base also shows that many training providers are seeing the public sector – especially local government – as largely untapped and having great potential. A concerted government policy focus is likely to result in apprenticeships expanding above current expectations, making public sector a target sector.

6.4 Conclusion: areas for engagement

The local authorities with the business base that afford the greatest potential for expanding their apprenticeship offer are shown in figure 6.4. These are local authorities that have a good mix of businesses in the ‘target’ SSC sectors – those that have a high modelled apprenticeship potential – and consequently are the areas as a whole predicted to perform well. There are a number of local authorities located in the North West, Yorkshire and the Humber and West Midlands which have a large expansion potential in most target sectors.

Figure 6.4: Top 20 local authorities

Local Authority	Region
Leeds	Yorkshire and the Humber
Birmingham	West Midlands
Sheffield	Yorkshire and the Humber
Liverpool	North West
Kirklees	Yorkshire and the Humber
Nottingham	East Midlands
Bradford	Yorkshire and the Humber
Manchester	North West
Bristol, City of	South West
Dudley	West Midlands
Wakefield	Yorkshire and the Humber
Newcastle upon Tyne	North East
Sandwell	West Midlands
Kingston upon Hull, City of	Yorkshire and the Humber
Doncaster	Yorkshire and the Humber
Wigan	North West
Wirral	North West
Westminster	London
Salford	North West
Stoke-on-Trent	West Midlands
<i>Source: Experian, based on rankings of modelled predicted apprenticeship indexes</i>	

The sectoral mix of businesses varies across England. Service sector industries – such as Skillsmart Retail (retail), People 1st (hospitality and catering) and Skills Active (sport and leisure), together with Skills for Care (Care), Skills for Health (Health) and Lifelong Learning (work-based learning, further and higher education; libraries; youth and community work) – are typically more evenly distributed around

Identifying sectors with prospects for expanding the number of apprenticeships

England according to population densities. Sectors such as SEMTA (engineering), Automotive Skills and Cogent (oil and gas) are geographically more concentrated, associated with resource availability and historic location patterns.

This is reflected in a high modelled apprenticeship potential across most local authorities for sectors such as Skillsmart Retail (retail) and People 1st (hospitality and catering), and a more variable modelled apprenticeship potential for a sector such as Cogent (oil and gas).

Amongst local authorities with lower potential for apprenticeship expansion – i.e. a low predicted apprenticeship index – there is often scope to expand apprenticeships in a more limited range of SSC sectors (i.e. those with relatively high modelled potential within the local authority). Often, but not exclusively, this is in the No SSC (range of sectors not covered by an SSC), Construction Skills (construction) and Summit Skills (building services engineering), Skillsmart Retail (retail) and People 1st (hospitality and catering) sectors.

Any strategic changes to the target expansion SSC sectors – for example a greater than expected public sector expansion of apprenticeships – will result in a change to the target local authorities as well, as the indices are based on the mix of sectors in the locality.

Target locations and apprenticeship engagement

In most areas, there is a match between the expansion potential and level of apprenticeship take up (i.e. the local authority falls in the same quintile in both).

In the majority of local authorities and sectors, the take up of apprenticeships is higher than the take up of potential apprenticeships (i.e. the local authority falls in the same or lower quintile for potential apprenticeships).

London is the exception with low levels of apprenticeship take up, and consistently high levels of take up of potential apprenticeships, indicating that a conversion from standalone NVQs to apprenticeships has been less successful in the region.

Cogent has particularly low levels of apprenticeship take up across most of the country, despite its expansion potential.

6.5 Supporting sectoral apprenticeship expansion

For the LSC and partners to target sectors for apprenticeship expansion, there are a number of resources available:

- **Using maps and ranking tables**

The maps provided for this project aid a gap analysis of areas with opportunity but currently low take up by learners and can provide a rapid review of opportunity areas. They provide an ideal first overview, where detail can be followed up through the more detailed data tables. To aid further detailed analysis of areas noted as potential gaps on the maps, ranking reports for the mapped sectors are available as MS Excel spreadsheets. These can be used to see in closer detail the ranking of individual local authorities for a particular sector, and therefore allow a more nuanced analysis.

- **Model output spreadsheets**

The model output spreadsheets provided with this project detail full listings of local authority positions together with details of sectoral breakdowns. The spreadsheets can be used to look more in-depth into the modelled potential for sectors within for example a region or a local

Identifying sectors with prospects for expanding the number of apprenticeships

authority. They can also be used to determine which sectors have the greatest expansion potential within a local authority.

- **Finding appropriate providers**

For a recent project undertaken for the LSC, *Apprenticeships – understanding the provider base*, a database of LSC management information on apprenticeship providers was created. The database contains information on the local authority location of the provider, based on its postcode, as well as the current apprenticeships frameworks offered (in 2007/08). We propose that this information is used in conjunction with the outputs of this project, where appropriate providers need to be found as vehicles for apprenticeship expansion.

- **Finding employers to target**

For local partners wishing to find businesses within a certain sector to target for apprenticeships, business listings⁶¹ can be purchased. The listings can be provided on a sectoral and geographical basis (along with many other criteria, e.g. size) and lists contact details for the business sites. Many private sector organisations not in the education sector use these listings for direct marketing, and this is an approach which could usefully be adopted by the sector to promote apprenticeship awareness and take up.

⁶¹ Such as the Experian National Business Database (NBD) used for this project.

Appendix A

Regression Model Technical Detail

A1 – Binary Logistic Regression (Apprentices at Site or not)

A1.1

Actual	Predicted		
		Apprentice	No Apprentice
	Apprentice	418	1910
	No Apprentice	1158	101581

Logistic Model Confusion Matrix (numbers based on sample of data)

A1.2

Sensitivity (proportion of correctly identified sites with apprentices)	18%
Specificity (proportion of correctly identified sites without apprentices)	99%

Logistic Model Sensitivity and Specificity

A1.3

Selected Estimates

When estimating the likelihood that an apprentice will be present at a business location, these numbers are added to the equation. For example, for a car dealer 0.10292 is added to the probability equation. The overall result of the equation must be between 0 and 1. *Positive numbers are associated with a higher probability of apprentices being present at a business location, and negative ones with a lower probability.*

Figure A1.3A: Logistic Model Estimates - Thomson Code

Thomson Code	Estimate
{Missing}	0.08115
{Car Dealers;Hairdressers - Unisex;Nurseries and Crèches;Nursery Schools}	0.10292
{Commercial Vehicle Bodybu;Construction Contractors;Department Stores;Electrical Engineers;Hairdressers and Hair Styl;Heating Contractors and Con;Hotels;Joinery Manufacturers;Leisure and Recreation Cent;Mot Testing Centres;Nursing Homes;Residential Care Homes;Restaurants - Pub Food}	0.10129
{Commercial Vehicle Dealer;Electricians and Electrical;Engineers - General;Garage Services;Golf Courses and Clubs;Health Clubs, Gymnasiums;Mechanical Engineers;Precision Engineers;Public Houses, Bars and Inn;Restaurants - English}	0.10148
{Air Conditioning and Refrig;Builders;Builders Merchants;Building Societies and Othe;Car Body Repairs;Card and Poster Shops;Central Heating - Install;Children and Babywear - Ret;Civil Engineers;Cycle Shops;Dentists;Do It Yourself Shops;Fashion Accessories;Fashion Shops;Food Products - Manufactu;Freight Forwarders;Gas Installers;Hospitals;Joiners and Carpenters;Ladieswear - Retail;Local Government;Mobile Phone Accessories;Motor Cycles and Scooters;Plumbers;Restaurants - Other;Scaffolding Erectors and Hi;Schools and Colleges - Art;Schools and Colleges - Furt;Shoe Shops;Solicitors;Sports Goods Shops;Steel Fabricators and Erect;Travel Agents and Holiday C;Tyre Dealers;Veterinary Surgeons and Pra}	0.09788
{Accountants;Accounting and Book-Keeping;Bakers Shops;Barbers;Bathroom Planners and Furni;Beauty Products;Beauty Salons;Beds, Bedding and Blankets;Booksellers;Building Refurbishment and;Burglar and Intruder Alarm;Cafes, Snack Bars and Tea R;Car Accessories and Parts;Car Breakdown and Recovery;Car Dealers - Used;Car Rental;Carpenters and Joiners;Chemists - Dispensing;Coach Hire;Computer Systems and Softwa;Confectioners Retailers;Conference Services;Corner Shops;Disability and Special Need;Electrical Goods Sales,	0.05732

Identifying sectors with prospects for expanding the number of apprenticeships

M;Electrical Testing and Insp;Electrical Wholesalers;Engineers - Consulting;Environmental Consultants;Estate Agents;Excavation and Groundwork C;Financial Services;Flooring Services;Furniture - Retail;Garden Centres and Nurserie;Glaziers;Hardware;Health Foods and Products;Hire Centres;Home Care Services;Housing Associations, Soc;Insurance - Other;Jewellers;Kitchen Planners and Furnis;KxOther;Landscape Contractors;Legal Services;Mail Order and Catalogue Sh;Menswear - Retail;Mobile Phones;Nursing Agencies;Office Stationery Supplie;Painters and Decorators;Pet Shops and Pet Supplies;Petrol Filling Stations;Plant and Machinery Hire and;Playgroups and Pre-School E;Printers;Printers Services and Sup;Property Developers;Property Maintenance and Re;Quantity Surveyors;Restaurants - Italian;Riding Schools, Livery St;Road Haulage Services;Roofing Services;Schools - Independent and P;Schools - Local Authority;Security Services;Supermarkets;Telecommunication Service;Timber Merchants, Importe;Training Services;Wines Spirits and Beer - Re}	
{Advertising - Agencies;Agricultural Contractors;Architects;Architectural Services;Banks and Other Financial I;Beauty Consultants and Spec;Blinds, Awnings and Canopie;Boarding Kennels and Catter;Boilers - Servicing, Repl;Butchers;Car Breakers and Dismantler;Caravan Parks;Carpets and Rugs - Retail;Caterers;Charities and Voluntary Org;Clinics - N.H.S.;Clothing and Fabrics - Manu;Clubs and Associations;Community Centres;Computer Consultants;Computer Maintenance and Re;Conservatories;Corporate Entertainment;Courier and Messenger Servi;Credit and Finance Companie;Curtains - Retailers and Ma;Dairy Farmers;Delicatessens;Delivery Services;Doctors;Double Glazing Installers;Employment and Recruitment;Farming - Mixed;Financial Advisers- Indep;Fish and Chip Shops;Florists;Grocers;Holiday Camps and Centres;Interior Designers and Furn;Internet Services;Letting Agents;Lock Smiths;Mortgage Brokers;Nail Technicians;Newspaper and Magazine Publ;Nurseries - Wholesale;Opticians - Ophthalmic (O;Party Organisers;Paving and Driveway Contrac;Plasterers, Screeders and D;Plumbers Merchants;Promotional Items;Public Relations Consulta;Publishers;Security Equipment;Sheltered Housing;Shipping Agents and Oversea;Signs and Nameplates;Skip Hire and Rubbish Clear;Social Services;Solariums and Tanning Salon;Sports Clubs and Associatio;Storage Services;Surveyors and Valuers;Surveyors - Building;Television, Video and Radio;Tiling Contractors - Wall;Upholsterers;Youth Organisations and Cen}	-0.04264
{Airport Transfer and Transp;Alternative and Complementa;Antique Dealers;Art Galleries and Fine Art;Artists and Illustrators;Baby Sitters;Bookmakers;Bouncing Castles and Inflat;Business and Management Con;Business Centres;Car Hire - Chauffeur Driv;Carpet Planning and Fitting;Carpet, Curtain and Upholst;Charity Shops;Chiropodists (Podiatrists;Cleaning Services - Domes;Commercial Cleaning Servi;Commercial Vehicle and Car;Computer Training;Counselling and Advice Serv;Dancing Schools;Design Consultants;Designers - Graphic;Discos - Mobile;Dog Clipping and Grooming;Driving Schools;Dry Cleaners;Educational Services;Entertainers;Exhibition Services;Farming - Crops;Farming - Livestock and Oth;Fencing Contractors;Fitness Consultants;Funeral Directors;Gardening Services;General Stores;Gift Shops;Greengrocers and Fruit Sell;Guest Houses;Halls For Hire;Handyman Services;Holidays - Self Catering;Homeopathic Practitioners;Hygiene and Cleansing Servi;Hypnotherapists;Landscape Architects and De;Laundries and Launderettes;Libraries;Marketing Consultants and S;Martial Arts Instruction;Mortgages - Direct;Music Teachers;Musicians and Composers;Newsagents;Osteopaths;Pest and Vermin Control;Pet Services;Photographers - Advertisi;Photographers - General;Physiotherapists;Picture and Photo Framing S;Places Of Worship;Post Office Services;Property and Estate Managem;Psychotherapists;Reflexologists;Religious Organisations;Removals and Storage - Hous;Restaurants - Chinese;Restaurants - Indian;Secretarial and Typing	-0.49938

Identifying sectors with prospects for expanding the number of apprenticeships

Serv; Slimming Products and Servi; Take Away Food Shops; Taxis and Private Hire; Television and Radio Aerial; Translators and Interpreter; Tree Work and Forestry Serv; Tuition - Private; Unconfirmed; Video Production Companies; Web Site Design; Wedding Supplies and Service; Window Cleaners}	
---	--

Identifying sectors with prospects for expanding the number of apprenticeships

Figure A1.3B: Logistic Model Estimates – Local Authority District

LOCAL AUTHORITY	Estimate
{Allerdale;Amber Valley;Ashfield;Barrow-in-Furness;Bassetlaw;Blackburn with Darwen;Blyth Valley;Boston;Broxtowe;Burnley;Calderdale;Cannock Chase;Carlisle;Carrick;Castle Morpeth;Chester-le-Street;Chesterfield;Chorley;Christchurch;Corby;Crewe and Nantwich;Dartford;Derby;Derwentside;Doncaster;Dudley;Durham;Easington;East Devon;East Lindsey;East Staffordshire;Eden;Ellesmere Port and Neston;Erewash;Exeter;Fareham;Forest Heath;Gateshead;Gedling;Gloucester;Halton;Hartlepool;Hinckley and Bosworth;Huntingdonshire;Ipswich;Kerrier;Kings Lynn and West Nor;Kingston upon Hull, City;Kirklees;Lincoln;Liverpool;Mansfield;Melton;Mendip;Middlesbrough;Newark and Sherwood;Newcastle upon Tyne;North Cornwall;North East Derbyshire;North East Lincolnshire;North Kesteven;North Lincolnshire;North Shropshire;North Tyneside;North Warwickshire;North West Leicestershire;Nottingham;Nuneaton and Bedworth;Oadby and Wigston;Oldham;Oswestry;Pendle;Peterborough;Plymouth;Preston;Redcar and Cleveland;Redditch;Restormel;Ribble Valley;Richmondshire;Rochdale;Rotherham;Rugby;Ryedale;Salford;Sandwell;Scarborough;Sedgefield;Sheffield;Shrewsbury and Atcham;South Derbyshire;South Hams;South Lakeland;South Somerset;South Tyneside;St. Helens;Staffordshire Moorlands;Stevenage;Stockton-on-Tees;Stoke-on-Trent;Sunderland;Tameside;Tamworth;Taunton Deane;Teignbridge;Telford and Wrekin;Tewkesbury;Torbay;Tynedale;Vale of White Horse;Wakefield;Walsall;Waveney;Wear Valley;West Devon;West Dorset;West Lancashire;West Lindsey;Wigan;Wirral;Worcester;Wyre}	0.21577
{Ashford;Aylesbury Vale;Barnsley;Blaby;Blackpool;Bolsover;Bolton;Bradford;Braintree;Breckland;Brentwood;Bury;Canterbury;Caradon;Charnwood;Chelmsford;Cherwell;Colchester;Copeland;Cotswold;Coventry;Darlington;Derbyshire Dales;Dover;East Dorset;East Northamptonshire;East Riding of Yorkshire;Eastbourne;Fenland;Forest of Dean;Fylde;Gosport;Great Yarmouth;Hambleton;Harborough;Harrogate;Hastings;Herefordshire;High Peak;Hyndburn;Isle of Wight;Kettering;Knowsley;Lancaster;Lewes;Lichfield;Mid Devon;Mid Suffolk;Newcastle-under-Lyme;North Devon;North Dorset;North Hertfordshire;North Norfolk;North Somerset;North Wiltshire;Northampton;Norwich;Penwith;Portsmouth;Salisbury;Selby;South Gloucestershire;South Holland;South Kesteven;South Norfolk;South Oxfordshire;South Ribble;Southampton;St. Edmundsbury;Stafford;Stockport;Stroud;Swindon;Tendring;Thanet;Thurrock;Wellingborough;West Wiltshire;Weymouth and Portland;Wolverhampton;Worthing;Wyre Forest;York}	0.08543
{Adur;Arun;Babergh;Barking and Dagenham;Basildon;Basingstoke and Deane;Bath and North East Somer;Bedford;Bournemouth;Bridgnorth;Bristol, City of;Broadland;Broxbourne;Cambridge;Chester;Craven;Eastleigh;Harlow;Kennet;Leeds;Leicester;Luton;Macclesfield;Maidstone;Malvern Hills;Manchester;Medway;Mid Bedfordshire;Milton Keynes;New Forest;Reading;Rossendale;Rushcliffe;Sefton;Solihull;South Bedfordshire;South Northamptonshire;South Staffordshire;Stratford-on-Avon;Torridge;Trafford;Wealden;West Oxfordshire;Wokingham}	0.00889
{Birmingham;Bracknell Forest;Bromley;Bromsgrove;Castle Point;Cheltenham;Chiltern;Congleton;Crawley;Dacorum;Daventry;East Cambridgeshire;East Hampshire;Epping Forest;Epsom and	-0.02302

Identifying sectors with prospects for expanding the number of apprenticeships

Ewell;Gravesham;Havant;Havering;Hillingdon;Horsham;KxOther;Maldon;Mid Sussex;Newham;Oxford;Poole;Purbeck;Rochford;Rother;Runnymede;Sedgemoor;She pway;South Cambridgeshire;South Shropshire;Southend-on-Sea;St. Albans;Suffolk Coastal;Sutton;Swale;Test Valley;Tonbridge and Malling;Tunbridge Wells;Vale Royal;Warwick;Watford;Welwyn Hatfield;West Berkshire;Winchester;Wychavon;Wycombe}	
{Bexley;Brent;Brighton and Hove;Croydon;Ealing;East Hertfordshire;Elmbridge;Enfield;Flintshire;Greenwich;Guildford;Hackney;Haringey;Hart; Hertsmere;Hounslow;Lewisham;Merton;Missing;Mole Valley;Redbridge;Reigate and Banstead;Rushmoor;Rutland;Sevenoaks;Slough;South Bucks;Spelthorne;Surrey Heath;Tandridge;Three Rivers;Uttlesford;Waltham Forest;Wandsworth;Warrington;Waverley;Windsor and Maidenhead;Woking;Wrexham}	-0.06681
{Aberdeen City;Aberdeenshire;Anglesey, Isle of;Angus;Antrim;Ards;Argyll and Bute;Armagh;Ballymena;Barnet;Belfast;Blaenau Gwent;Bridgend;Caerphilly;Camden;Cardiff;Carmarthenshire;Castlereagh;Ceredigion; Chichester;City of Edinburgh;City of London;Coleraine;Conwy;Craigavon;Denbighshire;Derry;Down;Dumfries and Galloway;Dundee City;Dungannon;East Ayrshire;East Dunbartonshire;East Lothian;East Renfrewshire;Falkirk;Fermanagh;Fife;Glasgow, City of;Gwynedd;Hammersmith and Fulham;Harrow;Highland;Inverclyde;Islington;Kensington and Chelsea;Kingston upon Thames;Lambeth;Lisburn;Magherafelt;Midlothian;Monmouthshire;Moray;Neath Port Talbot;Newport;Newry and Mourne;Newtownabbey;North Ayrshire;North Down;North Lanarkshire;Omagh;Pembrokeshire;Perth and Kinross;Powys;Renfrewshire;Rhondda, Cynon, Taff;Richmond upon Thames;Scottish Borders;South Ayrshire;South Lanarkshire;Southwark;Stirling;Swansea;The Vale of Glamorgan;Torfaen;Tower Hamlets;West Dunbartonshire;West Lothian;Westminster}	-0.22027

Figure A1.3C: Logistic Model Estimates – Number of Employees at Site

Number of Employees at Site	Estimate
9+	0.37199
5 to 8	0.0704
4	-0.05547
Missing, 1-3	-0.38693

A2– Multinomial Logistic Regression (How Many Apprentices at Site)

A2.1

Model Fit

	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	44298			
Final	38783	5515	234	<0.001

The model fits the data if the difference in the -2 log-likelihoods are significant (indicated by a number less than 0.05 in the final column). This is the case.

A2.2

Parameter Tests

	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	38783	0	0	3.5E+308
Corporate Position	39077	294	18	<0.001
County Court Judgements	38795	12	6	0.056
Small or Home Office	38874	91	6	<0.001
UK Turnover	38846	63	30	<0.001
Number In Family Tree	38832	49	24	<0.001
Employees In Business	38886	104	30	<0.001
Number of Employees at Site	39640	857	30	<0.001
Age of Business	38890	107	24	<0.001
Growth In Employees	38869	86	30	<0.001
Average Employee Remuneration	39124	341	30	<0.001

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

Variables are significant if their numbers in the final column are less than 0.05. The chi-square numbers indicate how important each variable was in determining how many apprentices there are likely to be at each site.

Appendix B

Sector Skills Council definitions

Identifying sectors with prospects for expanding the number of apprenticeships

ASSET SKILLS

Asset Skills is the Sector Skills Council for property, housing, cleaning services and facilities management. The sector includes:

- property managers;
- residential estate agents;
- caretakers;
- facilities management professionals;
- cleaners;
- town planners;
- letting agents and housing managers;
- chartered surveyors; and
- social housing professionals.

Asset Skills covers the Standard Industrial Classification (SIC) Codes 70 and 74.7.

AUTOMOTIVE SKILLS

Automotive Skills, a division of the Institute of the Motor Industry (IMI), is the Sector Skills Council for all businesses and people involved in the sale, maintenance and repair, daily rental and operating leasing of new and used vehicles and associated parts and accessories.

The sector comprises:

- new vehicle sales;
- used vehicle sales;
- routine servicing, maintenance & repair;
- MOT inspections;
- accident/body repair;
- restoration/rebuilding;
- fast-fit (tyres, exhausts, batteries, etc.);
- post-factory fitting and adaptation (electricals, motability, etc.);
- parts and accessories sales/fitting;
- motor fuels sales
- roadside assistance and rescue/recovery;
- contract hire/operational leasing;
- fleet management and insurance
- 'daily' rental (self drive or with driver); and
- valeting/preparation.

Automotive Skills covers SIC codes 50 (excluding 50.5) and 71.1.

Identifying sectors with prospects for expanding the number of apprenticeships

COGENT

Cogent is the Sector Skills Council for chemicals and pharmaceuticals, nuclear, oil and gas, petroleum and polymers. The SSC covers five economic groupings, which share a common foundation - science and technology. The groupings are:

- oil and gas extraction;
- nuclear and radiological technology;
- chemicals manufacturing;
- pharmaceuticals manufacturing
- petroleum industry; and
- polymers.

Cogent covers SIC codes 11, 23 to 25 (excluding 24.3, 24.64, 24.7, 25.11 and 25.12) and 50.5.

CONSTRUCTIONSKILLS

ConstructionSkills is the Sector Skills Council for the construction sector and covers a wide range of sectors in the development and maintenance of the built environment, including:

- house building (public and private);
- infrastructure (roads, railways and utilities);
- non-residential building in the private sector (schools and colleges, hospitals, offices);
- industrial building by the private sector (factories, warehouses); and
- commercial building by the private sector (offices, shops, entertainment, health and education).

Additionally, the sector covers maintenance and repair work in all sectors. The sector also covers the renting of construction machinery and professional and design work in consultancies (engineering, architecture and surveying).

ConstructionSkills covers SIC codes 45 (excluding 45.31 and 45.33) and 74.2.

CREATIVE & CULTURAL SKILLS

Creative & Cultural Skills is the Sector Skills Council for those involved in arts, cultural heritage and craft and design. The sub-sectors covered are:

- the arts - music, performing arts, visual arts and literary arts;
- cultural heritage - museums, galleries and heritage organisations;
- craft - including designer makers of contemporary crafts, covering over 50 specialist trades and occupations; and
- design - specialist consultancies covering graphic, spatial and domestic products.

Creative & Cultural Skills covers SIC codes 22.14, 22.31, 36.22, 36.3, 74.4, 92.31, 92.32, 92.34, 92.4 and 92.52.

E-SKILLS UK

e-skills UK is the Sector Skills Council for information technology and telecommunications and the lead body for contact centres on behalf of the Skills for Business Network. e-skills UK is responsible for developing the quality and quantity of professional skills of:

Identifying sectors with prospects for expanding the number of apprenticeships

- the IT and Telecoms workforce;
- IT and Telecoms professionals working in all industries;
- IT users working in all industries; and
- contact centres dedicated to outsourced services, and qualifications and frameworks for contact centres operating within all industries.

e-skills UK covers SIC codes 22.33, 64.2, 72 and which cover:

- reproduction of recorded media
- telecommunications
- computer consultancy, data processing, data base activities and maintenance
- call centre activities.

These codes do not cover IT and telecoms manufacturing.

ENERGY & UTILITY SKILLS

Energy & Utility Skills is the Sector Skills Council for electricity and renewables, gas, waste management and water industries. It represents:

- generation, transmission and distribution of electricity, combined heat and power
- production and distribution of gas and water
- removal of waste water and treatment of waste products

These industries cover a range of fundamental services that are vital to a successful UK economy and are key to the attainment of environmental targets on water quality, fuel utilisation and waste management.

Energy & Utility Skills cover SIC codes 37, 40.1, 40.2, 41, 60.3, 90.01 and 90.02.

FINANCIAL SERVICES SKILLS COUNCIL

Financial Services Skills Council is the Sector Skills Council for the financial services sector. It includes:

- banks, building societies and central banking;
- leasing;
- credit unions, factoring and other credit granting organisations;
- investment, unit trusts and venture capital;
- life insurance, non-life insurance (general insurance) and insurance brokers;
- administration of financial markets;
- pension funding;
- independent financial advisers and tied financial advisors;
- unit trust and investment trust companies;
- fund managers, asset managers and pension management; and
- securities and derivatives traders.

Financial Services Skills Council covers SIC codes 65, 66 and 67.

GOSKILLS

GoSkills is the Sector Skills Council for passenger transport, which includes:

- aviation (airlines, airports, and ground services);
- bus;
- coach;
- taxi and private hire;
- community transport;
- rail;
- trams;
- driver training; and
- transport planners.

GoSkills covers SIC codes 60.1, 60.21, 60.22, 60.23, 61.1, 61.2, 62.1, 62.2, 63.21, 63.22, 63.23 and 80.41.

GOVERNMENT SKILLS

Government Skills is the Sector Skills Council for central government. The sector includes:

- government departments;
- executive agencies;
- non-departmental public bodies; and
- armed forces

Government Skills covers SIC codes 75.1, 75.21, 75.22 and 75.3.

IMPROVE LTD

Improve Ltd is the Sector Skills Council for food and drink, which represents employers operating in all sectors of the food and drink manufacturing and processing industry. The sector includes:

- sea fishing;
- craft bakery;
- meat and poultry;
- dairy; and
- general food and drink.

Improve Ltd covers SIC codes 15 (except 15.92) and 51.38.

LANTRA

Lantra is the Sector Skills Council for the environmental and land-based sector. This includes:

- agricultural livestock and crops;
- animal care;
- animal technology;
- aquaculture;

Identifying sectors with prospects for expanding the number of apprenticeships

- environmental conservation;
- equine;
- farriery;
- fencing;
- fisheries management;
- floristry;
- trees and timber;
- game and wildlife management;
- land-based engineering;
- landscaping;
- productive horticulture; and
- veterinary nursing.

Lantra covers SIC codes 01, 02.01, 02.02, 05.02, 20.1, 51.88, 85.2 and 92.53.

LIFELONG LEARNING UK

Lifelong Learning UK is the Sector Skills Council for community based learning and development, further education, higher education, library and information services and work-based learning.

Lifelong Learning UK covers SIC codes 80.22, 80.3, 80.42 and 92.51.

PEOPLE 1ST

People 1st is the Sector Skills Council for the hospitality, leisure, travel and tourism sector, representing employers of all sizes in the following industries:

- hotels;
- pubs, bars and nightclubs;
- membership clubs;
- gambling;
- tourist services;
- youth hostels;
- self-catering accommodation;
- restaurants;
- contract food service providers;
- events;
- travel services;
- visitor attractions;
- holiday parks; and
- hospitality services.

People 1st covers SIC codes 55.1, 55.21, 55.23, 55.3-55.5, 63.3, 92.33 and 92.71.

Identifying sectors with prospects for expanding the number of apprenticeships

PROSKILLS

Proskills is the Sector Skills Council for the process and manufacturing sector. The sector includes:

- coatings;
- extractive and mineral processing industries;
- glass manufacture and glazing;
- building products and refractories; and
- print and printed packaging.

Proskills covers SIC codes 10, 12 to 14, 21.24, 22.2, 24.3, 26.1, 26.26 and 26.4-8.

SEMTA

Semta is the Sector Skills Council for science, engineering and manufacturing technologies and represents the sectors of:

- aerospace;
- electrical engineering;
- electronics, including semi-conductors;
- mechanical engineering and metal trades;
- motor vehicles;
- shipbuilding;
- packaging;
- pharmacy and parts of the pharmaceutical industry;
- biotechnology;
- genetics;
- nanotechnology;
- mathematics;
- forensic science; and
- meteorology.

Semta covers SIC codes 25.11, 25.12, 27 to 35 inclusive, 51.52, 51.57 and 73.10.

SKILLFAST-UK

Skillfast-UK is the Sector Skills Council for fashion and textiles. Its remit covers a wide variety of activities, including:

- production of raw materials e.g. leather production;
- manufacture of apparel, footwear, textiles and fibres;
- servicing of apparel, footwear and textile products e.g. dry cleaning and shoe repair;
- design activities related to apparel, footwear and textiles; and
- trading in apparel, footwear and textile products, including specialist wholesale activities and activities of brand-driven holding companies.

Identifying sectors with prospects for expanding the number of apprenticeships

Skillfast-UK covers SIC codes 15.11/3, 17, 18, 19, 24.7, 51.16, 51.24, 51.41, 51.42, 52.71 and 93.01.

SKILLS FOR CARE AND DEVELOPMENT

Skills for Care and Development is the Sector Skills Council for social care, children and young people. Social care policy is fully devolved to each of the four countries. The scope of the sector is defined by legislation in each of the countries, with some differences for the devolved administrations. The current scope of the sector is:

- children's homes;
- care homes;
- domiciliary care and support agencies;
- day centres and services;
- social work;
- fostering agencies and services, and foster carers;
- nurse agencies; and
- adoption services.

Skills for Care and Development covers SIC code 85.3.

SKILLS FOR HEALTH

Skills for Health is the Sector Skills Council that represents the whole of the UK health sector – National Health Services, independent healthcare and voluntary & community organisations.

Skills for Health covers SIC code 85.1.

SKILLS FOR JUSTICE

Skills for Justice is the Sector Skills Council for policing and law enforcement, youth justice, custodial care, community justice, courts service, prosecution service and forensic science.

Skills for Justice covers SIC codes 75.23 and 75.24.

SKILLS FOR LOGISTICS

Skills for Logistics is the Sector Skills Council for the logistics sector. The sector covers:

- wholesale trade
- freight transport by road;
- storage and warehousing;
- activities of other transport agencies;
- courier services;
- airfreight;
- rail freight;
- freight inland; and
- sea and coastal water transport

Identifying sectors with prospects for expanding the number of apprenticeships

Skills for Logistics covers SIC codes 51, (except 51.24, 51.38, 51.41, 51.42, 51.52, 51.57, 51.88) 60.24, 63.1, 63.4 and 64.1.

SKILLSACTIVE

SkillsActive is the Sector Skills Council for active leisure and learning. The sector covers:

- sport and recreation;
- health and fitness;
- the outdoors;
- playwork; and
- the caravan industry.

SkillsActive covers SIC codes 55.22, 92.6, 92.72 and 93.04.

SKILLSET

Skillset is the Sector Skills Council for the audio-visual sector. The sector covers:

- broadcast;
- film;
- video;
- interactive media; and
- photo imaging.

Skillset covers SIC codes 22.32, 24.64, 74.81, 92.1 and 92.2.

SKILLSMART RETAIL

Skillsmart Retail is the Sector Skills Council for the retail sector, established in 2002 and includes:

- supermarkets, department stores and corner shops;
- specialist food, drink and tobacco stores;
- specialist retailers of goods including textiles, clothing, footwear and leather, furniture, electrical, hardware, books and stationary, floor coverings and photographic equipment;
- antique retailers; and
- markets and mail order.

Skillsmart Retail covers SIC codes 52.1 to 52.6.

SUMMITSKILLS

SummitSkills is the Sector Skills Council for the building services engineering sector. The sector covers:

- design, installation and maintenance of electrotechnical heating, ventilation, air conditioning, refrigeration and plumbing; and
- oil and gas fitting design, installation and maintenance.

SummitSkills covers SIC codes 45.31, 45.33, and 52.72.

Identifying sectors with prospects for expanding the number of apprenticeships

No SSC

This sector covers all SICs that are not within the remit of SSCs. The top 15 sectors are listed in figure B1.

Figure B1: Top 15 sectors (4 digit SIC) by number of employees and number of apprentices

	Employees		Apprentices	
	Sector	Relevant SSC/SSB ⁶²		Relevant SSC/SSB
1.	K : 7487 : Other Business Activities nec (15%)		O : 9302 : Hairdressing And Other Beauty Treatment (36%)	HABIA
2.	M : 8021 : General Secondary Education (15%)	Training and Development Agency for Schools	M : 8010 : Primary Education (14%)	Training and Development Agency for Schools
3.	K : 7415 : Management Activities Of Holding Companies (8%)		K : 7487 : Other Business Activities nec (12%)	
4.	O : 9305 : Other Service Activities nec (8%)		O : 9305 : Other Service Activities nec (6%)	
5.	K : 7414 : Business And Management Consultancy Activities (5%)		K : 7415 : Management Activities Of Holding Companies (6%)	
6.	O : 9133 : Activities Of Other Membership Organisations nec (4%)		M : 8021 : General Secondary Education (4%)	Training and Development Agency for Schools
7.	O : 9302 : Hairdressing And Other Beauty Treatment (3%)	HABIA	K : 7412 : Accounting, Book-Keeping And Auditing Activities; Tax Consultancy (3%)	Financial Services Skills Council
8.	K : 7411 : Legal Activities (3%)		K : 7411 : Legal Activities (2%)	
9.	K : 7450 : Labour Recruitment And Provision Of Personnel (3%)		DD : 2030 : Manufacture Of Builders' Carpentry And Joinery (2%)	
10.	G : 5190 : Other Wholesale (3%)		G : 5190 : Other Wholesale (3%)	
11.	M : 8010 : Primary Education (3%)	Training and Development Agency for Schools	DN : 3663 : Other Manufacturing nec (2%)	

⁶² Standard Setting Board

Identifying sectors with prospects for expanding the number of apprenticeships

	Employees		Apprentices	
12.	DN : 3663 : Other Manufacturing nec (3%)		O : 9133 : Activities Of Other Membership Organisations nec (1%)	
13.	DE : 2212 : Publishing Of Newspapers (3%)		K : 7450 : Labour Recruitment And Provision Of Personnel (1%)	
14.	K : 7412 : Accounting, Book-Keeping And Auditing Activities; Tax Consultancy (2%)		K : 7414 : Business And Management Consultancy Activities (1%)	
15.	K : 7222 : Other Software Consultancy And Supply (2%)		DN : 3614 : Manufacture Of Other Furniture (1%)	FFINTO

Appendix C

About Experian



Who we are

Experian

Experian is a global leader in providing information, analytical and marketing services to organisations and consumers to help manage the risk and reward of commercial and financial decisions.

Combining its unique information tools and deep understanding of individuals, markets and economies, Experian partners with organisations around the world to establish and strengthen customer relationships and provide their businesses with competitive advantage.

For consumers, Experian delivers critical information that enables them to make financial and purchasing decisions with greater control and confidence.

Clients include organisations from financial services, retail and catalogue, telecommunications, utilities, media, insurance, automotive, leisure, e-commerce, manufacturing, property and government sectors.

Experian Group Limited is listed on the London Stock Exchange (EXPN) and is a constituent of the FTSE 100 index. It has corporate headquarters in Dublin, Ireland, and operational headquarters in Costa Mesa, California and Nottingham, UK. Experian employs around 15,500 people in 36 countries worldwide, supporting clients in more than 65 countries. Annual sales are in excess of \$3.8 billion (£1.9 billion/€2.8 billion).

For more information, visit the Group's website on www.experiangroup.com

The word 'Experian' is a registered trademark in the EU and other countries and is owned by Experian Ltd and/or its associated companies.

