

Employability and Skills in the UK: Redefining the debate

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Executive Summary

The Conservative-Liberal Democrat government faces the toughest economic environment for more than sixty years and government debt is expected to peak at 74.9% of GDP. This is the highest level of government debt incurred in peacetime.

The recession has accelerated structural change within the economy. The past 10 years have seen significant growth in knowledge-intensive industries and occupations, whilst job losses have primarily focused on the lower skilled. The past decade has seen growth over-dependent on debt, property booms, the financial sector and the public sector. This must be replaced by private sector led growth with technology and knowledge-based activities taking the lead – advanced manufacturing, low carbon activities, high tech and business services, and the cultural and creative industries.

Improving the nation's skills profile – both hard (qualifications) and soft (generic skills) – is therefore essential to the future prosperity of the UK. The benefits of this investment are felt by individuals, employers and the economy.

Yet it is clear that the current skills and employment system is not fit for purpose. Evidence from the Leitch Review as well as subsequent research from the UK Commission for Employment and Skills (UKCES) has demonstrated that the UK has performed poorly in terms of basic and intermediate skills.

Skills shortages, skill gaps and skills under-utilisation are cited as the main problems facing the system. However skill shortages only concern about 1% of employees and skill gaps more than 10% – skills under-utilisation concerns between 35 and 45 percent of the workforce. Some commentators have questioned whether we are producing too many graduates, but evidence suggests graduates will continue to be in demand - especially STEM graduates (with the government announcing that science and innovation will be key to the economy over the coming years). Although more attention needs to be given to the sort of STEM graduates being produced and also the demand side.

The debate about employability and skills has been long-standing. The cultural divide between education and employment, and a lack of demand for higher skills (the 'low skills equilibrium') are critical barriers. After many years there has been no revolution and we are still discussing a lack of 'employability skills', with education providers remaining focused on

qualifications targets rather than preparation for the workforce. Softer skills, such as communication, will grow in importance in an increasingly knowledge-intensive economy.

This paper introduces two contextual challenges which have the potential to exacerbate the problems that exist with the system – the continued progress towards the knowledge economy and public sector cuts. The demand for higher level skills within certain knowledge-based service industries has expanded over recent years and will continue to grow. Higher level skills are also more in demand in all other parts of the economy. Similarly, the public sector has not only invested more in workforce training and learning, but it is also a key driver of demand for higher level skills.

There is a clear spatial mismatch in the demand and supply of skills. The demand for high level skills within ‘knowledge-based’ service sectors, such as financial and insurance activities, is much lower in some places (such as the North East) than it is in others (London). And private knowledge-intensive industries are also most commonly located in places with higher level skills and less of a reliance on the public sector. Public sector cuts will therefore have a disproportionate negative effect on certain places.

The Coalition has placed a clear emphasis on strengthening the links between education and industry. Despite significant cuts in the Department of Business, Innovation and Skills’ budget, the government announced funds for 75,000 new apprenticeship places a year. Further and Higher Education will be given more freedoms, and the Browne Review has recommended lifting the cap on university fees, increasing the individual contribution to the system. At the heart of the Coalition’s economic development agenda is rebalancing the economy. The existence of Local Enterprise Partnerships (LEPs) will present an opportunity to provide tailored and integrated responses to skills and employment issues at a sub-regional level.

The report concludes with an agenda for change. It is essential that all key stakeholders recognise and react to the challenges ahead within the employment and skills system. We argue the need for a local and integrated approach that involves government, education providers, employers, and LEPs.

- **Government should:**

- Prioritise support for those with low and intermediate skills;
- Encourage innovation within the economy and a supply of graduates with relevant skills to meet the demands of the future economy.

- **Education providers should:**

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- Be more accessible to and pursue collaboration opportunities with local employers;
- Build generic skills into the education system.
- **Employers should:**
 - Collaborate more with local education and training providers and;
 - Private sector employers must play an active role within the skills system.
- **Local Enterprise Partnerships should:**
 - Provide a strategic role and facilitate relationships between local stakeholders.

1. Introduction

The Conservative-Liberal Democrat government faces perhaps the toughest economic environment for more than sixty years. The recession that has barely ended reduced the UK's productive capacity by 6.2% or around £100 billion. Over the next few years government debt is expected to peak at 74.9% of GDP according to the last Budget in April 2010.¹ This is the highest level of government debt incurred in peacetime.

If the UK is to respond to these challenges and make the most of the opportunities created by the upturn, there is an urgent need for policymakers to understand how the UK economy will look different. The past ten years have seen significant growth in knowledge-intensive industries and occupations and the recession has simply accelerated this ongoing structural change. Whilst all industries have been affected, fewer jobs have been lost in knowledge-intensive industries and there has even been some growth in the public knowledge-intensive sectors of education and healthcare. Between April–June 2008 and 2009, 84% of all jobs lost were in manual, unskilled and administrative occupations.

Any analysis of the future shape of the economy identifies skills – both hard (qualifications) and soft (teamworking, communication) – as a critical component of the future prosperity of the UK. Over the past 30 years advanced economies have become increasingly hungry for skills. New technologies have combined with intellectual and knowledge assets – the 'intangibles' of research, design, development, creativity, education, science, brand equity and human capital – to transform the UK economy. Across all sectors – manufacturing and services, high tech and low tech, domestic and internationally traded, public and private, large corporation and small enterprise – organisations have prospered by allowing highly skilled individuals the freedoms and flexibilities to deploy new technologies to rapidly create tailored products for increasingly sophisticated customers. The tripling of business investment in 'intangibles' such as human capital, research and development, software and design between 1970 and 2004 (Brinkley, 2008) - with the bulk of investment being in human and organisational capital - illustrates this starkly.

¹ http://webarhive.nationalarchives.gov.uk/+http://www.hm-treasury.gov.uk/d/budget2010_complete.pdf

There are substantial returns for the individual, businesses and the economy to investing in skills. The more educated an individual is, the more employable they are: '85% of employers that had recruited higher education leavers into their first job found them to be well or very well prepared for work, compared to 66% of employers that had recruited a young person who had completed only compulsory education'.² Increasing the training rate by 5 percentage points is associated with a 4 percentage point increase in productivity and subsequent £40 billion on GDP.³

And The Work Foundation's analysis suggests that this will intensify, with skills-hungry knowledge-intensive sectors being critical to the future growth of the UK. Growth of knowledge-intensive services drove the UK out of the recessions in the 1980s and 1990s; we expect the same to happen in the 2010s. Public knowledge-intensive industries are less likely to contribute to economic growth in the years ahead, given the scale of the deficit, and this means that private knowledge-intensive services will be increasingly important. The Work Foundation predicts that the most significant drivers of growth will be: creative industries, low carbon sectors, business services and "manu-services" (services that are sold in conjunction with manufactured products, for example Rolls Royce servicing its jet engines). Going forward, the UK will need to focus on innovative, high value sectors that create the potential to benefit from growing global markets.

And whilst we know that skills will be vital to economic recovery, and we can start to predict which sectors will be sources of growth, it has become clear that the skills system is not fit for purpose. There are more qualified people leaving higher and further education – some 44% more than 10 years ago⁴ – but there is rising concern that many people are overqualified for the kinds of work they find themselves doing. In addition, some employers are frustrated that individuals, including some university leavers, do not demonstrate many of the generic skills that employers are looking for – 19% of establishments reported a skills gap in 2009.⁵ This is despite long-standing recognition of skills for the workplace being a problem: in 1989, the Confederation of British Industry (CBI) called for a skills revolution, issuing a call for schools, colleges and universities to increase the provision of 'employability skills'. Twenty years on, there has been no revolution and we are still discussing a lack of 'employability' skills, with the incentives for education providers

² UKCES (2010) *National Employer Skills Survey for England 2009*

³ UKCES (2010) *Ambition 2020: world class skills and jobs for the UK*, The 2010 Report

⁴ <http://www.hesa.ac.uk/index.php/content/view/1175/141/>

⁵ UKCES (2010) *National Employer Skills Survey for England 2009*

remaining focused on qualifications targets rather than preparation for the workplace. Softer skills, such as team working and communication, are an important aspect of an individual's employability, and they will be in higher demand as we move towards a more knowledge-intensive economy.

Just as challenging is the reported under-utilisation of skills and experience for those in jobs. In the Work Foundation's Knowledge Worker Survey, 36% of knowledge workers reported that their jobs under-utilised their skills and experience.⁶ This problem intensifies further down the spectrum with 44% of those in jobs with some or little knowledge content reporting that their skills were underutilised.

In some parts of the UK these problems intensify due to the uneven distribution of supply and demand of higher level skills. Whilst there are overarching abstract failures within the employment and skills system of the UK, there is also a distinctly spatial aspect to skills supply and demand issues. Mismatches of demand and supply are evident across the country, and ongoing structural change within the economy could have further implications. The public sector has been both a key driver of skills provision and also a driver of demand for higher level skills. The latent private sector demand for skills is unevenly spatially distributed and there is lower provision of training within the sector. Public sector cuts, therefore, are likely to have disproportionate effects across the country with clear implications for local skills delivery.

The Conservative-Liberal Democrat government recognise the importance of education and skills. The Coalition government is committed to:

- Supporting the creation of apprenticeships (a commitment to 75,000 more places a year), internships, work pairings, and college and workplace training places;
- Setting colleges free from direct state control and abolishing many of the further education quangos, enabling public funding to follow student choices;
- Promoting the UK as a world leader in science and innovation

The Coalition government are also considering the recommendations from Lord Browne's final report into higher education funding were released on 12th October

⁶ Brinkley, I. *et al.* (2009) *Knowledge Workers and Work*, The Work Foundation: London.

2010. The report recommended moving towards a more free market approach, in which the cap on fees would be lifted, and advises that graduates would not have to repay their loans until their earnings have reached £21,000.

With all budgets under threat, however, education and skills will be no exception and skills policy will be under review over the coming months. The question is how education and skills policy can adapt to the demands of reducing the public sector deficit at the same time as responding to a rapidly changing economy. In an era of low public spending, priorities and new models of funding will have to be established. We need to review and progress the debate about skills and employability, updating discussions, reviewing what role employers can play in skills policy and understanding where the failures are occurring.

The paper responds to each of these questions as follows:

- **Section two** considers the challenges ahead with the continued progress towards the knowledge economy and public sector cuts.;
- **Section three** outlines how the debate has developed and where we are now;
- **Section four** considers the Coalition's response and the policy implications of this research.

2. The challenges ahead

This section reviews evidence on the supply and demand for skills in the UK economy. It focuses on the implications of continued progress towards the knowledge economy, the impact of the recent recession and public sector cuts – and what these changes might mean for skills demands from employers.

2.1 The Knowledge Economy and underlying demand for skills

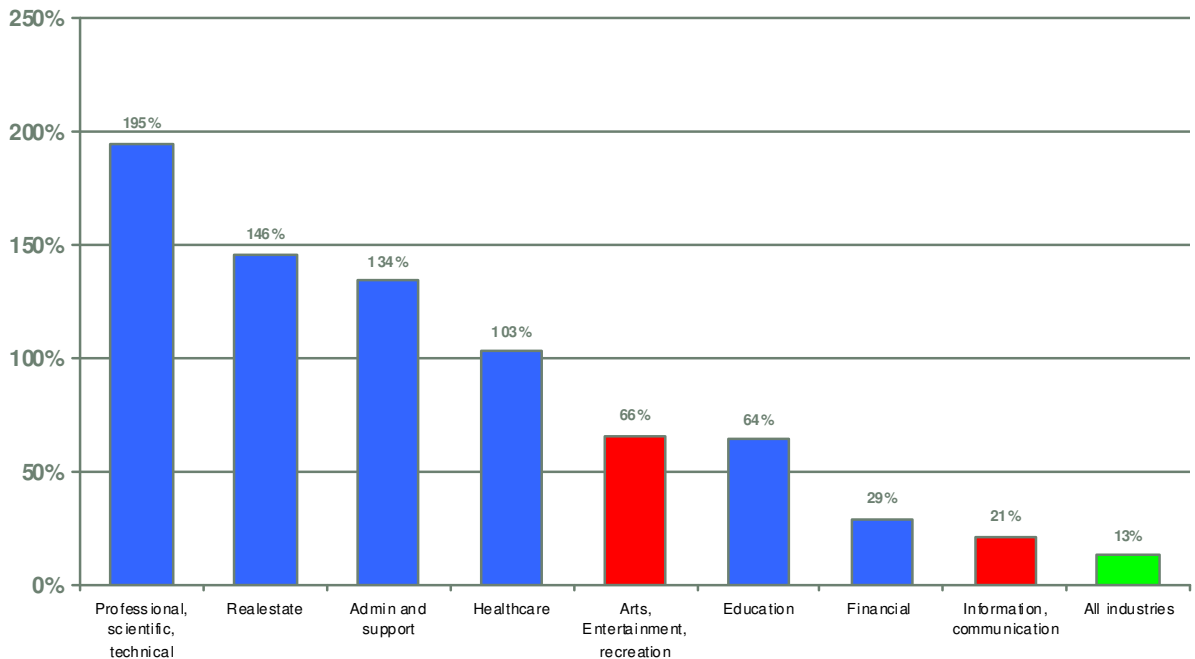
In today's global economy, competitive advantage is increasingly gained from the effective use of knowledge, skills and innovation. In 1970, around one fifth of the UK workforce were 'knowledge workers'.⁷ Today two fifths are 'knowledge workers' and by 2020 it will be over half.

The knowledge-intensive services acted as the primary source of economic growth in the boom period of the last decade, generating significantly more new jobs and productivity than other sectors.⁸ Between 1979 and 2010 employment in knowledge-intensive industries increased by around 90% compared with 13% across all industries. Nearly half of all UK employment was in the knowledge-intensive industries by 2010. Knowledge-intensive sector growth is shown in Figure 2.1. The balance has changed in some sectors over time. The expansion in financial services, for example, is largely a product of deregulation in the 1980s, and net job growth in financial services since 1990 has been zero. The information and communication industries have also seen relatively flat growth in the run up to the recession, with growing job losses in the publishing industries.

⁷ In this case, 'knowledge workers' are defined as workers employed in the top 3 SOC categories, including professionals, managers and associate professionals. However, there is not one uniformly accepted definition; with workers holding a degree often used as a proxy. In an attempt to more accurately capture the knowledge content of jobs, The Work Foundation (Knowledge Worker Survey) separated worker's who used tacit knowledge from those who relied on codified/ procedural knowledge in their work. The survey suggests we have a 30 (perform many knowledge tasks) – 30 (perform some knowledge tasks) - (perform few knowledge tasks) workforce.

⁸ The OECD defines knowledge-intensive service industries on the basis of their above average employment of graduates as well as above average use of new technologies.

Figure 2.1: Employment growth in knowledge-intensive services, 1979-2010



Source: Office for National Statistics, 2010

The shift to a knowledge-based economy is based on three key supply-side trends:

- **Increasing investment in intangibles** – There has been a fundamental shift in investment priorities towards the creation and exploitation of knowledge and other intangible assets such as research and development, IT, branding and advertising, and organisational development.⁹
- **Expansion of higher education** – Between 1970 and 2005 the proportion of the population with a graduate level education or above increased from 2% to 20% using a common international definition. (Figure 2.1). National indicators show that 36% of the employed workforce had a degree or equivalent in 2010.
- **Technological development** – The rapid development of general purpose technologies (GPTs) such as the personal computer and the internet have had transformational impacts on the flow of global capital, the processing and communication of information and the development of organisational systems and processes.

⁹ Ian Brinkley (2008), *The Knowledge Economy: How Knowledge is Reshaping the Economic Life of Nations*, The Work Foundation: London

This transition has been accompanied by important demand-side drivers:

- **Increasingly sophisticated consumer and business demand** – High value added knowledge-intensive goods and services. Consumer services are increasingly personalised and the demand for experiential services has increased rapidly.
- **Collective consumption** – There has been increasing demand for publicly funded services in all OECD economies, particularly health and education.

The accelerator on both the demand and supply side has been globalisation, creating markets of scale and also diversity and facilitating the flow of ideas, concepts, technologies, capital and people.

Investment in human capital has increased significantly in the last thirty years.

Prior to the 1980s, the UK had one of the lowest higher education participation rates in the OECD.¹⁰ The Education Act of 1988 alongside other reforms has expanded access to higher education and created an unprecedented up-skilling of the population as the percentage of the labour force with university education leapt from below 5% in 1980 to over 20% thirty years later.¹¹ This drive to expand higher education peaked in 2008 with Labour's policy of aiming to get 50% of young people to enter tertiary education and 75% to enter post-secondary education.¹²

In a generation we have gone from a workforce where most people had no formal qualifications and high level qualifications were rare to one where few have no qualifications and higher level qualifications have become much more commonplace. This is shown in figure 2.1 below - the share of the working age population is divided into three groups – those without qualifications, those with high level qualifications, and those in the middle – for the period 1970 to 2005. The classification is taken from the EU KLEMs database and in order to ensure a consistent measure over time these figures do not directly correspond with UK national measures. The chart also shows the same measures for the US, often regarded as the world leader in higher level education. The UK has failed to make much impression on the US lead despite significantly increasing investment in higher

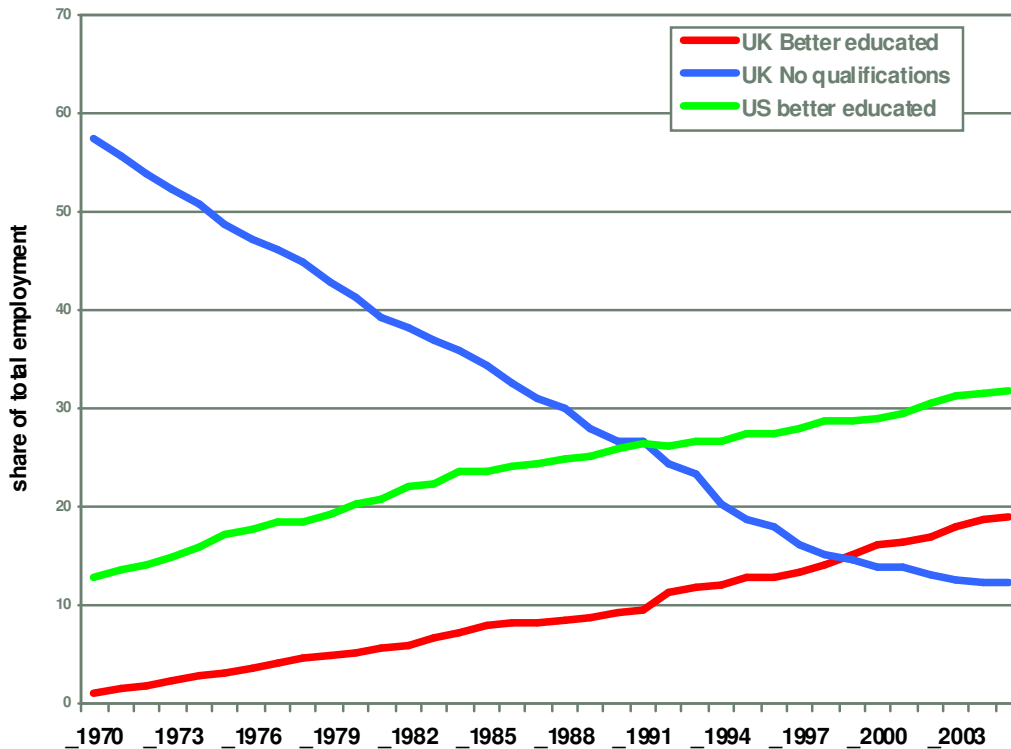
¹⁰ Chevalier and Lindley (2007), *Over-education and the Skills of UK Graduates*

¹¹ Chevalier, A. and Lindley, J. (2007) *Over-Education and the Skills of UK Graduates*

¹² Leitch Review of Skills (December 2006) *Prosperity For All in the Global Economy: world class skills*

education – illustrating how difficult it can be to catch up world leaders. However, the UK compares much more favourable with many other OECD economies.

Figure 2.2: Rise of the educated and qualified workforce, 1970-2005



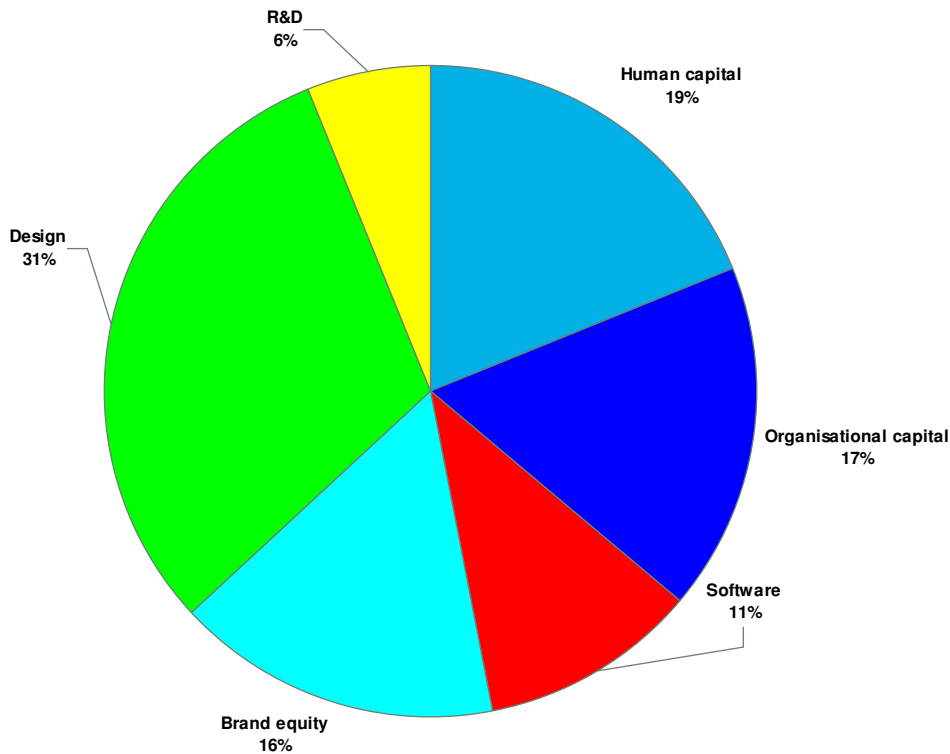
Source: KLEMs EU database and definitions, TWF estimates

Progress towards the knowledge economy is transforming the world of work.

Knowledge-intensive work depends on the use of ‘tacit’ knowledge that resides in people’s minds in the form of expertise or experience, rather than being written down in manuals, guides lists and procedures. Productivity depends on deriving value from intangible assets such as research and development, IT, branding and advertising, and organisational development. Across all sectors, organisations have invested massively in knowledge-based intangibles. In 1970, UK business investment alone in knowledge-based intangibles was worth 40% of investment in physical infrastructure such as buildings, machines and equipment, and vehicles. In 2004 it was worth nearly 120%, or nearly £130 billion. A reflection of the importance of human capital, employer training accounted for 19% of investment in intangibles in 2004.¹³

¹³ Brinkley, I. (2008), *The Knowledge Economy: How Knowledge is Reshaping the Economic Life of Nations*, The Work Foundation: London

Figure 2.3: UK Business Spending on Intangibles 2004



Source: Haskell, 2008

The nature of employment in manufacturing has also radically changed. The advanced manufacturing industries are defined by the OECD as those with higher R&D spend as a share of sales. The vast majority of UK exports are generated by these industries. However, across all manufacturing sectors the shift has taken place towards “manu-services” where manufacturing firms combine manufacturing with high value added services. By one measure, about 25% of UK manufacturing has adapted this model and they are disproportionately global companies.¹⁴ As a result, the manufacturing workforce is becoming increasingly white collar and high skill. Indeed, the TWF Knowledge Workers Survey found that manufacturing workers were just as likely to be engaged in knowledge-intensive tasks as their service sector counterparts, even though conventional measures based on job titles and qualifications show a much less favourable picture. Manufacturing firms now invest far more in design, human and organisational capital, and R&D than they do in physical plant.¹⁵ This process has further to go: in the US the share of manufacturing firms with some form of “manu-service” operation is 60%. By contrast, only 3% of

¹⁴ Neeley, A.D. (2009) *AIM*.

¹⁵ Gil, V. and Haskel, J. (2008) *Industry-level Expenditure on Intangible Assets in the UK*

manufacturing firms in China have adapted to manu-services. Manufacturing across the OECD is moving towards this model because it provides one source of competitive advantage over lower wage manufacturing in economies such as China.¹⁶

A highly skilled workforce is a pre-requisite for a knowledge economy.

Knowledge-intensive businesses depend heavily on access to high level skills, both in terms of specialist knowledge and the ability to practically demonstrate a spectrum of generic employability skills that are crucial to participate in the knowledge economy. Those working in knowledge-based service industries are more likely to receive training than those who work in the rest of the economy: 65% of those working in knowledge-based services received training compared to 53% in the rest of the economy in March 2010.

Demand for degree level qualifications in knowledge-based services is significantly higher than in the rest of the economy. Table 2.1 can be considered a proxy for demand for skills within different sectors of the UK economy. Here knowledge-based services have been separated from the rest of the economy:¹⁷ in 2010 51.2% employed in the knowledge-based services were qualified to at least NQF level 4 compared to 23.9% in all other industries as a whole. Within knowledge-based services, demand for degree level qualifications was particularly high amongst 'professional science and technical activities' (62% employed in the sector had level 4 qualifications in 2010). This compares with 15% for 'transport and storage' within the rest of the economy. Conversely, the proportion of individuals with no qualifications working in knowledge-based services is half that of the 'rest of the economy'. The proportion of those working in the rest of the economy with level 2 and 3 qualifications as the highest level attained is also higher than those working in 'knowledge-based services'.

Yet the increase in demand for higher level qualifications is not just confined to the knowledge-intensive services. The latest data shows that just as the proportion of graduates employed in the knowledge-intensive sectors has increased

¹⁶ So have some south east Asian economies such as Taiwan, Malaysia and Singapore and for much the same reasons.

¹⁷ Knowledge-based services have been defined using the following 2007 SIC codes: J Information and communications; K Financial and insurance activities; L Real estate activities; M Professional, scientific, technical activities; N Administrative and support services; P Education; Q Human health and social work; R Arts, entertainment and recreation (Eurostat definition)

by 2.8 percentage points from 2008 to 2010, in the rest of the economy the proportion of graduates has risen by 2 percentage points.

Table 2.1: Skills demand by sector, 2010

	2010		Trade Apprenticeship s	2010		Below NQF Level 2	No qualifications
	NQF Level 4 and above	NQF Level 3		NQF Level 2	NQF Level 2		
	2010	2010	2010	2010	2010	2010	2010
M Prof, scientific, technical activ.	62.3	11.2	2.3	10.5	7	1.8	
P Education	62.5	12.1	1.2	10	7.1	3.2	
J Information and communication	59	13.5	2.2	10.4	6.1	2.1	
Q Health and social work	49.1	15.6	1.4	15.5	7.9	4.2	
K Financial and insurance activities	43.7	20	0.8	19.1	10	1.4	
R Arts, entertainment and recreation	36.8	17.9	3.6	18.9	10.5	5.9	
L Real estate activities	38.5	17.9	2.9	17.6	13.4	5.4	
N Admin and support services	26.7	13.7	3.6	17.2	13.8	11.2	
knowledge based services	51.2	14.4	1.9	13.9	8.5	4.0	
U Extraterritorial organisations	41.3	9.4	7.7	16.7	8.0	1.3	
O Public admin and defence	44.2	18.8	2.5	17.8	10.0	2.6	
D Electricity, gas, air cond supply	37.7	22.1	11.0	15.6	6.0	2.4	
B Mining and quarrying	39.3	15.3	11.7	11.5	11.2	2.3	
S Other service activities	32.4	19.2	9.3	15.6	11.9	5.2	
E Water supply, sewerage, waste	25.6	12.9	5.2	16.1	14.7	14.0	
C Manufacturing	26.1	16.9	9.0	13.7	13.4	9.3	
A Agriculture, forestry and fishing	20.8	10.0	4.2	16.0	14.5	21.2	
F Construction	18.6	20.8	16.0	14.5	12.3	8.3	
T Households as employers	16.3	10.9	3.5	12.3	16.6	25.9	
H Transport and storage	15.6	14.0	7.3	18.8	17.0	10.2	
G Wholesale, retail, repair of vehicles	18.1	18.3	4.5	20.8	17.7	11.1	
I Accommodation and food services	17.1	19.0	2.1	21.7	13.7	11.5	
Rest of economy	23.9	17.9	7.1	17.5	14.1	9.0	
Total	36.5	16.3	4.7	15.8	11.5	6.7	

Source: Labour Force Survey

Despite the shift towards the knowledge economy, there is still a long ‘tail’ of low skilled employment in the labour market. The latest data from the Labour Force Survey (LFS) estimates that around 1.9 million jobs in the UK do not require a qualification.

The recession has sped up structural change within the economy. Between April-June 2008 and 2009, 84% of job losses were in manual, unskilled and administrative positions.¹⁸ Between March 2008 and March 2010 employment in knowledge-intensive services¹⁹ increased by 250,000 compared to a loss of 580,000 in the rest of the service sector.²⁰ In March 2010, the knowledge-intensive services

¹⁸ Brinkley, I. (2009) *Recession and Recovery to 2020*, The Work Foundation: London

¹⁹ As defined by EUROSTAT 2007 SIC codes

²⁰ Brinkley, I. (2010) *Mapping and Defining the Knowledge Economy: changes in the official industrial classifications*, The Work Foundation: London

accounted for 48% of total employment (this figure would be over 50% if high tech manufacturing was included).²¹

The recovery of the UK's economy will be dependent on the expansion of the private knowledge-intensive industries. Growth of the knowledge economy from now to 2020 is likely to be driven by growing consumer demand for health and education, cultural and environmental related services, as well as intermediate consumption by businesses and other organisations of knowledge-based business services and high tech goods. According to the UK Commission for Employment and Skills (UKCES) report *Working Futures* released prior to the recession, there would be an estimated net growth of about 1.9 million jobs between 2007 and 2017 of which 1.1 million jobs will be in private knowledge-intensive industries.^{22,23}

Both the recoveries of the 1980s and 1990s were driven by increased employment in the knowledge-based sectors. So far the recovery from this recession in both the UK and US has been dominated by the knowledge-intensive industries. The past decade has seen growth over-dependent on debt, property booms, the financial sector and the public sector. This must be replaced by private sector led growth with technology and knowledge-based activities taking the lead – advanced manufacturing, low carbon activities, high tech and business services, and the cultural and creative industries. A stronger emphasis on private enterprise over the coming years, with government support for SMEs in the form of the National Insurance contributions holiday for new businesses (announced in the June 2010 budget), will require individuals to become more versatile and entrepreneurial.

Key challenges

Two major challenges exist with regard to the UK skills system. Firstly, the shift towards the knowledge economy has increased demand for highly skilled graduates. The speed and strength of the UK's recovery will be dependent on developing and sustaining the skills of the UK workforce. Secondly, there is a danger that the recovery will create greater social and economic divides, with the workforce polarising between those in relatively well paid, secure knowledge related jobs and those in poorly paid, lower skill jobs.

²¹ Brinkley, I. (2010) *Mapping and Defining the Knowledge Economy: changes in the official industrial classifications*, The Work Foundation: London

²² Banking and insurance, professional services, computing and related services, other business related services.

²³ UKCES (2008), *Working Futures*.

2.2 The geography of supply and demand for high level skills

It is likely that the recovery will widen the gap between successful cities and those with weak economies. In *No City Left Behind?*, we argue that the four growth sectors and high growth businesses which will drive demand in the recovery are likely to locate, along with clusters of high skills and enterprise, predominantly in the South East of England in cities such as Reading, Cambridge and London.²⁴ These places have the greatest growth potential. Conversely, high growth businesses are less likely to be found in those places with the lowest skills profiles (that were worst affected by the recession). These places are predominantly in the north of England (such as Doncaster and Hull) and have the lowest growth potential.

One of the key contributors to the uneven development of the knowledge economy across the UK over the last decade has been the significant differences in skills profiles between and within regions. Concentrations of high and low skills have a substantial regional dimension: over a third (40%) of London's working age population is qualified to degree level and above, whilst the figure in the North East is just 24%. Patterns of graduate migration impact on the geography of skills. Debates around graduate attraction and retention frequently make reference to the 'brain drain' which sees regions lose their new graduates to London and the South East.

Over the past 30 years, cities and regions with historically highly skilled populations have seen larger increases in the share of the population with graduate level qualifications.²⁵ More recently, regions with the largest supply of level 4 qualifications in 2005 generally experienced the highest percentage point increase by 2009. For example, London experienced a 6 percentage point increase in its supply of graduates and 40% of the population are now qualified to at least NVQ level 4. This compares with the West Midlands where 24.8% of the local population has level 4 qualifications (and experienced a 1.9 percentage point increase between 2005 and 2009).

²⁴ Lee, N. Morris, K. Wright, J. Clayton, N. Brinkley, I. and Jones, A. (2010) *No City Left Behind? The geography of the recovery – and the implications for the Coalition*, The Work Foundation: London

²⁵ Lee, N. (2009) *Better Together? The clustering of the highly skilled and implications for low skills*

Just as the supply of skills has an uneven geographical distribution, so too does the demand for certain skills. There is great disparity in the level of qualifications demanded within knowledge-based services and the rest of the economy at a regional level. Central and inner London demanded the highest proportion of level 4 qualifications (as measured in the first quarter of 2010): 66.5% of individuals working in knowledge-based services in Central London have level 4 qualifications, compared to 44% in South Yorkshire and 43 % in the West Midlands. Similarly, London demands the highest proportion of level 4 qualifications in the 'rest of the economy', 50% compared to 17.2% in South Yorkshire. At the lower end of the skills profile, only 3.6% of individuals working in knowledge-based services in inner London have qualifications below level 2; this compares to 11.4% in the West Midlands.

Low skilled employment is concentrated in particular parts of the UK. In parts of Yorkshire and the Humber and the West Midlands, 15% of jobs require low or no qualifications. In contrast, in Central London less than 5% of jobs are low skilled.

Key challenges

There is a clear positive relationship between high skills and economic prosperity within the UK. Just as skills were a key determinant of the severity of the impact of the recession across the UK's cities and regions, so too will cities' recovery be dependent on how successful cities are in delivering a strong skills base. Cities need to work with employers and continue to invest in education and skills provision at a local level. This is crucial to growth in all cities.

2.3 Low public spending

The UK economy has entered an era of low public spending. For the foreseeable future deficit reduction is the priority for the government. This has implications for both the delivery of training and education, for employment and the demand for certain skills in the economy. The latter part of this sub-section will demonstrate that the public sector has driven demand for higher level skills and qualifications in many parts of the country, meaning support will be needed to push private sector companies up the value chain if they are to fully utilise the supply of higher level skills.

The supply of skills will be affected by spending cuts announced by the Coalition. Although spending on frontline health and education (primary and secondary) has been safeguarded, the October 2010 Spending Review announced a cut of 7.1% to the Business, Innovation and Skills budget. This settlement is comprised of 40% of savings from higher education reform. It has been projected that 170,000 prospective undergraduate students will fail to secure a higher education place this year compared to 100,000 who are rejected in a normal year because they fail to get the necessary grades. Overall, UK higher education institutions receive slightly less from private sources as a percentage of GDP than the OECD average (0.5%); this is significantly less than the US (1.9%).²⁶ Adult learning budgets are also likely to be affected. Research by the National Institute of Adult Continuing Education in 2008 highlighted that 47% of all post-compulsory and adult learning provision (£55 billion) was public expenditure, compared to 37% by private organisations and 17% by individuals.

2.3.1 Cuts to Public Sector Employment

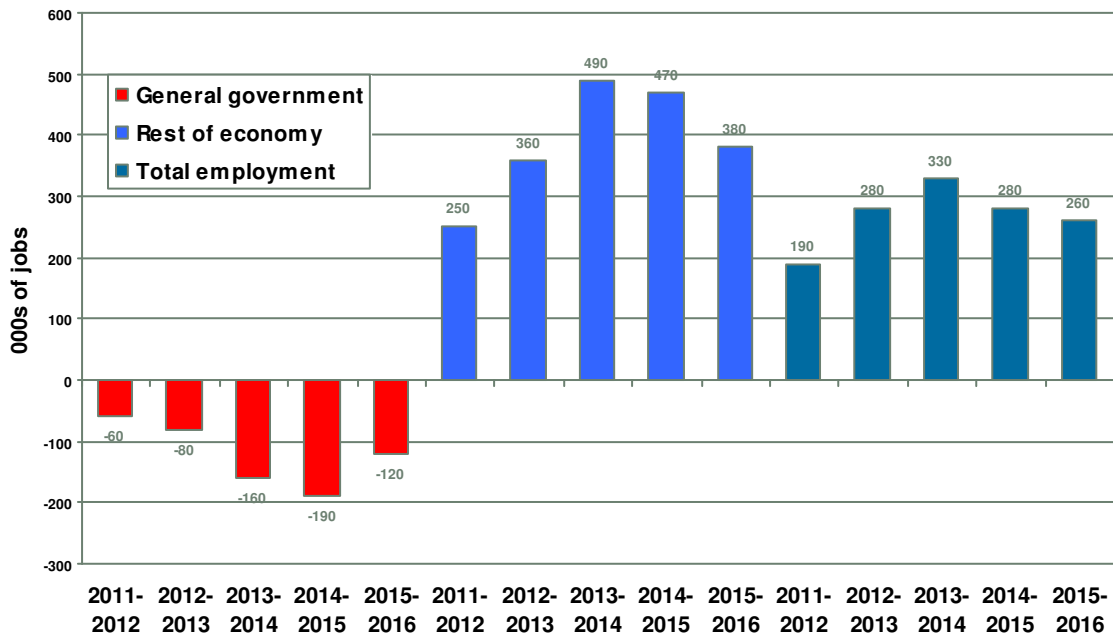
Over the next five years general government employment will fall by over 600,000, according to the Office for Budget Responsibility (OBR) assumptions.

The OBR assumes that there will be significant growth in the rest of the economy sufficient to absorb these job losses.

The chart below shows the fall in general government employment assumed by the OBR (the red bars on the far left hand side). The OBR projection of total employment growth is shown in the dark blue bars on the far right of the chart. The assumed growth in non-general government employment shown in the light blue bars in the middle is the result of subtracting the fall in general government employment from total employment. This implies some fairly impressive net job growth in the rest of the economy, peaking at close to 500,000 net new jobs in the private sector in 2014-2015.

²⁶ Levy, C and Hopkins, L. (2010) *Shaping up for Innovation in 2020*, The Work Foundation: London

Figure 2.4: OBR forecasts for general government jobs



Source: OBR, 2010

Whether the OBR assumptions prove too optimistic remains to be seen, but one obvious challenge is that people leaving the public sector may not have the right skills and experience to take up new jobs in the private sector. In addition, those who remain may face new challenges in delivering services in different ways that require additional skill training and acquisition. At the same time, training and development budgets within public organisations may be under strain as part of the general cuts in public spending.

As an employer, the public sector plays a crucial role in the upskilling of the UK workforce, despite accounting for a smaller proportion of employment.

Employees working in the public sector are more likely to receive training than those working in the private sector; 75% of employees working in the public sector were offered training compared to 52.5% in the private sector.²⁷ These differences are more acute in some parts of the country: in the East Midlands the difference is 25 percentage points (and nearly 26% in Northern Ireland). Conversely, the proportion of people receiving training in private sector jobs is highest in London, the South East and the South West, but also interestingly the North East, where the difference between the public and private sector is lowest.

²⁷ Labour Force Survey, January-March, 2010

Findings from the National Employer Skills Survey (NESS) emphasise the role played by the public sector in the delivery of training within the UK. In 2009, training activity was dominated by public sector establishments; 92% of education and 88% of health and social work establishments provided training. The proportion was also higher than average in the financial intermediation sector (80%) but was as low as 60% in manufacturing, retail and wholesale. However in terms of total workforce training expenditure (£39.2 billion), business services accounted for the most significant share (£9.1 billion). Analysing this spend by employee demonstrates that health and social work employers contribute a significant number (£2075 per employee) compared to other sub sectors such as financial intermediation (£825) and manufacturing (£1200).²⁸

Given that over 80% of our 2020 workforce is in employment, in-work training will contribute significantly to achieving the UK's skills ambitions. However, between 2007 and 2009 there was a real decrease of 5% in training expenditure by employers when inflation is factored in.²⁹

The public sector has also been a key driver of demand for higher level skills across the UK. Given the Coalition's commitment to rebalancing the economy, important questions are raised over the implications of public expenditure cuts and the strength of demand from the private sector to absorb the supply of labour. Public and private sector demand vary considerably at a regional level.

In all parts of the country, more people work in the private sector than in the public sector. However, private sector demand is much lower outside of London and the South East. In London and the South East over 11 million people work in the private sector compared to approximately 2 million in the public sector. But the public sector makes up a much larger share of total employment in other local economies; 29% of total employment in the North East and 27% in the North West.

In all parts of the country the public sector is more knowledge-intensive than the private sector, making the public sector a clear driver of demand for higher level skills and qualifications in many places across the UK (outside of London and the

²⁸ UKCES (2010) *National Employer Skills Survey for England 2009*

²⁹ UKCES (2010) *Ambition 2020: world class skills and jobs for the UK*, The 2010 Report

South East). At least 50% of the public sector workforce is qualified to level 4 in all parts of the country. In London, over 60% of those working in the public sector have degree level qualifications (the highest in the UK). However 46% of private sector workers in London are skilled to the same level. Demand here will therefore be more resilient to the restructuring of the public sector.

Elsewhere private sector demand is far more variable. The proportion of workers with a level 4 qualification in the knowledge-intensive private sectors of the North East, the East Midlands and Yorkshire and Humberside is 24%. The difference between public and private demand for level 4 qualifications in the East Midlands, Yorkshire and Humberside and Northern Ireland is 28% compared to 14% in London.

Growth in demand for level 4 qualifications has been greatest within the public sector, with the exception of the North East, the South West and Northern Ireland. In Yorkshire and Humberside, while there has been no growth in demand for level 4 qualifications in the private sector, demand grew by 8% in the public sector. However, demand contracted for level 4 qualifications within the public sector in the West Midlands and Northern Ireland.

Key challenges

The employment and skills system must respond to this period of low public spending and prioritise where necessary. Essentially, the employment and skills system will need to move towards a new model of funding in which individuals and/or employers will have to contribute more. There is a clear lack of demand for higher level skills in many of the northern regions in the UK, which have been supported by higher demand in the public sector. Policies will also need to support private sector companies move up the value chain if they are to fully utilise the supply of higher level skills. Investing in skills is a long term investment. There is now a joint responsibility for government, individuals and employers to put forward an integrated response to public sector tightening (as proposed in the Leitch Review).

The following section examines the historic debate between employability and skills, and addresses the three main problems that skills policy needs to address (skills shortages, skill gaps, and skills under-utilisation). The section also identifies the barriers to success but then highlights case study examples of good practice.

3. The skills system: where are we now?

The UK skills system faces considerable challenges in the years ahead. Yet the debate about employability and skills has been ongoing for many years. At the heart of the debate is the argument that the provision of ‘employability skills’³⁰ in this country is poor, and that vocational education is divorced and considered inferior to academic education. As Roberts states, ‘the emphasis on a set of core academic skills, and a culture of intensive testing, has too often squeezed out another set of skills – how to think creatively, how to collaborate, how to empathise – at the very time when they are needed more than ever.’³¹

Box A: The skills debate: a historic perspective

Apprenticeships – as a form of on the job training – have their origins in the medieval craft guilds. However, over time the system became criticised for the lack of general education and vocational theory being provided for those on apprenticeships - and vocational education became marginalised from academic education.³² Mechanics Institutes (a forerunner to today’s Further Education Colleges) were introduced in the mid 19th century, but were poorly supported and non compulsory. These Institutes competed directly with traditional apprenticeships rather than providing support to them. The Samuelson Commission was set up in 1881 in response to the dwindling competitiveness of English industry and the unregulated growth of various forms of technical education in England. The report in 1884 confirmed that England was lagging behind international standards in technical education.

Vocational education was still seen very much inferior to academic education in the latter part of the twentieth century. In 1979 the Further Education Unit developed ‘core skills’ for vocational students – but there was no clear or coherent national policy or philosophy on the concept of general education built into vocational

³⁰ ‘Employability skills’ refer to a multitude of generic attributes needed to be successful in the workplace. The UKCES has constructed the following definition:³⁰

- 1) A foundation: positive attitude.
- 2) 3 Functional Skills: using numbers effectively; using language effectively; using IT effectively
- 3) 4 Personal Skills: self management; thinking and solving problems; working together and communicating: understanding the business

³¹ Roberts, Y (2009) *Grit :The skills for success and how they are grown*. The Young Foundation

³² Hammond, M. (2001) *Key Skills: a metamorphosis of failure?*

education.³³ In 1989, the CBI produced 'Towards a Skills Revolution' in which employers demanded that employees be able to demonstrate a set of core skills – values and integrity, effective communication, application of numeracy, applications of technology, understanding the world of work, and personal and interpersonal skills such as problem solving and positive attitudes to change – if the country was to remain competitive in a global marketplace.

'Key skills' (defined as communication, numeracy, team working, self development, problem solving and IT) became a compulsory element of publicly funded modern apprenticeships in 1992. Yet in comparison to historically more integrated systems such as vocational trade schools on the continent, Britain lagged behind. 'Key skills', later recast as 'Functional Skills', were developed in an ad hoc way, and have subsequently lost employment relevance.

Introduced in 1986, National Vocational Qualifications (NVQs) were successful in some sectors but did not deliver the promised revolution in workplace learning or bridge the alleged academic vocational divide. GNVQs were predominately offered alongside GCSEs between 2000 and 2005 relating to occupational areas rather than subject area but ceased in 2007, from which time diplomas and vocational GCSE's have replaced them.

Within the higher education sector, Business Schools have prospered in the UK since the 1960s. Before 1965 there were no business schools in British universities; this had risen to 120 by 2000.³⁴ They rose to prominence in the 1980s and 1990s. Today 20% of postgraduate students study a business and management subject. It is the old polytechnics that have maintained the closest links with the original remit of meeting 'the practical needs of business'.³⁵ Yet in recent years some commentators have criticised them for failing to produce graduates with the right skills to meet the demands of modern business management. In fact some employers are 'increasingly opting to bring management training in-house.'³⁶

In 2005, The Foster Report looked into the future of further education. It argued that colleges were seen as a 'neglected middle child' between schools and higher

³³ Hammond, M. (2001) *Key Skills: a metamorphosis of failure?*

³⁴ Ivory, C. Miskell, P. Shipton, H. White, A. Moeslein, K. and Neely, A. (2006) *The Future of Business Schools in the UK: finding the path to success*, ESRC

³⁵ *ibid*

³⁶ *ibid*

education, had too many aims and expectations, and should in fact have an identifiable brand based around improving employability and supplying economically valuable skills. The report also proposed that they should be given more freedom.³⁷

The divorce between knowledge and skills, academic and vocational education has been at the heart of the debate. Historically, key skills have been an addition to rather than an integral element of our education system. Twenty years on from the CBI report there has been no revolution and we are still discussing a lack of 'employability skills', with incentives for education providers remaining focused on qualifications targets rather than preparation for the workplace.

3.1 Evidence for change

The Leitch Review, *Prosperity for all in a global economy*, was launched in 2006 due to concerns about poor numeracy and literacy amongst some sections of the workforce and a poor performance in intermediate skills. The overarching goal was to become a world leader in skills (in the upper quartile of OECD countries) by 2020. The Review argues that the delivery of skills targets is a shared responsibility; that employers and individuals should invest in training which gives private benefits and that the government should invest in basic skills for everyone.

The Review recommended that the provision of training should be demand-led and employers should be involved in establishing training priorities. Evidence presented in the previous section has demonstrated that today there are large disparities at the spatial level in the skills demanded and supplied. The Leitch report introduced proposals for the 'Skills Pledge' for employers to train employees to NVQ level 2 and the development of a nationwide network of local employer led 'Employment and Skills Boards'. It also recommended raising the statutory age at which young people leave education.

The 2010 report from the UK Commission for Employment and Skills (UKCES), *Ambition 2020*, identifies that the UK is internationally competitive in respect to employment and productivity, but is lagging in terms of skills. This is particularly

³⁷ Foster, A. (2005) *Realising the Potential: a review of the future role of further education colleges*

true for intermediate and low skills, in which the UK is projected to fall even further behind in by 2020. This is accentuated at the local level, with many areas in the north of England lacking the higher level skills found in the South East and London.

Amongst the OECD nations, the UK ranks 10th for employment and 11th for productivity. Yet with regard to skills the UK ranks 12th for high skills, 18th for intermediate and 17th for low skills.³⁸ The report also states that overall UK is unlikely to improve its skills position by 2020. The UKCES argue that insufficient attention is paid to the demand side and, with 80% of the workforce already in work, that the stock of adult skills needs to be addressed as well as the flow of young people into the labour market. As previously stated, training provision has been greatest in the knowledge-based industries and the public sector.

Skills policy seeks to address three problems: skill shortages, skill gaps, and skills under-utilisation:

- **Skills shortages:** Skills shortages occur 'when organisations cannot recruit sufficient people who are appropriately qualified, skilled or experienced to fill the vacancies they have'. Employer often cite a lack of technical and practical, oral communication and customer handling skills.³⁹ There is a disproportionate concentration of skills shortage vacancies in London, the East of England and Yorkshire and Humberside.
- **Skills gaps:** Skills gaps exist when 'members of the existing workforce in an organisation are seen to have lower skills than are necessary to meet current business needs.'⁴⁰ Employers experiencing a lack of proficiency within their workforce rose from 15% to 19% between 2007 and 2009.⁴¹ Approximately two million people in the UK are not considered to have the skills necessary to do their job effectively but this is concentrated in the lower level occupations. The main cause of skills gaps is lack of experience and lack of motivation. Where there is a high turnover rate of staff, an establishment is

³⁸ These benchmarks have to be used with care. The ambition to do well on all three indicators is challenging as currently hardly any OECD economy does well on all three. Moreover, we need to take account of whether the countries ranked above the UK are major or small economies. We might, for example, be more concerned at falling behind Germany or the United States rather than, say, Luxembourg.

³⁹ UKCES (2010) *Ambition 2020: world class skills and jobs for the UK*, The 2010 Report

⁴⁰ *ibid*

⁴¹ UKCES (2010) *National Employer Skills Survey for England 2009*

more likely to have skills gaps and to face high recruitment and vacancy costs.⁴²

- **Skills under-utilisation:** This is a measure of whether people are fully using the skills they have in their current job. Research by Falstead et al.⁴³ states that the proportion of graduates underemployed has increased by 50% over the last 20 years. The Work Foundation's Knowledge Worker Survey⁴⁴ found that a significant proportion of the workforce across a range of occupations felt that their skills were underutilised: 35% of one of the most knowledge-intensive group of experts and analysts reported that their jobs under-utilised their skills and experience, whilst 55% of people classified as servers and sellers reported that their skills were under-utilised.

However, when we look at the shares of the workforce affected we can see that the skills under-utilisation problem dwarfs the rest. Skill-shortages concern only about 1% of employees, skill gaps less than 10%, and skills under-utilisation between 35% and 45% of the workforce. As the UKCES rightly states, the latter is essentially a demand side problem.

Looking at shares of the workforce can only be a crude guide because skill-shortages and skills gaps in critical areas can cause problems out of all proportion to their incidence. Moreover, measurement in some areas can be problematic, especially skills utilisation where often it is hard to know how serious and persistent the mismatch is or whether the problem is really about skills. For example, people may be relatively well-matched when taking a job, but as their experience grows and the job content does not, they increasingly feel they can do more than their job demands. This is as much to do with job design and work organisation, both difficult for public policy to influence directly.

Despite the huge body of evidence assembled and analysed, there are some troubling contradictions which future skills policy will have to address. One is whether the UK under-invests in skills at the aggregate level and by how much. Comparisons by qualification level give an unambiguous yes, with the level of under-

⁴² UKCES (2010) *Ambition 2020: world class skills and jobs for the UK*, The 2010 Report

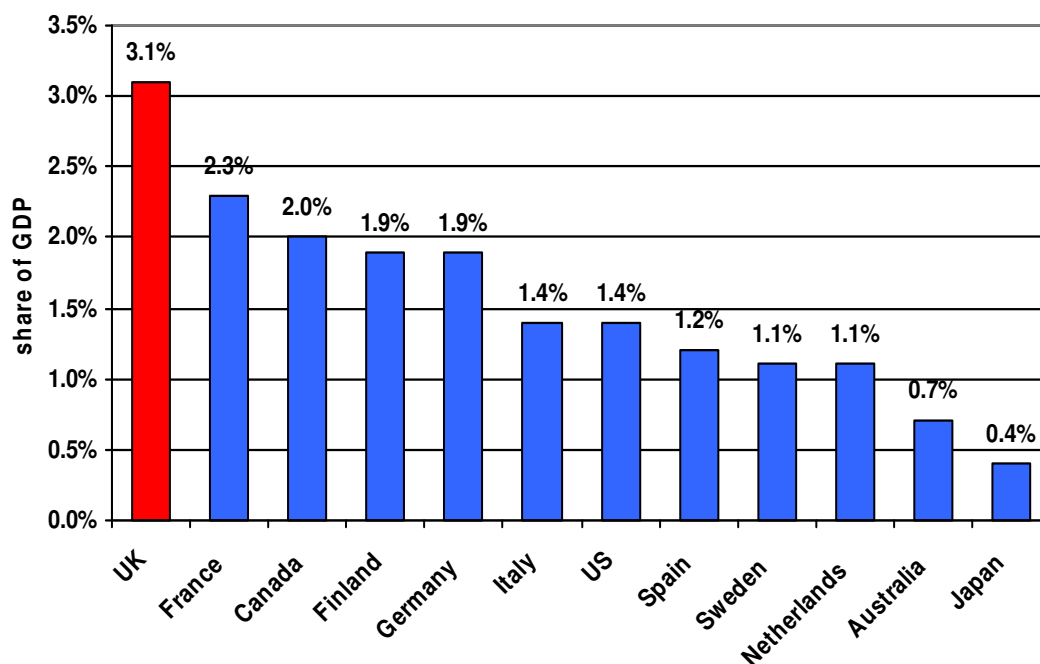
⁴³ Falstead, A. Gallie, D. Green, F. and Zhou, Y. (2007) *Skills at Work, 1986 - 2006*

⁴⁴ Brinkley, I. et al. (2009) *Knowledge Workers and Work*, The Work Foundation: London.

investment especially acute at non-graduate levels. However, other measures give a more ambiguous answer and suggest a more complex and nuanced position.

We drew attention to the huge investment in intangible assets as a key driver of the knowledge economy, and a large share is accounted for by business investment in human capital (proxied as the cost of employer provided training, including an allowance for foregone wages) (Figure 3.1). We have to be cautious about putting too much weight on these estimates because measurement of intangible investment is in its infancy and the source and comprehensiveness and timing of these estimates makes international comparisons problematic. With these caveats in mind, the UK scores well on this measure against those economies for which we have similar estimates.⁴⁵ Moreover, the UK also compares relatively well on one of the structural indicators used by the EU: the share of employees who had undergone some form of job related training. Yet we know from qualification based indicators, that in some respects the UK lags behind.

Figure 3.1: Business investment in human capital in the mid 2000s



Note: figures may not be directly comparable due to differences in coverage and quality of data. US is late 1990s.
Source: Australian productivity Board (2009)

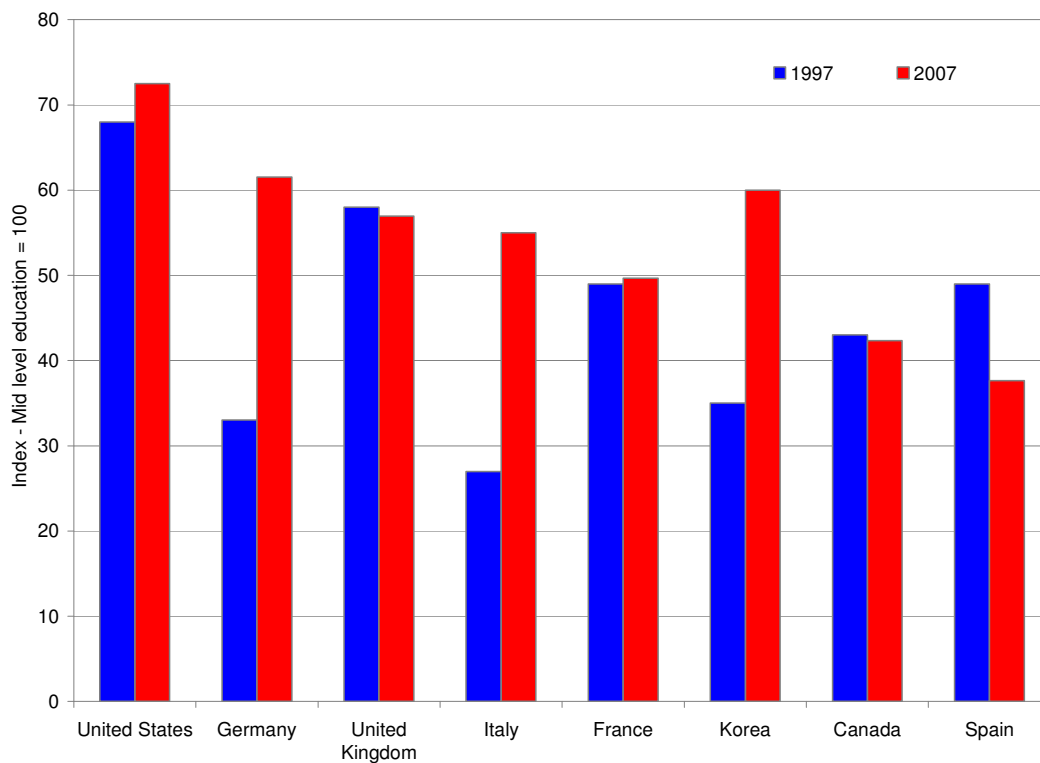
⁴⁵ The Work Foundation Comprehensive Spending Review Submission 2010

The intangibles measure shows some puzzling anomalies – for example, German and Swedish employers are shown as investing significantly less in human capital than UK employers. It is hard to imagine this reflects less commitment to human capital development in these economies. More plausibly, UK firms may be forced to invest more in some employees just to get them up to basic standard because of failings in the education/vocational training system. It could also be because large sums are spent on fairly basic and process related training (e.g. health and safety) that do not lead to higher qualifications. The well-known tendency for those already possessing qualifications to attract a disproportionate share of training could also be a factor.

There has recently been much debate about whether the economy has too many graduates. As we showed earlier, employment of graduate level labour has significantly increased in the knowledge economy and policy has been based on continued expansion of the higher education sector. Critics have however suggested that increasingly graduates are moving into jobs that do not require graduate level skills and studies show an imbalance between the number of jobs in the economy requiring a degree and the number of graduate students entering the labour market. Expansion has been especially rapid in recent years and following the recession graduate unemployment will remain high for several years. In 2010 the UKCES concluded *the supply of skills exceeds demand at all levels (except at the 'no qualifications' level)... the supply of graduates is outpacing the growth of jobs that require them*".

However, the wage premium associated with graduate employment – the gap between the wage received by someone with a graduate level education and those with non-graduate qualifications – in the UK is relatively high by international standards and has not fallen significantly in recent years (Figure 3.2). The OECD's conclusion is particularly robust: *"there is very little evidence to argue for an oversupply of higher educated individuals... increasing levels of those with tertiary education in recent years have been absorbed by the labour market"* (OECD 2007).

Figure 3.2: Graduate earnings compared with non-graduates, 1997-2007



Source: OECD, 2010

Our conclusion based on the evidence to date is that a policy of continued expansion of higher education remains sound for the longer term needs of the knowledge economy. However, questions remain over the balance of skills, as some research suggests significant variations in returns to education depending on the subject taken. It remains to be seen if efforts to give students more information about post graduation prospects and the greater freedom for universities to set course fees suggested in the Browne report sees a shift in demand towards subjects still commanding a wage premium.

The more contentious issue is the balance between STEM and non-STEM subjects. A series of reports have identified a lack of STEM skills as a significant problem and measures to increase the take up of STEM subjects have been put in place by successive governments. The UK has a relatively high level of STEM graduates in the workforce by international standards, with 40% of STEM graduates in non-STEM subjects. Nonetheless, employers continue to identify problems. Research by the CBI in 2008 reported that 42% of employers believe the quality of graduates is a barrier to recruitment. They often lack generic softer skills. The supply of STEM skills for the future still remains a concern. The UK is falling

behind in the uptake of STEM graduates into STEM occupations at an international level despite there being a financial premium to do so. However, it is also clear that simply increasing the supply runs the risk of pushing more STEM students into non-STEM subjects. This is wasteful both because of the higher costs of training STEM students but also because most STEM graduates who go into non-STEM jobs do not command a wage premium over students who pursue arts and humanities degrees.

More attention needs to be given to the sort of STEM graduates being produced and also the demand side. The UK is very poor at converting investment in STEM into an expanding research base. The UK is one of the few OECD economies to see little or no increase in scientific researchers over the past decade. The recent proposed changes in university funding are likely to tilt supply of graduates further towards STEM subjects, but it remains to be seen if demand side problems will also be addressed.

3.2 Barriers to success

Several barriers to an effective skills and employment skills systems have been identified which can help to explain mismatches in the demand and supply of skills highlighted in the previous section:

- **Lack of demand and the ‘Low Skills Equilibrium’:** The ‘Low Skills Equilibrium’ is a situation where an economy becomes trapped in a vicious cycle of low value added, low skills and low wages. A combination of relatively low wages but high employment seems to have become increasingly common in some parts of the UK economy (most notably in the north of England) and a large proportion of UK economic activity is low specification.⁴⁶ Unless companies move up the value chain, demand for higher level skills will remain low.
- **Lack of awareness of government training initiatives:** For example 8% of employers offer apprenticeships and awareness of the different categories was quite low.⁴⁷ UKCES evidence demonstrates a lack of knowledge

⁴⁶ Wilson, R. and Hogarth, T (Eds.) (2003) *Tackling the Low Skills Equilibrium: a review of issues and some new evidence*, DTI

⁴⁷ UKCES (2010) *National Employer Skills Survey for England 2009*

amongst employers about training initiatives (awareness of the skills pledge was 27%).

- **Complexity of the skills system:** The employment and skills system is complex and can be confusing to navigate at the national, local and sectoral levels. There has been confusion over strategic direction, notably how to best reconcile sector-led skills strategies with regional based skills strategies. The system lacks stability, with institutional changes made at regular intervals before the previous system has properly bedded down. Moreover, the knowledge economy is challenging existing sectoral boundaries – either the sector concept is largely irrelevant (the low carbon economy) or cuts across boundaries (the creative industries and “manu-services”).
- **Education culture:** some have argued that more emphasis is placed on academic success and attaining qualifications rather than the learning of the skills necessary for success in the workplace: ‘how to think creatively, how to collaborate, how to empathise’.⁴⁸

3.3 Examples of success

Despite evidence of failure within the system, we can identify both national and local level approaches that have attempted to respond to these challenges. It is imperative that we learn lessons from these examples in order to progress the debate.

Bewick (2009)⁴⁹ makes clear that it was the ‘countries that pursued active labour market measures that lost fewer jobs in past recessions’. In the 1990s recession, Denmark spent a larger proportion of GDP (1.8%) on such measures than the UK (0.4%). With the support of employers and trade unions the Danish government implemented a series of policies under the Labour Market Reform Act to stimulate demand. This included ‘investing in job-share and job rotation projects’ and ‘more intensive retraining’. The country managed to reduce its long term

⁴⁸ Roberts, Y. (2009) *Grit: the skills for success and how they are grown*, The Young Foundation

⁴⁹ Bewick, T. (2009) *UK Employment and Skills in a Global Recession: what can we do now?*

unemployment rate by 44%. In contrast the UK resisted active labour market measures, and 'unregulated low wages locked Britain into a 'low skills equilibrium'.⁵⁰

The Leitch Review argued for better integration between employment and skills in the UK. In 2008 Integration of Employment and Skills (IES) trials were set up in 12 Job Centre Plus Districts. IES involved the co-location of Job Centre Plus and next step advice services, which worked to identify individuals with skills gaps and barriers to employment. Certain customers were referred to a next step Skills Health Check and then training provision.⁵¹ As this has been a relatively new initiative more in depth quantitative analysis is needed to fully understand its successfulness. UKCES has also played a key role in the integration process. The organisation also funds and regulates the 25 independent Sector Skills Councils (SSC's). The SSC's are employer led and provide targeted expertise for individual sectors. Bewick (2009) argues that targeted intervention at a sectoral level is the most effective approach.⁵²

There are several examples of success within the higher education sector. Many universities in Europe have a history of combining academic studies with workplace experience. Research by the Open University has shown that participation rates in work placements is as high as 84% in France (compared to 30% in the UK), and there is almost universal participation in internships within vocational universities in the Netherlands.⁵³ In the US, approximately 500 institutions offer 'cooperative education' in which work placements are combined with university study. Although work placement participation rates in the UK are low and there has been a fall in the number of sandwich courses over the last 12 years⁵⁴, progress has been made in recent years. The University of Surrey, for example, has pursued work placements and has subsequently performed well on employment statistics – with the recent addition of placements in courses such as English literature. Every university department has a professional training tutor who is in direct contact with local employers.

⁵⁰ *ibid*

⁵¹ Department of Work and Pensions (2009) *Qualitative Evaluation of Integrated Employment and Skills Trials: implementation report*

⁵² Bewick, T. (2009) *UK Employment and Skills in a Global Recession: what can we do now?*

⁵³ Attwood, R. (2nd September 2010) *We Can Work it Out*, Times Higher Education

⁵⁴ CBI and Universities UK research demonstrated that levels have fallen from 10.5% in 1994/95 to 6.5% in 2006/07

There are also initiatives to develop employability skills in the UK. Since 2001 Deloitte has operationalised an employability skills training course for college students. The programme aimed to improve the employability of 40,000 students focussing on personal skills, attitudes and behaviours needed for success in the workplace, contextualising these skills within the student's main programme of vocational study.

Some of the most successful strategies have been local responses to economic restructuring. Many former industrial areas are suffering because of the 'mismatch between current and former employment opportunities'.⁵⁵ The involvement of the private sector is often the key to success in many programmes. There is an appreciation within the private sector that it is mutually beneficial to have a well qualified local workforce.

In Sheffield, for example, Kier Construction worked with the city council to train the local unemployed population for jobs in construction, recognising the benefits of having a suitably skilful workforce in the local area. The company formed a partnership with the council and local communities to offer training and jobs for the Decent Homes development in Sheffield, with local, national and European sources providing the finance for apprenticeships and qualifications.⁵⁶ Elsewhere, West Nottinghamshire College, based in Mansfield has successfully aligned its courses to the key growth sectors as defined by East Midlands Development Agency (EMDA) for the North Nottinghamshire sub region and has worked collaboratively with companies operating in the local area. During the redevelopment of the Kings Mill Hospital, the college partnered with SKANSKA to provide opportunities for young people to work in construction.

3.4 Summary

There has been a historic failure in the UK's skills and employment system. Skills-underutilisation appears to be particularly problematic. Demand side barriers such as the low skills equilibrium have hindered progress in this area. There is also evidence across the UK workforce of a lack of employability skills, partly created by the cultural divide between education and employment (vocational education has been seen as inferior to academic). This has been exacerbated by a lack of integration between education providers and local businesses. As the UKCES states:

⁵⁵ Power, A. Ploger, J. and Winkler, A. (2010) *Phoenix Cities*

⁵⁶ Power, A. Ploger, J. and Winkler, A. (2010) *Phoenix Cities*

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'we need to fundamentally change how individuals and businesses treat skills acquisition and development: from one-off experience in our youth to a lifelong commitment; from a business expense to an essential recurring investment in competitive advantage and business success'.⁵⁷

⁵⁷ UKCES (2010) *Ambition 2020: world class skills and jobs for the UK*, The 2010 Report

4. Policy Implications

Progress towards the knowledge economy is transforming the world of work.

Knowledge-intensive work depends on the use of ‘tacit’ knowledge that resides in people’s minds in the form of expertise or experience, rather than being written down in manuals, guides, lists and procedures. Productivity here depends on deriving value from intangible assets such as research and development, IT, branding and advertising, and organisational development. These activities depend heavily on the types of high-level skills often gained at universities – at its core a degree reflects an ability to use tacit knowledge to assimilate, interpret and use a range of specialist information.

Skills development across the workforce is of importance to the knowledge economy, not just graduate level skills. Our work has shown that a significant minority of knowledge-intensive jobs (measured by the share of working time devoted to knowledge-intensive tasks) are undertaken by non-graduates, and that some graduates are undertaking jobs that require relatively little knowledge-intensive activity.

However, despite the immediacy of the problem and the negative consequences of delayed action, our skills system and the debates that surround it progress at glacial speed, if at all. The 2003 Skills White Paper identified almost exactly the same issues as the 2009 White Paper and the analysis by the UK Commission for Employment and Skills in *Ambition 2020*. Lorna Unwin, Professor of Vocational Education at the Institute for Education, goes even further, noting the “acute sense of *déjà-vu*” that “permeates analyses of the labour market and skills’ policies over the past 30 years”.⁵⁸

The issues that attract the most attention appear to be the most intractable, while definitions and consensus around ostensibly key concepts such as ‘economically valuable skills’ remain vague. The system’s focus on qualifications has also led to tunnel-vision about issues related to skills and the changing nature of work. There are some puzzling “big picture” anomalies in the evidence that seem to be unresolved despite large sums spent trying to find answers – yet without some resolution the best future direction for policy remains uncertain. The current

⁵⁸ Unwin, L. (2010), *Learning and working from the MSC to New Labour: Young people, skills and employment*, NIER, No. 212.

development of more policy orientated research programmes by organisations such as UKCES may help fill in the gap.

There is a huge amount at stake. While a high-skill, high-value added economy is the only option to remaining a prosperous nation in a global economy, post-recession austerity will require new choices and new approaches to achieve this future. Skills policy needs to be clearly focused on what problems it is trying to solve, with the policy prescriptions, frameworks, and institutional structures flowing from that focus.

We have argued elsewhere that the UK needs to develop a fully functioning innovation eco-system over the next decade as the only way of generating the growth, jobs and new industries that will be required to achieve a balanced and sustainable knowledge-based economy by 2020. Skills policy development for the future must be seen as a key element in that wider innovation eco-system.

The aftermath of the current economic crisis is throwing up further major structural challenges. Over the next five years general government employment will fall by over 600,000, according to the OBR assumptions. One obvious challenge is that people leaving the public sector may not have the right skills and experience to take up new jobs in the private sector. But in addition, those who remain may face new challenges in delivering services in different ways that require additional skills training and acquisition. At the same time, training and development budgets within public organisations may be under strain as part of the general cuts in public spending.

Central to this report has been the assertion that the two key challenges of an ever increasing knowledge-intensive economy and low public spending are exacerbating failures within the employment and skills system. In all parts of the economy the general trend is towards an increasingly skilled and knowledgeable workforce. However, at a regional level, the demand for skills by sector is greatly variable. In some parts of the country, demand for higher skills in sectors traditionally considered 'knowledge-intensive' such as the financial services, is lower than the demand for skills in other parts of the economy, deemed less knowledge-intensive.

The public sector has been a driver for high level skills in certain parts of the country both in terms of fostering demand and also the provision of training.

Public sector investment currently makes up the largest share of total investment in education and training. Lower public spending will therefore have a considerable effect upon the system which will have to rely more heavily on funding contributions from both the individual and the private sector.

Different places and sectors will face different challenges and it is imperative that there are local, integrated responses to these challenges. Localities and sectors have distinct skills profiles and if key stakeholders, such as employers and education providers, come together at the local level to deliver economically valuable skills it may be possible to tackle problems such as skills shortages, skills gaps, underemployment and unemployment. For example, the Skills Academies initiative seeks to establish centres of excellence within different sectors and create hub and spoke models with local colleges, involving local employers to offer clear pathways into certain industries.

It must also be understood that unless there is structural change in parts of the economy, and organisations move up the value chain, there will be no incentive to improve skills in the workplace (the Low Skills Equilibrium).

4.1 The Coalition's Response

The government is committed to rebalancing the UK economy and stimulating enterprise, especially in places outside of the South East. Speaking at the 2010 Conservative Party Conference, John Hayes, the Minister for Further Education, Skills and Lifelong Learning, stated that 'Britain's future lies as a high-tech, high skilled economy'. The UK skills and employment system must respond appropriately.

As part of the rebalancing strategy, Local Enterprise Partnerships (LEPs) will replace the Regional Development Agencies. These local partnerships of business and local authorities will have devolved powers over employment and enterprise, and be expected to work with universities and Further Education colleges on skills. However the exact details are not yet known, and powers over inward investment, innovation and access to finance will be controlled centrally.

LEPs have the potential to deliver tailored sub-regional responses to employment and skills issues, but must be mandated with adequate resources if they are to be fully effective. It has been those places with the lowest levels of skills that have been worst hit by the recession. These places are also often supported by higher levels of public sector employment. Without sufficient intervention, employment and skills issues will intensify in these places. But these concerns must be balanced with the necessity to maximise the efficiency of the system in places that have both a strong private sector and a concentration of high level skills.

As part of the Coalition agreement, the government has also set out its position on the future of universities and further education:

Box B: Coalition Agreement on Universities and Further Education

The Government believes that our universities are essential for building a strong and innovative economy. We will take action to create more college and university places, as well as help to foster stronger links between universities, colleges and industries.

- We will seek ways to support the creation of apprenticeships, internships, work pairings, and college and workplace training places as part of our wider programme to get Britain working
- We will set colleges free from direct state control and abolish many of the further education quangos. Public funding should be fair and follow the choices of students.
- We will await Lord Browne's final report into higher education funding, and will judge its proposals against the need to:
 - o increase social mobility;
 - o take into account the impact on student debt;
 - o ensure a properly funded university sector;
 - o improve the quality of teaching;
 - o advance scholarship; and
 - o attract a higher proportion of students from disadvantaged backgrounds
- If the response of the Government to Lord Browne's report is one that Liberal Democrats cannot accept, then arrangements will be made to enable Liberal Democrat MPs to abstain in any vote

The agreement placed a clear emphasis on strengthening the links between education and industry. The Coalition supports the expansion of apprenticeships. In May 2010, Osborne announced that £150 million of Train to Gain funds would be reallocated to cover the cost of 50,000 new apprenticeships for SMEs. The 2010 Spending Review went further; within the 7.1% cut to the Business, Innovation and Skills budget, Osborne announced that Train to Gain would be abolished and that adult apprenticeships would get an extra 50% funding (£250 million a year by 2014-15) to create 75,000 more places a year. Although further education will receive more freedoms, contributions from individuals and employers will have to increase: individuals aged over 25 years training for a first full level 2 qualification and those over 24 studying for a level 3 qualification will pay fees.

The Spending Review has also named science as a priority area for the UK economy, and its £4.6 billion budget will be protected. The government aims to promote the UK as a world leader in science and innovation, making it even more necessary to invest in the supply of highly skilled graduates.

The Browne Review, released on the 12th October 2010, proposed major changes to the funding of higher education. Given the large cuts to university budgets (the Business, Innovation and Skills SR settlement is comprised of 40% of savings from higher education reform), it is important that other sources of finance are considered. The Leitch Review and the UKCES have argued that it should be a joint responsibility between government, employers and individuals. Lord Browne has called for the cap on fees (currently £3,290) to be lifted and favours the movement towards a free market system in which universities could charge individuals up to £12,000 a year for degree courses, but advises that graduates would not have to repay their loans until their earnings have reached £21,000.

If the intention is to simply replace cuts in public funding with increased individual contributions, no new capacity will be created. If the UK wishes to remain competitive at the international level we will need to continue to grow high quality capacity within the university system. Others have argued that raising tuition fees will force some students to make decisions on affordability rather than suitability, and university departments that are considered 'less economically valuable', of lower quality and less in demand, may struggle to attract new students.

4.2 The agenda for change

With spatial and sectoral mismatches in the supply and demand for skills and limited public investment, the employment and skills system needs to change. The government appears to be positively addressing these challenges but much needs to be done if the nation is to progress against international measurements of success. We propose an agenda for change that advocates a local and integrated solution involving relevant stakeholders. As argued in *Ambition 2020*, we need to ‘ensure the content of vocational learning (such as apprenticeships) and qualifications is shaped by the needs of the relevant sector with choice in provision being aligned to local labour market needs’.⁵⁹

The government should:

- Encourage innovation within the economy to move organisations up the value chain, stimulating demand for higher level skills and countering the low skills equilibrium. Skills policy should be focused on the central problems of under-utilisation;
- Encourage the expansion of higher education and the supply of graduates to meet the rising demand for highly knowledge-intensive skills;
- Support high quality supply of STEM skills with a bias towards the four productive growth sectors;
- The UK system is failing those with low and intermediate skills the most. The government must make this area a priority and support those out of work and with low qualifications into employment opportunities.

Education providers should:

- Prioritise sectoral strengths in the local economy and specialise in the delivery of economically valuable skills relevant to these sectors.
- Seek opportunities to work with local employers offering students valuable work experience, and like wise, a supply of skilled labour for such companies.
- Continue to build generic ‘employability’ skills into the education system working with employers.
- How can education providers be more accessible to local industry?

Employers should:

⁵⁹ UKCES (2010) *Ambition 2020: world class skills and jobs for the UK*, The 2010 Report

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- Collaborate with local education and training providers to foster pathways for local people into work and:
- Private sector employers must play an active role in shaping the skills system, and invest more in workplace training.

Local Enterprise Partnerships should:

- Promote strong relationships between local education providers and employers to facilitate a supply of labour with relevant economically valuable skills for the local economy.