THE INCREASING IMPORTANCE OF SKILLS

Chapter summary

The UK is in a strong economic position. It is the fourth largest economy in the world and has the highest employment rate in the G7. However, its prosperity has been constrained by its relatively poor skills base. Poor skills have constrained productivity, innovation and investment. They have prevented the employment rate from rising further.

The global economy is undergoing fundamental and dramatic changes. Emerging economies are accounting for a greater share of global output. Advances in technology are allowing different parts of the production process to take place in different countries and breaking down the barriers between what is and is not tradable.

These changes place an increased premium on improving skills. Unless the UK improves its skills base, productivity will remain relatively low and employment constrained. As the economy changes, the minimum level of basic skills is rising. Most jobs increasingly require basic literacy, numeracy and IT skills, and the need for team working and communication skills is rising. Global changes also place an increased emphasis on having high skills to encourage and take advantage of innovation.

Skills are unequally distributed between groups and across the regions and areas of the UK. Improving skills can help to build a fairer and more prosperous society with higher social mobility and fewer regional disparities.

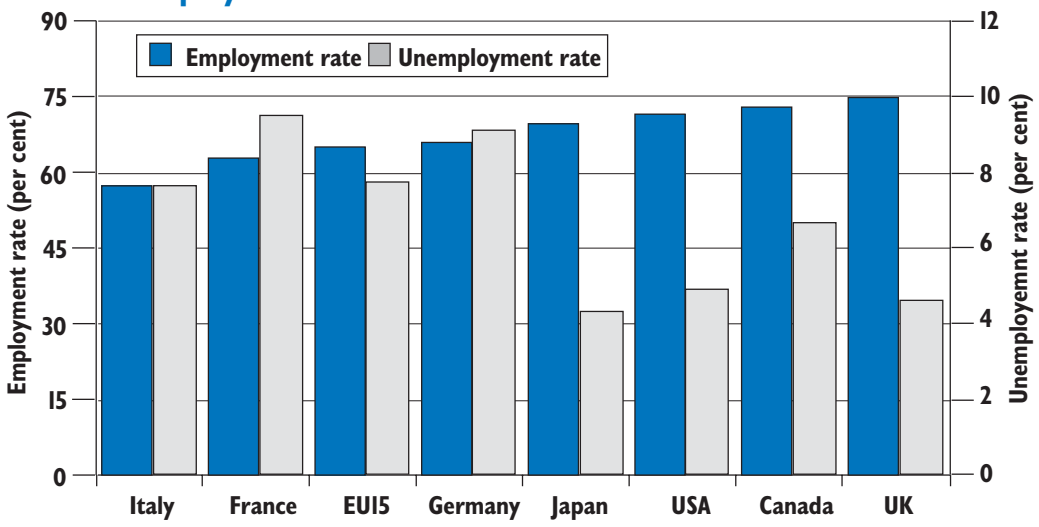
1.1 This chapter sets out the central importance of skills to improving long-term growth and building a fairer, more prosperous country. It discusses how this importance is likely to increase still further as a result of the significant global economic changes currently underway.

THE CHALLENGE OF IMPROVING LONG-TERM GROWTH

1.2 This Review was established to consider the optimal skills mix in order to maximise economic growth, productivity and social justice in the UK in the medium term. Skills are a key driver of economic growth, boosting productivity and contributing to increased employment. Fundamental changes underway in the global economy make improvements in skills ever more critical.

1.3 The UK is today in a strong economic position. It is the fourth largest economy in the world and has the highest employment rate and the second lowest unemployment rate in the G7 group of major industrialised countries, as shown in Chart 1.1.

Chart 1.1: International comparisons of employment and unemployment rates



Source: ONS

Increasing economic growth

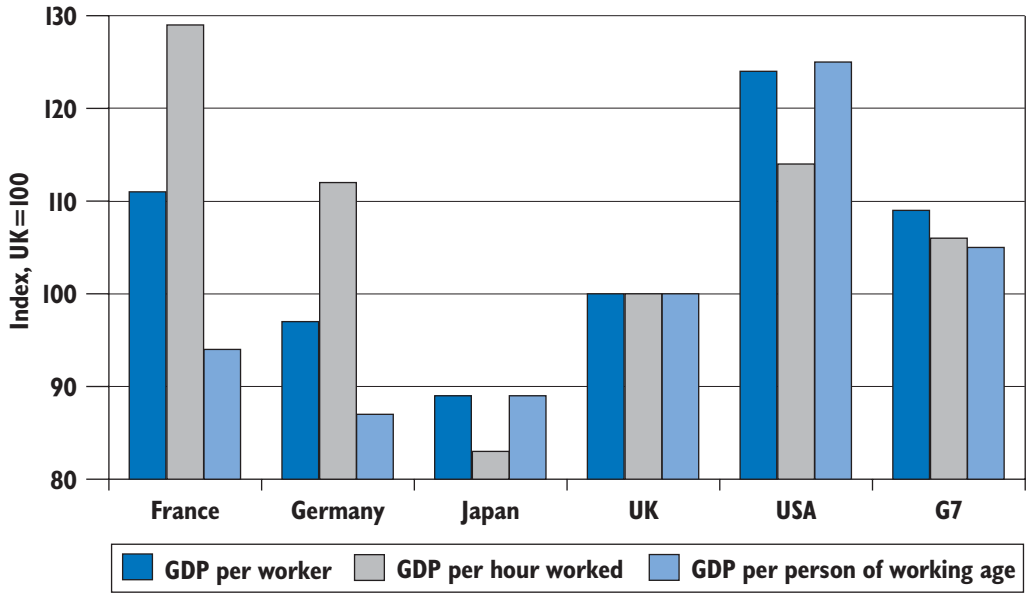
1.4 Despite this relative success, economic growth and prosperity have been constrained by the UK's relatively poor skills base. An economy's output depends on two things: how many people are working and how much they produce. Productivity in the UK has lagged that of many comparator countries and poor skills are a significant part of the reason for this. While employment is relatively high, improving skills can further increase employment and ensure that everyone has the opportunity to work. There is no long-term trade-off between productivity and employment – the experience of the USA shows that high employment can be combined with high productivity.

The productivity challenge

1.5 Productivity is the key driver of national living standards in the long term and the main source of economic growth. Despite some catch-up in recent years, productivity in the UK remains significantly below that in many comparator countries on most measures.

1.6 The UK's relatively poor productivity performance means that living standards are lower than they could be. A low productivity workforce prevents businesses from taking full advantage of the opportunities available to them in the global economy and constrains the earnings and opportunities of citizens. Chart 1.2 sets out the UK's current performance on the main measures of productivity. Box 1.1 discusses the relative merits of these measures.

Chart 1.2: International comparisons of productivity



Note: Data for 2004 is provisional; output per hour worked is experimental.
Source: ONS, HM Treasury.

1.7 Chart 1.2 shows that the UK has significant progress to make on the measures of productivity that do not take into account employment performance. Output per hour worked is almost 30 per cent higher in France and more than 10 per cent higher in Germany and the USA than in the UK.

1.8 The UK performs somewhat better on wider prosperity measures, which also take account of employment. Output per person of working age is higher in the UK than in France and Germany, but still significantly lower than in the USA and the G7 average.

Box 1.1: Measuring UK productivity performance

Productivity is the main determinant of national living standards. It refers to how well an economy uses the resources it has available by relating the quantity of inputs to outputs. There are several measures of this relationship, all of them in some way related to prosperity.

The most commonly used measures are output per worker and output per hour. Output per worker is perhaps the easiest to calculate because the data needed to do so (total output and employment) are readily available. Output per hour has the advantage of not being influenced by the number of hours worked in a given period, thus taking into account part-time work and time not spent working.

However, in terms of considering the prosperity of all those in an economy, it is perhaps better to see how well the economy is utilising all of its potential labour resources. This can be better done by measuring output per person of working age, though this does not take into account those working beyond the state pension age.

Finally, total factor productivity (TFP) attempts to measure output per unit of inputs, where inputs are generally labour and capital. This has the advantage of taking into account inputs other than labour, but is difficult to measure.

Each of the measures has advantages and disadvantages, and all give insights into the nature of productivity. The Review's focus is on the three main measures detailed in Chart 1.2. The aim of policy should be to make progress on all, rather than targeting one at the expense of another.

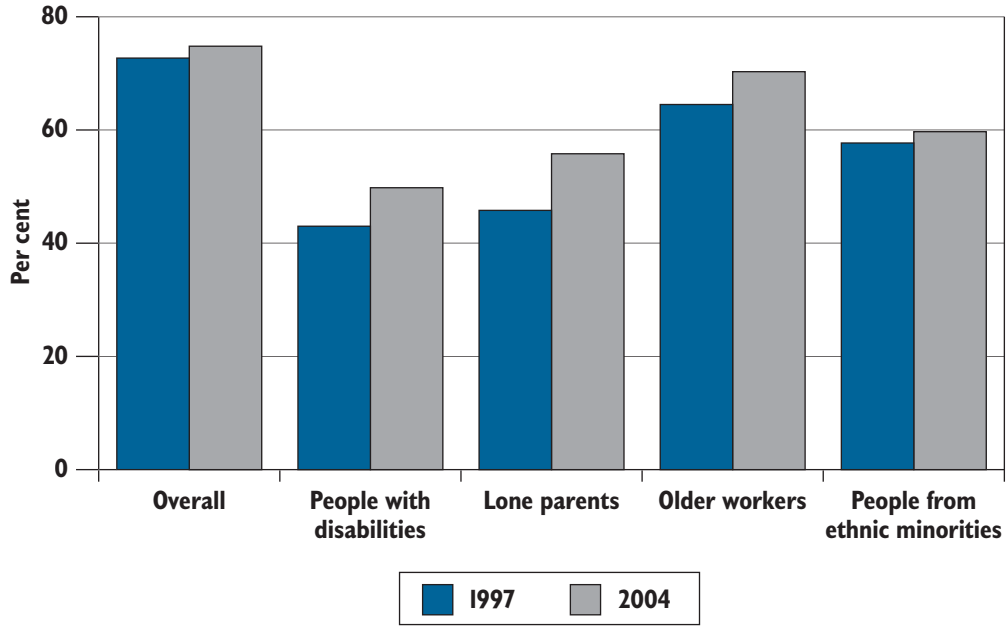
1.9 The challenge for the UK going forward is to improve its good employment performance, while also boosting growth in output per worker and output per hour. The experience of the USA suggests that this can be done.

The employment challenge

1.10 The second major component of economic prosperity is the number of people in work. The UK's overall employment rate is the highest in the G7 at 75 per cent. Despite this, there is still potential to further increase employment. The inactivity rate remains high at more than 20 per cent and has fallen little over the last decade. This suggests that there is significant scope to further increase employment. This is recognised in the Government's ambition of an 80 per cent employment rate.

1.11 Recent years have seen overall rises in employment, including among previously disadvantaged groups. However, as Chart 1.3 shows, employment among groups such as lone parents, those from some ethnic minority groups and people with disabilities remain significantly below the national average, although the gap has narrowed over the past decade.

Chart 1.3: Employment rate by group



Source: Labour Force Survey, ONS.

1.12 These persistent disparities in employment rates and labour market opportunities mean that these groups have not shared fully in past increases in prosperity. Economic inactivity also represents a waste of potential. As the population ages, workers from such 'non-traditional' sources of labour will become an increasingly important source of labour.

1.13 One of the major challenges for the UK economy looking forward will be to ensure that all groups share more fairly in labour market opportunities. This will provide businesses with a larger pool of labour, allowing a higher sustainable rate of growth, and allow everyone the chance to improve their pay and career prospects.

The challenge of global change

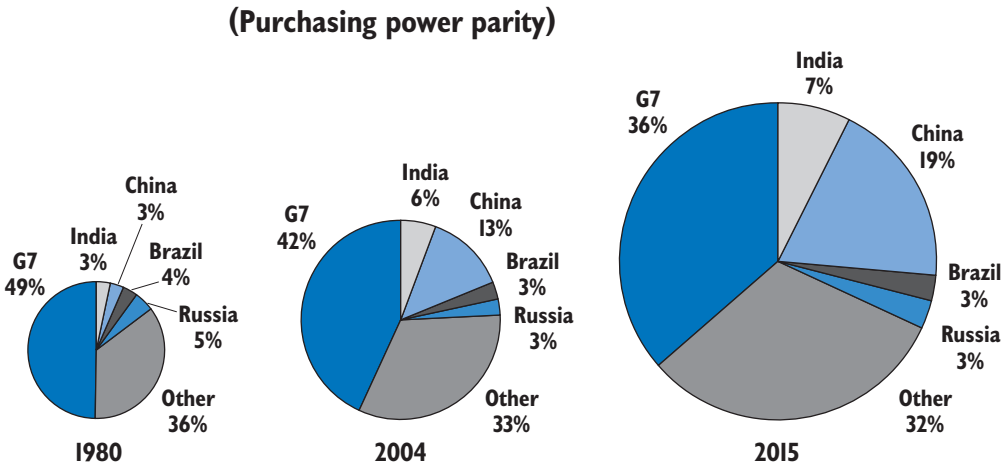
1.14 The global economy is undergoing a profound transformation, with far-reaching and fundamental changes in technology, production and trading patterns. Faster information flows and falling transport costs are breaking down geographical barriers to economic activity. Changes in technology and trade are opening up global markets and changing global patterns of production. The boundary between what can and cannot be traded is being rapidly eroded.

1.15 These changes make improving growth and productivity much more pressing and ever more challenging. They mean that the types of jobs in the UK and the skills they require are changing. At the same time, the UK population is ageing and global migration increasing, changing the type of labour available to UK businesses. The UK needs to adapt to these changes to ensure it continues to benefit from economic growth.

Balance of global activity

1.16 The rapid growth of emerging economies, including, but not limited to, China and India, is shifting the balance of global economic activity. By 2015, China is likely to have become the third largest economy in the world – after the USA and Japan.[1] Chart 1.4 shows how the distribution of global output is likely to change in coming years.

Chart 1.4: Shifting shares in global output



Areas indicate size of global economy.
Source: IMF, Consensus Forecasts, HM Treasury.

1.17 This creates new markets for UK firms and provides cheaper goods for UK consumers. It also means that the UK will have a decreasing share of output in the sectors in which these countries have a comparative advantage. To maintain and improve growth, the UK must manage the resulting domestic structural change, allowing workers and resources to shift to more productive and profitable sectors.

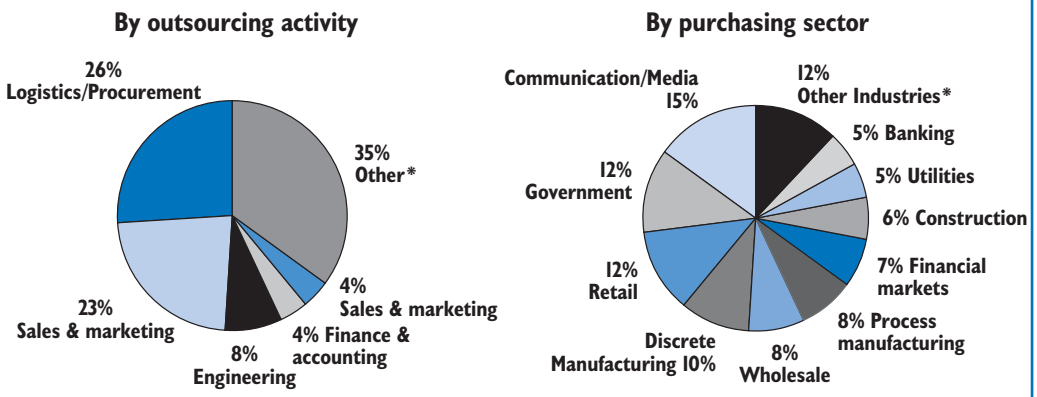
Increasing specialisation

1.18 Combined with advances in information and communication technology (ICT), these changes also create new ways of producing goods and services. Many production processes are becoming increasingly specialised, international and dispersed. Different parts of the production process increasingly take place in different areas or countries, according to the comparative advantage of that area or country.

[1] Based on market exchange rates. See *Long-term global economic challenges and opportunities for the UK*, HM Treasury, 2004.

1.19 Such fragmentation of production chains is not a simple matter of manufacturing being outsourced and service industries being protected from global competition. While such specialisation has been most common in manufacturing, it is happening increasingly in service sector industries. Chart 1.5 shows the types of activities being outsourced and the main sectors involved.

Chart 1.5: Global outsourced spending



*Other includes vertical processes and horizontal processes that do not fit into other categories.
Source: IBM (2004).

*Industries making up <5% of total: Education, Healthcare, Services, Transportation, Insurance.

1.20 This means that, in addition to structural changes, many types of jobs in a wide range of sectors can now be based in many different locations. Historically, high value-added activities, such as R&D, have been concentrated in developed countries, with low value-added activities, such as basic manufacturing and assembly, located in low-cost developing countries.

1.21 This is now changing fast with emerging economies increasing their share of high value-added activities. While the *proportion* of workers with high skills in emerging economies remains extremely low, the size of countries such as China and India means that they have high *absolute* numbers of skilled workers. India and China together produce around 4 million graduates each year, compared to 250,000 in the UK.

A world-leading skills base

1.22 The Review believes that the implications for the UK of these changes are clear and pressing. While growth in emerging economies does not come at the expense of growth in developed countries (there is not a fixed number of jobs in the world), the UK must ensure it has a world-leading skills base or risk losing out on high value-added industries and new technologies.

1.23 Without an internationally comparable skills base, UK businesses will be less able to succeed in the high value-added activities the UK needs to boost growth and will risk becoming trapped in low value-added activities. Improving the UK's skills base – making the skills of the people the UK's number one asset – will enable businesses to take advantage of new opportunities, markets and technologies and open up new careers, improved progression and higher pay to individuals.

1.24 The UK's future prosperity will depend upon ensuring that the UK has the skills base to be able to adapt to global changes. The UK workforce must have the skills to take advantage of changes in technology and workers must be able to reskill as the structure of the economy changes – otherwise growth will slow and groups and areas risk being left behind.

The challenge of the changing UK workforce

1.25 Significant changes are also taking place in the UK workforce and the pool of labour that UK firms can draw on. The UK population is ageing and global migration flows are increasing. Many older workers may have to reskill as the UK economy restructures in response to the global changes set out above. Businesses can increasingly choose from a wider pool of workers, partly as a result of increased global migration flows, but also as a result of the global economic changes outlined above.

Demographic changes

1.26 Over the coming years there will be a small decline in the number of people aged between 25 and 49 – often considered to be 'prime' working age – as the 'baby-boom' generation get older. By 2020, there will be 2 million more people over the age of 50 than there are today. This age group is currently far less likely to participate in education and training than younger people. Chapter 3 sets out these demographic trends in more detail.

1.27 These changes have important implications for the UK economy. Around 50 per cent of the adult population in 2020 are already over 25 and therefore beyond the age when they are most likely to participate in the traditional educational route, from school through to university. Over 70 per cent of the 2020 working age population are already over the age of 16.

1.28 In the past, structural change was facilitated by a flow into expanding industries of young people with more relevant skills, and the flow out of declining industries by older people leaving the workforce. In the future, workers are more likely to have to retrain as the proportion of older people and the length of working lives increases, and as the rate of change and innovation increases.

1.29 While this clearly increases the importance of adults improving their skills and reskilling over their working life, it remains the case that around half of the workforce in 2020 are today under 25. The attainment of school leavers will be a major determinant of the skills profile in 2020 – and the major determinant beyond that.

1.30 In addition to changes in the age profile of the population, the source of growth in the working age population is changing. People from ethnic minorities will account for around two thirds of future growth in the working age population. The challenge for employers will be to ensure their recruitment, retention and development strategies enable employers to make the most of all the talent available to them, for example, ensuring that people from ethnic minorities have equal opportunities and overcoming barriers of gender stereotypes in careers.

Migration

1.31 Global migration flows have been increasing over the past 30 years or so and are predicted to continue to increase. The expansion of the EU has added to the pool of labour from which UK firms can draw their workforce. Net migration is extremely difficult to predict accurately. However, official Government projections are for net migration of around 145,000 each year from 2007 onwards, around two thirds of whom will be of working age. This accounts for more than 40 per cent of growth in the working age population between now and 2020.[2] Chapter 3 discusses the impact of migration in more detail.

MEETING THE CHALLENGE: THE ROLE OF SKILLS

1.32 The Government has set itself an overall objective of raising the sustainable economic growth rate of the UK. Improvements in skills are essential to meeting this objective. They can contribute to increasing economic growth by both boosting productivity and increasing the overall employment rate. Investment in skills is ever more critical if the UK is to effectively meet global challenges.

[2] GAD population projections, 2004.

Box 1.2: What do we mean by skills?

There are a large number of different types of skills and they can be split into a number of different categories. Generic skills, such as team working and communication, are applicable in most jobs. Specific skills, such as the ability to operate a machine, are less transferable between occupations. Most occupations will use a mix of different types of skills and within each skill there will be different levels of ability; some people will be more competent than others.

There is no perfect measure of skills. A range of measures can be used. The most common measures of skills are qualifications, although of course it is possible to have skills without having qualifications. On the job training in the workplace is also an important source of skills development, but often not formally recognised. The Review recognises the importance of looking at these wider definitions of skills. However, the ready availability of qualifications data and the comparability of different qualification types means that they are the most regularly used measure.

Qualifications can be further grouped into five different levels: full Level 2 equates to five good GCSEs or their vocational equivalents, full Level 3 to two or more A-levels and Level 4 and above to degree level qualifications and higher. This classification is discussed in more detail in Box 2.1.

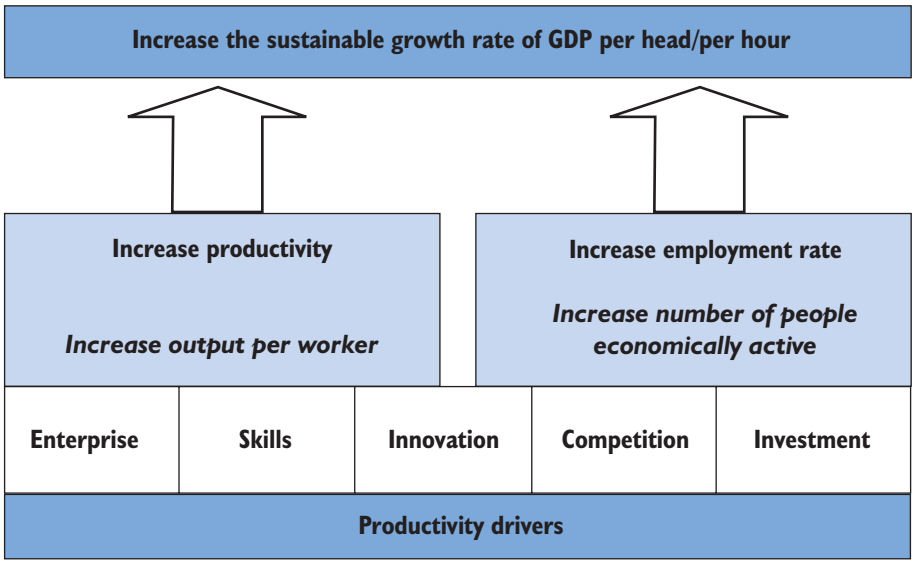
In addition to qualifications, levels of literacy and numeracy are also used as measures of skills. These tend to be based on surveys or on the proportion of the workforce with English or maths qualifications.

This Review has used a broad set of indicators of skills. However, for the reasons set out above, qualifications have been used most often. Chapter 2 sets out how the UK currently performs on a number of different definitions and measures of skill in more detail.

Skills and productivity

1.33 The Government uses a framework for considering policy to improve productivity – based around the five drivers of productivity. For clarity, the Review has adopted the same framework. Skills are one of the five main drivers. Chart 1.6 shows the five drivers and their relationship with overall economic growth.

Chart 1.6: The five drivers of productivity



1.34 Skills impact on productivity:

- directly by increasing human capital in a firm or country;
- indirectly by 'spillover' impacts on the productivity of other workers; and
- via other drivers by encouraging greater investment and innovation.

Skills and long-term growth

1.35 Workers with more skills are demonstrably more productive and also more flexible and adaptable. They will contribute more to growth. Two forms of economic growth theory make this link:

- **Neoclassical growth theory:** Suggests a boost to growth as the effects of improved education feed through the economy until it reaches its new equilibrium at a higher level of national income and the previous rate of growth;[3] and
- **Endogenous growth theory:** Suggests that improvements in education can permanently increase the growth rate of the economy by, for example, encouraging innovation.[4]

1.36 Most academic evidence shows that improving the skills and qualifications of workers increases growth and boosts national prosperity. While there is no consensus among economists about which theory most accurately describes economic growth, there is consensus that improvements in skills provide a boost to growth and are associated with higher levels of national income in the long term.[5]

1.37 The skills profile of the UK workforce has improved over time and this has contributed to economic growth. Analysis suggests that improvements in the skills of UK workers have contributed around one fifth of annual growth in the UK economy over the past 25 years.[6] Another study found a similar contribution over the five years to 2000, around 0.37 percentage points of annual growth.[7] Improving skills more quickly than in the past has the potential to increase this contribution and increase economic growth.

1.38 Around one fifth of the UK's productivity gap with France and Germany is a result of the relatively poorer skills of workers in the UK – if the UK had similar skill levels as these countries, its national income would be significantly higher.[8] The gap with the USA, however, is largely a result of the USA combining its labour and capital in a more efficient way, rather than the relative skill mixes of the UK and USA.

[3] *A contribution to the theory of economic growth,* Solow, Quarterly Journal of Economics 70, 65-94, 1956.

[4] See, for example, *Endogenous technological change*, Romer, Journal of Political Economy, 98, Part 2, 1990.

[5] For a summary of the literature see, *The returns to education: a review of the empirical macroeconomic literature,* Sianesi and van Reenan, Institute for Fiscal Studies, 2002.

[6] *A quality-adjusted labour input series for the United Kingdom (1975-2002),* Bell, Burriel-Llombart and Jones, Bank of England Working Paper 280, 2005.

[7] *Accounting growth: capital, skills and output,* Lau and Vaze, Office for National Statistics, 2002.

[8] *Britain's relative productivity performance: updates to 1999,* O'Mahoney and de Boer, National Institute for Economic and Social Research, 2002.

1.39 A recent study found that increasing the literacy score of a country by 1 per cent leads to a 2.5 per cent rise in labour productivity and 1.5 per cent increase in GDP per head.[9] Work to estimate the impact of reducing the number of young Australians who drop out of formal education before the age of 18 showed that encouraging an extra 50,000 to stay on by 2010 would lead to GDP being 1.1 per cent higher in the longer-term.[10]

Skills and business productivity

1.40 Improving the skills of workers also improves the productivity of businesses and helps them to compete in the global economy. The evidence clearly demonstrates that higher skills are associated with increased productivity and improved business outcomes at the firm level. For example, one study showed a 10 per cent rise in net sales per worker with over three years training,[11] while another study showed how the efficiency of production increased with training in manufacturing.[12]

1.41 The higher wages that firms are prepared to pay to workers with higher qualifications provide a measure of the impact of skills on productivity – in general, firms would not be prepared to pay them higher wages if they were not more productive.

1.42 Wage returns vary by both the level and type of qualification. Returns to higher qualifications tend to be larger than for low qualifications. For example, those with a degree are paid around 25 per cent more than those without, controlling for other factors that affect pay such as age and background. Returns to academic qualifications tend to be larger than for vocational qualifications, though the picture is not uniform.

1.43 In addition to the significant wage returns to qualifications, skills such as literacy and numeracy are also highly valued in the workplace. For example, those with good numeracy skills earn 10-15 per cent more than those with poor numeracy skills.[13]

1.44 These large and significant wage returns show that those with qualifications tend to be more productive than those without. Box 1.3 sets out the evidence on returns to qualifications in the UK in more detail.

[9] *Literacy scores, human capital and growth across 14 OECD countries,* Coulombe, Tremblay and Marchand, Statistics Canada, 2004.

[10] *The economic benefit of increased participation in education and training,* Access Economics Pty Limited, Business Council of Australia, Dusseldorp Skills Forum, 2005.

[11] *High performance work systems and firm performance,* King, Monthly Labour Review, May 1995.

[12] *Are training subsidies for firms effective? The Michigan experience*, Holzer et al, Industrial and Labour Relations Review, 1993.

[13] See, for example, *The returns to academic, vocational and basic skills in Britain,* Dearden et al, Skills Task Force Research Paper, 2000. More detail is included in Annex D.

Box 1.3: The returns to qualifications

Gaining qualifications can improve the pay prospects of individuals. Wage returns provide a measure of the extra pay individuals can earn on average by gaining a particular qualification, controlling for other factors that might affect wages, such as family background and underlying ability. They also provide a lower-bound estimate of the higher productivity of a worker with a higher qualification – in general, firms would not pay a worker a higher wage if they were not more productive.

There are a number of studies looking at wage returns in the UK and they paint a broadly consistent picture. Wage returns vary by level of qualification, by type of qualification and by subject.

Wage returns tend to be larger for higher-level qualifications and also for academic qualifications. The return to a degree is generally estimated to be around 25 per cent, though there is some tentative evidence that this may be beginning to fall slightly.[a] The returns to academic qualifications, such as A-levels and GCSEs, are in the order of 15 per cent and 25 per cent respectively. By contrast, returns to lower-level vocational qualifications are lower and vary. Some, such as Ordinary National Certificates (ONCs) and Higher National Certificates (HNCs), have significant positive returns. Others, such as NVQ Level 2, have little or no return, unless they are delivered in the workplace for example.

Returns also vary by subject. For example, one study showed that wage returns to medicine and law degrees are in the order of 30 per cent, while returns to arts and humanities and agricultural science are negligible.[b] Basic skills, such as literacy and numeracy, provide a significant, positive wage return. More detail is provided on wage returns in Table D.1 in Annex D.

Qualifications can provide other benefits to individuals beyond higher pay. They are associated with a higher probability of being in work, increased opportunities for progression, improved health outcomes, reduced offending rates and greater social cohesion. Wage returns therefore provide just one measure of the benefits or returns to an individual of attaining qualifications.

[a] *The class of '99: A study of the early labour market experiences of recent graduates*, Purcell, Elias, Davies and Wilton, DfES, 2005.

[b] *Evidence on the balance of supply and demand for qualified workers*, McIntosh, in *What's the good of education?*, Machin and Vignoles (eds), 2005.

1.45 Wages are a conservative estimate of the productivity benefits of gaining skills through qualifications. Evidence shows that productivity benefits are higher than wage benefits. One study showed that a 5 per cent increase in the proportion of workers trained in an industry leads to a 1.6 per cent increase in wages but a 4 per cent increase in value-added per worker – the increase in productivity was approximately double the increase in wages.[14] Similarly, recent evidence suggests that the impact of training on wages may be only half as large as the productivity effect.[15]

1.46 The productivity benefits that firms gain from employing workers with higher qualifications may be higher than the wage returns data suggest for a variety of reasons, such as if firms have paid part of the training costs themselves. In addition, in a market characterised by imperfect competition, firms may 'capture' some of the benefits themselves as firms and workers split the benefits according to their relative bargaining power.[16]

[14] *Who gains when workers train? Training and corporate productivity in a panel of British industries,* Dearden, Reed and van Reenan, Institute for Fiscal Studies, 2000.

[15] *The impact of training on productivity and wages: evidence from British panel data,* Dearden, Reed and van Reenan, 2005. Oxford Review of Economic Policy, Volume 16, Number 3, 2000.

[16] *Training and innovation in an imperfect labour market,* Acemoglu, 1996.

I.47 In addition to these direct impacts on productivity, improving the skills of some workers can have a 'spillover' effect on the productivity of other workers. For example, lower skill workers may improve their productivity through working with more highly skilled workers. Workers can also improve their own productivity by developing skills further as they apply them in practice – 'learning by doing'.

I.48 The evidence on the existence of spillovers and other related externalities is mixed. One study in the US found that a 1 per cent increase in the share of college graduates in an area raised the wages of high school dropouts in the same area by 2.2 per cent.[17] In the UK, evidence suggests that the only significant evidence of spillovers can be found from Level 3 and above qualifications.[18]

Investment and innovation

I.49 Evidence presented to the Review supports the idea that skills can also affect productivity by encouraging and facilitating investment and innovation. One study suggested that rises in the relative supply of skilled workers have encouraged firms to innovate in ways that are complementary with these high skills.[19]

I.50 Many economists have suggested that the rise in the relative wages of those with high qualifications compared to those with low qualifications, as shown by the wage returns to these qualifications, is at least partly a result of recent technological change being complementary to higher skills.[20]

I.51 To take advantage of the opportunities that new technologies bring, businesses now require more high-skilled workers. Increased demand for high-skilled workers causes their wages to rise and can therefore help to explain why their relative wages have risen despite large increases in the supply of skilled workers in recent years.

I.52 At the microeconomic level, one study of the manufacturing sector found that differences in the skills employed in firms in the most and least productive firms explained around 8 per cent of the total factor productivity (TFP) gap between them.[21] This was in addition to the direct impact of differences in skills on labour productivity.

I.53 Another study found that productivity growth is enhanced by the joint introduction of training and innovation.[22] This suggests that having highly skilled workers can help firms to gain the full rewards of new investment,[23] because they are better able to adapt quickly and effectively to change.[24]

[17] *Social returns to education and human capital externalities: evidence from cities,* Moretti, 1998.

[18] *Do social returns exceed private returns to education? Preliminary evidence on productivity spillovers in British firms,* Galindo-Ruedo, Haskel and Pereira, Centre for Research Into Business Activity, 2004.

[19] *Why do technologies complement skills? Directed technical change and wage inequality,* Acemoglu, Quarterly Journal of Economics, 113(4), 1055-1089, 1998.

[20] For a summary of the literature see, *The assessment: globalisation and labour market adjustment,* Greenaway and Nelson, Oxford Review of Economic Policy, Volume 16, Number 3, 2000.

[21] *Skills and productivity in the UK using matched establishment, worker and workforce data*, Haskell, Hawkes and Pereira, Centre for Research Into Business Activity, 2002.

[22] *The role of training and innovation in workplace performance,* Laplagne and Benstead, Productivity Staff Commission Research Paper, AusInfo, Canberra, 1999.

[23] *OECD: The growth report*, OECD (2001); *Britain's record on skills*, Layard, Mcintosh and Vignoles, Centre for Economic Performance, London School of Economics, 2001.

[24] *Education and training for manufacturing development,* Godfrey (ed), Institute of Development Studies, University of Sussex, 1997.

1.54 When deciding whether to invest in new equipment, processes or technology, firms must balance the costs of doing so against the potential benefits. If workers do not have the skills to adapt to new ways of working, then the firm must add the costs of training them to the direct costs of investment and innovation. This raises the return required in order to make capital investment profitable.

1.55 Uncertainty about whether workers will be able to adapt also adds to uncertainty about whether the benefits of investment will be fully realised. In this way, the relatively poor skills of UK workers may have constrained levels of both investment and innovation. Investment as a proportion of Gross Domestic Product (GDP) in the UK is, at 17 per cent, the lowest in the G7.[25]

1.56 In addition, relatively poor skills in the workforce might affect the type of investment that businesses undertake. For example, businesses may invest in equipment to enable poorly skilled workers to undertake basic tasks more easily. Investment in this way can be seen as a 'coping strategy', rather than opening up more productive ways of working, as different types of investment might do. The costs of training low-skill workers effectively acts as a 'double barrier' to investment.

Skills and employment

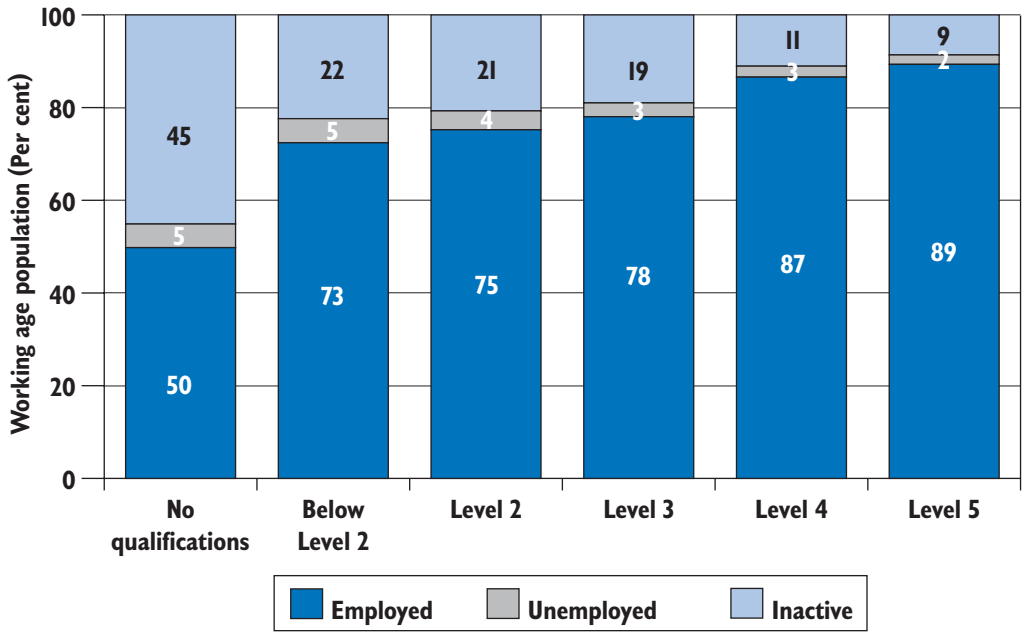
1.57 Skills have an important role to play in increasing the employment rate. As well as increasing the growth rate of the economy, they benefit firms by giving them a larger pool of skilled and flexible labour to choose from. They benefit individuals by enhancing the range and extent of their employment opportunities.

1.58 Groups with relatively low employment rates, such as those with disabilities and people from many ethnic minority groups, have, on average, fewer skills and qualifications than the population as a whole. More than 40 per cent of those of Asian or Asian British ethnicity hold only low-level qualifications or none at all, compared to around 30 per cent of the White population. Over 40 per cent of people with disabilities have no qualifications. Chapter 2 discusses this in more detail.

1.59 The relatively poor qualifications profile of particular groups are part of the reason for their relatively low employment rates. Chart 1.7 shows that those with higher qualifications are far more likely to be in work than those without qualifications. Half of those without qualifications are in work compared with around 75 per cent for those with Level 1, 2 and 3 qualifications and 90 per cent for those with Level 4 and above qualifications.

[25] *OECD Economic Outlook* 77, OECD, 2005.

Chart 1.7: Economic activity by highest qualification, 2004



Source: Labour Force Survey.

1.60 Those with basic skills, such as literacy and numeracy, are far more likely to be in work than those who lack them. Those with poor literacy skills[26] have an employment rate of around 50 per cent, compared with around 75 per cent for those with good literacy skills.

1.61 These raw differences in employment rates are not solely the result of differences in qualification or skill levels. For example, higher qualification or skill levels may be associated with other factors that increase the probability of being in work, such as soft skills like confidence and effective communication skills.

1.62 Box 1.4 sets out how economists attempt to control for these factors to isolate the impact of having qualifications. While the results are in some cases mixed, it is clear that having certain types of skills, particularly literacy and numeracy, is associated with better employment prospects.

[26] Defined as below Level 1 literacy skills, broadly equivalent to below a grade C GCSE English. See Chapter 2 for a fuller definition.

Box 1.4: Estimating the employment impact of skills

Employment prospects depend on a wide range of factors. While qualifications and skills are one of these, other factors, such as ability, motivation and soft skills such as confidence, also have an important impact.

These factors may be correlated across qualification levels. Those with higher qualifications may be more likely to have other factors that improve employability. Therefore it does not necessarily follow that those progressing from one qualification or skill level to another will have the same probability of finding and keeping a job as those who already have the higher qualification level unless they also gain the other factors that improve employability.

To try to isolate the increase in the probability of being employed due to having a higher qualification or skill level, economists attempt to control for the other potentially associated factors. While these studies cannot control for every factor, they are a better measure of the employment effects of having higher qualifications and skills than just looking at employment rates.

There are only a limited number of such studies and there is not a great deal of consistency between the results. For example, one study finds that those with Level 2 vocational qualifications are significantly more likely to be in work than those without using one data source, while using another data source suggests that those with such qualifications are actually less likely to be in work.[a] These differences will partly be a result of the use of different data sources and methodologies, as well as differences in the other variables controlled for.

For basic skills such as literacy and numeracy, the results are clearer and show a higher likelihood of being in work for those with good basic skills. For example, one study found that Level 1 numeracy skills are associated with a 2-3 percentage point higher probability of being in employment, and Level 1 literacy skills are associated with up to a 10 percentage point higher probability of being in employment, although previous studies found slightly smaller effects.[b]

[a] *The returns to academic, vocational and basic skills in Britain*, Dearden et al, Skills Task Force Research Paper, 2000.
[b] *Basic Skills, Soft Skills and Labour Market Outcomes: Secondary Analysis of the National Child Development Study*, Machin, McIntosh, Vignoles and Viitanen, DfEE Research Report RR250, 2001.

1.63 In addition to helping people move into work, gaining new skills and qualifications can help people to stay in work. Some people currently cycle between low-paid jobs and worklessness, trapped in a 'low pay, no pay' cycle. For example, around 25 per cent of those who leave Jobseeker's Allowance to move into work return to benefits within three months, and almost 40 per cent return within 6 months. Giving everyone the opportunity to improve and update their skills can help them to break this cycle and move into better-paid and sustained employment.

1.64 Gaining skills also aids progression in the labour market. Those with higher skills are both less likely to move between employment and worklessness and better placed to move into new employment when they leave their current job. Higher levels of education have been shown to have a positive impact on career progression.[27] Improving skills opens up new opportunities and new careers, increasing individuals' choices and their future earnings potential. In this way, improving skills can help to improve the chances of those beginning at the bottom of the career ladder to work their way up – known as intragenerational social mobility.

[27] *Career progression: Getting on, getting by and going nowhere,* Dolton, Makepeace and Marcenaro-Gutierrez, Education Economics, 2005.

Skills and global economic change

1.65 Global markets can deliver significant benefits, enhancing growth and living standards and providing new opportunities for UK businesses. Global change also puts a greater premium on economic flexibility. As the global economy restructures, the success of developed countries will depend on building a flexible economy with a highly skilled workforce, which can respond quickly to change and which focuses increasingly on high value-added sectors.

Increasing importance of high skills

1.66 Emerging economies are capturing increasing shares of high value-added industries and activities. While this need not be at the expense of UK jobs – faster world growth benefits all countries – it increases the need for the UK to have a world-class skills base.

1.67 Without this, firms may increasingly choose to locate high value-added activities outside the UK, leaving UK workers with low-paid jobs in low value-added activities. To maximise the prosperity of the country, the UK must ensure it has a world-class skills base, in order to create high value-added jobs and drive innovation – the future sources of growth and wealth.

1.68 Over the past twenty years or so, the proportion of jobs requiring high skills has increased substantially, as technology and the global economy have changed. Technological change often leads to higher demand for skills: skills needs are reported to have risen 'a lot' in 42 per cent of establishments reporting high levels of technological change, compared to only 25 per cent of all other establishments.[28]

1.69 This partly explains the fact that the wage returns to a degree have remained broadly stable over the past decade despite large increases in the number of graduates – demand for high skill workers has risen broadly in line with their supply. Box 1.3 discusses the latest developments in wage returns.

1.70 The changes taking place in the global economy make investment and innovation ever more critical. A highly skilled workforce is essential to taking advantage of new technologies and opportunities. Skilled workers are better able to adapt quickly and effectively to change.[29] The ability of companies to absorb new technology is linked to a firm's skill composition.[30]

Changing demand at the lower end

1.71 The shift in low value-added production to emerging economies does not necessarily mean that demand for relatively low-skilled workers will continue to fall. Rather, the type of demand at the lower end of the labour market is shifting further toward service sector jobs, such as in the hospitality and personal service industries.

1.72 These jobs require different types of skills to the low-skill jobs, such as basic manufacturing, they are replacing. In particular, they place greater emphasis on customer handling, team working and communication skills. These are not always formally assessed as part of a qualification.

[28] *Employer perspectives survey*, Green, Mayhew and Molloy, 2003.

[29] *Education and training for manufacturing development*, Cassen and Mavrotas in *Skill development for international competitiveness*, Godfrey (ed), Institute of Development Studies, University of Sussex, 1997.

[30] *Asia's next giant: South Korea and late industrialisation*, Amsden, 1989.

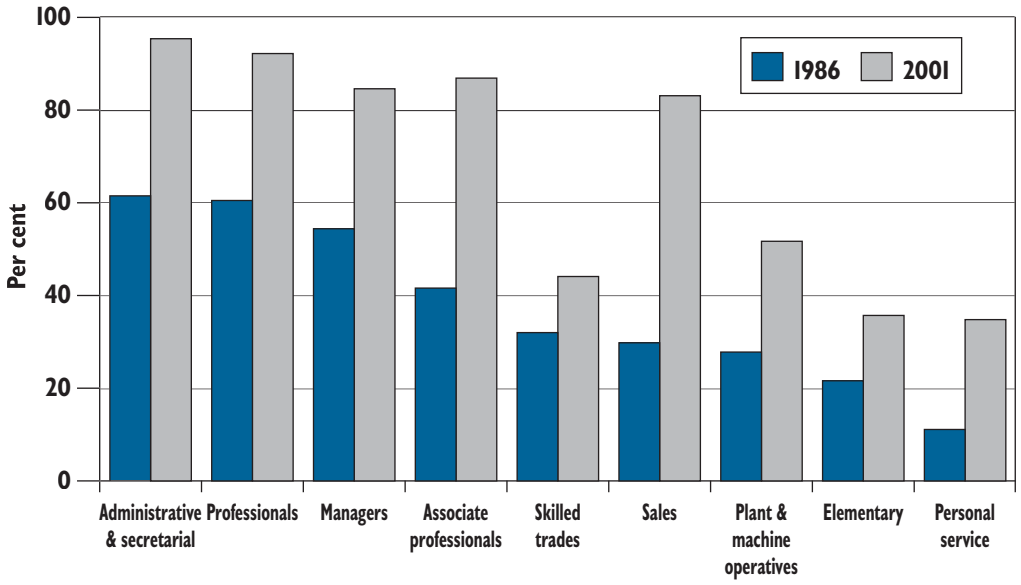
1.73 These shifts in the type of jobs mean that changes in the labour market are not as simple as increased demand at the top end at the expense of jobs at the low-skill end. Work may instead be polarising with the increase in the proportion of high-skilled workers leading to increased demand for less-skilled workers in some service sector jobs, but with technology increasingly substituting for intermediate-skill jobs.[31]

Increasing skills within occupations

1.74 In addition to the impact of change in the occupational structure on skills needs, the skills needed within a particular occupation are also changing. Skills that were once seen as high-level are increasingly seen as basic skills. For example, many jobs traditionally considered low-skill jobs now require IT skills as standard.

1.75 The ability to use a computer is one of the most visible and widely used generic skills. The past few decades have seen a rapid expansion in the need for such a skill across all occupations and sectors, as Chart 1.8 shows. This rise has not been concentrated in traditionally high-skilled jobs – even in those occupations traditionally thought of as low-skilled there has been significant growth in the use of IT.

Chart 1.8: Proportion of workers using computerised or automated equipment by occupation, 1986-2001



Source: Work Skills in Britain 1986-2001, Felstead, Gallie and Green (2002).

The importance of flexibility

1.76 It is not sensible to attempt to predict the rise of technologies, such as IT, or the types of jobs that will be important in the future. The Review does not believe the Government should aim to predict the impact of future technological advances and attempt to centrally provide the skills it believes will be necessary: manpower planning has a poor record and the Review does not support it. Rather, to ensure the UK is well placed to rise to the challenge of global change requires flexibility to adapt to new challenges and opportunities.

1.77 Flexibility can be enhanced in two key ways:

- ensuring that the skills delivery mechanism is accessible and flexible so that individuals are able to choose the skills and qualifications they wish to gain, guided by signals about the skills that businesses need most; and

[31] *We can work it out: the impact of technological change on the demand for low-skill workers,* Manning, CEP Discussion Paper 640, 2004; *Lousy and lovely jobs: the rising polarisation of work in Britain,* Goos and Manning, 2003.

- ensuring individuals have the opportunity to gain skills that enhance flexibility. These are skills, such as team working and communication, which are transferable across occupations.

1.78 As structural change continues, retraining is likely to become increasingly important to allow individuals to shift into new jobs and new sectors. Individuals must therefore be able to choose the skills and qualifications they want to gain so that they can move into new areas of work. The skills delivery system must also be able to signal the value that businesses place on particular skills and qualifications. These qualifications must reflect the skills that businesses want: achieving this can boost employers' demand for skills.

1.79 In addition, individuals should be able to equip themselves with skills that enhance flexibility. At the lower end of the labour market, this means that all individuals will need to develop the team working and communication skills that are increasingly essential in the expanding service sector jobs in areas such as the hospitality and personal services industries. This is in addition to the current set of basic skills, such as literacy and numeracy, which are already standard in most jobs. The set of basic skills is therefore expanding.

1.80 The analysis in the previous section suggested that taking advantage of technological change will be increasingly essential to the UK's prosperity. It is not possible to accurately predict which advances and which specific types of skills will be most important. However, high-level skills can often confer strong analytical skills that help workers to take advantage of such advances in technology and also drive change through innovation.

1.81 Ensuring that the UK has a large stock of highly skilled workers will help to ensure that UK businesses can take advantage of new technologies and production processes, even if it is not possible to predict in advance what those advances will be. Deployed effectively, it will enable businesses to change the nature of the jobs they offer to take advantage of the skills base available.

SHARING PROSPERITY FAIRLY

1.82 The previous sections have shown that improvements in skills will boost economic growth and make the UK more prosperous. In the past, not all groups and areas have fully shared in increased prosperity. Skills policy has a key role to play in reducing inequalities and ensuring no group, region or area is left behind. The transformation taking place in the global economy makes this role even more important – without improved skills policy, disparities are likely to increase further.

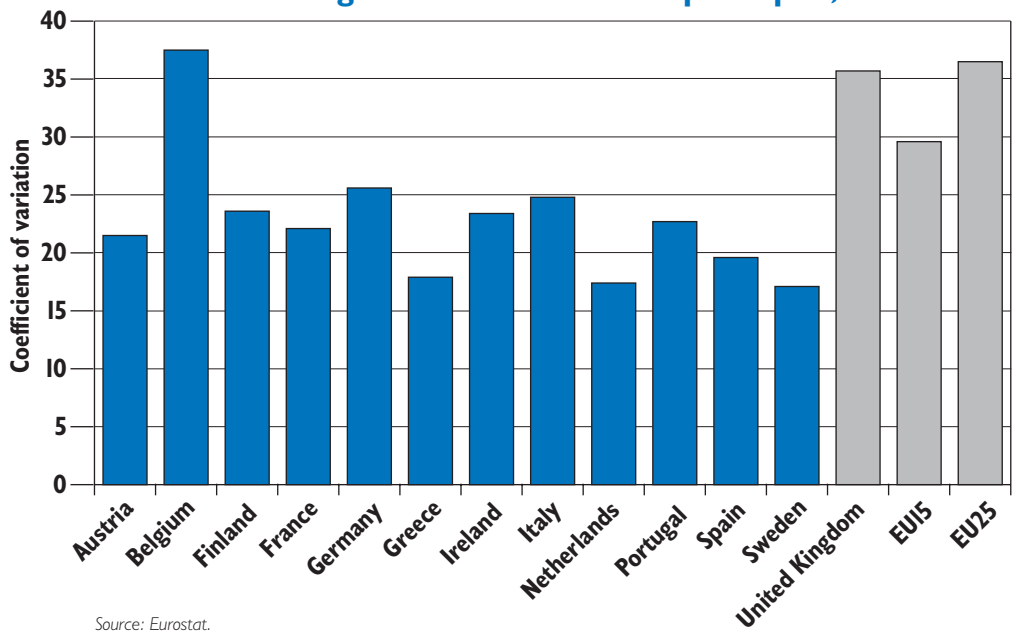
Helping all areas and regions to share in prosperity

Disparities between areas

1.83 While output and employment have increased in all regions of the UK, disparities between regions remain high and disparities between local areas are significantly larger than the European average. The gap in prosperity between parts of the UK is greater than the gap between the UK and the USA – Gross Domestic Product (GDP) per head in London is more than double that in Liverpool.[32] Chart 1.9 shows a measure of the relative gaps in living standards between local areas in European countries.

[32] Barclays Bank (2001) in *Urban Renaissance of EU non-capital cities*, Parkinson et al, 2004.

Chart 1.9: Sub-regional variation in GDP per capita, 2002



Source: Eurostat.

The role of skills

1.84 The different skills mixes of each region and country of the UK are part of the reason for these persistent disparities. For example, young people from regions such as the North East are less likely to take A-levels and less likely to go to university than in regions such as the South East. Hence the flow into the workforce is less well qualified in the North East. The qualifications profile of the UK's countries and regions is set out in more detail in Chapter 2.

1.85 Many of those that do gain higher qualifications in some regions move to the south of England, where many high-skill jobs are currently to be found. This leaves many northern regions with a poorer skill mix than, for example, the East and the South East. By contrast, there tends to be less inter-regional mobility among those with lower-level qualifications.

1.86 The evidence set out above showed a clear link between skills and productivity and employment. The disparities in skills mixes between regions are therefore likely to be a significant part of the reason for regional disparities in employment and productivity. Measures that affect the disparities between the skill mixes of regions and local areas are therefore likely to impact on the disparities in employment and productivity.

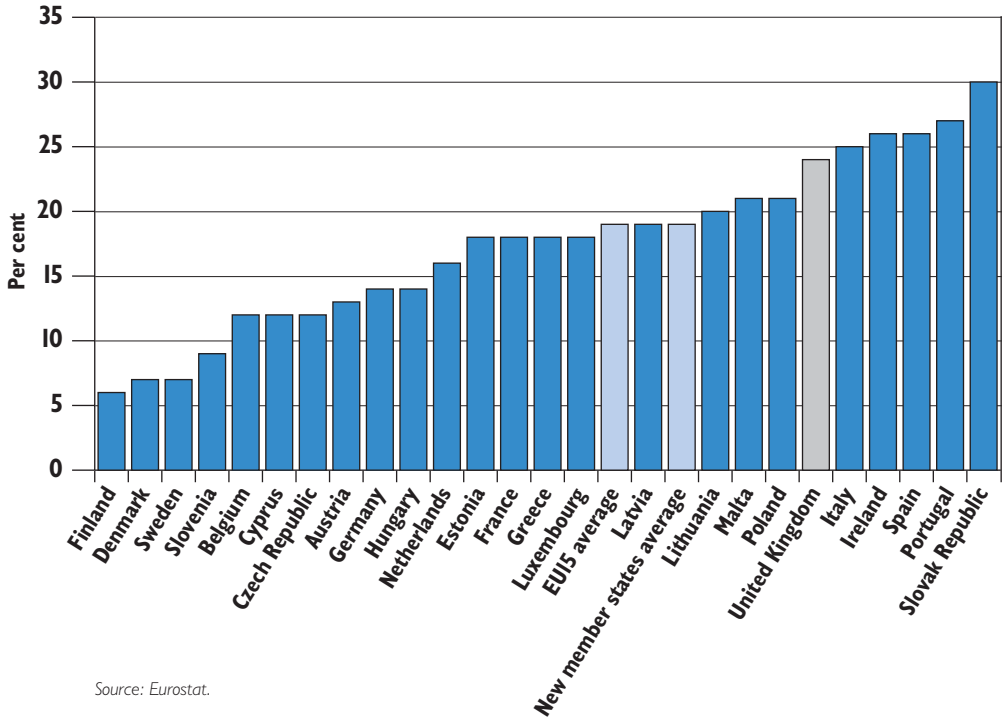
Reducing income inequality

Rises in income inequality

1.87 In addition to significant disparities in regional living standards, income inequality is high in the UK. Income inequality in the UK rose substantially during the 1980s and early 1990s. In 1976, the richest 10 per cent of people earned 2.9 times the poorest 10 per cent. Twenty five years later they were earning four times as much. Though the level of income inequality has stabilised since then, it remains high by international standards.

1.88 This rise in overall income inequality was associated with a rise in relative child poverty.[33] By 1997 the UK had, at 25 per cent, the highest proportion of children living in households with less than 60 per cent of median income in the EU. While the incidence of child poverty has fallen over the past decade, it remains among the highest in Europe, as shown in Chart 1.10. The Government has committed to halving child poverty by 2010 as a step towards eradicating it by 2020.

Chart 1.10: Child poverty rates in EU countries, 2003



Source: Eurostat.

1.89 Poverty in childhood impacts negatively on the opportunities that children have later in life. The evidence shows that children from low-income backgrounds are more likely to have low school attainment, become economically inactive as adults and suffer from poor health outcomes later in life. Young women from poor backgrounds are more likely to have children before the age of 21, perpetuating the cycle of deprivation.[34]

The role of skills

1.90 A wide range of factors, including the proportion of female workers and the tax and benefit system, influence the income distribution and the number of children in relative low-income poverty. Many of these factors will have contributed to the rise in inequality seen up until the mid 1990s.

1.91 The evidence set out above showed that qualifications are closely associated with income and that those with higher levels of qualifications earn substantial wage premiums. Since skills and qualifications are a key determinant of income, the distribution of skills and qualifications will be a key determinant of the income distribution. The relatively polarised distribution of qualifications in the UK would therefore, all else being equal, lead to a wide distribution of earnings.

[33] Child poverty can be measured in a number of ways. The most common, and the one used by the Review, is the proportion of children living in households with less than 60 per cent of median income.

[34] *Outcomes for children in poverty,* Ermisch, Francesconi and Pevalin, Institute for Social and Economic Research, 2001; *Poverty: the outcomes for children,* Jonathan Bradshaw (ed), Family Policy Studies Centre, 2001.

1.92 This impact was reinforced by changes taking place in the global economy over this period. In particular, technological change appears to have been biased towards skilled workers.[35] New technologies have required skilled workers to operate them and therefore increased the value of skilled workers to firms. This increased premium on high skills, reflected in the increased differentials in the wages low and high-skill workers can earn, would also, all else being equal, lead to a widening in the income distribution.

Giving all children the best chance in life

1.93 As well as reducing income inequality, improvements in skills can enhance the life chances of people, giving them the opportunity to progress and move into higher paid jobs.

Social mobility

1.94 The opportunities of a child should be dependent on their abilities rather than their background or their parents' income. The degree of dependence of life chances on background is known as intergenerational social mobility. There are a number of ways of defining social mobility, but the easiest to measure is income mobility – the chances of a child born into one income group progressing into another income group over the course of their working life.

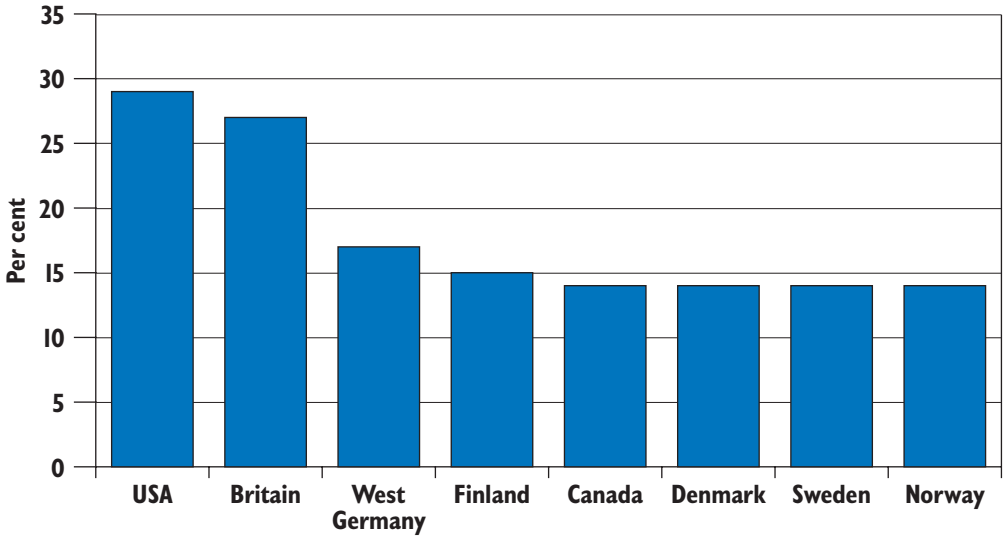
1.95 Income mobility is low in the UK – there is significant correlation between parents' position in the earnings distribution and the position their children achieve. Estimates vary but suggest that a significant proportion – more than one quarter – of a child's income can be explained by the income of their parents.[36]

1.96 This correlation between parents' income and that of their children is higher in the UK than in many other countries, as Chart 1.11 shows. Furthermore, income mobility has fallen in the UK in the last two decades, whereas it has either risen or stayed broadly the same in many other countries. Consequently, the chances of a child from a low income background having a high income job in adulthood are lower in the UK than they were in the 1950s.

[35] For a summary of the literature see, *The assessment: globalisation and labour market adjustment,* Greenaway and Nelson, Oxford Review of Economic Policy, Volume 16, Number 3, 2000.

[36] *Family income and educational attainment: A review of approaches and evidence for Britain,* Blanden and Gregg, Oxford Review of Economic Policy, 2, 245-263, Oxford University Press, 2004.

Chart I.II: International comparisons of the correlation between parents' and children's incomes



Source: Intergenerational mobility in Europe and North America, Blanden, Gregg and Martin, CEP, LSE (2005).

I.97 In addition to the equity reasons for higher social mobility, there are clear and strong efficiency arguments too. Low social mobility means that purely because of their background, large numbers of people are unable to contribute to society as effectively as they could. Low social mobility is therefore not just unfair, it is inefficient and constrains economic growth.

The role of skills

I.98 Education is closely related to income, and so the strength of the link between family background and educational attainment is a key driver of the level of income mobility.

I.99 In the UK, the links between educational attainment and family background are strong. Children with parents from unskilled manual backgrounds, and whose parents tend to have fewer qualifications, have been shown to have a 20 per cent probability of achieving five or more GCSEs at grade A*-C, compared with 69 per cent for children with managerial or professional parents.[37]

I.100 The link between family background and educational attainment has not weakened. Indeed the link between family income and the probability of entering higher education has strengthened in recent years.[38] Participation in higher education among young people from the most deprived wards has risen – from less than 5 per cent in 1960 to around 16 per cent in the early 1990s. However, participation in higher education among young people from less deprived areas rose more rapidly and from a higher starting point – from around 27 per cent to over 40 per cent.[39]

[37] *Education and skills: The economic benefit,* DfES, 2003.

[38] *Higher education, family income and changes in intergenerational mobility,* Machin in *The labour market under New Labour: The state of working Britain,* Dickens, Gregg and Wadsworth (eds), 2003.

[39] *National committee of enquiry into higher education,* Dearing, DFEE 1997.

1.101 These strong, persistent and, in some cases, strengthening links between family background and educational attainment are likely to be a significant part of the reason that social mobility is low in the UK by international standards and has fallen in recent years. Evidence suggests that greater equality of opportunity in education is a key driver of the higher social mobility seen in countries such as Canada.[40]

1.102 Looking forward, if work polarises further between high-skill and low-skill jobs as some have suggested, progression from low-skill jobs to high-skill jobs could become more difficult – there would be fewer 'intermediate' steps for people to take as they work their way up the career ladder. As a result, social mobility could fall further.

The wider social impact of skills

1.103 In addition to the economic and distributional impacts discussed above, there are important links between skills and wider social outcomes, such as health, crime and social cohesion. Skills can also have important impacts on financial inclusion, helping households to manage the family finances, and family life, allowing parents to help their children with their homework.[41]

Health

1.104 Health problems, including depression and obesity, are more common in unskilled and low-income households. Skills can impact on health either directly, by providing information on improving health, or indirectly, by improving income and making a healthy lifestyle more affordable. It is difficult to estimate the potential health benefits of skills improvements, but they are likely to be greatest for improvements at the bottom end of the skills distribution. One study suggests that moving 50 per cent of women currently without qualifications to Level 1 would have benefits of between £300 million and £1.9 billion per annum in terms of reduced obesity and depression.[42]

Crime

1.105 Those on lower incomes are both more likely to be victims of crime and more likely to commit crime. Offenders are far less likely to have qualifications and hence tend to have poorer pay and employment prospects: more than half of offenders have no qualifications, compared to 15 per cent in the population as a whole.[43]

1.106 Skills can affect crime by improving an individual's employment, pay and progression opportunities and hence the opportunity cost of offending, and by impacting on income inequality.[44] As with health, it is extremely difficult to quantify the impact of skills on crime. However, one study suggests that the benefits of a 1 percentage point increase in the proportion of the working age population with GCSEs could be £10-320 million per annum.[45]

Social cohesion

1.107 Improving skills can have important impacts on the cohesiveness of society. There is evidence to suggest that those with higher skill levels have, on average, greater levels of racial tolerance and higher levels of participation in the political process.[46] Clearly, however, skills alone are not the whole answer to building a more cohesive society.

[40] *Generational income mobility in North America and Europe,* Corak (ed), 2004, Cambridge University Press; *Intergenerational mobility in Europe and North America*, Blanden, Gregg, Machin, CEP 2005.

[41] *Education and skills: The economic benefit,* DfES, 2003.

[42] *Quantitative estimates of the social benefits of learning, 2: Health (depression and obesity),* Feinstein Centre for Research on the Wider Benefits of Learning, 2002.

[43] *Skills: getting on in business, getting on at work,* DfES White Paper, 2005.

[44] *Crime and economic incentives,* Machin and Meghir, Institute for Fiscal Studies, 2000.

[45] *Quantitative estimates of the social benefits of learning, 1: Crime,* Feinstein, Centre for Research on the Wider Benefits of Leaning, 2002.

[46] *Education, equity and social cohesion: A distributional model,* Green, Preston and Sabates, Report 7, Centre for Research on the Wider Benefits of Learning, 2003.

1.108 The evidence suggests that the distribution of educational outcomes matters more than the overall level of education in improving social cohesion: countries with a wider dispersion of educational outcomes tend to have lower social cohesion.[47] Measures that improve the overall level of education in a country, but do not change the level of educational disparities, are therefore unlikely to have an effect on social cohesion.

CONCLUSION

1.109 This chapter has set out the critical importance of skills to building a fairer, more prosperous country. Fundamental changes in the global economy are making improvements in skills ever more pressing. Investment in skills will help to boost UK growth by improving productivity and increasing employment.

1.110 Investment in skills will also help to improve social outcomes, enabling everyone to share in improved prosperity and improving the UK's poor record on social mobility. Societies with a polarised skills distribution are more likely to have high income inequality, since skills are a key determinant of income, and low social mobility, since skills increase the opportunity to progress within work.

1.111 Ensuring a fairer distribution of skills and that everyone has the opportunity to improve their skills can therefore help to reduce inequality and improve the job and career prospects of individuals and their children – enhancing both inter and intragenerational social mobility. Chapter 2 sets out evidence on the UK's current skills position.

[47] *Education equity and social cohesion: A distributional model,* Green, Preston and Sabates, Centre for Research on the Wider Benefits of Leaning, 2003.

2 THE UK'S SKILLS PROFILE

Chapter summary

The overall qualification profile of the UK workforce has been improving for some years. This is due mainly to improvements in the qualifications of young people flowing into the workforce while older, less well-qualified people retire.

Skills are hard to define and measure; qualifications are the best measure to enable overall analysis. The UK's qualification profile compares poorly internationally: international comparators have smaller proportions of their population with very low qualifications, and larger proportions with higher-level qualifications. Poor literacy and numeracy skills are also a widespread problem in the UK. In addition, employers report deficiencies in the skills of the UK's working age population, due to difficulties in finding people with the right skills to fill vacancies and lack of proficiency in their existing employees.

The international differences in productivity and the differences in prosperity between geographical areas and social groups will partly be explained by the unequal distribution of skills across the UK. The distribution is not uniform, and some groups and areas are more likely to be lower qualified than others, limiting their economic outcomes and range of opportunities.

2.1 This chapter sets out the Review's approach to measurement of skills, the UK's current skills profile, the extent of recent improvements and international comparisons of the UK skills profile. It shows that, despite recent improvements in the overall skills profile, the UK continues to compare relatively poorly internationally, and the distribution of skills across different groups within the UK remains unequal.

WHAT ARE SKILLS?

2.2 As set out in Chapter 1, skills are a factor of production in a similar way to physical capital. Most studies suggest there are three component indicators of an individual's or a population's 'human capital':

- innate ability;
- qualifications and knowledge acquired through formal education; and
- competencies and expertise acquired, for example, through training on the job.

2.3 Skills can be attained and used at varying levels of competence and can relate to *specific* tasks or circumstances or be *generic* to a range of jobs or situations. Generic skills such as literacy and numeracy are particularly important as precursors to the acquisition of other skills, through for example participation in further learning. Other less tangible generic skills, such as confidence and self-presentation, are sometimes grouped as 'employability skills'.

Measuring skills

2.4 A perfect measure of an individual's human capital would capture each skill acquired by an individual and show level of competence within that skill. In practice skill can be measured in three interrelated ways:

- level of competence (e.g. relative ability);
- achievement of competence (e.g. a qualification); or
- how competence is used (e.g. occupation).

2.5 This report uses a broad set of indicators in order to get the widest possible picture of the skills held by the UK population and the distribution within it. The current skills profile is analysed using generic skills, qualifications and occupations. Deficiencies in the UK skills profile are considered using both international comparisons of qualifications profiles and shortages of skills across the workforce as reported by employers.

2.6 However, when considering both the UK's current skill profile and projections into the future, the report uses levels of qualification as the key indicator. See Box 2.1 for a fuller description of the qualifications framework used by the Review.

Box 2.1: Qualifications by level

The analysis in this report classifies qualifications into the five levels set out below.

Level 1:	**GCSEs, O-Levels or equivalent at grades D-G; National Vocational Qualification (NVQ) Level 1; Business Training and Education Council (BTEC) first or general certificate; General National Vocational Qualification (GNVQ) foundation level; Royal Society of Arts (RSA); and SCOTVEC modules**
Level 2:	**Five or more GCSEs, O-Levels or equivalent at grades A*-C; NVQ Level 2; BTEC first or general diploma; GNVQ intermediate level; City and Guilds Craft; RSA diploma; and BTEC, SCOTVEC first or general diploma**
Level 3:	**Two or more A-Levels or equivalent; NVQ Level 3; BTEC National; Ordinary National Diploma (OND); Ordinary National Certificate (ONC); City and Guilds Advanced Craft; and 3 or more Scottish highers**
Level 4:	**First or other degree; NVQ Level 4; Higher National Diploma (HND); Higher National Certificate (HNC); and higher education diploma; nursing; teaching (including further education, secondary, primary and others)**
Level 5:	**Higher degree; Doctor of Philosophy (Ph.D.); and NVQ Level 5**

These levels can be further classified into low skills (no qualifications and Level 1); intermediate skills (Level 2 and 3) and high skills (Level 4 and above). This 'common currency' allows comparisons across sub-groups of the population, time and, to a certain extent, between countries. There is some debate at an international level: Level 2 can be classified as either low or intermediate level.

Annex C gives more detail on the qualification framework, including the classification of Scottish qualifications.

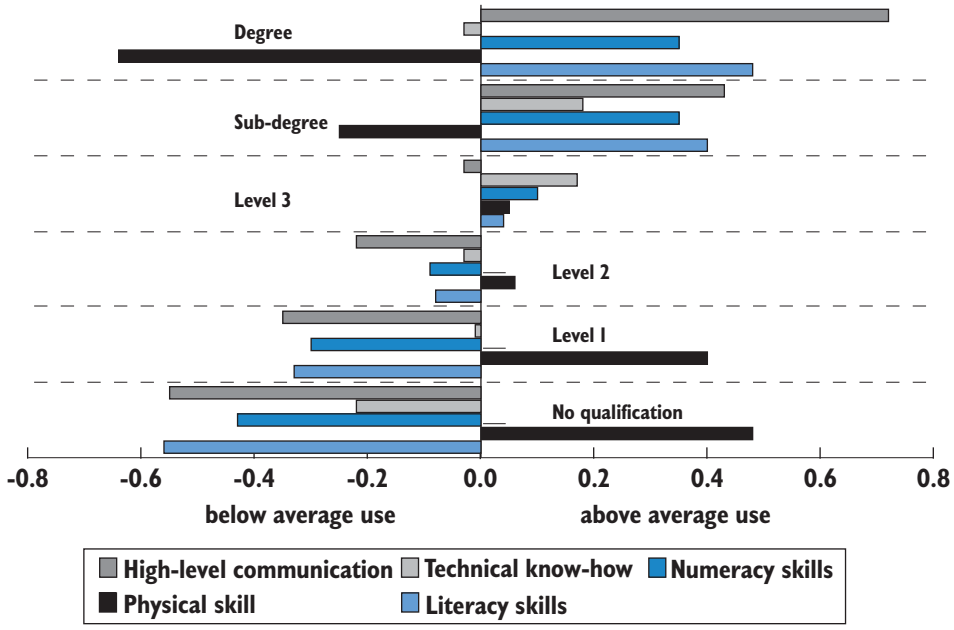
2.7 While data suggest that there is considerable overlap between measures, qualifications do not perfectly capture an individual's level and types of skill. The Review recognises the need to be cautious about the interpretation of qualifications as a definitive description of skill. Box 2.2 discusses the overlap between qualifications and other measures of skill in more detail.

Box 2.2: Measures of skill by qualification level

Qualifications are a measure of the acquisition of skills; they signal achievement of competence in a particular discipline, subject or range of subjects. Qualifications can also be used to signal the acquisition of generic skills which may not have been directly tested in attainment of the qualification, but which have been acquired in the process of achieving a qualification.

The level or type of competence is difficult to measure without direct testing. Although measurement of literacy or numeracy skills is becoming a more standardised procedure, testing has been limited to these two skills and is typically expensive to administer. Data suggest a positive correlation between the level of qualification held by an individual and their literacy and numeracy levels, though the proportion of people with high-level qualifications and poor literacy or numeracy is startling. Recent survey data show that about two thirds of those who have at least a Level 3 qualification have numeracy skills below Level 1.[a] The literacy figures are less stark at around 13 per cent.

Similarly, as the chart below shows, use of generic skills across individuals by different levels of qualification finds that, on the whole, higher usage of generic skills is associated with higher levels of qualification, with the exception of physical skills, where usage decreases as qualification level increases.



Source: The Growth and Valuation of Generic Skills, Green and Dickerson, 2002.

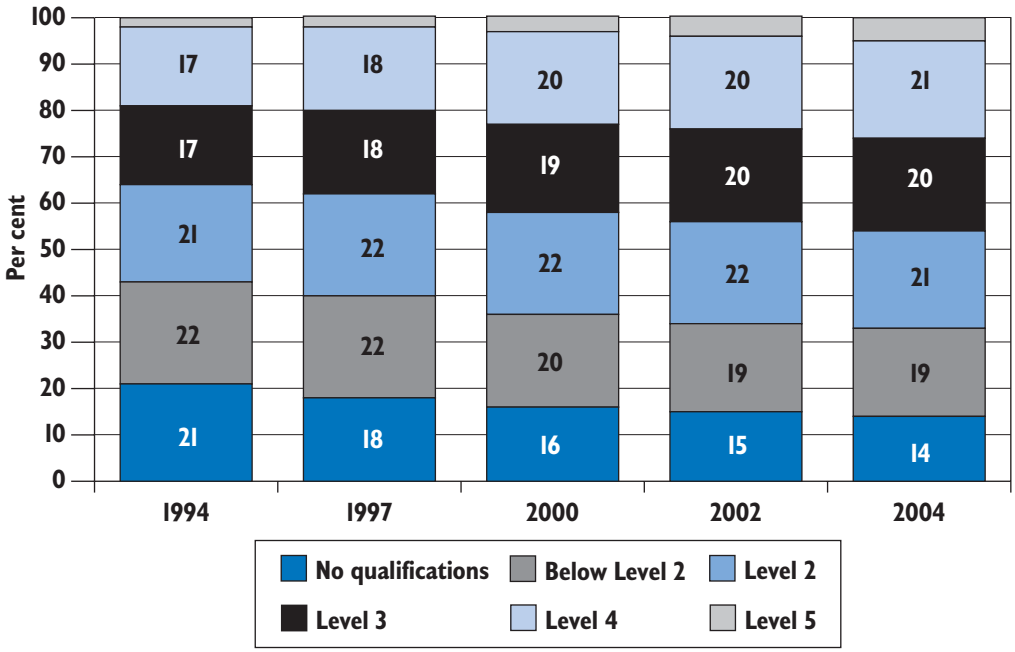
[a] *The Skills for Life Survey: A national needs and impact survey of literacy, numeracy and ICT skills,* DfES RR490, 2003.

SKILLS IN THE UK

Trends to 2005

2.8 Over the past ten years, the UK population's stock of skills, as measured by qualifications held, has been improving. Chart 2.1 shows this trend. There have been increases in the proportion of the working age population holding higher-level qualifications (Level 4 or above) and decreases in the proportion with no qualifications or very low levels of qualification (below Level 2). There has been relatively little movement in the proportions with qualifications at Levels 2 and 3.

Chart 2.1: Qualifications held by the working age population, 1994-2004

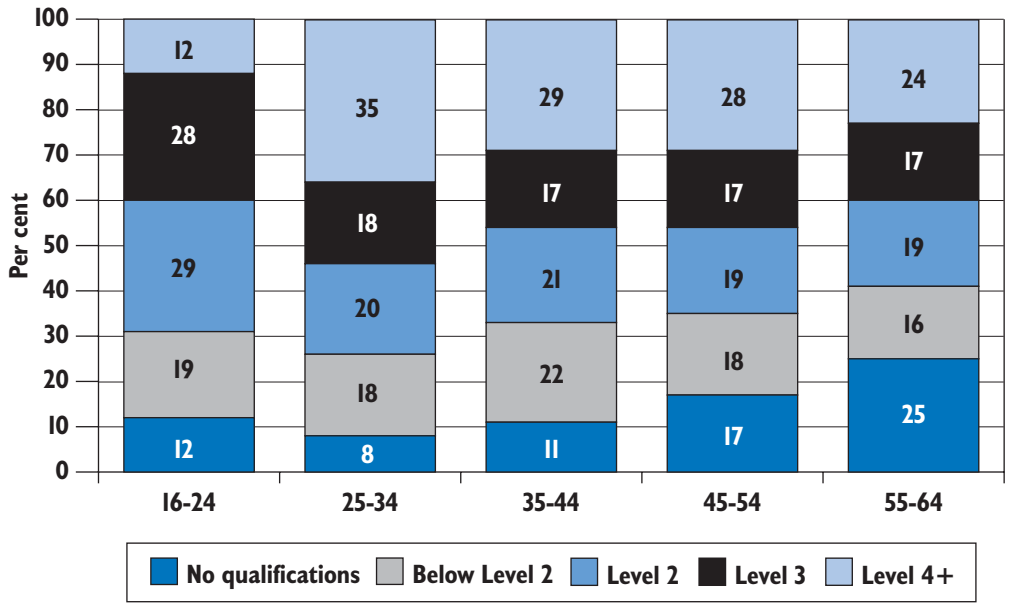


Base: UK working age population.
Source: Labour Force Survey, autumn quarters.

2.9 In 2004, more than one quarter of the working age population was qualified to Level 4 or above, compared to less than one fifth of the population in 1994. In 2004, only one third of the population held less than the equivalent of a Level 2 qualification, compared to more than 40 per cent in 1994.

2.10 Much of the improvement over the last decade has been brought about by relatively rapid improvements in the qualifications held by young people flowing into the working age population, and older, less well-qualified, people retiring. In particular, there has been a rapid expansion in higher education, leading to a rise in the proportion of young people with at least a Level 4 qualification; in 1994, only 22 per cent of those aged between 25 and 34 held at least a Level 4, compared to 35 per cent in 2004. The number with no qualifications fell from 7 million in 1994 to 5 million by 2004, despite an increase in the working age population of 2.5 million over the same period, which in 2004 numbered just over 37 million people.

Chart 2.2: Age and distribution of qualifications



Note: Columns may not sum to 100 due to rounding.
Base: UK working age population.
Source: Labour Force Survey, Winter 2004.

2.11 As Chart 2.2 shows, in 2004, 35 per cent of 25-34 year olds had at least a Level 4 qualification, compared to only 24 per cent of 55-64 year olds. Only 8 per cent of 25-34 year olds had no qualifications, compared to 25 per cent of 55-64 year olds. More recent drives to raise the skill and qualifications of the workforce are making further inroads into this figure. Lack of qualifications does not mean lack of skills, however, and, as older age groups leave the workforce, this creates demand for replacement of these skills by younger age groups. This replacement effect is considered further in Chapter 3.

Literacy and numeracy skills

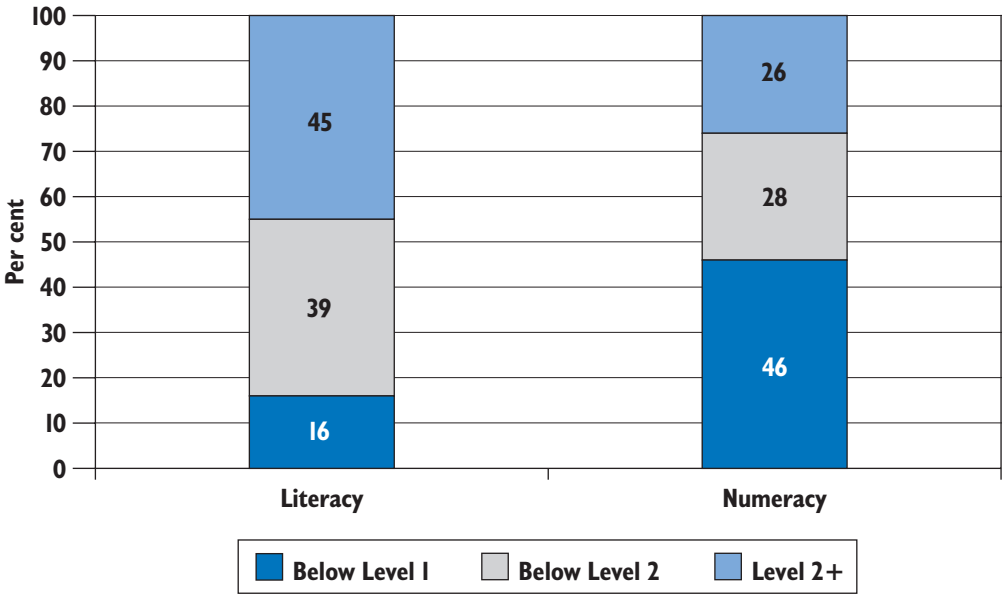
2.12 Qualifications tell only part of the story. Recent research shows that regardless of their qualification level, a large proportion of the UK population has poor literacy or numeracy skills (see Box 2.2). This has been tested by both the International Adult Literacy Survey (IALS), and the Skills for Life survey.[1]

2.13 Sir Claus Moser highlighted the scale of the problem in 1999 based on the IALS data for 1996.[2] More recent DfES analysis shows that, while some progress was being made, by 2003 the scale of the problem was still large. The data cover England only but, based on IALS findings, it is likely the picture is replicated across the UK. Chart 2.3 shows that high proportions of the working age population have both low functional literacy and, more especially, low functional numeracy skills.

[1] *International Adult Literacy Survey,* OECD, 1996; *The Skills for Life Survey – A national needs and impact survey of literacy, numeracy and ICT skills,* DfES 2003.

[2] *A Fresh Start: Improving Literacy and Numeracy,* DfEE 1999

Chart 2.3: Literacy and numeracy level, 2002-03



Base: Working age population, England only.
Source: DfES, Skills for Life Survey.

2.14 If these trends for England are replicated across the UK, over 6 million people of working age have literacy skills below Level 1 and around 17 million have numeracy skills below Level 1, or below the level expected of an 11 year old. Data for Wales and Scotland support the headline figures found for England and suggested for the UK overall. A recent survey found that a quarter of the Welsh population have literacy skills below Level 1, and more than half have numeracy skills below Level 1.[3] The results for the Scottish population in IALS 1996 were very similar to those for England.[4] There is some evidence that progress is being made. For example, in England, between April 2001 and July 2005, 3.7 million people participated in learning to improve their literacy and numeracy skills, and progress towards the PSA target for England has been good. However this still leaves a large volume of adults without functional literacy and numeracy skills.

Skills supplied by employers

2.15 This analysis only partly represents the skills of the UK. As set out in Box 2.2, qualifications and directly-tested measures of literacy and numeracy will not cover those skills that are acquired through unaccredited training undertaken while at work. Such skills, however, are highly valuable to employers, and evidence suggests that employers invest considerable effort and funds in developing these types of skill. Employer contribution to the development of skills is discussed in greater detail in Chapter 5.

INTERNATIONAL COMPARISONS

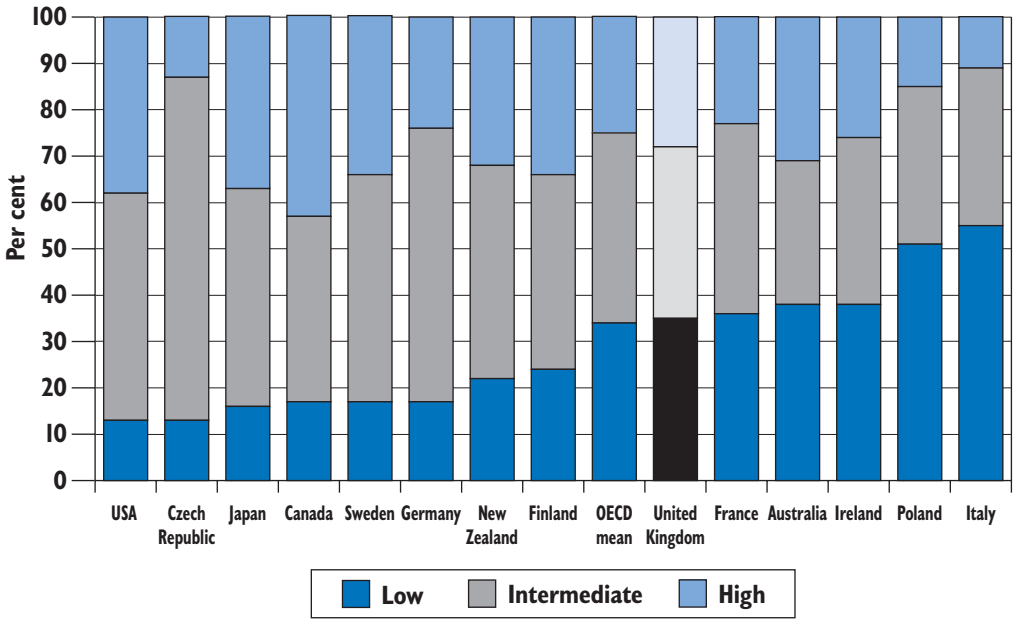
2.16 Chapter 1 sets out the increasing importance of skills in helping the UK to meet the challenges presented by global economic change. The UK's skills profile is unimpressive in comparison with other countries. A significantly larger proportion of the adult population in the UK has low qualifications and a significantly smaller proportion holds intermediate level qualifications than many comparator countries.

[3] *National Survey of Adult Basic Skills in Wales*, 2004.

[4] *Adult Literacy in Scotland: analysis of data from the 1996 Adult Literacy Survey*, Scottish Executive, 2001.

2.17 Chart 2.4 shows the UK's qualification profile against those of selected comparator countries.

Chart 2.4: International comparisons of qualification profiles, 2003



Base: Adult population aged 25-64.
Source: OECD Education at a glance, 2005.

2.18 The UK is consistently out-ranked by countries such as Sweden and Finland, the USA and Germany. In strict terms, the UK performs at or around the OECD mean, though this figure incorporates the qualification profiles of countries such as Mexico, Portugal and Turkey. Overall:

- the UK performs relatively well on higher-level qualifications compared to the OECD. Even so, a much higher proportion of the population in countries such as the US and Canada holds higher-level qualifications than in the UK;
- the UK has a smaller than average proportion of the population with intermediate skill levels, and is ranked 20th across the 30 countries of the OECD; and
- the UK has more people with low qualification levels than many major comparators and is ranked 18th across the OECD.

2.19 In 1996, the IALS found that Britain performed third from the bottom out of 12 countries, with the 10th highest proportion of the population without at least functional literacy; only Ireland and Poland had a greater proportion at this level.[5] Other surveys suggest that the UK performs even more poorly on comparisons of numeracy skill levels.[6]

[5] *Literacy skills for the knowledge society,* OECD, 1997.
[6] *International numeracy survey,* Basic Skills Agency, 1996.

Box 2.3: International comparisons

International comparisons of qualifications need to be treated carefully due to differences in the qualification frameworks of different countries. For example, the measure used by the OECD, here referred to as intermediate level qualification, is 'upper secondary' achievement. In the UK this is equivalent to Level 2 or five GCSEs at grades A*-C, whereas in other countries the equivalent 'upper secondary' qualification is a school leaving qualification for an 18 year old. This might lead to the UK's comparative position looking more favourable, as GCSEs are typically taken at age 16.

Measures of ability provide an alternative benchmark to qualifications and, on the whole, it has tended to be the same countries with high enrolment rates in Higher Education and greater proportions of high qualifications that also score highly on aptitude tests. Two international measures of population ability are in use – one looking at ability at age 15 and one at literacy and numeracy skills in the working age adult population.[a]

In the 2000 Programme for International Student Assessment (PISA) survey, the UK performed reasonably well in terms of literacy at age fifteen, with particularly strong performance amongst the best pupils (16 per cent scored Level 5 in the PISA literacy tests, the top mark attainable, which was the fifth best among 27 countries) but with a large number of young people performing very poorly, indicating a continuing flow of young people into the workforce without functional literacy skills.

In the 1996 IALS survey, which looks at the adult population, the UK performs less well. While the Nordic countries had around three quarters of their adult population scoring in Level 3 (the median grade) or above, the UK had under half. The IALS data is now almost 10 years old, but subsequent surveys, such as the Skills for Life survey, have confirmed the UK's poor basic skills profile.

[a] *International Adult Literacy Survey,* OECD, 1996 (the UK is not included in subsequent IALS surveys); *Programme for International Student Assessment,* OECD, 2000 (the UK is not included in subsequent PISA evaluations due to insufficient survey response).

SKILLS DEFICIENCIES

2.20 Differences in international comparisons do not necessarily indicate skills deficiencies for the UK; it is the relationship between skills and the economy that will determine the UK's productivity and prosperity. The current skills profile may limit a country's future industrial profile and place constraints on the flexibility of employers to respond to the challenges presented by global economic change.

2.21 Respondents to the Review's Call for Evidence cited recruitment problems associated with a lack of skills, with the Chartered Institute of Personnel and Development (CIPD) suggesting that *'85 per cent of employers had difficulty recruiting staff, primarily because of shortages of specialist and professional skills'* and another large employer organisation stating that young people do not value vocational and technical qualifications as much as academic qualifications and that this is resulting in *'a major shortage in these areas'.*

2.22 Within the evidence presented to the Review, there was no overall consensus among employers on where the main deficiencies lie. Most employers expressed concern of shortages at intermediate and higher qualification levels, particularly in vocational qualifications and in some specific disciplines, such as maths and science. Adult literacy and numeracy skills were also a key concern, both for economic and social reasons, with one key employer stating that *'poor levels of adult literacy and numeracy pose obvious problems for society and restrict the recruitment pool'.*

2.23 The measures used to assess reported skills deficiencies are skill-shortage vacancies (SSVs) and skills gaps. SSVs are vacancies that are hard to fill for skills-related reasons, such as a lack of relevant experience or lack of qualifications held by the available pool of labour. Skills gaps are reports of a lack of proficiency in existing employees. The latest statistics show that in England in 2004, employers reported 105,000 SSVs, equivalent to one in four of all vacancies, and described 1.5 million employees (7 per cent of all employees) as not fully proficient at their current job.[7] Similar figures are found for Scotland. [8]

2.24 There is considerable debate over the extent to which reported skills deficiencies reflect an accurate picture of the labour market, whether these are persistent deficiencies, and whether these reported deficiencies have a significant impact on productivity and performance. The presence of internal skills gaps is associated with higher levels of management perception that skills prevent movement to more complex or 'high-specification' products; 32 per cent of organisations reporting internal skills gaps report that skills prevent them moving up market. Even in establishments that do not report current skills gaps, 16 per cent of managers report that skills prevent them from moving up market, suggesting that the skills of the existing workforce present more of a barrier to moving to higher specification working practices in the future than current reported levels of skills gaps would suggest. [9]

2.25 While this suggests that skills gaps are a constraint both on current business performance, and on future demand for skills, there is evidence to suggest that skills gaps are transitory and indicators of positive changes in business strategy; a survey in Scotland found that for half of employers reporting skills gaps, these were the result of the introduction of new products or working practices.[10]

2.26 Overall the Review does not use reports of skills deficiencies as indicators of employer demand for skills per se. These measures are products of the way employers recruit and use skills in the workplace, and do not show the full extent of demand for skills. The UK will face significant skills shortages, particularly in some sectors, if it only relies on traditional flows of young people entering the labour market. Better use must be made of the talent that already exists, regardless of people's backgrounds. Young people and adults should not be steered away from, or to, careers by traditional stereotypes. Employer diagnosis of and response to organisational skill requirements is discussed further in Chapter 5.

Types of skills lacking

2.27 Employers are most likely to report generic skills as lacking in the existing and potential workforce, though technical and practical skills are also reported to be lacking. As Chart 2.5 shows, some skills are more likely to be lacking in existing employees than in applicants and vice versa. For example, literacy, numeracy and technical skills are more likely to be a problem in recruitment than in existing employees, where other generic skills such as communication, customer handling, team-working, problem-solving and general IT skills are more likely to be lacking in existing employees. The types of skills reported lacking and those critical to being proficient in a job vary considerably by industry and occupation.

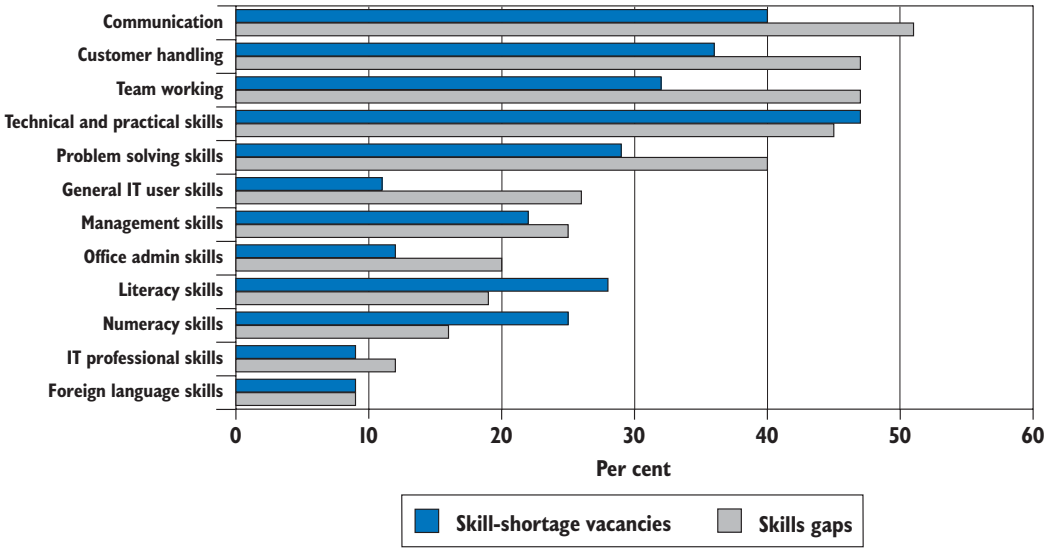
[7] *National Employer Skills Survey,* Learning and Skills Council, 2004.

[8] *Skills in Scotland,* Futureskills Scotland, 2004.

[9] *Employer Perspectives Survey,* Green, Mayhew and Molloy, May 2003.

[10] *Skills in Scotland,* Futureskills Scotland, 2004.

Chart 2.5: Skills lacking in connection with skills gaps and shortage vacancies, 2004



Base: All skill-shortage vacancies and skills gaps followed up.
Source: National Employer Skills Survey, 2004.

2.28 In order to understand the potential impact of skill-shortage vacancies, skills gaps and training on employers and industry, it is helpful to consider them in the context of the structure of employment in the UK (see Box 2.4) for a picture of where skills deficiencies may be concentrated.

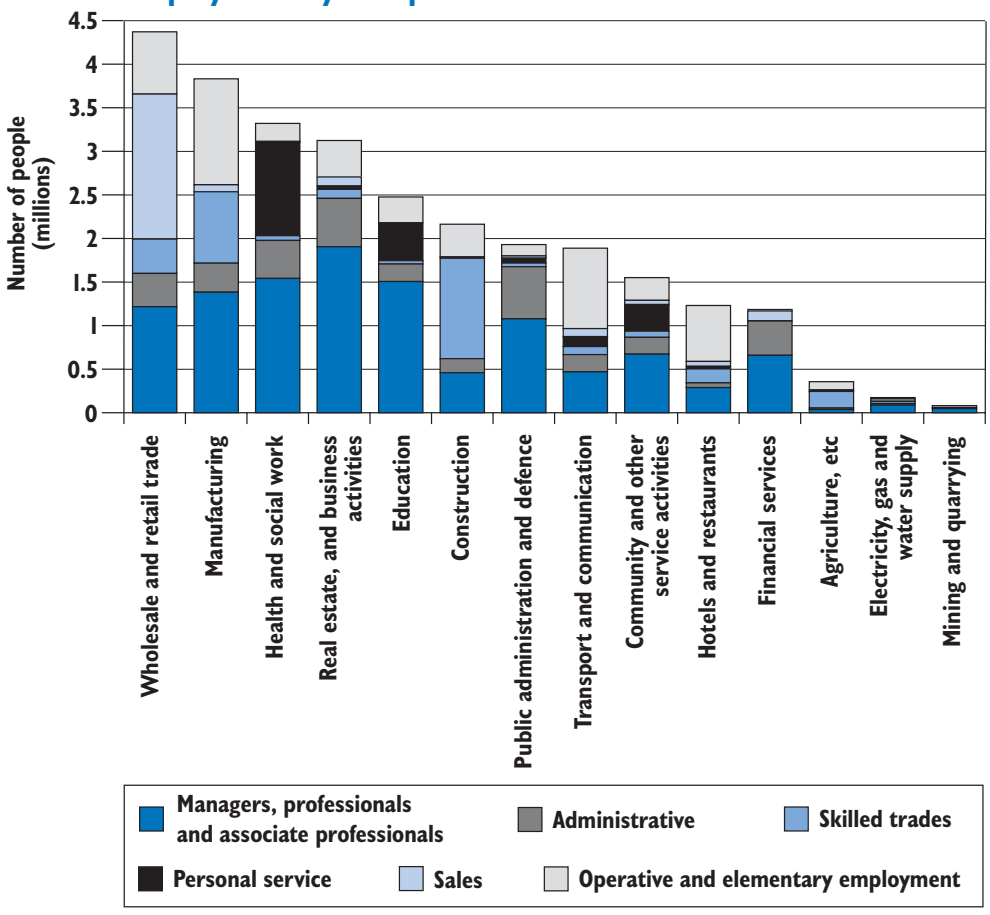
2.29 Some sectors, occupations and types of employer tend to report a greater share of skill-shortage vacancies and skills gaps relative to their shares of employment (over-report), which suggests that problems may be more acute in these areas.

Box 2.4: Employment by occupation and sector

The largest industry in the UK in terms of volume of employment is the wholesale and retail sector, closely followed by manufacturing, health and social work and real estate, renting and business activities. Public sector employment in recent years has risen relative to private sector employment. Between 2003 and 2004, public sector employment increased by 2.6 per cent relative to 0.5 per cent growth in private sector employment. However, public sector employment in 2004 stood at 5.7 million, or 20 per cent of the workforce, relative to 5.2 million in 1998. The greatest increases in public sector employment have been seen in the National Health Service (NHS) (up 5 per cent since 1999) followed by education (up 3.5 per cent since 1999). Together these two subsectors account for 80 per cent of growth in public sector employment since 1999.[a]

The occupational composition of the workforce can be seen to vary considerably by industry with, for example, sales occupations concentrated in wholesale and retail trades, and personal service occupations concentrated in health and social work and education industries.

Employment by occupation and sector



Source: Labour Force Survey, 2003-04 – four quarter average 2003q3-2004q2

[a] *Public Sector Employment*, Office for National Statistics, March 2005.

Impact of skill-shortage vacancies

2.30 Analysis has shown that the occupational distribution of skill-shortage vacancies fluctuates considerably from year to year. For example, in 2001, the main occupations suffering SSVs were:

- engineers, scientists and IT specialists at the professional and technician level, and related technical skills at craft level;
- business service jobs such as accountants, consultants and IT specialists; and
- lower level service jobs in sales and care.

2.31 By 2003 SSVs were most prevalent among:

- low-level service jobs – in sales and care;
- skilled craft jobs, in engineering and construction; and
- health associate professionals such as nurses.[11]

2.32 The fluctuation in SSVs suggests that for most occupations the market will adjust to fill skill-shortage vacancies. For example, migrant workers can bring skills into the economy to fill short-term SSVs, and there is evidence to suggest that migrant labour has a positive impact on the UK's productivity. Evidence suggests that migrants are increasingly important in filling recent skill shortages. For example in 2003, 29 per cent of the total number of doctors employed in the NHS were foreign-born; and since 1999, 44 per cent of nurses recruited have been from outside the UK.[12] Recruitment of migrants can create skill shortages in other countries, however, and agreements are now in place to limit this effect.

[11] *Skills strategy technical supplement on underlying data and evidence*, DfES, 2004.

[12] *Migration and health in the UK*, IPPR factfile, Kelly, Morrell and Sriskandarajah, 2005.

2.33 There do seem to be persistent skills-related recruitment difficulties in certain occupations. High levels of SSVs were reported for low-skilled service jobs and skilled craft jobs in both 2001 and 2003. In many cases this may be more of a symptom of the job than of a lack of sufficiently qualified people in the workforce. Factors such as poor pay and shift work are likely to deter potential applicants with the appropriate skills from applying. This is likely to explain over-reporting of skill-shortage vacancies in, for example, health and social work and hotels and catering, as shown in Box 2.5.

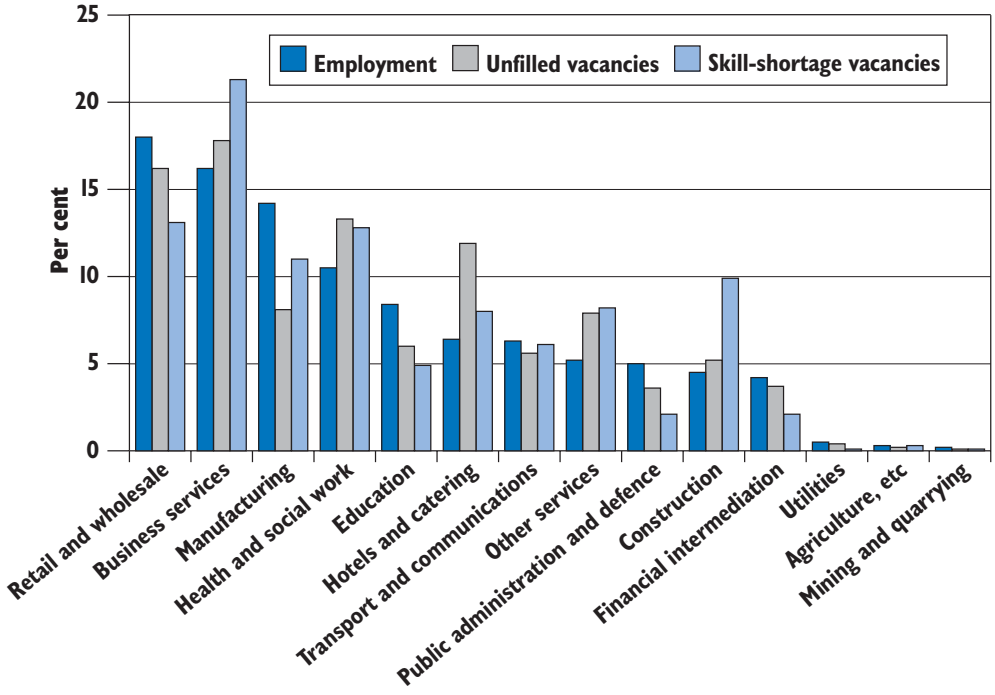
Box 2.5: Skill-shortage vacancies in England, 2004

Certain occupations exhibit disproportionately high levels of skill-shortage vacancies relative to employment and unfilled vacancies. Such a pattern is found in skilled trades occupations, suggesting that there are particular skill-related recruitment difficulties for this occupation. However, other occupations show greater shares of unfilled vacancies relative to share of employment but a lower level of skills-related recruitment problems. This pattern is particularly observed for sales and customer service jobs, which account for 15 per cent of all employment, 17 per cent of all vacancies, but only 10 per cent of all skill shortage vacancies.

In 2004, while some sectors disproportionately over-reported skill-shortage vacancies relative to their share of employment, others under-reported. Those sectors with a particularly high share of all skill-shortage vacancies relative to their share of employment were:

- **business services;**
- **health and social work;**
- **hotels and catering;**
- **other services; and**
- **construction.**

Share of employment and vacancies by sector



NESS 2004 data not available by sector.
Source: National Employer Skills Survey 2003.

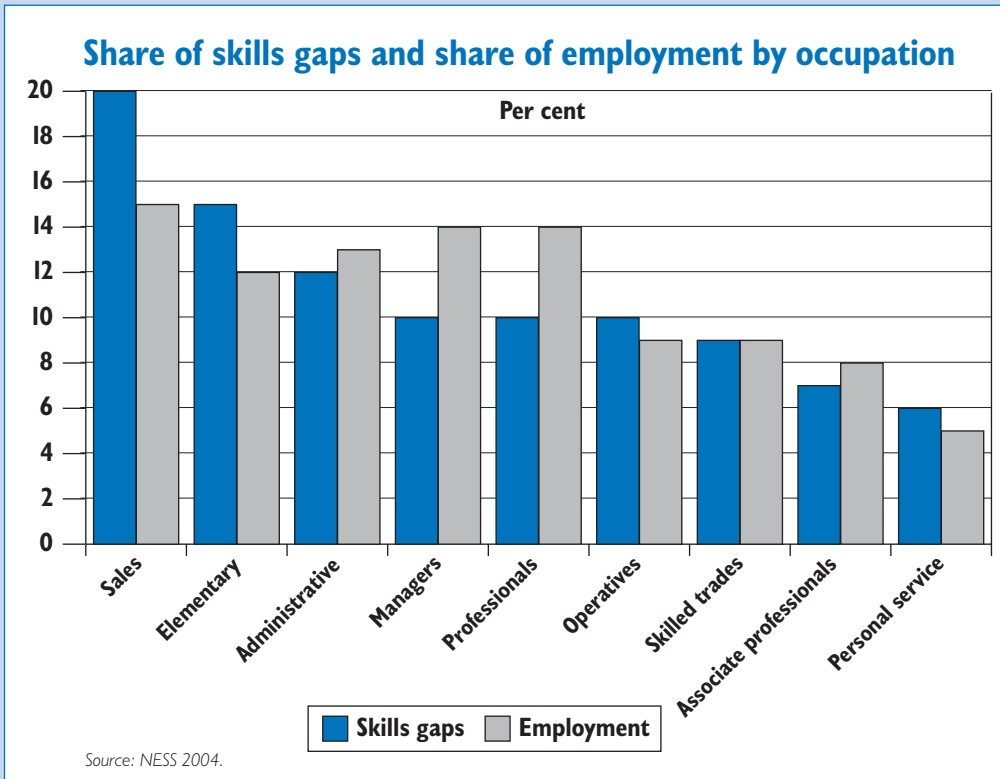
Impact of skills gaps

2.34 Skills gaps are a greater problem for the UK than skill-shortage vacancies; they are reported by a greater proportion of employers and affect a greater proportion of employees. Most employers reporting skills gaps also report taking action, such as training, in response.[13] Box 2.6 sets out further detail on the sectors and occupations where they are likely to be more acute.

Box 2.6: Skills gaps in England, 2004

As the chart shows, skills gaps are most likely to be reported for sales and elementary occupations. For certain occupations, a disproportionately high or low share of skills gaps is reported. A disproportionately high share of skills gaps relative to employment is reported for sales occupations, and a disproportionately low share is reported for managers and professionals.

Some sectors similarly under or over-report relative to their shares of employment by occupation. For example, the retail sector is the largest employer of those in sales occupations, as shown in Box 2.4 (47 per cent of all sales employees), and is also the sector with the greatest share of reported skills gaps for sales occupations (49 per cent of all skills gaps in sales employees). Skills gaps for certain occupations are concentrated in particular sectors. For example, health and social care employ 54 per cent of all personal service employees and report 72 per cent of all skills gaps for those in this occupation.



Source: NESS 2004.

[13] *National Employer Skills Survey*, LSC, 2003; *Skills in Scotland*, Futureskills Scotland, 2004.

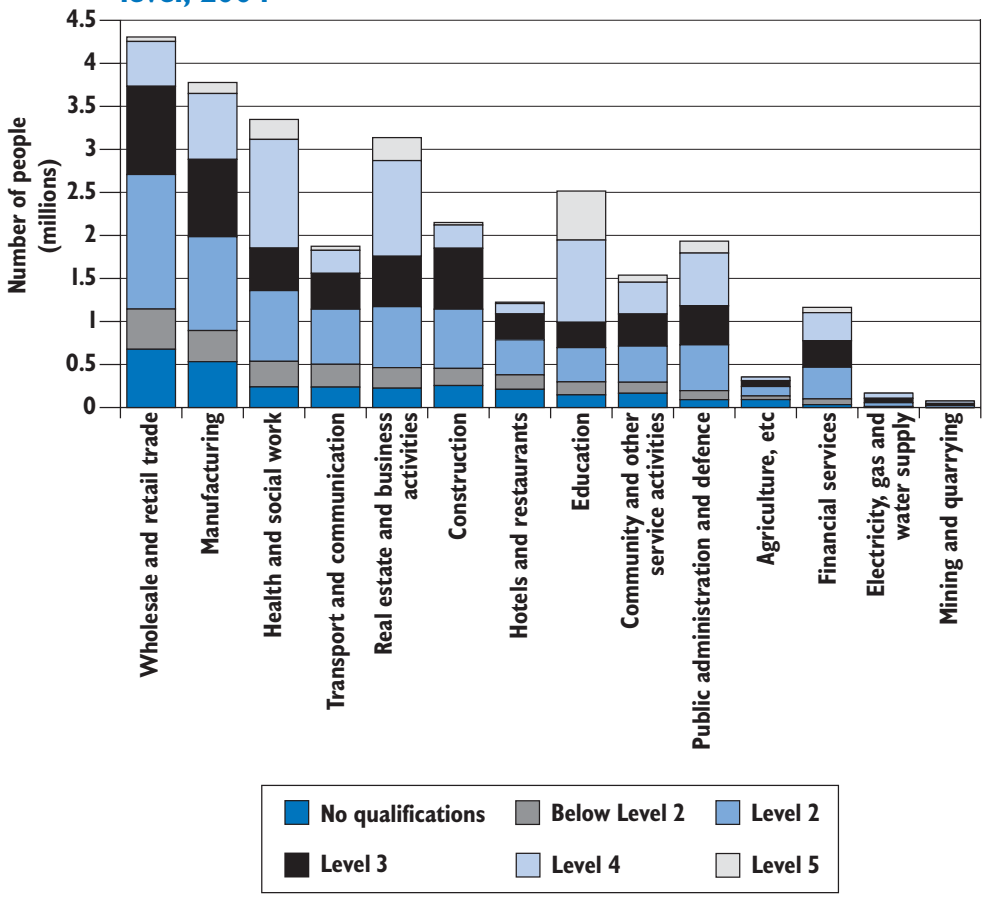
THE DISTRIBUTION OF SKILLS

2.35 Chapter 1 set out the relationship between productivity and skills. It highlighted both the variations in productivity performance by the UK relative to international comparators and the considerable differences in productivity within the UK and across different social groups. The national skills and qualifications profile, although it provides a useful framework to benchmark the UK against other countries, masks differences in the distribution of human capital within the UK. This section sets out the distribution of qualifications across the workforce, across the regions and countries of the UK, and demographic groups.

Employee skills

2.36 As Chart 2.6 shows, the wholesale and retail sector currently employ the largest share of the employed population. They also employ the greatest share of people that hold low or no qualifications.

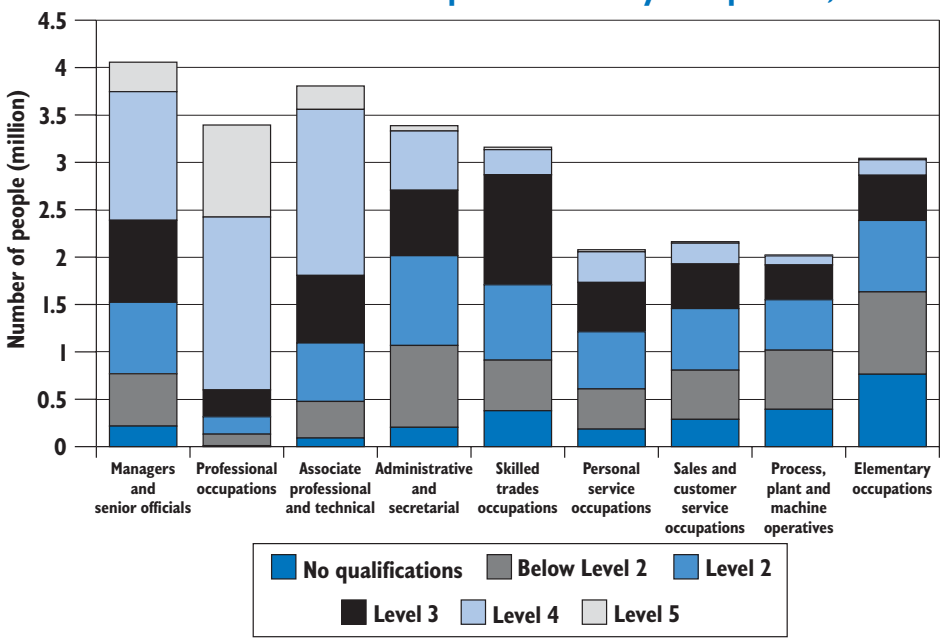
Chart 2.6: Employment by industrial sector and qualification level, 2004



Base: UK working age populatiion.
Source: Labour Force Survey, spring - summer, two quarter average, 2004.

2.37 However, it is agriculture that has the greatest proportion of its workforce with no, or below Level 2 qualifications, at 37 per cent, where the wholesale and retail workforce has only 27 percent of its workforce with low or no qualifications. Agriculture, however, comprises only 1 per cent of all employees, where wholesale and retail account for 16 per cent of all employees.

Chart 2.7: Distribution of qualifications by occupations, 2004



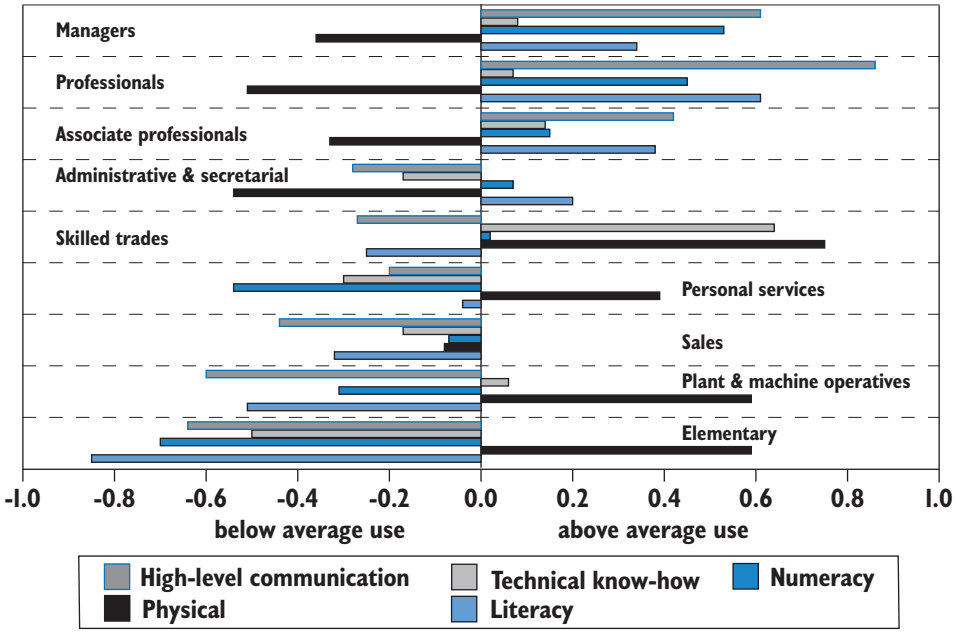
Base: UK working age population.
Source: Labour Force Survey, Winter 2004.

2.38 Chart 2.7 shows the qualification mix of each occupation. More than 50 per cent of those in elementary and process, plant and machine operative occupations hold no qualifications or less than a Level 2. By contrast, almost 60 per cent of all those in managerial, professional and associate professional occupations hold at least a Level 4 qualification.

2.39 Measuring occupations as an approximation for skills gives a profile of skills as they are used in the economy. However, within each occupation, some people will be better at their jobs than others, some will have specific qualifications to do the job and others will be unqualified but equally able to do the job. In addition, individuals may have skills which are under-utilised in their jobs, in which case occupational measures of skill would underestimate the levels and types of skills held.

2.40 Occupations registering greater use of higher qualifications, such as managers, professionals and associate professionals, have also been found more likely to register higher usage of generic skills while elementary and operative occupations register far less, as Chart 2.8 shows.

Chart 2.8: Generic skills by occupation



Source: Work Skills in Britain, Felstead, Gallie and Green, 2002.

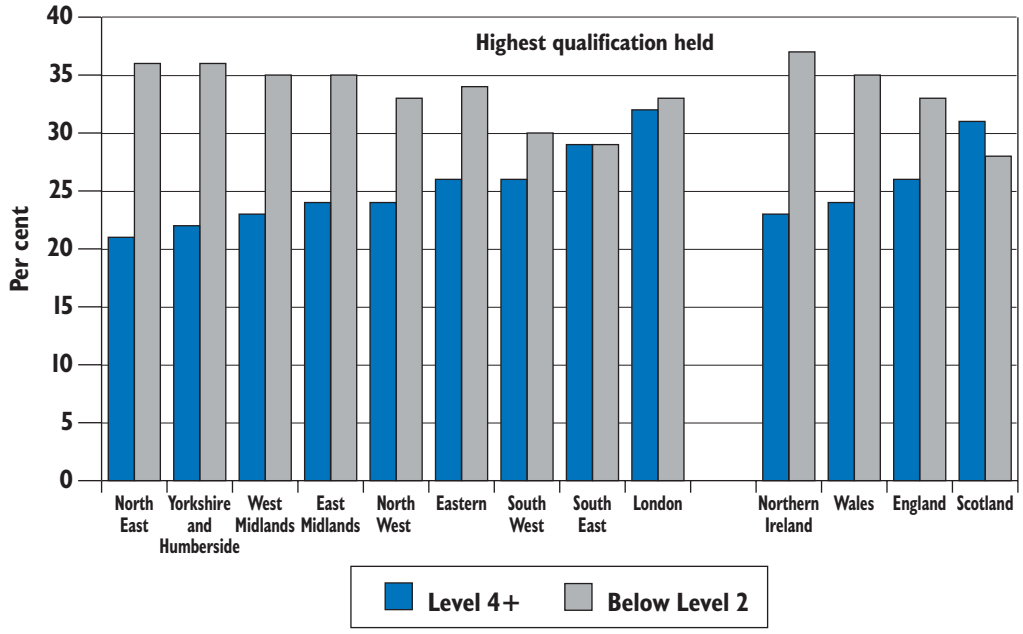
2.41 However, among other occupations there is far greater variation, with some generic skills much more highly used here than in so-called 'higher' occupations. As would be expected, those in skilled trades are more likely to use technical know-how than average.

2.42 Chapter 1 discusses the evidence on the way in which the nature of work in some industries has changed over the past 10 years. It is likely that skill levels for occupations will change in both level and type in the future. In some industries, previously low-skilled employment is increasing in its skill-intensity; those employees filling these jobs are being called upon to use more skills than before. Jobs are not constant, and will change their nature depending on the skill of the person doing them. One explanation for the relatively stable rates of return to graduate qualifications is that when graduates enter previously non-graduate roles they are able to change the nature of that job, making it more productive.

Geographical distribution of qualifications

2.43 The distribution of qualifications across different parts of the UK shows a marked difference between the northern English regions against the qualifications profile of the South East and London, Chart 2.9. This will in part explain the productivity gaps between different regions discussed in Chapter 1, and improvements in regional skill profiles could help to close these gaps.

Chart 2.9: Qualifications profiles across the UK, 2004



Base: UK working age population.
Source: Labour force survey, winter 2004.

2.44 Within each geographical area, however, there may be wide disparities. London, for example, has a high proportion of the working age population with Level 4 or above, alongside a still relatively high proportion without at least Level 2. However *within* London, areas of very high and very low qualifications exist alongside each other.

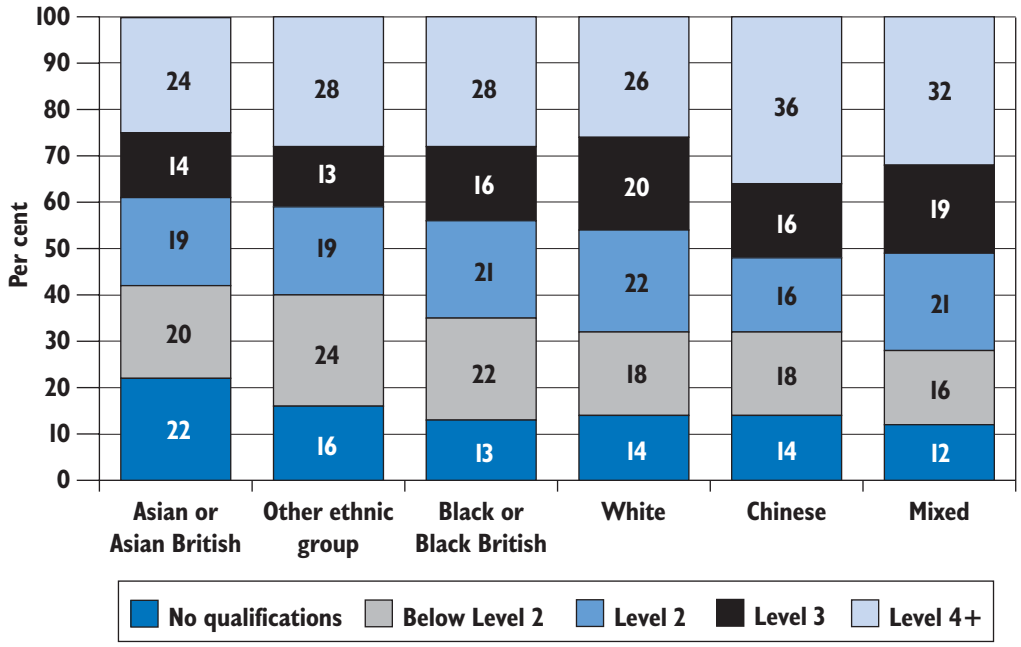
2.45 As would be expected, a higher proportion of the working age population in London and the South East have at least a Level 4 than the England average, whereas the East and West Midlands, Yorkshire and Humberside and the North East and North West have below average proportions. The highest volumes of adults with below Level 2 qualifications are found in the areas with the highest share of the total population; London, the South East and the North West. However, in the North East, Yorkshire and Humberside and the East Midlands, the proportion of the population with below Level 2 qualifications is slightly higher than would be expected given the share of the total population living in these areas. The reverse is true in the South West, South East and Scotland. For example, only 7 per cent of all adults with below Level 2 qualifications live in Scotland, compared to 9 per cent of the total population.

2.46 Chart 2.9 clearly highlights the distinctive Scottish skills profile relative to other countries and regions of the UK. Scotland has both a high proportion of its working age population with at least a Level 4 qualification and a far smaller proportion with less than a Level 2 qualification relative to all other regions and countries of the UK. In addition, Scotland's qualification profile is improving at a faster rate than for the UK as a whole: for example, between 1997 and 2004 the proportion of the working age population in Scotland with at least a Level 4 qualification increased from 22 per cent to 29 per cent, relative to an increase across the UK as a whole from 21 per cent to 26 per cent.

Ethnicity

2.47 Ethnic minority qualification attainment rates vary widely. Chart 2.10 shows the distribution of qualifications by ethnicity. Differences in the proportion holding low or no qualifications by ethnic group are marked; 42 per cent of those of Asian or Asian British ethnicity hold only low level qualifications or none at all, compared to only 32 per cent of the white population. As with all broad groupings, these distributions conceal particular disparities within these groups.

Chart 2.10: Qualification profiles of ethnic groups in the UK, 2004



Base: Working age population, UK.
Source: Labour Force Survey winter, 2004.

2.48 At the higher end, there are marked variations in the achievement of Level 4 qualifications or higher by ethnic group, with individuals of Chinese or mixed ethnicity most likely to hold degree level or equivalent qualifications.

2.49 As discussed in Chapter 1, holding only low or no qualifications will have considerable impact on an individual's employment, earnings and social mobility prospects and this is a particular concern for social cohesion. There is some evidence, however, that social mobility for some ethnic groups is better than for the White population.[14]

2.50 However, there are additional skills barriers to participation in both learning and work for much of the ethnic minority population; for example, 75 per cent of Bangladeshi women over the age of 25 do not speak fluent English.[15] The evidence also suggests that graduates from ethnic minority groups as a whole generally fare less well in the labour market than their White counterparts though, encouragingly, they have higher rates of initial participation in higher education than the White population.[16]

[14] *Migration and social mobility: the life chances of Britain's minority ethnic communities*, L Platt, Joseph Rowntree Foundation, 2005.

[15] Ethnic minority employment task force: year 1 progress report, DWP, 2004.

[16] Ibid; and *Why the difference? A closer look at higher education minority ethnic students and graduates*; H Connor et al, DfES RR552, 2004.

2.51 More flexible migration flows increase the need to ensure that migrant workers are fully integrated into the existing labour force and that they are at their most productive. However, for many migrants integration is made more difficult by language barriers and lack of recognition for overseas qualifications.

Gender

2.52 Overall, a greater proportion of men hold qualifications at Level 3 or above than women. However, there are interesting differences by age group. For example, over half of women between the age of 55 and pension age (currently 60) hold only low-level qualifications or none at all, compared to only one third of men in the same age bracket. Even in the cohort below this, the 45–54 age group, the difference in qualification levels between men and women is still marked, with double the percentage of women than men not qualified to Level 2. When legislation equalises state pension age at 65 for both men and women by 2020, this may increase the volume of labour provided by this age group, resulting in a greater proportion of the workforce with below Level 2 qualifications (see Chapter 3 for further discussion of this issue).

2.53 Among younger age groups, women tend to be better qualified. For example, 36 per cent of females aged 25-34 hold a qualification at Level 4 or above, relative to only 34 per cent of males in this age group. However, the proportion of females in this age group with below Level 2 qualifications is still greater than the proportion of males, though the difference between the sexes is much smaller than for older age groups and looks likely to equalise or reverse over the coming years.

Disability

2.54 On average, the skill levels of people with disabilities are significantly lower than those of people without. Almost 40 per cent of people with disabilities aged 19 lack a Level 2 qualification, compared with 23 per cent of non-disabled 19 year olds; over 40 per cent of all those with disabilities have no qualifications at all.[17] Many people with disabilities acquire their disability during their working lives. Helping them to return to work as quickly as possible will often be in their best interests, for both health and social integration as well as income. Effective early intervention can reduce the number of people falling into long-term dependency on state benefits. Acquisition of new skills could improve the prospects of returning to work for many people with disabilities. Chapter 1 sets out further evidence to support this.

Socio-economic group

2.55 The likelihood of gaining a qualification is greatly determined by socio-economic status early in life. There is evidence to show that even if children start with the same levels of ability early in life, children from low-income families go on to perform less well at school than children from better off families. In addition, the 20 per cent of young people living in the most advantaged areas are 5 to 6 times more likely to enter Higher Education than the 20 per cent of people living in the least advantaged areas.[18] This is likely to exacerbate the problems of poor social mobility discussed in Chapter 1.

[17] *Welfare to Workforce Development*, National Employment Panel, 2004.

[18] *Young participation in Higher Education*, Higher Education Funding Council for England, 2005.

CONCLUSION

2.56 This chapter shows the considerable improvements made to the UK's skills profile over the last decade. However, there remains a widespread lack of functional literacy and numeracy skills in the working age population. Overall, the UK's skills base compares poorly with the rest of the OECD. Although the UK performs better in higher-level skills, it has a greater proportion of its population with only low-level skills than many key comparator countries.

2.57 Employers continue to report significant skill deficiencies in the pool of labour from which they recruit, in generic skills such as communication as well as technical and practical skills. This constrains organisations' ability to grow and move into higher value-added markets.

2.58 As this chapter shows, skills in the UK are unequally distributed – both geographically and demographically. This constrains growth and productivity in regions across the UK and disadvantages low-skilled groups in the labour market, limiting their economic prospects.

2.59 Chapter 3 sets out the trends to 2020 that will drive changes to the UK's skill base and assesses how the UK's skills are likely to compare internationally.

3 TRENDS TO 2020

Chapter summary

The UK's skills profile is likely to improve significantly over the next 15 years. The Review has developed models of both qualifications and of basic skills to 2020. They show that meeting key targets on skills, a continuation of recent trends and demographic changes to the UK population will lead to large falls in the proportion and number of working age people with no formal qualifications, and large rises in the proportions and numbers with high levels of qualifications. However, there will still be large numbers at the bottom end of the qualifications distribution and with very low literacy and numeracy skills.

Even maintaining recent trends, and meeting PSA targets, represents a serious challenge that will be very difficult to achieve. The improvement will be less if these targets are not achieved.

Simple projections of the qualifications profiles of other OECD countries show that the UK's projected improvements will not be enough to move the UK up the international comparison rankings. In addition, the 2020 profile may be barely sufficient to meet 'demand' even on the basis that the economy follows a path very similar to that which it has followed over recent years. Any moves towards a more highly skilled economy could only be achieved if there is a change in the supply of highly skilled labour.

3.1 Chapter 2 describes the recent progress that the UK has made in improving the skills of the population and discusses the sources of those improvements.

3.2 This chapter sets out the demographic and labour market context to which skills policy will need to respond over the next 15 years. It explains where current policy direction, on top of a continuation of recent trends, would take the UK – the skills profile that the UK is on track to achieve in 2020 if it achieves its current ambitions. This skills profile is assessed against potential improvements in comparator countries and the human capital necessary to fulfil the growing, future demand for skilled labour in the UK economy, resulting from changing global markets and economic pressures.

DEMOGRAPHIC CHANGE: THE POPULATION IN 2020

3.3 This section sets out the demographic trends likely to occur in the UK population by 2020, including population growth and changes in its age profile. This section concludes with the impact that these changes will have on the workforce.

Population growth

3.4 The working age population in the UK will increase by over 3.5 million between 2005 and 2020. Government Actuary Department (GAD) forecasts, based on 2004 data, show a population of 40.5 million between 16 and 65 years old in 2020.[1] The skills implications of these trends are discussed later in this chapter.

[1] GAD published updated forecasts with a 2004 base on 20th October 2005. Unfortunately, we have not been able to revise the modelling in time for the current report to reflect those new data.

3.5 The most significant effect, in terms of the number of working age people, is the change to the state pension age for women. From 2010, the state pension age for women will change, gradually, until all women are eligible at 65 years old from April 2020 onwards rather than aged 60 at present. This will mean that 1.9 million more women will be below the state pension age in 2020 than if the changes had not occurred. While it is not clear whether these women will choose to wait until they are 65 to retire (many people retire even before the current state pension age), it is likely the loss of state pension income at age 60 will mean that more women will be in work between 60 and 65. Any further change to state pension age for men or women will have an effect on the size of the working age population.

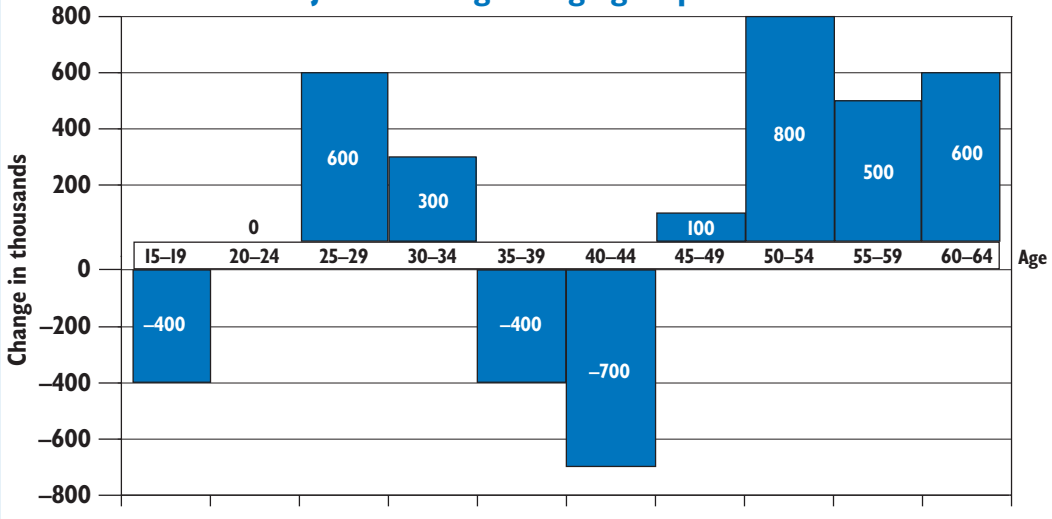
Ageing population

3.6 The age profile of the working age population in the UK is also changing. Around 70 per cent of those who will make up the working age population in 2020 are already over 16, and around 50 per cent of the adult population in 2020 are already over 25,[2] and therefore beyond the age when they are most likely to participate in the 'traditional' educational route. The prevailing trends mean the population in 2020 will be older on average and less likely to be participating in education or training.

3.7 Within this ageing profile, there is a small decline in the number of people between the ages of 25 and 49. These are often termed the 'prime age' category as this group has the highest rates of participation in the workforce, making them a large part of the economically active group. By contrast, the 50-65 year old group will grow substantially; with over two million more in that group in comparison to 2005. Chart 3.1 below shows the changes to different age cohorts in the UK working age population between now and 2020.

3.8 The forecast demographic changes differ within the UK. The trends in most age groups are similar in England, Scotland, Wales and Northern Ireland, though there are some notable exceptions. The prime age population is predicted to rise slightly in England, and remain constant in Northern Ireland and Wales between 2005 and 2020. In Scotland, however, that group is predicted to fall quite significantly (by 11 per cent) implying that the aggregate UK trend is driven by the changes in the prime age group in Scotland. Among older groups, Northern Ireland is forecast to see a 26 per cent increase in the 50-65 group between 2005 and 2020. That is far larger than the rise predicted for England, Wales and Scotland (18, 11 and 17 per cent respectively).

Chart 3.1: Projected change in age groups 2005–2020



Source: GAD population forecasts 2004

[2] GAD population forecasts, 2004.

Migration

3.9 The changing age profile is not the only factor that will impact on the population over the next 15 years. Net migration flows will also have an impact. The 2001 Census shows that, overall, around one in twelve (4.9 million) UK inhabitants were born overseas, and that the proportion has been rising steadily but slowly since the 1950s. The Census data also show that the non-UK born population is concentrated in the working age group. Three quarters of them were of working age compared to about three in five of the UK-born population. Immigrants were also less likely than emigrants to be in older age groups, which makes them an important part of the equation in skills and labour market terms.

3.10 Data from the Office for National Statistics (ONS) show that the UK has seen a net inflow of migrants each year since 1994, and the volume of both inward and out–migration has increased over recent years. It is difficult to predict the likely size and importance of the migrant group in the future. EU enlargement, for example, is likely to increase the number from new EU Member States as movement becomes easier. GAD population forecasts assume a constant level of net immigration to the UK of around 145,000 per year from 2007-08 onwards, over 90 per cent of which are of working age.

The workforce is changing

3.11 The nature of employment and the demographic profile of the people who are in the workforce are changing. The demographic changes discussed in the previous section will have an impact on the labour market.

3.12 Older groups' share of employment has been rising over the 1990s, and the fact that the UK population is ageing implies that their share of employment will continue to increase. Nearly one quarter of all those in employment in the UK at the end of 2004 were aged 50 or over.[3]

3.13 The pension age changes set out in paragraph 3.4 will also see more women over the age of 60 in the labour market. Although it is not clear how the change will affect their decision to work, it is very likely this will result in a larger proportion of the workforce being in the older age groups. There has also been an increasing number of people choosing to remain in work beyond the state pension age. Six per cent (630,000 people) of people over pension age were in work in 1997, compared with 8 per cent (770,000 people) in 2004.[4]

3.14 As well as increases in the share of employment represented by older groups, participation in the labour market by women, particularly those aged between 25 and 49 years old, has increased sharply over the last 20 years. The growth has slowed recently but, combined with a concurrent fall in participation amongst men of prime age, it is clear that women continue to form a more substantial part of the labour market than in the past. That is reinforced by rising employment rates for women (from 59 per cent in 1984 to 70 per cent by 2004), driven by changing social attitudes and an increased availability of part-time work.

3.15 As well as the changes in the demographic profile of the workforce, it is also important to consider the movements within the workforce. Much of the flow into employment comes from those who are economically inactive as well as from those who are unemployed. Analysis based on the Labour Force Survey (LFS) has shown that 'simple' measures of unemployment do not accurately capture labour availability.[5]

[3] LFS, winter quarter, 2004.

[4] LFS, autumn quarters 1997 and 2004.

[5] See *Non-employment and labour availability*, Jones, J Joyce, M & Thomas, J, Bank of England Quarterly Bulletin, autumn 2003 and *Ready, willing and able? Measuring labour availability in the UK*, Schweitzer, M E, Bank of England Working Paper No. 186 (BoE 2003).

3.16 The economically inactive group has remained remarkably stable in size since the mid 1980s. Coupled with falling unemployment, that has made them a larger share of the workless group. As one regional representative noted in the Call for Evidence, *'…groups such as women who have left the labour market for childcare... represent a stock of potential skills that are largely under-utilised…'*. There was also some concern that sectors and employers who traditionally recruit young people will face a much tighter labour market in the future, and one sector representative suggested that employers in their sector will increasingly need to *'recruit from non-traditional labour pools such as those provided by women and ethnic minorities'*.

THE CHANGING PATTERN OF EMPLOYMENT

UK jobs are changing

3.17 This section considers trends in the occupational and qualification profile of jobs in the UK to 2020. In recent decades the industrial structure of the UK economy has been shifting away from primary and manufacturing activities towards more service-based industries. Most studies agree that the sectoral employment profile of the UK will continue to change, moving away from primary and manufacturing-based sectors towards service-based sectors. For example, on the basis of recent trends – or 'business as usual' – the projections, developed by Cambridge Econometrics (CE) and the Warwick Institute for Employment Research (IER) to contribute to the Review, imply:

- large falls in employment levels in textiles and clothing (just over half the 2004 levels by 2020), significant, though less marked falls in industries such as food, drink and tobacco production, agriculture and transport equipment manufacture, and a small fall in public administration and defence; and
- an increase in the share of employment within service industries such as computing services (a 73 per cent increase), retail and wholesale distribution and health and social work.

3.18 That shift has implications for the occupational structure of employment in the UK, moving it towards greater use of higher-level occupations, and successive projections have suggested that these trends are likely to continue in the medium term.[6] Such forecasts have been extended to cover the period to 2020 for the Review, and show that these trends in occupational patterns are likely to continue over that period.[7] Projections have been made of what the occupational structure in the UK would look like on a continuation of recent trends and in the face of likely economic changes in the UK.

3.19 The relative changes are driven by a combination of scale effects (the level of employment in the occupational group); occupational effects (the effect of technological and organisational change on employment structure); and industrial mix effects (the effect of consumer demand on the industrial structure of employment). Analysis of these effects suggests that changes in work practices and technology used within industries are more significant drivers of change in the occupational profile than they have been in the past. The impact of sectoral shifts within the economy is declining. There is evidence that technology has replaced routine jobs leading to a polarised picture with non-routine jobs being concentrated at the higher and lower end of the occupational spectrum.[8] That does not imply that all relatively lower-skilled jobs will remain, but that the emphasis may move towards lower-skilled occupations in the service sectors.

[6] See, for example, *Working Futures: National Report*, Wilson, R Homenidou, K & Dickerson, A, SSDA, 2004

[7] *Alternative Skills Scenarios to 2020 for the UK Economy: Report to the Leitch Review of Skills*, HM Treasury/SSDA, Wathupon Dearne, CE/IER, 2005. The Leitch Review is grateful to the Sector Skills Development Agency (SSDA) for commissioning this work.

[8] *Lousy and Lovely Jobs: the Rising Polarization of Work in Britain*, Goos M, and Manning A, CEP, London, 2003

3.20 The occupational projections discussed here do not represent unconstrained demand for skills. The figures show the number of jobs in each occupational category and at each qualification level given economic and organisational change over the period. Those changes are, to some extent, influenced by the skills level of the population in terms of their supply of skilled labour and their decisions as consumers. In fact, the supply of skills, or the quality of labour, is an input to the projections themselves. A full description of the employment projections model, and the factors driving the changes, can be found in the full report, published on the Review's website.[9]

Expansion demand for occupations

3.21 The changing occupational pattern provides a useful indicator of changes in the skills employed in the UK. The relative industrial and behavioural changes result in expansion of some occupations and contraction of others. Such changes are referred to as 'expansion demand'. This is set within an overall increase in jobs of around 2.2 million by 2020. The groups that are expected to show the largest expansion demand in the next 15 years are at the higher end of the occupational spectrum. Managers and senior officials, professional occupations, associate professional and technical occupations will have the largest rises in their share of total employment. These groups are better qualified than average. These results therefore imply a steady increase in skill levels, as measured by the occupational distribution of employment in the UK.

3.22 However, there are also large increases for occupations that employ less-skilled labour. Personal service occupations and sales and customer service occupations also see relatively large positive changes to their levels of employment. Some occupations represent a falling share of employment (negative expansion demand). The largest decline is in elementary occupations, the group considered to be the lowest skilled. There are also declines predicted in administrative and secretarial, skilled trade and machine and transport operative occupations. Table 3.1 sets out these projections.

Table 3.1: Expansion demand by occupation, 2004-2020

	Employment shares 1984 (per cent)	Employment shares 1994 (per cent)	Employment shares 2004 (per cent)	Projected Employment shares 2020 (per cent)	Expansion Demand 2004-2020 (thousands)
Managers and senior officials	12	14	15	17	890
Professional occupations	8	10	12	14	980
Associate professionals and technical	10	12	14	15	680
Administrative and secretarial	15	15	13	11	-360
Skilled trade occupations	16	14	11	10	-180
Personal service occupations	4	6	8	9	640
Sales and customer service occupations	6	7	8	9	560
Machine and transport operatives	12	10	8	7	-130
Elementary occupations	16	14	11	8	-850
Total (per cent)	100	100	100	100	2,230

Source: CE/IER employment projections

3.23 The classification of occupations into nine broad groups means that some of the subtleties of the changes in the structure of employment are not shown in the table. A more detailed analysis of the same trends shows that there are marked differences within most groups.[10]

[9] www.hm-treasury.gov.uk/leitch

[10] Further breakdowns by narrower occupational groups can be found in the full report at www.hm-treasury.gov.uk/leitch

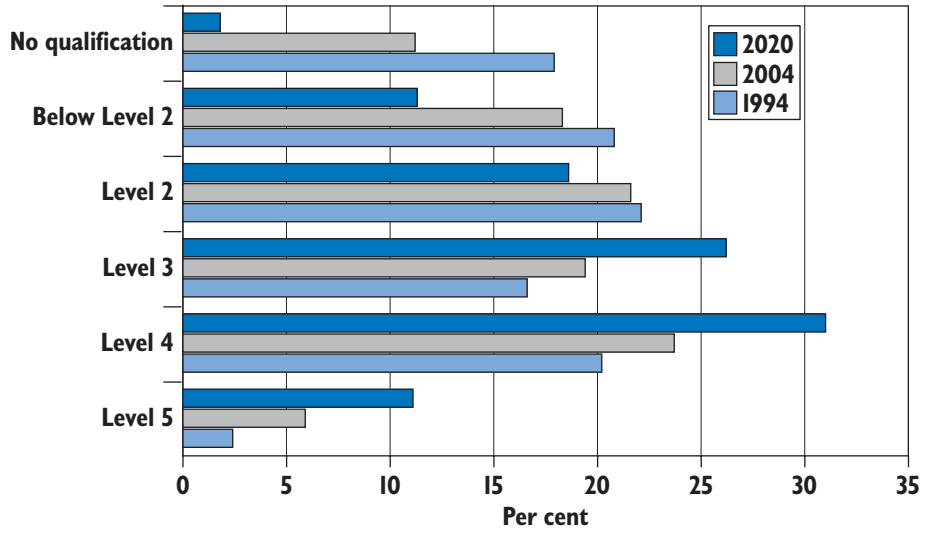
3.24 For example, the managers and senior officials group consists of corporate managers and managers and proprietors. These two sub-groups are projected to have very different trends between now and 2020. Corporate managers are projected to increase significantly, but managers and proprietors have a projected negative expansion demand. Similarly, machine and transport operatives' decline in employment hides a positive expansion demand for transport drivers and operatives, specifically. These differences highlight the complexities of such projections and their implications.

Employment by qualification level

3.25 The shifting importance of occupations implies that there will be a shift in the balance of qualifications held by those in employment. This is driven by the relationship between an individual's occupation and the qualifications they hold. A similar pattern can be seen in the share of employment by qualification level as in employment by occupation. For example, the proportion of employment with no qualifications fell from about 18 per cent in 1994 to 11 per cent in 2004 and the proportion with Level 4 or above rose from 23 per cent to 30 per cent over the same period.[11]

3.26 The projections shown in the tables above imply a continuation of this shift in employment by qualification level. The analysis suggests that, by 2020, 42 per cent of jobs will be filled by those with Level 4 and above – an increase of over 4.5 million, and possibly as low as 2 per cent with no qualifications (a fall of over 2.5 million). These changes are illustrated in Chart 3.2.

Chart 3.2: Share of employment by qualification level, 1994–2020



Source:. CE/IER employment projections.

Total demand for workers

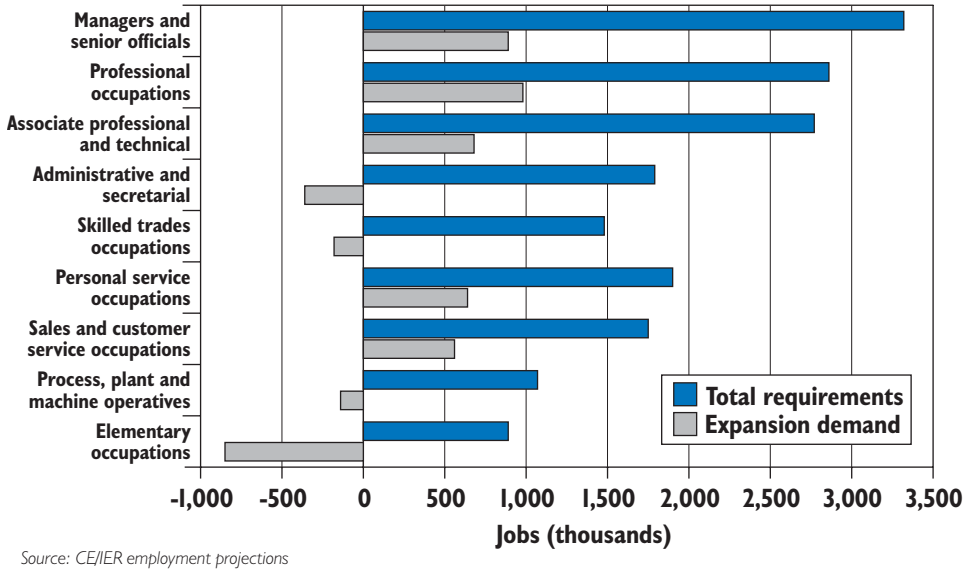
3.27 Despite the predicted changes in the relative importance of the different occupational groups and qualification levels, there will continue to be a need for new workers in all occupational groups. This arises primarily because of the changing demographics of the existing workforce. Even for occupations whose share of total employment is declining, such as elementary occupations, levels of retirement and movement between occupations will lead to a requirement to fill those jobs – 'replacement demand'.

[11] CE/IER employment projections.

3.28 In general, the largest replacement demands are in occupations that contain the largest number of older workers. The managers and senior officials group, for example, accounts for seventeen per cent of workers aged 45 or over, compared to only 5 per cent in sales and customer services.[12] Chart 3.3 shows the combined effect of replacement and expansion demand on the nine broad occupational categories.

3.29 All occupational groups have a large and positive replacement demand, although, as with expansion demand, the trends within each group can be rather different. Sales occupations, for example, have replacement demand of over 1 million, but customer service occupations have much smaller replacement demand – less than one quarter of a million. That reflects the very different demographic profile of those groups, with the latter having a much younger workforce than the former.

Chart 3.3: Total demand by occupation, 2004–2020



Source: CE/IER employment projections

3.30 Managers and senior officials represent the largest total demand for new workers as they have the largest replacement demand combined with the second largest expansion demand. However, administrative and secretarial occupations are projected to see the second biggest drop in their share of employment, although they also see the second largest replacement demand due to the age profile of the people in those occupations. All occupational groups have a positive demand for new employees to 2020. That implies that a supply of people with the appropriate skills must be available to fill jobs at all levels of the occupational spectrum.

Implications for broader skill needs

3.31 The occupations at the higher end of the distribution, such as managers and senior officials, professional occupations and associate professionals and technical occupations, require well above average levels of skills in high-level communication, planning and problem solving as shown in Chart 2.8.[13] As projections suggest these occupations will make up about half of the total demand for employment between now and 2020, it is likely there will be an increased need for these skills in the workforce, and less advanced skills, such as physical skills, will become relatively less important.

[12] LFS, winter 2004.

[13] *Work Skills in Britain 1986 – 2001*, A Felstead, D Gallie and F Green, DfES, 2002.

3.32 The transferable nature of many of these skills raises important questions about training and supply, as transferable skills, which would raise the longer-term productivity of the workforce, may not match in all cases to the needs of the individual's current job. However, the positive replacement demand for all occupations will mean that all types of skill will be needed in the future workforce, but the balance will shift from low-level skills to more advanced skills.

Economic impact

3.33 Although these projections are described as 'business as usual', or a continuation of recent trends, it is wrong to think they do not represent positive benefits for the economy. The trends towards more highly-skilled jobs and away from those industries that are performing less well will lead to continued improvements in key macroeconomic indicators for the UK. Macroeconomic modelling has shown that following such a trajectory would bring increases in overall employment levels, productivity and value-added output. The pattern is complex across the economy with some sectors and occupations seeing declines in employment (see above), and markedly different improvements in productivity and value-added.

3.34 At an aggregate level, the projections imply around a 0.5 per cent increase per year in the number of jobs in the UK between 2004 and 2020, increases in output of around 2.4 per cent per year and just under a 2 per cent per annum increase in productivity (GVA per worker). This does not all come as a direct result of the changes to the skills profile of the workforce, but from a combination of changes in the drivers of economic performance including technological change, capital investment and organisational practices.

PROJECTING FUTURE SKILL LEVELS

3.35 This section considers changes to the UK's skills profile over the next 15 years. It describes the impact of demographic change on the UK's skills and sets out the results of two new models constructed by the Review to analyse the change to the skills profile of the UK by 2020. These models project the qualifications profile of the UK if current Government ambitions are met; and project the literacy and numeracy skills of the working age population in 2020.

3.36 To be able to assess whether further action is needed to improve skills in the UK, it is important to make some assessment of what improvements are likely to occur in the skills profile over the coming years. Even in the absence of intervention on adult skills, the profile will change for the better over time.

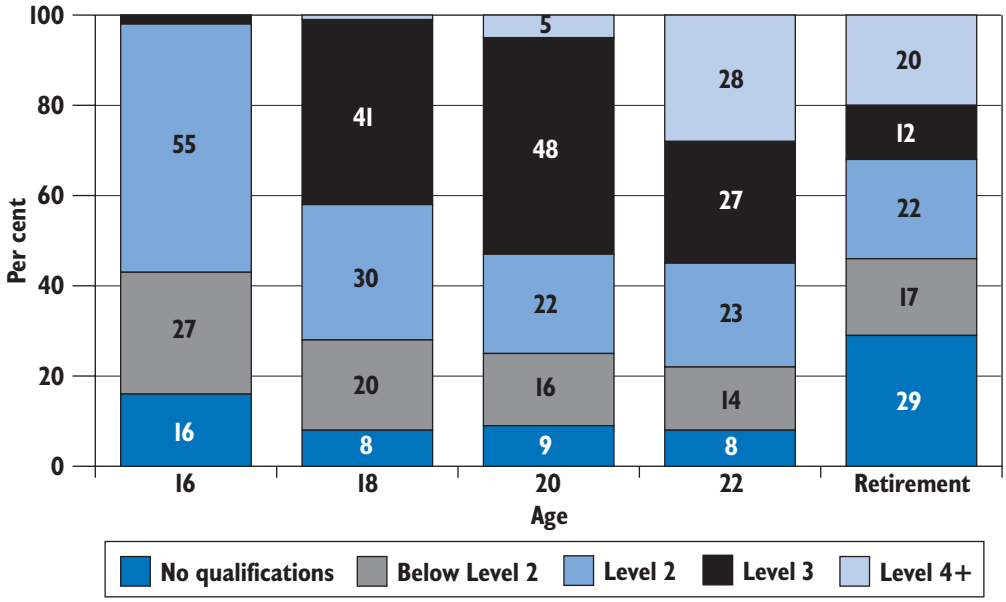
3.37 The Review's qualification model gives an indication of the potential skills mix that individuals in the UK would have in 2020. As discussed in Chapter 2, qualifications held represent a good, if imperfect, approximation for an individual's skill. The changes in the qualifications profile are largely driven by three factors; the qualifications of the young people who enter the working age population, the qualifications of those who retire and the qualifications acquired by those within the population. Box 3.1 gives more detail of the model.

The skills of young people

3.38 The way in which those factors influence the qualifications profile is not straightforward. Simply put, the young people entering the workforce are better qualified, on average, than the older groups who leave through retirement and so on. Those who leave the working age population through retirement have a range of qualification levels. For example, one third of those who retired in 2004 had no qualifications, and one fifth had at least a Level 4 qualification. The inflow of 16 year olds is more likely than those retiring to have a Level 2 qualification specifically, mainly acquired through attaining at least five GCSEs at grades A*-C, but very few 16 year olds achieve a qualification at Level 3 and above (2 per cent in 2004). They are not typically acquired until age 17.

3.39 That effect is, however, more than compensated for later when the inflow has had an opportunity to gain these higher-level qualifications. This progression predominantly occurs amongst the younger groups, with over one quarter having gained a Level 4 or better qualification by the age of 22 (in 2004). By that age, the qualification profile is significantly better than that of those who retire (the outflow). This effect is shown in Chart 3.4.

Chart 3.4: Qualifications of the inflow to the working age population and those retiring, 2004



Note: Estimates for level 4+ at 18 are based on small sample sizes and are therefore subject to a higher degree of sampling variability. They should therefore be treated with caution.
Source: LFS, autumn 2003 and autumn 2004.

The impact of migration

3.40 Trends in migration will also affect the skills profile of the UK population. Labour Force Survey (LFS) data suggest that entrants to the UK have a bi-polar skills distribution.[14] They are more likely than the UK-born population to have a degree or equivalent, but are also more likely to have no qualifications. Just under one half of recent immigrants had either qualifications below Level 2 or no qualifications at all. That compares to one third of the UK population on average.

3.41 The country of origin has an impact on the qualifications immigrants hold, and some are significantly more likely than others, as well as the UK-born population, to have high-level qualifications. Around four in ten migrants from North America have a degree or equivalent, compared to less than one in ten of those from Pakistan or Bangladesh for example. However, that finding is related closely to the reason for coming to the UK. Those who enter the UK for economic reasons are more likely to be higher skilled than those who enter for family reunion reasons, for example. The motivation for entering the UK will obviously have a significant influence on the labour market decisions of migrants, and therefore on policy responses.

[14] Classifying qualifications attained overseas is difficult and survey data, including the LFS, often assign foreign qualifications to a catchall 'other' group. That is the subject of ongoing work to improve the information we have about the qualifications of those living in the UK. The definitions here also mean that students are included in the measure. In many cases, overseas students return to their country of origin once their study is complete, so the skills profile of those who enter the UK and remain for the longer term may be somewhat different. Data suggest that migrants acquire qualifications relatively quickly and 'catch-up' to the average level for their age group.

3.42 While these findings are important, the real issue in terms of the overall UK qualifications profile is the relative qualifications of entrants compared to leavers; if emigrants come predominantly from the higher qualified groups for example, then the effect of net inflows would be more pronounced. Although LFS does not have data on the qualifications of emigrants from the UK, the age profile of emigrants, according to the International Passenger Survey (IPS), suggests that they are at least representative of the UK population.

3.43 It is not just demographics and education policy that impact on the overall skills profile. The changes to the state pension age for women from 2010 will slow the rate of improvement from replacement effects as they lead to more individuals aged over 60 in the working age population. This group is less likely to have higher-level qualifications and less likely to be engaged in learning. Therefore, the changes to the state pension eligibility result in slower improvements to the qualifications distribution between 2010 and 2020 than would have occurred in their absence.

Box 3.1: Constructing the qualifications projection model

The Leitch Review has developed a model to project skills supply to 2020. Using qualifications as an approximation for skills, it gives an indication of the progress that could be made between now and 2020. The model is not designed to give a precise forecast of numbers of people holding different qualifications in 2020, but to give indicative projections of the UK's skills profile if current trends continue and key skills targets are met. It is also capable of illustrating the impact of alternative skills profiles for 2020 or of 'raising our game' in some areas.

The model is based on data from the Labour Force Survey, and uses autumn quarter data from 1997 to 2004. It covers all individuals of working age, plus those working beyond state pension age. This means it covers the 'potential' supply of labour within the UK economy.

The model is constructed using the average annual rate of change in the qualifications held, by age, for the period 1997-2004. For each age group, this average rate of change is then rolled forward in each year over the period 2005-2020. The approach explicitly allows for demographic changes such as an ageing population, early retirement and pension age changes and incorporates assumptions about the relative qualification levels of immigrants and emigrants.

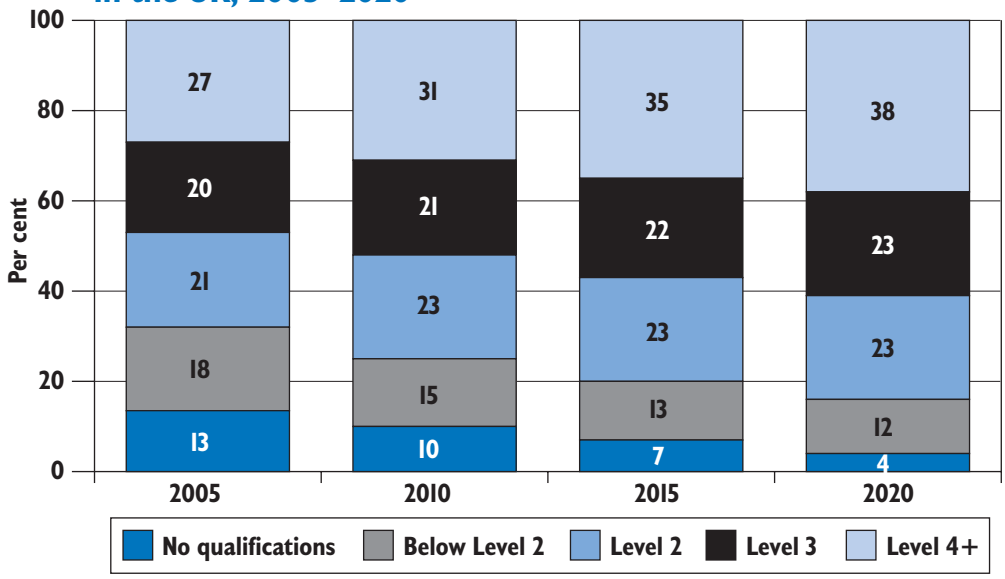
To capture more fully the likely impact of the current ambitions and trends in skills policy, the model also takes into account the impact of important Public Service Agreement (PSA) targets on skills across the UK. The underlying approach is to model the trajectory on the basis that those targets will be met, despite the fact that, in some cases, meeting them represents a serious challenge for policy. The Review's model has a more distant horizon than those targets. Consequently assumptions need to be made about what the trajectory may look like beyond the target date. Three alternatives were considered, and a number of potential projections were constructed (High, Intermediate and Low). The projection presented in this report follows the intermediate trajectory where trends in improvements begin to slow somewhat beyond 2010. Annex C describes the methodology in more detail.

As the model is based on the five level qualification framework, it cannot easily incorporate the changes in basic skills specifically. That is because courses designed to improve functional literacy and numeracy specifically, do not equate to a full Level 2 qualification, for example. As this is a crucial skills challenge, which is also subject to Government targets and policy, a separate basic skills model has been developed (see Box 3.3).

Projecting qualifications in 2020

3.44 Chart 3.5 shows the potential improvements that current trends in replacement flows and qualification acquisition among adults would bring if they were continued to 2020 and skills PSA targets were met. Annex C describes the methodology for deriving this projection in more detail.

Chart 3.5: Projections of qualifications of those of working age in the UK, 2005–2020



Note: Columns may not sum to 100 due to rounding.
Source: Qualifications projections model

3.45 On the basis of current targets, the projections suggest a steady improvement in the qualifications held by the working age population. In particular, there is likely to be a marked decrease in the proportion with no qualifications, falling from 13 per cent in 2005 to 4 per cent by 2020. This implies a fall in the number of individuals with no qualifications from 5.1 million to 1.5 million by 2020. There will also be a significant increase in the proportion of individuals with a qualification at Level 4 or above, rising from 27 per cent to 38 per cent – an additional 5.4 million individuals.

3.46 There is likely to be little change in the overall proportion of the population with a Level 2 or 3 qualification. That group is projected to rise from 41 per cent to 46 per cent. This small change is caused primarily by the high rates of progression from these qualifications to Level 4 and above amongst younger groups, for example from 'A'-levels to a degree.

3.47 However, there will still be significant numbers in the workforce with very low levels of qualifications. In particular, there will be 6.5 million people with either no qualifications or qualifications below Level 2 – more than the forecast 2020 working age populations of Scotland, Wales and Northern Ireland put together.

Is the trajectory achievable?

3.48 In setting the skills profile projected by the model for 2020, it is important to note that, as the UK moves towards an ever more highly skilled economy, some of these trends will become harder to maintain. For example, in many areas it will be a significant achievement to even maintain recent underlying trends, and a significant challenge to meet current PSA targets.

Box 3.2: Progress on PSA targets

The targets in Wales, Northern Ireland and England refer to the key areas of attainment including: GCSE attainment; Level 2 and/or Level 3 for young people and the working age population; a number of differing targets for HE; and literacy and numeracy among adults. The Scottish Executive has chosen not to have PSA targets. Instead, they have a series of 'high level indicators' that focus on similar areas to the PSAs for the rest of the UK. A list of the targets for England, Northern Ireland and Wales included in the qualifications model is in Annex C.

While no progress data is yet available, DELNI expect that their targets for 2007 will be met. The Welsh Assembly's latest data shows they are making good progress towards meeting their 2010 targets.[a]

The most significant targets for the UK qualifications profile are arguably those to reduce the number of economically active adults below Level 2 in England and to increase participation in Higher Education towards 50 per cent for those aged 18-30. The HE target for England is a target to increase participation in Higher Education *towards* 50 per cent for those aged 18-30. The model assumes that the participation rate *reaches* 50 per cent by 2010. An attainment rate assumption is then applied to derive a proportion that attains a Level 4 qualification. The charts below show the current position in relation to those targets.

Chart (a): Economically active adults qualified to Level 2 and above England autumn LFS quarters

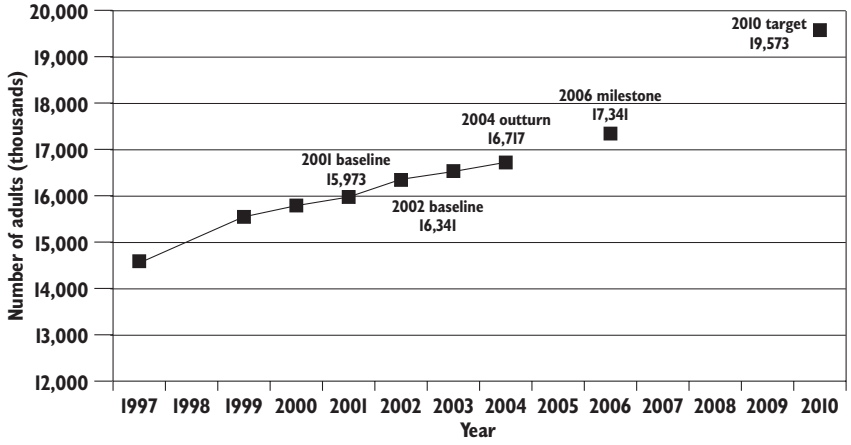
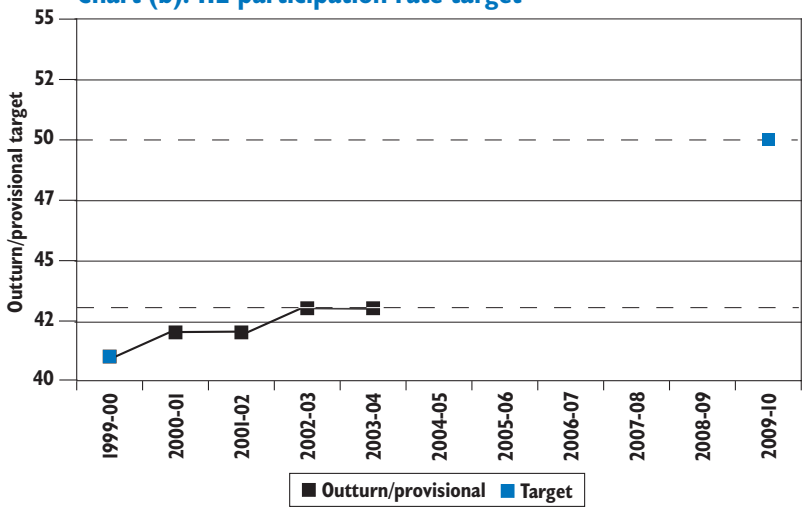


Chart (b): HE participation rate target



[a] *Progress towards Meeting the Lifelong Learning Targets in Wales 2004, SB59/2005*, National Assembly for Wales, September 2005.

3.49 The projection on the basis of current ambition implies an increase in the proportion of adults (25 to state pension age) with at least a Level 2 qualification, from 67 per cent in 2004 to 85 per cent in 2020. That equates to an extra 8.8 million people with qualifications at that level. The proportion with at least a Level 3 is projected to go from 47 per cent now to 61 per cent in 15 years time, an increase of around 7.3 million people. It is clearly a real challenge to achieve that level of increase, though it will not all need to come through qualifications delivered to adults.

3.50 It may also be the case that certain age groups reach, or rapidly approach, a 'natural ceiling'; a qualification distribution that cannot be improved upon. This is more likely to be an issue in the younger groups where the average qualification level is already high. This could mean that the current trends will slow significantly or, at worst, reach a plateau. By way of illustration, the projection shown in Chart 3.5 above implies an increase in the proportion of 25 to 34 year olds with a Level 4 or higher qualification from 36 per cent in 2004 to 58 per cent in 2020.

3.51 There will also be a geographical aspect to whether the projections shown here are achievable across the UK. The model does not disaggregate the projections to a lower level than that of the UK. The trend will not be uniform across the UK however, with Scotland, Wales, Northern Ireland and England, as well as the English regions, starting from different qualification profiles, as Chapter 2 discussed, and demonstrating differing historical performance.

3.52 This implies that the scope for change, or improvement, at certain levels of qualification is not the same across the UK. Scotland, for example, demonstrates a high proportion of working age people at Level 4 or above, higher than the rest of the UK, so the trajectory implied at an aggregated UK level may not be replicable within Scotland.[15] Similarly, Northern Ireland has a higher proportion with no qualification, so the rapid decrease across the UK implied by our projections may come disproportionately from the Northern Irish population, as the 'scope' for such change in other areas is less.

Projecting skills in 2020

Literacy and numeracy

3.53 As discussed in earlier chapters, qualifications are one good indicator of skill, but do not tell the whole story. Employers, for example, report a range of problems in terms of the adequacy of the skills held by their employees and by potential recruits (see Chapter 2). Basic skills are a key concern from an economic and social point of view, and have been marked out as a challenge by the Government and business leaders alike. It is vital to know what progress is being made in addressing that concern.

3.54 As with qualifications, younger people tend to have better basic skills than older people, so the demographic changes, as well as the impact of improvements in education performance, will affect future levels of literacy and numeracy in the working age population in a similar way to how they affect the qualification profile.

[15] The Scottish Executive are developing a similar projections model specifically for Scotland, the results from which will be available in time for the final report from this Review.

Box 3.3: The basic skills model

The basic skills model specifically projects trends in the number of people without at least Level 1 numeracy and literacy skills in the UK by 2020. Like the qualification model, it is not designed to give a precise measure of the number of individuals who lack basic skills in 2020. It is designed to illustrate the extent to which, under current trends and policies, the UK is likely to have reduced the number of working age people below Level 1 literacy and numeracy. The model is based on data from the DfES' Skills for Life survey (SfL), and covers individuals of working age (16 to state pension age).

The model has a stock/flow approach, building in the inflow of 16 year olds each year and removing those who will retire. To capture improvements in the stock (those over the age of 16) the model includes the estimated impact of current basic skills targets – estimated attainments at Level 1 in literacy and numeracy - across the UK. That level of delivery is assumed to continue until 2020.

Measuring the literacy and numeracy levels of school leavers is not straightforward. Two principal measures are available: GCSE maths and English acquisition, and the SfL survey. The SfL survey data, which tests numeracy and literacy explicitly, and GCSE maths and English data suggest very different levels of numeracy and literacy amongst 16 year olds. The SfL data suggest significantly larger numbers of young people lacking at least Level 1 basic skills and are supported by earlier findings from IALS.[a]

The debate around the use of these measures centres on whether having a GCSE G-grade or better ensures that an individual has functional numeracy or literacy (Level 1 or better). On the face of it, a two-year programme of study for GCSEs would seem a more rigorous test of ability, but GCSEs are not specifically designed to test 'functional' literacy and numeracy. It is not clear whether the concerns expressed by employers about low levels of basic skills among young people are based on whether or not they possess GCSEs, literacy and numeracy specifically or a broader range of more key or generic skills.

The model developed by the Review assumes that the basic skills profile in the rest of the UK matches that of England, even though the SfL data cover England only. International Adult Literacy Survey (IALS) data (1996), as well as the National Survey of Adult Basic Skills in Wales (2004),[b] suggest that is not an unreasonable assumption in the absence of comparable data across the whole of the UK.

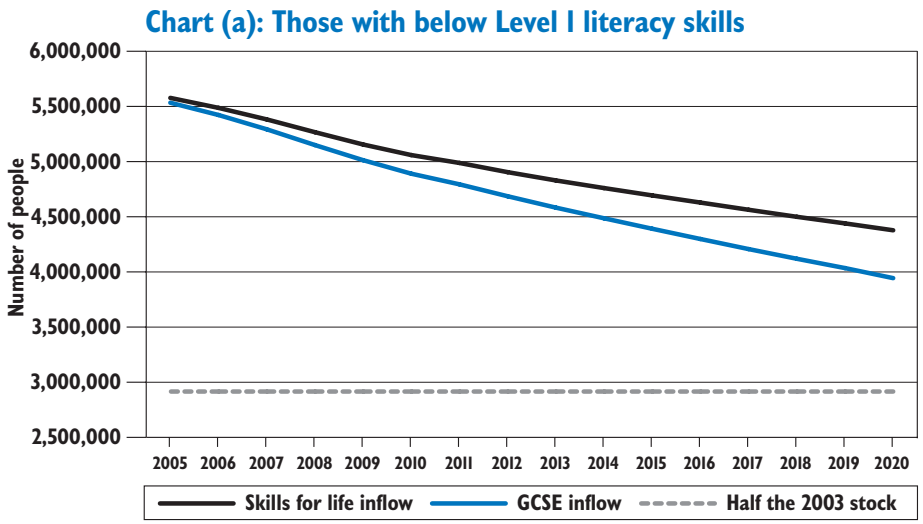
[a] IALS levels and SfL levels are not the same, and the matching process differs for literacy and numeracy. The IALS measures 'quantitative literacy' rather than numeracy per se, but the similarity between the measures is encouraging.
[b] *The National Survey of Adult Basic Skills in Wales*, BMRB, Basic Skills Agency, 2004.

Projections to 2020

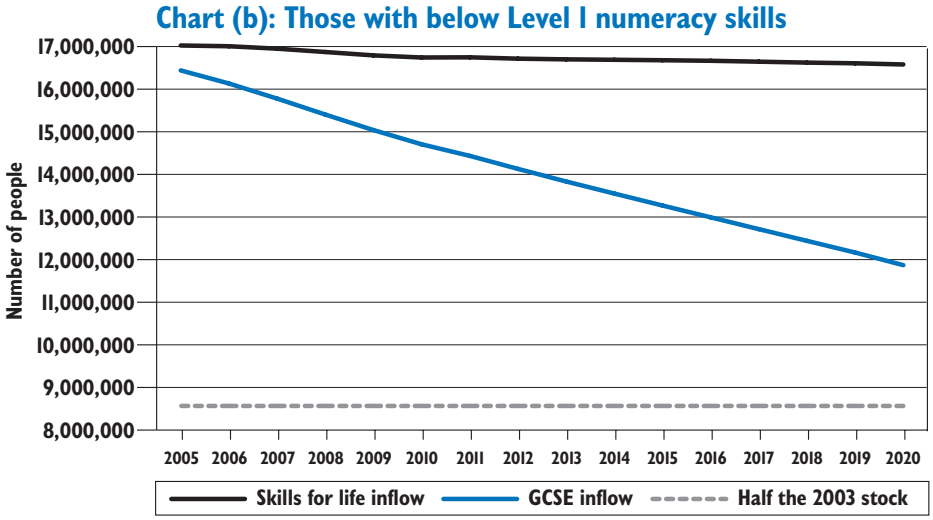
3.55 To illustrate the very different levels of literacy and numeracy amongst 16 year olds suggested by the GCSE data and the SfL survey data, the modelling presented in Box 3.4 uses both datasets.[16] The 14-19 White Paper states that no individual will achieve a Grade C or better in either GCSE English or maths without mastering the functional elements of literacy and numeracy.[17] If that is successful, then the methodology based on using GCSE attainment will become the most relevant.

[16] There is no time series data available for 16 year olds on the SfL basis. Therefore, despite the apparent lack of relationship between basic skills and GCSE maths and English, the skills of 16 year olds are assumed to improve at the same rate as GCSE grade G+ attainment.
[17] *14-19 Education and Skills*, DfES 2005.

Box 3.4: Projections of basic skills 2005-202



The dotted line on the charts represents half of the number of working age people identified with below Level 1 literacy or numeracy in the SfL survey in 2003. It is included here to give some sense of scale to the progress the projections represent. Even on the basis of the projections that use the GCSE data for young people, the projection implies that the UK will not have reduced the scale of the problem identified by the research by 50 per cent by 2020.



3.56 The charts in Box 3.4 show that if the current policies in place to improve the basic skills of adults continue, then the UK will continue to make progress towards reducing the extensive basic skills problem. Current DfES targets are to improve the basic skills of 2.25 million adults by 2010. That target covers literacy, numeracy and language at Entry Level 3, and the equivalent of Level 1 or Level 2. Therefore, the projections here do not represent a direct assessment of performance against that target, although they assume the targets will be met.

3.57 Clearly, the extent of progress will depend on the chosen measure (see Box 3.3 above). There will be between 1.2-1.6 million fewer people with poor literacy skills. However, this still leaves 4.0-4.4 million individuals with poor literacy (below Level 1) skills in the UK.

3.58 The difference between the two projections is far larger for numeracy as the mismatch between the two datasets is more significant:

- on the basis of the SfL data, the reduction in the group below Level 1 numeracy will be around 400,000 by 2020, leaving 16.6 million people below Level 1 numeracy; but
- under the projection based on GCSE maths attainment, there would be a fall of 4.6 million, resulting in 11.9 million people of working age being below Level 1 numeracy by 2020.

3.59 The latter represents far more significant progress, but still leaves a large number (around three in ten) with very low numeracy skills. For these people, the lack of basic skills is likely to hold them back in the labour market and in life, as shown in previous chapters.

FUTURE SKILLS PERFORMANCE

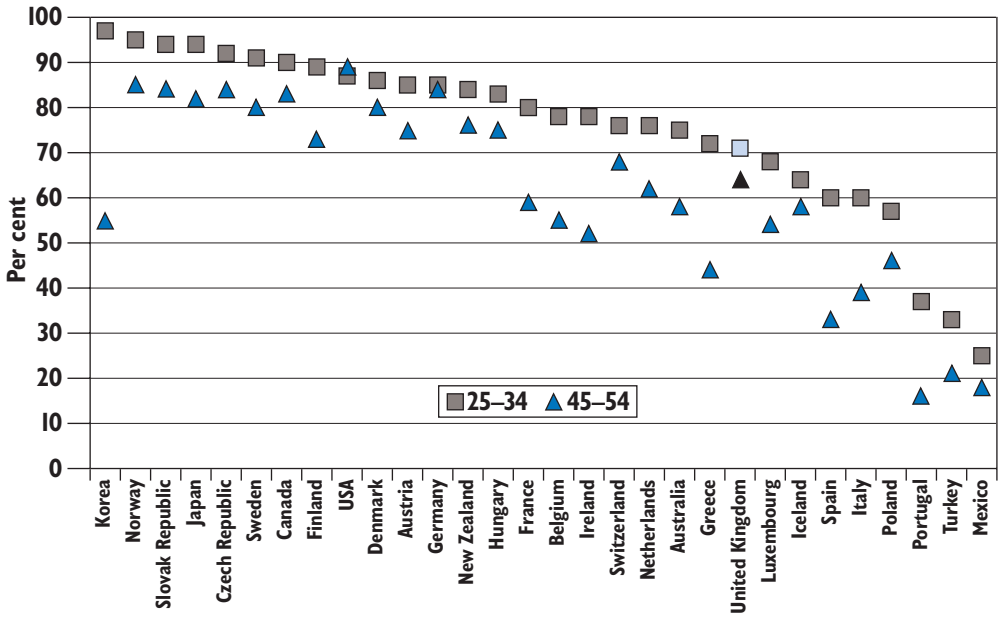
3.60 The Review has been asked to consider the 'optimal' skills for the UK, mix in 2020. The final section of this chapter asseses the future performance of the UK if it follows the trajectories set out above. In particular, this section considers whether the improvements modelled by the Review's projections (where current Government targets are met) will improve the UK's international position and it's ability to become a more highly–skilled and productive economy. Chapter 1 describes the growing importance of the UK's comparative skills profile. There are several data sources and studies that allow the UK to assess its comparative performance (see Chapter 2). It is also important to consider how well the projected supply of skills in the UK to 2020 'matches' the likely shape of employment in the UK over the same period.

International comparisons

3.61 It is difficult to predict with any reliability the future trajectories for other countries, and there has been little or no attempt to construct such forecasts, even within those countries. To varying degrees, they face the same demographic, labour market and economic challenges and pressures as the UK, although many start from a very different current profile (see Chapter 2) and have been following rather different paths compared to the UK.

3.62 Despite progress in improving the flow of qualifications into the workforce, described above, the stock of low-qualified adults plus the rate of improvements in other countries mean that the UK appears to be slipping slightly further behind. Chart 3.6 shows that the UK has made less progress on improving the flow of young people into the workforce with at least upper secondary education, having started from a comparatively poor position.

Chart 3.6: Population with at least upper secondary education, 2003



Source: OECD Education at a glance, 2005.

3.63 Among 45 to 54 year olds, the UK scores relatively poorly, with less than two thirds having an upper secondary education. However, little ground has been made up over the past twenty years or so, with a number of countries overtaking the UK. By 2002, 30 per cent of the UK's 25-34 year olds still had no upper secondary education. The experience of Korea, for example, lagging the UK in education among 45-54 year olds but ahead of the UK among 25-34 year olds demonstrates that economic growth and determined policy can clearly affect educational attainment.

3.64 This result is at least in part due to the UK's relatively poor, though improving, rate of participation in learning for 17 year olds. That must be set alongside relatively high participation at age 20, and high flows into the adult population of graduates. The UK is well above the OECD average on that measure.[18] Similarly, it is important to note that measuring the qualifications of 45-54 year olds does not simply illustrate their educational level 20 years previous when they were aged 25-34. The data will also capture qualifications gained in adulthood. While this is obviously the case for all countries, OECD data show the UK to have the highest levels of adult participation in full or part-time learning and above average participation in workplace training.[19] The difference between the UK's performance and that of other countries is less marked if one compares 25-34 and 35-44 year olds instead.

3.65 To assess whether meeting current ambitions will improve the UK's comparative position, some crude projections for other OECD member countries have been developed (see Box 3.5). The closest OECD data to 'working age' refers to those aged 25-64, and the projections here are constructed on that basis. As the qualifications model for the UK constructed by the Review covers a broader age group (16-64 in 2020), the projections have been adjusted to cover a comparable age range and the UK figures shown here differ from those shown in Chart 3.5 above.

[18] OECD, Education at a Glance 2005 Table A3.4

[19] OECD, Education at a Glance 2005, Table C1.2 (data refer to 30-39 year olds and 40-49 year olds).

Box 3.5: Constructing international projections

The international projections of qualification profiles to 2020 are based on trends in different countries' adult skills stocks from 1998 to 2003. Due to the complex nature of factors influencing the skills trajectory, the projections are made on a simple basis. The projections simply take the average, annual rate of change at each of the three levels (below upper secondary, upper secondary and tertiary) for 25-64 year olds from 1998-2003 and project that forward to 2020. Those historical data are used as they correspond roughly to the 1997-2004 data used in constructing the more detailed projections for the UK. To get a picture of the UK's relative position, the UK projections are taken directly from the qualifications model discussed above, adjusted to cover a comparable age range.

It is highly unlikely that other OECD members will not improve their qualifications profile at all over a 15-year period, and it is possible that various factors would prevent the continuation of the rapid growth rates seen in many countries over recent years (though not necessarily in all).

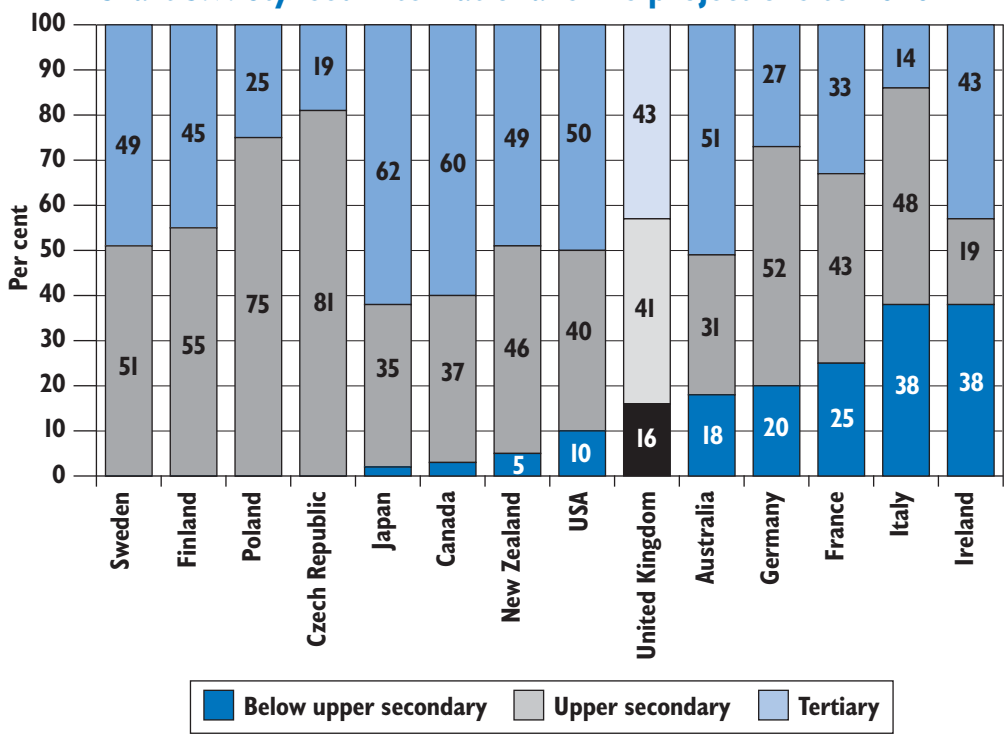
As with all comparisons between countries, there are limitations to the comparability of education systems and qualifications. The complexity of the factors which influence the future trajectory also mean that any attempt to project trends into the future will, necessarily, be very 'broad brush'. However, in the absence of more accurate projections, it is valuable to consider the results of such an exercise.

Although the projections are based on recent trends in skills supply across the OECD, the forecasts have important limitations. First, no explicit allowance has been made for the impact of demographic trends outside the UK. It may be that the age profile of other countries is changing such that improvements in their skills profile will slow or hasten in relation to historic performance. Second, the trends witnessed over the last 5 years may not be replicable into the future. They may be, for example, driven by one-off expansions of an HE system, constrained by population size or by economic trends. Finally, the international projections set out in this chapter do not make a systematic assessment of the future direction of skills policy in other OECD member states, which may alter the direction they take.

As a result, the analysis should be treated with some caution, but it serves as a useful tool in assessing the possible implications of the UK's current trajectory for the nation's relative international position.

3.66 Chart 3.7 shows where the current trajectory might take the skills profile of the UK adult population in relation to selected OECD members. The chart is ordered by the proportion that has not attained at least an upper secondary qualification. Countries that perform worst on this measure are on the right of Chart 3.7 (where the greatest proportion of adults do not have this school-leaving qualification).

Chart 3.7: Stylised international skills projections to 2020



Note: Columns may not sum to 100 due to rounding.
Source: Leitch Review International Projections.

3.67 These projections imply that the UK would, at best, lie around the middle of the OECD pack in all areas of skills in 2020, with average proportions at higher education (tertiary), upper secondary levels, and below upper secondary levels. Within the analysis there is significant movement among those countries for which data are available, driven by the different rates of change between 1998 and 2003.[20]

3.68 In terms of the remaining stock of lower skilled workers, the UK would lag many countries, including Sweden, Finland, Japan, and New Zealand. This analysis implies the UK would lie in the bottom half (17th of 30 countries), with 16 per cent below upper secondary level. At upper secondary level, the UK might improve its position on the basis of these projections, moving from 21st in 2003 to 19th in 2020.

3.69 In terms of higher education, the UK would lag Japan, Canada, the USA and Australia quite significantly but is comparable to Ireland and Finland. On this basis, the UK would lie in 12th out of 30 OECD countries, joint with Iceland and Ireland, with 43 per cent at tertiary level. Despite some change in the order of the countries that lie ahead of the UK, especially an improvement in Korea's position, the UK remains in 12th place overall as it was in 2003.

[20] These changes can be seen by comparing Chart 3.7 with Chart 2.4 in Chapter 2.

3.70 Overall, there is little change in the UK's relative position on this basis although, as the projections for the UK are predicated on meeting challenging skills targets, even this may prove somewhat difficult to achieve. As set out in box 3.6, the UK's position is clearly sensitive to the way the projections are made.

Box 3.6: The UK in international projections

Had the UK figures been calculated in the same way as those for other OECD countries, then the UK's profile would look slightly worse. That is, there would be a larger share below upper secondary, slightly less at upper secondary and slightly less at tertiary level: 21 per cent below upper secondary, 38 per cent at upper secondary and 40 per cent at tertiary level (compared to 16 per cent, 41 per cent, 43 per cent under the Review's projections). In particular, OECD data show the UK as having a larger proportion of adults with low level qualifications than suggested by the Review's model for 2020. It is encouraging that this is the area where the Review's model makes the largest adjustment to meet the assumption that PSA targets are met. The OECD data projections go some way to providing a guide as to where the UK would lie if the current assumptions about PSA targets are not borne out. However, if other countries take action to improve skill levels then their trajectory will improve relative to the ones used here and the UK's position would not look so positive. Indeed, the UK may slip further down the ranking if that occurs.

Generic skills

3.71 There is also evidence that the economy has been changing to make greater use of higher level generic skills over time. As discussed briefly in Chapter 1, research has shown that jobs require higher levels of qualification and generic skill than in the past, in part reflecting their increasing complexity. For example, the proportion of degree-level jobs rose from 10 per cent in 1986 to 17 per cent in 2001. Other measures of skill requirements also showed a trend towards higher levels over the same period, including necessary training time and the time required to 'learn to do the job well'.[21]

3.72 Given the continuing trend towards higher-level occupations and a more highly qualified population, it seems likely that these trends in increased use of skills will continue into the future. The extent of those changes is not clear, and will depend on factors similar to those influencing the occupational distribution. For example, it is possible that use of ICT skills will not rise as sharply as it has done in the past, although it would only take a significant development to alter that prediction (as witnessed by the impact of the invention of the Internet).

3.73 The projections set out in this section suggest that there will be a greater supply of individuals with the qualifications and skills necessary to work in higher-skilled occupations such as professional and associate professional occupations. There will be a parallel reduction in the number of people who only have the appropriate qualifications to do less-skilled, lower-level jobs, such as elementary occupations and plant and machine operative jobs. An important question is how the economy will adapt to make use of the greater supply of more highly skilled people.

[21] *Work Skills in Britain: 1986-2002*, Felstead, A, Gallie, D & Green, F, DfES, 2002.

Are supply and 'demand' compatible?

3.74 This section discusses whether the projected supply of skills into the economy by 2020 is likely to be adequate. It is difficult to judge whether or not the projected skills profile for 2020 is 'appropriate' for the sort of economy and labour market the UK will have by then. Firstly, comparing any two projections, each with their own degree of uncertainty, will be fraught with inaccuracy. Ideally, the comparison would be projected demand minus projected supply to generate an estimate of surplus or shortfall in skills supply, but the ability to do such analysis is debateable. Thirdly, it is highly likely that the economy will move towards an equilibrium over time, adapting industrial and occupational mix to match the quality of the available labour supply, and individuals will attempt to match their skills to the nature of work available in the economy. In that case, there will be little or no evidence of any mismatch in supply and demand.

3.75 It is a matter for debate as to whether or not 'demand' in its real sense can be projected. The projections set out above do not show what the distribution of employment by qualification level would look like if all players in the labour market could have what they wanted. The qualifications model described above represents supply, but as it covers the working age population not just those in employment, the relationship between it and the employment projections will be influenced by labour market changes such as overall activity and employment rates as well as demographic changes.

Employment trends and skill projections

3.76 However, it is valuable to make some assessment of the degree to which the projections 'match', despite the difference in coverage. The implications of the projections can be considered by looking at the change in the qualifications distribution in the population (qualifications projections) and of jobs (employment projections) now and in 2020 using the trends shown in Charts 3.5 and 3.2 above. Comparing the change in the proportions of jobs at each level between 2004 and 2020 with the change in proportions of working age people at each level gives some indication of whether or not the change in supply is keeping pace with trends in employment.

3.77 The proportions of jobs filled by those with no qualifications, qualifications below Level 2 and at Level 2 are projected to fall markedly faster than the proportions of the working age population in those groups. This could imply an over supply of people with these levels of qualification, although there is a risk that the skills distribution 'hollows out' unless there is continued supply across the spectrum. Progression from low levels to Level 2 and above will be important.

3.78 There is very little difference in the change at Level 4 and above, although the rate in the population is projected to grow slightly faster, suggesting employment patterns are not keeping pace with supply at that level. It is important to note that this simply compares proportions of jobs with proportions of people at each level, and does not make any assessment of which level is 'best' or how the economy could acquire more (or less) people at any given level.

3.79 This comparison suggests that, on the basis of current ambition and occupational trends, there would be an 'over supply' of working age people with no or low qualifications, especially those with no qualifications, by 2020. The picture in the middle is mixed, with perhaps too many at Level 2, and too few at Level 3, although the snapshot nature of these projections means that many of those at Levels 2 and 3 are in younger age groups and will progress to higher levels, and increasing the proportion at Level 2 will be an important step in getting people to higher levels. At the higher-skilled end, these projections imply a small over supply, although given uncertainty around the projections and the comparisons it is more likely that the supply is broadly consistent with the direction of employment at higher levels on current trends.

3.80 At Level 3 and above, the proportion of the working age population who are being 'employed' in the economy under these projections (in 2020) is high. This implies that there may be limited scope to increase the use of higher-skilled labour by business in order to improve economic performance, unless there is a commensurate increase in supply at those levels.

A high skills scenario

3.81 As set out above, the analysis of the qualifications and occupation projections suggests there may be a mismatch between supply and the employment patterns that the economy will require in 2020 on the basis of current trends, particularly for those with low or no qualifications. Any behavioural change that results in greater use of higher-skilled workers in the economy will clearly imply greater disadvantage for those with lower-level skills. The employment projections, conducted by CE and IER, considered two alternative 'high skills' scenarios for 2020, details of which are given in the full report.

3.82 There are many ways the UK economy could move to a more highly skilled position. The scenarios assume an increase in the use of skills in the economy, either through changes to the occupational make-up of the economy (a greater proportion of jobs are in the higher-skilled occupations), or by improvements in skill levels *within* occupational groups (occupations become more skilled). They do not represent assumptions about the increase in the qualifications held by the workforce. Briefly, the analysis here illustrates:

i) a situation where sectors that have performed less well in terms of productivity, output and wages begin to catch up in terms of skill intensity with other sectors ('catch-up'); and

ii) a situation where sectors that have performed less well in terms of productivity, output and wages continue to fall behind, are more vulnerable to increasingly global competition, and greater investment in skills continues in those sectors which have seen higher investment in recent years ('restructuring').

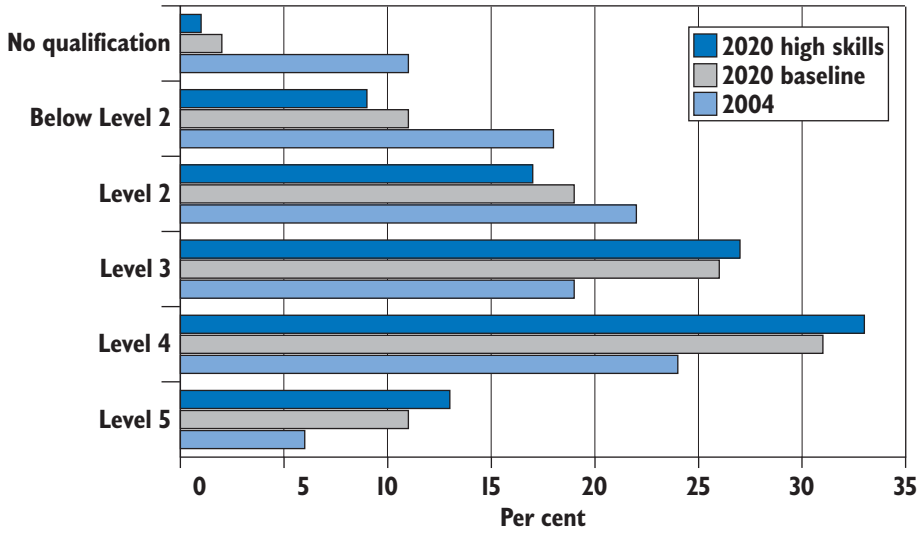
Occupational mix

3.83 The underlying assumptions to that analysis are not discussed here (see the full CE/IER report). The projections confirm the obvious conclusion that if efforts are made to move towards greater use of higher-skilled labour in the economy, then the shift towards higher-skilled occupations will be more pronounced than in the 'business as usual' projections discussed above.

Use of qualifications

3.84 That trend obviously means the high skills scenarios imply more marked changes in the structure of employment by qualification level. Chart 3.8 shows the qualifications profile of employment in 2020 under the high skills assumptions and the 'business as usual' projection in comparison to the current picture. While the modelling does suggest slight differences in the implications under the catch-up and restructuring approaches, they are small and as such are shown as a single high skills scenario for 2020.

Chart 3.8: Change in the qualification distribution of employment under high skills scenario, 2004–2020



Source: CE/IER employment projections.

3.85 The chart clearly shows that moves towards a higher-skilled economy in terms of the way labour is used would mean greater increases in the proportion of jobs filled by those with high qualifications (Level 4 and 5) and greater falls in the proportions at Level 2 and below. There is also a larger increase at Level 3 than under the 'business as usual' scenario. The proportion (and number) of jobs filled by those with no qualifications is projected to fall to less than 1.5 per cent (or under 500,000) of total employment.

3.86 This more marked move away from lower-qualified jobs to higher qualified ones implies that, on the basis of the Review's qualifications projections, the proportion of the working age population at higher levels who will be in work will rise even further. Conversely, the proportions of those at lower levels who will have jobs will fall more sharply implying further disadvantage for those groups.

3.87 As a certain proportion of those at any qualification level will be out of work at any given point (for example, students, those looking after families and people who have retired early), the groups at Level 3 and above may be very close to full capacity. For example, the projections suggest the number of jobs at Level 3 will be equivalent to 97 per cent of the number in the working age population at that level. These findings illustrate the need to increase the availability – that is the supply – of higher qualified people to keep up with the distribution a higher skilled economy would need.

3.88 Is it worth moving to such a higher-skilled economy given the potential mismatch? Chapter 1 sets out much of the evidence on the economic and social benefits of being higher skilled. The high skills scenarios in the CE/IER analysis would bring macroeconomic gains for above the UK in comparison with the 'business as usual' case described above. Both productivity (GVA per worker) and GDP growth are increased by 0.2 percentage points per year under both scenarios. The restructuring scenario has less of an impact on output than does the catch-up scenario, and results in total employment levels similar to the 'business as usual' case. Importantly, these increases are not all as a direct result of the increased skills used in the economy, but result from a combination of those skills with other drivers of economic performance.

CONCLUSION

3.89 The Review's models of qualifications and literacy and numeracy in the UK show that a continuation of current trends and achieving the Government's ambitions will lead to improvements in the UK's skills profile by 2020. That process suggests significant falls in the proportion and number of working age people with very low levels of qualifications and similarly large rises in the proportions and numbers with high levels of qualifications. However, maintaining recent trends, and meeting PSA targets represent a significant challenge, and the improvement will be less if these targets are not achieved.

3.90 However, these improvements may not be enough to change the UK's international comparison rankings, and, when compared to changes in the occupational and qualifications profile of employment in the UK, may be barely sufficient to meet demand even on the basis that the economy follows a path very similar to that which it has followed over recent years. At the least, the trends could lead to greater disadvantage for some groups (particularly the lower skilled) as the economy 'needs' ever shrinking numbers and proportions of lower-skilled workers.

3.91 Economic performance would be improved by moving to a higher-skilled economy, where businesses make greater use of more highly qualified employees. There may be little capacity within the working age population to do so on the basis of current ambitions and trends, especially in the high-skilled groups. Improvements in the supply of skilled labour will therefore be necessary to ensure that the UK can take full advantage of opportunities to move into higher value-added production. Chapter 4 will consider the economic and social impacts of increasing the supply of skills within the working age population by 2020.

4 Raising our sights

Chapter summary

Previous chapters have set out the importance of making improvements in the UK's skills and qualifications profile. Changes underway in the global economy are increasing the importance of rising to this challenge.

This chapter sets out a cost-benefit analysis (CBA) model the Review has developed to assess the relative impacts of investing in different levels of skills. The model shows that delivering, or going beyond, current ambitions for skills policy would deliver significant economic and social benefits.

The model also shows that investing in basic literacy and numeracy skills gives the biggest benefit, relative to costs. It shows that focusing on higher end skills provides a bigger boost to productivity compared to tackling low skills, but has a smaller impact on employment and is most expensive to deliver. In addition, the benefits delivered by investing in high and intermediate skills are the most sensitive to changes in the wage benefits that those with skills and qualifications derive.

The model will provide a tool for considering what the UK's skills mix should be and the kind of impacts that such a skills profile could have on economic and social outcomes.

4.1 This Review has been asked to consider the UK's optimal skill mix in order to maximise economic growth, productivity and social justice. Previous chapters have set out the importance of skills to improving growth and productivity, as well as other objectives such as improving social mobility. Global changes will further increase this importance.

4.2 The achievement of current policy ambitions will bring significant improvements to the skills and qualifications profile of the population in 2020, as Chapter 3 sets out. It will be challenging to maintain these rates of progress, but many comparator countries start from a stronger position and some are improving even faster. As Chapter 3 also shows, delivering current ambitions will still leave the UK with a large stock of adults who lack qualifications or basic skills.

4.3 Changes in the structure of the global economy mean it is becoming more important for the UK to improve the skills of its workforce and have a world-class skills base. The Review therefore believes that a higher level of ambition is required to improve the UK's skills profile in 2020 significantly enough to rise to the economic and social challenges ahead.

4.4 The next section of this chapter sets out the framework of a model the Review has developed to show the potential scale of the impact of setting a higher ambition for skills on key economic and social outcomes. The model's estimate of the impact of previous improvements in the UK's qualifications profile is found to be in line with other estimates of the impacts of skills improvements. The model is then used to estimate the potential impact of achieving current ambitions for skills policy.

4.5 The rest of the chapter uses illustrative scenarios to demonstrate the potential impacts of setting a higher ambition for different parts of the skills distribution. These scenarios are not options to choose from. Rather they are intended to show the relative impacts of different forms of investment. This framework will help to inform the Review's analysis of the optimal skills profile for the UK in 2020 – where it will be necessary to balance the benefits of improving different parts of the skills spectrum.

ASSESSING DIFFERENT AMBITIONS FOR SKILLS POLICY

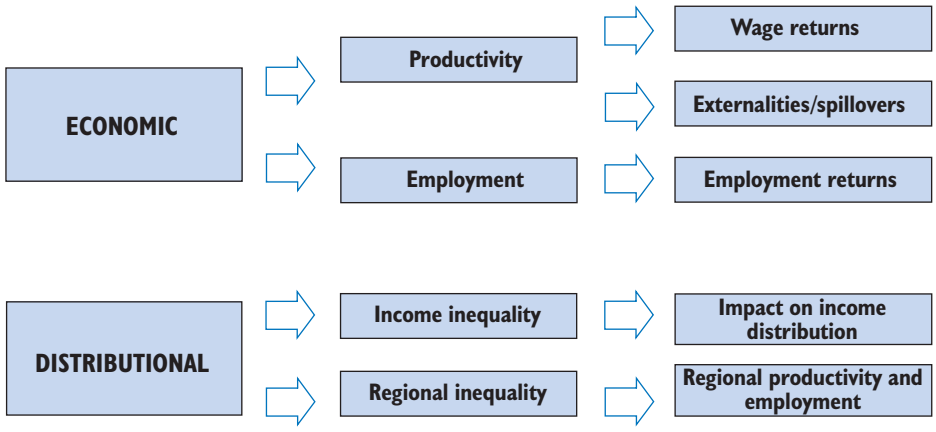
4.6 The UK faces important choices about which skills profile to aim for and how to deliver this. These choices will have important implications for the economic, social and distributional outcomes set out in Chapter 1. Skills policy can support economic and social objectives to varying degrees depending on the type and level of skill prioritised.

4.7 To help inform these *qualitative* choices about policy priorities, the Review has developed a cost-benefit analysis (CBA) model to assess the *quantifiable* impacts of different scenarios on a range of measures. The model estimates the impact of improvements in the qualification profile of the UK on productivity, employment and distributional outcomes. The CBA model is explained in more detail in Annex D.

4.8 Chart 4.1 provides an overview of the benefits of skills improvements quantified in the CBA model. These are divided into two broad types:

- **Economic:** Growth from increased productivity and employment; and
- **Distributional:** Reduced income inequality, both nationally and between regions. This also has the ability to increase economic growth, by ensuring that all areas, regions and people can reach their potential.

Chart 4.1: The quantifiable benefits of skills modelled



4.9 The Review recognises that these do not represent the full range of benefits that skills improvements can bring. For example, as Chapter 1 showed, skills can impact positively on health, crime and other social outcomes. While this model focuses on quantifiable impacts, the non-quantifiable impacts must also be fully considered in making policy choices.

4.10 However, considered alongside policy priorities and wider outcomes, the model provides a framework for systematically assessing the impacts of achieving different qualifications profiles over the longer term.

Economic benefits

Productivity

4.11 Chapter 1 details the strong effects skills can have on productivity. As Box 1.3 sets out, the higher wages that employers are prepared to pay for workers with a higher qualification level represent a lower bound to the productivity benefits that that qualification brings. This analysis therefore uses wage returns as an approximation for productivity increases. Since there is considerable evidence that productivity benefits are higher than wage returns suggest, this is a cautious approach.

4.12 The CBA model assumes that wage returns will remain the same over the next 15 years. This is a strong assumption – employers might not, for example, change their ways of working to take full advantage of the improved skill supply on offer. However, wage returns have remained stable over the past decade despite major improvements in the UK's skills profile, suggesting the economy has adjusted. The Review has conducted analysis to see what the impact of a fall in wage returns would be on the results of the model.

Employment

4.13 Chapter 1 notes that skills could impact on employment. The CBA model uses estimates of the increased likelihood of having a job that people with particular qualifications have. As with wage returns, these 'employment returns' are assumed to be constant over the period to 2020. As Chapter 1 discusses, the literature on employment returns is limited and the results mixed. To deal with this uncertainty, this analysis uses conservative estimates from the academic literature of the impact of qualifications on employment.

Distributional benefits

Regional inequality

4.14 Changes in the UK's qualifications profile are likely to affect the balance of productivity and employment between the UK's regions and countries. As Chapter 1 notes, the UK has a wide variance in both regional skills profiles and in economic and social outcomes like productivity and employment.

4.15 The CBA model examines the regional productivity and employment impacts of each scenario in the same way as at the national level. It also looks at the impact of targeting skills policy on particular regions, taking account of the impact of regional mobility.

Income inequality

4.16 The impact on income inequality is complex to model. Improving skills may have the seemingly perverse effect of increasing inequality if those improvements are focused on upskilling those already in work earning higher wages. The Review has estimated the impact of each scenario on income inequality and relative poverty.

Costs

4.17 When deciding on future skills ambitions, the benefits outlined above must be balanced against the costs of delivering that higher ambition. The CBA model includes two types of costs:

- the **direct cost** of training and education, including tuition and capital costs; and
- the **opportunity cost.** This is the income that each person would have been earning had they remained working rather than taking time out to study.

Limitations

4.18 The model provides a new tool to assess the costs and benefits of changing the UK's skills profile. However, there are inevitably significant uncertainties about key parameters and the complex interaction of supply and demand. The model therefore has a number of limitations:

- **focus on qualifications:** As discussed in Box 1.2, qualifications are just one measure of skills. However, as Box 1.2 shows, they are the measure for which most data is available and they are a reasonable measure of skills;
- **focus on qualification levels:** Data limitations mean the model focuses on qualification levels rather than qualification types or subjects. As Chapter 1 discusses, returns vary by subject. The mix of subjects taken is therefore an important determinant of the overall wage return to a qualification;
- **focus on quantity:** The model focuses on the quantity of qualifications at each level. However, the quality is implicitly modelled in the assumptions made about the future trend in wage returns to each qualification level – if the quality of a qualification falls, the wage return should also fall; and
- **focus on supply:** The model assumes that employers make effective use of newly supplied qualifications. If they did not, wage returns would fall, so the sensitivity analysis shows the impact on the benefits if skills are less effectively deployed. As Chapter 2 discusses, the Review recognises the importance of the effective use of skills.

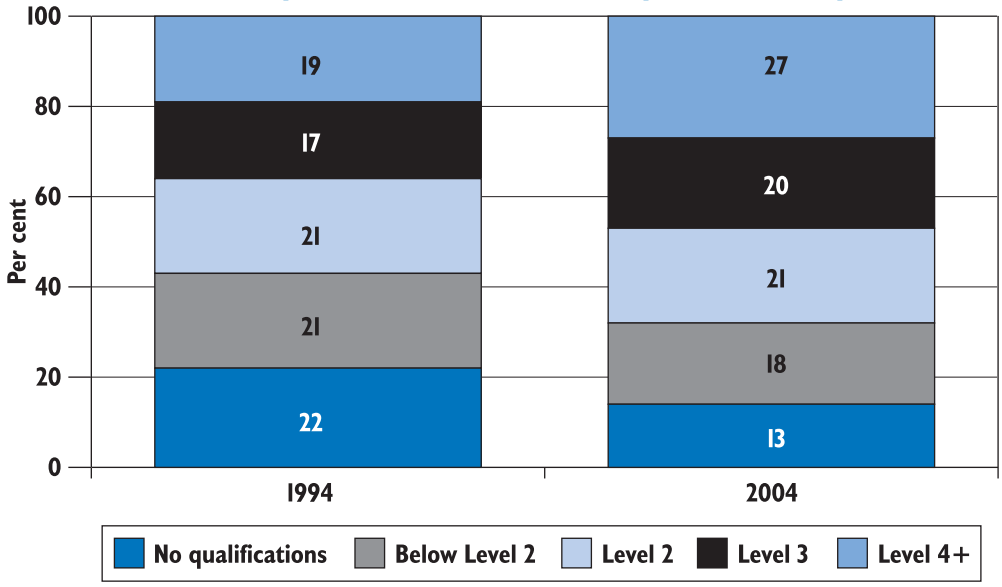
4.19 These limitations mean that the model should only be a guide to the potential impacts of skills policy. A number of other tools should be used in reaching a judgement about the impact and suitability of a particular skills profile. For example, the projections of qualification profiles of comparator countries shown in Chapter 3, and the need to develop competencies that are not built into this qualifications model, such as technical and communication skills and innovation, are also important.

THE IMPACT OF PREVIOUS QUALIFICATIONS IMPROVEMENT

4.20 The Review has applied the CBA model to changes in the qualifications profile of the UK over the past ten years. This allows the results of the illustrative scenarios detailed below to be put into context.

4.21 The qualifications profile of the UK's working age population has improved significantly over the past decade, as Chart 4.2 shows.

Chart 4.2: Improvements in the UK's qualifications profile



Source: Labour Force Survey.

4.22 Table 4.1 shows the impact that the model suggests from improvements in the UK's qualifications profile on key economic outcomes.

Table 4.1: The model's estimate of the impact of past qualifications improvement

Productivity	Output per worker: 2 per cent higher in 2004 than in 1994	Productivity growth: 0.2 percentage point contribution to annual productivity growth
Employment	Employment level: 160,000-210,000 higher in 2004 than in 1994	Employment rate: 0.4-0.6 percentage points higher
Net benefit	Total over whole period: £30-£50 billion	Average annual benefit: £1.3-£1.5 billion per year

4.23 In general, the CBA model estimated outcomes broadly in line with those that were achieved. Its estimate for output per worker is close to the current actual output per worker figure.

4.24 The estimated impact of qualifications improvements on growth in productivity, as measured by output per worker, was 0.2 percentage points per year. This is lower than the 0.37 percentage point contribution to average annual productivity growth of around 2 per cent that other studies have shown.[1]

[1] *A quality-adjusted labour input series for the United Kingdom (1975-2002)*, Bell, Burriel-Llombart and Jones, Bank of England Working Paper 280, 2005; *Accounting growth: capital, skills and output*, Lau and Vaze, Office for National Statistics, 2002.

4.25 This difference results largely from the fact that the CBA model assumes that the wage returns to qualifications measure all of the productivity effect that gaining a qualification has. As Chapter 1 set out, there is a wealth of evidence that suggests that productivity benefits are significantly higher than the wage returns. For example, while not directly comparable to changes in formal qualifications, two studies have suggested that the productivity impacts of training are approximately double the wage benefits.[2] The evidence set out in Chapter 1 therefore suggests that the model's estimate of the impact on productivity is consistent with the findings of other studies.

4.26 The model estimates that employment was 160,000-210,000 higher in 2004 than it would have been if the qualifications profile of the UK population had not improved – equivalent to 5-7 per cent of the total growth in employment over the period. The employment rate rose by 4.1 percentage points in the ten years to 2004. The model suggests that qualifications improvements contributed 0.4-0.6 percentage points of this – around 10 per cent of the growth in the employment rate over the period.

DELIVERING CURRENT AMBITIONS

4.27 Chapter 3 sets out the improvements in the qualifications and basic skills profile of the UK that delivering current ambitions for skills policy might bring about. The Review has used the CBA model to estimate the impact that these might have on key economic and social outcomes.

Improving the qualifications profile of the UK

4.28 Achieving current ambitions would lead to significant improvements in the qualifications profile of the UK population, as Chapter 3 sets out. The model suggests that this would have large benefits for the UK economy, both economically and socially. The main results are summarised in Table 4.2.

Table 4.2: Achieving current ambitions to 2020 key results

Productivity	Output per worker: 3.0 per cent higher in 2020 than it would otherwise be	Productivity growth: 0.20 percentage point contribution to annual productivity growth
Employment	Employment level: 275,000-325,000 higher in 2020 than today	Employment rate: 0.65-0.85 percentage points higher in 2020
Net benefit	Total over whole period analysed: £80-100 billion	Average annual benefit: £2.9-3.1 billion per year
Sensitivity	Impact of 1 per cent fall in wage returns each year:	Net benefit reduced to £40-60 billion, equivalent to an average annual benefit of £1.5-1.7 billion

4.29 Table 4.2 shows that delivering current ambitions would improve productivity, leading to output per worker being 3 per cent higher than it would be if there were no improvements in the UK's qualifications profile. The contribution of qualifications improvement to annual productivity growth would be equivalent to 0.20 percentage points – over 10 per cent of the expected annual growth in productivity, and in line with the estimated contribution of qualifications improvements over the past decade.

[2] *Who gains when workers train? Training and corporate productivity in a panel of British industries,* Dearden, Reed and van Reenan, Institute for Fiscal Studies, 2000; *The impact of training on productivity and wages: evidence from British panel data,* Dearden, Reed and van Reenan, 2005.

4.30 In addition to these productivity benefits, current ambitions could increase the employment rate by 0.65-0.85 percentage points by 2020. This is equivalent to average annual growth in the employment rate of 0.04-0.06 percentage points – around one third of the annual growth in the employment rate that the Government currently assumes in its trend growth projections.[3] Again, this is broadly in line with the impact of skills improvements on employment over the last ten years.

4.31 These positive impacts mean that delivering current ambitions would have a large net benefit: an average of £2.9-3.1 billion each year, equivalent to 0.29-0.31 per cent of Gross Domestic Product (GDP). Most of these benefits arise from improved productivity among those already in work: only 20 per cent are the result of increased employment.

4.32 It is important to note that this annual net benefit figure is an average figure for the whole period. In reality, more of the costs would be incurred in the short term, with the benefits coming over a longer period. The second phase of the Review will consider the relative timing of these costs and benefits in more detail.

4.33 A commonly cited concern is that wage returns to some qualifications may fall over coming years as the supply of highly qualified workers increases. The Review's analysis suggests that, even if this were to happen, delivering current skills policy would still have a large, positive impact.

4.34 The model estimates the impact of wage returns falling by 1 per cent each year between now and 2020. This would leave them at around 65 per cent of their current levels by 2020. If this were the case, the net benefit would be £40-60 billion, an average of £1.5-1.7 billion per year. This is around 50 per cent lower than if wage returns remain unchanged.

Delivering current basic skills ambitions

4.35 In addition to modelling the impact of improving the qualifications profile of the UK, the Review has estimated the impact of delivering current ambitions on improving basic skills among UK workers. This would reduce the number of people with less than Level 1 literacy skills by 1.2 million (from 5.6 million to 4.4 million) and the number of people with less than Level 1 numeracy skills by 400,000 (from 17 million to 16.6 million).[4] Table 4.3 shows the main impacts this might have.

Table 4.3: Basic skills current ambition key results

Productivity	Output per worker: 0.2 per cent higher in 2020 than it would otherwise be	Productivity growth: 0.01 percentage point contribution to annual productivity growth
Employment	Employment level: 20,000-50,000 higher in 2020 than today	Employment rate: 0.05-0.15 percentage points higher in 2020
Net benefit	Total over whole period analysed: £15-25 billion	Average annual benefit: £500-£700 million per year

4.36 Current basic skills policy will deliver some improvements in the basic skills profile of the UK, but, given the estimated scale of the challenge, this still leaves significant numbers of adults lacking functional literacy and numeracy. Consequently, the impacts on productivity and employment are relatively limited. An additional 0.01 percentage points would be added to annual economic growth. The impact on employment would be around 20,000-50,000 by 2020.

[3] See Table B2, page 222 in *Investing for our future: Fairness and opportunity for Britain's hard-working families,* HM Treasury, 2005.

[4] This is calculated on the basis of the Skills for Life measure presented in Chapter 3. As Chapter 3 showed, using the proportion of 16 year olds with English or Maths GCSEs suggests that fewer adults currently lack basic skills and that the numbers will fall more sharply over the next 15 years.

4.37 Despite this, current basic skills policy is estimated to deliver a large net benefit, an average of £500-700 million each year. Since basic skills courses cost relatively little to deliver, the benefit-cost ratios for this, and the other basic skills scenarios, are much higher than for the formal qualification scenarios.

4.38 Changing the assumption about the level of wage and employment returns affects these results. If the wage returns were to be 1 percentage point lower than they are now, the net benefit would be 1 per cent lower. If employment returns were to be 1 per cent lower, the net benefit would be 0.4 per cent lower.

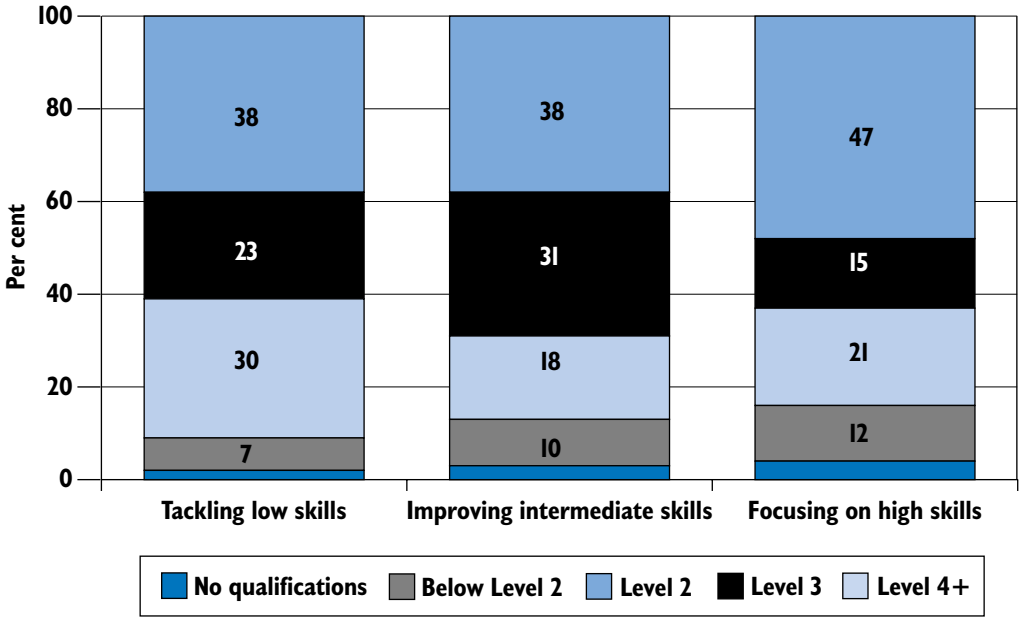
SETTING A HIGHER AMBITION

4.39 Delivering current ambitions will improve the UK's skills and qualifications profile and lead to significant economic and social benefits. However, Chapter 3 suggested that further improvements and a higher ambition are likely to be needed to meet the challenge of global change.

4.40 This higher ambition could take many forms. It is likely to involve increased ambition at all parts of the skills distribution. To illustrate the different types of impacts that investing in particular parts of the skills distribution might have, the Review has developed some illustrative scenarios showing improvements in different parts of the skill distribution on top of delivering current ambitions.

4.41 Each scenario involves giving new qualifications to a roughly similar number of people, allowing a fair comparison of the relative impacts of each scenario. Since the cost of delivering different types of qualifications varies, the cost of each scenario differs. The scenarios are set out in more detail in Box 4.1. Chart 4.3 sets out the skills mixes that these scenarios imply for the UK in 2020.

Chart 4.3: Stylised scenarios for skills policy



4.42 These scenarios should not be viewed as options for policy makers. The Review is not proposing a focus on one type or level of skills – the optimal skills profile will involve a mix of ambitions, targeting different parts of the skills distribution and not just formal qualifications. The scenarios are intended to show the relative impact of investing in different parts of the skill spectrum, rather than presenting options from which to choose.

Box 4.1: Illustrative scenarios

The impacts of improving the UK's skills profile are illustrated using three 'scenarios' of formal qualification attainment and two of basic skills improvements, on top of the impact of achieving current policy ambitions.

Improving the UK's qualifications profile by 2020

Tackling low skills:

This adds to current ambitions by upskilling an additional 3.5 million adults from less than Level 2 qualifications into the Level 2 group (80 per cent from Level 1 and 20 per cent from those without any qualifications).

Improving intermediate skills:

This adds to current ambitions by upskilling to Level 3 an additional 3.5 million people currently qualified to less than Level 3 (60 per cent from Level 2, 30 per cent from Level 1 and 10 per cent from those without any qualifications).

Focusing on high skills:

This adds an additional 3.5 million people to the stock of the population with Level 4 and above qualifications (80 per cent coming from Level 3 and 20 per cent coming from Level 2). This could be achieved by increasing the higher education attainment rate to 65 per cent of those aged between 19 and 30.

Improving basic skills by 2020

Increasing adult attainment:

This adds to current ambitions by increasing current rates of improvements in basic skills by adults by 2.5 times, allowing an additional 3.5 million adults to gain basic skills.

Improving school leavers attainment:

This adds to current ambitions by reducing the number of 16 year olds flowing into the workforce lacking basic skills by around 3.5 million – equivalent to almost halving this flow.

IMPACT OF IMPROVING UK'S QUALIFICATION PROFILE

4.43 This section sets out the impacts of improving the UK's qualification profile by applying the CBA model detailed above to each of the scenarios set out in Box 4.1. The results table for each scenario sets out the total impact of each scenario, including the impact of delivering current ambitions.

Tackling low skills

4.44 The first alternative scenario considers the additional impact of upskilling an additional 3.5 million people to Level 2, on top of delivering current ambitions. Table 4.4 summarises the main results.

Table 4.4: Tackling low skills scenario results		
Productivity	Output per worker: 3.2 per cent higher in 2020 than it would otherwise be	Productivity growth: 0.21 percentage point contribution to annual productivity growth
Employment	Employment level: 375,000-425,000 higher in 2020 than today	Employment rate: 0.9-1.1 percentage points higher in 2020
Net benefit	Total over whole period analysed: £85-105 billion	Average annual benefit: £3.1-3.3 billion per year
Average additional annual cost	Total: £1.5 billion	*Of which:* Direct course provision: £300 million
Sensitivity	Impact of 1 per cent fall in wage returns each year:	Net benefit reduced to £60-80 billion, equivalent to an average annual benefit of £2.3-2.5 billion

Economic impacts

4.45 Tackling low skills, in addition to delivering current ambitions, could lead to output per worker 3.2 per cent higher than it would otherwise be. This is only a small additional impact on top of that which delivering current ambitions is projected to have. On the other hand, this scenario delivers a relatively large impact on employment. The expected increase in employment is, at 375,000-425,000, around 25 per cent higher than the increase that current ambitions could deliver.

4.46 This scenario delivers the smallest total net benefit of the three alternatives considered. The estimated net benefit is an average of £3.1-3.3 billion per year – £200 million higher than delivering current ambitions – equivalent to around 0.3 per cent of GDP. The majority of this increased benefit, around 80 per cent, is the result of increased employment, with the remaining 20 per cent the result of improved productivity among those already in work.

4.47 The net benefit from this scenario is smaller than for the other scenarios analysed below. However, low-level qualifications tend to be less expensive to deliver than higher level qualifications. Consequently, the benefit-cost ratio for this scenario is in line with that for focusing on higher skills, but slightly lower than for improving intermediate skills. The annual cost of delivering the additional qualifications in this scenario is £1.5 billion, of which direct course provision is £300 million – equivalent to around 5-10 per cent of current Learning and Skills Council (LSC) spending on adult skills.

4.48 The net benefit for this scenario is the least sensitive to changes in wage returns. If wage returns were to fall by 1 per cent each year, the net benefit would fall to an average annual figure of £2.3-2.5 billion or 0.25 per cent of GDP, a fall of around 25 per cent. Consequently, it has the joint highest net benefit if wage returns fall as modelled.

Distributional impacts

4.49 The Review's modelling suggests that this scenario would have the most beneficial impact on income inequality and regional disparities. Those with low qualifications earn, on average, less than those with higher qualifications. Hence upskilling those with low qualifications lifts the bottom half of the income distribution most and reduces income inequality.

4.50 Similarly, the poorest regions tend to have the largest concentrations of low-skilled workers. Upskilling low-skill workers therefore impacts most beneficially on low-income regions. Targeting skills improvements on particular regions would help to reduce the gap in regional employment rates – for example, while the UK employment rate would rise by 1 percentage point, the employment rate in the North East would rise by 1.2 percentage points.

Social impacts

4.51 The evidence in Chapter 1 suggested that the wider social benefits of improvements in skills, such as reduced crime and better health, are likely to be greatest when the improvements in skills are concentrated among those currently toward the bottom of the skill distribution. Consequently, this scenario is likely to have the largest positive impact on these wider social outcomes.

Improving intermediate skills

4.52 This scenario looks at the impact of improving progression to intermediate skills, on top of the potential impact of current policy. Specifically, it increases the numbers upskilling to Level 3 by 2020 by 3.5 million.

Table 4.5: Improving intermediate skills scenario results

Productivity	Output per worker: 3.5 per cent higher in 2020 than it would otherwise be	Productivity growth: 0.24 percentage point contribution to annual productivity growth
Employment	Employment level: 350,000-400,000 higher in 2020 than today	Employment rate: 0.8-1.0 percentage points higher in 2020
Net benefit	Total over whole period analysed: £105-125 billion	Average annual benefit: £3.8-4.0 billion per year
Average additional annual cost	Total: £3 billion	*Of which:* Direct course provision: £800 million
Sensitivity	Impact of 1 per cent fall in wage returns each year:	Net benefit reduced to £50-70 billion, equivalent to an average annual benefit of £1.9-2.1 billion

Economic impacts

4.53 Table 4.5 shows that this scenario has a smaller impact on employment, 5 per cent less than the tackling low skills scenario could deliver. However, it has a slightly larger impact on productivity, leading to output per worker 3.5 per cent higher in 2020, 0.3 percentage points higher than the tackling low skills scenario would outcomes.

4.54 The net benefit for this scenario is higher than for tackling low skills. The average annual net benefit could be £3.8-4.0 billion, equivalent to around 0.4 per cent of GDP. In contrast to the tackling low skills scenario, most of the additional (compared to delivering current ambitions) benefit – around 75 per cent – comes from improved productivity of those already in work.

4.55 This scenario would cost around £3 billion in addition to the cost of current ambitions each year to deliver, of which direct course provision is £800 million – equivalent to increasing the current LSC adult skills budget by around 40 per cent. Taking into account the different costs of delivering each scenario, the benefit-cost ratio for improving intermediate skills is broadly in line with that for tackling low skills – the higher benefits are accrued at a higher cost. However, the net benefit figure is more sensitive to a fall in wage returns than the one for tackling low skills. If wage returns fall, the sensitivity analysis suggests the average annual net benefit would be halved, leaving the benefit-cost ratio highest for the tackling low skills scenario.

Distributional impacts

4.56 The distributional impacts of this scenario are broadly similar to those for the tackling low skills scenario. In general, the northern regions of England would experience a higher increase in employment compared to many of the southern regions. The picture for regional changes in productivity is similar. Output per person would rise by around 7 per cent in the North West, compared to 5 per cent in the South East.

Social impacts

4.57 The non-quantifiable wider social benefits of skills, such as health, crime and social cohesion, are likely to be lower for this scenario than for tackling low skills, since these benefits are largest for improvements at the bottom end of the skills distribution.

Focusing on high-level skills

4.58 This scenario considers the impact of significantly increasing flows of young people into higher education. This is broadly equivalent to having a 65 per cent attainment rate for the proportion of young people achieving qualifications at Level 4 or above. Table 4.6 shows the main impacts this might have.

Table 4.6: Focusing on high-level skills scenario results

Productivity	Output per worker: 4.4 per cent higher in 2020 than it would otherwise be	Productivity growth: 0.3 percentage point contribution to annual productivity growth
Employment	Employment level: 335,000-385,000 higher in 2020 than today	Employment rate: 0.75-0.95 percentage points higher in 2020 than today
Net benefit	Total over whole period analysed: £125-145 billion	Average annual benefit: £4.4-4.6 billion
Additional annual cost	Total: £9 billion	*Of which:* Direct course provision: £3 billion
Sensitivity	Impact of 1 per cent fall in wage returns each year:	Net benefit reduced to £65-85 billion, equivalent to an average annual benefit of £2.3-2.5 billion

Economic impacts

4.59 This scenario has the biggest impact on productivity of the illustrative scenarios, adding 0.3 percentage points to annual economic growth. This means that skills improvements would be contributing roughly 50 per cent more to economic growth than they have done in the past.

4.60 The impact on employment, however, is smaller than the other scenarios, adding 0.75-0.95 percentage points to the employment rate by 2020. This is largely because employment rates among those with Level 3 and above qualifications are already high – consequently there is little further employment gain to be made by increasing the number of graduates.

4.61 This scenario delivers the largest net benefit, an annual average of £4.4-4.6 billion, equivalent to around 0.45 per cent of GDP. The vast majority – almost 90 per cent – of the additional benefits that this scenario brings compared to current ambitions arise from improved productivity. Only 10 per cent of the additional benefits come from increased employment, the lowest proportion of the scenarios modelled.

4.62 However, with a total cost of around £9 billion per year to deliver the additional qualifications, this is by far the most expensive scenario to deliver. The direct course provision costs are around £3 billion per year. Consequently, the benefit-cost ratio for this scenario, which takes this into account, is slightly lower than for the improving intermediate skills scenario and broadly in line with that for tackling low skills. This suggests that, if the assumptions in the model hold, the 'return' on the investment in this scenario would be lower than the 'return' in the intermediate skills scenario.

4.63 The net benefit result is also much more sensitive to changes in wage returns than the low skills scenario. If wage returns were to fall to 65 per cent of their current levels, the net benefit would be almost halved at an average £2.3-2.5 billion per year. In this case, focusing on high skills produces roughly the same net benefit as tackling low skills and the benefit-cost ratio for tackling low skills would, given its lower cost, be highest.

Distributional impacts

4.64 The distributional impacts of this scenario are likely to be worse than for the other two scenarios. Focusing on high skills is likely to push up the median wage, since those gaining higher qualifications tend to earn well above the current median wage. Hence, even though all income groups may be getting better off, relative poverty could increase. It also has the risk of 'hollowing out' the UKs skills base, reducing the proportion of workers with intermediate skills.

4.65 This scenario does have the potential to reduce regional inequalities. This, however, relies on poorer regions being able to retain those who gain qualifications at Level 4 and above. Regions that currently have few high-productivity firms may find it more difficult to do so.

4.66 If the migration of graduates between regions continues at current rates, regional inequality might increase in this scenario. Under current rates of inter-regional migration, for example, the increase in output per head in this scenario would be greater for London and the South East than for the North East and North West.

Social impacts

4.67 In addition, the wider social impacts on health, crime and social cohesion discussed in Chapter 1, are likely to be smaller for this scenario than for the others. This means that the difference in net benefits, taking into account some of these non-quantifiable benefits, is likely to be much smaller.

IMPACT OF IMPROVING BASIC SKILLS

4.68 In addition to modelling the impact of improving the qualifications profile of the UK, the Review has modelled the impact of improving basic skills among the UK population.

4.69 The results of the scenarios modelled are detailed below. The additional benefits (over and above those that arise from delivering current ambitions) are found to be larger than for the formal qualification scenarios analysed above. This is reflected in much larger benefit-cost ratios.

Improving adult attainment

4.70 This scenario increases the rate of adult basic skills attainment by 2.5 times, compared with the rate achieved under current ambitions. This would decrease the number of people with below Level 1 literacy skills by 2.7 million (from its current 5.6 million to 2.9 million) and the number of people with below Level 1 numeracy skills by 2.4 million (from 17 million to 14.6 million) by 2020. Table 4.7 shows the main impacts this might have.

Table 4.7: Improving adult basic skills attainment key results

Productivity	Output per worker: 0.47 per cent higher in 2020 than it would otherwise be	Productivity growth: 0.03 percentage point contribution to annual productivity growth
Employment	Employment level: 75,000-105,000 higher in 2020 than today	Employment rate: 0.15-0.25 percentage points higher in 2020 than today
Net benefit	Total over whole period: £50-70 billion	Average annual benefit: £1.8-2.2 billion
Annual cost	Total: £800 million	*Of which:* Direct course provision: £200 million

4.71 This scenario has a positive impact on productivity, adding 0.03 percentage points to annual growth in output per worker. It also has a positive impact on employment, leading to an employment rate in 2020 around 0.15-0.25 percentage points higher than it is today.

4.72 Delivering current ambitions on basic skills would deliver smaller benefits than delivering current ambitions on formal qualifications. This is because current ambitions for formal qualifications involve upskilling a larger number of people than current ambitions for basic skills. Looking at the additional benefits that each scenario delivers, over and above those brought about by current ambitions, provides the best comparison. Improving adult attainment of basic skills provides the biggest additional improvement in productivity on this measure. The impact on employment is relatively small.

4.73 This scenario has a large net benefit of £50-70 billion, an average of £1.8-2.2 billion per year or around 0.2 per cent of GDP. This adds more to the net benefit of current ambitions than the tackling low skills and intermediate skills scenarios do, but less than the high skills one. The cost of delivering the scenario is £800 million per year, one quarter of which is the direct cost of providing courses. This is a much smaller cost than the formal qualification scenarios, but represents almost treble the cost of direct course spend under current ambitions.

Improving the attainment of young people

4.74 This scenario extends the current ambitions basic skills scenario by halving the flow of 16 year olds who currently lack basic skills in literacy and numeracy. This would decrease the stock of individuals with less than Level 1 literacy skills by 2 million (from 5.6 million to 3.6 million) and the stock of individuals with less than Level 1 numeracy skills by 3.1 million (from 17 million to 13.9 million). Table 4.8 shows the main impact this might have.

Table 4.8: Improving basic skills of young people key results

Productivity	Output per worker: 0.48 per cent higher in 2020 than it would otherwise be	Productivity growth: 0.03 percentage point contribution to annual productivity growth
Employment	Employment level: 65,000-95,000 higher in 2020 than today	Employment rate: 0.15-0.25 percentage points higher in 2020 than today
Net benefit	Total over whole period: £60-80 billion	Average annual benefit: £2.2-2.4 billion
Annual cost	Total: £200 million	*Of which:* Direct course provision: £200 million

4.75 This scenario gives similar productivity and employment benefits to the scenario improving adult attainment. This is because the two scenarios involve improving the basic skills of similar numbers of people.

4.76 The net benefit, and, by inference, the benefit-cost ratio, is significantly larger for this scenario than for any of the others modelled. This is because improving adult attainment involves significant opportunity costs, as those already in work have to take time off, and hence lose income, while they learn. By contrast, young people are, by definition, in school full-time and hence there is no opportunity cost in terms of lost income to consider.

THE OPTIMAL SKILLS MIX FOR THE UK

4.77 The CBA model developed by the Review has a significant role to play in determining the optimal skills mix for the UK and the implications this would have for key economic and social outcomes. The analysis set out above shows that delivering current ambitions for improvements in skills and qualifications will bring large benefits to the economy and society. It also shows that setting a higher ambition has the potential to bring larger benefits, improving productivity and increasing employment.

The benefits of improving the qualifications profile

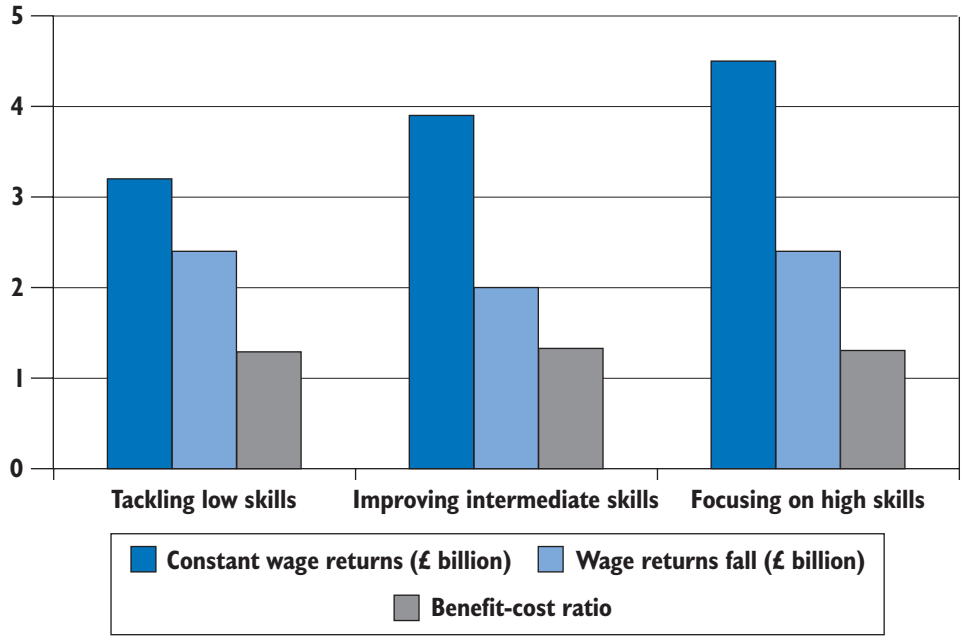
4.78 The CBA model shows that improving the UK's qualifications profile would have significant benefits for the UK economy. Delivering current ambitions would have a large net benefit, equivalent to an annual average of £2.9-3.1 billion or 0.3 per cent of GDP. This would come through increased productivity – a 0.2 percentage point contribution to annual productivity growth, in line with past contributions – and increased employment – the employment rate would be 0.65-0.85 percentage points higher by 2020.

4.79 The model also shows that setting a higher ambition, above current policy, would lead to larger additional benefits and increase the rate of productivity growth above its current rate.

Net benefit

4.80 Chart 4.4 sets out the additional net benefit – over and above that achieved by delivering current ambitions – that would result from the scenarios that model improvements in formal qualifications. It also shows the potential impact on that net benefit if wage returns fall by 1 per cent each year.

Chart 4.4: Annual net benefit and benefit-cost ratios



4.81 The largest additional net benefit would come from focusing on higher skills. However, the cost of each scenario differs – broadly speaking, lower-level qualifications cost less to deliver than higher qualifications. The annual cost of delivering each scenario is:

- **Tackling low skills:** £1.5 billion, of which £350 million is the direct cost of course provision;

- **Improving intermediate skills**: £3 billion, of which £800 million is the direct cost of course provision; and
- **Focusing on high skills:** £9 billion, of which £3 billion is the direct cost of course provision.

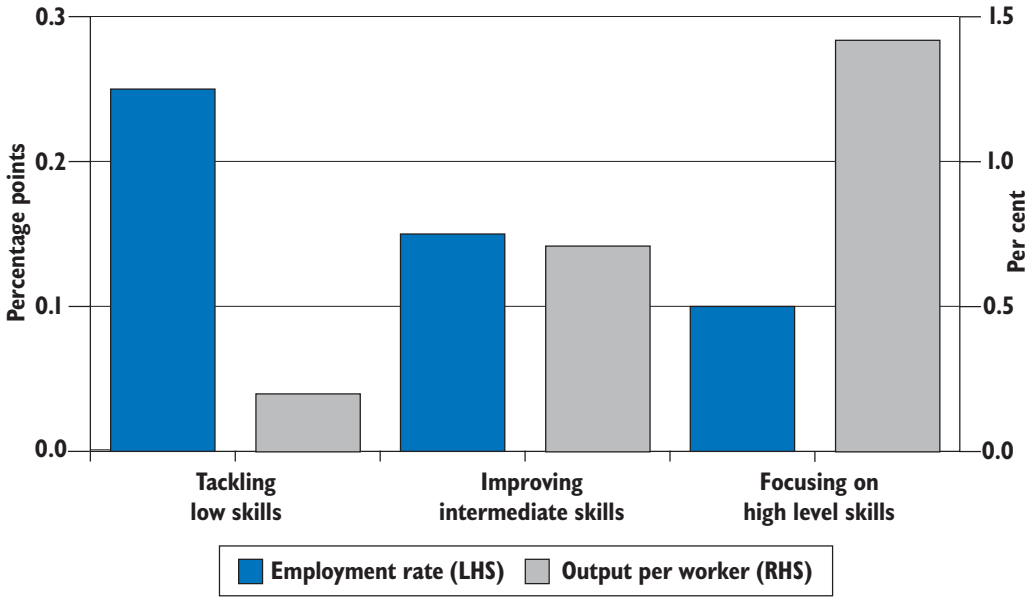
4.82 Hence, while focusing on higher skills gives the highest net benefit, the other scenarios cost less and the benefit-cost ratio for each scenario is broadly similar – they each give similar 'value for money'.

4.83 In addition, the net benefit of the focusing on higher skills scenario is most sensitive to changes in wage returns. If wage returns fall by 1 per cent each year, the tackling low skills and focusing on higher skills scenarios would both deliver the largest net benefit – an annual average of £2.3-2.5 billion, equivalent to around 0.25 per cent of GDP. Given the relative cost of each scenario, tackling low skills would then deliver the highest benefit-cost ratio.

Productivity and employment

4.84 The model also provides an insight into the main source of the benefits from investing in different parts of the skills spectrum. Most of the additional benefits from tackling low skills arise from increased employment. By contrast, most of the benefits from focusing on higher end skills arise from improved productivity. The impacts on productivity and employment of each of the formal qualifications scenarios are compared in Chart 4.5.

Chart 4.5: Impact on employment and productivity on top of current ambitions by 2020



4.85 Chart 4.5 shows that the biggest productivity improvement would come from focusing on high skills, though, as discussed above, this scenario would be the costliest to deliver. The largest gain in employment would come from focusing on low skills. However, the benefit-cost ratio is similar for all three scenarios. As Chapter 1 discussed, economic growth is made up of two components: how many people are working and how much they produce. In determining the optimal skills mix, the relative impact of different ambitions on both employment and productivity needs to be considered together.

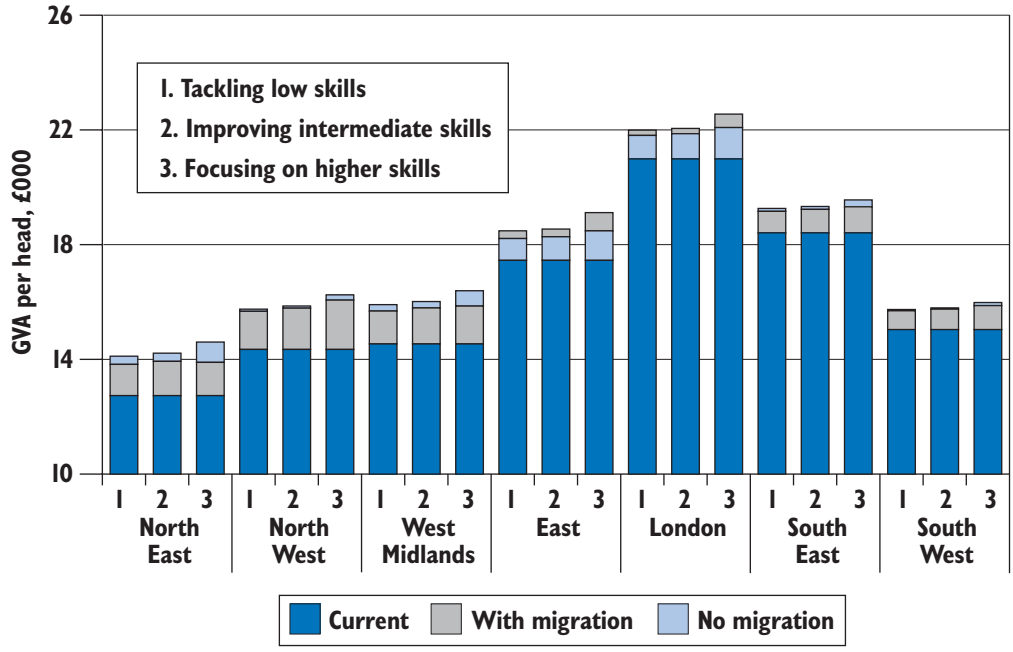
Distributional impacts

4.86 The impact of skills and qualifications improvements on income inequality is complex and difficult to model. However, the Review's modelling suggests that focusing skills improvements among the least qualified has the potential to reduce income inequality. Focusing skills improvements on higher skills is likely to lead to relatively faster increases in the median wage and hence increases in relative poverty, even if all income groups are better off.

4.87 Similarly, skills improvements focused on those currently on low incomes – no matter what their current qualification level – is most likely to lead to reductions in income inequality.

4.88 In addition to the impact on income inequality, skills improvements have the potential to affect regional inequality. The Review's analysis shows, unsurprisingly, that targeting skills improvements on the poorest regions has the potential to reduce regional inequalities. Chart 4.6 shows the potential impact of each scenario on regional productivity.

Chart 4.6: The impact on regional productivity



4.89 Chart 4.6 shows the impact on income per head, as measured by Gross Value Added (GVA), of targeting skills improvements on the North East, North West and West Midlands, at the expense of the East, South East, South West and London. It shows all regions stand to have higher income per head under each scenario. The increase is marginally greater for the focusing on higher skills scenario. This is in line with the national level results, which showed that the focusing on higher skills scenario had a bigger productivity outcome, but a smaller employment impact and higher cost, than the other scenarios.

4.90 Chart 4.6 also shows the potential impact on regional productivity of allowing for migration between regions. Allowing for migration between regions reduces the productivity impact in the North East and West Midlands, but increases it in London and the East, as newly qualified workers move from the north to the south of England.

4.91 Allowing for migration between regions suggests that the productivity impact of each scenario would be similar – the advantage of the focusing on higher skills scenario is wiped out in those regions with a net outflow of graduates currently. However, allowing for migration between regions increases the productivity advantage of the higher skills scenario for the East and London as graduates from the North move to the South.

4.92 The figures showing the impact on regional productivity represent the potential impact. Achieving these impacts will require measures that ensure more newly qualified people remain in their region of origin. In the absence of successful measures, the impacts will be reduced, as the chart shows.

Social benefits

4.93 In addition to the benefits quantified, there are, as Chapter 1 sets out, likely to be significant additional benefits of improving skills that cannot be fully quantified. In particular, Chapter 1 suggests there could be improvements in health, crime and other social outcomes. The evidence cited there suggests that these benefits are likely to be largest for improvements in skills that focus on tackling low skills.

The benefits of improving basic skills

4.94 The CBA model results presented above showed that delivering current ambitions for improvements in basic skills will result in a significant net benefit, equivalent to an annual average of £500-700 million. Delivering current ambitions would have a relatively modest impact on productivity – output per worker would be 0.2 per cent higher in 2020 than it would otherwise be – and employment – the employment rate would be 0.05-0.15 percentage points higher by 2020.

Net benefits

4.95 Setting a higher ambition for basic skills would deliver a larger additional net benefit (on top of that delivered by meeting current ambitions) than any of the formal qualification scenarios, aside from focusing on higher skills. Basic skills courses are relatively inexpensive to deliver relative to other qualifications. Consequently, the benefit-cost ratio is highest for the basic skills scenarios – they give by far the biggest 'return' on investment. Table 4.9 sets out the main additional impacts of each scenario.

Table 4.9: The additional impact of the basic skills profiles in 2020

	Improving adult attainment	Improving basic skills of young people
Net benefit	Average annual benefit: £1.4 billion	Average annual benefit: £1.7 billion
Productivity	Output per worker: 0.27 per cent higher in 2020 than if current basic skills ambitions are delivered	Output per worker: 0.28 per cent higher in 2020 than if current basic skills ambitions are delivered
Employment	Level: 55,000 higher by 2020 Rate: 0.1 percentage points higher in 2020	Level: 45,000 higher by 2020 Rate: 0.1 percentage points higher in 2020

Productivity and employment

4.96 Setting a higher ambition for basic skills has the potential to have a significant additional impact on productivity and employment. Given the relatively low cost of delivering improvements in basic skills, the increase in productivity and employment is large relative to the investment required to achieve it – it generates a greater impact for each pound invested.

Distributional impacts

4.97 As discussed above, the Review's modelling suggests that skills improvements focused heavily on the low-skilled and low earners are most likely to lead to reductions in income inequality. Those without basic skills tend to be low-paid and have a low employment rate – less than 50 per cent. Hence improvements in basic skills are most likely to lead to reductions in income inequality.

Social benefits

4.98 As well as delivering the largest net benefit, the impacts of the basic skills scenarios on wider outcomes, such as health, crime and social inclusion, are likely to be larger than for the formal qualifications scenarios. This further increases the higher benefit of improvements in basic skills relative to the formal qualifications scenarios.

CONCLUSION

4.99 The Leitch Review was asked to identify the 'optimal' skills mix for the UK in 2020 to maximise economic growth, productivity and social justice. The CBA model set out in this chapter provides a tool for analysing the potential scale of the benefits of investing in skills and the relative impacts of investing in different parts of the skills spectrum on various economic and social outcomes. The optimal skills mix will involve improvements in many parts of the skills distribution. It will also involve choices about which types of skill to encourage and incentivise.

4.100 Achieving a higher ambition for skills policy would require a step change in delivery. It would require a large increase in the number of adults gaining qualifications and major improvements in the performance and capacity of schools, colleges and universities, including the opportunities for young people and adults to progress through the system.

4.101 In addition, there would be a variety of ways to deliver such a higher ambition. Targeting policy on particular areas and/or groups could potentially have important implications for regional inequality and social mobility. Finally, setting a higher ambition would, despite delivering an overall net benefit, potentially incur substantially higher costs in the short term.

4.102 Even if there is an increased supply of skilled workers, businesses need to be able to adjust their strategies to adapt to this. Otherwise the skills will not be effectively used and the benefits described above will not be realised. While the implicit assumption in the model is that newly provided skills will be utilised, the Review recognises that individuals and businesses must adjust to this increased supply for the benefits the model predicts to be realised.

4.103 Chapter 5 describes the contribution made by the Government, employers and individuals to improve the UK's skills profile, and the current institutional and policy framework for delivering skills policy.

5 Delivering improvements in skills

Chapter summary

This chapter sets out the current framework and activity to improve skills in the UK. It describes the contributions to the UK's skills profile made by employers, individuals and the Government.

UK employers invest a significant amount in training. However, training activity is most likely to be focused on the most highly-qualified employees and, unsurprisingly, tends to provide employees with skills that are specific to their current jobs rather than more transferable skills.

Overall, highly-qualified adults are most likely to participate in learning. Those least likely to take part are more likely to face multiple barriers to participation.

This chapter describes the key institutions and policies currently in place to meet skills needs in the UK and how funding flows through the system. In particular, it considers how the existing policy and institutional landscape in England engages with employers and adults in the workforce.

Employer supply of skills

5.1 The analysis in Chapters 3 and 4 demonstrates that delivering on current skills ambitions will lead to improved economic performance, but that a higher ambition will be required if the UK is to significantly improve its comparative skills levels by 2020. Employers, individuals and the Government will all have a role to play in achieving this ambition. This chapter provides a description of their key activities and, although not a comprehensive account, presents preliminary evidence from the Review on activity by employers and individuals themselves to improve the UK's skills profile.

5.2 For employers to effectively use the skills of the UK population and have the flexibility to respond to challenges over the medium term, an effective diagnosis and response to employer skill needs is necessary. The way in which organisational and technological changes feed through into employer demand for skills, and how effectively the education and training systems respond to these needs in the supply of skills will be crucial.

5.3 This section sets out evidence on the training activity of employers in the UK. It uses survey data and international comparisons to show the extent to which employers train their employees and where this effort is concentrated in the workforce.

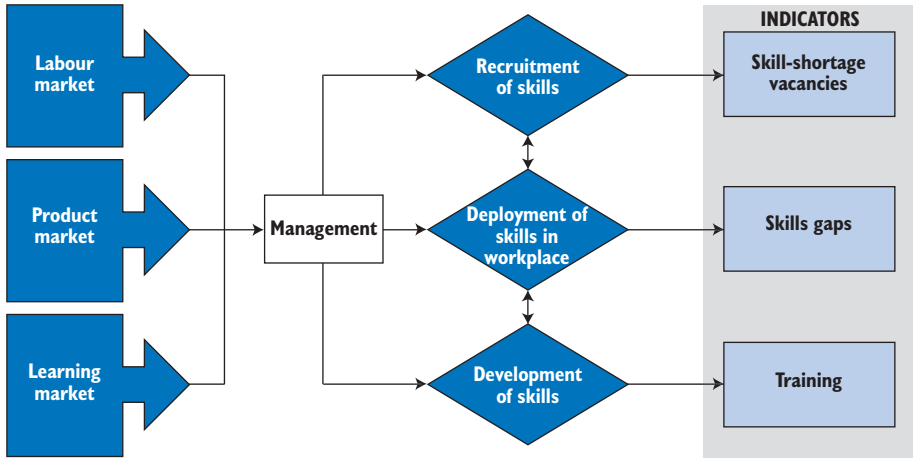
Employers' response to their demand for skills

5.4 In relation to production and processes that are conducted within an organisation (rather than bought in or outsourced), employers demand skills either of their current workforce or from the pool of potential labour from which they recruit. Indicators of the extent to which employer demand is met through recruitment of skills and deployment of skills are reports of skill-shortage vacancies and skills gaps, as discussed in Chapter 2. As illustrated in Chart 5.1, employers also respond by developing the skills of their current workforce. As this chapter describes, such training activity can be provided either directly or via external organisations. The Government also has policies in place to allow employers to articulate their skill needs and influence the education and training system.

5.5 Employers reporting skills gaps are more likely to provide training (82 per cent compared to 59 per cent of employers without gaps) and to spend more on training than employers that do not experience skills deficiencies within their workforce. They are also

more likely to have training plans and budgets than employers who do not report skills gaps.[1] Businesses that are growing are also more likely to train than those that are not.[2]

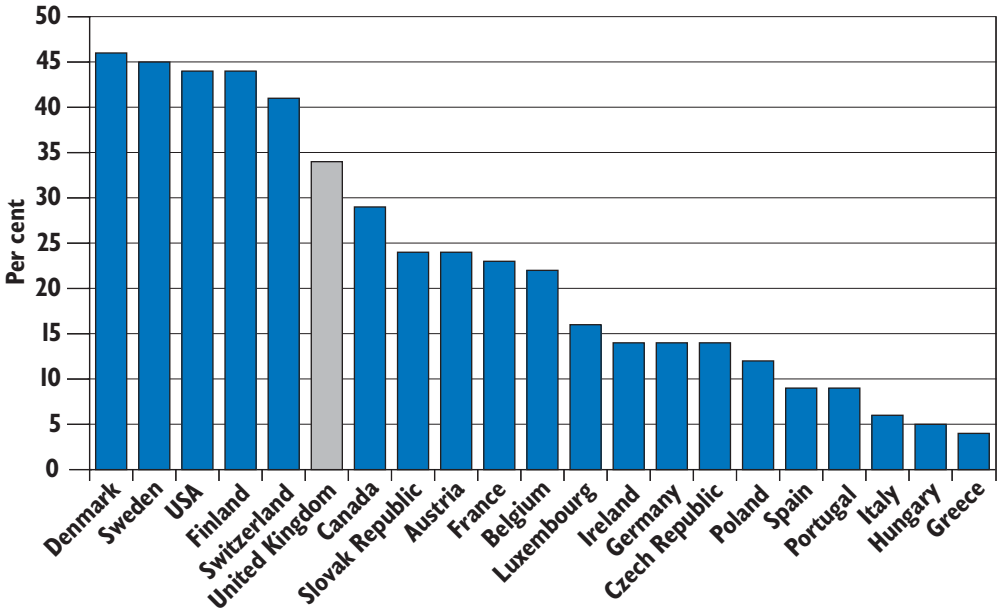
Chart 5.1: Employer diagnosis of and response to organisational skill requirements



International comparisons

5.6 Data suggest that UK employers spend 3.6 per cent of their total payroll on training, compared to an average across the EU-15 of 2.3 per cent.[3] Other international estimates suggest that the USA spends 2.5 per cent of payroll on training, Canada spends 2.3 per cent, Asia 1.7 per cent and Japan 1.2 per cent, against which the UK also seems to compare fairly well.[4]

Chart 5.2: Percentage of employees participating in education and training over the previous 12 months, 2003



Base: Working age population.
Source: OECD, Education at a glance, October 2005.

[1] *National Employer Skills Survey,* Learning and Skills Council 2004.
[2] *Skills in Scotland*, Future Skills Scotland, 2004.
[3] *Continuing Vocational Training Survey* 2, Eurostat 1999.
[4] *State of the Industry Report*, American Society for Training and Development, 2004; *International Comparisons Report,* ASTD, 2000.

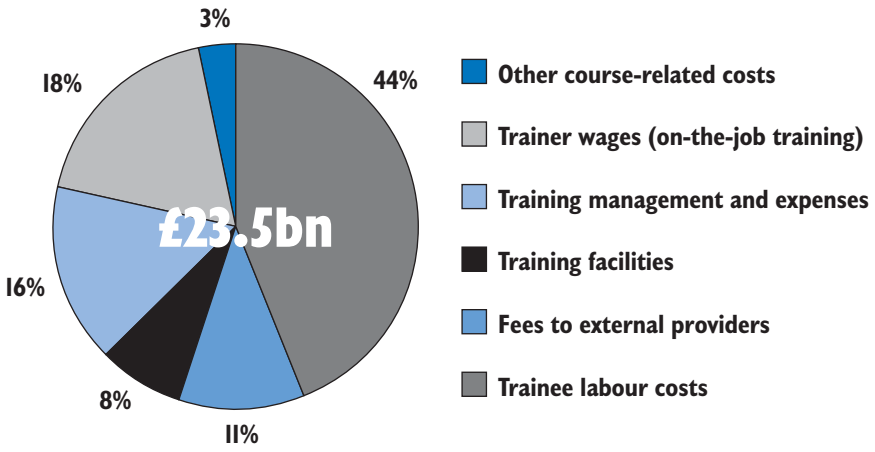
5.7 Evidence suggests that the UK compares well with international comparators on measures of employee training. The general picture seems to be that the UK trains a greater proportion of its employees than others (see Chart 5.2), and is ranked sixth out of the countries taking part in the survey, behind Denmark, Sweden, the USA, Finland and Switzerland.

5.8 European data show that the proportion of UK employees participating in vocational training increased by 16 per cent between 1999 and 2002. However, the time spent in training decreased over the same period by 5 per cent.[5] In 2002 the UK ranked only ninth on hours of training and eighth on training expenditure per employee across the EU-15, with those performing better including France and the Nordic countries.[6]

Employer Expenditure

5.9 Estimates for employer expenditure on training in the UK differ between surveys. Annual expenditure in the Learning and Training at Work (LTW) survey, now five years old, is £23.5 billion. The National Employer Skills Survey (NESS) gives a much lower figure for 2004 of £4.4 billion. The Learning and Training at Work estimate is higher than the NESS estimate as the survey is far more detailed than NESS and includes estimates of indirect spend on training, such as employee wages. Chart 5.3 suggests that, of the £23.5 billion in the LTW survey, 44 per cent, around £10.3 billion, is spent on the wages of employees while in training during work hours. Overall, direct spend on fees to external providers of training is an estimated £2.6 billion (11 per cent) of the total estimated spend.

Chart 5.3: Employer spend on training



Note: Learning and Training at Work (LTW) 2000 is the only survey which provides information on the component costs of employer expenditure on training. Wherever LTW is used again throughout this section, the 2000 edition, rather than a more recent survey in the series, is used for consistency.

Types of training

5.10 Evidence suggests that much of the training being done by employers is either job-specific or statutory training (such as health and safety) where the immediate needs of employers is clearest, although employees are less likely to gain transferable benefits. Of those employers providing training, 81 per cent provided job-specific training, 80 per cent provided health and safety training and 66 per cent provided induction training.[7]

5.11 As Chart 5.4 shows, the propensity to provide off-the-job training and training leading to a qualification, increases with size of employer.[8] The proportion of small employers offering training leading to a qualification is fairly low, at 13 per cent, but the proportion of large employers training to a qualification is relatively high, at 88 per cent.

[5] *European Union Labour Force Survey*, Eurostat, 1999 and 2002.

[6] *Continuing Vocational Training Survey 2*, Eurostat, 1999.

[7] *National Employer Skills Survey*, LSC, 2004.

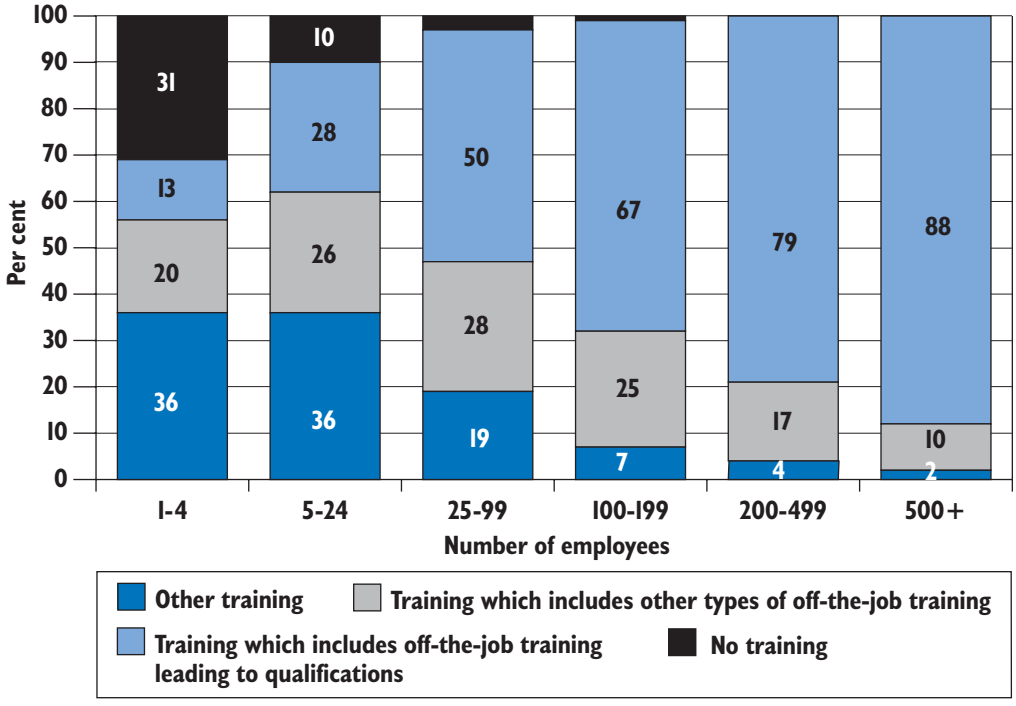
[8] These figures are now relatively old, but they are consistent with estimates of on/off-the-job provision of training as measured by NESS 2004; NESS 2004 does not give data on proportions of employers training to qualifications.

5.12 On-the-job training is offered by employers alongside off-the-job training; data from NESS 2004 suggest that the propensity to offer both types of training increases with the size of employer, with only 19 per cent of the smallest employers offering both types of training, compared to 85 per cent of the largest.

5.13 Of the estimated £23.5 billion employers spend each year on training, an estimated 38 per cent of this is spent on on-the-job training. This includes a wide variety of activities. NESS 2004 defines this activity as that which '*would be recognised as training by staff, but not the sort of learning by experience which takes place on an on-going basis.*' On-the-job training therefore includes anything from being shown how to do a task by a supervisor or colleague to seminars, conferences and videos from equipment suppliers.

5.14 Higher levels of off-the-job training for employees have been found to be associated with better business performance.[9] However, on-the-job training could be more suitable in many circumstances. It is less expensive than off-the-job training and many of the skills reported as most lacking in the context of skills gaps discussed in Chapter 2 could be just as effectively imparted through on-the-job learning than through class-based training. Although on-the-job training may lead to enhanced job performance, wage increases and promotion, it is more likely to be unaccredited, and lack of a qualification may lead to the skills acquired going unrecognised by future employers or even by the individuals themselves even if they are in fact transferable.

Chart 5.4: Proportion of employers providing training, off-the-job and qualification-based training by size of firm



Source: Learning and Training at Work, 2000.

Low-skilled employees

5.15 In 2004, 61 per cent of all employees had received training in the preceding 12 months. However, evidence suggests that low-qualified employees are much less likely to receive training than more highly-qualified employees. Over one fifth of employees, with at least a Level 4 qualification, had received training from their employer in the last four weeks compared with only 12 per cent of those with a Level 1 qualification and only 5 per cent of those with no qualifications.[10]

[9] *Britain at Work; as depicted by the 1998 Workplace Employee Relations Survey*; Cully, Woodland, O'Reilly and Dix, 1999.
[10] Labour Force Survey, UK, Winter 2004.

5.16 Assuming firms invest in training where it is most profitable, it is possible that employees with lower levels of qualifications may be less likely to be trained if the return employers expect to gain on such an investment is lower.

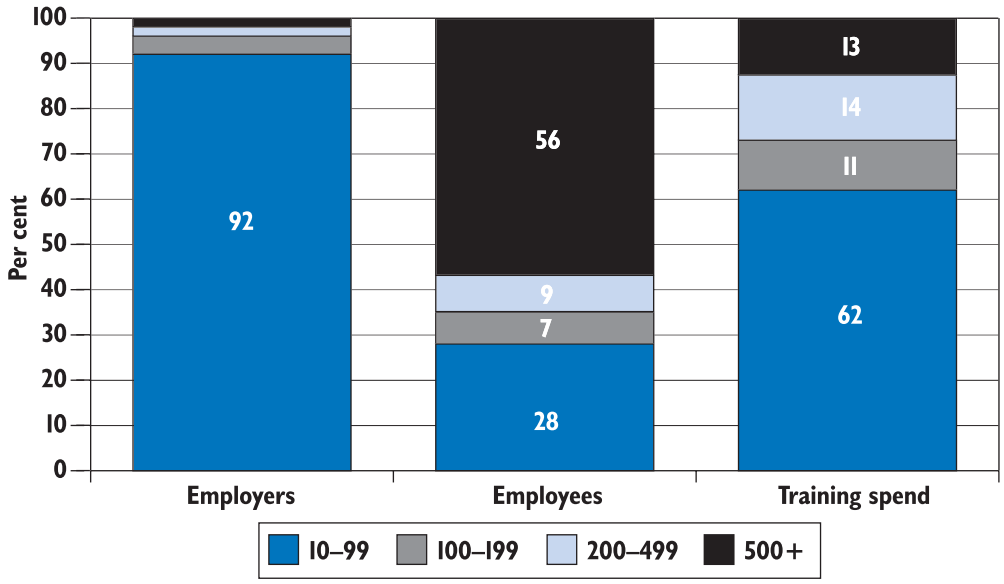
5.17 Those industries with a high proportion of low-skilled employment is relative to their total workforces, tend to have higher levels of staff turnover. For example, in hotels and catering the Chartered Institute for Personnel and Development (CIPD) report a high level of staff turnover, measured as the annual rate of people leaving relative to employment, of 65 per cent.[11] This is likely to reduce employer investment in training overall and training is more likely to be non-transferable, company-specific training in order to minimise the risk rival firms gaining the benefits of this investment when employees leave their current firm.

Size of employer

5.18 According to NESS 64 per cent of establishments were providing some sort of training in 2004. Smaller employers are less likely to provide training than larger employers but, according to NESS 2004, around 76 per cent of employers with 5 to 24 employees offer training, rising to at least 93 per cent of employers with more than 25 employees.[12] Almost all employers, therefore, with more than 25 staff are providing some form of training though the previous section showed that it is most likely to be provided to the most highly-qualified employees.

5.19 Chart 5.5 shows that employers with less than 100 employees account for almost two thirds of total employer investment in training but less than one third of employment. This means that even though smaller employers are less likely than larger employers to train, the smaller employers that do train spend far more per employee than larger employers. Employers with between 25 and 100 staff spend an average of £1,600 per employee, while employers with more than 500 staff spend an average of £870 per employee.[13]

Chart 5.5: Share of total spend on training against share of enterprises and employment, by size of firm



Note: Data are for firms with 10 or more employees to enable comparison with the Learning and Training at Work figures for expenditure which only relate to firms of this size.
Source: Small Business Service, SME statistics 2003; Learning and Training at Work 2000.
Base: England only.

[11] *Recruitment, retention and turnover*, Annual survey, CIPD 2005.
[12] NESS 2004 and LTW 2002.
[13] LTW 2000.

5.20 These differences in spending by employee are not unexpected. Small employers may be unable to take advantage of economies of scale that would be available to employers with more larger workforces. Larger employers may have the space to provide learning facilities on site, reducing the expenses associated with off-site training; training courses will also be cheaper per employee if there are large numbers of employees attending. These higher per-person costs might deter smaller firms from training.

Importance of management

5.21 Skills are a derived demand: employers' skill needs will be a consequence both of their product strategy (for example, whether the firm faces high or low competition) and the firm's characteristics. For the supply of skills to turn from merely potential change in performance into a tangible increase in productivity, the available skills of the workforce have to be effectively utilised. People need to be in jobs that use their skills and capabilities effectively. There are clearly implications here for the way in which skills are factored into business strategy, the way people are managed once in a job and for recruitment practices. Management plays a pivotal role; it sets strategic direction and is the filter through which interpretations of demand for skills will be made, based on knowledge of the product market, the labour market and the learning market (comprising, for example, education and training providers and the qualifications framework). It is important that employers diagnose and articulate their skill requirements effectively so that education and training providers can respond to these needs.

Box 5.1: Management and skills

Research has shown that more productive firms use better management practices.[a] The quality of management practices as measured in a recent study was found to be strongly associated with better firm performance in terms of productivity, profitability, the ratio of a firm's market value to the replacement of its assets and sales growth.[b] Evidence from other sources suggests that management practices such as objective-setting, performance tests, regular appraisals, engagement of non-managerial employees in problem-solving and family friendly schemes have been found to be associated with better organisational performance.[c] Evidence shows that effective human capital management practices, such as internal labour markets and the flexibility for individuals to 'grow' their own jobs, are critical to organisational success.[d]

The occupational category of 'managers' is very broad, encompassing everyone from corporate management through to any employee with the job title of 'manager' including many whose duties might be classed as supervisory rather than managerial.

The qualifications held by managers are one indicator of management capability.[e] As Chart 2.7 showed, a greater proportion of those classified as 'managers' by the Labour Force Survey hold low-level qualifications than in other 'higher' level occupations such as professional occupations. For example, 41 per cent of managers hold below a Level 2 qualification.

It is clearly difficult to make an overall assessment of management performance. However, recent work has attempted to measure the quality of middle management practices in medium-sized manufacturing firms across a number of economies and the impact of variations in these practices on firm performance. This found that the quality of management practice varied widely within countries and industries, and overall the UK was ranked behind the USA, Germany and France.[f] Evidence on managerial practices in the service sector is less well-established.

[a] *Skill, human capital and the plant productivity gap*, Haskel, Hawkes and Pereira, May 2005.

[b] *Management practices across firms and nations;* Bloom, Dorgan, Dowdy, Van Reenen, Rippin, LSE-Mckinsey, June 2005.

[c] *Britain at Work; as depicted by the 1998 Workplace Employee Relations Survey,* Cully, Woodland, O'Reilly and Dix, 1999.

[d] *What to do when people are your most important asset,* L Bassi and McMurrer, 2004.

[e] *Sectoral Management Priorities: management skills and capacity;* SSDA research report, January 2005.

[f] *Management practices across firms and nations;* Bloom, Dorgan, Dowdy, Van Reenen, Rippin, LSE-Mckinsey, June 2005.

5.22 As this section illustrates, employers already contribute significantly, through time and funds, to the training of their existing employees. This activity compares well internationally. However, training tends to be concentrated in certain types of organisation, is most likely to benefit the most highly-qualified employees as well as be specific to an employee's job.

INDIVIDUAL PARTICIPATION

5.23 This chapter and Chapter 2 highlight the disparities in the distribution of qualifications and in the provision of training. This section explores the extent of individual participation and motivation to learn. It suggests that those groups most likely to achieve only low-level qualifications and least likely to receive training from employers are also less likely to participate in learning of their own accord and suffer more barriers to learning than those with higher qualifications.

5.24 Chapter 1 discussed the relative wage return for individuals from the achievement of certain levels of qualification and the additional private and social returns not captured by wage returns. Individuals have a key role to play in recognising where their skills need to be improved, seeking appropriate training or learning opportunities and investing in their own human capital.

Individual motivation to learn

5.25 Individuals' desire to learn is a key factor in determining whether training occurs. While many individuals will participate in learning that is work-related, either prior to work or while in employment, an individual is likely to have diverse motivations for wanting to participate in learning; while some will want to gain a qualification, others may want to meet new people or to pursue a personal interest. For example, while 72 per cent of individuals participated in taught learning in order to improve knowledge about a subject, the second most popular reason is 'to do something interesting', cited by 44 per cent of adults.[14]

5.26 The Review understands the importance of motivation and capability to learn. Many respondents to the Call for Evidence discussed the need for a stronger learning culture in the UK, particularly in the face of demographic change. A prominent UK employer responding to the Call for Evidence suggested '*a person needs to 'own' their learning but also feel that investing their time and effort will benefit them.*' Another suggested that the ageing workforce need help to '*adapt to technological change, primarily through engendering 'lifelong learning' approaches and age-specific re-skilling.*' While employers responding to the Call for Evidence generally recognised that individuals needed to update their skills throughout their working lives '*to respond to the growing need for a more flexible workforce',* other respondents worried that there was too much focus *'on new entrant training as the foundation for a life-long career*'.

Extent of adult participation

5.27 Evidence from the latest National Adult Learning Survey (NALS) suggested that 73 per cent of adults had participated in education and training in the previous year.[15] This encompasses all types of learning, including vocational and non-vocational, taught and self-directed, and there is some evidence that the proportion of adults taking part in learning is increasing steadily.[16] For example, the equivalent figure for participation in NALS 2001 was only 68 per cent of adults. Internationally, the UK seems to compare well, ranking 6th across the OECD for individual participation in non-formal learning, behind the Scandinavian countries, the USA and Switzerland.[17]

5.28 The UK has the highest figures for enrolment in public and private education establishments by those aged over 30 in the OECD. In 2003, 16 per cent of 30-39 year olds in the UK enrolled as either full or part-time students, compared to 15 per cent in Australia, 14 per cent in Sweden and an OECD average of 5 per cent. Of those aged over 40, 8 per cent were enrolled in the UK, compared to an OECD average of 2 per cent[18]. The likelihood of participating in learning decreases with age, with, for example, only half of those aged 60-69 participating in any learning in the previous three years, compared with 85 per cent of those aged 20-29.[19]

5.29 Of those in publicly-funded further education in 2003/04, 61 per cent were aged 25-59; females make up 60 per cent of learners; and people from ethnic minority groups made up 15 per cent of learners while they make up only 10 per cent of the population. In particular, at age 16, Asian (85 per cent) and Black people (82 per cent) are more likely to continue into further or higher education than Whites (69 per cent).[20]

[14] *National Adult Learning Survey*, DfES, 2002.
[15] *National Adult Learning Survey*, DfES, 2002.
[16] *Thematic Review on Adult Learning*, OECD, December 2004; National Adult Learning Survey, DfES, 2002.
[17] *Education at a Glance*, OECD, October 2005.
[18] *Ibid*.
[19] *National Adult Learning Survey*, DfES, 2002.
[20] *Minority Ethnic Attainment and Participation in Education and Training: The Evidence*, DfES, 2003.

5.30 As set out in Chapter 2, the UK has an unequal distribution of skills. Survey evidence suggests that current patterns of individual participation in learning may reinforce rather than overcome this unequal distribution:

- less than one third of adults with no qualifications participate in learning compared to 94 per cent of those with at least Level 4 or equivalent qualifications;
- only 52 per cent of those with basic skills difficulties take part in learning compared to 83 per cent of those without; and
- participation by those from low-income households is 40 per cent lower than participation by those from high-income households (55 per cent relative to 92 per cent).

5.31 In addition, the probability that those who have not previously undertaken learning will do so in the future is low. Of those who had not participated in learning in 2001, only one third had done so by 2003, compared with 84 per cent of those who reported that they had participated in learning in 2001.[21]

5.32 Although the UK has a relatively high rate of participation by individuals in education and training, the participation rate for the economically inactive is particularly low. Those who are already in employment are much more likely to take part in learning, and the latest figures suggest that this is a picture broadly mirrored across all OECD countries; participation rates for the economically inactive are far lower than for the employed and unemployed. Learning by the inactive is at its highest for the USA, where 10 per cent of the inactive participate in some form of learning, compared to only 4 per cent in the UK.[22]

5.33 Participation by individuals in those regions with the poorest qualification distributions and lowest levels of employment is also very low. In England, for example, more than 80 per cent of individuals in the South East and Inner London participate in learning, while the lowest participation rate is recorded for the North East, at only 65 per cent.

Barriers to learning

5.34 A number of barriers may constrain the ability of adults to take up opportunities to train. If learning is constrained because of particular barriers, such as financial or practical constraints or a lack of information about opportunities, it is possible that improvements to the system of support for individuals would increase participation and investment. Surveys are one way to assess the extent to which these barriers exist.

5.35 The National Adult Learning Survey (NALS) suggests that barriers to learning affect those with lower qualifications far more than those with higher qualifications. Those with no qualifications are far more likely to mention lack of time due to family (27 per cent), lack of qualifications (30 per cent) and being nervous about going back into the classroom (28 per cent) as reasons for not participating in learning. They are also most likely to say they lack knowledge of local learning opportunities (30 per cent) and that they do not know where to find out about courses (15 per cent). Lack of time due to work and difficulties in getting time off were most likely to be mentioned as barriers to further learning by those who had previously participated (31 per cent and 22 per cent respectively).[23]

[21] *Pathways in Adult Learning Survey* (PALS) 2003, which follows respondents to NALS 2001.

[22] *Education at a glance*, OECD, 2005.

[23] *National Adult Learning Survey*, DfES, 2002.

5.36 Financial barriers, such as the prospect of losing benefits, were far more likely to affect those with no qualifications than those with higher levels of qualification, and those with no qualifications were most likely to say that they would only participate in learning if someone else paid the fees.[24] Unsurprisingly, however, those most likely to report difficulty in paying course fees as a barrier to learning are the unemployed (42 per cent) and those in the lowest income bracket (39 per cent). However, there is evidence that individuals in the UK are less likely to contribute to the costs of their job-related learning than they are in many other countries in the OECD. For example, only 19 per cent of adults in the UK reported contributing any of their own funding towards education and training, compared with an average of 37 per cent of adults across those countries surveyed.[25]

5.37 NALS 2002 suggests that the most popular reason across all qualification groups (with the exception of postgraduates) for not learning is that the individual prefers to spend time doing other things (32 per cent overall). This was reported by 37 per cent of those with basic skills difficulties. Such a barrier seems likely to limit the potential impact of intervention to increase individual participation.

5.38 The following section sets out the current framework – institutions and policies – to engage individuals in learning opportunities as well as to encourage employers to take part in training, to improve the UK's skills profile.

GOVERNMENT'S INSTITUTIONAL AND POLICY FRAMEWORK

5.39 The final section of this chapter describes the Government's institutional framework – the departments, agencies and delivery organisations – with a remit to improve the UK's skills profile. It also describes the policies in place to engage employers in the education and training system and to engage adults in work, as well as outside the labour force, in learning opportunities.

5.40 The Government's role in improving the skills of the UK has historically rested in two areas:

- ensuring that the initial education system is of as high a standard as possible; and
- intervening to correct market failures in the wider market for skills as people move into the world of work.

Improving schools, universities and colleges (and training providers) and the qualification levels and participation rate of young people all largely, although not exclusively, fall into the first category.

5.41 In the wider market for skills that includes colleges and universities as well as other providers of work-based education and training, the broadly accepted areas of market failure are:

- information failure;
- credit constraints;
- time preferences; and
- externalities.

5.42 To varying degrees, market failures, discussed in more detail in Box 5.2, create problems to be overcome by skills policy.

[24] *Ibid.*

[25] See *Adults in Training: an international comparison of continuing education and training*, Philip J O'Connell, Economic and Social Research Institute/OECD, 1999.

Box 5.2: Overview of market failures

Market failures are likely to occur in various aspects of the wider market for skills. These are likely to create problems that government policy may attempt to address. The four broadly accepted areas of market failure are as follows:

Time preferences and risk are short-termist attitudes to investment in skills and their future returns. Investing in skills is a risk; neither individuals nor employers can be certain of the benefits they may gain when they invest in training. Both may be concerned that they will not receive a sufficient return, or may prefer to be doing other things with their time.

Credit market failure occurs when individuals or firms are not able to afford the costs of training. It may be more difficult to secure loans against human capital than other forms of investment, and individuals or firms may lack the necessary credit history to acquire loans and so be unable to invest in skills that would benefit them in the longer term.

Information failure occurs when the information available to individuals and firms is incomplete or not good enough, or when some have more or different information to others. This might be information about the quality and content of courses or the returns they might gain if they complete a course.

Externalities are social costs or benefits of decisions that are felt more broadly than just through returns to individuals or firms. An individual or business will make decisions on investment in skills based on their assessment of the costs and benefits to themselves. They will not take account of any wider benefits to society or spillover effects on other firms.

5.43 How government designs policy to improve the standard of the initial education system is vital to the future skills profile of the UK. However, as Chapter 3 explains, improving the skills profile of the UK in 2020 also requires adults to improve their skills. Therefore, the way in which government has designed or delivered interventions over time in order to address market failures is important. As described in Annex E, there have been many different types of intervention in this area over the last 50 years and they have differed both in approach and impact. It will be important to ensure that future delivery of policy is effective and also does not lead to unintended consequences which inhibit their impact.

Institutional frameworks

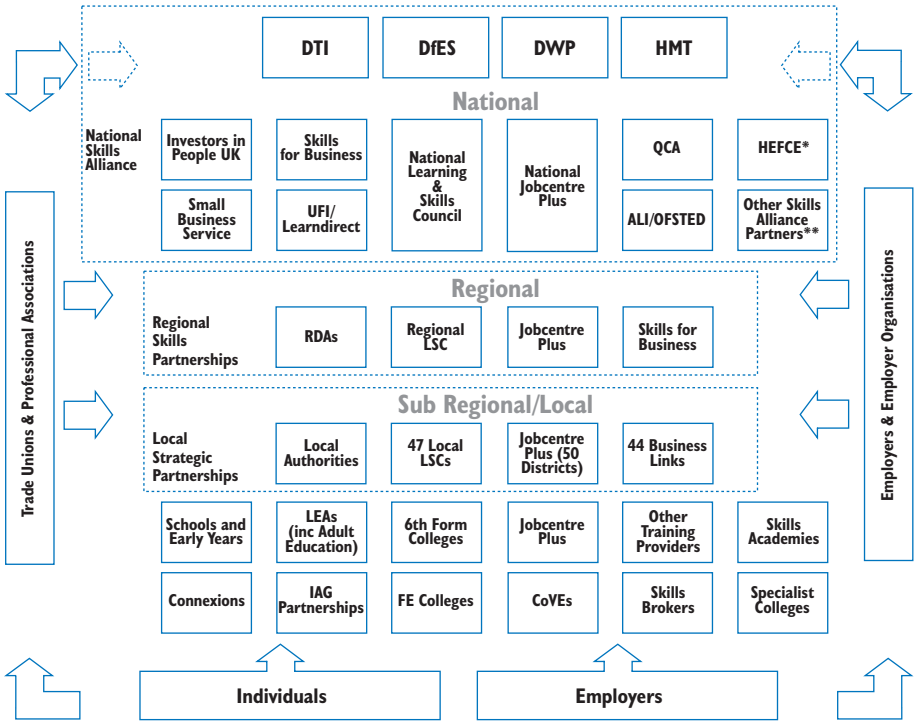
Current institutional framework

5.44 A wide range of Government agencies and institutions are charged with helping employers to train their workforce and to use skills more productively. More broadly across the Government, there are many more organisations responsible for supporting employers in other areas such as filling vacancies, complying with regulation and providing business support and advice.

5.45 In England, the Department for Education and Skills (DfES) plays the lead role in delivering policies to improve skills. The Department for Work and Pensions (DWP) and the Department of Trade and Industry (DTI) are also important, with a wide range of welfare to work, innovation and business support policies. The DTI, with the Small Business Service (SBS) and the Business Link network, help to improve productivity, economic development and business support. The Regional Development Agencies (RDAs), through partnerships such as the Northern Way, have a direct interest in skills and their effect regeneration, as does the Office of the Deputy Prime Minister (ODPM) with its remit for neighbourhood renewal. DWP, via Jobcentre Plus, is principally focussed on helping employers to fill job vacancies and individuals to get jobs.

5.46 The Scottish Parliament and the Welsh and Northern Irish Assemblies also have devolved responsibilities for education and skills policies (see Annex E for explanations of the key institutions and targets).

Chart 5.6: Departments and delivery agencies for educational skills in England



* HEFCE is also a part of Regional Skills Partnerships.

** The Skills Alliance also includes the Small Business Council, Connexions, TUC, CBI, National Institute of Adult & Continuing Education (NIACE), the Association of Colleges (AoC) and the Association of Learning Providers (ALP).

(NB some institutions have been omitted in order to focus on those responsible for engaging adults and employers in developing skills)

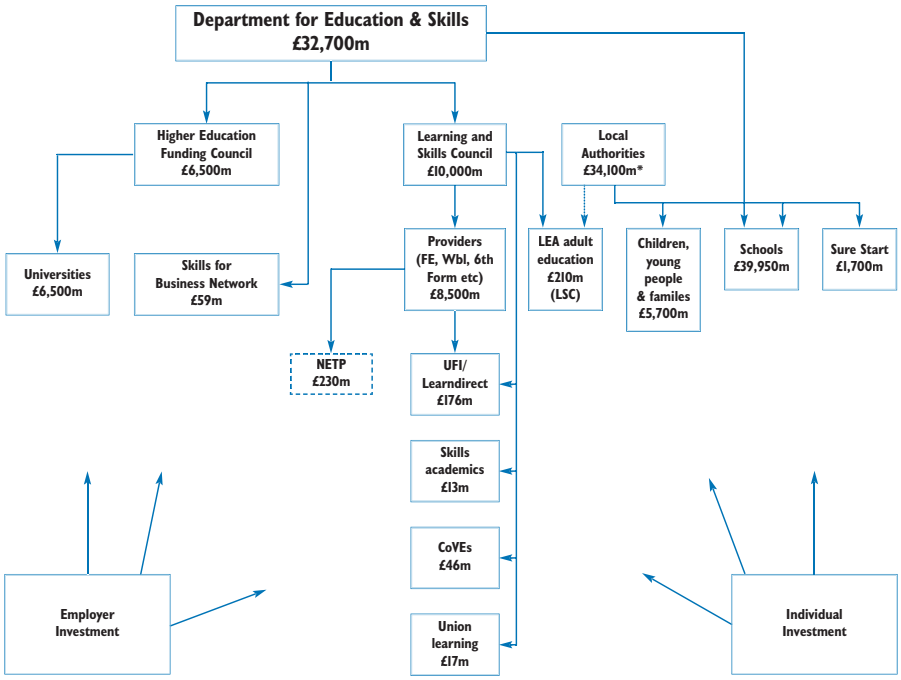
5.47 Chart 5.6 shows the major organisations in the education and skills system in England at national, regional, sub-regional and local levels. Annex E describes the arrangements in Scotland, Wales and Northern Ireland. Some key organisations, such as Jobcentre Plus and Sector Skills Councils (SSCs), have UK-wide responsibilities, because employment policy is not devolved and because many employers and sectors also operate on a UK-wide basis. This system has evolved over time and continues to adapt.

Funding

5.48 Chart 5.7 shows how DfES configures its main agencies and policies, particularly those responsible for engaging employers. This also shows the amounts of funding currently allocated to each organisation or area of activity. The funding flows show that schools, universities and the learning and skills sector are the principal recipients of DfES funding.

5.49 Chart 5.7 highlights the key policies and institutions designed to increase the involvement of employers such as the Skills for Business Network, the National Employer Training Programme (NETP), Skills Academies and the Centre for Vocational Excellence (CoVE) network.

Chart 5.7: Main DfES organisations and funding flows



2006-07 Approximate estimates (including capital expenditure)
** Central Goverment support for local authorities*
Source: Funding details from DfES 2005

Learning and Skills Council

5.50 In England, as well as in Scotland, Wales and Northern Ireland, much of education policy is delivered at the local level through Local Education Authorities. However, in all areas, skills policies are largely managed centrally. In England, this was initially through the Further Education Funding Council (and now the Learning and Skills Council) after the removal of FE colleges from Local Authority control in 1993. Annex E sets out details of the arrangements in the devolved administrations.

Box 5.3: The Learning and Skills Council's Agenda for Change

The LSC has embarked on its Agenda for Change programme aiming to transform the sector. The principles underpinning Agenda for Change are about simplification, removing barriers to co-operation, moving resources to the front-line and increasing standards across the sector. It consists of seven themes:

- **how the sector can best meet the needs of employers;**
- **how to build a sector fully committed to quality;**
- **how data can a be simplified;**
- **how funding methods can be changed to support priorities;**
- **how the sector can achieve business excellence;**
- **how the reputation of the sector as a whole can be enhanced; and**
- **how the LSC can change itself to provide real leadership to the sector.**

5.51 The Learning and Skills Council is responsible for a wide range of policy areas and institutions including the planning and funding of all post-16 education and employer engagement. There are 47 local LSCs, each with a board of 12 to 16 members. At least 40 per cent of all board members at the local and national levels are drawn from employers. In 2004, the LSC introduced a new management structure with nine Regional Directors. This has been put in place so that the LSC can more effectively engage with the regional and sectoral agendas as brought together in the Regional Skills Partnerships (RSPs), a key point in the system where employers' needs are expressed. The LSC is currently consulting through Agenda for Change on proposals to strengthen the regional structure. More recently, the LSC has also reorganised its resources at the local level, introducing 148 Local Partnership Teams and 35 Economic Development Teams – the latter with a specific responsibility for engaging with employers.

5.52 The LSC also operates a National Employer Service run specifically for those employers who need to make arrangements throughout England. Large, national employers have different needs from smaller and more local employers, and do not want to have to negotiate training supply several times over with providers in different parts of the country.

5.53 Further education colleges, alongside schools, universities and other training providers, are critical to improving the skills of both young people and adults. The Government commissioned a review of further education (FE) colleges in England from Sir Andrew Foster which concluded in November 2005. Box 5.4 sets out details of this review. The Government's response to the recommendations of this review will help to improve the capacity of the education and training sector to respond to the challenge of needing to improve skills levels by 2020.

Box 5.4: The Foster Review of further education colleges

Sir Andrew Foster was commissioned by the Government to review further education (FE) colleges in England.[a] The Foster Review concluded in November 2005. The primary recommendation for the mission of FE colleges is that they should adopt as their primary purpose; improving employability and supplying economically valuable skills.

The Foster Review states that to achieve this: the skills focus should be clear in mission statements, there must be a rigorous approach to quality, and funding incentives, performance management arrangements, capital investment and workforce development strategies must all be geared towards this primary purpose.

The Foster Review also states that FE colleges need to improve their services to employers. The key recommendations in the report about a skills focus should help achieve this. In addition, FE colleges should look at what more they need to do to improve their offer to employers both through their primary role in improving the pool of employability and skills and in response to specific employer needs.

FE colleges should work with the LSC to develop a network of 'business' colleges focused on the needs of employers as proposed under Agenda for Change. This should include developing the new national standard in the design and delivery of workforce development service to employers.

[a] Further information about the Foster Review can be obtained from www.dfes.gov.uk/furthereducation/fereview

Policies to improve the skills and qualifications of young people

5.54 Improving the skills and qualifications of young people flowing into the workforce, is extremely important given its contribution to overall skill levels in 2020. Reforms to 14-19 education and schools, together with early years and higher education can all be grouped together as policies, funding and targets that broadly aim to improve the 'flow' of young people into the workforce both now and in the years leading up to 2020.

14-19 reforms

5.55 The aim of the Government's recent 14-19 White Paper is to improve secondary and post-secondary education so that all young people achieve and continue in learning until at least the age of 18.[26] Fourteen new specialised diplomas are being developed by 2015 – with the first four (ICT, Engineering, Health and Social Care, Creative and Media) due by 2008; and a further eight by 2010. A-levels and GCSEs are to be retained and incorporated into the new diploma framework. Apprenticeships will continue as a distinct option, but with clear alignment to new diplomas, to facilitate progression.

5.56 The reforms aim to tackle the UK's persistently low post-16 participation by increasing the participation rate at 17 years of age from 75 per cent to 90 per cent over the next ten years. These reforms also aim to strengthen the literacy and numeracy of young people taking the new specialised diplomas as well as existing qualifications such as GSCE and A-level. Sector Skills Councils will play an important part in developing the new diplomas to ensure that they meet employer needs.

Apprenticeships

5.57 Apprenticeships are a well-understood and valued part of the skills system that provides alternative types of training for young people, adults and employers. Apprenticeship frameworks at Levels 2 and 3 are developed by SSCs and by large employers. The PSA target of having 175,000 young people starting an apprenticeship during 2004-05 was recently met and now the LSC is working towards a target of increasing the number of apprentices who complete their apprenticeship to 75 per cent. In Scotland, a similar target of 30,000 young people on Modern Apprenticeships was also met in 2004.

5.58 Apprenticeships are now used by around one quarter of 14-19 year olds as part of their transition from school to work. They offer opportunities for progression, including into higher education. In addition, an Adult Apprenticeship programme, for over 25's, is being developed, as are Level 4 Apprenticeships.

Higher education

5.59 Higher education (HE) also helps to equip people with higher level skills relevant to their working lives. The challenge for the sector is to work even more closely with employers, building on its reputation for responding to the skill needs of the economy, in order to meet the very substantial anticipated growth in demand for HE-level skills in the workplace. In particular, HE is now working closely with SSCs in order to achieve a greater alignment of provision with employer needs. As discussed in Chapter 3, the Government's existing higher education participation target is to move towards 50 per cent of those aged 18 to 30 to be participating in higher education by 2010. Attached to this is the target of making significant progress, year on year, towards fair access, and reducing non-completion rates in higher education courses. To strengthen the flow of HE-level skills, an important area of growth has been in Foundation Degrees, developed in partnership with employers, with an expected 50,000 students enrolled by 2006. SSCs and RDAS are now also consulted on the allocation of additional places in HE to help meet sectoral and regional skills needs.

[26] *14-19 Education and Skills,* DfES 2005.

Further financial incentives

5.60 There are a range of subsidies and other financial support initiatives available to young people and adults in order to help them take up training opportunities or to remain in full-time education after 16:

- **Career Development Loans (CDLs)** – consist of deferred repayment bank loans, which the LSC operates in conjunction with high street banks. Individuals aged 18 or over can borrow between £300 and £8,000 for vocational courses lasting up to two years. Loans cover up to 80 per cent of tuition (100 per cent if unemployed for over three years) and full cost of materials, travel, and childcare;
- **Adult Learning Grant (ALG)** – the grant is specifically aimed at those on low incomes studying full time, but is not available to those on means-tested unemployment benefits. Financially assessed, it consists of up to £30 per week for adults on low incomes and is available for up to two years (three years for learners progressing from Level 2 to Level 3 in the pilots). The ALG will be progressively rolled out nationally, with full implementation by 2008-09, subject to satisfactory outcome of the trials;
- **Education Maintenance Allowances (EMAs)** – are a weekly payment of £10, £20 or £30 a week depending on household income and available for people aged 16-18 whilst undertaking an approved programme of study. The money is intended to help with the day-to-day costs of staying on at school or college – such as travel, books and course equipment; and
- **Learner Support Funds (LSF)** – the Learner Support Fund is the main source of financial support to help students in further education with additional costs associated with studying. The LSC pays a grant to FE colleges so that they can provide financial help through LSF to students experiencing financial difficulty.

Policies to engage adults

Level 2 entitlement

5.61 This section discusses some of the key policies in place to engage adults in learning opportunities. A key part of the Government's strategy to tackle the stock of low-skilled adults and encourage progression to higher skills is the 'Level 2 entitlement' for adults. This entitlement gives every adult in England who has not already gained a full Level 2 qualification, equivalent to five GCSEs at grades A*-C, the opportunity to receive free tuition for a qualification at this level. As a first step, this approach was introduced from August 2004 in the North East and South East regions. In these two regions, the Level 2 entitlement is part of a linked package of support including enhanced information and advice. The entitlement will be available across England from 2006-07.

The Skills Strategy

5.62 The Government's Skills Strategy was launched in July 2003.[27] A second Skills Strategy White Paper was published in March 2005; 'Getting on in Business, Getting on at Work.' The key objectives are summarised in Box 5.5 below. The main objectives of the Skills Strategy are to improve national productivity and the strength of the economy as well as to improve the abilities and prospects for both individuals and employers. A further goal is to use skills as one of several key drivers to improve regional productivity and to close the gaps in performance between English regions.

[27] *21st Century Skills – Realising Our Potential: Individuals, Employers, Nation*, DfES, 2003.

Box 5.5: The Government's Skills Strategy

The Strategy has the following broad objectives:

- **To work in partnership with employers to enhance skills by putting their needs and priorities centre stage in the design and delivery of training for adults. The main vehicle will be the National Employer Training Programme, working alongside business support programmes to raise demand for skills to a more ambitious level.**
- **To give employers a stronger voice in shaping the supply of training at every level – nationally, regionally, locally and in each sector of the economy. Sector Skills Agreements, Skills Academies and Regional Skills Partnerships are the key levers.**
- **To support individuals in achieving their ambitions, through better information and guidance to identify the best options for them in terms of jobs, skills and training.**
- **To help all adults gain the functional skills of literacy, language and numeracy and develop wider employability skills, with more opportunities for people to progress on to skilled trade, technician, graduate and professional qualifications, going as far as their talents and drive can take them.**
- **To tackle the obstacles that people face in gaining fair access to training and jobs, including the barriers between welfare and work.**
- **To encourage the role that trades unions play in addressing skills needs and raising demand for training, recognising the shared gains for employees as well as employers that flow from greater investment in skills.**
- **To build on the existing strengths of our universities, colleges and training providers, in order to develop the capacity to deliver these benefits successfully for employers and individuals. Greater contestability should bring greater rewards for those institutions that best meet the needs of customers.**

Source: *Getting on in business, getting on at work*, DfES, 2005.

Welfare to work

5.63 The Department for Work and Pensions (DWP) is responsible for key aspects of the wider employment performance of the UK (unlike education and skills, employment and the activities of the Jobcentre Plus network are not devolved to the Scottish Parliament or to the Welsh or Northern Irish Assemblies). To maintain and achieve high employment rates, DWP is responsible for a wide range of active labour market policies including welfare to work programmes such as the New Deals and area-based initiatives such as Employment Zones and Fair Cities. DWP and DfES have joint responsibility for delivering the New Deal for Skills, a range of services for workless adults. Some 43 per cent of all jobless people lack Level 2 qualifications and over 50 per cent of lone parents and 40 per cent of individuals on Incapacity Benefit have no qualifications at all.[28]

Union learning

5.64 Trades Unions are increasingly involved in the skills agenda and are playing a key role in engaging both adults and employers, especially in workplaces where learning opportunities may have been limited in the past. The Union Learning Fund, established in 1998, has been highly effective together with the growing network of Union Learning Representatives (ULRs) in workplaces throughout the UK. There are now nearly 12,000 trained ULRs who last year alone helped over 67,000 workers back into learning.[29] The recent Skills Strategy White Paper has also announced the creation of a Union Learning Academy. The new Academy will build on training currently run by unions via ULRs, and often supported by the Union Learning Fund.

[28] *Welfare to workforce development*, National Employment Panel 2004.

[29] www.unionlearningfund.org.uk

Policies to engage employers

5.65 This section sets out the institutions and policies in place to encourage employers to train their own workforce and engage in the education and training system as a whole.

A demand-led approach

5.66 The current system for engaging employers in workforce development is moving to a more demand-led approach with the Skills for Business network and other agencies such as the National Employment Panel (NEP) taking a lead in articulating the needs of employers. Other institutions and partnerships in the system, such as the Learning and Skills Council and Regional Skills Partnerships, are also adopting a more demand-led approach informed by employers at several levels.

5.67 Employers can engage with the system in a number of ways, depending on their location and type of business needs; nationally, regionally, locally or sectorally. As explained in Annex E, improvements have been made to the way in which employers can engage in the planning and design of the system and of individual qualifications and institutions.

Skills for Business network

5.68 The Skills for Business network, comprising 25 Sector Skills Councils and the Sector Skills Development Agency (SSDA) is the main mechanism through which employers are able to influence the skills and qualifications agenda.

5.69 Sector Skills Councils (SSCs) are UK-wide, employer-led organisations, charged with the identification of skills needs and through this, in curriculum and qualification design. They will also take a lead role in the development of Skills Academies and Sector Skills Agreements and engage with Regional Skills Partnerships and devolved administrations in Scotland, Wales and Northern Ireland.

5.70 SSCs, together with employers, will also develop proposals for sector-based National Skills Academies (NSAs). NSAs will build links to sector based networks of FE colleges, CoVEs, universities, private training providers and schools as they develop. A network of 12 sector-led NSAs will be developed by 2008 and in the longer term it is expected that there will be at least one NSA for each major sector.

5.71 The main mechanism through which SSCs address employer skill needs will be through Sector Skills Agreements (SSAs). SSAs are designed to engage employers in analysis and action planning for skills required to raise performance. In England, the SSA is also the vehicle for the sector to get agreement with the LSC and Higher Education Funding Council for England (HEFCE) to reflect sector priorities in the allocation of public funds. All SSAs are scheduled to be completed by April 2007.

5.72 The main elements of SSAs (funded by the SSDA with money in addition to core SSC funding) are:

- the LSC and HEFCE will reflect the agreements, with their planning and funding decisions, so that training and qualifications identified as priorities directly drive the allocation of funds to providers and institutions;
- sectors developing effective SSAs will be given priority for Skills Academies;
- where sectors agree to introduce a training levy, the Government will introduce statutory backing for an Industry Training Board;
- within NETP and the LSC's National Employer Service, brokers will signpost employers to relevant parts of the Agreement; and
- the Curriculum and Qualifications Authority (QCA) will work with SSCs to develop Sector Qualification Strategies, rationalising current qualifications and provide a clear ladder of progression.

National Employer Training Programme

5.73 There has also been a wide range of policies aimed at increasing the amount of training undertaken by employers. The National Employer Training Programme (NETP), now also known under its brand name 'Train to Gain,' is due to be rolled out in England during 2006. It will be one of the most significant mechanisms for engaging employers in formal education and training. Its key features are described in Box 5.6.

Box 5.6: The National Employer Training Programme (Train to Gain)

The National Employer Training Programme (NETP), now branded as Train to Gain, is a key policy for engaging employers in delivering training. It builds on the success of 18 Employer Training Pilots trialled since 2002 and is being rolled out in 2006-07. The main features of the programme are:

- **a brokerage service for employers through a national network of regional and local brokers funded by the LSC. Brokers will act for employers, assess their training needs, design integrated training packages and source the best and most appropriate provision;**
- **a core offer to employers willing to give employees paid time to train of free high quality training for their employees who lack basic skills and/or a first full Level 2 qualification. including enabling employees without a Level 2 qualification to train direct to Level 3 where appropriate;**
- **support from the broker to design and source a wider training package at Level 3 and beyond (including management and leadership training) and for; non-qualifications based training to deliver high quality and value for employers;**
- **relevant, flexible, high-quality training in the workplace, or where employers require; and**
- **advice on the most appropriate training provision and qualifications, agreed by employers through their Sector Skills Councils as most relevant to their needs.**

Current pilots have supported over 26,000 employers and over 220,000 employees. There are two pilot areas (North West and the West Midlands) that will support matched funding for training in the workplace at NVQ Level 3. £20 million in 2006-07 and 2007-08 will be made available for the trial.

National Employment Panel

5.74 NEP is an employer-led organisation that advises Government on labour market policies and performance. Its principal objective is to help disadvantaged people move from worklessness into jobs that contribute to business productivity and growth. The NEP manages a UK-wide network of employer coalitions and programmes such as Fair Cities, which are designed to effectively engage employers primarily in the welfare to work agenda.

Interface with employers

5.75 The Government has recognised that since the publication of the Skills Strategy in July 2003, there has been concern about the complexity of the organisational landscape. This was also reflected in the Call for Evidence (see Annex B) and in the Foster Review's description of a *'galaxy of oversight, inspection and accreditation bodies'* governing the FE sector in England.[30]

5.76 However, as described in the recent Skills Strategy white paper, published in March 2005, *'to some extent, complexity is inevitable in such a vast system'*. The public sector alone is spending some £5 billion a year to support 3 million learners in 400 colleges and 800 other training providers, reflecting the needs of employers in 25 sectors, nine regions and 47 local LSC areas.

[30] *Realising the Potential: A Review of the Future Role of Further Education Colleges*, DfES, 2005.

5.78 The Skills Strategy White Paper made clear that an important priority and *'a major ongoing challenge to Government and the public sector agencies* (is) *to simplify, integrate, and help customers understand in simple terms what is available and how they get it'.* It also stated that individual employers do not need to get to grips with the organisational detail of the training and business support infrastructure, but need to *'experience a better, simplified, front-end service'.*[31]

The balance of responsibility for investing in skills

5.79 This section explains how Government, employers and individuals share the responsibility for investing in skills in the UK. Compulsory education is provided by Government free of charge to students and evidence confirms that this is where the greatest private and public benefits lie. Beyond compulsory education, the existing balance of funding varies widely according to the type and level of study, as well as to the status and age of the learner. The expected contribution from employers also varies across different initiatives and levels or types of study.

[31] *Getting on in Business, Getting on at Work Part 2*, DfES, 2005.

Box 5.7: Balance of funding responsibilities in England

Levels of Qualification	Government	Individuals	Employers
Basic Skills/ Skills for Life	All tuition and most direct costs.	Mainly time some direct costs (providers may charge fees).	Time off for employees.
Adult Leisure Learning	Subsidised through LEAs and through LSC provision with protected funding.	Fees paid for classes. Rising proportion of overall costs.	No contribution except for professional classes.
Basic employability training	Subsidised through Welfare to Work programme and also through Skills for Life.	No individual costs.	No direct costs.
Bespoke or Professional training	Generally no state funding. ESF may be used for bespoke training. Subsidised loans available.	Individuals may have to bear full costs of learning if not offered through employer.	Employers likely to spend most on this training though direct fees to providers.
Level 1	All tuition costs for full time 14-19 study and financial support (eg EMAs). Most tuition costs for adults and some financial support. Loans and other financial support available.	No costs if 14-19. Adults on Level 1 study can be charged fees at 27.5% of cost but planned to rise to 37.5% in 2007/8. There are no fees for adults on means tested benefits.	Some costs absorbed by employers if around Induction. Some support available through Welfare to Work.
Level 2	All tuition costs for full time 14-19 study and financial support. All tuition costs for adults without one through Level 2 entitlement or if in employment through NETP. Some costs for unemployed/ inactive adults on Welfare to Work programmes. Part funding for apprenticeships.	No costs if 14-19 or for adults without a full Level 2 via Level 2 entitlement or NETP routes. Others can be charged fees (if not their first Level 2) currently at 27.5% of course cost but planned to rise to 37.5% in 2007/08. No fees for adults on means tested benefit.	Free for employees without a first Level 2 through NETP. Time off for employees on NETP.
Level 3	All tuition costs for full time 14-19 study and financial support. Match funding will be available through NETP Level 3 pilots. Part funding through apprenticeships.	No costs if 14-19 Adults on Level 3 study can be charged fees currently at 27.5% of course cost but planned to rise to 37.5% in 2007/08.	Some tuition costs and staff time costs for employees on 'off the job' training.
Level 4/5	Most tuition costs for HE study subsidised by state. (Means tested so some learners will be more heavily subsidised).	Full time HE study requires tuition fees and state subsidised loans repayable at earnings threshold post-graduation. Adults may also study part time and incur fees.	Full costs for most training at Level 4 (for instance management and leadership programmes).
Other higher level/ technical training	Some state subsidy through DTI programmes and R&D tax credits.	Professional courses with full fees (subsidised loans available). Individuals responsible for fees (employer may make contribution).	Most costs absorbed by employers. Some subsidies available through DTI programmes and various tax credits.

Who pays for skills?

5.80 The Government, employers and individuals all invest significantly in learning through financial and other contributions. This chapter has set out the evidence on employer engagement and spending on skills and training. Individuals and employers contribute in other ways too. Both can contribute time as well as financial resources, for example there are opportunity costs for learning, either for individuals, or employers allowing employees time to study. Furthermore there is a wide range of other direct and indirect costs such as travel, learning resources and childcare costs incurred whilst attending training courses.

5.81 Responsibility for initial or basic education and for young people preparing to enter the labour market is generally that of Government. This is also the case for adults with lower levels of skills (below Level 2). However, as individuals progress in the labour market, or are learning at higher levels (specifically in higher education – see Box 5.8 below), the balance of responsibility for funding shifts either towards individuals or to employers (or to both).

5.82 In post-compulsory education, the current balance of responsibility and funding is split very broadly according to private returns to investment. Individuals are increasingly expected to pay for a proportion of higher education costs because they can expect to benefit financially from this investment over their lifetime. Employers are expected to pay for job or firm-specific training for employees if they are to gain from subsequent improvements to their profitability. There are national rates for fee remission that include people on income support.

5.83 Recent changes in the balance of responsibility for funding courses within the learning and skills sector are set out in the LSC's 'Priorities for Success: Funding for Learning and Skills 2006-2008'. The fee assumption – the level of course fees that providers should expect to collect from individuals and employers – has risen from 25 per cent to 27.5 per cent for 2005-06, which in turn means that the rate at which the LSC provides subsidy falls from 75 per cent of the overall cost to 72.5 per cent for this year.[32] Over the next two years this will rise by a further 5 percentage points in both 2006-07 and 2007-08, taking the contribution from individuals or employers up to 32.5 per cent and then 37.5 per cent. This means a step-change in the balance between what is paid for by Government, individuals and the contributions from employers to the cost of training their employees.

5.84 The Government has announced the intention to move by the end of the decade to a national fee assumption of 50 per cent compared to 27.5 per cent in 2005-06. This is described as part of a *'wider strategy to raise the level of contributions from employers and learners who can afford to pay, in order to redirect funds to support growth in priority areas of learning.'* This follows the re-organisation of funding (and re-distribution of responsibilities) for higher education in England over recent years (see Box 5.8 below).

Box 5.8: Changing balance of funding of higher education in England

The Higher Education Act of 2004 set out a new tuition fee framework for higher education in England. Fees will be charged from 2006-07. Up-front fees will be abolished and replaced with a deferrment system whereby students repay after graduation, with interest charged at the rate of inflation once they are earning above a minimum earnings threshold of £15,000 per year. If the loan has not been repaid already, it is written off twenty-five years after graduation. A maintenance grant of £2,700 each year for the poorest students will be available from 2006-07.

This adjustment to the higher education fees policy reflects a fairer allocation of the costs and benefits of study whilst simultaneously allowing the higher education sector to grow and to help meet its 50 per cent participation target. Greater investment in universities also comes from expansions to research budgets.

[32] The national fee assumption provides a general guide for colleges and other providers. Some providers may choose not to collect fees and all have flexibility to vary the level of fees they charge for any programme.

CONCLUSION

5.85 This chapter has described how employers and individuals contribute to the skills profile of the UK. It also sets out the institutions and policies that the Government has in place to improve skills and engage learners and employers. However, for improvements in the 'flow' of skills into the economy to have an impact on productivity and growth, the way in which employers diagnose and respond to their skill requirements is critical. It is also vital that employers' demands are clearly articulated and that the education and training system can respond appropriately.

5.86 Greater engagement of employers and individuals is critical to achieving improvements in the UK skills profile. Employers already contribute significantly, through time and funds, to the training of their existing employees. However, participation in education or training is much lower for those individuals who are out of work, or in work, but with lower levels of qualifications.

6 Issues and next steps for the review

Chapter summary

The Leitch Review was commissioned by the Government to identify the UK's optimal skills mix in 2020 to maximise economic growth, productivity and social justice and to consider the policy implications of achieving the required level of change.

The Leitch Review will report its conclusions and recommendations to the Government in 2006. Over the next phase of the Review, it will consider:

- **the skills profile that the UK should aim to achieve in 2020 in order to drive growth, productivity and support social justice over the longer term;**
- **the appropriate balance of responsibility between Government, employers and individuals for the action required to meet this level of change; and**
- **the policy framework required to support this.**

6.1 The analysis set out in this report suggests that without further improvement, the UK's skills base risks constraining long-term growth, prosperity and improvements in social justice. Although the Government already has targets in place to improve the nation's skills by 2010, this report suggests the urgent need to be even more ambitious. This analysis raises key questions about the scale of ambition necessary and the most effective way to rise to this challenge.

Skills and the UK's prosperity

6.2 Chapter 1 presents the evidence on the increasing importance of skills to the UK economy and society. Looking ahead to 2020, skills are likely to become even more important as a result of global economic trends; increasing the need for the UK to have a world-class skills base. As described in Chapter 2, although the skills base of the UK has improved over the last decade, significant problems remain. For example, there is a large stock of adults who do not have functional literacy and numeracy.

6.3 New analysis presented in Chapter 3 models the supply of skills in the economy and shows that meeting the Government's current ambitions for improving skills will result in significant improvments by 2020. The proportion of adults without qualifications at the equivalent level of five GCSEs at grades A*-C will halve (from 31 per cent today to 16 per cent in 2020); the proportion of adults without any qualification would fall by two thirds to 4 per cent; and by 2020 almost four in ten adults would hold at least a degree-level qualification. Chapter 4 shows the extent to which the economy would benefit from these improvements; productivity would be 3 per cent higher and employment would increase by 275-325,000. The net average annual benefit to the economy of £2.9-3.1 billion is equivalent to around 0.3 per cent of GDP.

A greater ambition for 2020

6.4 Although it will be challenging to meet the targets currently set by Government for 2010 and to sustain momentum beyond this date, it is clear that an even greater ambition is required in order to meet the challenges ahead and improve the UK's comparative skills profile. Occupational trends set out in Chapter 3 show that changes in the labour market over the next 15 years could lead to even greater disadvantage for some groups (particularly adults with skills) as the economy requires an ever-shrinking number of lower-skilled workers. At the top end of the spectrum, there are relatively few highly-skilled people currently out of work: moving further toward a more highly-skilled and productive economy will therefore require an increased supply of workers with high-level skills as well as making better use of the existing supply of such workers.

6.5 The analysis in Chapter 4 quantifies the benefits of investing further in the skills base in the UK. However, the analysis set out in Chapter 4 makes no assumptions about how to finance the additional investment required; how the skills should be delivered; or whether there is capacity within the existing system to achieve further improvements by 2020. These are all key issues to be addressed in the next phase of the Review.

6.6 As set out in Chapter 5, employers are already doing a great deal to train their workforce, engaging with the education and training system and using their employees' skills productively. The Government has an extensive policy framework in place to encourage this behaviour as well as to improve the quality of formal education and to help individuals overcome the barriers to training that they face after they leave full-time education. It will be necessary to build on this shared responsibility between Government, employers and individuals to achieve a greater ambition for skills in 2020.

AMBITION FOR THE UK'S SKILLS PROFILE IN 2020

6.7 The UK is already making good progress in improving its skill profile and has stretching targets in place to improve the nation's skills by 2010. Although meeting current targets will be a significant challenge, the Review believes that in order to support growth and rise to the challenge of a high-skill economy in 2020, the UK will need to be even more ambitious. Further improvements must be made to the stock of skills in the working age population:

- it is not possible to rely solely on the flow of better-qualified young people to drive further change by 2020. Seven out of ten of the workforce in 15 years time have already finished compulsory education;
- further action is required to reduce the stock of adults without basic literacy and numeracy skills and to encourage progression to Level 2 and beyond to enable expansion of the economy's capacity in higher-end skills; and
- at the higher end of the spectrum in particular, further consideration must be given to whether people have the right incentives to gain skills that are commercially valuable and support innovation.

Setting priorities

6.8 The next phase of the Review will set out a comprehensive ambition for developing skills in the UK by 2020, balancing the need to prioritise different types and levels of skills. As Chapter 1 sets out, developing the country's skills can drive growth and productivity in a number of ways. Chapter 4 illustrates that investing in high-level skills brings disproportionate benefits to productivity, while investing in lower-level skills results in disproportionate gains to employment. Consideration of the longer-term economic and social aspirations for the country will inform analysis of the skills profile that the UK should aim to achieve.

6.9 Setting an ambition for developing human capital over the next 15 years will require consideration of these objectives, alongside others, such as improving the UK's comparative skills profile. The Review will also explore the impact of targeting investment in skills in order to support wider social objectives, for example, improving social mobility; addressing the needs of disadvantaged groups in the labour market; and reducing geographical disparities, by targeting skills policy to help address differences in regional growth.

Quality of skills and their use

6.10 The skills profile that the UK should aim to achieve in 2020 will need to be more ambitious in terms of both the quantity and *quality* of the skills acquired. The type of skills that people attain and their relevance to the labour market will dictate the extent to which the desired improvements in productivity can be achieved. However, the economic benefit of improving the skills of the population depends upon ensuring that the skills acquired are relevant to the needs of employers as well as used productively in work. The production strategies and deployment of skills within organisations will be critical.

6.11 The next phase of the Review must build on the analysis of the supply of *qualifications* and take a broader view of the type of skills required in the labour market, in particular:

- vocational and technical skills;
- generic skills – including those that are more likely to improve people's employability and management capability; and
- the skills necessary to drive innovation.

6.12 A key challenge will be to ensure that economic benefits, such as those quantified in Chapter 4, can be realised by increasing the supply of skills in the economy. Overall, improved productivity requires a joint response from employers, individuals and the Government.

BALANCE OF RESPONSIBILITY

6.13 To date, the Government, employers, individuals and their representatives have cooperated in driving change and have benefited from doing so. It will be necessary to build on this partnership to deliver a greater ambition for skills in the UK and ensure that the country reaps the benefits.

6.14 There is a clear need to build consensus between the Government, employer representatives as well as trades unions about this joint responsibility in order to achieve change. As Chapter 4 explains, there are significant net gains from investing in skills; individuals stand to gain personally, as do businesses and society as a whole.

6.15 As Chapter 5 discusses, the Government, employers and individuals are already investing in human capital. It is important that these resources are used effectively in developing the UK's skills profile over the medium-term. Government investment and intervention should be focused where incentives and facilities do not exist for individuals to develop their own skills or for employers to train their employees. Government intervention should help individuals and employers to overcome barriers that prevent them training. Where there are incentives for individuals and employers to invest in their own human capital, it is important that maximum use is made of the skills acquired. The productive use of skills requires a tangible commitment from management to develop organisational and production processes that deploy the skills of their workforce effectively.

6.16 The Review must consider whether the current balance of responsibility is appropriate and sustainable in achieving the ambition it sets for the UK's skills profile in 2020. This will require an assessment of how incentives differ between types of organisations in the economy, for example public and private, or large and small employers in different sectors.

FRAMEWORK FOR IMPROVEMENT

6.17 The ambition for developing skills in 2020 will require acceleration from current rates of progress. The next phase of the Review will consider the scale of change required and the implications of this challenge. There will be policy implications for setting and delivering an ambition for the UK's skills in 2020 and supporting the appropriate engagement of individuals and employers.

6.18 In those areas where more progress is required, the Review will consider the barriers or market failures that prevent individuals and employers investing in their own skills and the skills of their employees. It is very difficult to quantify the extent to which different market failures are at work, but this is a useful framework for considering the most appropriate forms of government intervention.

6.19 As shown in Chapter 5, there is already an extensive institutional framework and a range of policies in place to drive changes in the skills of the UK workforce and how they are used in the economy. The challenge for the Government is to ensure that these departments and agencies deliver the skills that employers and the economy require over the long-term and also effectively address the key barriers that individuals and employers face in further developing their skills.

6.20 There is a clear challenge to organisations with a remit to articulate employer demands and to delivery organisations with a remit to respond to those needs at all levels (regionally and sectorally). In particular, it will be vital to ensure that:

- individuals are themselves committed to becoming more skilled, developing their talents and using their skills productively;
- skills are provided flexibly, facilitate progression and are responsive to the needs of employers and the longer-term needs of the economy; and
- employers are even more engaged in the education and training system, continuing to invest in training and using the skills of their workforce productively.

6.21 In considering the policy framework required to deliver the scale of change necessary, the Review will look at the different approaches taken to skills development by the devolved administrations in the UK as well as in comparator countries. For example, historical and philosophical differences have led to an education and training system in Scotland that looks very different to the English model described in Chapter 5 and partly as a result of this, the skills profiles of these countries, and the rates of progress that they are achieving, differ.

NEXT STEPS

6.22 The Review understands how important it is for the Government to respond effectively to global economic challenges, securing long-term growth for the UK and building on the country's impressive employment rate, while supporting social justice. The analysis in this report has shown that developing the UK's human capital will be critical to unlocking the economy's potential; ensuring that more people can work and be productive in work. A clear ambition for developing skills in the UK by 2020 is critical. Achieving this will require commitment from the Government, those providing education and training, employers, trades unions and individuals to work together.

6.23 The next phase of the Review will address three issues:

- the skills profile that the UK should aim to achieve in 2020 in order to drive growth, productivity and support social justice over the longer-term;
- the appropriate balance of responsibility between the Government, employers and individuals for the action required to meet this level of change; and
- the policy framework required to support this.

6.24 The Leitch Review will report its conclusions and recommendations to the Government in 2006.