

 For information

 LSC

Leading learning and skills

Skills in England 2004 Volume 1: Key Messages

July 2005

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



Skills in England 2004 is presented in four volumes. Volume 1 provides key messages and an overview of the research findings in the other three volumes. Volume 2 is the main research report. It contains separate chapters on the demand for and supply of skills as well as mismatches between demand and supply. Finally, Volumes 3 and 4 provide evidence related to industrial sector, and regional and local trends respectively.

Skills in England 2004 has been produced by the Learning and Skills Council (LSC) in partnership with the Department for Education and Skills (DfES) and Sector Skills Development Agency (SSDA)

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Foreword



I am very pleased to introduce *Skills in England 2004*. This is the fourth in an annual series of national skills assessments produced by the Learning and Skills Council (LSC) in collaboration with its key partners.

Skills in England 2004 draws upon current analysis, particularly on the demand and supply of skills in England. It is a cross-government publication with views from major departments and agencies involved in the government's skills agenda, helping to identify and focus on priorities. The findings are critical in helping the LSC achieve improvements in transforming learning and skills, including help fulfil its strategic objectives in:

- economic development to provide the skills needed to help all individuals into jobs and to keep them
- collaborating with partners at a national and sectoral level to identify the skills most crucial for economic prosperity; and
- working effectively at a regional level – particularly with regional development agencies and regional skills partnerships.

The report warns that unless Britain has the requisite stock of skills, including entrepreneurship, innovation, and technical capability, then the goal of achieving a high-value added, high-productivity economy would remain elusive. One of the ways to achieve this will be to ensure that skills strategies go hand-in-hand with those policies and strategies that aim to increase levels of capital investment within companies, develop new products and processes, and capture new markets.

And while young people are now leaving Britain's education system with higher-level, more relevant qualifications, there are still a substantial proportion of young people who lack the skills necessary for the workplace. The LSC is determined to transform the outcomes for learners and employers, to ensure that the productivity, employability and lifetime earnings of these groups are not hampered by low skill levels.

Whilst important, skills are only part of the policy mixture necessary to create a more prosperous and socially inclusive Britain and that is why the LSC's work with key partners and stakeholders is critical to help drive forward improvements in the learning and skills development opportunities available to employers and individuals.

In closing, may I take this opportunity to commend *Skills in England 2004* to all those who are interested and have a role to play in driving forward the nation's skills agenda. The LSC looks forward to working with you to help achieve world class skills for a more competitive economy.

Christopher N Banks CBE

Chairman, Learning and Skills Council

Summary

The overarching message is that **skills matter**: for individuals, organisations, and society more generally. This point cannot be made too strongly. Unless the UK has the requisite stock of skills, including entrepreneurship, innovation, managerial effectiveness and technical capability, then the goal of achieving a high-value-added, high-productivity economy will remain elusive.

But **adult skills formation is not a panacea**. First, the vocational education and training (VET) system cannot help all individuals who do not fulfil their potential while in the education system. Second, skills strategies need to go hand-in-hand with those policies and strategies that seek, among other things, to increase levels of capital investment within companies, develop new products and processes and capture new markets.

Many of the key messages highlight longstanding themes, and many reflect concerns that are currently being addressed by government policy:

- Ultimately, the performance of the UK economy is dependent upon the abilities the population can bring to the labour market. Of course, skills are not the only thing that matter and, as with other investments, it is important to channel resources to those areas with the highest return.
- The world economy is becoming more open. The increasing capacity of countries such as China and India to produce goods and services at a much lower price than in the UK, has seen work being transferred to these locations. The most constructive response to this development, for employers faced with global competition, is to develop or move into markets where they are not at a price disadvantage.
- This means UK firms becoming increasingly focused on knowledge-intensive, high-value-added, high-productivity activities. But for any country, the sustainable shift into higher-value-added markets is a formidable challenge. At the very least, it requires a mix of entrepreneurial flair, the effective deployment of skills and access to capital investment.
- On the credit side, the most recent evidence suggests that the UK's competitiveness is improving. Recent years have seen a narrowing of the productivity gap between the UK and its major competitors. But there is still concern that output per hour is less than that recorded in France, Germany and the USA.
- The latest evidence suggests that the gap with France and Germany arises primarily from a lower level of capital investment. The major difference between the UK and the USA relates to total factor productivity. The most plausible explanations for this are first, more efficient systems of work organisation; and second, greater levels of Information Communication Technology (ICT) diffusion in the USA. But skills cannot be discounted from the explanation of differences between either France and Germany or the USA. The capacity of organisations to capture capital investment or create high performance work organisations will depend upon the ability of management to foster the necessary skills.
- This highlights the crucial importance of **management skills**: the ability to create a successful strategic vision for an organisation, to implement it and deploy the labour force effectively. The UK needs to improve its management skills. But as management skills are improved and the strategic outlook of business alters, this is likely to give rise to a demand for other higher-level skills within organisations.
- The shift to an even more service-oriented economy, and the greater availability to firms of data about consumption patterns, creates a demand for **customer and information-handling skills** at all levels. Competitive advantage can be readily fostered through knowing more about the customer and being able to manage that information effectively to deliver goods or services matching their specific requirements as well as to generate new business.
- There are also problems relating to certain technical skills (often sector specific). These include recruitment problems for many skilled trade and associate professional occupations, which persistently top the rankings in terms of skill-shortage vacancies.
- The UK's education system is now producing a much greater number of young people with formal, higher-level qualifications, but it still leaves a substantial proportion of young people who lack any formal qualifications or who are deficient in basic skills. The employability and lifetime earnings of this group are hampered by their skill deficiencies.
- As noted above, skills are not a panacea. Developing **high-performance workplaces** is, for instance, also dependent upon capital investment. Improving the lot of the most skill-deficient in society is dependent upon a much wider range of policies that are designed to combat social exclusion. Skills, whilst important, are only part of the policy mixture necessary to create a more prosperous and socially inclusive nation.

Introduction



1.1

The UK labour market currently exhibits many positive features, not least of which are historically high levels of employment and low levels of unemployment. The principal weakness ascribed to the national labour market is one of relatively low productivity compared with principal competitor nations. Domestically, there has been concern for many decades that too much economic activity has been concentrated in relatively low-value-added activities. The UK has both failed to retain its position in many key market areas and failed to capture many new markets based on high-value-added products and services as they have emerged.

The UK labour market is relatively strong although some weaknesses remain. Productivity and the stock of skills are improving.



1.2

From a policy perspective, creating conditions of socially inclusive full employment and high-productivity employment is always something of a fine balancing act. It is a moot point whether some of the UK's competitors have achieved the latter at the expense of the former.

1.3

But things are changing. For instance, UK productivity per worker, if not per hour worked, is now similar to that of Germany. The stock of skills in the economy, measured by qualifications, has shown steady improvement. And the evidence points to positive rates of return related to the acquisition of formal qualifications, despite the huge increase in educational participation.

1.4

As in previous years, *Skills in England 2004* is a four-volume publication. This is Volume 1 and covers the key messages. The vast array of evidence from which this report has been distilled can be found in Volume 2 which is the main research report. Volumes 3 and 4 provide sectoral and regional perspectives respectively.

The Economic Context

The economic environment for investment in skills remains favourable. But the benefits of economic prosperity have not been shared equally.

1.5

The economic environment in which decisions relating to skills are being taken can explain much about an individual's or an employer's behaviour. The present economic environment provides a favourable one in which to invest in skills:

- Gross Domestic Product (GDP) growth, though slackening, has been growing steadily at around 2 per cent a year for some time.
- Inflation is low.
- Levels of unemployment are at a historically low level.
- Though the growth in the size of the workforce has slowed, employment levels are also at historically high levels.
- All the indicators suggest a positive rate of return to investing in skills.

1.6

But the benefits of economic prosperity have not been shared equally between the regions. For instance, GDP per capita in London has been estimated as 54 per cent greater than in the UK as a whole. Productivity differences between the regions are largely explained by skills (as measured by occupational employment structure). HM Treasury (2001) comments:

Recent studies conclude that variations in the UK regions' skill composition are the major factor in explaining regional variations in productivity.

HM Treasury and Department of Trade and Industry (DTI) (2001) *Productivity in the UK 3: The regional dimension*, London: HM Treasury, page 15.

1.7

The DTI, HM Treasury and others have developed the notion of five key drivers of productivity. These are investment, innovation, enterprise, competition and skills. While last in this list, skills are far from being the least important of the factors driving productivity improvements. Indeed, a case can be made that skills play a key role in all the other drivers mentioned.

1.8

There are some significant differences in productivity between industrial sectors. In some respects the low skills equilibrium debate is sector specific. There are industries in which relatively low-value-added products or services, produced through largely low-skill, labour-intensive systems of production, are the norm. Organisations operating in the low-skills equilibrium sector of the economy typically have the following characteristics:

- They produce primarily or wholly for the local or domestic market.
- They face little threat from cheap imports, for the time being at least.
- They often rely upon labour-intensive production systems.
- They produce goods or services with low margins.

1.9

Despite the above qualifications, the general outlook for the economy and labour market remains favourable. In the most recent national employment projections currently available, total employment is expected to grow over the medium term by around 1.5 million jobs to 2012, although most of the growth will be accounted for by part-time jobs.

Defining Skills

1.10

The National Skills Task Force (2000) has defined skill in the following terms:

At the core of the term skill is the idea of competence or proficiency [...] Skill is the ability to perform a task to a pre-defined standard of competence [...] but also connotes a dimension of increasing ability (for example a hierarchy of skill). Skills therefore go hand in hand with knowledge.

National Skills Task Force (2000) *Skills for All*, Nottingham: DfEE page 21.

In essence, the focus is on those characteristics that allow individuals to enter and progress through the labour market in a sustainable fashion and that contribute positively to the relative economic performance of the country.

1.11

Skills can be measured in a number of different ways. The most traditional approach has focused upon **occupation** and **qualification**. Qualifications tend to be a better indicator of the initial endowments of an individual after completing a course of education or training, rather than the skills actually deployed by the individual in a job.

1.12

In recent years, increasing emphasis has been placed on measuring the skills actually required or deployed in particular jobs. Much greater emphasis is now being placed on technical skills (related to some form of abstract knowledge of a subject matter) and generic skills (often related to psychological traits and personal characteristics as much as abstract knowledge).

1.13

There have also been attempts to develop hierarchies of skills, rising from those basic skills required to obtain employment even at the most rudimentary level to those that make possible entry at a higher occupational level and progression through the labour market and/or organisation.

1.14

Overlapping these distinctions is the difference between transferable skills and organisation or sector-specific skills. In between, there is a range of skills that are transferable between a limited set of industries. It is likely that no simple definition of skills will suffice and that all these measures need to be used.

Skill refers to those characteristics or capabilities that allow people to enter and progress through the labour market. Skills can be measured in a number of different ways – of which occupation and qualification are the most common. But other aspects of skill have become increasingly important.



Why Skills Matter

Skills are associated with positive rates of return to the individual, the employer and the State.

There are substantial wage premia for acquiring qualifications, especially degrees. Skills also improve the employability of individuals.

1.15

Skills matter to individuals, to employers and to the State for a whole variety of reasons. There are significant benefits for:

- **Individuals** – possession of higher-level skills, typically measured by formal qualifications or duration of education, increases the probability of being in employment, and contributes to higher earnings in employment.
- **Employers** – a workforce that is relatively highly skilled is associated with higher productivity and often with a product market strategy that is aligned to operating in higher-value-added markets. It also contributes, critically, to an organisational culture that is adaptable and responsive to change.
- **The State** – higher-level earnings and improved profitability of employers generates high tax revenue, and lower expenditure on benefits where unemployment and economic inactivity are lowered. Skills can also be an engine for economic development and growth as well as being a source of continuing improvement in quality of life for citizens.

The benefits to the individual, the employer, and the State are explored in greater detail below.

Why skills matter for individuals

1.16

Research conducted by the Centre for the Economics of Education and others suggests that individuals obtaining additional qualifications benefit from higher earnings. Despite the growth in post-compulsory education over recent years this relationship persists, especially for graduates. The latest research suggests that although real incomes for recent graduates have fallen compared with that of previous cohorts, they still earn considerably more than those with the next lowest level of qualification.

The wage premium associated with a university degree remains substantial.

1.17

The evidence on the private rates of return to obtaining qualifications is a little more ambivalent than that for simple earnings differentials. In part, the ambivalence stems from changes to the way in which higher education is financed. The more that individuals have to bear the full cost of their education, other things being equal, the lower the rate of return. The general consensus remains that there is a strong positive private rate of return to education for most higher-level and many intermediate-level qualifications. However, both the levels and trends over time do vary significantly between qualifications.

1.18

A second important benefit of skills to the individual is that they increase employability. Evidence demonstrates that possession of skills is necessary to enter employment, sustain that status and achieve some form of progression through the labour market. Evidence relating to social exclusion demonstrates that, in part, those in poverty – defined as being below 60 per cent of the income of the median household after adjusting for household composition – have become worse off in a relative sense because changes in the demand for skills have benefited the more highly skilled (as revealed by increased levels of wage dispersion). More generally, investment in education and training tends to increase the probability of an individual finding and retaining a job.

Why skills matter for employers

1.19

Without the skills necessary to produce whatever goods or services they sell, employers would be unable to achieve their most basic objectives. However, it is clear that organisations often face a choice about the product and skill strategies and trajectories they follow. These choices can result in very different outcomes.

1.20

The benefits to organisations from having a more highly-skilled workforce are becoming more apparent, especially in terms of productivity. However, recent research has found it rather more difficult to demonstrate that increasing the level of skills within a firm will improve its bottom line business performance (profitability).

1.21

The programme of research funded by the Department for Education and Skills (DfES) and based on the National Employers Skill Surveys reveals that there is a symbiotic relationship between skills and organisational performance. Organisations that have more highly developed skills tend to have more developed product market strategies. Therefore these organisations are more likely to:

- pursue and capture higher-value-added markets
- be using the latest technologies, both within their products and in the processes used to produce them
- consider themselves to be operating at the leading edge of their field.

1.22

The importance of this finding cannot be underestimated. Given the threat posed by global competition, where the trend is increasingly towards more open world markets, producers in the UK increasingly need to concentrate on activities that are less price-dependent.

1.23

Research that has examined high-performance workplaces (HPWs) and high-level work practices (HLWPs) demonstrates that the role of workforce development in promoting business performance cannot be divorced from:

- the wider set of human resource practices
- the product market strategy of the organisation.

Research addressing three specific working practices (training, compensation linked to worker or firm performance, and employee involvement in decision-making) provides evidence of the contribution training makes to improved company performance. But the main conclusion is that, while all three practices appear independently to improve organisational performance, these positive effects appear to be mutually reinforcing. The impact on productivity of systems of interrelated practices appears to be greater than the sum of the independent contributions.

Why skills matter for the State

1.24

The importance of individuals, employers and the State investing in skills relates to the impact on the overall performance of the economy. The evidence of a positive link between skills, earnings and productivity provides a central plank in any strategy to address the perceived weakness of the economy in terms of its relatively poor productivity compared with competitor countries.

Employers benefit from having a more highly skilled workforce.

But within organisations the relationship between skills and performance is complex. The key to understanding the relationship is product market strategy.

Higher level skills are associated with more highly developed product market strategies. Skills also need to be seen in the light of the wider set of human resource practices that encourage worker motivation.

Skills are an important part of the strategy to improve the nation's productivity. Although other factors are also important ... and a productivity gap remains.



1.25

The five drivers of productivity performance identified by the DTI and HM Treasury all have a skills dimension. Without the necessary skills at some level within an organisation, investment, innovation, and enterprise – which all lead to improved competitiveness – are unlikely to materialise. Therefore, in a very real sense, skills are the most important of all the drivers of productivity performance.

1.26

Output per hour worked in the UK remains lower than in most competitor countries. The gap is as much as 40 per cent compared with the USA in the market goods sector, and 20 per cent below that of Germany and France. Part of the explanation is that the UK has been more successful at getting people into jobs. In other words, the average level of labour productivity in the UK might be raised were marginal workers not included in the employed workforce.

1.27

Even if it were accepted that such a change was desirable (which on the grounds of social inclusion it is clearly not), this is unlikely to be the whole explanation. The evidence suggests that capital investment per hour worked in the UK is still lower than that in Germany or France. In the USA, the evidence suggests that the difference is accounted for by total factor productivity, linked to more effective working practices and greater ICT usage. All three of these explanations for productivity differences also have skills implications.

1.28

There are undoubted problems in comparing productivity levels across countries. What is perhaps clearer from the available evidence is the direction of change. Recent evidence suggests that the UK has improved its relative productivity position over the past decade. There is likely to be a number of different reasons for the improvement, but it is inconceivable that improvements in the VET system have not played a substantial part.

1.29

Nevertheless a productivity gap remains. The gap is likely to be related, at least in part, to the following factors.

- First, that it is the mix of goods and services that is the problem, with the UK failing to produce enough goods and services at the higher end of the value-added spectrum. The preparedness and capability of UK management to lead the nation into higher-value-added markets remains a key issue.
- Second, that ICT remains a significant driver of productivity improvement. Investment in ICT and its impact on the demand for ICT skills relative to the available supply will remain a key factor.
- Finally, that the long-tail to the distribution of skills in the UK results in a relatively high proportion of people lacking formal qualifications and basic skills. This remains a major concern.

Which Skills Matter?

1.30

The synthesis of the available evidence reported in Volume 2 of *Skills in England 2004* suggests that the most important skills can be characterised under six main headings:

- skills that are in areas of rapidly growing demand
- the need to replace those leaving the workforce in certain key areas, even where employment is expected to decline
- the current skill shortages and problems faced by employers
- skills that will improve the UK's relative economic performance and those associated with HPWs or HLWPs
- the continuing importance of ICT skills
- skills that will improve the employability of those deficient in basic skills.

Each of these is considered in turn.

1.31

It is clear that structural changes in the economy and the labour market are likely to lead to substantial changes in the future pattern of demand for skills as proxied by occupation. In particular, there is:

- a continuing shift towards higher-level managerial, professional and associate level occupations (often associated with a need for higher-level formal qualifications)
- increasing demand for information-handling skills at all levels
- increasing demand for communication skills, and especially customer-handling skills, again at all levels.

1.32

There are also important skill needs in areas where employment levels are projected to decline, but where there are still many people employed, some of whom will need to be replaced as older workers retire from the workforce over the next decade. Such replacement demands for skills may be some of the most difficult to meet, since they are in areas that are often perceived as being in decline.

1.33

Evidence from employers skills surveys about current skill difficulties reveals that employers face difficulties in finding both some technical skills (often sector specific) as well as certain generic skills, such as those related to customer service. The former include problems for many skilled trade and associate professional occupations, which invariably come out top of the rankings in terms of skill-shortage vacancies. Many of these occupations remain highly segregated by gender and there is a growing concern that recruitment problems in these areas may be related to the difficulties of attracting women into such jobs.

1.34

The customer service skill set is not entirely a generic skill, nor purely a matter of personal attitude and disposition. Customer-handling typically requires a mix of different types of skill, including:

- being able to deal with customers in a friendly and polite manner (a generic skill, bordering on psychological trait)
- being able to handle customers firmly where necessary (generic skill)
- having a good product knowledge (technical skill)
- possessing knowledge of the wider product market range so as to sell further products as necessary; that is, recognising a sales opportunity (technical skill)
- following up customers to obtain their views on the service or product provided.

A number of key skill needs can be identified.

Future employment growth will result in demands for various specific types of skill. But even where employment is in decline, there will be a strong demand for skills. Customer handling skills will be increasingly important.



The skill needs of high performance workplaces are specific but will generally include management skills. Skills related to information processing will be vitally important for the future. But more basic skills will also be needed amongst the workforce in general.

1.35

Improving national economic performance has much to do with creating HPWs and ensuring that HLWPs are diffused. The evidence relating to product strategy, and developing HLWPs consistent with this, emphasises the need to develop management skills. The evidence provides many examples of the economy's relative weakness in relation to management skills. From the analyses of product market strategies, skill formation and organisational performance based on the employers skills surveys, the clear message is the need for management who are able to:

- identify new markets
- develop products and processes (for example, innovation and marketing to capture new markets)
- develop or acquire skills such that the workforce is able to produce the quantity and quality required to sustain a presence in any new market
- deploy skills effectively and ensure that human resources practices are in place to support such deployment.

1.36

Central to the improvement of the UK's economic performance is the diffusion of ICT. ICT increases the scope to process information. This provides substantial opportunities for employers to improve the data flow relating to product quality, production flows and customer information. There has been speculation that the difference in productivity between the UK and the USA is explained by the greater diffusion of ICT in the USA. The potential use of ICT not only allows for greater automation (thereby displacing some employees, often those in lower skilled occupations) but increases the opportunity to develop more tailored products and services, as well as to market those products and services. What is much less clear is whether the further diffusion of ICT is limited by the availability of relevant skills.

1.37

Improving the operation of the labour market is not simply about improving higher- and intermediate-level skills but also, at a more fundamental level, providing all employees with the basic skills needed to operate in a modern economy. The Government has set out targets to improve the acquisition of basic skills and the means to achieve this.

The Demand for and Supply of Skills

The demand for skills

1.38

The demand for skills is derived from the demand for goods and services that people are employed to provide. Changes in the latter are reflected in changing patterns of sectoral employment. Figure 1 illustrates this, focusing on broad sectors. The period covered (1982 to 2003) captures a time when there was quite a sharp shift in employment towards the service sector and during which many traditional areas of employment continued to decline.

1.39

Figure 1 highlights a number of significant changes. In common with most other developed economies, the UK has seen dramatic shifts in the sectoral structure of employment over the last few decades. Many traditional areas of employment have witnessed large job losses. This has had a direct impact on the demand for many skills. Large falls in employment have taken place in the primary and utilities sector. Agriculture and mining have experienced steady job decline but, more recently, the utilities have also seen sharp job losses, especially following privatisation. Job losses have been greater still in manufacturing. A combination of the pressures of international competition and the continuing process of specialisation and subcontracting has resulted in severe contraction for many parts of the manufacturing sector.

1.40

The patterns underlying the employment changes presented in Figure 1 are complex and include:

- outsourcing of functions (for example, cleaning, security and so on) within the production sector to the service sector
- technical change which has resulted in automation substituting for jobs and allowing some functions to be outsourced
- rising real incomes, which have resulted in people spending more of their income on leisure and entertainment, as well as on health care and education
- transference of some jobs, typically in manufacturing but increasingly in data processing, to locations abroad with much lower labour costs.

As a consequence, there have been increases in employment in business services, distribution and transport, and non-market services, including health and education.

1.41

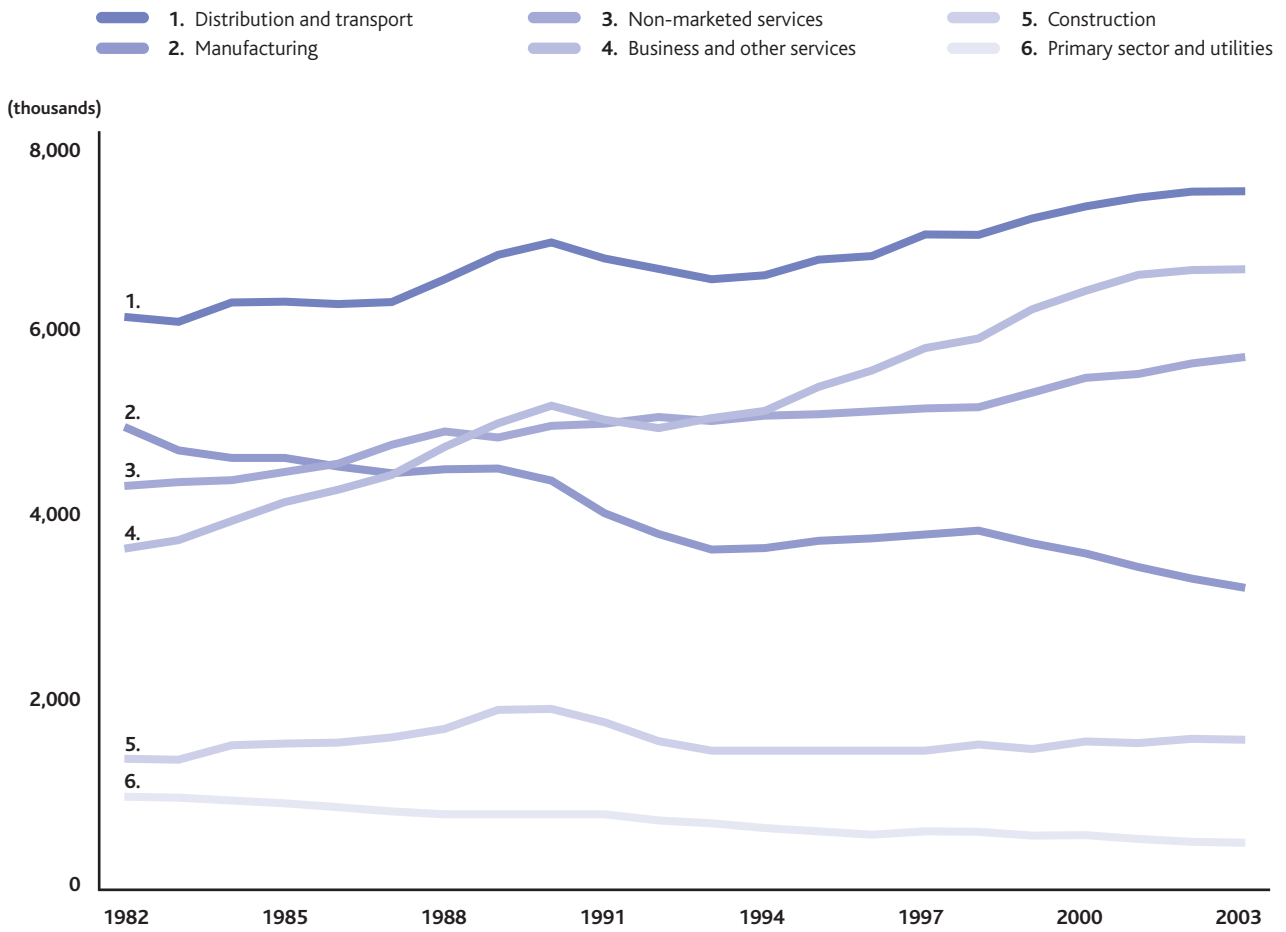
Sectoral change has implications for occupational change (see Figure 2). Two main patterns are discernible over recent years; these are:

- the increase in the share and number of people employed in managerial, professional and service occupations (so-called higher-level occupations)
- the decline in the share and number employed in lower-level manual and non-manual occupations.

In summary, the changing occupational structure of employment demonstrates that the skill intensity of work is increasing overall. But this trend has distinct sectoral and regional characteristics.

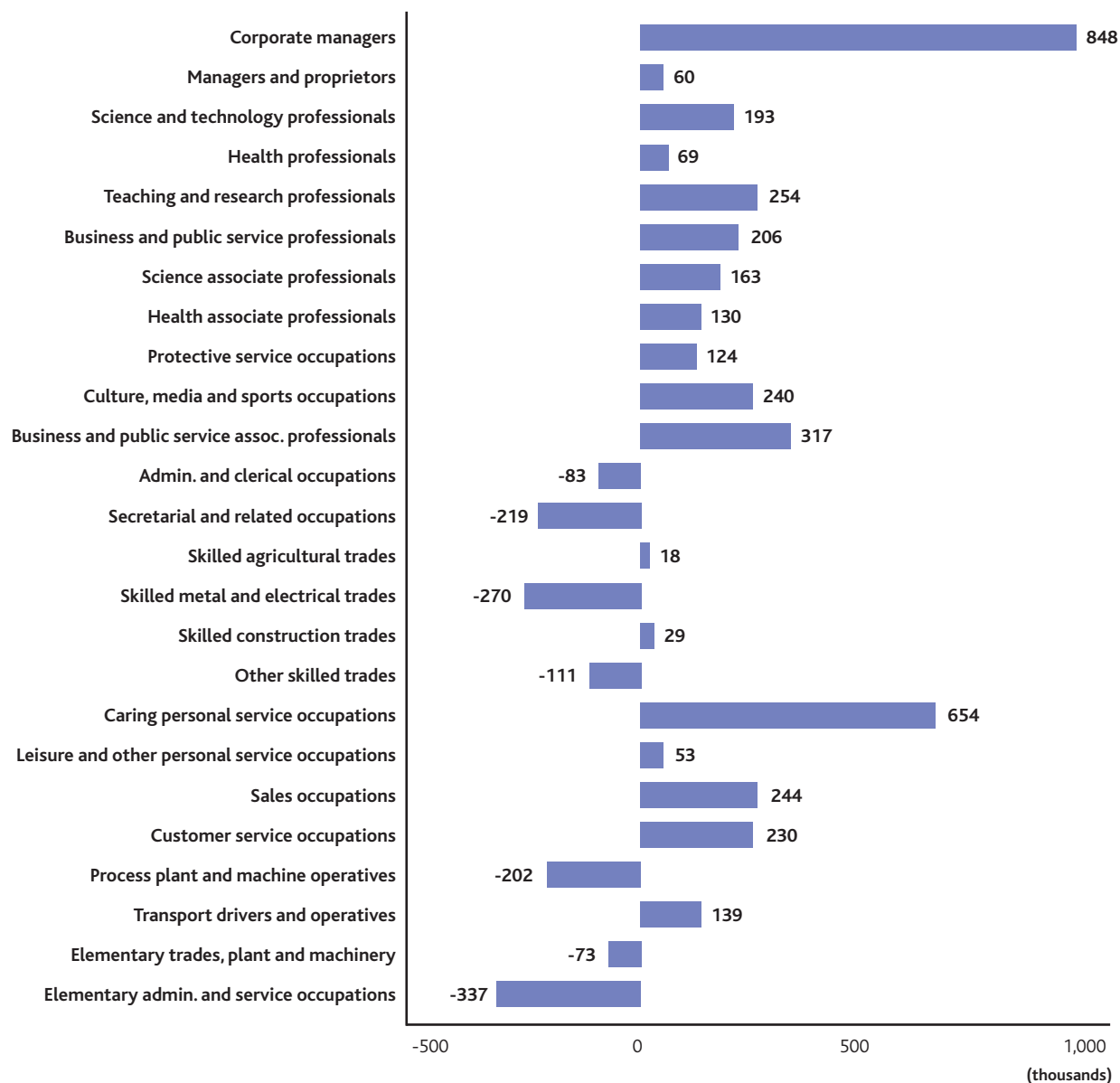
There has been a sharp shift in the pattern of demand for skills over recent years. There have been dramatic changes in the structure of employment, with a continued fall in manufacturing employment. But this decline has been more than offset by employment growth in services..

Figure 1: Employment trends by sector, England 1982 to 2003.



Source: IER/CE estimates, based on Wilson et al. (2004) (see also *Skills in England 2004*, Volume 2, Figure 2.1)

Figure 2: Occupational change by SOC sub-major group, England 1993 to 2003.



Source: IER/CE estimates, based on Wilson et al. (2004) (see also *Skills in England 2004*, Volume 2, Figure 2.7)

Notes: SOC = standard occupational classification.

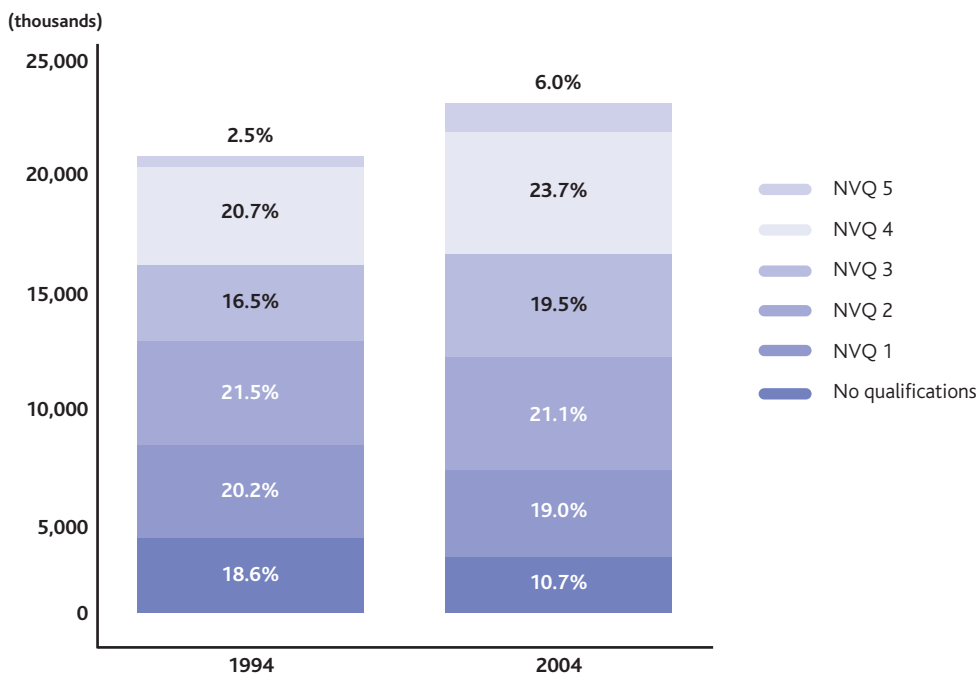
The skill intensity of employment, as measured by shifting patterns of occupational employment and the proportion of the workforce with formal qualifications has risen.

1.42

The rising skill intensity of employment as measured by shifting patterns of occupational employment has been complemented by the growth in qualifications held by the workforce (see Figure 3). In 1994, 40 per cent of those in employment had a qualification at Level 3 or higher. By 2004, the corresponding figure was 50 per cent (although as noted below, this is a reflection of supply-side as well as demand-side changes). This has taken place against a background of rising numbers in employment.

The trend has been driven, in part, by the massive expansion in participation in higher education and the fact that many of those acquiring intermediate-level qualifications (Level 3) go on to obtain even higher-level qualifications. Young people in the UK typically progress to a national vocational qualification (NVQ) at Level 3 by age 19 and then on to higher education (an NVQ at Level 4 and Level 5) by their mid-20s. But there is little progression to an NVQ at Level 3 from below beyond the mid-20s age group. Nevertheless, there is no doubt that the qualifications profile of the workforce has improved markedly over the past decade or so.

Figure 3: Qualifications of individuals in employment, England 1994 and 2004.



Source: IER estimates based on the Labour Force Survey Spring 1994 and 2004, Wilson et al. (2004) (see also *Skills in England 2004*, Volume 2, Figure 2.1)

Notes: Highest qualification held for all those in employment. The figures differ slightly from those published elsewhere due to different treatment of certain responses. 'Don't knows' are included here with those reporting no qualifications. Some low-level qualifications that do not attain NVQ Level 1 status are also included in the 'no qualification' category. In total, these differences boost the 'no qualifications' category by almost 1 percentage point.

Future demand for skills

1.43

The Working Futures set of employment projections, produced on behalf of the Sector Skills Development Agency (SSDA), provides a comprehensive and detailed view of both historical and future employment prospects by occupation and industrial sector to 2012. The main focus of the projections is on the likely future requirements of employers. The key features are:

- employment growth of just under 0.5 per cent a year to 2012
- creation of 1.5 million additional jobs
- just under three-quarters of the additional jobs likely to be taken by women and to be part-time in nature.

1.44

The Working Futures results focus upon industrial categories as defined by the SSDA for its sector skills matrix. The prospects for these 27 industries are shown in Figure 4. Changes in the industrial composition of employment are a key driver of the changing pattern of demand for skills. Significant changes are expected to take place over the next few years. Employment in the primary and manufacturing sectors is expected to continue its downward trend. This is offset by growth in many parts of the service sector, especially in business and miscellaneous services. Some growth is also expected in non-marketed services and distribution, transport and so on. Manufacturing employment is expected to decline more rapidly, while growth in services is expected to decelerate compared to trends observed in the past 10 years.

1.45

Figure 5 presents the corresponding projections by occupation. The key findings here are:

- strong growth generally in managerial, professional, associate professional and technical, and personal service occupations
- in more detail, growth is projected for culture, media and sports occupations, business and public service professionals (and associate professionals), teaching, research and science and technology professionals (and associate professionals) and corporate managers
- job losses are projected amongst administrative, clerical and secretarial, skilled metal and electrical trades, process, plant and machine operatives and elementary occupations, especially those which are clerical and service related.

1.46

Most job losses are forecast in occupations outside the so-called higher-level occupations. However, job gains are spread amongst jobs that typically require a high level of skill (such as managerial and professional) but also those that require much more modest levels (such as many sales and personal service occupations).

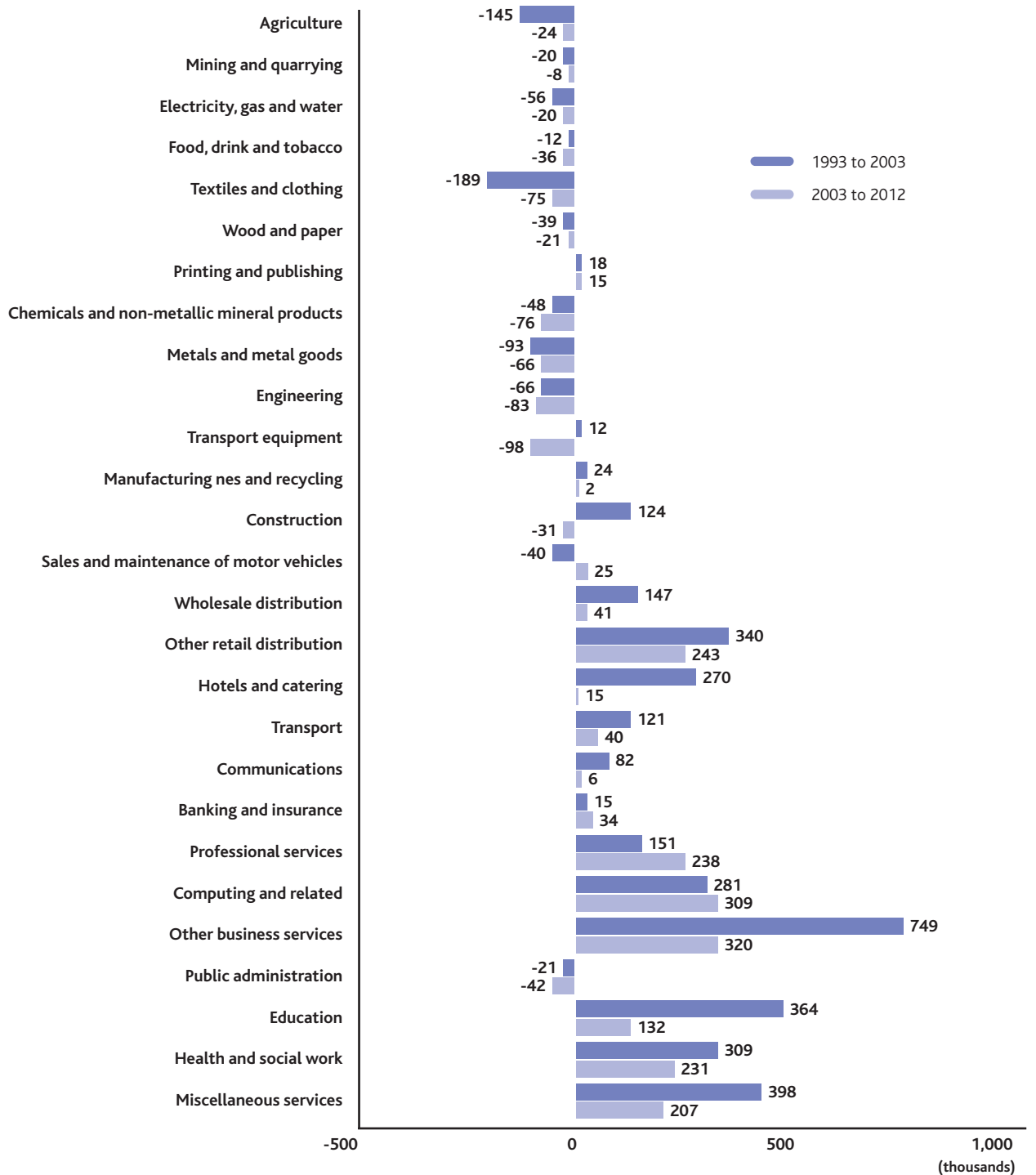
Employment is projected to grow by 1/2 per cent a year to 2012 ...

with further significant structural changes favouring services at the expense of manufacturing.

Occupational employment growth will be concentrated in higher level occupations and personal service occupations.



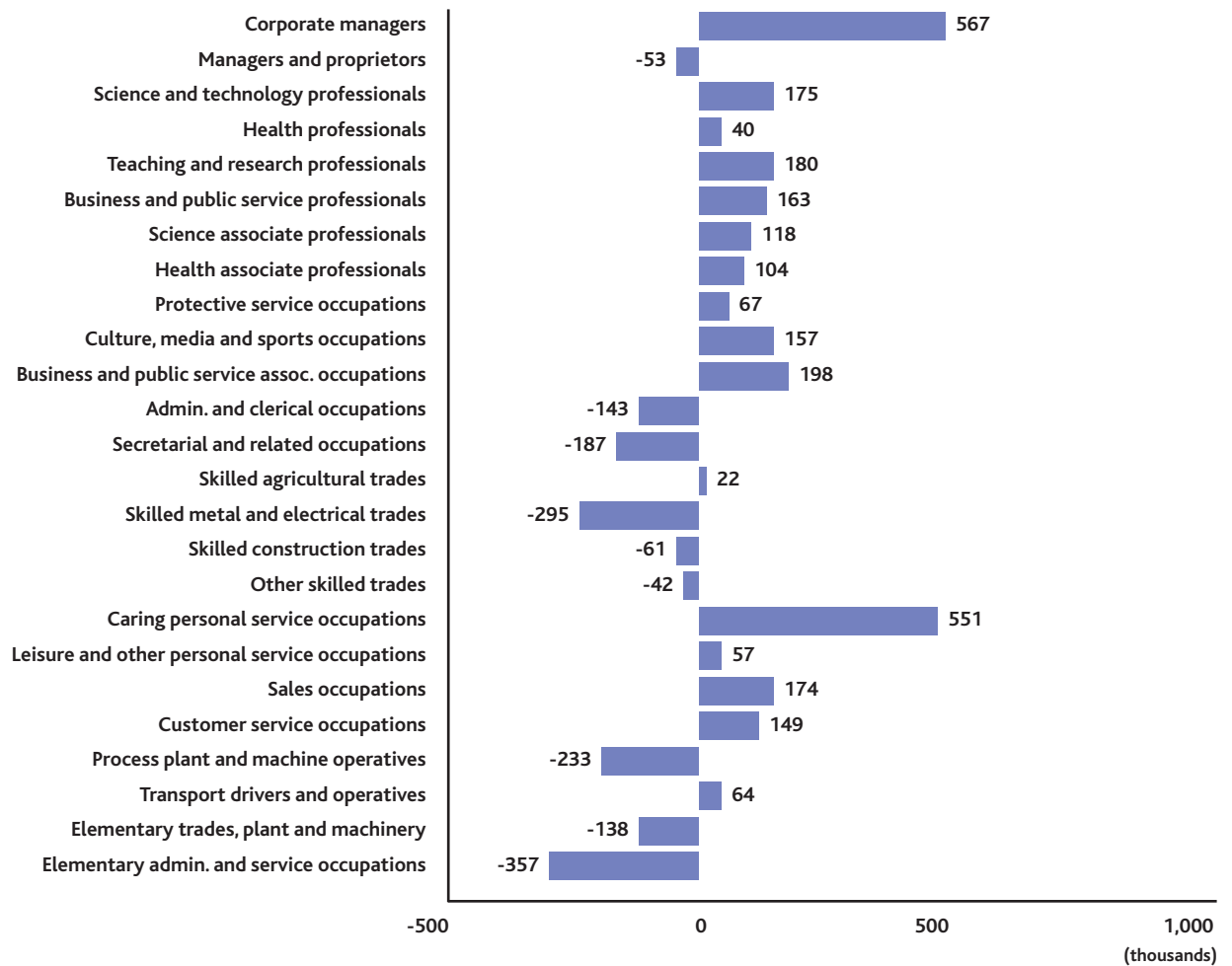
Figure 4: Historical and projected changes in employment by detailed sector, England.



Source: Working Futures, Wilson et al. (2004) (see also *Skills in England 2004*, Volume 2, Figure 2.17)

Notes: The bars show changes in thousands over the periods shown. nes = not elsewhere specified.

Figure 5: Projections of employment changes by occupation, England, 2003 to 2012.



Source: Working Futures, Wilson et al. (2004) (see also *Skills in England 2004*, Volume 2, Figure 2.19)

It is important to consider replacement demands to offset those leaving the workforce. The scale of replacement demand is projected to substantially outstrip the scale of expansion demand. Attracting people to work in industries in decline will remain a challenge.

1.47

While changing patterns of employment levels are important, an equally significant indicator of future skill needs is replacement demand. Replacement demand refers to the number of job openings (vacancies) that will occur because people leave their current jobs. This needs to be added to those additional staff required to meet any employment expansion in order to get an overall estimate of total requirements. Even occupations and industries that are in decline in employment terms can have substantial replacement demand requirements, especially where they have an older workforce.

1.48

Replacement demands include the need to replace those retiring as well as those leaving for many other reasons, such as general labour turnover. Most estimates focus on the former, which is both more straightforward to measure and more pertinent in terms of the need to train and educate replacements. Even on this restricted basis, the scale of replacement demand among all occupations is projected to substantially outstrip the scale of expansion demand (by a factor of almost 10 to 1) (see Figure 6). Even where substantial job losses are projected, the replacement demand elements are always more than sufficient to offset this. It is essential, therefore, for employers, education and training providers, and public agencies to recognise the different characteristics and requirements of these two different components of future skill needs.

1.49

Figure 6 highlights three distinct patterns of future skill needs, as follows:

- i occupations where there is strong expansion demand and strong replacement demand
- ii those with weak (or even negative) expansion demand but strong replacement demand
- iii those with weak (negative) expansion demand and weak replacement demand.

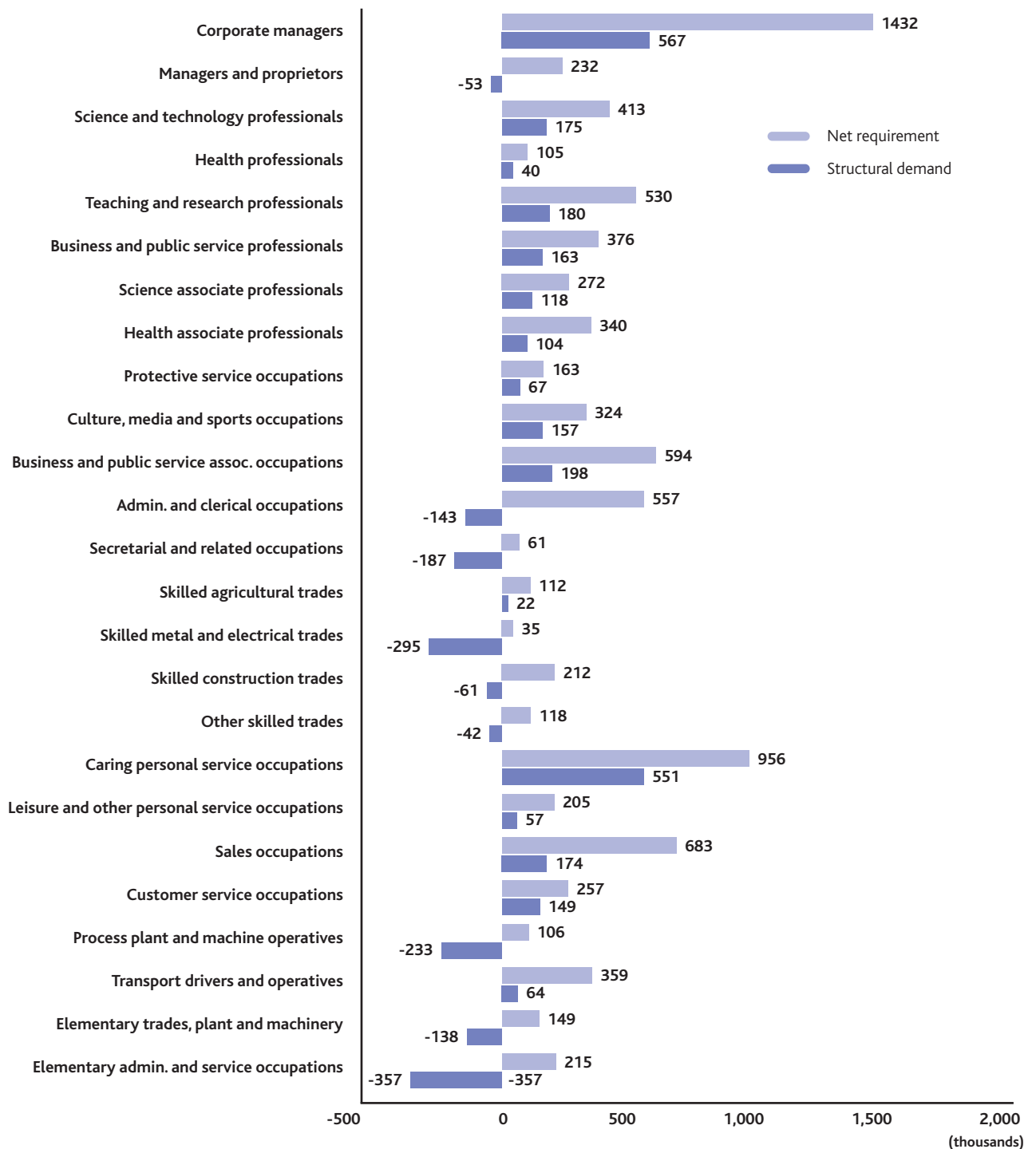
1.50

For those employers facing needs as in category (i), there is likely to be strong competition for the skills required, especially where these are sector specific. These may be considered skill hot-spots. Even where expansion demand is negative, as in category (ii), meeting strong replacement demands can prove difficult. That is especially the case where employers are attempting to recruit young people into an occupation or industry perceived to be in decline. The combination of negative expansion demand with strong replacement demand often occurs in industries that are associated with high levels of value-added and productivity, notably in the production sector. Achieving the goal of shifting organisations into higher-value-added markets may create an even greater level of replacement demand, for higher-level skills, in some sectors of the economy characterised as category (ii) above.

1.51

Figure 6 also indicates that replacement demands are high in declining occupations such as administrative and clerical occupations and elementary occupations, both of which are spread across all sectors, including services.

Figure 6: Replacement demand by occupation, England 2003 to 2012. England: All industries.



Source: Working Futures, Wilson et al. (2004) (see also *Skills in England 2004*, Volume 2, Figure 2.20)

Notes: These estimates do not allow for any losses due to occupational or geographical mobility.

Total net requirements = replacement demand plus expansion (or structural) demand.

Skills supply is improving but not as fast as in some competitor economies.

1.52

Overall, the evidence suggests that the scale and nature of expected future skill needs will be a great challenge for Government and public agencies, as well as for individuals and employers. Major structural change is projected to continue, with further decline in manufacturing and primary sector employment, offset by expansion of employment in the service sector. Further changes in the occupational structure of employment are also expected. These changes will require new skills and qualifications from the workforce (especially high-level professional, managerial skills and ICT skills, and information and customer-handling skills at all levels). Related changes will continue to favour jobs traditionally undertaken by women working part-time.

The supply of skills

1.53

International evidence from the *Skills Audit Update* (Centre for Economic Performance, 2004), reveals that among those aged 19 to 21 years, the proportion with Level 2 and above qualifications in the UK is higher than in Germany and the USA, but lags behind France by a substantial margin. At Level 3 and above for this age group, the proportions are similar in all four countries. For those aged 25 to 28 years, the UK lags behind France and Germany, especially at Level 3 and above.

1.54

As noted in the *Skills Audit Update (ibid.)*, the other important difference between the qualifications structures in the four countries is that in France and Germany, vocational qualifications contribute considerably to helping young people achieve Level 2 or Level 3 qualifications by the age of 25 to 28. Qualification levels increase much more slowly in the UK after the ages of 19 to 21.

1.55

The latest evidence, comparing across different countries, suggests that improvements in the UK are primarily restricted to cohort effects and that, unless improvements are made to increase qualification upgrading within cohorts, catching up with France and Germany will remain an elusive goal.

1.56

The Organisation for Economic Cooperation and Development (OECD) publication *Education at a Glance* (OECD, 2004) provides a ranking of the proportion of the population who have achieved upper-secondary-level attainment. The UK is 13th of 30 OECD countries for 55 to 64 year olds (who completed schooling 40 years ago) but ranks 22nd amongst 25 to 34 year olds (who completed schooling 10 years ago).

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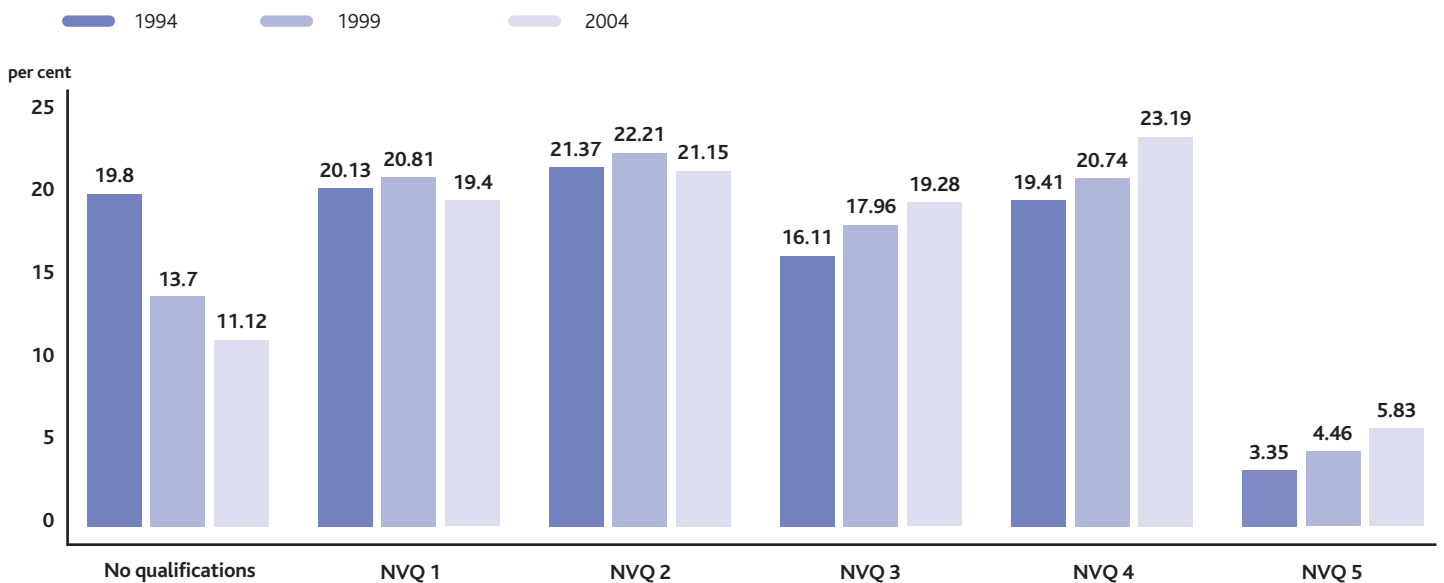
Despite increases in participation (and attainment), participation in higher education remains well behind some countries, although drop-out rates are much lower here. Rates of improvement also still seem to be better in many other countries. Participation in post-compulsory full-time education by young people generally remains relatively low compared with some countries. In particular, problems still remain at the intermediate level. However, the UK is now above the OECD average in relation to the proportion of the workforce qualified to NVQ at Level 4 and above, and it now has one of the highest rates of university graduation in the 30 OECD countries.

1.58

Figure 7 shows the scale of improvement in skills supply over the past 10 years using NVQs (or equivalents) as the measure of skill. The most striking feature is the fall in the proportion of people without qualifications. There is a cohort effect here as older people are more likely to possess no qualifications. The other key finding is the

growth in the number of people educated to NVQ at Level 3 or Level 4 (or equivalent). There has also been a large increase in the proportion with NVQs at Level 5, which has more than doubled in just the last decade, although these still only represent just over 5 per cent of the economically active population in England.

Figure 7: Highest qualification held by economically active population, England 1994, 1999 and 2004 (percentages).



Source: Labour Force Survey, Spring 1994, 1999 and 2004.

Notes: See Figure 3.

Evidence from employers suggests that training activity is substantial.

1.59

A further important indicator of skills supply is the extent to which employers engage in training. The National Employers Skill Survey (NESS) 2004 provides an indication of the extent to which employers provide training. The key findings are:

- 64 per cent of employers provided training in the 12 months before the survey (of which around half was on the job)
- 61 per cent of staff had received some training
- on average just under 6 days of training were provided, amounting to around 130 million days of training
- most training offered was for induction or health and safety.

According to NESS 2003, where training was provided 51 per cent of establishments reported that it led to a formal qualification.

1.60

Assuming that employers are rational in their decision-making regarding training, then it is likely that the training provided is designed to improve the performance of the business, directly or indirectly. Yet, despite the fact that the UK engages in a higher volume of training than some of its main competitors, it does not achieve the same level of productivity. It appears that employer investment in training cannot fully compensate for the deficiencies in the attainment levels of those leaving full-time education. This may reflect differences in the quality or nature of training provision compared with other countries.



Evidence of Mismatches

1.61

Mismatches between skill demand and supply are measured in two main ways:

- looking at wage differentials and patterns of wage dispersion by qualification or occupation, including rates of return to the acquisition of qualifications; or
- reports summarising employers' perceptions of skill shortages, including vacancies and skill gaps.

The discussion above has already highlighted the positive rates of return associated with gaining additional skills. The following discussion concentrates on employers' perceptions.

1.62

NESS provides further evidence data about the extent of the mismatch between skill supply and demand. The survey distinguishes between employers' **external skill problems** (that is, recruitment problems in the external labour market) and their **internal skill problems** (that is, the extent of skill gaps as a consequence of their staff not being fully proficient).

1.63

With respect to external skill problems, vacancies are classified as **hard-to-fill vacancies** (HtFVs) where so described by employers. Where HtFVs are skill related they are referred to as **skill-shortage vacancies** (SSVs), that is, HtFVs that arise because of a shortage of applicants with the required experience, qualifications or skills. The extent of current recruitment problems faced by employers is shown in Table 1. There were approximately 620,000 vacancies at the time NESS 2004 was undertaken in the summer and autumn of 2004. Of these, just over a third were proving hard-to-fill, and around one in six were classified as SSVs.

1.64

Skill gaps are defined as occurring when employers regard some of their staff as not being fully proficient to meet the requirements of their jobs. What is required of employees in their jobs is partly dependent on what the business is attempting to do, and two establishments having workers with identical skill levels may interpret whether they have skill gaps differently. For example, a company with a commitment to grow and develop new markets may be more demanding of its staff than one that is content with its current position. Nevertheless, the measure of skill gaps in NESS gives an indication of the extent to which employees possess the skills required by their current employer.

1.65

Around one in five establishments reported that there were skill gaps amongst their existing workforce. This amounted to around 1.5 million employees with a skill deficiency (in other words, they were described by their employers as not being fully proficient in their current jobs). This represents about 7.5 per cent of total employment. The extent of skill gaps, therefore, far exceeds that of recruitment problems.

1.66

Some skill mismatches appear to be persistent and stable. Since 2001, the extent of both recruitment problems and skill gaps has proved relatively constant. Based on information from NESS 2003, problems with the lack of certain key and generic skills appear to be a particular feature.

In 2004 there were around 620 thousand unfilled vacancies, of which around a quarter were hard-to-fill because of a shortage of skills.

Skill gaps refer to the proficiency of an organisation's existing staff. About a fifth of workplaces reported skill gaps.

Table 1: National Employer Skills Survey (NESS) headline findings.

Vacancies and recruitment problems	NESS 2004	NESS 2003	ESS 2001
% of establishments with vacancies	18	17	14
% of establishments with hard-to-fill vacancies (HtFVs)	8	8	8
% of establishments with skill shortage vacancies (SSVs)	4	4	4
Number of vacancies (000s)	617	679	766
Number of HtFVs (000s)	227	271	358
Number of SSVs (000s)	145	135	159
Vacancies as a % of employment	3.0	3.1	3.7
HtFVs as a % of employment	1.1	1.2	1.7
HtFVs as a % of vacancies	37	40	47
SSVs as a % of employment	0.7	0.6	0.8
SSVs as a % of vacancies	17	20	21
Skill gaps			
% establishments with skill gaps	20	22	23
Number of skill gaps (millions)	1.5	2.4	1.9
Skill gaps as a % of employment	7	11	9

Source: NESS 2004 (IFF).

Base: All establishments and employment.

Notes: Comparisons between 2001, 2003 and 2004 should be treated as indicative due to differences in the way skill gaps and skill shortage vacancies are measured between 2001, 2003 and 2004. These differences reflect both changes in sampling and questioning between the surveys.

1.67

NESS enables the identification of the underlying skill needs that give rise to recruitment problems and the sectors of the economy where they are occurring. In relation to both HtFVs and SSVs, NESS 2003 indicates that difficulty in finding applicants with the required technical and practical skills was one of the main skill-based reasons leading to a recruitment problem. But it is also apparent that softer, more generic skills also gave rise to recruitment problems. Both communication and customer-handling skills have been reported as being difficult to find in relation to a relatively high percentage of recruitment problems.

1.68

Occupations in skilled trades stand out as giving rise to the highest share of all recruitment problems (15 per cent of HtFVs and just under 20 per cent of SSVs). But it is also important to gauge the extent to which recruitment problems are disproportionately high or low relative to the distribution of employment. Looked at in this way, recruitment problems were disproportionately high for transport operatives, caring personal service occupations and among business associate professionals.

1.69

Based on information from NESS 2003, the key skill areas in which employees were thought to lack full proficiency were mainly generic ones, that is communication, customer-handling, team working, and problem-solving. That said, technical and practical skills were also lacking in just over two in five of the employees with skills gaps that were followed up.

1.70

Based on information from NESS 2003, two occupational categories accounted for a larger share of skills gaps than they did of employment:

- sales and customer service occupations (19 per cent of all skills gaps compared with 16 per cent of total employment)
- elementary occupations (16 per cent of all skills gaps compared with 14 per cent of total employment).

These two occupations also accounted for the largest absolute number of skills gaps relative to other occupations.

1.71

Over time, the extent of recruitment problems appears to be stable, showing that they are persistent at a given level of economic activity. But persistence gives little indication of their importance. The evidence suggests that skill mismatches give rise to direct effects such as losing business, delays in developing new products and services, and failing to provide the level of service required.

1.72

There are also indirect effects to consider. The DfES programme of research based on earlier skills surveys suggests that, where companies are engaging in a process of change (often related to improving their product market position), operational problems tend to arise as a consequence of difficulties in recruiting staff or because existing staff are not sufficiently skilled. This suggests that, in the more dynamic sectors of the economy, recruitment problems and skill gaps have a substantial impact on organisational performance. If, as prescribed by a variety of policy documents, employers were to attempt to increase their demand for skilled labour as part of a strategy of increasing the value-added they generate, the evidence suggests that they would be hampered by a lack of skills in the current labour market.

NESS enables the key areas where employers are facing recruitment problems and internal skill gaps to be identified. Staff lacked proficiency in many key and generic skills. Skill gaps are mainly concentrated in just two occupations. The impact of skill deficiencies can be pronounced, especially where an organisation is trying to move upmarket.

Conclusion

Skills can play a key role in helping to meet the challenges facing the economy, as well as enabling individuals to take advantage of opportunities.

Perhaps the Key challenge is capturing higher value-added markets.

Current prospects are encouraging ... but improving skills supply is only part of the solution.

Investment in Skills can also help deal with social exclusion but only in combination with other policies.

1.73

This first volume of *Skills in England 2004* provides a snapshot of some of the main strengths and weaknesses of skills development in England, highlighting the main trends in skill formation. In summary, the key conclusions relate to the threats (and opportunities) facing the UK economy over the medium-term, posed by technological change and increasing global competition. It highlights the role of skills development in helping the economy meet that challenge.

1.74

Perhaps the key challenge is the need to capture higher-value-added markets. Achieving this is critically dependent upon management possessing sufficient knowledge to identify market opportunities and to develop the capability within their organisation to undertake such operations. This challenge is formidable. It is not simply about improving the supply of skills but ensuring that they are deployed appropriately. Hence, this Key Messages report has emphasised, throughout, the importance of management skills.

1.75

In many respects the prospects are encouraging. Comparisons of UK productivity with that of some of its main competitors suggest the gap is closing. And the quality of the workforce is improving as the growth in higher-level occupations and acquisition of formal qualifications suggests. But a key question remains as to whether the VET system is providing the right skills quickly enough.

1.76

It is also apparent that improving skills supply is only part of the solution to improving the UK's productivity. The discussion of high-performance workplaces, for example, illustrates the need for investment in workforce development to be consistent with a wider set of human resource policies that seek to motivate and encourage staff (particularly through developing high-level work practices). Differences between the productivity of France and Germany compared to the UK point to the importance of differential levels of capital investment per employee. These problems will also need to be addressed if the aim of achieving a more prosperous and dynamic economy is to be achieved.

1.77

The other key role of skills is in helping individuals to progress through the labour market. They provide a key element in allowing some of the most disadvantaged members of society to get a foot on the ladder. As with productivity, skills are not a panacea. A raft of other policies will be needed in addition to investment in skills if the problems of social exclusion are to be fully addressed.

Related Publications

Skills in England 2004: Index

Publication Reference: LSC-P-NAT-050412

Skills in England 2004 Volume 2: Research Report

Publication Reference: LSC-P-NAT-050161

Skills in England 2004 Volume 3: Sectoral

Publication Reference: LSC-P-NAT-050162

Skills in England 2004 Volume 4: Regional/local

Publication Reference: LSC-P-NAT-050163

Useful Websites:

Skills and Education network

<http://senet.lsc.gov.uk>

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