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Skills in England 2007 Volume 3: Sectoral Evidence

September 2007

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

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FOREWORD

I am pleased to be introducing our fifth *Skills in England*. This is the annual skills assessment, carried out by the Learning and Skills Council on behalf of ourselves and our key partners. It is designed to complement the key government publications in the skills arena, including the Leitch Review of Skills and the Freud Report.

Skills in England 2007 emphasises that, while globalisation provides many economic opportunities, understanding the phenomenon is increasingly crucial in order to appreciate any potential threats to low-skilled jobs and to those people with such jobs. With increasing international competition, not least from the rapidly developing economies in Asia, it is important that, to remain competitive, England produces high value-added goods for the world economy. To achieve this, employers need a highly skilled workforce. Many employers need to raise their game to capture high-value markets – to achieve this, skills need to be placed at the heart of an organisation's business plan. The report highlights that, collectively, we must continue to find ways to increase the demand for skills from employers and ensure that everyone, whether an employer or an individual, is able to access the learning opportunities that are suitable for them.

The benefits of economic growth have not been distributed evenly across society. Like many other countries, England has a large number of people who have effectively been excluded from participation in some parts of modern life. Although not the only factor linked to social exclusion, a lack of skills is a key determinant and, in fact, the gap between the employment rates of the unqualified and those with qualifications has widened during the 21st century. This underlines the importance of addressing the skills needs of the socially excluded. Succeeding in this is key to helping all citizens become active members of society.

The LSC is dedicated to improving the skills of people in England. Through our network of skills brokers, the Train to Gain service has already engaged with over 50,000 employers. Those trained as a result of this programme will contribute towards an increase in the number of people with Level 2 and Level 3 qualifications, lead to higher productivity for employers and lay the foundations to allow England to contribute extensively in a more value-added economy. An aim the LSC shares with all our key partners.



Mark Haysom
Chief Executive, Learning and Skills Council

Introduction

3.1 This volume presents a set of industry sector profiles that covers the whole of the English economy. These profiles summarise the economic and labour market context for each sector. The commentary examines, for each industry: key economic developments; trends in occupational structure; and key findings from the National Employer Skills Survey 2005 (NESS2005). In addition to the industry sector profiles data are also presented by 25 Sector Skills Councils (SSCs) whose relation to the sector categories is discussed in paragraph 3.3 below. These tables follow the industry sector commentary text.

The economy has been divided up into 27 detailed industry sectors.

3.2 A summary table is presented for each industry sector and SSC sector showing comparable information on variables such as:

- output;
- employment;
- occupational structure;
- vacancies;
- productivity.

The data came from a variety of sources, details of which can be found in Annex A.

3.3 Following discussions with the SSDA and LSC, for the purposes of this report three sectoral categories are used: 6 broad sectors; 27 Sector Matrix industries; and 25 SSC sectors plus one Non-SSC category (see Tables 3.1A and 3.1B). Both the Sector Matrix and SSC sector definitions are based on aggregations of Standard Industrial Classification (SIC) codes. The SSC sectors are based on a mapping from detailed SIC categories to the SIC footprints agreed between the SSCs and the SSDA (see *Annex B* in Volume 2 for details). Some SSCs also define their coverage in terms of an occupational footprint. The results here are based solely on the “best-fit” SIC-based footprint agreed with the SSDA. This avoids any overlap with other SSCs. Most available data are based on the 2003 SIC. Table 3.1a shows how the 27 industries correspond to both the 2003 SIC and the various SSCs, by identifying those SSCs with an interest in the industry grouping.

- 3.4 Over the past decade, the structure of the UK economy has shifted further away from traditional manufacturing and primary industries towards services. Although total employment in England grew by around 1 per cent a year between 1996 and 2006, the vast majority of energy and manufacturing industries have seen employment decline over the past decade, while the vast majority of services have seen employment grow, particularly business services, public services, and personal services. Employment in public services and retailing has increased steadily over the past decade, reflecting both increased spending and the relatively labour-intensive nature of these industries. Employment in agriculture has contracted substantially and employment in utilities has fallen dramatically.
- Employment growth in England has been driven by demand for services, while manufacturing employment has continued to decline.*
- 3.5 The Standard Occupational Classification (2000) identifies nine major groups of occupations, based on the tasks involved and skills and qualifications required to undertake them:
- managers and senior officials;
 - professional occupations;
 - associate professional and technical occupations;
 - administrative and secretarial occupations;
 - skilled trades occupations;
 - personal service occupations;
 - sales and customer service occupations;
 - process, plant and machine operatives;
 - elementary occupations.
- 3.6 The changing structure of the economy has resulted in changes in the levels and types of skills demanded, and is reflected in:
- an increase in demand for managers and senior officials (particularly specialist corporate managers in construction, consumer services, business services and public services);
 - an increase in demand for professional, associate professional and technical occupations, particularly in science and technology, protective services and culture,

media and sport;

- an increase in employment in personal services (above all in healthcare and related services, and to a lesser extent, in leisure and travel services);
- a sharp increase in demand for customer service staff and a modest rise in the number of sales staff;
- a decline in demand for some skilled trades, most notably metals and electrical trades, as well as process, plant and machine operatives within manufacturing;
- a decline in demand for unskilled workers in elementary occupations, particularly in administrative and service positions.

Cross-Sector Summary

- 3.7 Volume 3 presents a set of industry sector profiles covering the whole English economy. These profiles summarise the economic and labour market setting for each sector. The following text outlines cross-sector trends in employment and other contextual factors.

Trends across broad sectors

- 3.8 Of the six broad sectors defined, only the manufacturing sector and the primary and utilities sector had declining employment levels over the period 2001 to 2006. Employment growth in the other four broad sectors has ranged from 0.6 per cent per annum in distribution, transportation, etc. to 2.7 per cent per annum in the construction sector over this same period. A number of factors have affected these broad sectors including environmental regulations, competition from low cost countries in the EU, the adoption of new technology and government policy and legislation. These factors are explored in more detail with respect to detailed sector definitions.

Trends across detailed sectors

- 3.9 There are 27 detailed sectors outlined in Volume 3. Of these, 14 sectors are forecasted to experience growth in employment over the period 2006-2014. The sectors with forecasted decreases in total employment are:

- agriculture, etc.;
- mining and quarrying;
- food, drink and tobacco;
- textiles and clothing;
- wood and paper products;
- printing and publishing;
- chemicals and non-metallic minerals;
- metals and metal goods;
- engineering;
- transport equipment;
- electricity, gas and water; and
- public administration and defence.

Textiles and clothing is forecasted to have the greatest decline in employment at 4.5 per cent per annum from 2006-2014. Printing and publishing has the lowest projected rate of decline at 0.2 per cent per annum. Of those sectors with employment levels forecast to increase over the period 2006-2014, computing and related services has the greatest estimated growth of 3.1 per cent per annum, while communications and banking and insurance have the lowest growth levels anticipated at 0.2 per cent a year.

- 3.10 There are a number of contextual factors that carry across sectors which may contribute to overall performance and changes in employment. These factors include changes in legislation and government regulations, environmental concerns, increasing international competition and new technologies.

Environmental concerns and regulations

- 3.11 Most sectors in the UK are witnessing the impacts of increased environmental concern and regulation. The environment is found to be a major factor in performance and employment in the following sectors: mining and quarrying; wood and paper products; chemicals and non-metallics; electricity, gas and water; sale and maintenance of motor vehicles; transport; and miscellaneous services. Increased environmental regulation can negatively impact on the performance of various sectors through increased compliance costs and through increased input costs due to controls on

the prices and quantities of fuel and raw materials. Changes in consumer preferences related to environmental concerns can also have major impacts on sectors' performance.

- 3.12 In the mining and quarrying sector, changing consumer demand in response to environmental concerns combined with environmental regulations is likely to cause a decline over the medium-term in the amount of coal consumed for energy production as substitute energy sources are found.
- 3.13 In the wood and paper products sector, the burden of environmental regulation is placing European producers at a disadvantage compared to countries with less stringent environmental rules. The paper and board packaging sub-sector is also encountering increasing concerns about environmental impacts not just from regulatory agencies but also from the end consumer. Paper and board tends to fare well in the face of environmental regulations as in the UK this sub-sector has achieved recycling rates above the target set by the EC's Packaging Directive.
- 3.14 Within the chemicals and non-metallic minerals sector, non-metallic minerals, like other sub-sectors heavily exposed to the natural environment, is facing increasing amounts of environmental regulation. Rubber and plastics is traditionally seen as environmentally-unfriendly but recent initiatives have been undertaken with the aim of changing this perception.
- 3.15 In the electricity, gas and water sector, increased environmental concerns are contributing to challenges related to associated capital and operating costs. Industry has made progress towards greater compliance with the requirements of a range of EC Directives. Other major challenges for water resources include the EC Habitats Directive and the Water Framework Directive (WFD).

- 3.16 Fuel efficiency and increased environmental awareness continue to influence the choice of vehicle purchase, and the proportion of new cars sold with diesel engines continues to rise. New car registrations have fallen having a serious negative impact on the sale and maintenance of motor vehicles sector. Increased consumer awareness of environmental problems impacts on consumer demand for motor vehicles and take-up of alternative public transportation.
- 3.17 In the miscellaneous services sector, one of the main developments in recent years has been environmental regulation of waste collection and treatment.

EU expansion and globalisation

- 3.18 The accession of new Member States into the EU affects UK businesses due to trade liberalisation and movement of labour across the region. The expansion of the EU results in more European workers coming to the UK and being available to work in UK businesses. Improvements in new Member States also increase the level of competition for UK businesses in a number of sectors. Finally, labour costs and the prices of some raw materials are lower in many new EU Member States relative to the UK, making these other countries attractive sites for many UK businesses. Globalisation in general has much the same impact on sector performance and employment levels in the UK as does the expansion of the EU.
- 3.19 In the manufacturing sector, margins have been hit as a result of globalisation, market liberalisation and the expansion of the EU. Low-value production work has been largely relocated to lower-cost countries.
- 3.20 Relocation to continental Europe to exploit cheaper labour costs has also been prominent in the food, drink and tobacco sector.
- 3.21 In the wood and paper products sector, higher energy prices in the UK relative to Europe are making the UK less competitive as a site for production.
- 3.22 The more routine production of end-user electronics items in the engineering sector is outsourced to locations with adequate skills but lower costs than in western Europe. Eastern

Europe (especially the new members of the EU) and Asia (increasingly China) are attracting much of the outsourced production as not only are transport and labour costs low in these countries, but they are also closer to the main markets.

- 3.23 The transport equipment sector has seen a significant effect of EU expansion. Following the accession of ten new Member States to the EU in 2004 some production work has been moved overseas by car producers to lower-cost countries. In the case of volume car production, manufacturers are likely to take advantage of the location and cost competitiveness of these countries by switching production facilities away from western Europe. The closure of Peugeot's Ryton plant over 2006-07 is one example, with work being relocated to Slovakia. Manufacturing labour costs in central and eastern Europe are in some cases as low as one-fifth of those in western Europe. Consequently, it is now much less likely that new volume car plants will be built in the UK.
- 3.24 Across the EU, liberalisation of energy markets has opened the way for a series of domestic and cross-border takeovers, joint ventures and strategic stake-building. Whereas the UK government and regulators have ordered the break-up of former publicly-owned electricity groups to encourage competition, many continental governments have allowed and encouraged the development of powerful national champions capable of competing in the new, broader EU market. As a result, while the UK is the most liberalised energy market in the EU, UK companies are vulnerable to takeover by larger European companies.
- 3.25 Since the early 1980s, the motor trade had been allowed a block exemption from EU competition laws, because it was claimed that consumers would not benefit from normal competition in the new car market. In recent years there has been considerable concern over the large price differentials for new cars across the EU. Recent changes to the rules of block exemption are intended to harmonise prices and to reduce the power of manufacturers to maintain these differentials.
- 3.26 For business and other services globalisation is seen as one of the key drivers of growth in both output and employment. In other sectors however,

the effects of globalisation are more negative for the UK. In IT, there has been increasing use of labour from overseas and a number of activities have been offshored to other countries with lower labour costs.

- 3.27 In the other business services sector, significant off-shoring has taken place. In response to customer dissatisfaction with service from offshore call-centres, much of the offshore activities are returning to the UK despite the gains to be had from cheaper offshore labour.
- 3.28 Professional services covers the high-value services provided by professionals such as accountants, lawyers, management and engineering consultants and marketing and advertising consultants. These are provided both to corporate clients and government and have grown rapidly over the last decade as markets have liberalised, and the twin forces of globalisation and outsourcing have seen such professionals become ever more closely involved in the everyday business activities of their clients.
- 3.29 A number of manufacturing businesses have relocated production to cheaper countries. The bulk of such production is higher volume, lower value-added than the production that has remained in the UK. There is also increased competition from overseas companies as demonstrated by increasing imports from China, Malaysia and some eastern European countries.
- 3.30 The metals and metal goods sector is significantly affected by global conditions with trading taking place on a global basis. Globalisation and the increasing capability of producers in developing countries have had a negative impact on the UK's metals and metal goods sector.
- 3.31 Globalisation also presents the opportunity for UK companies to expand into new markets. One example of UK companies moving into overseas markets is illustrated by UK furniture exports to China having risen more than eleven-fold since the mid-1990s.

Technology

- 3.32 Adoption of new technologies presents a way for businesses across sectors to enhance productivity and improve profit margins. While technology can have a positive effect on business performance, it

may have a negative effect on employment growth as the need for labour may decrease with improved technology.

- 3.33 One impact of technology is to improve the efficiency of supply chains and raise customer price awareness. High street retailers are among those most affected by these developments, especially where they are competing against e-tailers.
- 3.34 In the business and other services sector, broadband technology is stimulating demand for online video-conferencing and downloading of television services, films and videos thus creating new business opportunities. Although banks have been at the forefront of developing technology to support scale efficiencies and marketing potential, keeping abreast of the latest technologies is very expensive and the investment in legacy systems can raise a barrier to innovation.
- 3.35 The printing and publishing sector is facing the challenge of finding new ways to boost margins. This includes offering greater value-added through use of digital technology and improved ink technology and colour accuracy on the demand-side. The sector has also identified the need for British printers to increase interaction with universities to gain access to cutting edge technologies and bespoke software solutions. This sector has also benefited from technology with respect to online music sales and marketing however, the problem of piracy remains.
- 3.36 Within the wholesale distribution sector, modern technology allows consumers to bypass retailers and to buy directly from wholesalers or producers having effects on employment levels in the sector. In the transport sector, the application of new technology and processes in the freight market has boosted productivity at the expense of labour demand. The shift towards net-based services and the technological improvements that will allow the rail systems to meet increased demand will also tend to restrain the demand for labour.
- 3.37 In the public administration and defence sector, the efficient and effective use of technology is a key element of government's strategy to increase efficiency and to direct more staff to front-line delivery of services. A number of substantial IT projects have been commissioned but the public

sector has had only limited success with the delivery of complex IT systems.

Skill needs across detailed sectors

- 3.38 The sectors with the greatest overall incidence of vacancies are: public administration and defence (33 per cent of establishments reporting vacancies); education (27 per cent); health and social work (27 per cent); and electricity, gas and water (25 per cent). The lowest incidence of vacancies is in agriculture, etc. (7 per cent).
- 3.39 The percentage of establishments reporting hard-to-fill vacancies is highest at 10 per cent in metals and metal goods, hotels and catering, public administration and defence, and health and social work. Agriculture, etc. also has the lowest incidence of hard-to-fill vacancies (4 per cent). The national average for the incidence of hard-to-fill vacancies is 7.3 per cent. Of the 27 detailed sectors, 13 have higher proportions of hard-to-fill vacancies than the national average.
- 3.40 The national average for skills shortages is 5.1 per cent of establishments. 16 of the detailed sectors have higher proportions of skills shortages than the national average. The highest incidence rate is observed in metals and metal goods (9 per cent). The lowest rate is 3 per cent in agriculture, etc., mining and quarrying, retail distribution, and professional services.
- 3.41 The percentage of establishments reporting that their staff are not fully proficient ranges from just 5 per cent in public administration and defence to 29 per cent in the electricity, gas and water sector.

Broad Sectoral Profiles

Broad Sector 1: Primary Sector and Utilities

- 3.42 In the primary sector and utilities, employment has been decreasing for several decades. This fall largely reflects the decline in the coal industry in the 1980s and early 1990s, and long-term restructuring of agriculture, exacerbated by the BSE and foot-and-mouth crises in the 1990s and 2001. Conditions have remained tough in agriculture since 2000 with support for farmers from subsidies and price controls diminishing while pressure from buyers, such as supermarkets, has
- Falling employment in the primary sector reflects the decline of the UK coal industry and pressure to consolidate among the utilities and agriculture.*

increased. Since the mid-1990s, and following privatisation, increased competition among electricity, gas and water suppliers has resulted in a wave of consolidation across the utilities sector, and many firms are now foreign-owned. This consolidation and the narrowing of margins in agriculture have driven the push for economies of scale and this has led to a sharp fall in employment. By 2006, 439,000 people were employed in this broad sector compared to just over 1m in 1981. Industries in this sector are now dealing with increasing amounts of environmental regulation and legislation.

Primary Sector and Utilities

SIC03 headings: 01-02,05,10-14,40-41
Agriculture, Mining etc, Utilities.

Share of GVA (per cent) ^{1,2}	4.5
Employment (thousands)	439
Share of England (per cent)	1.7
Male: Female	74:26
Change: 1996-2006 (per cent pa)	-2.7
Change: 2001-2006 (per cent pa)	-3.5
Self-Employment (per cent)	34.8
Top Three Occupational Groups (per cent of Total Emp.)	
Skilled Trades Occupations	38
Elementary Occupations	20.5
Managers and Senior Official	9.9
GVA per Worker (£000) ¹	108.5
Exports: Gross Output (per cent) ^{1,2}	16.6
Concentration ^{1,2}	Medium

Note(s): Data are for 2006 except ¹ where data are for 2004. Data relate to England except ² where data are for the UK.
Source: CE and IER estimates based on various National Statistics Sources (see Annex A for details).

Broad Sector 2: Manufacturing

3.43 The manufacturing sector has experienced tough trading conditions since 2001. The prices of inputs, including energy, have increased but firms have not been able to pass on all of the increases due to strong price competition among buyers and cheaper imports. This has hit margins and in the context of globalisation, market liberalisation and EU expansion, this has led to the relocation of much low value production work to lower-cost countries. Companies producing commoditised

Globalisation and pressure on margins is leading to the relocation of manufacturing jobs overseas.

products face greater pressure to increase productivity and to move into higher value-added niches. The result is a sharp decline in manufacturing employment, as firms seek to maintain international competitiveness by cutting costs, introducing more efficient methods of process control, entering new markets and boosting productivity. The hardest-hit industries in terms of employment have been textiles and clothing, which are in long-term domestic decline and have suffered the sharpest fall in employment among manufacturing over the past decade; engineering, where demand has been hit by low euro-zone demand and a weak dollar; and metals and metal goods, which have been characterised by a wave of mergers and acquisition activity among the major players over the past decade.

Manufacturing

SIC03 headings: 15-37

Food, Drink and Tobacco, Textiles and Clothing, Wood and Paper, Publishing and Printing. Chemicals and Non-Metallic mineral products, Metals and Metal Goods, Engineering, Transport Equipment, Manufacturing nes and Recycling.

Share of GVA (per cent) ^{1,2}	13.5
Employment (thousands)	2,951
Share of England (per cent)	11.5
Male: Female	76:24
Change: 1996-2006 (per cent pa)	-2.3
Change: 2001-2006 (per cent pa)	-2.9
Self-Employment (per cent)	8.3
Top Three Occupational Groups (per cent of Total Emp.)	
Skilled Trades Occupations	21.6
Process, Plant and Machine Operatives	21.4
Managers and Senior Officials	15
GVA per Worker (£000) ¹	48.9
Exports: Gross Output (per cent) ^{1,2}	46.3
Concentration ^{1,2}	medium

Note(s): Data are for 2006 except ¹ where data are for 2004. Data relate to England except ² where data are for the UK.

Source: CE and IER estimates based on various National Statistics Sources (see Annex A for details).

Broad Sector 3: Construction

3.44 The late 1990s and first half of the present decade have been relatively good for the construction industry. Strong and stable economic growth, falling interest rates and strong wage growth all fuelled demand for commercial and residential property, while increases in Government investment spending boosted demand for infrastructure work. The construction sector increasingly has to deal with environmental and resource use regulations as the Government looks to promote the construction of more environmentally friendly and sustainable buildings.

3.45 The construction industry is highly labour-intensive. Furthermore, construction activity is particularly sensitive to the economic cycle, and tends to suffer higher peaks and lower troughs because of the volatility of investment spending. The large fluctuations in activity typically mean that in times when output is rising, skills shortages have built up quickly. The traditional 'boom-bust' cycle has meant that a fall in activity tends to follow shortly afterwards, which has resulted in an equally sharp decline in labour demand. Consequently, the duration of skills shortages has typically been temporary. The long-term consequence of volatility in construction output has been that firms have been reluctant to invest sufficiently in training. This combination of volatility and limited investment in training is likely to reduce the proportion of prospective entrants who perceive the industry as one which offers sustained, long-term career prospects. Recruitment difficulties are also resulting in an ageing workforce, and this is exacerbating the problem of meeting replacement demand for those retiring. The launch of the National Skills Academy for Construction in November 2006 should help to address this problem but it is not yet clear if it will produce a sufficient volume of graduates.

A National Skills Academy has been launched to alleviate skills shortage problems in the construction industry.

Construction

SIC03 headings: 45
Construction.

Share of GVA (per cent) ¹	5.9
Employment (thousands)	1,773
Share of England (per cent)	6.9
Male: Female	90:10
Change: 1996-2006 (per cent pa)	2
Change: 2001-2006 (per cent pa)	2.7
Self-Employment (per cent)	40.6
Top Three Occupational Groups (per cent of Total Emp.)	
Skilled Trades Occupations	47.8
Managers and Senior Officials	13.5
Process, Plant and Machine Operatives	10.7
GVA per Worker (£000) ¹	36.9
Exports: Gross Output (per cent) ^{1, 2}	0.2
Concentration ¹	very low

Note(s): Data are for 2006 except ¹ where data are for 2004.

Data relate to England except ² where data are for the UK.

Source: CE and IER estimates based on various National Statistics Sources (see Annex A for details).

Broad Sector 4: Distribution, Transport, etc.

- 3.46 Since 1995 road's share of total freight in Great Britain has fallen from 66 per cent to 64 per cent and rail's share has risen from 6 per cent to 8 per cent. Because rail is only better suited than road for the transport of heavy loads over long distances, the main types of freight for which rail can compete with road are container traffic from ports, coal and bulky construction materials, for example aggregates. There is little prospect of road freight losing much of its share of, for example, the food, drink & tobacco market to rail. *Road has by far the largest share of freight transport within the UK, but rail's share has risen.*
- 3.47 Between 1995/96 and 2005/06 there was a fall in the share of cars, vans and taxis in total transport in Great Britain, from 87 per cent to 85 per cent and corresponding rises in the shares of rail, from 5 per cent to 6 per cent and domestic air transport, from 0.8 per cent to 1.2 per cent. The share of buses and coaches remained the same, at 6 per cent. As total demand for transport in the UK, both public and private, rose between 1995/96 and 2005/06, rail increased its overall share through strong rises in usage, on the national rail system, the London Underground and some urban light rail systems. Across Britain as a whole, while bus and

coach usage taken together rose, local bus usage fell slightly. All the indications are that demand for rail services is set to continue growing.

- 3.48 Communications has been one of the fastest growing industries in Europe since the early 1990s. Since the mid-to-late 1990s, growth has accelerated, driven by technological change in telecommunications. The key sub-sectors in the telecoms market are fixed-line telephony, mobile telephony and the provision of internet access, typically broadband. Competition in the market is fierce, exemplified by the number of firms entering the market, and the downward trend in prices despite the continued improvement in services and products. The market for internet broadband access is perhaps the most competitive and dynamic. As internet penetration continues to rise, one of the downsides is the continued expansion of internet crime that goes with it. As ICT related crime continues to grow, the need, and demand, for improved computer security is likely to grow.

In Communications, competition remains fierce and prices are falling.

- 3.49 Consolidation and technological advances are increasing price competition in the distribution and retail sector. The impact of technology is to improve the efficiency of supply chains and raise customer price awareness. High street retailers are among the most affected by these developments, especially where they are competing against e-tailers. As a result employment growth in these sectors is likely to be slower over 2006-14. The hospitality sector was hard hit by the September 11 attacks and the foot-and-mouth crisis in 2001. The weakness of the dollar since 2003 has hampered the recovery at times but by 2004 tourist visits had returned to levels seen in 2000, and by 2006 they were even higher. Some parts of the sector, especially pubs, now coping with the impact of a smoking ban in England since July 2007. Early anecdotal evidence from Scotland suggests this will hit profits, and consequently employment.

Distribution, Transport, etc

SIC03 headings: 50-52,55,60-64
Sale and Maintenance of Motor Vehicles, Wholesale
Distribution, Retail Distribution.
Hotels and Catering, Transport and Storage,
Communications.

Share of GVA (per cent) ^{1,2}	21.9
Employment (thousands)	7,596
Share of England (per cent)	29.5
Male: Female	55:45
Change: 1996-2006 (per cent pa)	1.2
Change: 2001-2006 (per cent pa)	0.6
Self-Employment (per cent)	9.2
Top Three Occupational Groups (per cent of Total Emp.)	
Sales and Customer Service Occupations	20.6
Managers and Senior Officials	19.5
Elementary Occupations	16.1
GVA per Worker (£000) ¹	31.8
Exports: Gross Output (per cent) ^{1,2}	5.5
Concentration ^{1,2}	low

Note(s): Data are for 2006 except ¹ where data are for 2004.
Data relate to England except ² where data are for the UK.
Source: CE and IER estimates based on various National
Statistics Sources (see Annex A for details).

Broad Sector 5: Business and Other Services

- 3.50 Globalisation, the impact of ICT and the associated cross-border mergers, divestments, acquisitions and alliances are a key driver of growth in both output and employment in Business and Other Services. A large part of the sector comprises City-based professional services and these benefit from relatively light regulation compared with other international financial centres. At the same time, this sector includes the call centre industry and while some call centre operations have been off-shored in recent years, some are returning to the UK in response to customer dissatisfaction. Although ICT and computing services remain a fast growing sub-sector, it is facing a shortage of suitably skilled personnel and this is forcing firms to employ foreign workers.
- 3.51 The use of ICT is transforming some business activities. Industries in which information can be accessed directly and which can be delivered over the internet will see the greatest gains from diffusion of new technologies, such as financial services. Internet banking is enabling cost cutting (and is also enabling banks to reduce their branch
- Globalisation and the diffusion of IT are key drivers of growth in business services, supported by light regulation.*

numbers) and is resulting in greater price transparency, both of which mean increased product commoditisation and price-based competition. Broadband technology is stimulating demand for online video-conferencing and downloading of television services, films and videos. The convergence of content, communications and end-user delivery has blurred the distinction between media companies, broadcasters and telecommunications operators, and firms will continue to expand into each other's traditional markets.

- 3.52 Even though banks have been at the forefront of developing technology to support scale efficiencies and marketing potential, keeping abreast of the latest technologies is expensive and the investment in legacy systems can raise a barrier to innovation. Banks are facing increasing amounts of legislation, particularly from the EC, in the wake of a string of financial scandals since 2000. There are signs that this is generating increased demand for data and security services, if not hardware services, in order to meet compliance needs.

Business and Other Services

SIC03 headings: 65-67,70-74,90-99

Banking and Insurance, Professional services, Computing services, Other Business Services, Miscellaneous Services.

Share of GVA (per cent) ^{1,2}	36.6
Employment (thousands)	6,924
Share of England (per cent)	26.9
Male: Female	55:45
Change: 1996-2006 (per cent pa)	2.3
Change: 2001-2006 (per cent pa)	1.1
Self-Employment (per cent)	16
Top Three Occupational Groups (per cent of Total Emp.)	
Associate Professional and Technical Occupations	19.9
Administrative and Secretarial Occupations	19.4
Managers and Senior Officials	18.5
GVA per Worker (£000) ¹	58.7
Exports: Gross Output (per cent) ^{1,2}	11.2
Concentration ^{1,2}	medium

Note(s): Data are for 2006 except ¹ where data are for 2004.

Data relate to England except ² where data are for the UK.

Source: CE and IER estimates based on various National Statistics Sources (see Annex A for details).

Broad Sector 6: Non-Marketed Services

3.53 In today's knowledge based economy, education has become increasingly important, while developing health and social care has also become increasingly important owing to the ageing population and higher expectations about care. The increased demand and the rising cost of healthcare are stimulating take-up of technological innovations which cut the time involved in the treatment of patients. Recent budgets and Spending Reviews have provided substantial increases in funding for health and education, and these have been reflected in strong employment growth. From 2007 onwards Government spending in these areas is likely to grow rather less rapidly as the Government looks to rein in spending and reduce borrowing. Given the pressure to curb spending growth and divert spending towards 'front-line' services, cut backs will be felt in public administration. Under the Government's own target, up to 80,000 civil service jobs are expected to go by 2008.

3.54 Meanwhile, in the education sector, the emphasis on work-based training continues to increase. The Government decided to establish a network of twelve National Skills Academies to improve the quality and status of vocational education available to students and to help train the existing workforce in new skills. The first three of these became operational in 2006 (financial services, construction, and manufacturing). Other sectors due to benefit from an academy include: food & drink, chemistry, creative and cultural industries and the nuclear sector.

Education and health are high in the social priority of the Government, but spending on these areas is set to slow.

Non-Marketed Services

SIC03 headings: 75,80,85
Public administration and defence, Education services,
Health and Social work.

Share of GVA (per cent) ^{1,2}	17.6
Employment (thousands)	6,040
Share of England (per cent)	23.5
Male: Female	29:71
Change: 1996-2006 (per cent pa)	1.6
Change: 2001-2006 (per cent pa)	2
Self-Employment (per cent)	6.1
Top Three Occupational Groups (per cent of Total Emp.)	
Professional Occupations	26.4
Associate Professional and Technical Occupations	21.7
Personal Service Occupations	17.5
GVA per Worker (£000) ¹	32.6
Exports: Gross Output (per cent) ^{1,2}	0.9
Concentration ^{1,2}	high

Note(s): Data are for 2006 except ¹ where data are for 2004.
Data relate to England except ² where data are for the UK.
Source: CE and IER estimates based on various National
Statistics Sources (see Annex A for details).

Detailed Industrial Profiles

Industry 1: Agriculture, etc.

SIC03 headings: 01-02, 05
Arable Farming, Livestock Production, Horticulture and Related Services; Forestry and Provision of Recreational Facilities and Roads by Forestry Units; and Commercial Sea and Inland Fishing.

Share of GVA (per cent) ^{1,3}	0.9
Employment (thousands)	314
Share of England (per cent)	1.2
Male: Female	72:28
Change: 1996-2006 (per cent pa)	-2.7
Change: 2001-2006 (per cent pa)	-3.1
Change: 2006-2014 (per cent pa)	-1.6
Self-Employment (per cent)	47.2
Top Three Occupational Groups (per cent of Total Emp.)	
Skilled Trades Occupations	43.9
Elementary Occupations	25.5
Managers and Senior Officials	8.9
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	4
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	3
GVA per Worker (£000) ¹	31.9
Exports: Gross Output (per cent) ^{1,3}	8
Concentration ^{1,3}	very low

Note(s): Data are 2006 except ¹ and ² where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.55 Agriculture accounts for just less than 1 per cent of UK GVA and 1.2 per cent of total employment in England. In the mid-1990s the agriculture industry had to deal with the BSE crisis and in 2001 it suffered another setback following the outbreak of foot-and-mouth disease. Fishing, meanwhile, remains a small and declining part of the sector, accounting for just 4 per cent of total GVA of these three industries in 2004. Since 1997, output growth in agriculture has been comparatively low, especially over 2000-06 when it was barely positive. The sector could yet be hit by a large-scale outbreak of disease such as avian flu.
- 3.56 Matters in agriculture have not been helped by recent reforms to the Common Agricultural Policy.

Since the Fischler reforms went through in 2003 subsidies have been decoupled from production. This has led to an overall lowering of subsidy levels which is expected to continue. Even before the reform, very few farms were profitable without subsidies. Between the mid-1970s and 2005 incomes fell by around 35 per cent. Other reforms have removed price controls on some crops and this is undermining their viability as income-earners. One potential area of growth for cereal farmers is the increasing interest in bio-fuels, but whether their cultivation is economically sustainable remains to be seen.

- 3.57 In England, the introduction of the Single Payment System (SPS) in 2005 was marred by delays, errors and overspending in its administration. These delays have cost farmers in England around £22m in interest and arrangement fees on loans they had to take out, and have caused distress. Confidence in the ability of the Rural Payments Agency is low, after its chief executive told the NFU in October 2006 that an acceptable level of service could be two years away. *The introduction of the Single Payment Scheme was marred by delays.*
- 3.58 According to *Working Futures* estimates, the agriculture sector employs around 342,000 people, of which around 48 per cent are self-employed. The nature of these industries means that employment is dominated by skilled trades, which account for around 44 per cent of employment. Elementary occupations are next, accounting for 25.5 per cent. The generally low skill levels help to explain, in part, the comparatively low GVA per worker in agriculture, just £31,900.
- 3.59 Employment in agriculture has fallen substantially since 1996, and since 2001 it has fallen by 3.1 per cent a year; only some manufacturing-related sectors have fared worse. With support for farmers from subsidies and price controls diminishing in the face of increasing pressure from buyers, such as supermarkets, and fishing quotas being cut further, the prospects for profit margins and employment in agriculture is not good. Employment in the sector is expected to continue to fall over the forecast period, by 1.6 per cent a year.
- 3.60 Perhaps because overall employment is falling, just 4 per cent of employers reported problems with hard-to-fill vacancies, while just 3 per cent *Agriculture has a relatively low rate of recruitment difficulties.*

reported skill-shortage vacancies. Both these rates were well below the England averages (7.3 per cent and 5.1 per cent respectively).

Industry 2: Mining and Quarrying

SIC03 headings: 10-14

Deep coal mines and opencast coal working. Exploration for, and extraction of, mineral oil, etc; and the provision of services incidental to oil and gas extraction.

Mining of uranium and thorium ores, metal ores and their preparation; quarrying of stone, sand and clay; production of salt; other mining and quarrying not elsewhere specified.

Share of GVA (per cent) ^{1,3}	2
Employment (thousands)	31
Share of England (per cent)	0.1
Male: Female	87:13
Change: 1996-2006 (per cent pa)	-4.7
Change: 2001-2006 (per cent pa)	-7.2
Change: 2006-2014 (per cent pa)	-1.8
Self-Employment (per cent)	4.5
Top Three Occupational Groups (per cent of Total Emp.)	
Skilled Trades Occupations	24
Process, Plant and Machine Operatives	19.6
Managers and Senior Officials	13.4
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	6
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	3
GVA per Worker (£000) ¹	653.6
Exports: Gross Output (per cent) ^{1,3}	48.4
Concentration ^{1,3}	high

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.61 Mining and Quarrying generates 2 per cent of UK GVA and, by *Working Futures* estimates, employs just 31,000 people. This is just 0.1 per cent of total employment in England. The heavy nature of much of the work in the sector means that men dominate the workforce. Skilled trades are the largest occupational group, with 24 per cent of total employment. Process, plant and machine operatives are the second-largest group, accounting for 19.6 per cent.

3.62 Power generation accounts for around 80 per cent of total coal consumption (UK-produced and imported), but over the medium term this use is likely to decline as environmental concerns and regulations encourage coal's substitution by other energy sources. To make coal-fired generation a viable prospect in the longer term, given the UK's environmental commitments, advanced carbon management techniques will be necessary. Carbon emissions can be managed either by improving the efficiency of the coal burn or by carbon capture and storage (sequestration). Such schemes are technically feasible at present, and a few pilot projects have already received Government approval, although little is known about their safety or the security of carbon storage offered. Without substantial government intervention and financial support, however, there appears to be relatively little incentive for private companies to introduce such clean technologies in the short to medium term. The DTI Energy Review, published in July 2006, suggested that coal might have a long-term future in meeting the UK's energy needs. There is a move to convene a Coal Forum to bring together electricity generators and coal producers to help find solutions to secure the long-term future of UK coal production. It is not yet clear to what extent clean-coal technology in power generation will be promoted by concrete policy measures, although the May 2007 Energy White Paper reaffirmed the Government's view that coal would continue to have an important and continuing role in future as part of the UK's diverse and resilient energy mix.

Coal's future as a fuel for power generation will necessitate advanced carbon management techniques.

3.63 High oil prices have led to a surge in the profitability of oil exploration for UK companies. British Petroleum (BP), for instance, has reported consistently strong financial performances over the period 2004-2006, and at the same time UK-based oil companies have invested heavily in exploration and extraction. In 2005, total expenditure in UK offshore oil and gas exploration, new field development and operations increased year-on-year by 15 per cent, which comprises the largest increase in investment of any British industrial sector over this period, according to a report published by the UK Offshore Operators Association (UKOOA). Although oil and gas prices in the UK are strongly correlated, gas prices are typically set on the domestic market rather than

internationally. Like oil prices, gas prices have risen strongly over the period 2005-06, forced up by supply problems at a time of high demand. While the demand for gas depends largely on winter temperatures, the sources of gas supply have been gradually changing over the period 2000-06. In 2004, the UK became a net importer of gas, and now relies heavily on gas supplies from Norway and Belgium. A new pipeline (the Langeled pipeline from the Ormen Lange field in Norway) and storage terminals for Liquid Natural Gas (LNG) imports, expansion of the existing interconnector to Belgium and completion of a new interconnector to the Netherlands will bring new supplies to the UK, easing supply pressures in the future.

- 3.64 Total production from the UK Continental Shelf (UKCS) declined by 11 per cent to 3.2m barrels of oil equivalent per day (boepd) in 2005, following a similar decline in 2004. Production is declining because oil and gas reserves on the UKCS are dwindling. In response, larger oil companies such as BP and Shell have outsourced their activities on the UKCS to smaller oil companies. Some of these smaller oil companies, such as BG, Talisman and Newfield, have succeeded in making North Sea exploration and extraction profitable. The contribution of small participants (that is, participants with a production of less than 20 thousand boepd in 2005) has increased since 1999, in terms of both production and expenditure. Conversely, the share of production accounted for by the majors has shrunk between 2000 and 2005. Nevertheless, expenditure by majors appears to be increasing as a proportion of the total.
- 3.65 The share prices of the major mining conglomerates have increased rapidly since 2001. The shares of companies such as Rio Tinto and BHP Billiton trade consistently at higher values than their less diverse rivals, simply because the more commodities a mining firm produces, the less its profits depend on the price of each one. Similarly, the more countries it operates in and the more mines it operates, the less vulnerable it is to difficulties in any one of them. In mining, the existence of political risks associated with geographical diversification has increased the importance for a company to have a broad portfolio of commodities. Mining companies are

increasingly seeking to diversify from their historical bases in North America and Australia to newer opportunities in Africa and Latin America. Some countries in these continents have been adopting an increasingly aggressive attitude towards them; for example via demands for higher royalty payments or threats to expropriate assets. This has increased the risk premium associated with such investment. The linking of gold with other metals is also not advised. Since gold is so highly valued, its producers tend to trade at an even higher valuation than diversified mining firms. So gold producers tend to sell off reams of any other metals which they discover and to merge only with one another. As a result of high commodity prices, mining firms are cash rich; but the best time for effecting an acquisition is when commodity prices fall. No such fall seems likely in the short run since rapid economic growth in the developing world is likely to boost demand for mining output for years to come. Moreover, the low level of investment in the industry during the 1980s and 1990s means that there is a backlog of investment needed to enable supply to satisfy growing demand. Furthermore, attempts to boost supply in the short run are being hampered by bottlenecks, which include a shortage of key personnel, such as geologists, and of equipment.

3.66 The Government is proposing reforms to the planning system that could pave the way for the construction of up to ten new gas storage facilities. The aim of the changes, proposed in 2006, is to make energy supplies more secure, over the medium term. Compared with other large gas-consuming countries, the UK has very little gas storage. Total storage capacity is equivalent to 3½ per cent of annual demand, compared with 16 per cent in the rest of Europe. That means the country has little to fall back on when demand peaks in winter months, and so prices become more volatile then.

Proposed reforms could pave the way for the construction of up to ten new gas storage facilities.

3.67 The DTI launched in June 2005 a strategy for developing carbon abatement technologies (CAT) for fossil fuel use in the UK energy system. CATs are a group of innovative technologies that complement other abatement measures. They provide an option for using fossil fuels (that is, coal, oil and gas) during the transition to a low-carbon energy system. The DTI analysis suggests that

CAT can offer carbon dioxide reductions of between 5 and 30 per cent by making existing technologies more efficient and through mixing nominally carbon-neutral biomass with fossil fuels. Over the longer term there is potential to reduce carbon emissions by around 85 per cent by the use of Carbon Capture and Storage (CCS) technologies, which separate the carbon dioxide produced in large combustion plant and store it in geological formations. CATs are viewed as complementing renewables technologies in the group of sustainable energy technologies for tackling climate change. The development and implementation of CATS will require the involvement of many business sectors, including power engineering, electricity generation, fossil fuel supply, offshore and petroleum engineering, geological services and project developers. The DTI argues that the UK is well placed to contribute to the development and deployment of CATs in the UK and worldwide. The two key factors are: first, the UK has a strong presence in the relevant business sectors; and second, there are abundant natural resources for the long-term storage of carbon dioxide in the UK's offshore oil and gas fields and in deep saline aquifers.

- 3.68 Employment in Mining and Quarrying fell over 1996-2006 by 4.7 per cent a year. The rate was even faster in the second half of this period. It is forecast to continue to fall over 2006-14, but at a slower rate (1.8 per cent a year). Despite the continued fall in employment over the last decade, the sector still has recruitment difficulties. According to NESS2005 6 per cent of establishments reported having hard-to-fill vacancies in 2005 and 3 per cent reported skill-shortage vacancies.

Industry 3: Food, Drink and Tobacco

SIC03 headings: 15-16

Production, processing and preserving of meat, fish, fruit and vegetables; vegetable and animal oils and fats; dairy products; grain milling, cereals and starches; animal feeds; bread, pastry goods, biscuits; sugar, cocoa, confectionery etc; tea, coffee, seasonings and other food products not elsewhere specified.

Distilling of spirits including ethyl alcohol; manufacture of wine, cider and other fruit wines; manufacture of beer and malt; production of mineral waters and soft drinks.

Manufacture of tobacco products: cigarettes, cigars, pipe tobacco, snuff.

Share of GVA (per cent) ^{1,3}	2
Employment (thousands)	357
Share of England (per cent)	1.4
Male: Female	71:29
Change: 1996-2006 (per cent pa)	-0.7
Change: 2001-2006 (per cent pa)	-1.8
Change: 2006-2014 (per cent pa)	-1.3
Self-Employment (per cent)	2.6
Top Three Occupational Groups (per cent of Total Emp.)	
Process, Plant and Machine Operatives	27
Elementary Occupations	15.1
Skilled Trades Occupations	15.1
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	8
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	6
GVA per Worker (£000) ¹	61.2
Exports: Gross Output (per cent) ^{1,3}	18.1
Concentration ^{1,3}	medium

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.69 Since the mid-1990s the contribution of the food and drink industry to overall economic growth has been steadily declining. The slow demographic growth in the UK and key euro-zone export markets limits the growth in demand, as does the typically low income-elasticity of demand for food products, which account for so much of the industry's output. This means, that activity in the food, drink and tobacco sector is much less sensitive to the business cycle than the manufacturing average. In 2004 the sector accounted for 2 per cent of UK GVA.

- 3.70 Competition to supply the UK supermarkets now dominates the food industry. In the more distant past, the food industry consisted of many low-volume producers, but during the 1980s and 1990s the industry was transformed by mergers and consolidation, increasing efficiency and realising economies of scale. As a result, productivity growth in the industry tended to hold up well. In the late 1990s productivity deteriorated and there were a number of food scares, resulting in considerable over-capacity. This has perpetuated the trend for consolidation, but more recently it has been characterised by takeover activity led by financial firms (often private equity) rather than other food and drink producers. *Competition to supply the UK supermarkets now dominates the food industry.*
- 3.71 Although the concentration ratio for this sector is classed as medium, some sub-sectors of the drink industry are dominated by a few large firms. For example, some 85 per cent of beer drunk in the UK in 2001 was brewed by four companies. Since 2003 the market for 'real beer' made by medium-sized breweries has been growing strongly, and about 12 per cent of UK beer consumption is attributable to the medium-sized breweries (one of the largest of which is Greene King, of Bury St Edmunds). According to the Society of Independent Brewers more than 500 small breweries accounted for around 2 per cent of beer drunk in the UK in 2005. Some large companies also own many of the pubs where the beer is sold, and so small local breweries can struggle to maintain market share. Regulation and legislation also play a key role in the drinks industry. At the same time, people's drinking patterns have changed in recent years. There has been a downward trend of on-trade sales. More than 40 per cent of Britain's beer was bought in shops and supermarkets in 2005, compared to 33 per cent in 2000. This reflects low retail prices, but also the consequence of long-term social trends.
- 3.72 An increasing number of confectionery manufacturers have been consolidating to protect their margins. One driver for this is the competition between supermarkets which is forcing downward pressure on factory-gate prices. In 2006, Masterfoods (Mars), Nestle Rowntree and Heinz all relocated production facilities to continental Europe. *An increasing number of confectionery manufacturers have been consolidating to protect their margins.*

- 3.73 *Working Futures* estimates indicate that the food, drink and tobacco sector employed 357,000 workers in 2006, or 1.4 per cent of total employment in England. With the industry being dominated by large firms and multinationals, the rate of self-employment is low, at just 2.6 per cent. As with much of manufacturing, the trend in employment in the sector has been downward over the past ten years. This accelerated over 2001-06 when employment fell by 1.8 per cent a year, among the poorest rates across all the sectors. With margins likely to remain under pressure from raw material costs, lower-cost competitors from overseas, and tough pricing deals from buyers, employment prospects for the food, drink and tobacco sector are weak and, supported by further consolidation, employment is forecast to fall by 1.3 per cent a year over 2006-14.
- 3.74 Those hardest hit by this restructuring are likely to be those at the lower end of the skills spectrum, who currently dominate the occupational structure in Food, Drink & Tobacco. In first place, process, plant and machine operatives account for 27 per cent of employment; elementary occupations and skilled trades are the second-largest groups, with 15.1 per cent each. These falls are expected to be partly offset by an increase in demand for skilled workers in sales and customer service occupations; managerial, professional; and associate technical and professional occupations.
- 3.75 According to estimates derived from NESS2005, Food, Drink and Tobacco is just above the national average with regard to employment problems: 8 per cent of establishments report hard-to-fill vacancies, while 6 per cent report skill-shortage vacancies.

Industry 4: Textiles and Clothing

SIC03 headings: 17-19

Preparation and spinning of textile fibres (cotton, wool, flax, silk, threads etc); weaving and finishing of textiles; manufacture of made-up textile articles (soft furnishings, blankets, table linen etc); manufacture of carpets and rugs; manufacture of other textiles not elsewhere specified; manufacture of knitted and crocheted fabrics including hosiery, pullovers, cardigans and similar articles.

Clothing including workwear, coats, suits, jackets, trousers, dresses, skirts etc, underwear, hats, swimwear and fur articles.

Tanning and dressing of leather; manufacture of luggage, handbags and the like; manufacture of footwear for all purposes.

Share of GVA (per cent) ^{1,3}	0.4
Employment (thousands)	132
Share of England (per cent)	0.5
Male: Female	64:36
Change: 1996-2006 (per cent pa)	-9
Change: 2001-2006 (per cent pa)	-10.1
Change: 2006-2014 (per cent pa)	-4.5
Self-Employment (per cent)	17.2
Top Three Occupational Groups (per cent of Total Emp.)	
Process, Plant and Machine Operatives	30.7
Managers and Senior Officials	18.1
Skilled Trades Occupations	15.3
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	8
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	6
GVA per Worker (£000) ¹	27.1
Exports: Gross Output (per cent) ^{1,3}	80.2
Concentration ^{1,3}	low

Note(s): Data are 2006 except ¹ and ² where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.76 Textiles and Clothing accounted for around 0.4 per cent of UK GVA in 2004. Although UK sales have risen sharply over the last 20-30 years, import penetration has also risen markedly, reflecting the combined effect of trade liberalisation and a highly price-sensitive domestic market. A large share of the sector's output is exported and the sector has suffered as UK firms struggle to compete internationally with lower-cost rivals based in developing countries. At the same time exports

have fallen as the industry increasingly specialises in low-volume high value-added production.

3.77 Large retail chains have continued to place more of their orders with overseas suppliers and encourage their UK-based suppliers to shift production to lower-cost countries. Consequently, companies have been forced to restructure their businesses, and many have closed. In spite of this decline, the industry remains a major source of output and employment in some regions of the UK, particularly the East Midlands, where the industry accounts for around 6 per cent of all manufacturing output and 9 per cent of manufacturing employment, compared with 3 per cent and 5 per cent for the UK as a whole.

3.78 China's accession to membership of the World Trade Organisation in 2001 and the abandonment in 2005 of the quota system that for 40 years governed the quantity of textile exports shipped by developing countries have both fuelled the rapid rise in cheap imports. As a result high-cost producers in countries like the UK are losing out to countries where production is cheaper, especially China and India. The industry is heavily reliant on trade: over 80 per cent of output is exported. The ending of the Multi-Fibre Agreement in 2005 is supporting the trend to offshore and is leading to further employment losses as a sizeable share of work is relocated to countries such as Turkey, Tunisia and Morocco.

The volume of textiles imports has increased dramatically and the EU has imposed new tariffs.

3.79 In October 2006 the EC imposed emergency tariffs on footwear imports from China and Vietnam in response to concerns that producers in these countries were receiving state aid. A 16.5 per cent duty was placed on Chinese imports and a 10 per cent duty was placed on Vietnamese imports. These are due to last for two years, but they will not change the economic fundamentals that are driving the globalisation trend.

3.80 Retailers in the UK, concerned about the possibility of higher prices, were critical of the tariffs. This is symptomatic of a wider attitude among retailers to demand ever more favourable price and payment terms. This is squeezing producers' margins further and encouraging the relocation of production to lower-cost countries.

3.81 Employment in the textiles and clothing sector in the UK has fallen for many decades. In 1981 employment in the industry accounted for 2.5 per cent of all employment in England. *Working Futures* figures suggest that in 2006 the industry represented only 0.5 per cent of employment (132,000). The decline in employment continues to accelerate: between 1996 and 2006 employment declined by 9 per cent a year, but the rate was -10.1 per cent a year in the shorter more recent period, as trade liberalisation accelerated. Compared to most other manufacturing sectors, Textiles and Clothing has a high proportion of female workers (36 per cent). The labour-intensive nature of the industry is reflected in the fact that process, plant and machine operatives and skilled trade occupations make up 46 per cent of the workforce. Trade liberalisation and restructuring are having a clear impact on the occupational structure. In *Skills in England 2004*, it was reported that 36 per cent of the workforce was process, plant and machine operatives; for *Skills in England 2006* that figure is now less than 31 per cent. The shift among UK producers to lower volume, higher value-added work and the relocation of remaining higher volume, low value-added work to cheaper locations overseas mean employment in this sector is expected to continue to fall over 2006-14. With much of the restructuring already complete, the rate of decline is expected to slow. Over the forecast period, employment is expected to fall by 4.5 per cent a year.

3.82 Following the recent restructuring and job cuts the sector lies just above the average for establishments reporting hard-to-fill and skill-shortage vacancies. Given the recent decline of these industries, they are less likely to be peoples' first choice as job destination. In cutting jobs, companies will seek to hold on to the most skilled (productive) and so the sector can be expected to have a comparatively low rate of incidence of skills gaps. What is less clear, however, is whether firms are adapting sufficiently rapidly to the consequences of globalisation and have the required skills to make the change.

The sector lies just above the average for establishments reporting hard-to-fill and skill-shortage vacancies.

Industry 5: Wood and Paper Products

SIC03 headings: 20-21

Sawmilling and planting of wood; manufacture of veneer sheets, plywood, laminboard, fibreboard etc; manufacture of builders' carpentry and joinery; manufacture of wooden containers, and other products of wood.

Manufacture of: pulp, paper and paperboard; articles of paper and paperboard, incl. bags, containers, sanitary goods, stationery, wallpaper and other articles of paper nes.

Share of GVA (per cent) ^{1,3}	0.6
Employment (thousands)	149
Share of England (per cent)	0.6
Male: Female	75:25
Change: 1996-2006 (per cent pa)	-2.4
Change: 2001-2006 (per cent pa)	-1.5
Change: 2006-2014 (per cent pa)	-1.5
Self-Employment (per cent)	12
Top Three Occupational Groups (per cent of Total Emp.)	
Skilled Trades Occupations	29
Process, Plant and Machine Operatives	18.1
Managers and Senior Officials	15.7
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	8
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	7
GVA per Worker (£000) ¹	42.8
Exports: Gross Output (per cent) ^{1,3}	15.3
Concentration ^{1,3}	low

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.83 The wood and paper products sector accounts for 0.6 per cent of UK GVA and 0.6 per cent of employment in England. Of the 149,000 people it employs, 75 per cent are male. According to *Working Futures*, skilled trades dominate the employment structure in Wood and Paper Products, accounting for 29 per cent of employment. Process, plant and machine operatives is the next largest group, accounting for 18.1 per cent.
- 3.84 The current high energy prices are increasing demand for woodfuel. One side effect of increased demand will be to bid up prices of timber; and this will have wider repercussions throughout the wood products and paper and board industries. The Forestry Commission England has developed a strategy to bring forward two million cubic metres

of timber for the biomass fuel market. In Scotland funds of £7.5m have been earmarked to stimulate the development of wood energy. The Forestry Commission has recently launched three information sources aimed at promoting the use of wood as a fuel.

3.85 Being energy-intensive, the paper & board industry has been hit hard by rising energy prices. This has put margins on mill operations under immense pressure and mill closures have continued. No fewer than five paper and tissue mills and some corrugated sites in the UK closed down in 2006. These mill closures will reduce domestic demand for recycled paper. In addition, the strength of sterling, while lowering the cost of purchases of pulp from the continent, has continued to restrict exports and expose UK producers to more intense import competition. Tissue production, which is particularly energy-intensive, has been hard hit, since energy accounts for more than 25 per cent of total manufacturing cost. The higher UK energy prices compared to Europe are making the UK less competitive as a site for production compared to the continent. In a recent assessment, the Confederation of European Paper Industries has identified a range of issues and challenges facing the European industry in the context of rising global competition. These issues are pertinent to the UK industry. The European industry as a whole has suffered from high energy costs and the failure to complete the liberalisation of European energy markets is seen as a disadvantage to the paper & board industry because it contributes to high prices in an oligopolistic market structure. The relative unattractiveness of Europe has deterred some companies from investing in Europe. The European industry also faces challenges in terms of the cost and efficiency of timber supply, since fast-growing plantations in Latin America and South East Asia provide raw material at lower cost. One particular concern is that the burden of environmental regulation is placing European producers at a disadvantage compared to countries which have laxer environmental rules.

The paper & board industry has been hit hard by rising energy prices.

3.86 The two largest manufacturers of containerboard in China, Nine Dragons Paper and Lee & Man Paper, have increased total capacity by 3.5m tonnes of recycled linerboard and corrugating medium.

China is expected to become an increasingly important exporter of paper and board.

- 3.87 The paper market continues to be affected by environmental regulation, which is an area where paper & board generally scores well, with high recycling rates, particularly in the UK because its high density of population allows efficient collection of recyclable material. In 2005 the paper & board industry in the UK achieved a recycling rate of 77 per cent, well above the 60 per cent target set by the EC's Packaging Directive. Around 75 per cent of exports go to the Far East with China being the biggest market. The global market for recovered paper is expected to become increasingly competitive as countries around the world and in particular North America step up their recycling targets. The paper and board packaging sub-sector is grappling with increasing concerns about environmental impacts not just from regulatory agencies but also from the end consumer. *The paper market continues to be affected by environmental regulation.*
- 3.88 Output growth in the wood and paper sector has been falling for the last decade and, coupled with robust productivity growth, this has translated into falling employment. Employment fell by 2.4 per cent a year over 1996-2006. Over 2001-06, rising energy costs ate into operators' margins and kept the squeeze on employment, which continued to fall by 1.5 per cent a year. The forecast is for this to continue over 2006-14. In the sector, 8 per cent of establishments report hard-to-fill vacancies and 7 per cent report skill-shortage vacancies.

Industry 6: Printing and Publishing

SIC03 headings: 22

Printing and publishing of books, newspapers, periodicals and miscellaneous products; related services such as bookbinding; reproduction of recorded media incl. records, CDs, tapes, videos and computer media.

Share of GVA (per cent) ^{1,3}	1.5
Employment (thousands)	340
Share of England (per cent)	1.3
Male: Female	66:34
Change: 1996-2006 (per cent pa)	-0.4
Change: 2001-2006 (per cent pa)	-0.8
Change: 2006-2014 (per cent pa)	-0.2
Self-Employment (per cent)	13.1
Top Three Occupational Groups (per cent of Total Emp.)	
Associate Professional and Technical Occupations	22.9
Managers and Senior Officials	18.2
Process, Plant and Machine Operatives	15.6
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	6
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	5
GVA per Worker (£000) ¹	48.2
Exports: Gross Output (per cent) ^{1,3}	13.3
Concentration ^{1,3}	low

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

3.89 Printing and Publishing generates about 1.5 per cent of UK GVA. The sector employs around 340,000, or 1.3 per cent of total employment in England, of whom around two thirds are male. Managers and senior officials make up 18.2 per cent of the sector's workforce but associate professional and technical occupations is the largest group, accounting for 22.9 per cent.

3.90 It is widely believed that the rapid spread of the information revolution will have a detrimental effect on publishers, especially as the internet and CD-ROMs take the place of hard copies of publications. To date, however, the internet and CD-ROMs seem to be functioning rather as complements to paper-based copies of books, newspapers, and magazines. There are few signs of the new media replacing the old, especially as

The internet and digital media are acting as complements to paper-based publications.

the new is being used as a marketing tool to encourage people to subscribe to paper versions of publications. There are, however, particular issues of copyright and piracy in relation to recorded music.

3.91 There is growing evidence of maturity in the men's magazine sub-segment, even though it has seen the launch of several successful titles in recent years. The recent decline in overall circulation in the men's magazine sub-segment has been partly put down to failure to attract enough new readers at the bottom end of the age range. Younger men are more predisposed to seek entertainment via the internet and mobile phones. Women's magazines, the most important sub-segment of the market, continues to see strong demand and continuous product innovation, including new product launches and revamps of existing titles. Nevertheless, most of the top titles have seen circulation decline recently. Part of the problem is seen as the difficulty of winning new readers in the younger age ranges. Magazines lose out to new media as a source of entertainment. The response of the magazine publishers has been to develop multimedia platforms for their titles. The contract magazine segment, which produces titles linked to companies or products, continues to be robust. This is one of the few segments of the print media to have seen recent increases in advertising revenue. These titles now account for seven of the top ten magazine circulations. They are becoming increasingly recognised as an effective way of getting advertising messages across to consumers.

3.92 Conditions remain tough for the national newspapers, because they are continuing to see falls in advertising revenues. Indeed, internet advertising has pushed national newspaper advertising into fourth place for share of the total advertising spend. While internet advertising is continuing to grow quickly, national newspapers have seen advertising revenues fall substantially since 2000. The squeeze has been felt hardest by the 'red-top' tabloids, which are losing out to new media, multi-channel television and weekly tabloid-style magazines. The system for distribution of newspapers and magazines, under which publishers award exclusive territories to distributors, has caused much investigation and

Falling advertising revenues are making conditions tough for national newspapers.

anguished debate in recent years. The Chief Executive of the OFT has signalled that the arrangement may be outlawed since it is hard to justify under competition law. This would open the way for supermarkets to set up their own distribution systems to their advantage and, potentially to the detriment of the traditional newsagent.

3.93 The printing industry has been under pressure for some time from a combination of input prices rising ahead of general inflation, and output prices falling. Output prices are currently some 9 per cent below their peak in 1996. An important reason for this price weakness is overcapacity in the industry, where an estimated 70 per cent of printers are working below full capacity. In common with other industries, printing has suffered from the substantial rise in energy prices. There has been a general mood of pessimism within the industry over the past ten years. One of the challenges facing the industry is to find ways of boosting margins. On the demand side this includes offering greater value-added through use of digital technology and improved ink technology and colour accuracy. On the cost side, adoption of lean manufacturing and internal streamlining offer potential for savings. The industry has also identified a need for British printers to interact more with universities to gain access to cutting edge technologies and bespoke software solutions, an area in which British printing is felt to lag behind the USA.

3.94 The internet, long a thorn in the flesh of the commercial record companies, has proved to be a boon for debut albums. Social networking sites have made it far easier to obtain exposure for new acts, relying on that most powerful of marketing devices, the reference sell. Digital distribution has also contributed to robust sales of debut albums. Illegal internet file-sharing has halved the British singles market between 1999 and 2004 according to the International Federation of Phonographic Industries (IFPI). The internet is increasingly being used as a distribution channel for pirate and counterfeit CDs, a market worth an estimated £77m in the UK annually. The counterfeit trade is also believed to be becoming increasingly dominated by organised criminal gangs. International piracy, which has long been a drain

The music industry is still grappling with the internet and its ramifications.

on the revenues of the UK industry, continues to operate on a much larger scale than domestic piracy in the UK.

- 3.95 Global sales in recorded music have been falling since 2000, although the rate of decline slowed in 2004. The major record labels consistently give the same reason for this: internet piracy. An internal study concluded that no more than one-third of the decline in sales could be accounted for by internet piracy. The other factors are competition from other forms of entertainment and the retail space they occupy (such as DVDs and video games which have higher margins than CDs and are therefore allocated more shelf-space), physical piracy such as copying of CDs and tapes (which existed long before 2000) and, most of all, the quality of the music available. The problem of short-termism has been a growing factor behind the decline in music quality. Consequently a large number of customers have been alienated. Future profitability is also being put at risk by the promotion of so many one-hit artists who will not add anything to the record labels' back-catalogues. The growth in internet use presents the record labels with an opportunity to regain greater control over the products they sell. The internet has the potential to allow the record labels much greater freedom in their marketing and this will particularly benefit smaller, independent labels, which currently find it difficult to get their artists heard on commercial television and radio stations.
- 3.96 Output in Printing & Publishing has been falling over the last decade as new technology has opened up new distribution channels that have completely altered the traditional business model of publishers. This has hurt the sale of some printed media and in turn, demand for paper, where there is now plenty of spare capacity. In line with these trends, employment in the sector fell by 0.4 per cent a year over 1996-2006, with a faster rate in the second half of the decade as more people adopted and used these new channels and energy prices hit firms' margins. Over the forecast horizon, employment will continue to decline, albeit at a slower rate. Within the sector, 6 per cent of establishments reported hard-to-fill vacancies in 2005, according to NESS2005, while 5 per cent reported skill-shortage vacancies.

Industry 7: Chemicals and Non-Metallic Minerals

SIC03 headings: 23-26

Manufacture of coke, refined petroleum products and processing of nuclear fuel.

Investigation, perfecting and production of basic pharmaceutical products; manufacture of pharmaceutical preparations and medicaments.

Manufacture of basic chemicals incl. industrial gases, dyes and pigments, inorganic and organic basic chemicals, fertilizers, plastics and synthetic rubber in primary forms; pesticides, paints, varnishes and inks; detergents, cleaning and toilet preparations; glues, photographic chemicals and unrecorded media (tapes, cassettes, discs); manufacture of man-made fibres.

Manufacture of rubber products, rubber tyres, etc production of finished and semi-manufactured plastics goods, including plates, sheets, tubes & profiles, packing goods, builders' & other plastic products.

Manufacture of various building materials, such as glass; ceramics products; bricks, tiles and clay products; cement, lime and plaster; articles of concrete, plaster and cement; and other non-metallic mineral products not elsewhere specified.

Share of GVA (per cent) ^{1,3}	2.9
Employment (thousands)	501
Share of England (per cent)	1.9
Male: Female	74:26
Change: 1996-2006 (per cent pa)	-1.9
Change: 2001-2006 (per cent pa)	-2.4
Change: 2006-2014 (per cent pa)	-1.3
Self-Employment (per cent)	5.4
Top Three Occupational Groups (per cent of Total Emp.)	
Process, Plant and Machine Operatives	25.2
Skilled Trades Occupations	15
Managers and Senior Officials	14.2
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	5
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	7
GVA per Worker (£000) ¹	62.7
Exports: Gross Output (per cent) ^{1,3}	52.4
Concentration ^{1,3}	medium

Note(s): Data are 2006 except ¹ and ² where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.97 Chemicals and non-metallic minerals generates around 3 per cent of UK GVA. It accounts for 1.9 per cent of all employment in England, with 501,000 workers. Most of these are men, while

process, plant and machine operatives is the largest occupational group. Skilled trades is the second-largest group, accounting for 15 per cent of those employed in the sector.

- 3.98 Outside the tyre industry, plastics and rubber production in the UK is fragmented. Small and medium-sized firms specialise in niche markets, responding to, and in some cases driving, technological progress, such as the development of new plastics usable in wider applications. Rubber production was relatively labour-intensive until recently, when new production techniques began to lower employment levels and increase productivity. Rubber & plastics is traditionally seen as an environmentally-unfriendly sector but some recent initiatives are aiming to change this. Rubber & plastics is also sensitive to Government waste policy, commodity prices and energy prices. *Plastics and rubber production in the UK is very fragmented.*
- 3.99 Thirteen top UK grocery retailers committed to minimising household waste in August 2005 by signing up to a new initiative that aims to reduce the amount of household packaging and food waste generated each year. The Waste & Resources Action Programme (WRAP) in the Courtauld Commitment aims to design out packaging waste growth by 2008 and deliver absolute reductions in packaging waste by March 2010 among other things. Since then several major food producers have also joined the Commitment. This is likely to stimulate demand for a new wave of packaging innovation, including new packaging concepts and formats, new materials, new sealing, coating and labelling technologies, and, potentially, new ways of distributing and dispensing products in the UK grocery market. R&D is work supported through WRAP's £8m Innovation Fund, which is dedicated to stimulating design innovation in the sector. The focus is not just on packaging, however, but also on household food waste, which amounts to some five million tonnes per year.
- 3.100 The pharmaceuticals industry is less sensitive to cyclical fluctuations than most industries, for two reasons. Firstly, medical drugs are always seen as necessary goods regardless of economic conditions. Secondly, as economies become wealthier, the proportion of national income spent on healthcare tends to increase. In many economies, including the UK, the Government is

the main purchaser of drugs, and its stable spending acts to sustain demand in times of economic downturn. Also, a rapidly ageing population brings a sustained increase in demand for drugs. In their search for new pipeline products, large pharmaceutical firms are exploiting alliances with biotechnology firms and early alliances are leading to merger and acquisition (M&A) activity. The short and long-term strategies of pharmaceuticals companies are playing a key role in determining their market shares. While short-term strategies aim at fighting patenting issues and will have an immediate impact on market share, long-term strategies focus on the improvement of R&D, targeted treatment solutions, biotechnology and integrated network models.

3.101 Instead of competing with generic producers, global pharmaceuticals companies are increasingly seeking to collaborate with drugs companies in cheap-labour countries, such as India. As well as low costs, India has the know-how in organic chemistry required to produce local versions of proprietary medicines. Another push towards collaboration has come from India itself, which is implementing a patent law that could see the thousands of skilled scientists who used to copy western drugs put their energies into developing their own innovative treatments. This prospect has forced Indian generic producers to re-examine their strategies. The long-term payoff from collaboration could be considerable. Global pharmaceuticals companies are under mounting pressure to cut costs and tight health care budgets are forcing authorities in Europe and the USA to buy more generic drugs from places like India. Global pharmaceuticals companies could build plants in cheap-labour countries themselves, but this would expose them to regulatory scrutiny in their home countries. Partnership is therefore more likely.

Global pharmaceuticals companies are increasingly seeking to collaborate with drugs companies in cheap-labour countries.

3.102 Although pharmaceuticals is perhaps the most high-profile of this industry's sectors, the manufacture of chemicals is the most important sector in terms of its contribution to output. The demand for chemicals as an input for other manufacturing industries is cyclical, and so, with the recent slowdown of the global economy and higher input costs, the industry suffered as demand weakened and margins narrowed. Some firms are choosing to specialise in niches where the cost of

The chemicals industry has suffered recently as demand weakened and margins narrowed.

raw materials is more stable. Chemicals is highly export-oriented and is consequently sensitive to changes in world prices.

3.103 The Health and Safety Executive (HSE) has been appointed as the UK Competent Authority for the forthcoming EU chemicals legislation, REACH (Registration, Evaluation and Authorisation of Chemicals). Implementation of REACH will be a challenge for both the industry and the regulators. REACH would see approximately 30,000 substances go through a process of registration, evaluation, and authorisation. According to Cefic, the European chemicals industry association, more than 80 per cent of Europe's big chemicals companies are already preparing for REACH. Small and medium-sized enterprises (SMEs) are less well informed of the challenge they face. Finding and hiring a toxicologist and other experts is already becoming more difficult as a result of demand created by REACH. The Commission will also have to ensure that the chemicals agency is up and running by the middle of 2007. From 2008, when REACH becomes fully effective, the agency will have to deal with 120,000 to 140,000 registrations.

3.104 The chemicals industry has suffered from a skills shortage for many years and it is beginning to see the lack of skills in the UK as a major obstacle to its competitiveness. One of the problems is the perception that apprenticeships leading to industry jobs are for low achievers. There is also a drop in the number of students studying 'hard' sciences as the range of other degree courses available grows. The industry itself is also to blame, having cut training during the periods of restructuring in the 1970s and 1980s. Yorkshire Forward has opened an £8m mock chemicals plant in Stallingborough, near Grimsby, as part of an initiative to tackle skills shortages in the Yorkshire and Humber chemicals industry. CATCH (the Centre for the Assessment of Technical Competence Humber) looks similar to an active chemicals plants. It comprises a full-scale plant section with working machinery, control room and workshops, but with water and other non-hazardous substances running through its pipe network. According to Yorkshire Forward, CATCH is unique in Europe in providing a 'real life' training environment for technical staff in the chemicals industry. The opening marks the

The chemicals industry is beginning to see the lack of skills in the UK as a major obstacle to its competitiveness.

culmination of five-year project in response to a growing skills gap in the chemicals industry as well as to legislation, which bans the training of unskilled personnel on hazardous sites.

- 3.105 The non-metallic minerals industry is closely linked to general economic conditions in the UK. There are two reasons for this. First, the low value/weight ratio makes transportation expensive and thus makes it inefficient for companies to develop markets outside their local region. Partly as a result, the industry is fragmented, with a high preponderance of small and medium-sized enterprises. Secondly, many of the products are inputs into divisions of the building industry, which is highly sensitive to general economic conditions. Like other sub-sectors heavily exposed to the natural environment, non-metallic minerals has to deal with increasing amounts of environmental regulation.
- 3.106 Employment growth in this sector has been poor over 1996-2006 as downward pressure on prices from powerful customers, competition from lower-cost producers overseas and rising input cost have squeezed margins and forced some companies to restructure to boost productivity, relocating to lower-cost countries in some cases. As a result employment fell by 1.9 per cent a year over 1996-2006, with an even faster decline in the second period. Things should improve a little for the longer term, but employment is still forecast to fall over 2006-14, by 1.3 per cent a year.

Industry 8: Metals and Metal Goods

SIC03 headings: 27-28

Manufacture of basic iron and steel and ferro-alloys including pig iron and steel and hot rolled or cold rolled products such as sheets, bars, rods and rails; manufacture of tubes and other first processing of iron and steel; manufacture of basic precious and non-ferrous metals, including aluminium, lead, zinc, tin and copper; casting of metals (ferrous and non-ferrous).

Manufacture of fabricated metal products, excluding machinery and equipment, but including: structural metal products, doors and windows; tanks, reservoirs, boilers and steam generators; forging, pressing and stamping; general hardware; light metal packaging; other fabricated metal products not elsewhere specified.

Share of GVA (per cent) ^{1,3}	1.4
Employment (thousands)	396
Share of England (per cent)	1.5
Male: Female	82:18
Change: 1996-2006 (per cent pa)	-2.8
Change: 2001-2006 (per cent pa)	-2.3
Change: 2006-2014 (per cent pa)	-1.3
Self-Employment (per cent)	10.3
Top Three Occupational Groups (per cent of Total Emp.)	
Skilled Trades Occupations	29.5
Process, Plant and Machine Operatives	21.6
Managers and Senior Officials	14.3
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	10
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	9
GVA per Worker (£000) ¹	37.5
Exports: Gross Output (per cent) ^{1,3}	33.9
Concentration ^{1,3}	29.5

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.107 The metals and metal good sector, responsible for about 1.4 per cent of UK GVA, employs around 400,000 people in England, or 1.5 per cent of the workforce. The vast majority of these workers are male, while skilled trades dominate the occupational structure, accounting for 29.5 per cent. Process, plant and machine operatives make up just under 22 per cent.

- 3.108 The basic metals industry comprises the manufacture and processing of iron and steel, non-ferrous metals, and precious metals. Corus plc is the principal enterprise in the UK iron and steel sector. It was formed in 1999 by the merger of British Steel and Hoogovens of the Netherlands. It has integrated iron ore-to finished steel operations at Port Talbot, Scunthorpe and Teesside in the UK and at IJmuiden in the Netherlands. Engineering steels in the UK are produced at Rotherham. In January 2007, Corus was taken over by Tata of India. The non-ferrous metals sector produces refined base metals (primarily aluminium, copper, nickel, lead, tin and zinc) that are manufactured to defined standards. There is little specialisation between producers. Trading is on a global basis, prices being determined daily on the London Metal Exchange. UK non-ferrous metals manufacturing is chiefly of aluminium and copper. Its prospects are threatened by the trend for production to move closer to sources of minerals and to regions with low costs of energy and labour.
- 3.109 The metal goods industry comprises principally the production of: castings and forgings, metal structures and sections, tanks and containers, steam generators, boilers and radiators; general mechanical engineering products; and the manufacture of a wide range of metal products including: cutlery, tools and fasteners, wire products and packaging materials. The main sectors that drive the demand for metal goods are: aerospace and defence; automotive; construction; engineering; and the process and packaging industries. Over the past twenty years the volume of annual metal goods output in the UK has neither risen nor fallen by much. While domestic demand has shown some increase, the market share of UK-based producers has been steadily eroded by imports, which have enjoyed both quality and price advantages. Export sales are influenced primarily by exposure to the markets of the USA and the euro-zone. Strong competition in the home market, coupled with increasing costs of energy, labour and materials, is putting severe pressure on profit margins. Enterprises in the metal goods industry range from small businesses to large diversified engineering groups.

- 3.110 In recent years, the major UK-based metal goods producers have been generally engaged in a process of restructuring to sustain and improve their competitiveness. The process involves two main types of activities. First, key strategic sectors are identified in which competitive advantage can be built both by developing value-adding products and associated services and by gaining significant market share. Second, financial stability is achieved, by reducing overheads and raising productivity so as to improve cash flow; by selling or spinning off non-core businesses, and by reducing debt. Once stability has been achieved, growth through internal expansion or by carefully-targeted acquisitions in key strategic areas can provide the scale that is necessary to compete with large USA companies, particularly those serving the defence and aerospace sectors.
- In recent years, the major UK-based metal goods producers have been generally engaged in a process of restructuring.*
- 3.111 Globalisation, the increasing capability of producers in developing countries and rising input costs have all taken their toll on the sector since 1996. Over 1996-2006, employment fell by 2.8 per cent a year, this slowed slightly in the second half of that period but the fall is forecast to continue. Employment is expected to fall by 1.3 per cent a year over 2006-14. The sector has a comparatively high rate of establishments reporting recruitment problems. According to NESS2005, 10 per cent of establishments reported hard-to-fill vacancies in 2005 while 9 per cent reported skill-shortage vacancies.

Industry 9: Engineering

SIC03 headings: 29-33

Manufacture of machinery and equipment incl: engines for mechanical power; furnaces; general purpose machinery (incl. lifting and handling equipment, cooling and ventilation equipment; tractors and other agric. machinery); machine tools; special purpose machinery (eg for quarrying and construction; food, drink and tobacco processing; textiles and clothing production); weapons and ammunition; domestic appliances.

Manufacture of office machinery (including calculators, franking machines and terminals for dispensing tickets, banknotes etc) and computers (including peripheral units such as printers); manufacture of radio, television and communication equipment and apparatus.

Manufacture of: electric motors, generators and transformers; electricity distribution and control apparatus; insulated wires and cables; batteries, lighting equipment and electric lamps; electrical equipment not elsewhere specified.

Manufacture of: medical and surgical equipment and orthopaedic devices; instruments for measuring, checking, testing, navigating etc; industrial process control equipment; optical instruments and photographic equipment; watches and clocks.

Share of GVA (per cent) ^{1,3}	2.5
Employment (thousands)	561
Share of England (per cent)	2.2
Male: Female	79:21
Change: 1996-2006 (per cent pa)	-3.3
Change: 2001-2006 (per cent pa)	-4.5
Change: 2006-2014 (per cent pa)	-1
Self-Employment (per cent)	6.8
Top Three Occupational Groups (per cent of Total Emp.)	
Skilled Trades Occupations	22.1
Process, Plant and Machine Operatives	16.6
Managers and Senior Officials	16.5
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	9
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	7
GVA per Worker (£000) ¹	48.8
Exports: Gross Output (per cent) ^{1,3}	75.6
Concentration ^{1,3}	low

Note(s): Data are 2006 except ¹ and ² where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.112 The Engineering sector covers a broad range of activities. It generates around 2.5 per cent of UK GVA and employs 561,000 people, 2.2 per cent of all employment in England. Only 21 per cent of the workforce is women. Skilled trades is the largest

occupational group, accounting for just over 22 per cent of all those employed by the sector. Process, plant and machine operatives is the next largest group with 16.6 per cent, just 0.1 percentage point ahead of managers and senior officials.

- 3.113 Mechanical engineering encompasses a number of activities which range from the manufacture of machinery, equipment and machine tools to the production of weapons, ammunition and domestic appliances. About half of the industry's products are finished capital goods, while the remainder consist primarily of components for capital goods. Mechanical engineering is consequently very sensitive to the economic cycle, because of its dependence on capital goods investment by other parts of the manufacturing sector, which is itself highly sensitive to any downturns in the economy. Recently, there has been growing concern that the international competitiveness of Britain's mechanical engineering industry is deteriorating, after some firms relocated production to lower-cost centres overseas.
- 3.114 The electronics industry includes a broad variety of activities ranging from the manufacture of office machinery and computers to the manufacture of radio, television and communication equipment and components such as semiconductors. The industry enjoyed strong output growth over the 1990s, driven by rapid technological change. Despite rapid productivity growth, output growth was fast enough to stem the fall in employment seen in the 1970s and 1980s. Over-investment and the subsequent slump in global ICT spending at the end of the 1990s led to a sharp decline in both output and employment.
- 3.115 Electronics in the UK is dominated mainly by a few multinational companies but, because there are also a large number of small and medium-sized firms, there are currently about 10,000 electronics firms in the UK. One reason for the plethora of companies is that the UK has considerable strengths in design and software. There are also several small firms still involved in the manufacture of end-user electronics items and components for end-user items. There are a number of weaknesses in the UK electronics sector. Particularly, there is not enough R&D compared to the USA and the large western European economies. The little R&D that does take place is

There is concern about the competitiveness of the UK engineering sector.

not effectively commercialised: many UK companies tend to follow rather than lead, doing little novel product or process innovation. Another area where the UK electronics sector compares unfavourably is in the skills-base of the labour force despite access to relevant training and education. It has a greater proportion of low-skilled workers than France, Germany or the USA and is also weak in the intermediate skills area.

- 3.116 The current phase of growth in electronics is being driven by demand for automotive applications, consumer electronics and wireless telephony (both mobile handsets and network systems). These are likely to continue to drive demand for the next few years, but to be joined as drivers by medical equipment and other applications of electronics in health. Increased military spending in the USA and the UK is also stimulating growth in defence electronics. *Electronics is currently being driven by the automotive industry and consumer electronics.*
- 3.117 An Electronics Knowledge Transfer Network (EKTN) was announced for the electronics sector by the DTI in October 2006. The network will receive £3m of Government funding to help drive growth, innovation and development in the electronics industry. The successful proposal was put forward by the Electronics Leadership Council (ELC) to enable key industry figures to share knowledge and best practice with the aim of boosting the industry's long-term success. The EKTN's primary objective is to bring together firms operating across all sub-sectors, ranging from academia and R&D through to manufacturing, with the aims of making a common platform and establishing an environment in which small and large enterprises can flourish, and to which international ones are drawn.
- 3.118 Like some areas of electronics, electrical engineering and instruments is facing pressure on margins that makes industrial concentration, economies of scale and relocation to lower-cost regions increasingly attractive. Demand for electrical goods is, however, typically more dependent on the economic cycle than is demand for electronics products.
- 3.119 There is an increasing tendency for manufacturing firms to relocate production to low-cost countries. The savings made from this are reinvested into recruiting skilled labour in the UK to focus on

product design and on hiring sales personnel to improve customer service. Given the UK's emerging strengths in design and software, an increasing number of UK electronics firms are following this trend, which was once the domain of large multinationals. The more routine production of end-user electronics items is outsourced to locations with adequate skills but lower costs than in western Europe. Eastern Europe (especially the new members of the EU) and Asia (increasingly China) are attracting much of the outsourced production as not only are transport and labour costs low in these countries, but they are also closer to the main markets.

- 3.120 Since 2000, high input costs and falling margins, the trend to relocate in lower-cost countries, and competition from lower-cost producers in Eastern Europe and Asia have all hit many areas of engineering. Over 1996-2006 employment fell by 4.5 per cent a year in engineering, with an even faster rate of decline over 2001-06. Although the outlook for these export-oriented industries will improve as the sector focuses on high specification, high value-added areas, and as the euro-zone economy recovers, the pressure on margins will perpetuate the drive for productivity gains and the trend to relocate. As such, employment is still expected to fall over 2006-14, albeit at just 1 per cent a year. The incidence of recruitment difficulties is above average in engineering: 9 per cent of establishments reported hard-to-fill vacancies while 7 per cent reported skill-shortage vacancies, according to NESS 2005.

Industry 10: Transport Equipment

SIC03 headings: 34-35

Manufacture of: cars, commercial vehicles, buses and coaches; motor vehicles engines and chassis; bodies (coachwork) for motor vehicles, trailers and semi-trailers; parts and accessories for motor vehicles and their engines. Electrical parts (such as sparking plugs, lighting, windscreen wipers and defrosters) are classified to Industry 9, Engineering.

Manufacture of: aeroplanes, helicopters, gliders, dirigibles and balloons, spacecraft, satellites and launch vehicles; major assemblies such as fuselages, wings, doors, landing gear, rotor blades and engines of a kind typically found on aircraft; ground flying trainers.

Manufacture of instruments and navigation systems is classified to Industry 9, Engineering.

Building and repairing of ships (merchant, warships, fishing vessels and pleasure boats), hovercraft and drilling platforms; manufacture of railway and tramway locomotives and rolling stock, specialised parts (such as brakes, axles, coupling devices), signalling equipment; manufacture of motorcycles and bicycles, invalid carriages and other transport equipment not elsewhere specified.

Share of GVA (per cent) ^{1,3}	1.5
Employment (thousands)	308
Share of England (per cent)	1.2
Male: Female	87:13
Change: 1996-2006 (per cent pa)	-1.1
Change: 2001-2006 (per cent pa)	-2.7
Change: 2006-2014 (per cent pa)	-1.5
Self-Employment (per cent)	5
Top Three Occupational Groups (per cent of Total Emp.)	
Skilled Trades Occupations	28.3
Process, Plant and Machine Operatives	21.7
Elementary Occupations	10.8
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	8
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	7
GVA per Worker (£000) ¹	52.2
Exports: Gross Output (per cent) ^{1,3}	64.5
Concentration ^{1,3}	medium

Note(s): Data are 2006 except ¹ and ² where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.121 The transport equipment sector includes the production of motor vehicles, aeroplanes and ships. It generates 1.5 per cent of UK GVA and according to *Working Futures* estimates it employs around 308,000 people, or 1.2 per cent of all those employed in England. Only 13 per cent of the workforce are women. Skilled trades and process, plant and machine operatives dominate the occupational structure, accounting for 50 per cent of the workforce. Skilled trades alone make up just over 28 per cent.
- 3.122 Since the mid-1990s, the motor vehicles industry has experienced a period of consolidation among car producers, with much take-over activity and forging of alliances between manufacturers, often with a view to savings through shared technologies and access to new markets. Firms are also seeking to cut costs by demanding price reductions, quality improvements and faster deliveries from their suppliers of parts and accessories. This is forcing suppliers to consolidate. Recent difficulties faced by the industry include weak demand in the euro-zone and high raw material costs. Among the UK's plants, the operations of non-Japanese producers have been more severely affected, which has led to considerable restructuring. The industry also has to deal with changes to the EU block exemption scheme, which gives them less control at the retail and repair end, and new end-of-life legislation which will force producers to take back cars for scrapping and recycling.
- 3.123 Following the accession of ten new member states to the EU in 2004 some production work has been moved overseas by car producers to lower-cost countries. In the case of volume car production, manufacturers are likely to take advantage of the location and cost competitiveness of these countries by switching production facilities away from western Europe. The closure of Peugeot's Ryton plant over 2006-07 is one example, with work being relocated to Slovakia. Manufacturing labour costs in central and eastern Europe are in some cases as low as one-fifth of those in western Europe. Consequently, it is now much less likely that new volume car plants will be built in the UK.

Volume car production is being relocated away from the UK to lower-cost areas of the EU.

- 3.124 In the aerospace industry, between 1980 and 2005 the share of industry activity accounted for by defence fell from around 70 per cent to 54 per cent, making it more exposed to international trade. Because aerospace is a business with long lead times, its business cycle is typically not closely synchronised with the global economic cycle. The commercial aircraft sub-sector faced a severe downturn in orders following the September 11 attack on the USA, as airlines deferred deliveries in response to the sharp drop in demand for air travel. Boeing and Airbus, the two industry leaders, made sharp cuts in output and employment, and their suppliers (including those in the UK) suffered from the knock-on effects. In 2006, BAE sold its stake in Airbus to EADS, Airbus' controlling company, and this increases the chance that future production and investment will not be carried out in the UK. *BAE has sold its stake in Airbus, threatening the long-term prospects for aerospace in the UK.*
- 3.125 Over the past twenty years many shipyards in the UK and the rest of Europe have closed as European firms have struggled to compete against lower-cost Japanese and South Korean producers. The few surviving UK shipyards rely mainly on naval orders by the Ministry of Defence, although some producers have differentiated themselves by specialising in the higher-value added, high-tech end of the market. In the cruise market, more sophisticated design and production processes have given domestic producers some protection from low-cost competition from developing countries and helped to maintain a strong position in a market where the USA has little presence.
- 3.126 There is pressure to consolidate the UK's naval shipyards from the MoD, which has ambitious plans to build two aircraft carriers, six new destroyers, as well as new nuclear-powered submarines to replace the current fleet carrying Trident nuclear missiles. The Government believes that integration of the UK's shipbuilding yards could mean substantial cost savings and would also provide the UK industry with greater means to win future orders over foreign bidders. *The MoD wants the UK's naval shipyards to consolidate.*
- 3.127 Since 2000, high input costs and falling margins, the trend to relocate in lower-cost countries, weak demand for cars, and the downturn in the aviation industry following September 11 have all come to bear on the transport equipment sector and the result has been falling employment. Over 2001-06

employment fell by 2.7 per cent a year. Although the outlook for these export-oriented industries will improve with the euro-zone economy, the pressure on margins will perpetuate the drive for productivity gains and the trend to relocate. As such, employment is still expected to fall over 2006-14, albeit at a slower rate.

- 3.128 Transport Equipment is slightly above the national average with regard to recruitment difficulties. Figures from NESS2005 indicate that 8 per cent of establishments reported hard-to-fill vacancies in 2005 and 7 per cent reported skill-shortage vacancies.

Industry 11: Manufacturing nes and Recycling

SIC03 headings: 36-37

Manufacture and upholstery of furniture (incl. chairs and seats, office and shop furniture, fitted kitchens, other furniture and mattresses).

Manufacturing nes incl.: jewellery, musical instruments, sports goods, games and toys, and miscellaneous products. Recycling of metal and non-metal waste and scrap; (but excl. new products from secondary raw material, eg paper from pulp).

Share of GVA (per cent) ^{1,3}	0.6
Employment (thousands)	205
Share of England (per cent)	0.8
Male: Female	74:26
Change: 1996-2006 (per cent pa)	0.7
Change: 2001-2006 (per cent pa)	-0.9
Change: 2006-2014 (per cent pa)	0.1
Self-Employment (per cent)	13.7
Top Three Occupational Groups (per cent of Total Emp.)	
Skilled Trades Occupations	34.3
Process, Plant and Machine Operatives	20.7
Managers and Senior Officials	14.7
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	7
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	5
GVA per Worker (£000) ¹	32.6
Exports: Gross Output (per cent) ^{1,3}	28.8
Concentration ^{1,3}	low

Note(s): Data are 2006 except ¹ and ² where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.129 Manufacturing nes encompasses a range of manufacturing industries, mainly furniture (which accounts for more than 55 per cent of output), jewellery, games, toys, sports goods and recycling of metal and non-metal waste. Consequently, rates of growth in demand and output within manufacturing nes vary considerably but in general tend to be cyclical and dependent on overall economic performance, interest rates and disposable incomes. Manufacturing nes and Recycling generates just 0.6 per cent of UK GVA. It employs 205,000 people, or 0.8 per cent of total employment in England. Skilled trades is the largest occupational group in the workforce and along with process, plant and machine operatives, the next largest group, makes up 55 per cent of total employment in the sector. Of those employed, 74 per cent are men.
- 3.130 Demand for furniture has been increased by the trend towards smaller household size and by the diffusion of ICT equipment, which enables people to work at home. During the 1990s the UK shifted from being a net exporter to a net importer of furniture, with an increase in imports from Indonesia, China and Malaysia, and more trade with eastern European countries. Technological innovation influences activity in the games and toys sub-sectors. Many of the sub-sectors show a trade deficit. The sports goods sub-sector imports heavily from the USA and China; the traditional games and toys industry relies almost exclusively on imports from Japan and China; electronic games is the exception, it has a trade surplus; musical instruments sends most of its exports to the USA, but has a trade deficit. Recycling is closely linked to acquisition and disposal by households and industry and is increasing as a result of EU directives and Government policy.
- 3.131 The EU directives on recycling are based on the 'polluter pays' principle, and are directed particularly at motor vehicles and electronics. In motor vehicles, the aim is to ensure that recyclable components account for 85 per cent of the weight of new vehicles by 2015 (compared to the current level of 75 per cent) in order to facilitate the recycling of end-of-life vehicles. Car manufacturers will therefore need to create dis-assembly plants to dispose of cars and extract re-usable components. The EC would prefer to have

voluntary agreements rather than legislation, but it is unlikely that this hope will be realised, given the estimated cost to the European car industry of £20bn over the next ten years or so. Furthermore, the Waste Electrical and Electronic Equipment (WEEE) Directive, approved in April 2001 and originally intended to be in force from August 2004, obliges electronics manufacturers to recover between 60 per cent and 80 per cent of electronic waste. Electronic waste accounts for only about 4 per cent of total waste, but is one of the most dangerous pollutants. The UK Government started to transpose WEEE into UK law in August 2005, but decided to postpone its enforcement with respect to producer responsibility and retailer take-back obligations until July 2007. The Directive will result in significant costs being incurred by European electrical equipment producers and importers. The Government's estimate for the UK is between £217m a year and £455m a year.

3.132 English households are now recycling more than twice as much waste as they did in 2003. Provisional figures published by DEFRA in October 2006 show that households in England recycled 27 per cent of their waste in 2005/06. This means that the Government has easily met its target of recycling or composting 25 per cent of waste by the end of 2006. Confusion in the UK over EU environmental regulations aimed at reducing chlorofluorocarbons (CFCs) in the atmosphere led to the creation of 'fridge mountains' between 2002 and 2004. This problem has now largely been solved, but it undoubtedly damaged manufacturers' confidence in the Government's handling of waste strategies and raised fears that similar problems may arise with cars and electrical equipment.

English households are now recycling more than twice as much waste as they did in 2003.

3.133 The volume of exports of UK furniture has remained fairly constant over the past ten years, but imports have risen steeply and the trade balance has deteriorated. Western Europe is still the leading destination for UK furniture. After western Europe, North America is second with a 19 per cent share and nearly 5 per cent of UK furniture exports are destined for Asia. The principal Asian importer at present is Japan, but UK furniture manufacturers have identified China and Russia as the two countries with the greatest potential as new markets. UK furniture exports to China have risen more than eleven-fold since the

The UK's furniture trade balance has deteriorated since the mid-1990s.

mid-1990s. UK furniture exports to Asia depend partly on economic growth and also on increasing demand for western lifestyle products among the elite in countries such as Japan, China and South Korea. While western Europe is still the single greatest source of imports for the UK, it has lost ground in recent years. Over the last ten years, there has also been a decrease in imports from North America. The most significant rise was in imports from Asia. In Asia, the growth was most dramatic in Chinese exports. In 1994 China had just 2.2 per cent of the share of all UK furniture imports but now its share is 13 per cent.

- 3.134 Even though exports have hardly risen and imports have soared, UK manufacturers appear to have held their own in the domestic market for furniture. Furthermore, a survey by the British Furniture Manufacturers' Association (BFM) suggests that the imports may have in fact created new markets within the UK but without taking market share from UK manufacturers. Moreover, UK demand for furniture has grown strongly since 2000. Therefore, it was not a matter of UK furniture manufacturers losing their market to imports, but rather of their not being able to supply the new and evolving demand. The survey also shows that the strength of sterling has become a major barrier for UK furniture exporters, followed by lack of knowledge and specialised market information.
- 3.135 Employment in Manufacturing and Recycling grew by 0.7 per cent a year over 1996-2006, but employment fell by 0.9 per cent a year between 2001 and 2006 as rising input costs and a failure to capture new markets badly hit furniture manufacturers. The increasing importance being attached to recycling means it is likely to become an increasingly important driver of output and employment growth. Employment is forecast to increase by 0.1 per cent a year over 2006-14. The sector is in line with the national average with respect to recruitment difficulties: 7 per cent of establishments report hard-to-fill vacancies and 5 per cent reported skill-shortage vacancies in 2005.

Industry 12: Electricity, Gas and Water

SIC03 headings: 40-41

Electricity generation, transmission, distribution and supply.
Transportation, distribution and supply of gaseous fuels through a system of mains; manufacture of gaseous fuels with a specified calorific value; production of gas for the purposes of gas supply from coal, by-products or waste; production, collection and distribution of steam and hot water for heating, power and other purposes.

Collection, purification and distribution of water.

Share of GVA (per cent) ^{1,3}	1.6
Employment (thousands)	94
Share of England (per cent)	0.4
Male: Female	76:24
Change: 1996-2006 (per cent pa)	-1.8
Change: 2001-2006 (per cent pa)	-3.5
Change: 2006-2014 (per cent pa)	-2
Self-Employment (per cent)	3.3
Top Three Occupational Groups (per cent of Total Emp.)	
Skilled Trades Occupations	22.9
Administrative and Secretarial Occupations	15.4
Professional Occupations	12.2
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	7
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	6
GVA per Worker (£000) ¹	175.6
Exports: Gross Output (per cent) ^{1,3}	0.5
Concentration ^{1,3}	high

Note(s): Data are 2006 except ¹ and ² where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.136 Across the EU, liberalisation of energy markets has opened the way for a series of domestic and cross-border takeovers, joint ventures and strategic stake-building. Whereas the UK Government and regulators have ordered the break-up of former publicly-owned electricity groups to encourage competition, many continental governments have allowed and encouraged the development of powerful national champions capable of competing in the new, broader EU market. As a result, while the UK is the most liberalised energy market in the EU, UK companies are vulnerable to takeover by larger European companies.
- 3.137 In the UK, power generating stations provide at least 80GW of electricity capacity and 400TWh of

electrical generation a year to the UK electricity market. Power generation firms typically own different types of generating stations to allow them to diversify supply in response to changing gas, coal and carbon prices. Electricity generators sell electricity to the National Grid, which is regulated by Ofgem. Ofgem's objectives are to protect customers, ensure security of supply and promote competition. Electricity suppliers buy electricity from the grid and sell to the final users. In the 1990s the supply of electricity was liberalised and transferred from state-owned regional suppliers to privately owned utilities firms. In the UK in 2005, British Gas was the largest electricity supplier. Whereas previously under the regional structure consumers only had the choice of a single provider, consumers can now choose from a range of suppliers. In recent years the Government has introduced a number of policies to promote low-carbon electricity generation and energy efficiency in the UK including: the Climate Change Levy (CCL); the UK Emissions Trading Scheme (UK ETS); the EU Emissions Trading Scheme (EU ETS); and the Renewables Obligation (RO).

3.138 The gas supply industry has undergone a period of continual change since British Gas was privatised in 1986; and the UK gas market has developed into one of the most liberalised in Europe. For example, all price limits on sales to final consumers were lifted in 2002, when Ofgem decided there was sufficient competition. In contrast, Ofgem remains concerned about the lack of progress towards competitive markets throughout the rest of Europe. This liberalisation has on the whole been of widespread benefit to the UK economy: not only has productivity in the industry increased at least four-fold since privatisation, but lower real gas prices have improved the competitiveness of the rest of UK industry and commerce. More recent rises in wholesale prices have fed through to many customers, however. In the UK households are the largest consumers of gas, followed closely by the power-generation sector.

The liberalisation of the gas market has benefited other parts of the economy.

3.139 Since privatisation in 1989, the water industry has made great efficiency gains. The combination of strict pricing regimes and increased environmental concerns means that companies are facing a period of unprecedented challenges with

The water industry has a multiplier effect on several industries.

associated capital and operating costs. Industry has made progress towards greater compliance with the requirements of a range of EC Directives. Other major challenges for water resources include the EC Habitats Directive and the Water Framework Directive (WFD).

- 3.140 Ten water and sewerage companies and 13 water supply companies constitute the major part of the UK water industry. The largest water supplier in the UK is United Utilities. Its principal activities are managing and operating water and wastewater networks in the North West, a region with a population of around seven million. The second-largest water supply company in the UK is Severn Trent Water. The UK water and sewerage industry has been faced with severe leakage problems in the last decade. Recent estimates, however, suggest that overall leakage is on its way down. Overall leakage in England and Wales was close to 3,600 million litres per day (mld) in 2005/06, compared to nearly 5,000 mld in 1995/96. Most of the water and water and sewerage companies are meeting or exceeding the targets set by Ofwat.
- 3.141 Together, all of the activities covered by electricity, gas and water account for 1.6 per cent of UK GVA and employ 94,000 people, or 0.4 per cent of the total workforce in England. The nature of these industries mean the export share of output is low.
- 3.142 Employment across the sector is male dominated. Skilled trades account for the largest share of employment, just under 23 per cent. Professional occupations are the third largest group, accounting for 12.2 per cent of employment in this sector.
- 3.143 Privatisation, regulators' push for more competition and increasing costs associated with environmental compliance have all taken their toll on the workforce. Employment in electricity, gas and water fell between 1996 and 2006 as companies sought productivity gains to drive growth. The decline was stronger over 2001-06, when employment fell by 3.5 per cent a year. This industry group is expected to see modest output growth over 2006-14 and a slight improvement in productivity growth. The result is that employment is expected to fall over the forecast period, but by a slightly slower 2 per cent a year.

3.144 Electricity, gas and water still has trouble recruiting: 7 per cent of firms reported hard-to-fill vacancies and 6 per cent of establishments reported skill-shortage vacancies in 2005. This seems a little high, given that this sector is not subject to the cyclical variations that others face and so should find long-term planning easier and employment demand more stable. In addition, the job losses over the last decade have been employer led. The long-term trend of falling employment is likely to be one reason for this: making it unattractive to young workers as a long-term career option. Along with the sector's dependence on skilled trades, this will go some way towards explaining these facts.

Industry 13: Construction

SIC03 headings: 45

General construction work incl.: site preparation and demolition; building of complete constructions or parts thereof and civil engineering (including all types of buildings, bridges, tunnels, pipelines, roads, airfields, sports facilities, water projects etc); installation and completion (including wiring, insulation, plumbing, plastering, painting and glazing).

Share of GVA (per cent) ^{1,3}	5.9
Employment (thousands)	1,773
Share of England (per cent)	6.9
Male: Female	90:10
Change: 1996-2006 (per cent pa)	2
Change: 2001-2006 (per cent pa)	2.7
Change: 2006-2014 (per cent pa)	-0.5
Self-Employment (per cent)	40.6
Top Three Occupational Groups (per cent of Total Emp.)	
Skilled Trades Occupations	47.8
Managers and Senior Officials	13.5
Process, Plant and Machine Operatives	10.7
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	7
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	5
GVA per Worker (£000) ¹	36.9
Exports: Gross Output (per cent) ^{1,3}	0.2
Concentration ^{1,3}	very low

Note(s): Data are 2006 except ¹ and ² where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.145 The construction industry generates around 6 per cent of UK GVA and accounts for 6.9 per cent of total employment in England; roughly 1.8m in 2006. By employment, small firms and sole traders dominate the industry, but large firms carry out a disproportionate share of the work done (by value); however, the industry is not highly concentrated. Around 25 per cent of the firms are engaged in the main trade activities: housebuilding; non-residential building; and civil engineering. The remainder is accounted for by firms in specialist trades such as plumbing; installation of electrical wiring and fittings; joinery; painting; and roofing. These account for around 39 per cent of total employment, of which a substantial share is self-employed.
- 3.146 Traditionally, consolidation has not been widespread in the construction industry, and on the whole the industry remains fragmented, with many small players. Mergers and acquisitions (M&A) activity has become more commonplace since the mid-to-late 1990s, driven by three forces: the trend towards Public Finance Initiative (PFI) schemes and greater private sector participation in large infrastructure projects; the opening up of government work to overseas competition, as EU markets become more liberalised; and Government policy designed to promote the redevelopment of brownfield land.
- 3.147 In the non-residential market, development of commercial property is driven by the strength of activity in the sectors of the wider economy served by commercial real estate. For example, demand for shops, leisure and entertainment facilities is largely driven by growth in retailing and leisure services, which in turn is driven by the strength of household spending. Demand for offices is largely driven by growth in financial & business services (including ICT services) and demand for factories is dependent on prospects in manufacturing. A key characteristic of the commercial property market is that there can be long lags between a project's conception and its completion, notably in the case of offices and hotels.

- 3.148 In the residential market, there have been irregular periods of boom and bust since the early 1970s. Demand is stronger when the economy and wage growth are strong and interest rates are low or falling. Although the last cycle of 1996-2004 was not followed by a price crash, it did lead to sharp deterioration in affordability and this has stimulated Government initiatives to increase the stock of affordable housing. *The last house-price boom led to sharp falls in affordability and prompted government action.*
- 3.149 The construction industry is labour-intensive. Consequently, the potential for rapid technological change to transform the industry through process innovation (improved building techniques) and product innovation (higher quality buildings) is limited, although the use of pre-fabricated units on site has enabled the industry to make some improvements in productivity. Construction activity is particularly sensitive to the economic cycle, and tends to suffer higher peaks and lower troughs because of the volatility of investment spending, which in turn is fed by speculative activity in property markets. The large fluctuations in activity typically mean that in times when output is rising, skills shortages have built up quickly. The traditional 'boom-bust' cycle has meant that a fall in activity tends to follow shortly afterwards, which has resulted in an equally sharp decline in skills demand. Consequently, the duration of skills shortages has typically been temporary. The industry ranks among the worst for money spent on training and consequently it is in danger of falling into vicious circle in the labour market. In November 2006, the National Skills Academy for Construction was launched with the aim of establishing 30 academies at construction sites over 2006-11. *The National Skills Academy for Construction was launched in November 2006.*
- 3.150 The period of 1996-2006 has been a relatively good one for construction. Output growth in the construction industry has been in line with or just ahead of that national average, averaging around 3 per cent a year since 2000. Demand has been strong on the residential side, and the infrastructure side due to substantial increases in Government investment spending. In line with these developments, construction enjoyed one of the strongest rates of employment growth among all the sectors over 1996-2006, a rate of 2 per cent a year. The measure is even more favourable for the 2001-06 period. Within the construction sector

7 per cent of establishments reported hard-to-fill vacancies in 2005 and 5 per cent report skill-shortage vacancies. This places the sector just below the national average on both counts.

Industry 14: Sale and Maintenance of Motor Vehicles

SIC03 headings: 50

Sale, maintenance and repair of motor vehicles and motorcycles (but excluding renting: classified to Industry 21, Professional Services); retail sale of automotive fuel.

Share of GVA (per cent) ^{1,3}	2
Employment (thousands)	541
Share of England (per cent)	2.1
Male: Female	78:22
Change: 1996-2006 (per cent pa)	-0.7
Change: 2001-2006 (per cent pa)	-0.2
Change: 2006-2014 (per cent pa)	0.1
Self-Employment (per cent)	11.5
Top Three Occupational Groups (per cent of Total Emp.)	
Sales and Customer Service Occupations	27
Managers and Senior Officials	21.3
Skilled Trades Occupations	13.4
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	7
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	5
GVA per Worker (£000) ¹	40.1
Exports: Gross Output (per cent) ^{1,3}	0.2
Concentration ^{1,3}	low

Note(s): Data are 2006 except ¹ and ² where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.151 As a whole, sale and maintenance of motor vehicles represents 2 per cent of UK GVA and 2.1 per cent of total employment in England. Of this sector's 541,000 employees, just under 12 per cent are self-employed. The retail nature of the industry means sales and customer service occupations account for the largest share of the workforce, 27 per cent. Although this means the industry has the potential to be more attractive to women, who are typically represented more in these occupations, they only account for 22 per cent of the workforce.
- 3.152 Since the 1960s, the classical division between wholesaling and retailing that exists in the

distribution sector has been becoming more blurred, but the motor trade has always been a special case due to exceptional distribution regulations. Since the early 1980s, the motor trade had been allowed a block exemption from EU competition laws, because it was claimed that consumers would not benefit from normal competition in the new car market. In recent years there has been considerable concern over the large price differentials for new cars across the EU. Recent changes to the rules of block exemption are intended to harmonise prices and to reduce the power of manufacturers to maintain these differentials. Under the rules, manufacturers must opt to choose their dealers either by selective criteria or with an exclusive deal. Each has its merits and drawbacks, but under the new rules the relationship between the manufacturers and dealers will slowly change. Manufacturers will no longer be able to withdraw a franchise without good reason, or block the takeover of dealerships. The servicing of cars will be radically changed as well, to the dealer's advantage. Since October 2005, dealerships have been able to expand into other Member States. All of these developments are expected to consolidate the industry across the UK and Europe.

- 3.153 Despite the changes to the EU block exemption many manufacturers have changed the way dealers make their margins on new car sales by reducing the direct margin, and linking significant parts of the dealers' rewards to subjective factors, such as how well they represent the brand, achieve sales volumes, or achieve customer satisfaction ratings. This has given some power back to manufacturers and reduced dealership margins.
- 3.154 New vehicle registrations in the UK have fallen since the peak of 2.6m registrations in 2003. This has contributed to a fall in profit margins at car dealerships and further consolidation within the industry. Fuel efficiency and increased environmental awareness continue to influence the choice of vehicle purchase, and the proportion of new cars sold with diesel engines continues to rise. The Society of Motor Manufacturers and Traders (SMMT), the industry body, expects registrations to continue falling in 2007.

Car dealers are not benefiting from EU reform as much as might have been expected.

- 3.155 Falling new car sales, the increased power of vehicle manufacturers and decreasing profit margins are putting pressure on car dealerships in the UK, leading to a further period of consolidation. Profit margins are being squeezed by price pressure from consumers and an extremely competitive market, and the UK industry average margin is now around 1 per cent. Profit margins in other areas, such as used car sales, servicing and parts, and financing and insurance, which at one time provided relatively high margins for dealerships, are also now being squeezed. Despite recent consolidation in dealerships, the market is still quite fragmented; there are 6,000 franchised car dealers in the UK, and the top ten account for only 28 per cent of the total new car market.
- 3.156 In the context of increasing competition and narrowing margins, and the increasing reliability of cars, firms in this sector have sought to protect profits by cutting jobs. Employment fell between 1996 and 2006, but since 2000 the rate of decline has eased. Given the highly fragmented nature of the industry conditions are unlikely to improve, especially while margins remain under pressure. Consequently, employment is expected to grow by just 0.1 per cent a year over 2006-14.
- 3.157 The incidence of recruitment difficulties within sale and maintenance of motor vehicles is at a rate that matches the national average: 7 per cent of establishments reported hard-to-fill vacancies and 5 per cent reported skill-shortage vacancies in 2005.
- There is scope for considerable consolidation in the motor retail industry.*
- Recruitment difficulties in the sector are in line with the national average.*

Industry 15: Wholesale Distribution

SIC03 headings: 51

Wholesale and commission trade of new and used goods to retailers, industrial, commercial, institutional or professional users; acting as agents; usual manipulations such as assembling, sorting and grading of goods.

Share of GVA (per cent) ^{1,3}	4.2
Employment (thousands)	1,133
Share of England (per cent)	4.4
Male: Female	70:30
Change: 1996-2006 (per cent pa)	0.4
Change: 2001-2006 (per cent pa)	-0.6
Change: 2006-2014 (per cent pa)	1
Self-Employment (per cent)	10.6
Top Three Occupational Groups (per cent of Total Emp.)	
Sales and Customer Service Occupations	26.3
Managers and Senior Officials	21.2
Skilled Trades Occupations	12.5
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	5
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	4
GVA per Worker (£s) ¹	40.5
Exports: Gross Output (per cent) ^{1,3}	0.6
Concentration ^{1,3}	very low

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.158 Production techniques and the logistical capacities and scale of distribution networks had, until the second half of the 20th century, made the division of distribution into wholesaling and retailing on the whole the most efficient means of taking goods from producer to consumer. Wholesale Distribution accounts for around 4.2 per cent of UK GVA and accounts for a similar share of employment in England (4.4 per cent).
- 3.159 Beginning in the 1960s, in the UK at least, improved production methods reducing the lead time between orders and production and the general convergence of consumer tastes both within countries and across borders have made it possible for companies to manage larger distribution networks. In many areas of distribution this is leading to consolidation as there are large economies of scale to be won. Major retailers have taken the initiative to bring wholesale under their

control and also to exercise more influence over producers. Since the mid-1990s this process has sped up and the lines between wholesaling and retailing have become more blurred. Vertical integration is increasing, and many companies such as grocery supermarkets, department stores and fashion houses now control both their own distribution networks and their retail outlets. They also control the manufacture of their own-label brands. Modern technology also allows consumers to bypass retailers and to buy directly from wholesalers or producers.

- 3.160 A draft ruling by the Office of Fair Trading (OFT), in June 2006, questioned the validity of newspaper and magazine distribution arrangements between publishers and wholesalers. The OFT has said that more competition within the distribution chain would mean that the benefits would be passed on to consumers, which could bring down the cover price for magazines and newspapers. If the final ruling (due in 2007) confirms the verdict that the system is anti-competitive, supermarkets and other retailers will be able to set up their own national distribution systems.
- 3.161 Publishers and wholesalers are concerned that opening up the system will mean that large supermarkets will dictate pricing and squeeze publishers and wholesalers, as well as putting further pressure on small newsagents. They insist that the current system is beneficial to the consumer, as wholesalers are obliged to offer universal delivery to all retailers in their area in exchange for the territorial exclusivity.
- 3.162 Of the roughly 1.1m employed by wholesale distribution, just under 11 per cent are self-employed. Although the sector enjoyed the benefits of a buoyant economy in the early-2000s, the increasing application of ICT and communications technologies to streamline and enhance delivery networks and stock control led to a fall in demand for labour. Employment fell by 0.6 per cent a year over 2001-06. Prospects are brighter for the forecast period, as subsequent productivity gains from new technologies diminish; employment growth of 1 per cent a year is forecast.
- Newspaper and magazine distribution arrangements could be opened up to competition.*

3.163 As is to be expected with this sector, sales and customer service occupations account for the largest share of employment, 26.3 per cent; managers and senior officials are the second-largest group while skilled trades are the third-largest group on just 12.5 per cent. Estimates derived from NESS2005 show that wholesale distribution is below the national averages with regard to recruitment difficulties. Just 5 per cent of establishments reported hard-to-fill vacancies while 4 per cent reported skill-shortage vacancies.

Wholesale distribution is below the national averages with regard to recruitment difficulties.

Industry 16: Retail Distribution

SIC03 headings: 52

Retail of new and used goods to the general public for personal or household consumption or utilisation, by shops, department stores, stalls, mail-order houses, consumer co-operatives etc; retail sale by commission agents; repair and installation of personal or household goods.

Share of GVA (per cent) ^{1,3}	5.5
Employment (thousands)	2,680
Share of England (per cent)	10.4
Male: Female	39:61
Change: 1996-2006 (per cent pa)	1.5
Change: 2001-2006 (per cent pa)	1
Change: 2006-2014 (per cent pa)	0.8
Self-Employment (per cent)	7.9
Top Three Occupational Groups (per cent of Total Emp.)	
Sales and Customer Service Occupations	36
Managers and Senior Officials	17.4
Administrative and Secretarial Occupations	9.6
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	5
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	3
GVA per Worker (£000) ¹	22.6
Exports: Gross Output (per cent) ^{1,3}	0
Concentration ^{1,3}	low

Note(s): Data are 2006 except ¹ and ² where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

3.164 By employment, retail distribution is the largest single sector, employing around 2.7m in 2006, or 10.4 per cent of total employment in England, by *Working Futures* figures. It also covers a substantial part of output, 5.5 per cent of UK GVA. More than 60 per cent of the workforce are women,

and this reflects the availability of part-time employment in readily accessible locations. As with wholesale distribution, the nature of the retail distribution means most of the workforce (36 per cent) falls into the sales and customer service occupation category.

3.165 Retailing takes many forms, from market stalls to independent high street shops, to department stores and high street chains, to mail order catalogues and internet retailers. Given the economies of scale in purchasing, branding and selling of commoditised products, some of the largest retailers are naturally those that sell groceries. The top four supermarket chains in the UK are Tesco, Asda, J Sainsbury and Wm Morrison. Price competition in the sector is fierce. Tesco and the other supermarket chains have for many years extended their brands to expand rapidly in non-food sales and the provision of retail banking and insurance services. They have also expanded rapidly into the convenience store sector in recent years. This has led to added pressure on existing convenience stores, who find it difficult to compete with the buying power of the large chains. The expansion into the convenience store sector by supermarkets is one of the reasons why the Office for Fair Trading (OFT) referred the industry to the Competition Commission in 2006.

The expansion of supermarkets into the convenience store sector is being investigated by the Competition Commission.

3.166 Another retail sector suffering from strong price competition is electrical goods. The growth of sales in the large supermarkets and via the internet, and the increasing use of price-comparison websites, has put severe pressure on high street stores, who have higher overheads. In a sign of the impact this is having, DSG International, the owner of Dixons and Currys, made the decision in 2006 to shut down the high street operations of Dixons and turn it into an internet-only retailer.

3.167 High-street retailing conditions are tough due to three main causes. A major factor has been greater awareness of price differences among consumers, leading to (and reinforced by) the greater importance of price in marketing campaigns. Secondly, retail capacity continues to increase. In the UK, there was almost 9 per cent more retail floor space in 2004 than in 1998. Thirdly, consumers are spending a smaller proportion of their income on retail goods, as

increasing wealth allows them to spend a greater proportion on other services. Retailers can protect themselves from this competition by specialising in certain brands. Sports clothing retailing, for example, is centred around a few well-known brands which do not compete heavily on price. This is, however, an exception to the general trend for high-street retailers, and so price-cutting and special offers are commonplace.

- 3.168 The most important single factor for change in retailing is the rise of e-commerce. The use of the internet by households to make purchases has grown rapidly in recent years, but has only now reached a size where it is starting to have an impact on the fortunes of a significant number of retailers. In 2006, online sales accounted for around 10 per cent of all retail sales. The range of goods that consumers are now happy to purchase over the internet is expanding from the relatively small original selection of electrical goods, air tickets, books and CDs, to include items such as clothing, home furnishings and furniture. It is now essential for many high street retailers to also have an internet operation, and many of those that do not are looking to create one.
- The rise of e-commerce is a significant development in the retailing industry.*
- 3.169 The challenge for firms involved in the repair of household electrical goods is the falling price of these goods. Where once the replacement costs were at least modest and the workforce was skilled, consumers were prepared to get an item fixed before replacing it. This has been undermined and almost done away with over the last 20 years as the price of these goods has fallen, their reliability has improved and the number of students studying the relevant technical subjects has fallen. Even the introduction of legislation and charges on the disposal of electrical waste are unlikely to generate much demand as many of the disposal charges will be incurred at the time of purchase, not disposal. Hence, when a product does break down, there will be no incentive to fix it at a cost below the disposal fee.
- The challenge for firms involved in the repair of household electrical goods is the falling price of these goods.*
- 3.170 The period 1996-2006 represented a decade of healthy, sustained output growth, strong employment and wages growth and relatively low interest rates. Against this backdrop, the retailing sector enjoyed strong output growth as consumer spending grew strongly. Consequently, employment growth in retail distribution was a

healthy 1.5 per cent a year over the decade, although slower at 1 per cent a year over the more recent five years. The outlook is for growth of just under 1 per cent a year over 2006-14.

- 3.171 Employment conditions in the industry are among the most flexible while many of the jobs are low skilled. This means entry into the industry is quite easy and that there is usually a healthy supply of workers. Not surprisingly, therefore, the proportion of establishments reporting hard-to-fill and skill-shortage vacancies within retail distribution is comparatively low: 5 per cent and 3 per cent respectively, which are both well below the average in 2005.

Industry 17: Hotels and Catering

SIC03 headings: 55

Hotels: licensed/unlicensed hotels, motels and guest houses, other tourist or short-stay accommodation (incl. camping and caravan sites, holiday camps and conference centres).

Catering: licensed and unlicensed eating places, including take-aways; public houses and bars; night clubs, including residential clubs; canteens; contract catering for airlines, corporate hospitality, weddings etc.

Share of GVA (per cent) ^{1,3}	3
Employment (thousands)	1,674
Share of England (per cent)	6.5
Male: Female	46:54
Change: 1996-2006 (per cent pa)	1.7
Change: 2001-2006 (per cent pa)	2
Change: 2006-2014 (per cent pa)	0.6
Self-Employment (per cent)	5.7
Top Three Occupational Groups (per cent of Total Emp.)	
Elementary Occupations	35.6
Managers and Senior Officials	29.2
Skilled Trades Occupations	10.6
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	10
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	6
GVA per Worker (£000) ¹	20
Exports: Gross Output (per cent) ^{1,3}	9.3
Concentration ^{1,3}	very low

Note(s): Data are 2006 except ¹ and ² where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.172 Among the sectors detailed in this report, hotels & catering is one of the larger employers, covering around 1.7m employees in the hotels and catering industry. It accounts for 3 per cent of UK GVA and like retail distribution, because the industry labour market is relatively flexible with a lot of part-time work, women make up a higher proportion of the labour force (54 per cent). The low skilled nature of much of the work is reflected in the fact that elementary occupations are the largest occupational group with 35.6 per cent of the workforce. Because of its great dependence on tourism, hotels & catering is particularly vulnerable to seasonal trends, fashion and currency movements. Furthermore, unexpected crises in other sectors of the economy can affect activity in the industry, as seen in 2001 during the foot-and-mouth epidemic in the UK and after the London bombings in 2005. The foot-and-mouth epidemic, in particular, led to severe reductions in tourist numbers throughout the country and did great harm to the business of hotels and restaurants. Visitor numbers, however, recovered quickly after 9/11 and the July 2005 bombings. The industry is also influenced by the growing use of online booking of hotels. The development of internet software has resulted in strong demand for those with the required skills to develop and maintain the software, such as associate professional and technical workers.
- 3.173 The huge USA hotel chains still dominate the market and continue to grow through M&A activity. Few UK and European groups are truly pan-European, although some UK-owned hotel chains are expanding, mostly through acquisitions beyond the national border. Hoteliers are, consequently, increasingly conscious of the need to pool resources such as centralised reservation systems, grouped marketing and quality-enhancement initiatives in order to compete effectively with the large USA companies. They are choosing to expand by means of integrated chains and franchising rather than by direct ownership, in part because of the reduction in banks' involvement in property markets, and the scarcity of land in many of Europe's key cities.

- 3.174 Hotels & catering is vulnerable to changing consumer demand. Restaurants and fast-food businesses, especially, face falls in fast food sales and increasing demand for healthier food options such as salad and sandwiches. There has also been the development of the preference for drinking in restaurants or at home instead of going to pubs and bars, especially as growth in wine sales is outstripping that of beer. Moreover, pub operators are facing rising costs as a result of an increasing amount of legislation and regulation. They are under pressure to take responsibility for alcohol-related problems such as binge drinking. *Hotels & catering is vulnerable to changing consumer demand.*
- 3.175 Some parts of the sector, especially pubs, now have to deal with a smoking ban in England, which came into effect from July 2007. Early anecdotal evidence from Scotland suggests this will hit profits, and consequently employment. *Smoking bans are now in place across the UK.*
- 3.176 The performance of hotels & catering is closely linked to general economic conditions and consumer confidence. The period since 1996 has been one of relatively fast economic and wage growth, while consumer confidence has been strong as well, buoyed by robust house-price inflation. As such, output and employment growth in these industries has been above the national average. Employment growth has averaged 1.7 per cent a year since 1996. Consumers' increasing desire to pursue leisure activities mean these sectors will remain in demand, but with consumers choosing to spend more on pensions and to clear debt positions, output and employment growth in hotels & catering are likely to ease. Over 2006-14, employment is forecast to grow by just 0.6 per cent a year.
- 3.177 The sector suffers badly from recruitment difficulties. With regard to hard-to-fill vacancies, 10 per cent of establishments reported difficulties, while 6 per cent report skill-shortage vacancies in 2005. Both rates are above the national average, but especially so in the case of the former. To some extent these figures reflect the perception that these industries offer low value, unrewarding jobs with little career prospects. This represents a bigger problem than the availability of skills in the market place. *Hard-to-fill and skill-shortage vacancies are comparatively big problems for the hotels & catering sector.*

Industry 18: Transport

SIC03 headings: 60-63

Passenger and freight transport by inter-city and interurban railways.

Scheduled passenger land transport, including inter-city coach services, urban and suburban transport by bus, tramway, underground or elevated railways etc; taxis and other non-scheduled passenger transport such as charters and excursions.

Freight transport by road; transport via pipelines (excluding natural gas, water or steam).

Sea, coastal water and inland water transport of passengers and freight.

Transport of passengers or freight by air or via space, including scheduled and non-scheduled (for example charter) services.

Supporting and auxiliary transport activities, incl.: cargo handling; storage and warehousing; operation of terminal facilities such as railway stations, bus stations, parking lots or garages, harbours and piers, navigation, pilotage and berthing, airports and air traffic control.

Activities of travel agencies and tour operators, and other transport agencies such as freight forwarding, customs agents.

Share of GVA (per cent) ^{1,3}	4.5
Employment (thousands)	1,110
Share of England (per cent)	4.3
Male: Female	72:28
Change: 1996-2006 (per cent pa)	1.5
Change: 2001-2006 (per cent pa)	0.3
Change: 2006-2014 (per cent pa)	0.5
Self-Employment (per cent)	18.1
Top Three Occupational Groups (per cent of Total Emp.)	
Process, Plant and Machine Operatives	26.3
Administrative and Secretarial Occupations	16.1
Elementary Occupations	13.3
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	8
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	6
GVA per Worker (£000) ¹	44.3
Exports: Gross Output (per cent) ^{1,3}	13.6
Concentration ^{1,3}	low

Note(s): Data are 2006 except ¹ and ² where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.178 The transport sector generates 4.5 per cent of UK GVA and accounts for a similar share of employment in England. It is no less important on account of the contribution it makes to other industries through commuter and freight transport and within that, rail

transport is crucial. Of the 1.1m employed in transport, just over 70 per cent are men. The largest occupational group is process, plant and machine operatives, which accounts for 26.3 per cent of total employment.

3.179 Between 1995/96 and 2005/06 there was a fall in the share of cars, vans and taxis in total transport in Great Britain, from 87 per cent to 85 per cent and corresponding rises in the shares of rail, from 5 per cent to 6 per cent and domestic air transport, from 0.8 per cent to 1.2 per cent. The share of buses and coaches remained the same, at 6 per cent. As total demand for transport in the UK, both public and private, rose between 1995/96 and 2005/06, rail increased its overall share through strong rises in usage, on the national rail system, the London Underground and some urban light rail systems. Across Britain as a whole, while bus and coach usage taken together rose, local bus usage fell slightly. All the indications are that demand for rail services is set to continue growing. If national rail is to take advantage of this potential, it has to overcome capacity constraints, on the track and in the stations, in parts of the network where usage has been growing most strongly, the London commuter area and areas around some other conurbations, notably Birmingham.

The demand for rail services is set to continue growing.

3.180 In the light of the 47 per cent increase in rail passenger traffic in the ten years to 2004/05, Network Rail projects that passenger traffic, if not constrained by limitations on the capacity of the system, will grow by around 30 per cent between 2004/05 and 2014/15. The growth in passenger traffic will not be evenly spread across the network, but is projected to be around 20 per cent for peak travel in London & the South East and 35 per cent for off-peak travel, up to 50 per cent on long-distance services and between 25 per cent and 30 per cent on regional services. In the case of passenger traffic the forecast is based on Treasury projections of economic growth and current plans for new housing in the South East and East of England. It relies also on assumptions about the effects of financial pressures and environmental policy on the growth of private car use and air passenger traffic. Network Rail is developing two complementary strategies to cope with this increase in demand. One strategy, called the Baseline, assumes that funds will not be forthcoming to make additions of any size to the network after the West Coast Main Line upgrade

Network Rail has announced two strategies to cope with the increase in demand for passenger transport.

is completed in 2008 and the second stage of the high-speed Channel Tunnel Rail Link is opened in November 2007. The strategy, therefore, is to increase the efficiency with which the infrastructure can carry passengers. If Network Rail is able to implement no more than the Baseline, the likely consequence, on Network Rail's projections, is that the network will be able to accommodate growth of around 2 per cent a year in passenger traffic until about the end of 2009, but thereafter capacity will be unable to keep up with growth in demand. Consequently, on the most used stretches of the network, trains will be crowded to well above the current limits, fares will rise and much potential traffic will be lost. Because of these potential losses to the rail industry along with the environmental and other consequences of the shift from rail to other means of transport, Network Rail advocates that in addition to the Baseline a more ambitious programme, the Base Case, should be adopted.

- 3.181 Considering the 60 per cent increase in freight traffic in the decade to 2004/05, Network Rail forecasts that freight traffic, barring limitations of system capacity, will grow by around 30 per cent between 2004/05 and 2014/15. This growth assumption depends heavily on projections of demand for coal at power stations and on the forecast growth of containerised traffic through the southern English ports. The current trend is for the length of rail freight journeys to increase. The main explanation given by Network Rail for the increasing length of journeys is that coal, which accounts for nearly 53 per cent of rail freight lifted, is being carried over greater distances to power stations in the Aire and Trent valleys, as British deep-mined coal is increasingly replaced by imported coal and by coal from open-cast mines. At the same time rail's share in container traffic from the seaports of southern England, mainly Felixstowe and Southampton, increased from 16 per cent in 1996 to 25 per cent in 2005. Network Rail expects increases in coal and container freight to be the main drivers of rail freight growth at least until 2014. Road freight is typically carried on shorter journeys than rail freight. Some 70 per cent of road freight is carried for less than 100 kilometres. The three largest categories of road freight in Great Britain, by weight lifted, are crude minerals (accounting for 21 per cent of total road freight), food, drink & tobacco (19 per cent) and building materials (9.5 per cent). Since 1995 road's share of total freight in Great Britain has fallen from 66

per cent to 64 per cent and rail's share has risen from 6 per cent to 8 per cent. Because rail is better suited than road to the transport of heavy loads over long distances, the main types of freight for which rail can compete with road are container traffic from ports, coal and bulky construction materials, for example aggregates. There is little prospect of road freight losing much of its share of the food, drink & tobacco market to rail.

3.182 Similar to its reaction to growth in passenger transport, Network Rail is also examining strategies to deal with the increase in demand for freight transport. The Baseline strategy (see paragraph 3.179), would see an increase in the efficiency with which the infrastructure can carry freight. Since many freight trains run on passenger track, limited growth in freight traffic, if there are to be no improvements to the track, can be accommodated through modifications to the timetable and freight paths, through creating additional freight paths and by lengthening trains. These involve complex logistical planning. If only the Baseline strategy can be implemented, then freight traffic will likely grow at well below its potential. As discussed with reference to passenger transport, potential losses to the rail industry as well as environmental and other consequences of shifting from rail to other means of freight transport has led to Network Rail promoting the adoption of a more ambitious strategy in addition to the Baseline strategy for freight transport.

Network Rail's Baseline strategy to cope with the increase in demand for freight transport may not be enough.

3.183 Water-borne travel within the UK accounts for less than 0.25 per cent of all passenger kilometres travelled in the UK. Nevertheless, the UK is by far the largest cruise market in Europe, with 1.25m passengers estimated for 2006 and a total of 1.5m forecast for 2008. Across the whole range of ocean and river cruising demand is rising and cruising companies are reaching out beyond their traditional customer base of the older and retired towards families. Low-cost airlines are also becoming involved in the cruising market. At the same time, capacity is being increased and several of the 18 new ships destined for the European cruise market over 2006-07 are based in the UK.

3.184 Most growth of budget airlines since the mid-1990s has occurred in Europe. In 1995 there were three budget airlines: Ryanair, Virgin Express and easyJet. In 2000 there were three more, all off-shoots of scheduled airlines. Since 2000 numbers have

increased further, but competition for airport slots is now encouraging consolidation. Two UK airports, Stansted and Luton which share more than 20 per cent of the sub-sector's capacity in Europe, still dominate; but since 2003 there has been a sharp increase in the numbers of seats offered at continental airports. This increase was led by UK-based carriers which sought to focus expansion outside the almost-saturated UK market. Two approaches to attracting passengers characterise the sub-sector: one (typified by Ryanair) aims at those who might fly almost on impulse because of low prices and special offers; the other (typified by easyJet) is designed for those who are going to fly in any case, but are seeking lower prices. The range of travellers includes holiday makers, impulse flyers and business travellers. The two largest budget carriers, easyJet and Ryanair, have stated that they will reduce the growth of their capacity in the future, but the majority of the aircraft ordered have yet to be delivered (Ryanair has 225 Boeing 737s on order to 2012, with options on 193 more), and this constitutes a huge expansion of capacity in the sector.

- 3.185 The three principal types of maritime transport for freight in the UK are foreign traffic carried on international trading routes to and from the seaports, coastwise traffic carried between UK seaports and one-port traffic, carried between a seaport and an offshore installation. The two predominant types of goods carried in one-port traffic are sand, gravel and similar material shipped to a port for commercial purposes and supplies for oil drilling stations. Foreign traffic accounted for nearly 73 per cent (by weight lifted) of all maritime freight carried via the UK's seaports in 2005; coastwise traffic for 21 per cent and one-port traffic for the remaining 6 per cent. While containerised shipping is the fastest-growing mode of freight shipping worldwide and in the UK trading fleet, the largest share of maritime traffic (nearly 70 per cent of foreign traffic and 79 per cent of coastwise traffic in 2005) is still accounted for by bulk carriers, including oil tankers. Freight carried on containers or RoRo (Roll-on Roll-off) ships accounts for 30 per cent of foreign traffic and 21 per cent of coastwise traffic. Because of the location of the major sea routes and the large ports in northern Europe and because also of the concentration of population in the south of England, the major shipping companies prefer to transport containers to and from the southern UK ports. Large amounts of bulk shipping, by contrast,

are carried to and from the northern English and the Scottish ports.

3.186 Container shipping companies are suffering at present from over-capacity, particularly on the North Atlantic route, as the volume of new shipping coming into service is growing much faster than the increase in demand. This kind of mismatch is a recurrent problem because of the difficulty of coordinating the long lead times for shipping orders with the growth patterns of demand for shipping services. The immediate consequence is that freight shipping rates are falling sharply. In one way the UK is insulated from this problem because there are now no major UK companies engaged in containerised shipping. In an important respect, moreover, the UK can benefit from fluctuations in shipping rates, since ship-owners registered in the UK, whatever their nationality, have the option of paying tax on their gross tonnage (i.e. tonnage without cargo, passengers and crew) rather than corporation tax on their profits. This has the advantages of stability and predictability in a world where shipping rates and profits can fluctuate considerably from year to year.

3.187 Another attraction is the UK's leasing regime. A ship-owner leasing a ship is allowed to pass capital allowances on to a bank in return for reduced rentals under the lease. The volatility of shipping profits would otherwise make it difficult for the owner to use the allowances. Since April 2006, however, foreign ship-owners leasing a ship for more than seven years are not allowed to take advantage of this arrangement. The Chamber of Shipping argues that this change will deter ship-owners from registering ships in the UK. According to the Chamber, the deterrent is not so much the removal of this right to reduce rentals; a greater deterrent is that a change has been introduced into a tax and leasing regime that was stable and predictable. This raises the possibility of further changes. Ship-owners might, therefore, choose to register in countries (for example, Germany, the Netherlands or Denmark) that also have tonnage tax and seem unlikely to introduce changes. It is too early to judge whether the fears about future registration are justified. It seems plausible to argue that, if no further changes are on the horizon (the 2006 change was announced in December 2004), then the other advantages of registering in the UK will outweigh the disadvantage of the change in leasing arrangements.

A change to the ship leasing regime could deter owners from registering in the UK.

3.188 The transport sector enjoyed a period of strong, steady demand over 1996-2006 as robust healthy economic activity increased the demand for its services. As a result, employment growth over 1996-2006 averaged 1.5 per cent a year. Employment growth was slower over 2001-06 due to the fallout of the 9/11 attacks and the foot-and-mouth epidemic on consumer travel demand, and the subsequent impact on profit margins and staffing levels. In the freight market, the application of new technology and processes also boosted productivity at the expense of labour demand. At the same time the shift towards net-based services and the technological improvements that will allow rail systems to meet increased demand will all tend to restrain labour demand. Employment in transport is forecast to grow by 0.5 per cent a year over 2006-14. According to NESS2005, 8 per cent of establishments within the sector reported problems with hard-to-fill vacancies and 6 per cent reported problems with skill-shortage vacancies in 2005.

Industry 19: Communications

SIC03 headings: 64

National post and courier activities, including collection, distribution and delivery of national and international mail and parcels.

Telecommunications, including the transmission of sound, images, data or other information via cables, broadcasting, relay or satellite; this includes maintenance of the network and transmission of radio and television programmes.

Share of GVA (per cent) ^{1,3}	2.7
Employment (thousands)	458
Share of England (per cent)	1.8
Male: Female	73:27
Change: 1996-2006 (per cent pa)	1.3
Change: 2001-2006 (per cent pa)	-1.7
Change: 2006-2014 (per cent pa)	0.2
Self-Employment (per cent)	2
Top Three Occupational Groups (per cent of Total Emp.)	
Administrative and Secretarial Occupations	20.6
Process, Plant and Machine Operatives	19.3
Skilled Trades Occupations	17
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	7
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	5
GVA per Worker (£000) ¹	64.7
Exports: Gross Output (per cent) ^{1,3}	6.7
Concentration ^{1,3}	high

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

3.189 The communications sector accounts for 2.7 per cent of UK GVA, with most of this coming from telecommunications. *Working Futures* figures show that the sector employs 458,000 in England, or 1.8 per cent of the total workforce, of which around three quarters of the workforce are male. Administrative and secretarial occupations account for the largest share of total employment, 20.6 per cent. Process, plant and machine operatives account for just less than 20 per cent and skilled trades account for 17 per cent.

3.190 Communications has been one of the fastest-growing industries since the early 1990s, driven by several waves of technical change and associated deregulation. First came the liberalisation of fixed-line telecommunications networks, which has

Technological and regulatory developments are the main drivers of growth in communications.

resulted in increased competition (especially in the long-distance telephony market) and a fall in call charges. During the 1990s the increase in internet penetration and demand for online services resulted in rapid growth in the volume of data being transmitted and in the development of new telecommunications services. Finally, the rapid take-up of mobile telephony during the late 1990s, helped by the boost of the connectable market given by the single GSM technical standard and the popularity of pre-pay phones, resulted in a surge in demand for mobile telecommunications services. Between 2000 and 2002, the boost to demand from these drivers was much weaker, as the initial phase of rapid penetration of both the internet and mobile telephony passed. Technological and regulatory developments should continue to drive growth: a competitive postal market; local loop unbundling (LLU); the roll-out of high-speed broadband technology; and take-up of 3G mobile telephony. Broadband penetration rose sharply over 2004-06, and this should stimulate strong growth in demand for more complex data services. Beyond this, one other area of growing demand is that for mobile computing. The late roll out of 3G telephony means its uptake has so far been low and it remains to be seen if it will become widespread enough to become a major driver of growth.

- 3.191 In the UK the postal market is dominated by Royal Mail, which only lost its monopoly in 2006. Competitors such as UK Mail, DHL and TNT Post have begun to take work away from Royal Mail, but it will be several years before Royal Mail's share of the market falls to the level one would expect to see in a competitive market. In the UK, the Royal Mail employs around 193,000 and in 2005/06 it had a turnover of just over £9bn. In 2002/03 it initiated a three-year renewal plan to turn it into a profitable venture in its own right, in advance of the opening-up of the postal market. This appears to have succeeded (it turned an operating loss of £318m in 2002 into an operating profit of £302m in 2005), and resulted in the loss of some 30,000 jobs across the Royal Mail group. More jobs will go over 2006-10, as it undergoes a programme of branch closures across its Post Office network. The Post Office has struggled to keep up with changes in the marketplace and continues to make losses despite an annual subsidy of £150m. Around 2,500

branches are expected to close over 2006-10 in an attempt to return the network to profitability. Given that Royal Mail suggested that it could operate a viable network with 10,000 fewer branches than the 14,000 it had in 2006, further closures cannot be ruled out in the future, especially as competition intensifies.

3.192 The key sub-sectors in the telecoms market are fixed-line telephony, mobile telephony and the provision of internet access, typically broadband. The nature of competition in these markets means many suppliers offer packages which combine some or all of these services. In the fixed-line market, British Telecom (BT) is the dominant supplier but its market share is being eroded. One of the reasons for this decline, aside from the general process of opening the market up to competition, is the introduction of full carrier pre-selection in 2001. This allows customers to route all their calls via an alternative provider over their BT line. The market for mobile telephony is dominated by four companies: O2, Orange, T-Mobile and Vodafone. A concern for the industry in recent years has been signs of maturity in the market following signs that average revenue per user may have reached a plateau and after 3G failed to take off, at least initially, in the way they expected. The market for internet broadband access is perhaps the most competitive and dynamic. By 2006 around 12m households were connected to the internet via a broadband connection, and this represents around 75 per cent of all internet connections. Companies are eager to enter and capture the market for broadband access as broadband is seen as the key channel for delivering media content in the near future.

Competition in the telecoms industry is fierce and this is driving down prices.

3.193 Openreach is an independently-run division of BT tasked with overseeing the local loop unbundling (LLU) process and ensuring fair and equal access to BT's network. BT's Openreach division has struggled to meet the demand from BT's rivals for access to BT's network. In a move to improve matters, Openreach drafted in 150 engineers from other BT divisions until the end of 2006 to assist it in opening up BT's network. Although these were only temporary secondments, BT is looking to recruit more engineers and apprentices to its Openreach division. BT expects to have unbundled 1.5m local loops by May 2007.

- 3.194 Some communications companies that own the networks that provide internet access want to start charging internet service providers (ISPs) more for delivering videos, emails or search results, or, at least, for ensuring a minimum level of service. The implicit suggestion is, therefore, that those who do not pay will see a poorer level or a denial of service. Critics argue that this would create a closed network and stifle innovation. The heart of the matter appears to be how the cost of investing in networks will be recouped. Communications companies argue that they incur the cost of investment and so should be allowed to charge in order to earn a reasonable rate of return. The issue has been largely confined to the USA but it has started to appear in Europe, and given the international and universal nature of the internet, developments in the USA could still impact on UK users and businesses.
- 3.195 In 2005 the proportion of household spending devoted to telecommunications, television and radio (TTR) fell for the first time since 2000, albeit very slightly due primarily to the falling cost of landline telephone calls. Generally, consumers are getting more for less, and this looks set to continue as competition remains fierce in the industry, due to new entrants and the bundling of services, which typically leads to heavy discounting. This will put pressure on prices and force communications companies to come up with new ideas to generate value. The share may rise as new services such as on-demand TV and internet broadcasting become mainstream.
- 3.196 The House of Commons Public Accounts Committee criticised the Royal Mail for the quality of its service and called on Postcomm to introduce new performance measures. Its December 2006 report was critical of the number of items being lost, stolen or damaged, and the deterioration in collection and delivery times. The Committee called on Postcomm to measure these, neither of which are targeted under the current regulatory regime, for the sake of improvement. At the same time, it did also concede that by international standards the performance of the Post Office was good.

- 3.197 Demand for communications services was strong in the late-1990s as the dot-com boom took hold, and this fed into labour demand. *Working Futures* figures indicate that employment grew by over 4 per cent a year in the late-1990s but this fell away sharply after the dot-com bubble burst. Between 2001 and 2006 employment fell by 1.7 per cent a year. Employment growth should recover as the industry recovers from the dot-com hangover and new services stimulate demand for communications services. Having invested heavily in networks over the last decade, companies are looking for productivity driven growth and so employment is forecast to grow by just 0.2 per cent a year.
- 3.198 According to NESS2005 around 7 per cent of establishments reported having hard-to-fill vacancies in 2005 and 5 per cent reported skill-shortage vacancies.

Industry 20: Banking and Insurance

SIC03 headings: 65-67

Financial intermediation, other than for insurance and pension funding, including: central banking, banks, building societies, financial leasing, factoring, mortgage finance, investment and unit trusts, venture capital and financial intermediation not elsewhere specified.

Insurance, including friendly societies, benevolent funds and Lloyd's underwriters, covering life insurance, pensions and non-life insurance.

Activities auxiliary to financial intermediation, including administration of financial markets, broking of securities, insurance agents and brokers.

Share of GVA (per cent) ^{1,3}	7.9
Employment (thousands)	1,020
Share of England (per cent)	4
Male: Female	47:53
Change: 1996-2006 (per cent pa)	0.8
Change: 2001-2006 (per cent pa)	0.3
Change: 2006-2014 (per cent pa)	0.2
Self-Employment (per cent)	5.8
Top Three Occupational Groups (per cent of Total Emp.)	
Administrative and Secretarial Occupations	43.5
Managers and Senior Officials	15.2
Associate Professional and Technical Occupations	12.9
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	7
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	6
GVA per Worker (£000) ¹	85.9
Exports: Gross Output (per cent) ^{1,3}	17
Concentration ^{1,3}	very high

Note(s): Data are 2006 except ¹ and ² where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.199 Banking & insurance is responsible for around 8 per cent of UK GVA. It employs just over 1m people, or 4 per cent of total employment in England. Most of these workers, 43.5 per cent, have administrative and secretarial occupations, while professional and technical occupations account for 12.9 per cent. Meanwhile, the ratio between male and female workers is fairly even, and much more so than for other sectors.
- 3.200 The banking industry has gone through a wave of integration and consolidation since the early 1990s, triggered by deregulation of financial activities introduced by European governments.

Technological developments are also important drivers. Internet banking has often been identified as a potential source of expansion as it offers a cheap distribution channel for financial products because there is no need for an expensive branch network presence. While an internet bank is apparently a cheap distribution channel for financial products, many existing experiments in on-line banking, insurance and brokerage have not fulfilled the initial optimistic expectations, as users are proving unwilling to give up the ability to carry out transactions face-to-face in a branch network. This means that traditional banks providing internet services have not been able to cut costs by as much as they had initially hoped by reducing their branch networks.

- 3.201 The 2006- 07 arrival of the new Basel Capital Accord (Basel II) and the EU Markets in Financial Instruments Directive (MiFID) have increased compliance costs. While both sets of regulations contain discretionary elements, the basic rules governing all banks will apply unevenly, as smaller banks remain subject to 'off the peg' regulation and larger ones enjoy a more bespoke regime. This is because the regulators adopted banks' own advanced in-house risk appraisal models – something larger banks can better afford. Ultimately, capital requirements for larger banks will be less taxing, perhaps leading to further industry concentration as smaller competitors see benefits in merger.
- 3.202 Even though banks have always been at the forefront of developing technology to support scale efficiencies and marketing potential, progress towards a cashless society is slow. Trials of contact-less payment cards show some promise, yet these are hardly innovative. Keeping abreast of the latest technologies is expensive and the investment in legacy systems can raise a barrier to innovation and expansion as huge new expenditure will be needed to replace them.
- 3.203 In retail banking market shares are highly concentrated. It is acknowledged that supermarket banks have yet to make serious inroads into the core current account market as they concentrate on savings instruments and fee-based services such as insurance. Incumbent firms see 'wafer-thin' margins on mortgages. This has driven further cost-cutting and consolidation
- Financial institutions are faced with increasing regulation and compliance costs.*

and raised questions about the independence in the UK of some smaller players. Outsourcing of key functions, such as human resources, is an indication of the tough market conditions. Barclays' consolidation of its branch network by closing Woolwich outlets is yet another sign of pressure. HBOS and RBS are pulling in the other direction as they are still keen to expand their presence in the populous South East.

- 3.204 In wholesale banking and investment banking the level of competition is increased by the continuing interest of overseas banks in London as a premier financial centre. Industry concentration is not as marked as in the retail sector, although pressures arising from equity market volatility and new regulatory requirements (via the Markets in Financial Instruments Directive) may make merger a favoured strategy. An Investment Managers Association survey estimates that assets under management in London now exceed £3,000bn. This has been affected by the continuing switch by pension funds out of equities and into bonds as they align their assets and liabilities more closely, and by a bullish, albeit unsteady, equities market.
- 3.205 A run of problems during 2001 and 2002, including the demise of Equitable Life and Independent Insurance, prompted the Financial Services Authority (FSA) to increase resources available for monitoring the insurance industry; it increased the number of insurance regulators and required them to carry out more visits to insurers. Insurers and life assurers incurred an increase in compliance costs over 2002-03, (although some of the increase may be due to one-off costs). These extra costs, and the higher standards that will be expected in the future, are likely to accelerate the restructuring of the industry because they give an incentive to the weakest players to search for partners in defensive mergers.

- 3.206 An ageing population, longer life expectancy and declining contributions to private pensions mean that in the future there will be fewer workers to pay for the greater number of old people and that there will be more people relying on pensions for a much longer period. Measures proposed to tackle this include: a gradual rise in the state pension age and the reduction in means-tested pension payments, so as to create an incentive to save. A low-cost national pensions saving scheme (NPSS) is also being planned.
- The National Pensions Saving Scheme is due to be launched in 2012 but it is not clear who will run the scheme.*
- 3.207 The National Pensions Saving Scheme (NPSS) is due to be launched in 2012 for the ten million workers who have no pension. Originally, insurers argued that the scheme was impractical because the proposed annual management fees on personal accounts were too low. Consequently, it was argued that investment management firms are in a better position to run the scheme because they have better economies of scale than insurance companies, but a recent report for the Association of British Insurers (ABI) found that there is no significant difference in economies of scale between insurers and fund management once the number of personal accounts exceeded 500,000. Fund managers gained significant economies of scale handling funds up to £1bn, but most would handle far larger sums, for which there is little cost difference with insurers.
- 3.208 A global catastrophe network of top insurers was set up in September 2006 to plan for the financial fall-out from natural disasters. The group, which is sponsored by the OECD, will identify potential financial threats and assess how vulnerable the world economy has become to large-scale disasters. Lloyd's of London argues that the insurance industry has long neglected the potential damage of natural disasters. It recommends that the industry should investigate a new approach to underwriting that is based on projected scenarios related to climate change rather than rely on historical precedent. According to Lloyd's, premiums will have to rise and some risks might even be classed as uninsurable if they are due to greenhouse gas and rising sea levels.
- Insurers are paying more attention to the impact of natural disasters.*
- 3.209 The financial services industry has enjoyed a period of strong growth over 1996-2006 buoyed by robust UK and global growth, and increased international demand for financial services as

globalisation promoted restructuring through mergers and acquisitions. The insurance industry is an exception to this. It was hit badly by some disasters in that period and even led to some major bankruptcies. It has been a period of considerable restructuring for the insurance industry. In the banking industry, competition remains fierce and margins in some quarters are thin. These have led to banks off-shoring some areas of work and cutting jobs in other areas in order to boost productivity and margins. Together these forces mean that employment growth in the sector has been modest: 0.8 per cent a year over 1996-2006 and just 0.3 per cent a year over 2001-06. Growth in financial services is expected to ease over 2006-14 and some organisations will continue to trim their workforces with the help of new technologies. Consequently, employment growth is expected to be just 0.2 per cent a year over 2006-14.

- 3.210 Some of the positions in banking & finance require a high level of technical knowledge and training, and given the fast moving and innovative nature of the financial services industry, this means the sector has an above average share of establishments with skill-shortage vacancies, 6 per cent; 7 per cent of establishments reported having hard-to-fill vacancies in 2005.

Industry 21: Professional Services

SIC03 headings: 70-71, 73, 74.1-74.4

Real estate activity, including development, buying and selling, letting and management of real estate.

Renting of machinery, equipment, personal and household goods, incl. motor vehicles and other transport equipment.

R&D on natural sciences, engineering, social sciences etc.

Other professional services incl.: legal, accountancy, tax, market research, other consultancy; architects, engineering services, weather forecasting, surveying; technical testing; advertising.

Share of GVA (per cent) ^{1,3}	11.6
Employment (thousands)	662
Share of England (per cent)	2.6
Male: Female	58:42
Change: 1996-2006 (per cent pa)	2.3
Change: 2001-2006 (per cent pa)	0.3
Change: 2006-2014 (per cent pa)	0.4
Self-Employment (per cent)	16.4
Top Three Occupational Groups (per cent of Total Emp.)	
Associate Professional and Technical Occupations	21
Managers and Senior Officials	20.5
Administrative and Secretarial Occupations	16.7
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	5
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	3
GVA per Worker (£000) ¹	186.3
Exports: Gross Output (per cent) ^{1,3}	2.8
Concentration ^{1,3}	very low

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.211 Professional services covers the high-value services provided by professionals such as accountants, lawyers, management and engineering consultants and marketing and advertising consultants. These are provided both to corporate clients and Government and have grown rapidly over the last decade as markets have liberalised, and the twin forces of globalisation and outsourcing have seen such professionals become more closely involved in the everyday business activities of their clients. The sector accounts for just under 12 per cent of UK GVA and 2.6 per cent of total employment in England. Slightly more than 50 per cent of those

employed by the sector are men. Associate professional and technical occupations are the largest occupational group, accounting for 21 per cent of all those employed. Managers and senior officials are the second-largest group, with 20.5 per cent.

3.212 Each of the specialist professional areas has seen the largest professional partnerships consolidating to achieve global reach and to allow them to service global clients more effectively. Higher earnings from larger practices are evident in the enhanced fees earned by partners in the largest practices, especially in accountancy, law and advertising. The evidence for scale economies in accountancy has been established de facto by the success of the biggest consultancy firms merging over the last decade as they have built global businesses. What were once the Big Eight accounting firms were reduced by mergers and the demise of Andersen to the Big Four. Before the collapse of Enron these firms (plus Andersen) provided one-stop audit and associated consultancy services for their global clients, including ICT consultancy and M&A advice. The very process of audit gives such firms access and insights that provide an advantage in winning business to advise their clients on other matters. In the post-Enron environment it became clear that there was the need for a distinct separation of audit from other consultancy activities and most accountancy firms sold their consultancy operations. The Big Four still earn around 75 per cent of their fees from consultancy services but now focus their services more on non-audit clients, to avoid a conflict of interest. By relying on fees from consultancy services the largest accountancy firms now face the cyclical pressures more usual to those operating in marketing and advertising.

Each of the specialist professional areas has seen the largest professional partnerships consolidating.

3.213 The concentration of supply among accountancy firms can easily lead to conflicts of interest and various public and private sector groups have called for regulation of the sector. Possible conflicts of interest leave firms vulnerable to legal action but, despite the sudden collapse of Andersen, there are still no measures in the UK to protect the remaining accountancy firms from litigation. It has been suggested that this stops mid-tier accountants from taking on larger clients for fear of legal action, and thus keeps competition

limited. Two factors may change this situation: first the UK is introducing measures to limit liability on individual contracts (through making shareholders sign disclaimers), which will offer some protection to accountants; and second, the EC is considering putting a total cap on liability of accountancy firms. The second option is preferred by accountants as it is less open to legal interpretation, and such a cap already exists in several European countries. Even a cap on liability would not protect a firm against a public backlash and resulting loss of clients. An alternative method for protecting auditing firms is to put in place a system of liability insurance, but so far no insurance companies have agreed to provide this.

- 3.214 The UK media are undergoing major structural changes and audiences are becoming increasingly fragmented due to the introduction of digital services, and personal recording devices which give viewers more control over what they watch. Consequently television is becoming a less attractive medium for advertising. At the same time, some areas of the traditional printed media are in decline, in part due to the number of freely-available electronic publications. All this presents a new challenge for advertising agencies to find ways to address consumers, as they can no longer rely solely on the traditional media in their campaigns. As internet usage grows, web advertising is becoming more important as part of a comprehensive campaign. In the UK spending on internet advertising now exceeds that in the national press and this is creating innovative new ways for firms to reach and interact with consumers. Another current trend is for advertising agencies to take promotions outside the home, where consumers have less control over what they are exposed to. One of the most attractive areas for advertising is in retail outlets: where advertisers have access to a mass market of consumers who can be reached relatively easily. Alternative forms of outdoor advertising are also becoming more common. Large synthetic billboards are appearing in London and other major world cities (particularly covering building sites), and digital screens are also becoming more common on streets and in public places. There is, of course, a limit as to how much advertising consumers can absorb in public places before switching off (in the same way that people do not

The UK media are undergoing major structural changes and audiences are becoming increasingly fragmented.

remember adverts in the middle of long TV commercial breaks), and there is a subtle change in approach from trying to force a message on consumers to trying to actively engage them. As London and other cities become more crowded and the traditional media become less attractive to advertisers, outdoor advertising is likely to become more popular.

- 3.215 In mid-2006 the Government announced plans to reform the legal aid system. Legal aid currently costs the UK £2.1bn pa and the reforms aim to cut this by 20 per cent in real terms by 2011. The main change will be that lawyers will no longer be paid an hourly rate for working on cases but would have to bid for blocks of work. This should end problems with the current system where some lawyers can drag out cases and receive payments for waiting time at police stations and magistrates' courts. Research commissioned by the Law Society suggests that 63 per cent of offices that do legal aid work would not be able to meet the minimum requirements (taking 200 cases a year) for bidding for contracts. This means that to carry on taking legal aid work they would either have to expand rapidly or merge with other law firms. The most likely outcome is that many of the smaller firms will merge. According to the Law Society, the number of offices providing criminal legal aid services fell by 25 per cent between 2001 and 2005 and it now seems likely that this number will fall further.
- 3.216 In 2006 it appeared that estate agents were going to lose much of their business of selling homes to property websites. Despite strong growth in sales, the property websites still relied on existing estate agents for much of their revenues, through advertising. Once the estate agents threatened to remove this advertising, the websites were no longer able to offer a private service for individuals to sell property online, and most sellers have once again been forced to use traditional estate agents. Estate agents may soon be facing competition from a new source: supermarkets. In 2006 Asda announced that it was going to trial selling houses through its stores using a system of computer terminals and call centres. If it is successful, it will be expanded throughout the UK.

- 3.217 Despite rising house prices, estate agents' revenues have come under pressure from falling liquidity in the housing market, with average length of occupancy increasing from 10 years in the late 1980s to around 15 years in 2006. This has mainly been due to the rising cost of moving, through stamp duty and fees, and lower inflation, which means mortgage debt is not paid off so quickly.
- 3.218 In the March 2007 Budget report the Government announced that it was considering responses to consultations on the introduction of the Planning Gain Supplement. Following this review, if it is deemed workable and effective, the Planning Gain Supplement (PGS) will not be introduced until 2009 at the earliest. Property developers have welcomed this delay as they believe the scheme would be hard to administer. In addition, there is uncertainty about what rate the PGS would be applied at. To date no figure has been put forward and all the Government has said is that the rate would be 'modest'. *The Planning Gain Supplement will not be introduced until 2009 at the earliest.*
- 3.219 The Housing Corporation has outlined plans to expand its investment programme and produce 49,000 new homes for social rent by 2008.
- 3.220 Professional services enjoyed robust growth over 1996-2006 and in tandem with this employment in the sector grew by 2.3 per cent a year over the period. Demand for professional services slowed in the wake of the dot-com bubble bursting as demand from related industries eased a little. Employment in professional services slowed to just 0.3 per cent a year over 2001-06 and the forecast is for this to change little over the forecast horizon. The sector is comparatively well placed with regard to recruitment difficulties. NESS2005 indicates that just 5 per cent of establishments reported hard-to-fill vacancies in 2005 and just 3 per cent reported skill-shortage vacancies.

Industry 22: Computing and Related Services

SIC03 headings: 72

Hardware consultancy; software consultancy and supply including development, production, supply and documentation of customised and non-customised software; data processing including facilities management; database activities including on-line data retrieval; maintenance and repair of computer equipment; and other computer-related activities.

Share of GVA (per cent) ^{1,3}	2.8
Employment (thousands)	514
Share of England (per cent)	2
Male: Female	63:37
Change: 1996-2006 (per cent pa)	6.1
Change: 2001-2006 (per cent pa)	0.2
Change: 2006-2014 (per cent pa)	3.1
Self-Employment (per cent)	8
Top Three Occupational Groups (per cent of Total Emp.)	
Administrative and Secretarial Occupations	20
Associate Professional and Technical Occupations	20
Managers and Senior Officials	19.6
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	5
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	4
GVA per Worker (£000) ¹	60.9
Exports: Gross Output (per cent) ^{1,3}	13.3
Concentration ^{1,3}	low

Note(s): Data are 2006 except ¹ and ² where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.221 Computing and related services accounts for 2.8 per cent of UK GVA and 2 per cent of employment in England. Of the 514,000 workers employed in related industries, 63 per cent are men, reflecting the high take up of computing science and similar subjects by men at school and university in the 1980s and 1990s. The sector is trying to attract more women but many women are often put off by long working hours.
- 3.222 Despite the technical nature of many jobs in this sector, administrative and secretarial occupations account for the largest share of the workforce (20 per cent). The three largest occupational groups,

which also include managers and associate professional and technical occupations, each account for roughly 20 per cent of employment.

3.223 As internet penetration continues to rise, one of the downsides is the continued expansion of internet crime that goes with it. With 'phishing' and card fraud on the rise, many consumers are put off using online services because of security concerns. Thus, as ICT-related crime continues to grow, the need, and demand, for improved computer security is likely to grow. Demand for computer security systems may not come just from business. The rapid expansion of digital and computer technology has brought about a shift in lifestyles, as consumers make use of digital music players and cameras, and work from home. These activities are likely to create a consumer demand for safe data storage, which, in turn, is likely to create a demand for computer security.

3.224 In recent years there has been substantial growth in the number of overseas workers employed in the UK ICT sector. In 1995, 1,800 work permits were issued to overseas ICT workers; in 2005 30,000 were issued. In total, 140,000 work permits were issued to non-resident ICT workers between 2001 and 2005, allowing them to work in the ICT sector in the UK. This comes against a backdrop of a fall (of similar magnitude) in total employment in the ICT sector over the same period. Evidence of skills gaps and skills shortages in the ICT sector suggest there has been a shift in the skills needed by employers. Of concern for the industry is the fear that, as a 'quick fix', employing overseas workers might have a negative impact on long-term prospects by undermining the training and development of resident ICT workers. A report by the British Computer Society, published in July 2006, highlighted that the number of UK students applying to study computer science fell by 50 per cent between 2001 and 2005. At the same time, as many of the industry's pioneers retire over the next ten years, there appears to be an insufficient number of graduates to fill their places. Even a recovery in student levels would not be enough to meet demand. In the light of these findings, the trend to recruit non-resident workers looks set to continue.

There has been substantial growth in the number of overseas workers in the IT sector.

3.225 One of the features of the rise in non-resident ICT workers is the strong presence of Indian workers. One of the reasons for this is the attempt by Indian companies to branch out from the outsourcing market into higher value-added services, such as consulting. Such work involves more face-to-face contact with clients than outsourcing work and this requires a physical presence in the client's market. While this has led to the transfer of Indian workers to the UK, it is also creating opportunities for UK residents as these companies look to shape a workforce that reflects the region it operates in. In doing so, the hope is that they can use these individuals' knowledge of the local market and culture to improve customer relations and strengthen their position in the UK market for computing services.

3.226 The prospects for those with ICT management skills look good in the medium to long term as the nature of ICT work changes. While basic ICT jobs (such as programming) are being off-shored to lower cost countries, the number of strategic and project management related roles is expanding rapidly. Indeed, it is the off-shoring of basic ICT jobs that has created some of these higher value jobs in the UK, as firms from lower cost countries set up project management bases in the UK to be close to the customer, a feature that many feel is essential for better project management. The demand for these skills is also coming from companies as they use ICT in new ways. Instead of using ICT just to automate tasks and cut costs, companies are using it to develop new markets and capitalise on business opportunities, and so they are looking for employees with not just ICT skills, but with relevant business expertise also. The challenge for the industry and educators over the medium and long term is to ensure that there are enough workers with these relevant skills.

There is increasing demand for new ICT skills combined with business skills.

3.227 Healthy growth in financial and business services (a large user of services provided by the sector), the millennium bug, the dotcom boom, and the rapid profusion of mobile telephony and broadband all helped to fuel strong employment growth in the late 1990s. Once 2000 passed and the dotcom bubble burst, demand for these services dried up and this is reflected in the profile of employment growth. Over 1996-2006 it averaged 6.1 per cent a year, but over 2001-06 it was just 0.2 per cent a

year. The outlook is for employment growth to recover and average 3.1 per cent a year over the forecast period as the over-reaction to the slowdown in the early-2000s is reversed. Demand for professional computing services and telecoms services will be supported by legislative and technological developments.

- 3.228 What seems surprising about this sector is the relatively low rates of establishments reporting skill-shortage vacancies, just 4 per cent in 2005. Anecdotal and other survey evidence suggests it is a bigger problem, with a lack of combined ICT and business skills one of the key issues. The proportion of establishments reporting hard-to-fill vacancies is also quite low.

The incidence of skills-related problems does not fit with anecdotal evidence.

Industry 23: Other Business Services

SIC03 headings: 74.5-74.8

Other business services incl.: recruitment agencies; security services; industrial cleaning; photographic, packaging and secretarial services; and other business services nes.

Share of GVA (per cent) ^{1,3}	9.3
Employment (thousands)	3,123
Share of England (per cent)	12.1
Male: Female	58:42
Change: 1996-2006 (per cent pa)	2.4
Change: 2001-2006 (per cent pa)	1.5
Change: 2006-2014 (per cent pa)	1.6
Self-Employment (per cent)	15.2
Top Three Occupational Groups (per cent of Total Emp.)	
Associate Professional and Technical Occupations	20.7
Managers and Senior Officials	19.4
Administrative and Secretarial Occupations	17.8
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	8
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	6
GVA per Worker (£000) ¹	33.3
Exports: Gross Output (per cent) ^{1,3}	16.2
Concentration ^{1,3}	20.7

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.229 The sector 'other business services' generates around 9.3 per cent of UK GVA and according to *Working Futures* figures, employs just over 3m people, or 12.1 per cent of total employment in England. Men account for close to 60 per cent of the workforce. Associate professionals and technical occupations are the largest occupational group, accounting for 20.7 per cent of employment in this sector. Managers and senior officials are the second-largest group with 19.4 per cent.
- 3.230 These services consist of a great variety of mainly lower value-added services: these include, for example, recruitment and personnel services, security and industrial cleaning. The sector contains many small firms but also several very large multi-activity organisations formed by mergers and acquisitions. Such large organisations aim to achieve rapid growth in turnover and profits by employing economies of scale and tight managerial control over costs as they provide a range of outsourced services to corporate and Government clients. The sector grew rapidly in the 1990s as firms concentrated on their core higher value-added business, and outsourced initially the more peripheral low-cost activities (such as cleaning) to contract suppliers and subsequently higher value-added activities such as building and factory maintenance. Some parts of the sector are vulnerable to economic slowdown, for example recruitment services.
- 3.231 A re-evaluation of the consequences of off-shoring prompted some firms to return call centre operations to the UK in 2006, in a drive to maintain high standards of customer service. Many companies set up operations in India to take advantage of cost savings, but in some cases the quality of customer service deteriorated, and as labour costs in India have risen, benefits have been eroded further. Managing offshore operations at a distance has also created concerns over compliance with regard to consumer data protection.
- 3.232 The telemarketing industry, which generates around £4bn annually, is facing a mounting challenge as increasing numbers of telephone lines are registered to block cold calls. Around 40 per cent of all fixed-line numbers in the UK cannot be called by marketing firms without permission, significantly diminishing the industry's ability to
- Some call centre operations are being returned to the UK.*
- The telemarketing industry is finding it harder to reach its chosen sectors of the population.*

reach chosen sectors of the population. The industry believes that those who register with Telephone Preference Service typically represent an attractive group profile with relatively high disposable income. In order to maximise the effectiveness of a diminishing target market there are moves toward permission-based marketing so that customers can opt in to marketing calls. This is happening gradually and is helping to allay fears that the industry could suffer at the hands of regulation.

- 3.233 The European Commission is currently assessing the concerns over a 2005 ruling by the European Court of Justice that forces insurers to pay VAT on outsourced services, with special reference to the way the tax is applied throughout Europe. Insurers fear that jobs at UK call centres could be at risk as the new legislation will give competitors in the USA, for example, an advantage on cost. European insurers could therefore be forced to move call centre operations offshore to locations such as India. This would be in stark contrast to the recent signs that some off-shored services are being brought back to the UK.
- 3.234 Employment in the sector has been robust over the last decade, buoyed by the trend to outsource and a generally strong performance of the City, which boosts the recruitment industry. Employment grew by 2.4 per cent a year over 1996-2006 and although it slowed after 2001 it did still average 1.5 per cent a year over 2001-06. The forecast is for this rate of growth to continue over 2006-14. The incidence of recruitment difficulties in the sector is above average; 8 per cent of establishments reported hard-to-fill vacancies and 6 per cent reported skill-shortage vacancies in 2005.

Industry 24: Public Administration and Defence

SIC03 headings: 75

General public service activities, including administration of central, regional and local bodies; business and Government regulation agencies; foreign affairs, defence activities and judicial activities; police and fire services; and compulsory social security.

Share of GVA (per cent) ^{1,3}	5.1
Employment (thousands)	1,229
Share of England (per cent)	4.8
Male: Female	50:50
Change: 1996-2006 (per cent pa)	0.7
Change: 2001-2006 (per cent pa)	1.8
Change: 2006-2014 (per cent pa)	-0.3
Self-Employment (per cent)	1.3
Top Three Occupational Groups (per cent of Total Emp.)	
Administrative and Secretarial Occupations	26.6
Associate Professional and Technical Occupations	22
Managers and Senior Officials	14.1
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	10
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	8
GVA per Worker (£000) ¹	44.9
Exports: Gross Output (per cent) ^{1,3}	1
Concentration ^{1,3}	n/a

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.235 Public administration and defence covers just over 1.2m government workers, who constitute 4.8 per cent of total employment in England. The sector is responsible for 5.1 per cent of UK GVA. Administrative and secretarial occupations form the largest part of the workforce, 26.6 per cent; while professional and technical professions account for the second largest share, 22 per cent. Women account for half the workforce.
- 3.236 Over the last 20 years central Government has increased its control over local Government functions, through central provision of a greater proportion of resources, and the practice of ring-fencing resources for particular service areas. The issue of the future role and funding of local

Government is now the focus of some debate. The Lyons Inquiry was established in July 2004, initially to consider the case for changes to the present system of local Government. Its remit was then extended to consider issues relating to the wider function of local Government and its possible future role. In October 2006, before the inquiry reported, the government published a White Paper on the future of local Government. It acknowledged the need to give local authorities greater freedom from central government and at the same time to increase the stability of long-term planning by local authorities and to increase local accountability by the use of more directly elected mayors or cabinets.

- 3.237 The 2004 Gershon review of the efficiency of public sector delivery identified up to 80,000 job cuts, savings of up to £15bn made by removing bureaucracy and savings of a further £5bn through increased productivity in public services. In addition to a reduction in staff, the roles of employees would change; more specialist staff would work in cross-departmental policy and delivery groups. Savings could be made by reforming the many organisations that are charged with improving services through inspection and regulation, and by reviewing the function of existing agencies. The review did not limit itself to central government: it suggests that local authorities could achieve efficiencies by joint purchasing, thereby reducing staff. Some departments have already planned to cut staff.
- Up to 80,000 civil service jobs are expected to go by 2008.*
- 3.238 Employment in the sector has been on a downward trend for most of the last 30 years. Until the late 1980s measured productivity was increasing, albeit slowly; but thereafter there has been little change in the level of productivity. Indeed, during the late 1990s and early 2000s measured productivity fell, as Government spending rose during this period, and employment increased as a result. The Government is making a considerable effort to reverse this increase and to ensure that public services are delivered efficiently. Its target is to reduce the number of civil service administrative jobs by 80,000 by 2008, partly through relocating work out of London and the South East.

- 3.239 A key element of the Government's strategy to increase efficiency and to direct more staff to front-line delivery of services is the efficient and effective use of technology. A number of substantial ICT projects have been commissioned, but the public sector has had only limited success with the delivery of complex ICT systems.
- 3.240 Government plans to reform the legal aid system, which were announced in 2006, aims to cut costs of the system by 20 per cent in real terms by 2011. The main change is that lawyers would no longer be paid an hourly rate for working on cases but would have to bid for blocks of work.
- 3.241 Police officials have warned that times ahead will be difficult. Police forces have record numbers of officers following generous pay settlements but they are now faced with a 2 per cent cap on public sector pay rises over the next few years and this will require more flexibility and economies of scale across England's police forces.
- 3.242 *Working Futures* estimates imply that prior to 2001 employment growth in public administration and defence was negative. Increases in Government spending in the early-2000s led to increased employment growth and over 2001-06 growth was 1.7 per cent a year. In the wake of the Gershon review and the Government's desire to contain spending levels, employment is expected to fall in the short and medium terms and a decline of 0.3 per cent a year is forecast for 2006-14.
- 3.243 Although the Government sector cannot always pay the highest wages, it does often compensate for this with additional benefits and working conditions. Nevertheless, the sector's inability to match wages in some parts of the private sector when living costs, and in particular housing costs, were rising strongly, mean it has often struggled to attract staff. The prospect of tighter Government spending over 2007-09 is also likely to put off potential candidates as it will probably curb future wage rises. In public administration and defence, 10 per cent of establishments reported hard-to-fill vacancies and 7.9 per cent reported skill-shortage vacancies in 2005. These rates are well above the averages (7.3 per cent and 5.1 per cent respectively).

Industry 25: Education

SIC03 headings: 80

Public and private education at any level or for any profession, oral or written as well as by radio or television, including: primary, secondary, technical, vocational and higher education; adult education including driving schools, other private training providers, TECs and LECs.

Share of GVA (per cent) ^{1,3}	5.6
Employment (thousands)	2,083
Share of England (per cent)	8.1
Male: Female	30:70
Change: 1996-2006 (per cent pa)	1.9
Change: 2001-2006 (per cent pa)	2
Change: 2006-2014 (per cent pa)	0.5
Self-Employment (per cent)	5.4
Top Three Occupational Groups (per cent of Total Emp.)	
Professional Occupations	53
Associate Professional and Technical Occupations	13.2
Personal Service Occupations	10.6
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	9
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	6
GVA per Worker (£000) ¹	30.2
Exports: Gross Output (per cent) ^{1,3}	2
Concentration ^{1,3}	medium

Note(s): Data are 2006 except ¹ and ² where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

3.244 The education sector generates 5.6 per cent of UK GVA and accounts for 8.1 per cent of all employment in England. There is a skew towards women among the 2m or so workers it represents, which comes mainly from the inclusion of primary and secondary education. The nature of the sector means many of its practitioners are well qualified and so professional occupations make up 53 per cent of the workforce. Associate professionals and technical occupations make up 13.2 per cent.

3.245 The number of UK universities increased markedly in the early 1990s when the higher education sector was reorganised with former polytechnics and various colleges of higher education given the status of university. Since then a number other colleges have also gained university status. Universities have received increased funding in

Universities can now charge undergraduate students up to £3,000 per annum.

recent years but are increasingly looking elsewhere for income. From September 2006 universities have been able to charge UK students top-up fees, which are intended to contribute towards the cost of teaching. A ceiling of £3,000 a year was set, a rate that all universities introduced. UK universities have seen overseas students as an important source of income, as they are charged higher fees than domestic students or those from the EU, but there is increasing competition internationally for overseas students and so the UK's share of the overseas student market can be expected to fall. There is a long history of companies being spun out from university research activities. Recently universities have become more proactive in using the intellectual property that is developed by their staff as a source of future income. A number of institutions have entered into long-term partnerships with intellectual property commercialisation companies which would make available initial funding for companies that are spun out of university research in return for an equity stake.

- 3.246 The emphasis on work-based training has increased since the 1970s and the LSC is now responsible for all post-16 education and training other than in higher education. The focus of skills training is increasingly on the needs of particular sectors in the economy. This is illustrated by the setting up of the Sector Skills Development Agency and the Sector Skills Councils in 2002. In 2005 the Government decided to establish a network of 12 National Skills Academies to improve the quality and status of vocational education available to students and to help train the existing workforce in new skills.
- 3.247 The CBI has emphasised the concern employers have with the numeracy and literacy of recruits. It found a fifth of companies surveyed often found deficiencies in the literacy and numeracy of non-graduate recruits and many companies are sending staff on remedial training courses. Although the Government has placed considerable emphasis on improving the attainment rates among school leavers, recent research by the Chartered Institute of Personnel and Development suggests that employers are often as interested in the 'soft skills' of potential recruits as they are in their literacy and numeracy skills.

- 3.248 In 2005 the government announced a proposal to help address the skills gaps in the workforce through a network of 12 National Skills Academies. The Academies, to be created by 2008, are intended to improve the quality and status of vocational education available to students aged 16+, and to help train the existing workforce in new skills. The project has been allocated £90m in Government funding and will draw in additional sponsorship from the appropriate industries. The sectors initially identified for the focus of the academies were construction, financial services, food & drink, hospitality, and manufacturing. In November 2006 it was confirmed that the industries included in the network would also include chemistry, creative and cultural industries and the nuclear sector. The Academies for construction, manufacturing and financial services were operational by the end of 2006. Those for the other sectors are expected to be operational in 2007. The focus for the remaining five academies is expected to be announced in 2007.
- Twelve National Skills Academies will be set up between 2006 and 2008.*
- 3.249 Since 1997 education has been at the forefront of Government policy and government funding has increased sharply as a result. There has also been increased focus on the productivity performance of the UK economy. Together, these have led to an increase in those working in education and over 1996-2006 employment increased by 1.9 per cent a year. This did not slow over 2001-06, but it is likely to slow over the forecast period as attempts to contain Government spending mean funding is not likely to be as strong. Over 2006-14 employment is forecast to grow by just 0.5 per cent a year.
- 3.250 Even though the focus on education has increased in recent years and swelled the sector, the high proportion of highly-trained professionals within it means the supply of labour has failed to keep up with this expansion. This is reflected in the vacancy statistics: 9 per cent and 6 per cent of establishments reported difficulties with hard-to-fill and skill-shortage vacancies in 2005.

Industry 26: Health and Social Work

SIC03 headings: 85

Human health activities incl.: hospitals, medical and dental practices; nurses, midwives, speech therapists etc working other than in hospitals; medical laboratories, blood banks and ambulance transport. Veterinary activities.

Social work activities incl.: hostels/homes for children, the aged, the handicapped, homeless etc; day care activities; and social, counselling, refugee, and similar activities.

Share of GVA (per cent) ^{1,3}	6.9
Employment (thousands)	2,728
Share of England (per cent)	10.6
Male: Female	19:81
Change: 1996-2006 (per cent pa)	1.7
Change: 2001-2006 (per cent pa)	2
Change: 2006-2014 (per cent pa)	0.9
Self-Employment (per cent)	8.8
Top Three Occupational Groups (per cent of Total Emp.)	
Personal Service Occupations	28.2
Associate Professional and Technical Occupations	28
Professional Occupations	13.1
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	10
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	7
GVA per Worker (£000) ¹	28.6
Exports: Gross Output (per cent) ^{1,3}	0.1
Concentration ^{1,3}	very high

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

- 3.251 Health & social work represents one of the largest pools of employees, around 2.7m, or 10.6 per cent of total employment in England. The sector generates under 7 per cent of UK GVA and through its role in maintaining the health of the population and workforce it supports the output of other sectors. As is typical of the healthcare profession, the workforce is dominated by women, who account for 81 per cent. The focus of healthcare on patient-provider interaction, typically at an individual level is reflected in the fact that personal service occupations account for 28.2 per cent of the workforce. Associate professionals make up a similar share, 28 per cent.

- 3.252 Precise data are difficult to compile but since 1997 the market share of the independent sector in the provision of health and care in the UK is estimated to have grown significantly. The majority of family doctors remain independent contractors, earning their income from profits they make from their business. The role of the private sector as a whole has been expanded recently because of contracts negotiated centrally by the Department of Health's commercial directorate. Much of the growth has come from two waves of independent treatment centres, which when fully up and running will provide more than 400,000 operations a year at a cost of £1bn. Furthermore contracts to provide diagnostics (for example, scans, X-rays and similar investigations) have been signed to a value of £200m a year. The NHS also buys about £17bn-worth of supplies each year from the private sector as well as more than £10bn-worth of pharmaceuticals. In addition, the health service in England also buys about £4bn a year of clinical services from the private and the voluntary sectors. In this field, two significant contracts are under negotiation: one to allow the commercial sector to provide GP services in areas short of doctors and one to support, or even supply the commissioning of patient care. How much these contracts will be worth will depend on the extent of the use that primary care trusts make of them.
- The role of the private sector in healthcare provision has expanded significantly.*
- 3.253 Some nurses and therapists have started to leave the National Health Service and sell their services back to it through a mutually-owned limited company. The move is supported by the Department of Health which believes that such social enterprises have a huge potential to deliver better services for patients. The Department of Health is creating a unit, which from 2007 will be given a budget to help other staff to create business plans, while each of the ten strategic health authorities are also setting up units to encourage such moves.
- Some NHS staff are selling their services to the NHS through mutually-owned limited companies.*
- 3.254 The future involvement of the private sector in the provision of healthcare is expected to increase but with greater variation than in the past. Much of the recent expansion of the private health sector has come from centrally-driven contracts, but its future involvement will depend on the choices of patients, the decisions of local commissioners and the creativity of hospital and community staff. The

Government has stated that it is not planning any new central procurements as it does not see the need for a third wave of independent treatment centres. Although the private sector will be invited to tender for the supply of doctors in areas where there is a shortage and to support/supply the commissioning of care, the share of NHS care supplied by a particular private provider will depend on local need and the decisions of patients and commissioners.

- 3.255 In response to the rising costs of childcare and calls from charities for action, the Government has promised to increase access to free childcare for three and four year olds, particularly in poorer areas. By 2007/08 Government funding for childcare will reach £5.5bn a year, having risen from £1.1bn a year in 1996/97. By 2010 the government plans to have established 3,500 children's centres and created 300,000 childcare places for school-age children.
- 3.256 There have been calls for an expansion of free care for all two to four year olds to 20 hours per week and 48 weeks per year. This investment could cut access to free care by making it uneconomic for private and voluntary organisations to provide care without the subsidies, thereby reducing the number of providers on which the government's plans will rely.
- 3.257 The Government's commitment to direct spending to front line services means the healthcare system has been one of the beneficiaries. Employment in the sector increased by 1.7 per cent over the decade since 1996, with even faster growth, 2 per cent, since 2001. Although the Government is looking to focus most of the savings over the next few years on central and administrative functions, front-line services are still likely to be affected by spending constraints. Furthermore, with many parts of the NHS now running substantial deficits the scope for these rates of employment growth to be sustained is limited. Employment in the healthcare sector covered by Skills for Health is expected to grow by just 0.9 per cent a year over 2006-14.
- 3.258 Long, unsociable working hours and low morale mean the sector often struggles to attract and retain recruits. In the context of the recent rapid increase in activity underpinned by strong

increases in Government spending this has translated into recruitment difficulties. In health & social work, 10 per cent of establishments reported hard-to-fill vacancies and 7 per cent reported skill-shortage vacancies in 2005.

Industry 27: Miscellaneous Services

SIC03 headings: 90-99

Sewage and refuse disposal, sanitation etc, incl. collection of solid wastes, transportation and treatment by incineration or other means, sewage removal and disposal, and maintenance of sewers and drains.

Recycling of waste with an industrial process is classified to Industry 11, Manufacturing and Recycling; collection and purification of water is classified to Industry 12, Electricity, Gas and Water.

Business, professional, religious and political organisations; trade unions; recreational, cultural and sporting activities incl. film, radio and television, theatre, arts facilities, museums, sports arenas and organisations, betting; other service activities incl. dry cleaning, hairdressing, funerals.

Private households with employed persons; extra-territorial organisations and bodies.

Share of GVA (per cent) ^{1,3}	5.1
Employment (thousands)	1,604
Share of England (per cent)	6.2
Male: Female	48:52
Change: 1996-2006 (per cent pa)	2
Change: 2001-2006 (per cent pa)	1.5
Change: 2006-2014 (per cent pa)	0.9
Self-Employment (per cent)	26.5
Top Three Occupational Groups (per cent of Total Emp.)	
Associate Professional and Technical Occupations	22.5
Managers and Senior Officials	17.7
Personal Service Occupations	15.1
Establishments Reporting Hard-to-Fill Vacancies (per cent) ²	8
Establishments Reporting Skill-Shortage Vacancies (per cent) ²	6
GVA per Worker (£000) ¹	35.1
Exports: Gross Output (per cent) ^{1,3}	7
Concentration ^{1,3}	medium

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

3.259 The sector 'miscellaneous services' covers a wide and diverse range of household services and the broadcast media, many of which are in the early stages of development and may one day establish themselves as separate industries. As such there are many small firms in the industry and some small, but rapidly expanding, sectors. In recent years, the main developments in the industry have included environmental regulation of waste collection and treatment, the deregulation of the UK broadcast media, the strong growth in the betting industry following its deregulation and, in 2005, the passing of the Gambling Bill. Online gaming has grown rapidly in the UK since 2000, but now faces legal uncertainty in the USA. Miscellaneous Services also includes organisations such as trade unions and political groups, film and theatre producers, libraries, museums, sports facilities, dry-cleaners, hairdressers and undertakers. The sector accounts for 5.1 per cent of UK GVA and employs around 1.6m people, of whom 48 per cent are men. As with other services sectors, associate professional and technical occupations dominate the occupational structure along with managers and senior officials. Together they account for just over 40 per cent of employment in the sector.

3.260 Since the Communications Act, 2003, the UK has had one of the most liberal TV and radio markets in the world, in particular relating to cross-media ownership. Strong competition means there is less need for regulation; and mergers and acquisitions which would have previously created monopolies, or caused competition concerns, have been allowed. In comparison there has been less change in the printed media, although traditional publications have come under threat from freely-available online material, in particular from the BBC. Nearly all national newspapers and magazines now maintain their own websites.

The UK has one of the most liberal TV and radio markets in the world.

3.261 Since multi-channel television was introduced to the UK in 1989, the supply of television channels has expanded rapidly. Analogue cable and satellite services grew in popularity throughout the 1990s and paved the way for the introduction of digital satellite in 1998. Meanwhile, UK broadband speeds continue to increase, allowing home PCs to show content produced from anywhere in the world. It is expected that by the end of 2007

connection speeds will be fast enough to allow users to easily download entire films. Other recent developments in television broadcasting include the launch and rapid take-up of non-subscription multi-channel services, such as Freeview and Freesat, which have brought more channels into homes without the need for a digital subscription, and the use of the digital capabilities to carry other services, including video-on-demand, pay-per-view services, software downloading and interactive TV (iTV) services (for example, commerce and gambling).

3.262 The new tax structure for UK film production came into place in April 2006 and had an immediate impact on investment in British productions. Although some of this extra investment was delayed from 2005 so that producers could make most efficient use of the tax changes, it seems fairly clear that ending the uncertainty around the tax benefits in the sector has stimulated investment.

3.263 As innovation and technological progress continue at a rapid pace, the traditional boundaries between various areas of the media and their distribution networks have become increasingly blurred. This has led to competition between firms that would not normally be thought of as competitors. Competition to supply broadband services has become increasingly fierce, with particular focus on access speeds and low prices. Over 2007-08 firms are likely to pay increasing attention to quality of content. The penetration of faster broadband speeds that allow users to send and receive short video clips relatively easily has had impacts on many different media groups. Downloads of entire films are not likely to take off until broadband speeds increase further, probably late in 2007.

The traditional boundaries between sub-sectors has become blurred.

3.264 The recent increase in prices paid for works of art reflect the growing interest in the art itself. This is a trend reflected at the Tate galleries, where attendances have reached record levels despite an overall fall in tourism. The Tate Modern, already the most popular modern art museum in the world, is now planning a £167m extension, due to be ready in time for the 2012 Olympics. The extension would add space for an extra 1m visitors a year and include ten galleries, two performance spaces and bars and restaurants.

- 3.265 Light regulation in the UK has helped British internet firms become world leaders in online gaming. It has never been clear whether their business in the USA was legal and at least two attempts have been made to pass legislation with the explicit purpose of preventing them from dealing with USA customers. It became apparent in 2006 that the USA may be taking a tougher stance when senior managers of two companies were arrested during visits to the USA. The move to prevent banks and credit cards from processing payments used for online gaming in October 2006 still came as a shock. This left British firms with no option but to suspend USA trading. As the USA accounts for roughly half of all revenues this was a major blow to companies in the sector. The sector should be able to recover from this setback, as long as demand for online gambling is sustained, and firms may instead focus attention on developing Asian markets. There may also be some consolidation as the fall in share prices and market valuations has left firms vulnerable to acquisition. There is also the possibility that the USA legislation may be challenged under WTO rules, as it heavily favours domestic industry and horse racing (which is exempt from the bill). Furthermore, resourceful USA gamblers may find a way around the laws.
- UK firms are major players in international gambling but they have been closed out of the USA.*
- 3.266 Although the share of household waste that is recycled has risen from 11 per cent in 2000 to 27 per cent in 2006, the total volume of waste has continued to increase, and as a result the amount of waste being sent to landfill has not fallen in some parts of the country. This is a problem for local authorities, which face fines for not meeting their landfill targets. The National Audit Office (NAO) now estimates that the share of household waste recycled may have to rise to 40 per cent to meet these targets. This will give a further boost to firms in both waste collection and waste processing, as the emphasis moves from landfill to higher value-added methods of waste disposal, including recycling and power generation. Over 2007-08 the government is likely to address some of the biggest problems the sector faces, namely getting financial backing for new projects, delays in PFI procurement and obtaining planning permission, as reforms become more urgent. Other possible measures, such as charging households directly for waste sent to landfill, could

also have a major impact, and create scale economies in the sector.

- 3.267 In June 2006, the UK Government indicated its commitment to increasing the role of the voluntary sector in the provision of public services. The main developments included a switch from annual to long-term contracts and a review of procurement systems. The intended result is that both private companies and voluntary-sector organisations should be able to bid against public-sector bodies for service contracts. The areas where voluntary groups are expected to make the biggest impacts are in community hospitals and helping people on incapacity benefit back into the workplace.
- 3.268 Demand for the services in this sector is largely dependent on consumer spending. The sector experienced healthy demand over the last decade boosted by robust growth in consumer spending. This supported employment growth of 2 per cent a year over 1996-2006. Growth slowed slightly over 2001-06 to 1.5 per cent a year and is expected to slow further over 2006-14, as demand slows, driven by slower consumer spending as consumer concerns about debt and pensions have a bigger impact on spending. The sector is slightly above average with regard to recruitment difficulties: 8 per cent of establishments reported hard-to-fill vacancies and 6 per cent reported skill-shortage vacancies in 2005.

Detailed SSC Profiles

SSC 1: LANTRA

Share of GVA (per cent) ^{1,3}	1
Employment (thousands)	342
Share of England (per cent)	1.3
Male: Female	66:34
Change: 1996-2006 (per cent pa)	-2.3
Change: 2001-2006 (per cent pa)	-2.8
Change: 2006-2014 (per cent pa)	-1.6
Self-Employment (per cent)	42.5
Top Three Occupational Groups (per cent of Total Emp.)	
Skilled Trades Occupations	38.8
Elementary Occupations	23.3
Personal Service Occupations	10.1
GVA per Worker (£000) ¹	32.4
Exports: Gross Output (per cent) ^{1,3}	6.7
Concentration ^{1,3}	very low
per cent establishments with vacancies ²	8.3
per cent establishments with hard-to-fill vacancies ²	4.7
per cent establishments with skill shortage vacancies ²	3.1
per cent establishments with skill gaps ²	10.5
Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.	
Data relate to England except ³ where data are for UK.	
Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).	

SSC 2: IMPROVE LTD

Share of GVA (per cent) ^{1,3}	2
Employment (thousands)	370
Share of England (per cent)	1.4
Male: Female	71:29
Change: 1996-2006 (per cent pa)	-0.6
Change: 2001-2006 (per cent pa)	-1.8
Change: 2006-2014 (per cent pa)	-1.2
Self-Employment (per cent)	2.9
Top Three Occupational Groups (per cent of Total Emp.)	
Process, Plant and Machine Operatives	26.2
Skilled Trades Occupations	15
Elementary Occupations	14.9
GVA per Worker (£000) ¹	57.9
Exports: Gross Output (per cent) ^{1,3}	16.6
Concentration ^{1,3}	medium
per cent establishments with vacancies ²	19.4
² per cent establishments with hard-to-fill vacancies	7.9
per cent establishments with skill shortage vacancies ²	5.4
per cent establishments with skill gaps ²	21.3

Note(s): Data are 2006 except ¹ and ² where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

SSC 3: SKILLFAST-UK

Share of GVA (per cent) ^{1,3}	0.7
Employment (thousands)	256
Share of England (per cent)	1
Male: Female	63:37
Change: 1996-2006 (per cent pa)	-5.3
Change: 2001-2006 (per cent pa)	-5.9
Change: 2006-2014 (per cent pa)	-1.6
Self-Employment (per cent)	16.9
Top Three Occupational Groups (per cent of Total Emp.)	
Process, Plant and Machine Operatives	19.2
Managers and Senior Officials	18.3
Skilled Trades Occupations	12.2
GVA per Worker (£000) ¹	28.3
Exports: Gross Output (per cent) ^{1,3}	44.6
Concentration ^{1,3}	very low
per cent establishments with vacancies ²	14.9
² per cent establishments with hard-to-fill vacancies	6.1
per cent establishments with skill shortage vacancies ²	4
per cent establishments with skill gaps ²	13.3
Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.	
Data relate to England except ³ where data are for UK.	
Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).	

SSC 4: PROSKILLS

Share of GVA (per cent) ^{1,3}	1.7
Employment (thousands)	371
Share of England (per cent)	1.4
Male: Female	77:23
Change: 1996-2006 (per cent pa)	-2
Change: 2001-2006 (per cent pa)	-2.4
Change: 2006-2014 (per cent pa)	-1.2
Self-Employment (per cent)	9
Top Three Occupational Groups (per cent of Total Emp.)	
Process, Plant and Machine Operatives	19.9
Skilled Trades Occupations	17.6
Managers and Senior Officials	16.7
GVA per Worker (£000) ¹	49.7
Exports: Gross Output (per cent) ^{1,3}	25.8
Concentration ^{1,3}	low
per cent establishments with vacancies ²	15.7
² per cent establishments with hard-to-fill vacancies	6
per cent establishments with skill shortage vacancies ²	4.6
per cent establishments with skill gaps ²	15.4
Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.	
Data relate to England except ³ where data are for UK.	
Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).	

SSC 5: COGENT

Share of GVA (per cent) ^{1,3}	4.5
Employment (thousands)	422
Share of England (per cent)	1.6
Male: Female	71:29
Change: 1996-2006 (per cent pa)	-1.3
Change: 2001-2006 (per cent pa)	-1.9
Change: 2006-2014 (per cent pa)	-0.9
Self-Employment (per cent)	4.2
Top Three Occupational Groups (per cent of Total Emp.)	
Process, Plant and Machine Operatives	23
Managers and Senior Officials	14.8
Skilled Trades Occupations	12.8
GVA per Worker (£000) ¹	112.8
Exports: Gross Output (per cent) ^{1,3}	51.3
Concentration ^{1,3}	medium
per cent establishments with vacancies ²	16.9
² per cent establishments with hard-to-fill vacancies	6.8
per cent establishments with skill shortage vacancies ²	4.1
per cent establishments with skill gaps ²	20.2

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

SSC 6: SEMTA

Share of GVA (per cent) ^{1, 3}	5.2
Employment (thousands)	1208
Share of England (per cent)	4.7
Male: Female	82:18
Change: 1996-2006 (per cent pa)	-2.6
Change: 2001-2006 (per cent pa)	-3.4
Change: 2006-2014 (per cent pa)	-1.2
Self-Employment (per cent)	7.5
Top Three Occupational Groups (per cent of Total Emp.)	
Skilled Trades Occupations	25.7
Process, Plant and Machine Operatives	19.3
Managers and Senior Officials	14.4
GVA per Worker (£000) ¹	46.3
Exports: Gross Output (per cent) ^{1, 3}	62.5
Concentration ^{1, 3}	low
per cent establishments with vacancies ²	17.4
per cent establishments with hard-to-fill vacancies ²	9.4
per cent establishments with skill shortage vacancies ²	7.8
per cent establishments with skill gaps ²	18.5

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

SSC7: ENERGY & UTILITY SKILLS

Share of GVA (per cent) ^{1,3}	2.6
Employment (thousands)	261
Share of England (per cent)	1
Male: Female	78:22
Change: 1996-2006 (per cent pa)	-0.2
Change: 2001-2006 (per cent pa)	-1.9
Change: 2006-2014 (per cent pa)	-0.1
Self-Employment (per cent)	4.9
Top Three Occupational Groups (per cent of Total Emp.)	
Associate Professional and Technical Occupations	15.6
Skilled Trades Occupations	15.6
Managers and Senior Officials	15.3
GVA per Worker (£000) ¹	106.2
Exports: Gross Output (per cent) ^{1,3}	0.7
Concentration ^{1,3}	medium
per cent establishments with vacancies ²	15.5
² per cent establishments with hard-to-fill vacancies	4.7
per cent establishments with skill shortage vacancies ²	3.9
per cent establishments with skill gaps ²	19.2

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

SSC 8: CONSTRUCTIONSKILLS

Share of GVA (per cent) ^{1,3}	6.5
Employment (thousands)	1780
Share of England (per cent)	6.9
Male: Female	85:15
Change: 1996-2006 (per cent pa)	2.1
Change: 2001-2006 (per cent pa)	2.5
Change: 2006-2014 (per cent pa)	-0.1
Self-Employment (per cent)	35.3
Top Three Occupational Groups (per cent of Total Emp.)	
Skilled Trades Occupations	38.9
Managers and Senior Officials	14.9
Process, Plant and Machine Operatives	9.4
GVA per Worker (£000) ¹	40.1
Exports: Gross Output (per cent) ^{1,3}	2.3
Concentration ^{1,3}	very low
per cent establishments with vacancies ²	14.5
per cent establishments with hard-to-fill vacancies ²	7.8
per cent establishments with skill shortage vacancies ²	6.1
per cent establishments with skill gaps ²	13.1

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

SSC 9: SUMMITSKILLS

Share of GVA (per cent) ^{1,3}	1.4
Employment (thousands)	381
Share of England (per cent)	1.5
Male: Female	88:12
Change: 1996-2006 (per cent pa)	1.9
Change: 2001-2006 (per cent pa)	2.5
Change: 2006-2014 (per cent pa)	-0.5
Self-Employment (per cent)	40.1
Top Three Occupational Groups (per cent of Total Emp.)	
Process, Plant and Machine Operatives	46.2
Managers and Senior Officials	14.3
Elementary Occupations	10.5
GVA per Worker (£000) ¹	39.5
Exports: Gross Output (per cent) ^{1,3}	0.2
Concentration ^{1,3}	very low
per cent establishments with vacancies ²	13.4
per cent establishments with hard-to-fill vacancies ²	6.8
per cent establishments with skill shortage vacancies ²	5.4
per cent establishments with skill gaps ²	19.6

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

SSC 10: AUTOMOTIVE SKILLS

Share of GVA (per cent) ^{1,3}	2
Employment (thousands)	521
Share of England (per cent)	2
Male: Female	79:21
Change: 1996-2006 (per cent pa)	-0.8
Change: 2001-2006 (per cent pa)	-0.4
Change: 2006-2014 (per cent pa)	-0.1
Self-Employment (per cent)	12.2
Top Three Occupational Groups (per cent of Total Emp.)	
Sales and Customer Service Occupations	24.8
Managers and Senior Officials	21.7
Skilled Trades Occupations	13.2
GVA per Worker (£s) ¹	42
Exports: Gross Output (per cent) ^{1,3}	0.4
Concentration ^{1,3}	low
per cent establishments with vacancies ²	14.6
per cent establishments with hard-to-fill vacancies ²	6.8
per cent establishments with skill shortage vacancies ²	5.7
per cent establishments with skill gaps ²	18.6

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

SSC 11: SKILLSMART RETAIL

Share of GVA (per cent) ^{1,3}	5.4
Employment (thousands)	2639
Share of England (per cent)	10.3
Male: Female	38:62
Change: 1996-2006 (per cent pa)	1.5
Change: 2001-2006 (per cent pa)	1
Change: 2006-2014 (per cent pa)	0.9
Self-Employment (per cent)	7.4
Top Three Occupational Groups (per cent of Total Emp.)	
Sales and Customer Service Occupations	36.3
Managers and Senior Officials	17.1
Administrative and Secretarial Occupations	9.7
GVA per Worker (£000) ¹	22.7
Exports: Gross Output (per cent) ^{1,3}	0
Concentration ^{1,3}	low
per cent establishments with vacancies ²	14.3
per cent establishments with hard-to-fill vacancies ²	5.4
per cent establishments with skill shortage vacancies ²	3.4
per cent establishments with skill gaps ²	20.3

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

SSC 12: PEOPLE 1ST

Share of GVA (per cent) ^{1,3}	3.9
Employment (thousands)	1874
Share of England (per cent)	7.3
Male: Female	45:55
Change: 1996-2006 (per cent pa)	1.9
Change: 2001-2006 (per cent pa)	1.9
Change: 2006-2014 (per cent pa)	0.7
Self-Employment (per cent)	5.5
Top Three Occupational Groups (per cent of Total Emp.)	
Elementary Occupations	33
Managers and Senior Officials	27.5
Skilled Trades Occupations	9.9
GVA per Worker (£000) ¹	22.8
Exports: Gross Output (per cent) ^{1,3}	8.8
Concentration ^{1,3}	low
per cent establishments with vacancies ²	20.1
per cent establishments with hard-to-fill vacancies ²	9.4
per cent establishments with skill shortage vacancies ²	5.4
per cent establishments with skill gaps ²	20.3

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

SSC 13: GOSKILLS

Share of GVA (per cent) ^{1,3}	2.3
Employment (thousands)	577
Share of England (per cent)	2.2
Male: Female	79:21
Change: 1996-2006 (per cent pa)	0.8
Change: 2001-2006 (per cent pa)	0.3
Change: 2006-2014 (per cent pa)	0.1
Self-Employment (per cent)	32.6
Top Three Occupational Groups (per cent of Total Emp.)	
Process, Plant and Machine Operatives	28
Elementary Occupations	12.8
Skilled Trades Occupations	12.1
GVA per Worker (£000) ¹	42.8
Exports: Gross Output (per cent) ^{1,3}	22.4
Concentration ^{1,3}	medium
per cent establishments with vacancies ²	25.2
per cent establishments with hard-to-fill vacancies ²	13.1
per cent establishments with skill shortage vacancies ²	8.7
per cent establishments with skill gaps ²	14

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

SSC 14: SKILLS FOR LOGISTICS

Share of GVA (per cent) ^{1,3}	2.6
Employment (thousands)	684
Share of England (per cent)	2.7
Male: Female	76:24
Change: 1996-2006 (per cent pa)	1.3
Change: 2001-2006 (per cent pa)	-0.5
Change: 2006-2014 (per cent pa)	0.1
Self-Employment (per cent)	6.7
Top Three Occupational Groups (per cent of Total Emp.)	
Process, Plant and Machine Operatives	25.2
Administrative and Secretarial Occupations	16.9
Elementary Occupations	14.4
GVA per Worker (£000) ¹	40.4
Exports: Gross Output (per cent) ^{1,3}	3.9
Concentration ^{1,3}	low
per cent establishments with vacancies ²	15.8
per cent establishments with hard-to-fill vacancies ²	6.6
per cent establishments with skill shortage vacancies ²	4.6
per cent establishments with skill gaps ²	14.4

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

SSC 15: FINANCIAL SERVICES SKILLS COUNCIL

Share of GVA (per cent) ^{1,3}	7.9
Employment (thousands)	1020
Share of England (per cent)	4
Male: Female	47:53
Change: 1996-2006 (per cent pa)	0.8
Change: 2001-2006 (per cent pa)	0.3
Change: 2006-2014 (per cent pa)	0.2
Self-Employment (per cent)	5.8
Top Three Occupational Groups (per cent of Total Emp.)	
Administrative and Secretarial Occupations	43.5
Managers and Senior Officials	15.2
Associate Professional and Technical Occupations	12.9
GVA per Worker (£000) ¹	85.9
Exports: Gross Output (per cent) ^{1,3}	17
Concentration ^{1,3}	very high
per cent establishments with vacancies ²	19.2
per cent establishments with hard-to-fill vacancies ²	7.3
per cent establishments with skill shortage vacancies ²	5.7
per cent establishments with skill gaps ²	20.3

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

SSC 16: ASSET SKILLS

Share of GVA (per cent) ^{1,3}	11.1
Employment (thousands)	888
Share of England (per cent)	3.5
Male: Female	52:48
Change: 1996-2006 (per cent pa)	2
Change: 2001-2006 (per cent pa)	0.9
Change: 2006-2014 (per cent pa)	1.3
Self-Employment (per cent)	19.9
Top Three Occupational Groups (per cent of Total Emp.)	
Associate Professional and Technical Occupations	19.6
Managers and Senior Officials	18
Administrative and Secretarial Occupations	17.7
GVA per Worker (£000) ¹	136.1
Exports: Gross Output (per cent) ^{1,3}	3.2
Concentration ^{1,3}	very low
per cent establishments with vacancies ²	16.1
per cent establishments with hard-to-fill vacancies ²	5.5
per cent establishments with skill shortage vacancies ²	3.4
per cent establishments with skill gaps ²	11.4

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

SSC 17: E-SKILLS UK

Share of GVA (per cent) ^{1,3}	4.9
Employment (thousands)	804
Share of England (per cent)	3.1
Male: Female	63:37
Change: 1996-2006 (per cent pa)	4.7
Change: 2001-2006 (per cent pa)	0.1
Change: 2006-2014 (per cent pa)	2.4
Self-Employment (per cent)	11.5
Top Three Occupational Groups (per cent of Total Emp.)	
Administrative and Secretarial Occupations	20
Managers and Senior Officials	17.1
Associate Professional and Technical Occupations	16.9
GVA per Worker (£000) ¹	67.1
Exports: Gross Output (per cent) ^{1,3}	11.5
Concentration ^{1,3}	medium
per cent establishments with vacancies ²	17.6
per cent establishments with hard-to-fill vacancies ²	6
per cent establishments with skill shortage vacancies ²	4.9
per cent establishments with skill gaps ²	12.3

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

SSC 18: GOVERNMENT SKILLS

Share of GVA (per cent) ^{1,3}	3.8
Employment (thousands)	937
Share of England (per cent)	3.6
Male: Female	46:54
Change: 1996-2006 (per cent pa)	0.8
Change: 2001-2006 (per cent pa)	1.9
Change: 2006-2014 (per cent pa)	-0.2
Self-Employment (per cent)	1.2
Top Three Occupational Groups (per cent of Total Emp.)	
Administrative and Secretarial Occupations	28.2
Associate Professional and Technical Occupations	21.2
Managers and Senior Officials	13.6
GVA per Worker (£000) ¹	44.4
Exports: Gross Output (per cent) ^{1,3}	1
Concentration ^{1,3}	n/a
per cent establishments with vacancies ²	26.1
per cent establishments with hard-to-fill vacancies ²	6.3
per cent establishments with skill shortage vacancies ²	5.5
per cent establishments with skill gaps ²	19.5
Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.	
Data relate to England except ³ where data are for UK.	
Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).	

SSC 19: SKILLS FOR JUSTICE

Share of GVA (per cent) ^{1,3}	1.3
Employment (thousands)	292
Share of England (per cent)	1.1
Male: Female	62:38
Change: 1996-2006 (per cent pa)	0.5
Change: 2001-2006 (per cent pa)	1.5
Change: 2006-2014 (per cent pa)	-0.6
Self-Employment (per cent)	1.4
Top Three Occupational Groups (per cent of Total Emp.)	
Associate Professional and Technical Occupations	24.3
Administrative and Secretarial Occupations	21.6
Managers and Senior Officials	15.4
GVA per Worker (£000) ¹	46.3
Exports: Gross Output (per cent) ^{1,3}	1
Concentration ^{1,3}	n/a
per cent establishments with vacancies ²	27.7
per cent establishments with hard-to-fill vacancies ²	6.6
per cent establishments with skill shortage vacancies ²	4.8
per cent establishments with skill gaps ²	18.8
Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.	
Data relate to England except ³ where data are for UK.	
Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).	

SSC 20: LIFELONG LEARNING UK

Share of GVA (per cent) ^{1,3}	2.3
Employment (thousands)	823
Share of England (per cent)	3.2
Male: Female	41:59
Change: 1996-2006 (per cent pa)	2.1
Change: 2001-2006 (per cent pa)	2
Change: 2006-2014 (per cent pa)	0.5
Self-Employment (per cent)	7.8
Top Three Occupational Groups (per cent of Total Emp.)	
Professional Occupations	52.7
Associate Professional and Technical Occupations	14.2
Personal Service Occupations	9.2
GVA per Worker (£000) ¹	30.8
Exports: Gross Output (per cent) ^{1,3}	2.9
Concentration ^{1,3}	medium
per cent establishments with vacancies ²	29.6
per cent establishments with hard-to-fill vacancies ²	8.7
per cent establishments with skill shortage vacancies ²	6.7
per cent establishments with skill gaps ²	19.4

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

SSC 21: SKILLS FOR HEALTH

Share of GVA (per cent) ^{1,3}	5.2
Employment (thousands)	1730
Share of England (per cent)	6.7
Male: Female	21:79
Change: 1996-2006 (per cent pa)	1.7
Change: 2001-2006 (per cent pa)	2.1
Change: 2006-2014 (per cent pa)	0.9
Self-Employment (per cent)	7.1
Top Three Occupational Groups (per cent of Total Emp.)	
Associate Professional and Technical Occupations	28.3
Personal Service Occupations	27.6
Professional Occupations	13.4
GVA per Worker (£000) ¹	33.6
Exports: Gross Output (per cent) ^{1,3}	0.2
Concentration ^{1,3}	very high
per cent establishments with vacancies ²	23.3
per cent establishments with hard-to-fill vacancies ²	9.4
per cent establishments with skill shortage vacancies ²	6.1
per cent establishments with skill gaps ²	17.6
Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.	
Data relate to England except ³ where data are for UK.	
Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).	

SSC 22: SKILLS FOR CARE & DEVELOPMENT

Share of GVA (per cent) ^{1,3}	1.7
Employment (thousands)	967
Share of England (per cent)	3.8
Male: Female	14:86
Change: 1996-2006 (per cent pa)	1.6
Change: 2001-2006 (per cent pa)	1.9
Change: 2006-2014 (per cent pa)	0.8
Self-Employment (per cent)	11.4
Top Three Occupational Groups (per cent of Total Emp.)	
Personal Service Occupations	29.4
Associate Professional and Technical Occupations	27.5
Professional Occupations	12.6
GVA per Worker (£000) ¹	19.7
Exports: Gross Output (per cent) ^{1,3}	0
Concentration ^{1,3}	medium
per cent establishments with vacancies ²	30.9
per cent establishments with hard-to-fill vacancies ²	11.6
per cent establishments with skill shortage vacancies ²	6.9
per cent establishments with skill gaps ²	20.1

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

SSC 23: SKILLSET

Share of GVA (per cent) ^{1,3}	0.5
Employment (thousands)	213
Share of England (per cent)	0.8
Male: Female	59:41
Change: 1996-2006 (per cent pa)	2.8
Change: 2001-2006 (per cent pa)	1.8
Change: 2006-2014 (per cent pa)	1.7
Self-Employment (per cent)	37.2
Top Three Occupational Groups (per cent of Total Emp.)	
Associate Professional and Technical Occupations	25.1
Managers and Senior Officials	20.3
Professional Occupations	14.5
GVA per Worker (£000) ¹	26.1
Exports: Gross Output (per cent) ^{1,3}	14.1
Concentration ^{1,3}	medium
per cent establishments with vacancies ²	13.3
per cent establishments with hard-to-fill vacancies ²	4.2
per cent establishments with skill shortage vacancies ²	3.4
per cent establishments with skill gaps ²	11.8

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

SSC 24: CREATIVE & CULTURAL SKILLS

Share of GVA (per cent) ¹	1.1
Employment (thousands)	349
Share of England (per cent)	1.4
Male: Female	50:50
Change: 1996-2006 (per cent pa)	2.6
Change: 2001-2006 (per cent pa)	2.6
Change: 2006-2014 (per cent pa)	1.2
Self-Employment (per cent)	42.4
Top Three Occupational Groups (per cent of Total Emp.)	
Associate Professional and Technical Occupations	24.1
Managers and Senior Officials	22
Professional Occupations	13.1
GVA per Worker (£000) ¹	35.8
Exports: Gross Output (per cent) ^{1, 3}	11.2
Concentration ¹	low
per cent establishments with vacancies ²	13.7
per cent establishments with hard-to-fill vacancies ²	5.2
per cent establishments with skill shortage vacancies ²	4
per cent establishments with skill gaps ²	9.2

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

SSC 25: SKILLSACTIVE

Share of GVA (per cent) ^{1,3}	1.1
Employment (thousands)	302
Share of England (per cent)	1.2
Male: Female	48:52
Change: 1996-2006 (per cent pa)	2.3
Change: 2001-2006 (per cent pa)	2.2
Change: 2006-2014 (per cent pa)	1.1
Self-Employment (per cent)	13
Top Three Occupational Groups (per cent of Total Emp.)	
Associate Professional and Technical Occupations	18.8
Personal Service Occupations	16.4
Managers and Senior Officials	15.5
GVA per Worker (£000) ¹	40.6
Exports: Gross Output (per cent) ^{1,3}	11.8
Concentration ^{1,3}	medium
per cent establishments with vacancies ²	18.3
per cent establishments with hard-to-fill vacancies ²	8.1
per cent establishments with skill shortage vacancies ²	5.6
per cent establishments with skill gaps ²	18

Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.

Data relate to England except ³ where data are for UK.

Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).

Non-SSC employers

This category covers all sectors not covered by an SSC elsewhere at this point in time, spread across the manufacturing and service sectors.

Share of GVA (per cent) ^{1,3}	17.5
Employment (thousands)	5711
Share of England (per cent)	22.2
Male: Female	52:48
Change: 1996-2006 (per cent pa)	1.5
Change: 2001-2006 (per cent pa)	0.8
Change: 2006-2014 (per cent pa)	0.8
Self-Employment (per cent)	11.5
Top Three Occupational Groups (per cent of Total Emp.)	
Professional Occupations	20.3
Managers and Senior Officials	16.4
Associate Professional and Technical Occupations	16.2
GVA per Worker (£000) ¹	33.7
Exports: Gross Output (per cent) ^{1,3}	10.9
Concentration ^{1,3}	very low
per cent establishments with vacancies ²	18.4
per cent establishments with hard-to-fill vacancies ²	7.6
per cent establishments with skill shortage vacancies ²	5.6
per cent establishments with skill gaps ²	15.2
Note(s): Data are 2006 except ^{1 and 2} where data are 2004 and 2005.	
Data relate to England except ³ where data are for UK.	
Source: CE and IER estimates based on various National Statistics sources (see Annex A for details).	

ANNEX A: STATISTICAL SOURCES

Many of the data in the broad sector and detailed industry summary tables were taken from the estimates and projections produced by Cambridge Econometrics and the Institute for Employment Research (CE and IER) and published in Wilson, R.A., A. Dickerson and K. Homenidou (2005). *Working Futures II: New Projections of Occupational Employment by Sector and Region*. Sector Skills Development Agency: Wath-Upon-Dearne.

National Statistical Sources

GVA (Gross Value added), Export and Concentration estimates are based on data from several sources: *UK National Accounts – The Blue Book* (2006); and *Input-Output Supply and Use* (2006).

Other Sources

Employment and Occupational estimates are based on *Working Futures II* data.

Vacancy and skill gap estimates were obtained from the 2005 *National Employer Skills Survey*.

ANNEX B: SSC DESCRIPTIONS

SSC	Footprint / Description
Asset Skills	<p>Asset Skills is the Sector Skills Council for property, housing, cleaning and facilities management. The sector includes:</p> <ul style="list-style-type: none"> • property managers; • residential estate agents; • caretakers; • facilities management professionals; • cleaners; • town planners; • letting agents and housing managers. <p>Based on Standard Industrial Classification (SIC) codes, Asset Skills includes SIC 70 and 74.7.</p>
Automotive Skills	<p>Automotive Skills is the Sector Skills Council for all businesses and people involved in the sales, maintenance and repair of new and used vehicles. The sector comprises:</p> <ul style="list-style-type: none"> • providers of servicing, maintenance, repair and valeting services; • bodyshops (repairers, rebuilders and refinishers); • vehicle inspection and MOT testing; • specialist sellers and fitters of parts; • accessories, and motor fuels; • vehicle rental, leasing and fleet management and insurance; • roadside assistance and recovery. <p>The Standard Industrial Classification (SIC) codes covered by Automotive Skills include SIC 50 (excluding 50.5) and 71.1.</p>
Cogent	<p>Cogent is the Sector Skills Council for chemicals, nuclear, oil and gas, petroleum and polymers. The SSC covers five industry groupings, which share a common foundation - science and technology. The groupings are:</p> <ul style="list-style-type: none"> • oil and gas extraction; • nuclear and radiological technology; • chemicals manufacturing; • petroleum industry; • polymers. <p>The Standard Industrial Classification (SIC) codes for Cogent include SIC 11, 23, 24, 25 and 50.5. Significant numbers of science and technology employees fall into occupations not covered by SIC codes. In reworking the <i>Working Futures II</i> results 24.3 and 24.64 were excluded.</p>

SSC	Footprint / Description
ConstructionSkills	<p>ConstructionSkills is the Sector Skills Council for the construction industry and covers a wide range of sectors in the development and maintenance of the built environment, including:</p> <ul style="list-style-type: none"> • house building (public and private); • infrastructure (roads, railways and utilities); • non-residential building in the private sector (schools and colleges, hospitals, offices); • industrial building by the private sector (factories, warehouses); • commercial building by the private sector (offices, shops, entertainment, health and education). <p>Additionally, the sector covers maintenance and repair work in all sectors. The sector also covers the renting of construction machinery and professional and design work in consultancies (engineering, architecture and surveying).</p> <p>The Standard Industrial Classification (SIC) codes for ConstructionSkills include SIC 45 (excluding 45.31 and 45.33) and 74.2.</p>
Creative & Cultural Skills	<p>Creative & Cultural Skills is for those involved in arts, cultural heritage and craft and design. The sub-sectors covered are:</p> <ul style="list-style-type: none"> • the arts - music, performing arts, visual arts and literary arts; • cultural heritage - museums, galleries and heritage organisations; • craft - including designer makers of contemporary crafts, covering over 50 specialist trades and occupations; • design - specialist consultancies covering graphic, spatial and domestic products. <p>The Standard Industrial Classification (SIC) codes and for Creative & Cultural Skills include SIC 22.14, 22.31, 36.3, 92.31, 92.32, 92.34, 92.52 and 92.53. In reworking the <i>Working Futures II</i> results 74.842, 74.843 and 92.849 were also included.</p>
Energy & Utility Skills	<p>Energy & Utility Skills is the Sector Skills Council for electricity and renewables, gas, waste management and water industries. It represents all aspects of the generation, transmission and distribution of electricity, combined heat and power and the production and distribution of gas and water. It is also concerned with the removal of waste water and treatment of waste products.</p> <p>These industries cover a range of fundamental services that are vital to a successful UK economy and are key to the attainment of environmental targets</p> <p>The Standard Industrial Classification (SIC) codes for Energy & Utility Skills include SIC 37, 40.1, 40.2, 41, 51.54, 51.55, 60.3 and 90. In reworking the <i>Working Futures II</i> results only 37.1 is included and 60.3 is excluded.</p>

SSC	Footprint / Description
e-skills UK	<p>e-skills UK is the Sector Skills Council for information technology, telecommunications and contact centres and is responsible for developing the quality and quantity of professional skills of:</p> <ul style="list-style-type: none"> • the IT industry, IT professionals working in all industries and Telecommunications; • contact centres dedicated to outsourced services and contact centres operating within all industries. <p>The SIC codes offer only a 'best fit' to the sector. Standard Industrial Classification (SIC) codes 22.33, 64.2 and 72 are used covering:</p> <ul style="list-style-type: none"> • reproduction of recorded media; • telecommunications; • computer consultancy, data processing, data base activities and maintenance. <p>This does not cover Contact Centres or IT and Telecoms manufacturing.</p>
Financial Services Skills Council	<p>Financial Services Skills Council is the Sector Skills Council for the financial services sector. It includes:</p> <ul style="list-style-type: none"> • banks, building societies and central banking; • leasing; • credit unions, factoring and other credit granting organisations; • investment, unit trusts and venture capital; • life insurance, non-life insurance (general insurance) & insurance brokers; • administration of financial markets; • pension funding; • independent financial advisers and tied financial advisors; • unit trust and investment trust companies; • fund managers, asset managers and pension management; • securities and derivatives traders. <p>The Standard Industrial Classification (SIC) codes and for the Financial Services Skills Council include SIC 65, 66 and 67.</p>
GoSkills	<p>GoSkills is the Sector Skills Council for passenger transport, which includes:</p> <ul style="list-style-type: none"> • aviation (airports, operators and ground services); • chauffeurs and coaches; • community bus services; • driving instructors; • private hire vehicles; • scheduled bus services; • taxis; • trams; • transport planners. <p>The Standard Industrial Classification (SIC) codes for GoSkills include SIC 60.21, 60.22, 60.23, 61.2, 62.1, 62.2, 63.21, 63.22, 63.23, and 80.41. In reworking the <i>Working Futures II</i> results 50.2 and 61.1 are also included.</p>

SSC	Footprint / Description
Government Skills	<p>Government Skills is the Sector Skills Council for central government, Non-Departmental Public Bodies not covered by other SSCs, and the Armed Forces.</p> <p>The Standard Industrial Classification (SIC) codes for Government Skills include SIC 75.1, 75.21, 75.22, 75.25, 75.3.</p>
Improve Ltd	<p>Improve Ltd is the Sector Skills Council for food and drink, which represents employers operating in all sectors of the food and drink manufacturing and processing industry. The sector includes:</p> <ul style="list-style-type: none"> • sea fishing; • craft bakery; • meat and poultry; • dairy; • general food and drink. <p>The Standard Industrial Classification (SIC) codes for Improve Ltd include SIC 15. In reworking the <i>Working Futures II</i> results 15.113 was excluded but 51.38 was included.</p>
Lantra	<p>Lantra is the Sector Skills Council for the environmental and land-based sector. This includes:</p> <ul style="list-style-type: none"> • agricultural livestock and crops; • animal care; animal technology; • aquaculture; • environmental conservation; • equine; • farriery; • fencing; • fisheries management; • floristry; • trees and timber; • game conservation; • land-based engineering; • landscaping; • productive horticulture; • veterinary nursing. <p>The Standard Industrial Classification (SIC) codes for Lantra include SIC 02.01, 05.02, 29.3, 51.66, 85.2 and 92.53. In reworking the <i>Working Futures II</i> results all of 01 and 02 are included.</p>
Lifelong Learning UK	<p>Lifelong Learning UK is the Sector Skills Council for community based learning and development, further education, higher education, library and information services and work-based learning.</p> <p>The Standard Industrial Classification (SIC) codes for Lifelong Learning UK include SIC 80.22, 80.3, 80.42 and 92.51.</p>

SSC	Footprint / Description
People 1st	<p>People 1st is the Sector Skills Council for the hospitality, leisure, travel and tourism sector, representing employers of all sizes in the following industries:</p> <ul style="list-style-type: none"> • hotels; • pubs, bars and nightclubs; • membership clubs; • gambling; • tourist services; • youth hostels; • self-catering accommodation; • restaurants; • contract food service providers; • events; • travel services; • visitor attractions; • holiday parks; • hospitality services. <p>The Standard Industrial Classification (SIC) codes for People 1st are SIC 55 (excluding 55.22), 63.3, 92.33, 92.34, 92.53 and 92.71. In reworking the <i>Working Futures II</i> results 70.2 and 74.84 were included.</p>
Proskills	<p>The Proskills Sector Skills Council (SSC) covers:</p> <ul style="list-style-type: none"> • coatings • extractives • glass • refractories and building products • print <p>The core SIC definitions are: SIC 10, 12, 13, 14, 21.24, 22.2, 24.16, 24.3, 24.63, 26.1, 26.26, 26.4, 26.5, 26.6, 26.7, 26.8 and 37.2. In reworking the <i>Working Futures II</i> results 20, all of 21, 36.1 and 51.64 is included and SIC 10.101, 24.16, 24.3 24.63 and 26.6 are excluded.</p>
SEMTA	<p>SEMTA is the Sector Skills Council for science, engineering and manufacturing technologies and represents the sectors of:</p> <ul style="list-style-type: none"> • aerospace; • electrical engineering; • electronics, including semi-conductors; • mechanical engineering and metal trades; • motor vehicles; • shipbuilding; • bio technology; • nano technology • mathematics; • forensic science. <p>SEMTA includes Standard Industrial Classification (SIC) codes from 27.4 to 35 inclusive, excluding 28.4. Note that this excludes scientific skills employed outside engineering.</p>

SSC	Footprint / Description
Skillfast-UK	<p>Skillfast-UK is the Sector Skills Council for apparel, footwear, textiles and related businesses. Its remit covers a wide variety of activities, including:</p> <ul style="list-style-type: none"> • production of raw materials e.g. leather production; • manufacture of apparel, footwear, textiles and fibres; • servicing of apparel, footwear and textile products, for example, dry cleaning and shoe repair; • design activities related to apparel, footwear and textiles; • trading in apparel, footwear and textile products, including specialist wholesale activities and activities of brand-driven holding companies. <p>The Standard Industrial Classification (SIC) codes for Skillfast-UK include SIC 17, 18, 19, 24.7, 33.1, 51.41, 51.42, 52.71 and 93.01. In reworking the <i>Working Futures II</i> results 33.1 was excluded but 15.113 and 51.16 were included.</p>
Skills for Care and Development	<p>Skills for Care and Development is the Sector Skills Council for social care, children and young people. Social care policy is fully devolved to each of the four countries. The scope of the sector is defined by legislation in each of the countries, with some differences for the devolved administrations. The current scope of the sector is:</p> <ul style="list-style-type: none"> • children's homes; • care homes; • domiciliary care and support agencies; • day centres and services; • social work; • fostering agencies and services, and foster carers; • nurse agencies; • adoption services. <p>The Standard Industrial Classification (SIC) codes for Skills for Care include SIC 85.3.</p>
Skills for Health	<p>Skills for Health represents the four UK health departments, all key stakeholders within the health sector, and has close-working relationships with similar bodies working in related sectors.</p> <p>The Standard Industrial Classification (SIC) codes for Skills for Health include SIC 85.1.</p>
Skills for Justice	<p>Skills for Justice is the Sector Skills Council for custodial care, community justice and police, in public, private and voluntary organisations.</p> <p>The Standard Industrial Classification (SIC) codes for Skills for Justice include SIC 75.23 and 75.24.</p>

SSC	Footprint / Description
Skills for Logistics	<p>Skills for Logistics is the Sector Skills Council for the logistics sector. The sector covers freight transport by road, storage and warehousing, activities of other transport agencies, courier services, airfreight, rail freight, freight inland and sea and coastal water transport.</p> <p>The Standard Industrial Classification (SIC) codes Skills for Logistics include SIC 60.24, 62.1, 62.2, 63.1, 63.23, 63.4 and 64.1.</p> <p>Skills for Logistics has recently taken responsibility for most of Wholesaling (SIC 51) but this is not reflected in the data presented in <i>Skills in England</i>.</p>
SkillsActive	<p>SkillsActive is the Sector Skills Council for active leisure and learning. The sector covers sport, recreation, children's play, health and fitness, outdoor education, training, caravans, recreation and adventure.</p> <p>The Standard Industrial Classification (SIC) codes for SkillsActive include SIC 55.22, 92.33 and 92.6. In reworking the <i>Working Futures II</i> results 34.203 was included.</p>
Skillset	<p>Skillset is the Sector Skills Council for the audio-visual industries. The sector covers broadcast, film, video, interactive media and photo imaging.</p> <p>The Standard Industrial Classification (SIC) codes for Skillset include SIC 21.12, 22.3, 24.64, 25.21, 33.4, 74.81, 92.1 and 92.2.</p> <p>It is also important to note that this definition does not include some industries that are core to other SSCs, such as interactive media. Furthermore, self-employed (free lancers) account for a large proportion of the workforce represented by Skillset. In reworking the <i>Working Futures II</i> results only 22.32 is included, 21.12, 25.21 and 33.4 were excluded.</p>
Skillsmart	<p>Skillsmart is the Sector Skills Council for the retail sector, established in 2002 and includes:</p> <ul style="list-style-type: none"> • supermarkets, department stores and corner shops; • specialist food, drink and tobacco stores; • specialist retailers of goods including textiles, clothing, footwear and leather, furniture, electrical, hardware, books and stationary, floor coverings and photographic equipment; • antique retailers; • markets and mail order. <p>The Standard Industrial Classification (SIC) codes for Skillsmart include SIC 52.1 to 52.6.</p>

SSC	Footprint / Description
SummitSkills	<p>SummitSkills is the Sector Skills Council for the electrotechnical, heating, ventilating, air conditioning, refrigeration and plumbing industries. The sector covers:</p> <ul style="list-style-type: none"> • design, installation and maintenance of electrotechnical heating, ventilation, air conditioning, refrigeration and plumbing; • oil and gas fitting design, installation and maintenance. <p>The Standard Industrial Classification (SIC) codes for SummitSkills include SIC 31.1, 31.62, 33.3, 45.31, 45.33, and 52.72.</p>

Table 3.1a: Industrial Coverage

No.	Industry	SIC 2003	SSC representation
1	Agriculture, etc	01-02, 05	Lantra
2	Mining and Quarrying	10-14	Cogent, Proskills
3	Food, Drink and Tobacco	15-16	Improve Ltd
4	Textiles and Clothing	17-19	Skillfast
5	Wood and Paper Products	20-21	Proskills
6	Publishing and Printing	22	Proskills e-skills UK Skillset
7	Chemicals and Non-Metal Minerals	23-26	Cogent Proskills
8	Metals and Metal Goods	27-28	SEMTA
9	Engineering	29-33	SEMTA
10	Transport Equipment	34-35	SEMTA
11	Manufacturing nes and recycling	36-37	Energy & Utility Skills
12	Electricity, gas and water	40-41	Proskills Energy & Utility Skills
13	Construction	45	ConstructionSkills SummitSkills
14	Sale and Maintenance of Motor Vehicles	50	Automotive Skills Cogent
15	Wholesale Distribution	51	Improve Ltd Skillfast-UK Energy and Utility Skills
16	Retail Distribution	52	Skillfast-UK SummitSkills Skillsmart Retail
17	Hotels and Catering	55	People 1 st SkillsActive
18	Transport	60-63	Energy & Utility Skills GoSkills Skills for Logistics People 1 st
19	Communications	64	Skills for Logistics e-skills UK
20	Banking and insurance	65-67	Financial Services Skills Council
21	Professional Services	70-71, 73	ConstructionSkills Automotive Skills Asset Skills
22	Computing and Related Services	72	e-skills UK
23	Other Business Services	74	ConstructionSkills Asset Skills e-skills UK Skillset Creative & Cultural Skills
24	Public Administration and Defence	75	Government Skills Skills for Justice
25	Education	80	GoSkills Lifelong Learning UK
26	Health and Social Work	85	Lantra Skills for Health Skills for Care and Development

(continued)

Table 3.1a: Industrial Coverage (Continued)

No.	Industry	SIC 2003	SSC representation
27	Miscellaneous Services	90-99	Lantra Skillfast-UK Energy & Utility Skills People 1st Lifelong Learning UK Creative & Cultural Skills SkillsActive Skillset

Source: SSDA.

Table 3.1b: SSDA sector mappings

Matrix Standard Sector Groupings			SSC
1	Agriculture	01 Agriculture, hunting, etc	Lantra
		02 Forestry, logging, etc	Lantra
		05 Fishing, operation fish hatcheries/farms	Lantra
2	Mining & quarrying	10 Mining coal/lignite; extraction of peat	Cogent
		11 Extraction crude petroleum/natural gas	Cogent
		12 Mining of uranium and thorium ores	Proskills
		13 Mining of metal ores	Proskills
		14 Other mining and quarrying	Proskills
3	Food, drink & tobacco	15 Manuf food products and beverages	Improve Ltd
		16 Manuf tobacco products	
4	Textiles & clothing	17 Manuf textiles	Skillfast-UK
		18 Manuf apparel; dressing/dyeing fur	Skillfast-UK
		19 Tanning/dressing of leather, etc	Skillfast-UK
5	Wood, paper	20 Manuf wood/products/cork, etc	
		21 Manuf pulp, paper and paper products	Proskills
6	Printing & publishing	22 Publishing, printing repro recorded media	Proskills e-skills UK Skillset Creative & Cultural Skills
7	Chemicals & non-metallics	23 Manuf coke, refined petroleum products	Cogent
		24 Manuf chemicals and chemical products	Cogent
		25 Manuf rubber and plastic goods	Cogent
		26 Manuf other non-metallic products	Cogent Proskills
8	Metals & metal goods	27 Manuf basic metals	SEMTA
		28 Manuf fabricated metal products, etc	SEMTA
9	Engineering	29 Manuf machinery and equipment nec	SEMTA
		30 Manuf office machinery and computers	SEMTA
		31 Manuf electrical machinery/apparatus nec	SEMTA
		32 Manuf radio, tv/communications equipment	SEMTA
		33 Manuf medical, precision instruments, etc	SEMTA
10	Transport equipment	34 Manuf motor vehicles, trailers, etc	SEMTA
		35 Manuf other transport equipment	SEMTA

(continued)

Table 3.1b: SSDA Sector Mappings (Continued)

Matrix Standard Sector Groupings		SSC	
11	Manufacturing nes & recycling	36 :Manuf furniture; manufacturing nec	Creative & Cultural Skills
		37 :Recycling	Energy & Utility Skills
12	Utilities	40 :Electricity, gas, steam/hot water supply	Energy & Utility Skills Proskills
		41 :Collection, purification/distribution of water	Energy and Utility Skills
13	Construction	45 :Construction	ConstructionSkills Summitskills
14	Sales & maint. motor vehicles	50 :Sale, maintenance/repair motor vehicles	Automotive Skills Cogent
15	Wholesale distribution	51 :Wholesale trade/commission trade, etc	Improve Ltd Skillsfast-UK Energy & Utility Skills
16	Retail Distribution	52 :Retail trade, except of motor vehicles	Skillsmart Retail Skillsfast-UK Summitskills
17	Hotels & Catering	55 :Hotels and restaurants	People 1 st Skillsactive
18	Transport	60 :Land transport; transport via pipelines	Energy & Utility Skills Goskills Skills for Logistics GoSkills
		61 :Water transport	GoSkills
		62 :Air transport	GoSkills
		63 :Supporting/auxiliary transport, etc	People 1 st GoSkills Skills for Logistics
19	Communications	64 :Post & Telecommunication	Skills for Logistics e-skills UK
20	Banking & insurance	65 :Financial intermediation, etc	Financial Services Skills Council
		66 :Insurance and pension funding, etc	Financial Services Skills Council
		67 :Act auxiliary financial intermediation	Financial Services Skills Council
21	Professional services	70 :Real estate activities	Asset Skills
		71 :Renting machinery/equipment	ConstructionSkills Automotive Skills
		73 :Research and development	
22	Computing & related	72 :Computing and related activities	e-skills UK
23	Other business services	74 :Other business activities	ConstructionSkills Asset Skills e-skills UK Skillset Creative & Cultural Skills
24	Public administration	75 :Public admin/defence; compulsory SS	Government Skills Skills for Justice

(continued)

Table 3.1b: SSDA Sector Mappings (Continued)

Matrix Standard Sector Groupings		SSC
26	Health & social work 85 :Health & social work	Lantra Skills for Health Skills for Care and Development
27	Other services 90 :Sewage/refuse disposal, sanitation, etc	Energy & Utility Skills
	91 :Activities membership organisations	
	92 :Recreational, cultural and sporting	Lantra People 1 st Lifelong Learning UK Skillset Creative & Cultural Skills
	93 :Other service activities	SkillsActive Skillsfast-UK Skillsactive

Source: SSDA.

Table 3.2: Employment by detailed industry

No.	Industry	SIC 2003	Employment in England in 2006 (000s)
1	Agriculture, etc	01-02, 05	314
2	Mining and Quarrying	10-14	31
3	Food, Drink and Tobacco	15-16	357
4	Textiles and Clothing	17-19	132
5	Wood and Paper Products	20-21	149
6	Publishing and Printing	22	340
7	Chemicals and Non-Metal Minerals	23-26	501
8	Metals and Metal Goods	27-28	396
9	Engineering	29-33	561
10	Transport Equipment	34-35	308
11	Manufacturing nes and Recycling	36-37	205
12	Electricity, Gas and Water	40-41	94
13	Construction	45	1773
14	Sale and Maintenance of Motor Vehicles	50	541
15	Wholesale Distribution	51	1133
16	Retail Distribution	52	2680
17	Hotels and Catering	55	1674
18	Transport	60-63	1110
19	Communications	64	458
20	Banking and Insurance	65-67	1020
21	Professional Services	70-71, 73	662
22	Computing and Related Services	72	514
23	Other Business Services	74	3123
24	Public Administration and Defence	75	1229
25	Education	80	2083
26	Health and Social Work	85	2728
27	Miscellaneous Services	90-99	1604

Source: CE and IER estimates from *Working Futures II* (see Annex A for details).

Table 3.3: Employment by broad sector

No	Sector	Sector Matrix industries	Employment in England in 2006 (000s)
1	Primary Sector and Utilities	1-2, 12	439
2	Manufacturing	3-11	2951
3	Construction	13	1773
4	Distribution, Transport etc	14-19	7596
5	Business and Other Services	20-23, 27	6924
6	Non-Marketed Services	24-26	6040

Source: CE and IER estimates from *Working Futures II* (see Annex A for details).

Table 3.4: Summary sector indicators – Employment change

	Level	Change (per		Change ('000s)		Rank	
	('000s)	cent)		Emp	Emp	Emp	Emp
	Emp	Emp	Emp	Emp	Emp	Emp	Emp
	2006	96-06	01-06	96-06	01-06	96-06	01-06
Agriculture	314	-2.7	-3.1	-54	-98	23	23
Mining	31	-4.7	-7.2	-14	-19	26	26
Food Drink and Tobacco	357	-0.7	-1.8	-34	-26	18	19
Textiles and Clothing	132	-9	-10.1	-93	-207	27	27
Wood and Paper	149	-2.4	-1.5	-12	-41	22	17
Publishing and Printing	340	-0.4	-0.8	-14	-15	16	15
Chemicals and NMM	501	-1.9	-2.4	-65	-104	21	21
Metals and Metal goods	396	-2.8	-2.3	-49	-133	24	20
Engineering	561	-3.3	-4.5	-146	-226	25	25
Transport Equipment	308	-1.1	-2.7	-46	-35	19	22
Manufacturing nes and							
Recycling	205	0.7	-0.9	-10	14	13	16
Utilities	94	-1.8	-3.5	-19	-19	20	24
Construction	1773	2	2.7	219	314	4	1
Sale and Maintenance of							
Motor Vehicles	541	-0.7	-0.2	-6	-40	17	13
Wholesale distribution	1133	0.4	-0.6	-35	48	15	14
Other Retail distribution	2680	1.5	1	124	363	9	8
Hotels and Catering	1674	1.7	2	155	266	8	4
Transport	1110	1.5	0.3	17	155	10	10
Communications	458	1.3	-1.7	-41	54	11	18
Banking and Insurance	1020	0.8	0.3	14	82	12	11
Professional Services	662	2.3	0.3	10	136	3	9
Computing Services	514	6.1	0.2	5	230	1	12
Other Business Services	3123	2.4	1.5	226	670	2	6
Public administration and							
Defence	1229	0.7	1.8	106	88	14	5
Education	2083	1.9	2	198	359	6	3
Health and Social work	2728	1.7	2	257	415	7	2
Miscellaneous Services	1604	2	1.5	117	290	5	7

Note(s): Ranking of employment change by industry: 1 equals the industry with the strongest employment growth.

Source: CE and IER estimates from *Working Futures II* (see Annex A for details).

Table 3.5: Summary sector indicators – Occupational employment levels

	Levels (000s)								
	Managers	Prof	Prof Assoc	Admin	Skilled	Personal	Sales	Operatives	Other
Agriculture	28	3	7	9	138	25	3	22	80
Mining	4	2	3	3	7	1	1	6	4
Food Drink and Tobacco	51	16	33	27	54	3	23	96	54
Textiles and Clothing	24	5	13	8	20	3	3	41	16
Wood and Paper	23	5	18	14	43	3	4	27	12
Publishing and Printing	62	16	78	34	48	9	13	53	28
Chemicals and NMM	71	38	57	45	75	11	14	126	62
Metals and Metal goods	57	25	33	27	117	4	7	86	41
Engineering	93	61	74	52	124	9	14	93	41
Transport Equipment	32	28	29	23	87	4	5	67	33
Manufacturing nes and Recycling	30	7	16	16	71	2	4	43	17
Utilities	11	12	10	15	22	2	7	10	6
Construction	239	100	102	118	847	8	23	191	145
Sale and Maintenance of Motor Vehicles	115	16	44	28	73	19	146	47	54
Wholesale distribution	240	34	97	71	142	50	298	93	108
Other Retail distribution	465	72	230	258	212	78	964	150	251
Hotels and Catering	489	23	94	101	178	71	88	33	596
Transport	136	52	102	179	113	51	39	292	147
Communications	37	22	31	94	78	14	28	88	66
Banking and Insurance	156	85	132	444	29	14	89	18	54
Professional Services	136	110	139	101	29	60	24	22	39
Computing Services	101	100	103	103	25	14	23	18	27
Other Business Services	606	503	647	556	142	217	133	113	206
Public administration and Defence	173	132	270	327	40	64	31	40	152
Education	122	1104	275	123	25	222	23	41	149
Health and Social work	344	358	764	229	47	770	46	41	129
Miscellaneous Services	284	186	361	139	74	242	48	90	181

Source: CE and IER estimates from *Working Futures II* (see Annex A for details).

Table 3.6: Summary sector indicators – Occupational employment shares

	per cent of employment								
	Managers	Prof	Prof Assoc	Admin	Skilled	Personal	Sales	Operatives	Other
Agriculture	8.9	0.9	2.1	2.8	43.9	8	0.9	7	25.5
Mining	13.4	7.3	10.1	10.1	24	2.1	2.1	19.6	11.3
Food Drink and Tobacco	14.4	4.4	9.1	7.7	15.1	0.7	6.5	27	15.1
Textiles and Clothing	18.1	3.5	9.5	6.1	15.3	2.5	2.2	30.7	12
Wood and Paper	15.7	3.4	12	9.3	29	1.8	2.9	18.1	7.8
Publishing and Printing	18.2	4.6	22.9	10	14	2.6	3.8	15.6	8.3
Chemicals and NMM	14.2	7.7	11.5	9.1	15	2.2	2.8	25.2	12.4
Metals and Metal goods	14.3	6.2	8.4	6.9	29.5	1	1.8	21.6	10.3
Engineering	16.5	10.9	13.2	9.2	22.1	1.5	2.5	16.6	7.3
Transport Equipment	10.3	9.1	9.4	7.6	28.3	1.2	1.7	21.7	10.8
Manufacturing nes and Recycling	14.7	3.4	7.6	7.5	34.3	1	2.2	20.7	8.4
Utilities	12.2	12.2	10.5	15.4	22.9	1.9	7.5	10.6	6.8
Construction	13.5	5.6	5.8	6.6	47.8	0.5	1.3	10.7	8.2
Sale and Maintenance of Motor Vehicles	21.3	2.9	8.2	5.1	13.4	3.5	27	8.7	9.9
Wholesale distribution	21.2	3	8.6	6.3	12.5	4.4	26.3	8.2	9.6
Other Retail distribution	17.4	2.7	8.6	9.6	7.9	2.9	36	5.6	9.4
Hotels and Catering	29.2	1.4	5.6	6	10.6	4.3	5.3	2	35.6
Transport	12.2	4.6	9.2	16.1	10.2	4.6	3.5	26.3	13.3
Communications	8.1	4.7	6.8	20.6	17	3.1	6.1	19.3	14.4
Banking and Insurance	15.2	8.3	12.9	43.5	2.8	1.4	8.7	1.8	5.3
Professional Services	20.5	16.7	21	15.2	4.4	9.1	3.7	3.4	6
Computing Services	19.6	19.5	20	20	4.9	2.7	4.5	3.5	5.2
Other Business Services	19.4	16.1	20.7	17.8	4.6	7	4.3	3.6	6.6
Public administration and Defence	14.1	10.7	22	26.6	3.2	5.2	2.5	3.2	12.4
Education	5.9	53	13.2	5.9	1.2	10.6	1.1	2	7.2
Health and Social work	12.6	13.1	28	8.4	1.7	28.2	1.7	1.5	4.7
Miscellaneous Services	17.7	11.6	22.5	8.7	4.6	15.1	3	5.6	11.3

Source: CE and IER estimates from *Working Futures II* (see Annex A for details).

Table 3.7: Summary sector indicators – Occupational employment structure

	Rank								
	Managers	Prof	Prof Assoc	Admin	Skilled	Personal	Sales	Operatives	Other
Agriculture	25	27	27	27	2	5	27	17	2
Mining	20	13	14	9	7	18	21	8	9
Food Drink and Tobacco	15	19	18	17	12	26	6	2	3
Textiles and Clothing	8	20	15	23	11	16	19	1	8
Wood and Paper	12	22	11	12	5	20	15	10	19
Publishing and Printing	7	18	2	10	14	15	11	12	17
Chemicals and NMM	17	12	12	14	13	17	16	4	6
Metals and Metal goods	16	14	21	20	4	24	22	6	12
Engineering	11	8	8	13	9	21	17	11	20
Transport Equipment	24	10	16	18	6	23	23	5	11
Manufacturing nes and Recycling	14	21	23	19	3	25	20	7	16
Utilities	23	6	13	7	8	19	5	14	22
Construction	19	15	25	21	1	27	25	13	18
Sale and Maintenance of Motor Vehicles	2	24	22	26	15	11	2	15	13
Wholesale distribution	3	23	19	22	16	9	3	16	14
Other Retail distribution	10	25	20	11	19	13	1	18	15
Hotels and Catering	1	26	26	24	17	10	8	24	1
Transport	22	17	17	6	18	8	13	3	5
Communications	26	16	24	3	10	12	7	9	4
Banking and Insurance	13	11	10	1	25	22	4	26	25
Professional Services	4	3	5	8	23	4	12	22	24
Computing Services	5	2	7	4	20	14	9	21	26
Other Business Services	6	4	6	5	22	6	10	20	23
Public administration and Defence	18	9	4	2	24	7	18	23	7
Education	27	1	9	25	27	3	26	25	21
Health and Social work	21	5	1	16	26	1	24	27	27
Miscellaneous Services	9	7	3	15	21	2	14	19	10

Note(s): Ranking of employment by occupational group: 1 equals the industry with highest proportion of workers in a particular occupational group.

Source: CE and IER estimates from *Working Futures II* (see Annex A for details).

Table 3.8: Summary sector indicators – Vacancies (Levels)

	Vacancies	Hard-to-fill vacancies	Skills shortage vacancies	Staff not fully proficient
Agriculture, etc	5700	3200	1900	10900
Mining and Quarrying	500	100	100	1300
Food, Drink and Tobacco	6300	1500	1100	30400
Textiles and Clothing	3200	1400	1000	6300
Wood and Paper Products	2300	1200	1000	8800
Publishing and Printing	7100	1900	1600	19800
Chemicals and Non-Metal Minerals	6900	2100	1700	36500
Metals and Metal Goods	7700	4200	3500	30200
Engineering	8900	3200	2600	23400
Transport Equipment	2900	700	600	15700
Manufacturing nes and Recycling	3000	1200	800	12900
Electricity, Gas and Water	1400	200	200	4700
Construction	25200	12400	9200	46400
Sale and Maintenance of Motor Vehicles	11500	5100	4000	30100
Wholesale Distribution	20100	7500	6000	52400
Retail Distribution	55500	17600	9700	189200
Hotels and Catering	60800	22400	12600	137200
Transport	25400	8900	6000	49500
Communications	9600	2400	1800	11000
Banking and Insurance	21900	5800	4400	62300
Professional Services	21900	6800	4300	32200
Computing and Related Services	14300	3300	2800	15100
Other Business Services	80700	30700	24600	108200
Public Administration and Defence	33100	12300	10900	54700
Education	40800	10200	7300	102000
Health and Social Work	64100	23800	14700	123700
Miscellaneous Services	33100	12600	8700	50200

Source: Skills for Business Sectors Skills Matrix, 2005.

Table 3.9: Summary sector indicators – Vacancies (Shares)

	Hard-to-fill vacancies (as per cent of vacancies)	Skills shortage vacancies (as per cent of vacancies)	Staff not fully proficient (as per cent of employment)
Agriculture, etc	56.1	33.3	5
Mining and Quarrying	20.0	20.0	4
Food, Drink and Tobacco	23.8	17.5	8
Textiles and Clothing	43.8	31.3	4
Wood and Paper Products	52.2	43.5	6
Publishing and Printing	26.8	22.5	6
Chemicals and Non-Metal Minerals	30.4	24.6	7
Metals and Metal Goods	54.5	45.5	6
Engineering	36.0	29.2	4
Transport Equipment	24.1	20.7	7
Manufacturing nes and Recycling	40.0	26.7	8
Electricity, Gas and Water	14.3	14.3	5
Construction	49.2	36.5	5
Sale and Maintenance of Motor Vehicles	44.3	34.8	6
Wholesale Distribution	37.3	29.9	5
Retail Distribution	31.7	17.5	8
Hotels and Catering	36.8	20.7	10
Transport	35.0	23.6	5
Communications	25.0	18.8	4
Banking and Insurance	26.5	20.1	7
Professional Services	31.1	19.6	5
Computing and Related Services	23.1	19.6	4
Other Business Services	38.0	30.5	5
Public Administration and Defence	37.2	32.9	5
Education	25.0	17.9	4
Health and Social Work	37.1	22.9	5
Miscellaneous Services	38.1	26.3	5

Source: Skills for Business Sectors Skills Matrix, 2005.

Table 3.10: Summary sector indicators – Incidence of vacancies

	Establishment Reporting Vacancies (per cent)	Establishment Reporting Hard-to-fill vacancies (per cent)	Establishment Reporting Skills shortage vacancies (per cent)	Establishment Reporting Staff not fully proficient (per cent)
Agriculture, etc	7	4	3	10
Mining and Quarrying	15	6	3	14
Food, Drink and Tobacco	20	8	6	22
Textiles and Clothing	18	8	6	13
Wood and Paper Products	15	8	7	20
Publishing and Printing	16	6	5	12
Chemicals and Non-Metal Minerals	17	5	7	19
Metals and Metal Goods	17	10	9	22
Engineering	18	9	7	16
Transport Equipment	15	8	7	19
Manufacturing nes and Recycling	17	7	5	20
Electricity, Gas and Water	25	7	6	29
Construction	13	7	5	15
Sale and Maintenance of Motor Vehicles	15	7	5	19
Wholesale Distribution	13	5	4	15
Retail Distribution	14	5	3	20
Hotels and Catering	20	10	6	21
Transport	19	8	6	15
Communications	18	7	5	14
Banking and Insurance	19	7	6	20
Professional Services	16	5	3	13
Computing and Related Services	15	5	4	11
Other Business Services	18	8	6	13
Public Administration and Defence	33	10	8	5
Education	27	9	6	21
Health and Social Work	27	10	7	19
Miscellaneous Services	18	8	6	13

Source: Skills for Business Sectors Skills Matrix, 2005.

