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Transportation and Storage: Sector Skills Assessment 2012

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Sector Skills Assessment: Transportation and Storage Sector

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Foreword

The UK Commission for Employment and Skills is a social partnership, led by Commissioners from large and small employers, trade unions and the voluntary sector. Our ambition is to transform the UK's approach to investing in the skills of people as an intrinsic part of securing jobs and growth. Our strategic objectives are to:

- Maximise the **impact** of employment and skills policies and employer behaviour to support jobs and growth and secure an internationally competitive skills base;
- Work with businesses to develop the best market solutions which leverage greater **investment** in skills;
- Provide outstanding labour market **intelligence** which helps businesses and people make the best choices for them.

The third objective, relating to intelligence, reflects an increasing outward focus to the UK Commission's research activities, as it seeks to facilitate a better informed labour market, in which decisions about careers and skills are based on sound and accessible evidence. Related, impartial research evidence is used to underpin compelling messages that promote a call to action to increase employers' investment in the skills of their people.

Intelligence is also integral to the two other strategic objectives. In seeking to lever greater investment in skills, the intelligence function serves to identify opportunities where our investments can bring the greatest leverage and economic return. The UK Commission's third strategic objective, to maximise the impact of policy and employer behaviour to achieve an internationally competitive skills base, is supported by the development of an evidence base on best practice: "what works?" in a policy context.

Our research programme provides a robust evidence base for our insights and actions, drawing on good practice and the most innovative thinking. The research programme is underpinned by a number of core principles including the importance of: ensuring '**relevance'** to our most pressing strategic priorities; '**salience'** and effectively translating and sharing the key insights we find; **international benchmarking** and drawing insights from good practice abroad; **high quality** analysis which is leading edge, robust and action orientated; being **responsive** to immediate needs as well as taking a longer term perspective. We also work closely with key partners to ensure a **co-ordinated** approach to research.

Sector Skills Assessments (SSAs) are key sources of authoritative and focused sectoral labour market intelligence (LMI), designed to inform the development of skills policy across the UK. They combine "top-down" analysis of official data with bottom-up intelligence to provide a consistent, comparable and rich understanding of the skills priorities within different sectors of the economy, across the four UK nations.

The two Sector Skills Councils (SSC) who authored this report are Skills for Logistics and People 1st. Skills for Logistics is the SSC for the freight logistics and wholesaling sectors and People 1st is the SSC for hospitality, passenger transport, travel and tourism sectors.

Sharing the findings of our research and engaging with our audience is important to further develop the evidence on which we base our work. Evidence Reports are our chief means of reporting our detailed analytical work. All of our outputs can be accessed on the UK Commission's website at www.ukces.org.uk

But these outputs are only the beginning of the process and we are engaged in other mechanisms to share our findings, debate the issues they raise and extend their reach and impact. These mechanisms include our *Changing Behaviour in Skills Investment* seminar series and the use of a range of online media to communicate key research results.

We hope you find this report useful and informative. If you would like to provide any feedback or comments, or have any queries please e-mail info@ukces.org.uk, quoting the report title or series number.

Lesley Giles

Deputy Director

UK Commission for Employment and Skills

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Executive Summary

The Transportation and storage sector is an essential part of the UK economy. Our economy and way of life are highly dependent upon effective transport. The sector employs 1.45m people, equal to five per cent of total UK employment.

The sector contributes £134bn towards the UK's turnover. The value is slightly lower than 2008 (£137bn), reflecting the economic climate in that period, but its contribution to the economy each year has remained stable at four per cent.

Total UK gross value added (GVA) of £91bn, places the sector sixth out of 15 sectors in economic terms. Current GVA per employee job at £50,000 is above the all economy average of £46,000. Increases in efficiency and effectiveness are understood to have contributed to recent improvements in productivity. But the differing levels across the nations and sub-sectors indicate that it is not performing to its full potential.

Furthermore, while the sector performs well within the UK economy, when comparing its Total Factor Productivity to international competitor nations, it is revealed that the sector is not as productive as in France and Germany.

As freight and passenger transport are driven by the needs of people and businesses, establishments and employment is found in every nation and region. Greatest employment is found in the South East, London and the North West – areas with major transport hubs.

Employment roles are concentrated in the lower occupational groups of machine operatives and elementary workers (60 per cent), with managers accounting for a further 11 per cent. 69 per cent of the workforce work in just 15 job roles, whilst four of the top six roles are driving occupations.

However, the sector is less diverse than the economy as a whole. It is predominantly male, accounting for 80 per cent of the workforce, compared to 54 per cent across the economy. Some 49 per cent are over 45 years of age and only six per cent are under 25 (compared to 41 and 13 per cent respectively for the whole economy).

This lack of diversity is a consequence of several factors. The vast majority of establishments in the sector employ fewer than 10 people and smaller firms, particularly in road haulage, use informal recruitment methods, such as word-of-mouth. This may have implications for the recruitment of non-typical workers, while the negative perceptions of the sector and a lack of awareness of opportunities available mean that young people do not consider the sector as a career of choice. This is further reflected in the data that shows the sector is one of the least likely to take on an individual in their first job on leaving school, college or university.

The working patterns of the sector are dominated by full-time workers, who are employees of businesses. Working hours though, tend to be non-standard – evenings, early mornings and weekends.

The sector offers opportunities for employment for those with level 1, basic and employability skills, such as warehouse operatives and cleaners, right through to level 4 and higher qualifications. But the sector is relatively low skilled.

The qualification profile reveals that the sector is one of the most poorly qualified of all, with 37 per cent of the sector workforce not qualified to a level 2, and only 16 per cent having a level 4 or higher qualification (compared to 23 per cent and 37 per cent across the whole economy). Furthermore three in five managers do not have a level 4 or higher qualification.

A number of factors affect the skills levels of the workforce. Firstly a large number of the roles are at a level 2 grade, but key qualifications, such as vocational licences, considered to be level 2, are not included in formal accreditation frameworks. Furthermore, the ageing profile of employees, especially those that have worked in the sector all their working lives, means they see little tangible benefit from gaining higher qualifications.

Investigation into four High Performance Working Practices (HPW) – identifying talented individuals, work variety, discretion over how employees do work and access to flexible working – suggests that the sector has not embraced HPW to the same extent as other sectors. In addition, the sector is the least likely to have a training budget and provide training and skills development. This could be in part due to competitive strategy, where companies are working with low profit margins, are more concerned with day-to-day survival and are competing on price. However, recognition for quality, through customer service, is becoming more important, which will impact skills on utilisation and development.

One in nine employers report having at least one vacancy. Employers reveal that most vacancies are at machine operative level. Drivers fall within this and historically there has been a shortage of good Large Goods Vehicle (LGV) drivers. However, the economic slowdown and an influx of European workers, has mitigated this situation to some degree, but concerns remain for future recruitment.

Although significant number of individuals are seeking a role in the sector, a lack of applicants with the required skills mean that nearly a fifth of vacancies are classified as hard-to-fill. The skills most frequently reported as being considered to be lacking are job specific; in addition, a lack of customer handling skills is more prevalent compared to the all economy average.

The skills identified as lacking in applicants are similar to those found to be lacking in the current workforce. 55,000 sector workers have skills gaps, with machine operatives and elementary workers most likely to be highlighted as lacking full proficiency. The impact on businesses includes increased operating costs and the loss of business or orders to competitors.

The majority of employers undertake activities to overcome these skills gaps, such as increasing training or expanding the trainee programme. However, the failure of employers to provide appropriate training is reported to contribute to over a quarter of skills gaps.

The skills needs considered to be most threatening to sector performance are job-related technical skills and customer service abilities. These skills are a consequence of a number of drivers influencing the sector.

EU and UK directives and regulations affect many areas of the transport sector, with compliance training being a significant motivation for training spend. The Driver Certificate of Professional Competence (CPC) is one of the latest directives to have a massive impact on the training and development of professional LGV and Passenger Carrying Vehicle (PCV) drivers, and the supply of training. Over 400,000 professional drivers will need to complete 35 hours of periodic training every five years.

The ageing population and workforce impacts both the supply and demand for skills. As an employer, the sector will see a growing trend for older workers who will need to keep abreast of new technologies and ways of working. At the same time, attracting younger workers to a sector already not perceived as one of choice, will become a greater challenge. The demographics will also impact on how the sector operates as a service provider – an ageing population will have different customer service requirements, which the sector must be able to respond to.

The continuing need to reduce CO_2 emissions, to diversify energy sources and to build a 'lower carbon' greener economy will see the transportation and storage sector implement new ways of working – either through new technologies and/or behavioural changes like eco-driving, vehicle utilisation and modal shift. The sector will need to be resourceful to be able to deal with the implications of extreme weather and plan for alternatives in emergencies.

Transport of freight and people has been both a contributor to and beneficiary of globalisation, with advances in technology ensuring that this has become ever more efficient. However, businesses continue to look for products and services that meet changing consumer demands, taking into account determining factors such as quality, price and individuals' values and identities.

Finally technological changes have and will continue to impact the transportation and storage sector. The desire to improve competitiveness and meet customer requirements means employers will continue to look towards technologies to gain greater efficiencies. These include vehicle development changes, e-services and ICT technologies all of which impact the skills of users.

All of these drivers will impact the sector in the future, through new employment opportunities and skills development. Total jobs in the sector are projected to grow by 95,000 between 2010 and 2020, with replacement demand of 553,000. This means that 647,000 job openings are expected in the period, across all occupational groups. This raises issues for skills needs. To fully maximise economic performance there is an immediate need to ensure that we supply the 'right skills' which effectively meet the changing needs and requirements of the sector labour market.

Steps must therefore be taken to ensure that the sector can:

- Attract new recruits
- Promote clearer development pathways
- Professionalise the workforce and increase businesses' investment in skills development.

Additionally, in the case of passenger transport, achieving economic growth by improving customer service experience will be crucial.

By delivering solutions to these priorities, the barriers employers and individuals face today, which prevent them from investing and optimising skills will be removed, enabling the sector to maximise its potential for economic growth.

1 Introduction

1.1 Purpose of report

The aim of this report is to provide authoritative labour market intelligence (LMI) for the transportation and storage sector to inform the strategic decision making of national governments in the development of employment and skills policy. It is one of 15 UK Sector Skills Assessment (SSA) reports produced by Sector Skills Councils[1] and the UK Commission for Employment and Skills.

SSAs combine top-down data from official sources with bottom-up sectoral intelligence to provide a consistent, comparable and rich understanding of the skills priorities within sectors across the four UK nations. The reports have been produced to a common specification (developed by the UK Commission in consultation with the four UK governments) and follow a consistent structure.

Reports have been produced for the following sectors of the economy:

- Agriculture, forestry and fishing
- Energy production and utilities
- Manufacturing
- Construction building services, engineering and planning
- Wholesale and retail trade
- Transportation and storage
- Hospitality, tourism and sport
- Information and communication technologies
- Creative media and entertainment
- Financial, insurance & other professional services
- Real estate and facilities management
- Government
- Education
- Health

[1]Please note, the Education report was produced by LSIS who are not a licensed Sector Skills Council

- Care.

The reports contain intelligence on sectors and sub-sectors of particular interest to the four UK governments. As each nation has different 'key sectors', that are defined in different ways, it hasn't been possible to define the SSA sectors in a way that matches precisely the key sectors identified by each nation government. Therefore, as far as possible, data has been reported in such a way that it can be aggregated to produce an overall picture for key sectors of interest. In some cases this will involve gathering information from more than one SSA report.

The reports are designed to provide sectoral intelligence at a relatively broad level for strategic decision making purposes. Whilst they do contain some sub-sectoral and occupational intelligence, further intelligence at a more granular level may be available from individual Sector Skills Councils.

In addition to the main UK reports, executive summaries have been produced for Scotland, Wales and Northern Ireland. The UK reports contain information on key regional variations between the four UK nations and within England where appropriate (for example if sectoral employment is focused in a particular geographic area). However, the reports are not designed to provide a comprehensive assessment of sectoral skills issues beyond the national level.

1.2 Defining the sector

The transportation and storage sector is defined by the following five sub-sectors, based upon SIC 2007 codes 49 to 53:

- 49: Land transport and transport via pipelines
- 50: Water transport
- 51: Air transport
- 52: Warehousing and support activities for transportation
- 53: Postal and courier activities

Within these sub-sectors, it is important to note that there is also the division between freight logistics and passenger transport within these.

One of the intrinsic properties of the logistics market is that it is a service market, where consumption cannot be decoupled from production and delivery activities. The sector operates 24 hours a day, 7 days a week and 365 days of the year. Logistics operates on a global scale, underpinning all other sectors of the economy.

Similar to logistics, passenger transport serves all other sectors by facilitating movement of people who work for all industries of the economy. Additionally, it directly underpins the tourism industry and plays a key role in enabling social inclusions by making travel possible.

1.3 Sector Skills Councils

The two Sector Skills Councils (SSC) who authored the report are: Skills for Logistics and People 1st.

1.3.1 Skills for Logistics

Skills for Logistics (SfL) is the Sector Skills Council for the UK's freight logistics and wholesaling sectors (http://www.skillsforlogistics.org/). SfL works alongside companies in the UK that are involved in the moving, handling, storing and wholesaling of goods.

SfL's ambition is to "open doors so that logistics skills potential can be unleashed enabling people and organisations to do amazing things". This drives their vision "to deliver the best skilled logistics workforce in the world".

1.3.2 People 1st

People 1st is the Sector Skills Council for hospitality, passenger transport, travel and tourism sectors (http://www.people1st.co.uk/).

People 1st' mission is to support the hospitality, passenger transport, travel and tourism sectors in developing the right numbers of people with the right skills and qualifications at the right time. This is supported by People 1st's vision to be recognised as leading by example, impartial and inspirational skills body responsible for: raising demand for and development in skills, improving the retention and development of people, and maximising the return on public investment in building the right skills.

1.4 Summary of methodology

This report combines top-down data with bottom-up intelligence to provide a rich assessment of sectoral skills priorities that is consistent and comparable with assessments produced for other sectors of the economy.

Three main types of information have been drawn on in the preparation of this report:

- Economy-wide quantitative data from core labour market information sources (such as the Labour Force Survey and the UK Employer Skills Survey)
- Sectoral, sub-sectoral and occupational specific quantitative data generated by SSCs / sector bodies and others (including Government departments and agencies, academics and professional associations)
- Qualitative information collected by SSCs / sector bodies and other organisations

To ensure consistency and comparability across all 15 SSA reports, data from core labour market information sources was centrally collected, processed and formatted. It was then distributed by the UK Commission to Sector Skills Councils / sector bodies for inclusion within the reports. This data was quality assured by contractors, the UK Commission and by Sector Skills Councils.

To meet consistency requirements, sub-sector analysis of data from core sources has primarily been undertaken at a 2-digit Standard Industrial Classification (SIC) code level (or by combining 2-digit SIC codes where appropriate).

Data from core sources has been supplemented within the report with data from sector specific sources.

Each SSC in this report supplemented the core LMI by commissioning sector specific surveys (quantitative and/or qualitative), to fill gaps in the information or to achieve a representative sub-sector sample. Details of the methodologies of such additional research used in this report are provided in the Technical Appendix.

The report also draws on qualitative research that has been undertaken to explore sectoral skills issues in more detail. Qualitative research with small samples of employers (and others), most commonly through interviews and focus groups, seeks to provide rich and detailed understanding and insight, rather than measurement. Samples tend to be designed to be broadly representative of the wider population, to gather a range of views. In terms of skills research with employers, size and sector tend to be key drivers of demand and therefore these are usually the main characteristics that are taken into account when designing samples.

The report synthesises and contextualises information from the sources identified above and, by undertaking a rigorous analysis of it, turns the information into intelligence.

Further information

Further methodological information is provided within Technical Appendix. This includes descriptions of the main quantitative and qualitative sources used within the report.

2 Current performance of sector

Chapter Summary

- The economy and daily lives of individuals are highly dependent upon effective transport
- The sector contributes four per cent of the UK economy's turnover
- Gross value added (GVA) of £91bn (seven per cent of UK total) places the sector in the top six out of 15 SSA sectors
- Sector GVA per employee job is estimated to be £50,000. This is greater than the all economy average of £46,000
- 1.45m individuals work within the sector, accounting for five per cent of total UK employment
- The majority (86 per cent) of the workforce work within England, eight per cent in Scotland, three per cent in Wales and two per cent in Northern Ireland
- Land transport is the largest sub-sector, employing half of the workforce
- Employment levels have declined by 69,000 since 2008, most likely as a consequence of the economic climate but GVA has remained stable.

This chapter looks at the economic performance and competitive position of the transportation and storage sector within the UK economy. The employer profile in terms of establishment size and national distribution, as well as how the numbers have changed in recent years are also analysed.

The chapter then explores the current employment profile and its distribution in a spatial and sub-sectoral context, and demonstrates how employment levels have altered in recent times.

2.1 Economic performance

The following section looks at the economic and competitive performance of the transportation and storage sector in terms of turnover, Gross Value Added (GVA) and Total Factor Productivity (TFP). The employer profile, in respect of establishments is then described.

2.1.1 Current and recent UK economic performance

The transportation and storage sector is an essential part of the UK economy. Our economy and way of life are highly dependent upon effective transport and in particular freight activity. A report by Professor A. McKinnon (2004) demonstrates this dependency. It found that without lorries to carry freight, current standards of living could be maintained for only a few days and for the economy as a whole, the loss of road transport for a week would be devastating. For example during a week in September 2000, the fuel crisis was estimated to have cost firms £1bn (The Guardian 2000).

Danny Leipziger, the World Bank vice-president for poverty reduction and economic management has commented that, “Being able to connect to global markets is fast becoming a key aspect of a country’s capacity to compete, grow, attract investment, create jobs and reduce poverty” (Logistics Manager 2010). Similarly, Uri Dadush, World Bank trade director has remarked, “As a main driver of competitiveness, logistics can make you or break you as a country in today’s globalised world” (Europa 2010).

The Office for National Statistics (ONS 2011a) highlights that in 2010 the annual turnover of the sector was £134bn which is slight decrease from the 2008 total of £137bn reflecting the effects of the economic recession. Despite the decrease the sector’s contribution to the economy each year has remained stable at four per cent. The turnover contribution of the five sub-sectors was:

- Land transport - £45bn
- Water transport - £8bn
- Air transport - £19bn
- Warehousing and support activities - £44bn
- Postal and courier activities - £18bn

Land transport contributes the greatest turnover. This is the largest sub-sector in terms of employment and with regards to freight transport, the mode through which the greatest proportion of goods are moved (DfT 2011d). This reflects the fact that the road system in the UK and Europe provides a link between nearly all establishments, thus providing door-to-door carriage via a single mode of transport. Another reason for road's high freight market share is the relatively short distances that much freight travels. Analysis of the origins and destinations of goods lifted shows that, on average, around 70 per cent of road freight has its origin and destination within the same region of the UK. Only five per cent of goods lifted are carried more than 300 kilometres (DfT 2011d).

Between 2008 and 2010, certain industries within the sub-sectors did report growth. For example, passenger rail grew by 46 per cent, air freight by 29 per cent and postal and courier activities by 28 per cent. While passenger air transport reported a decline in turnover of 21 per cent and road freight by 20 per cent (ONS 2011a). The rapid turnover growth of passenger rail services resulted from two main socio-economic factors. Firstly, it was an outcome of large numbers of people across the UK moving towards more cost efficient transport solutions during times of national austerity. Secondly, more people decided to spend their holiday in the UK (colloquially referred to as "staycation"), instead of going abroad. This added significant numbers of users of the domestic land transport, with domestic tourism trips in July 2011 in Great Britain exceeding the level from July 2010 by 11 per cent (VisitEngland 2011).

The economic performance of the sector can also be described through Gross Value Added (GVA) data. Table 2.1 highlights the UK sectoral GVA for 2008. The transport, storage and communication sector accounts for seven per cent or £91,347m of the UK GVA, making it within the top six sectors across the economy. 88 per cent of the sector's GVA occurred in England, with a further eight per cent in Scotland, three per cent in Wales and two per cent in Northern Ireland, reflecting the differences in population size across the four nations.

Table 2.1 GVA by nation (£m in current basic prices) (2008)

	UK	England	Scotland	Wales	Northern Ireland
	£m	£m	£m	£m	£m
Agriculture, hunting, forestry & fishing	9715	7982	1180	145	407
Mining and quarrying of energy producing materials	2661	1298	1277	60	27
Other mining and quarrying	2365	1777	282	134	173
Manufacturing	150298	124860	13555	7734	4149
Electricity, gas and water supply	21342	17414	2653	729	545
Construction	80756	68247	7328	2924	2256
Wholesale and retail trade (including motor trade)	147158	127900	10441	5166	3651
Hotels and restaurants	36428	30938	3297	1424	770
Transport, storage and communication	**91347**	**80262**	**7065**	**2529**	**1491**
Financial intermediation	116801	104574	8501	2305	1422
Real estate, renting and business activities	303179	268770	20829	8380	5200
Public administration and defence	63281	51275	6148	3275	2583
Education	76493	64478	6322	3502	2191
Health and social work	93775	76336	9851	4788	2800
Other services	65563	57177	4804	2420	1162
All sectors	1261162	1083288	103533	45515	28827

Source: Regional Accounts, ONS, 2010

Of the £80bn (in terms of GVA) contribution the transportation and storage sector in England makes, 42 per cent is accounted for by London and the South East (Table 2.2). The first reason for this is the high population density, where London and South East account for 12 and 14 per cent respectively of the total UK population. Secondly, London has direct links with all nations and regions and – which mainly impacts on the air transport sub-sector – is most often used as a distribution point and central communication hub of the transportation and storage companies.

Table 2.2 GVA by English region (£m in current basic prices) (2008)

	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East	London	South East	South West
	£m	£m	£m	£m	£m	£m	£m	£m	£m
Agriculture, hunting, forestry & fishing	303	777	966	996	915	1387	86	1168	1383
Mining and quarrying of energy producing materials	81	90	140	130	82	164	280	270	61
Other mining and quarrying	178	142	156	379	84	132	60	202	442
Manufacturing	6706	19336	14332	13299	13974	13518	13651	18084	11961
Electricity, gas and water supply	979	1622	1511	1952	1920	1948	1823	3061	2598
Construction	2990	8236	6266	5835	6588	8946	10262	12482	6643
Wholesale and retail trade (including motor trade)	4424	14906	11348	10850	12313	15933	22016	24588	11522
Hotels and restaurants	1123	3527	2383	2012	2905	3041	7717	5063	3166
Transport, storage and communication	**2668**	**8846**	**6518**	**5866**	**6596**	**9871**	**17509**	**16218**	**6170**
Financial intermediation	2195	8356	6641	3702	5260	9352	48190	13828	7050
Real estate, renting and business activities	7842	26072	17146	16325	20405	29769	74039	55440	21733
Public administration and defence	2623	5843	4753	3919	4376	5634	7642	10218	6267
Education	3156	8008	6302	4877	6541	6725	11972	10861	6036
Health and social work	4004	10080	7552	5894	7215	8201	13719	11975	7696
Other services	1715	5174	3459	3314	4583	5577	18190	10551	4615
All sectors	40987	121015	89473	79350	93757	120198	247156	194009	97343

Source: Regional Accounts, ONS, 2010

Table 2.3 demonstrates how the transport, storage and communication GVA figures have changed since 1999. The sector has seen its GVA increase 41 per cent between 1999 and 2008. This is slightly lower than the UK economy GVA increase of 56 per cent over the same period (Table 2.3).

Table 2.3 UK GVA (£m in current basic prices) (1999-2008)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
Agriculture, hunting, forestry & fishing	9022	8532	8333	9007	9807	10670	7530	7792	8632	9715
Mining and quarrying of energy producing materials	2059	1998	1874	1661	1456	1643	2055	2297	1861	2661
Other mining and quarrying	1700	1784	1750	1469	1519	1848	2115	2145	2291	2365
Manufacturing	151157	150009	149223	146308	144845	145689	148110	151455	154726	150298
Electricity, gas and water supply	15703	15798	15660	16052	16405	16106	16685	20279	21884	21342
Construction	42236	45626	50526	54684	59522	66029	69868	74619	80675	80756
Wholesale and retail trade (including motor trade)	99509	103410	110249	113777	120520	127367	129810	135366	141735	147158
Hotels and restaurants	24146	25605	26928	28639	30120	31870	32902	34594	35962	36428
Transport, storage and communication	**64961**	**69201**	**70502**	**73064**	**76587**	**79020**	**80889**	**83655**	**88280**	**91347**
Financial intermediation	48545	44989	48202	63367	71530	75117	79553	90807	103731	116801
Real estate, renting and business activities	173329	188361	204041	214849	232204	248677	260116	276108	296955	303179
Public administration and defence	39891	41645	43855	46212	49768	53779	58229	60385	61503	63281
Education	44914	48111	51675	55099	58328	61934	65739	68926	72766	76493
Health and social work	51577	55282	59549	64492	70593	75154	79965	85965	89381	93775
Other services	39821	42085	44560	48311	51804	54947	57961	60166	62824	65563
All sectors	808570	842436	886927	936991	995008	1049850	1091527	1154559	1223206	1261162

Source: Regional Accounts, ONS, 2010

Sectors differ in the level of 'added value' generated per employee job. Table 2.4 highlights these differences and it also shows the variation across the nations within sectors.

Estimated gross value added (GVA) per employee job in the transportation and storage sector is greater than the all economy average for the UK and for each of the four nations. At a UK level the sector's GVA is approximately £50,000, but this decreases to £41,000 for Northern Ireland, £44,000 within Wales, with England and Scotland both close to the UK average.

Table 2.4 Estimated workplace gross value added (GVA) per employee job at current basic prices, 2009

SSA Sector	UK	England	Wales	Scotland	Northern Ireland
	£000s	£000s	£000s	£000s	£000s
Agriculture, forestry and fishing	35	41	11	21	25
Energy production and utilities	131	134	118	127	107
Manufacturing	52	51	49	61	53
Construction, building services, engineering and planning	65	66	54	60	56
Wholesale and retail trade	33	33	27	29	27
Transportation and storage	50	51	44	50	41
Hospitality, tourism and sport	23	23	21	22	20
Information and communication technologies	83	84	72	77	63
Creative media and entertainment	45	49	30	12	38
Financial, insurance & other professional services	86	89	57	69	63
Real estate and facilities management	85	86	103	67	98
Government services	39	40	33	35	40
Education	33	33	32	36	33
Health	27	27	26	25	23
Care	30	30	28	31	26
Not within scope	32	33	27	35	30
All sectors	46	47	38	43	38

Source: UK Commission estimates based on Regional Accounts; Annual Business Survey; Business Register and Employment Survey (BRES). See technical appendix for basis for estimates.

Notes: Figures for Real estate and facilities management sector include contribution from owner-occupier imputed rental. All figures exclude Extra-Regio element. Estimates will tend to overstate the level of GVA per job in those sectors with high levels of self-employment.

The *Working Futures* model (Wilson and Homenidou, 2011) provides historic estimates of productivity (output per job) by sector on a constant price (chained volume measure) basis. This analysis indicates an average rate of productivity growth for the UK transportation and storage sector for the first half of the last decade (2000-2005) of 0.5 per cent per annum. This is much lower than the average rate for the wider UK economy of 1.4 per cent. Moreover, productivity is believed to have fallen in the second half of the decade as the recession hit. However, *Working Futures* does forecast future rates of productivity growth for the sector that are similar to the average for the wider economy as the recovery takes hold.

Looking closer at sub-sector level there is a wide variation in the 'added value' per job[2]:

[2] These sub-sector figures are calculated using the Annual Business Survey and Business Register and Employment Survey (both 2009) and unlike Table 2.4 are not constrained to the Regional Accounts totals.

- Land transport – £42,140
- Water transport - £180,560 (England & Scotland only)
- Air transport - £67,180
- Warehousing and support activities - £68,500
- Postal and courier activities - £29,260.

The postal and courier activities sub-sector is the least productive while water transport is the most. The reason for the latter having the highest GVA per employee is the result of sea and coastal freight generating significantly larger revenues. For that reason, the strong productivity figure for water transport does not reflect the slowdown faced by other industries, which reported a 41 per cent decrease in economic output between 2008 and 2010, while its staff wages are the lowest within the sector.

Anecdotal evidence showed that in passenger transport this is caused mainly by the rising price of fuel and the economic slowdown, which decreased the regular flow of users. The impact of the rising fuel prices is greater in the case of waterways, as – unlike the air transport sub-sector – it is not protected by fuel hedges and hence more volatile and exposed to the price fluctuations.

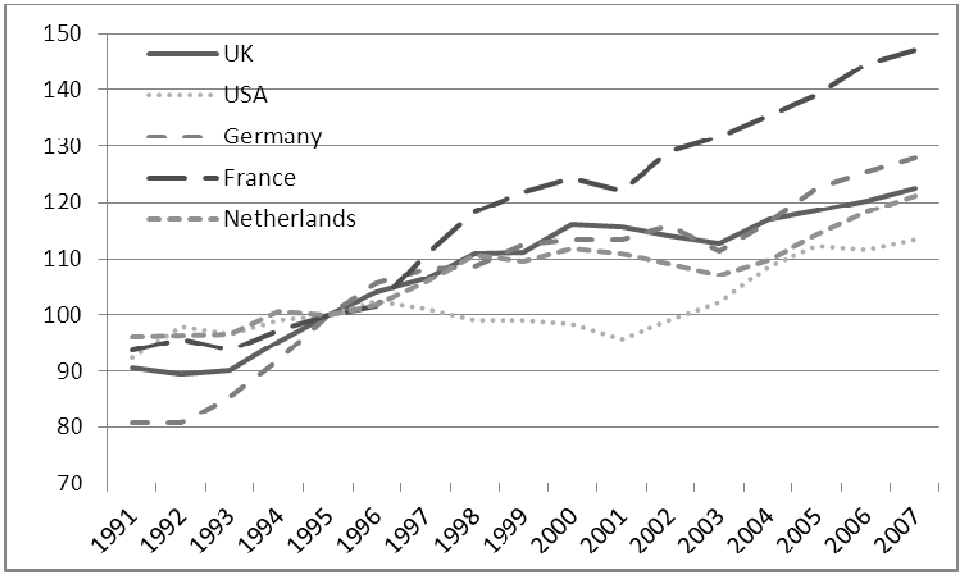
Of the sub-sectors with the majority made up of passenger services, air transport has the largest GVA per job. This stems from the character of the sub-sector, which covers long distances and is on average much more costly operationally than any other mode of transportation.

2.1.2 Productivity and competitive nature of the sector

A further key variable in the assessment of the economic performance of a sector is productivity. Total Factor Productivity (TFP) growth is one productivity measure. Gains in TFP are not the result of any physical investment but rather associated with broad-based technical change and business process reorganisation (McGuckin *et al.* 2005).

Figure 2.1 details the international perspective of the TFP growth for the transportation and storage sector since 1991. This indicates that the UK sector lies third, in terms of TFP productivity, behind France and Germany but is higher than the Netherlands and the USA. There are potentially many polices and variables that might have impacted on the productivity growth of the sector in each country. For example, expenditure on infrastructure, liberalisation policies, and measures aimed to alleviate congestion problems.

Figure 2.1 Total factor productivity growth for the transportation and storage sector



Source: EU KLEMS Growth & Productivity Accounts: November 2009 Release

The competitive position of the logistics sector is determined by a number of demands. These include the price, characteristics and features of the product, the location of customers, the time requirements of the customers, and the variability in demand. It also relates to the relative importance of each of these attributes and the extent to which these attributes are changing or stable over time. The economic and technological trends which shape the global marketplace and the capabilities of managers can also influence the competitive position of companies.

The greatest competitive advantage of road freight transport is its capacity to carry goods all over the UK and Europe with unequalled flexibility and at a low price. Road seems likely to remain the predominant mode of transport for freight in the future, as rail is not a perfect substitute for road in the majority of cases. This is partly due to the need for terminals at convenient locations (i.e. close to origin and destination points). However, rail can be a low carbon alternative to road as part of a supply chain and is likely to be more competitive on price for longer journeys, for example the Stobart / DB Schenker trans-Europe rail route (WorldCargoNews 2009 and Global Cold Chain News 2011). Ensuring that businesses are utilising the optimum combination of transport modes to deliver goods competitively, will require employees with strong planning and financial costing skills, particularly if the supply chain spans a number countries. Knowledge of export and import rules and regulations will also be paramount.

The operational cost of distribution facilities is an important factor that influences regional competitiveness in logistics. High warehouse costs usually reflect high economic activity and overcrowding, while low warehouse costs usually reflect economic stagnation and poor infrastructure. However, low warehouse cost alone will not attract logistics companies. Being close to where the economic activity takes place is more important. Nevertheless, some shift is likely. As companies in the UK, have sought to make economies of scale in warehousing and storage, there has been a strategic move by businesses towards the East and West Midlands. Regional Distribution Centres (RDCs) have been set up in strategic locations to take advantage of lower land prices away from the South East, which in turn helps to justify investments in complex automated handling systems.

Therefore, the competitive advantage of a logistics company will depend upon their logistics capabilities, such as transportation, warehousing and management techniques, relative to other firms in the industry. Many of the larger operators undertake several logistics roles, having extended their reach beyond their original core business to other sub-sectors. Major players like Royal Mail, Wincanton, DHL, Tesco Distribution Ltd, TNT and Kuehne & Nagel dominate the UK market and tend to offer the most sophisticated and innovative services. It is noteworthy that a large number of small and medium sized companies service niche markets.

Research by Skills for Logistics (2010) makes it clear where the UK's logistics sector fits in the global league tables with regards to performance. The Logistics Performance Index ranks the UK logistics sector eighth, behind a number of European competitors, including Germany, Sweden, and the Netherlands (World Bank 2010). The UK logistics sector performance has declined in five of the six core dimensions used to rate each country's performance between 2007 and 2010. The only area of improvement was seen in customs. Possibly, the most worrying decline was seen in the infrastructure ranking, where we have declined from tenth to sixteenth. Another area of concern would be in regards to timeliness, where we have declined from first to eighth. However, this may be correlated to the decline in the infrastructure performance. The UK logistics sector, therefore, is in the top division globally but there is considerable room for improvement.

As far as passenger transport is concerned, it is the passenger air services that are directly exposed to international competition. Airport Council International (ACI, 2011) classifies London Heathrow airport as the fourth busiest passenger hub in the world, with Atlanta, Beijing and Chicago serving larger numbers of air passengers. The 2010 Skytrax survey ranks Heathrow as 21st of 163 airports worldwide for the quality of its infrastructure. Gatwick is ranked as 64th and Stansted as 99th. At the same time, British Airways is classified as a 4-star airline (Skytrax, 2012). However, the global competition arises in areas of the world previously not considered to be a threat to the British air transport. Dubai's Emirates has recently grown to be the world's largest airline in terms of scheduled international passenger kilometres flown, while Dubai airport is already the 13th largest in terms of passenger numbers (ACI, 2011). At the same time, Qatar's Doha is preparing to unveil their newest hub, targeting specifically transfer passengers from Northern America and Europe – the main consumer base of the British passenger air transport.

Once compared with their international equivalent, UK's other passenger transport sub-sectors face significant comparisons with newly built networks within some of the emerging market economies. As George Osborne stated in the 2011 Autumn Statement, "See what countries like China and Brazil are building and you'll see why we risk falling behind the rest of the world". This refers directly to the UK's rail system, which – despite being the 18th longest rail network in the world – is also one of the oldest, slowest and most overloaded (International Union of Railways 2009). The railways are carrying more passengers than at any time in the last six decades, and yet many passengers find them too expensive for what they offer and not connected well enough to other modes of public transport (Passenger Focus 2011). This is perhaps the main driver behind the government's recently announced investment under the National Infrastructure Plan and the plans for High Speed 2 network, connecting London, Birmingham, Manchester and Leeds. This will impact directly the skills requirements for the sector's workforce. Train drivers will need to be trained to be able to operate the new trains. Engineers will have to be familiar with the peculiarity of the new permanent way (rail tracks). Finally, exploiting the potential of the new infrastructure and the new rolling stock (trains) will require good management and leadership skills.

2.1.3 Employer profile

The following provides further detail on the employer profiles, with regards to number of establishments and details on opening and closures of businesses.

2.1.3.1 Establishments

The number of establishments across the UK economy comprises approximately 2.57m. 85 per cent of these are located in England, eight per cent in Scotland, four per cent in Wales and Northern Ireland has three per cent of all establishments (Table 2.5).

The transportation and storage sector has a total of 83,825 establishments and accounts for three per cent of all establishments in each nation. The sector has a similar distribution across the nations as per the whole economy, with the majority based in England.

Table 2.5 Number of establishments by sector and nation (2010)

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Agriculture, forestry and fishing	144895	6%	96770	4%	17625	9%	14210	13%	16290	19%
Energy production and utilities	13290	1%	10365	0%	1495	1%	865	1%	565	1%
Manufacturing	144115	6%	124235	6%	9395	5%	6040	5%	4445	5%
Construction, building services, engineering and planning	358455	14%	303300	14%	27845	14%	14280	13%	13030	15%
Wholesale and retail trade	509215	20%	431330	20%	38165	20%	23000	20%	16720	20%
Transportation and storage	**83825**	**3%**	**70685**	**3%**	**6370**	**3%**	**3925**	**3%**	**2845**	**3%**
Hospitality, tourism and sport	223370	9%	185390	8%	20515	11%	11580	10%	5885	7%
Information and communication technologies	131065	5%	120095	5%	6610	3%	3130	3%	1230	1%
Creative media and entertainment	134115	5%	121900	6%	6830	4%	3640	3%	1745	2%
Financial, insurance & other professional services	255000	10%	228725	10%	14770	8%	7160	6%	4345	5%
Real estate and facilities management	149325	6%	129340	6%	10610	5%	5730	5%	3645	4%
Government services	52210	2%	40870	2%	5625	3%	2985	3%	2730	3%
Education	67125	3%	55020	3%	5535	3%	3250	3%	3320	4%
Health	55135	2%	46925	2%	3895	2%	2515	2%	1800	2%
Care	85935	3%	70460	3%	7810	4%	4710	4%	2955	4%
All economy	2574230	100%	2183845	100%	193305	100%	112810	100%	84270	100%

Source: Inter-departmental Business Register (IDBR), ONS

The number of establishments in the English regions varies considerably for both the sector and economy (Table 2.6). In the sector, the South East has the highest number with nearly 11,600 establishments, followed by the East of England and London, with 9,300 and 9,200 respectively. The North East has the smallest number. Freight and passenger transport are driven by the needs of people and businesses and are therefore situated where industries are based, where goods are sourced and where people live.

Table 2.6 Number of establishments by sector and English region (2010)

	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East	London	South East	South West
Agriculture, forestry and fishing	3870	11305	11205	10770	11880	12170	935	11785	22850
Energy production and utilities	475	1460	1155	1025	1065	1320	950	1605	1310
Manufacturing	4650	15950	13100	12915	15930	15235	13350	20025	13080
Construction, building services, engineering and planning	10845	35520	26035	24975	28750	41485	42520	58785	34385
Wholesale and retail trade	16630	55955	41975	36895	45695	48635	67620	71850	46075
Transportation and storage	**2610**	**8775**	**7270**	**6830**	**7930**	**9305**	**9190**	**11570**	**7205**
Hospitality, tourism and sport	8395	23095	17600	14030	16700	19290	32470	31885	21925
Information and communication technologies	2325	10885	6685	6900	9260	14735	29655	28805	10845
Creative media and entertainment	2660	10035	6735	6215	7425	12210	43255	22760	10605
Financial, insurance & other professional services	5440	23475	14900	14950	18300	23850	61915	45495	20400
Real estate and facilities management	4185	14800	10225	9390	11925	15045	27475	22980	13315
Government services	1815	4810	4260	4270	4040	4215	6495	6340	4625
Education	2495	6890	4965	4810	5465	6330	8215	9925	5925
Health	2010	6255	4265	3830	4570	4850	8045	8280	4820
Care	3575	9340	6950	6110	6940	7210	10725	11700	7910
All economy	75975	255705	187810	174700	210065	253120	392540	394505	239425

Source: Inter-departmental Business Register (IDBR), ONS

Overtime the number of establishments across the economy and sector has altered. Since 2006, the number of sector establishments has increased from 70,425 to 83,825. This is a change of 19 per cent, greater than the two per cent growth seen across the economy and is just one of seven sectors to see a positive change (Table 2.7). Generally these growth sectors are closely interlinked to the transport sector. For example, the goods needed for construction need to be transported to the sites. At the same time, the passenger transport side of the sector is strongly linked to another growing sector, the hospitality, tourism and sport, which also grew by two per cent in the four years to 2010.

The number of establishments across the sector in 2010 was slightly lower than that in 2009, reflecting the overall decrease across the economy of two per cent. This can likely be attributed to the poor economic situation the UK and other countries have been experiencing since 2008. In addition a number of mergers and acquisitions have occurred. Even larger operators have been affected, for example, British Airways merged with Iberia in order to strengthen their market position.

The overall increase in transportation and storage establishments between 2006 and 2010 has not been uniform across the four nations. The sector saw a 19 per cent increase across England, a 22 per cent increase in Scotland, 16 per cent in Wales and 14 per cent in Northern Ireland.

Table 2.7 Number of establishments by sector 2006-2010 (UK)

	2006	2007	2008	2009	2010	% Change 2006-2010
Agriculture, forestry and fishing	146485	158080	163715	146620	144895	-1%
Energy production and utilities	18170	18260	11435	12980	13290	-27%
Manufacturing	165675	163525	167335	151165	144115	-13%
Construction, building services, engineering and planning	230610	240535	258055	374320	358455	55%
Wholesale and retail trade	533105	532905	532060	520070	509215	-4%
Transportation and storage	**70425**	**70750**	**71665**	**86680**	**83825**	**19%**
Hospitality, tourism and sport	219770	222920	227430	229690	223370	2%
Information and communication technologies	136395	140505	144080	134805	131065	-4%
Creative media and entertainment	125100	130185	131180	132225	134115	7%
Financial, insurance & other professional services	271310	283920	287015	256915	255000	-6%
Real estate and facilities management	180305	191195	201915	155855	149325	-17%
Government services	159395	164690	54875	52060	52210	-67%
Education	28935	28880	66055	66725	67125	132%
Health	25860	25810	53300	53900	55135	113%
Care	40150	40075	82755	83675	85935	114%
All economy	2533855	2600065	2643215	2634790	2574230	2%

Source: Inter-departmental Business Register (IDBR), ONS

Note: Data for 2006-2008 is based on SIC 2003 whereas data beyond this use SIC 2007.Some of the data for 2006-2008 is based on estimates .For full details please see technical appendix.

The distribution of establishments by sub-sectors varies substantially:

- Land transport – 57 per cent (47,690)
- Water transport – two per cent (1,545)
- Air transport – two per cent (1,410)
- Warehousing and support activities – 19 per cent (16,140)
- Postal and courier activities – 20 per cent (17,040)

However this is reflective of the sector's nature, whereby land transport is the primary nature of movement for both freight and passengers.

2.1.3.2 Size of establishments

Understanding the size of establishments is important as this has implications on skills development. Larger businesses, employing more than 100 employees, are more likely to offer formal training through their own in-house training or via private training providers. Small businesses struggle with providing training on a number of levels. Firstly, assessing the necessary information is often an obstacle. Secondly, small operators avoid releasing employees for training. This is partially determined by the fear of poaching but also difficulties in finding tailored training and the lack of economy of scale, which means costs are higher (Stone 2010).

The employer landscape is dominated by small establishments. There are 31,205 sole traders within the sector. Many of these are accounted for by taxi and private hire drivers, who largely consist of self-employed individuals.

Even when sole traders are excluded nearly half (48 per cent) of establishments in the sector are very small, employing between two to four people (Table 2.8). A further 36 per cent have between five and 24 staff, meaning that more than four in five establishments employ fewer than 25 people. By contrast, only one per cent of the establishments employ 250 or more staff.

Some sub-sectors show an even larger dependency on small businesses. For example, freight transport by road, and taxi and private hire operators are dominated by companies that employ less than five people (76 and 74 per cent respectively) (IDBR 2010). This stems mainly from the character of the industries, where drivers often own their vehicles, obtain licences and register as transport operators, managing the businesses on their own.

Table 2.8 Size of establishments by sector (UK) (2010)

	Number of employees						
	2-4	5-9	10-24	25-49	50-250	251+	All
	%	%	%	%	%	%	Number
Agriculture, forestry and fishing	80	14	5	1	0	0	97,910
Energy production and utilities	36	22	20	10	10	2	10,265
Manufacturing	43	22	18	8	8	1	108,050
Construction	67	18	10	3	2	0	211,710
Wholesale and retail trade	49	27	16	4	3	1	385,760
Transportation and storage	**48**	**20**	**16**	**7**	**8**	**1**	**52,620**
Hospitality, tourism and sport	42	30	19	6	3	0	198,630
Information and communication technologies	68	15	10	4	3	1	56,710
Creative media and entertainment	66	17	10	4	3	0	62,305
Financial, insurance & other professional services	57	21	14	4	3	1	134,900
Real estate and facilities management	62	21	11	3	3	1	95,270
Government services	34	21	20	10	12	4	41,505
Education	20	14	20	23	21	2	56,740
Health	31	24	25	10	7	2	47,570
Care	26	24	28	13	8	0	75,725
All economy	52	22	15	6	4	1	1,742,370

Source: Inter-departmental Business Register (IDBR), ONS

Table 2.9 details this breakdown for the UK economy and Table 2.10 highlights the data for the transportation and storage sector, across the nations.

Table 2.9 Size of establishments by nation (2010)

	England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%
2-4	767,415	52	66,560	48	44,675	54	30,175	52
5-9	323,815	22	33,775	24	18,005	22	13,395	23
10-24	215,295	15	23,090	17	11,910	14	9,175	16
25-49	82,055	6	8,330	6	4,170	5	3,265	6
50-250	63,865	4	6,405	5	3,130	4	2,145	4
251+	9,915	1	1,030	1	505	1	270	0
Total	1,462,360	100	139,190	100	82,395	100	58,425	100

Source: Inter-departmental Business Register (IDBR), ONS

The sector mirrors the overall economy in terms of distribution by size across the nations (Table 2.9 and Table 2.10).

Table 2.10 Size of establishments within sector by nation (2010)

	England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%
2-4	20,940	48	1,985	44	1,355	52	935	50
5-9	8,645	20	945	21	525	20	445	24
10-24	6,895	16	835	18	405	15	255	14
25-49	3,095	7	385	9	165	6	105	6
50-250	3,385	8	325	7	155	6	130	7
251+	640	1	50	1	10	0	10	1
Total	43,600	100	4,525	100	2,615	100	1,880	100

Source: Inter-departmental Business Register (IDBR), ONS

Within the sub-sectors there are variations in the size distributions of establishments (Table 2.11). All are dominated by companies employing less than 25 employees, ranging from 71 per cent in the air transport sub-sector to 89 per cent for water transport sub-sector.

15 per cent of water transport companies employ over 100 individuals, but this falls to six per cent in postal and courier activities, five per cent in warehousing and support activities and three per cent each for land and air transport.

Table 2.11 Size of establishments within sub-sectors (2010)

	Land Transport		Water transport		Air Transport		Warehousing and Support Activities		Postal and Courier Activities	
	Number	%	Number	%	Number	%	Number	%	Number	%
2-4	15,195	52	530	53	280	36	5,390	43	3,820	42
5-9	5,955	20	200	20	140	18	2,620	21	1,645	18
10-24	4,535	16	160	16	125	16	2,250	18	1,320	14
25-49	1,570	5	55	5	50	6	1,080	9	995	11
50-250	1,535	5	55	5	125	16	1,065	8	1,215	13
251+	290	1	5	0	50	6	195	2	170	2
Total	29,080	100	1,005	100	770	100	12,600	100	9,165	100

Source: Inter-departmental Business Register (IDBR), ONS

The land transport sub-sector plays a significant role in bringing down the average size of establishments within the sector, mainly due to its fragmented nature. Despite some large players like Eddie Stobart, Wincanton, NYK, National Express, Arriva, Addison Lee and Virgin Trains, the sub-sector encompasses family-owned businesses, especially in the case of coach and freight transport by road.

2.1.3.3 Business start-ups and closures

The continual entry and exit of businesses is crucial to the growth of an economy. It is thought to impact productivity through increased competition leading to greater cost efficiency. Innovative firms enter the market, introducing new, improved products and technologies and processes that replace old ones.

Overall the UK economy experienced more closures than openings during 2009 (Table 2.12), with construction, and wholesale and retail experiencing the greatest differences. The poor economic conditions and lower consumer spending are likely to be a factor. It is therefore not surprising that the transportation and storage sector also saw more closures than openings, because some of the activities within this sector, such as freight transport, underpin these other sectors.

In 2009, 6,980 business start-ups were recorded in the transportation and storage sector. This is a start-up rate of nine per cent and is slightly lower than that recorded across the whole economy (10 per cent). However, business closures, including mergers in the sector, exceeded start-ups by 2,740 in 2009, and had a closure rate of 13 per cent, slightly greater than the whole economy rate of 12 per cent. This is largely due to the economic climate.

Table 2.12 Business (enterprise) start-ups and closures 2009 (UK)

Sector	Start-ups	Closures
	Number	Number
Agriculture, forestry and fishing (SIC 75 only)	285	190
Energy production and utilities	1270	408
Manufacturing	10570	15445
Construction, building services, engineering and planning	35835	51040
Wholesale and retail trade	38760	47090
Transportation and storage	**6980**	**10805**
Hospitality, tourism and sport	23345	28030
Information and communication technologies	16120	19935
Creative media and entertainment	24290	20805
Financial, insurance & other professional services	25640	25765
Real estate and facilities management	12805	16275
Government services (SIC 94 only)	1010	1260
Education	3485	3160
Health	4135	3110
Care	2745	2165
Other sectors	28750	32135
All economy	**236,025**	**277,618**

Source: Business Demography - Enterprise Births, Deaths and Survivals 2009 (ONS)

Large variations in start-ups can be seen across the sub-sectors (Table 2.13). The start-ups to closures ratio within the sub-sectors often depends on the business profile of the operator and its customers. For example, budget airlines are less likely to fail than business-class only operators, like Eos Airlines' bankruptcy (The Telegraph 2008). Land transport closure to start-up ratio depends mainly on the size of establishment, as the diversity here is very large, ranging from micro businesses to large companies. As previously mentioned, this can be linked to business closures and mergers.

Table 2.13 Business (enterprise) start-ups and closures by sub-sector 2009 (UK)

Sub-sector	Start-ups		Closures		
	Number	%	Number	%	%
Land transport	4025	58	6765	63	57
Water transport	200	3	225	2	2
Air transport	210	3	160	1	2
Warehousing and support activities	770	11	1255	12	19
Postal and courier	1775	25	2400	22	20

Source: Business Demography - Enterprise Births, Deaths and Survivals 2009 (ONS)

2.2 Employment

This section provides analysis of the employment levels at a UK and sector level. The historical trends will be highlighted as well as the key occupational roles.

Nearly 29m people are in employment in the UK. Of these nearly 1.45m people work within the UK transport and storage sector, accounting for five per cent of UK's total employment. The sector's employment split across the four nations can be seen in Table 2.14.

Table 2.14 Total employment by sector and nation (2010)('000s)

	UK		England		Scotland		Wales		Northern Ireland	
	000s	%	000s	%	000s	%	000s	%	000s	%
Agriculture, forestry and fishing	406	100	296	73	51	13	31	8	27	7
Energy production and utilities	473	100	346	73	88	19	25	5	14	3
Manufacturing	2,970	100	2,542	86	199	7	138	5	91	3
Construction, building services, engineering and planning	2,697	100	2,270	84	244	9	113	4	71	3
Wholesale and retail trade	4,140	100	3,471	84	353	9	205	5	112	3
Transportation and storage	**1,448**	**100**	**1,252**	**86**	**117**	**8**	**46**	**3**	**33**	**2**
Hospitality, tourism and sport	2,046	100	1,704	83	198	10	100	5	44	2
Information and communication technologies	761	100	675	89	56	7	18	2	13	2
Creative media and entertainment	987	100	876	89	65	7	32	3	14	1
Financial, insurance & other professional services	2,001	100	1,768	88	138	7	53	3	41	2
Real estate and facilities management	978	100	848	87	75	8	38	4	18	2
Government services	2,209	100	1,835	83	173	8	111	5	89	4
Education	3,088	100	2,625	85	235	8	154	5	75	2
Health	2,087	100	1,713	82	199	10	111	5	64	3
Care	1,729	100	1,409	81	183	11	97	6	40	2
Whole Economy	28,855	100	24,331	84	2,446	8	1,312	5	766	3
Unweighted bases	*194.448*	100	*161.501*	83	*17.022*	9	*8.693*	4	*7.232*	4

Source: Labour Force Survey 2010, ONS

The sector accounts for slightly varying shares of the nations' and regions' employment. Within England and Scotland the sector's share of employment accounts for five per cent, but this falls to four per cent within Northern Ireland and stands at only three per cent in Wales.

Across the English regions, the employment share reaches six per cent in the East Midlands, four per cent in both the South West and North East, while the remaining regions each have a five per cent share (Table 2.15). The East Midlands share is largely a consequence of the numerous logistical companies based in the region such as the distribution centres at DIRFT near Daventry and Magna Park in Lutterworth.

Table 2.15 Total employment by sector and English region, % share within region (2010)

	London	South East	East of England	South West	West Midlands	East Midlands	Yorkshire and the Humber	North West	North East
Agriculture, forestry and fishing	*	1	1	3	2	2	1	1	1
Energy production and utilities	1	2	1	2	2	2	1	2	2
Manufacturing	4	9	11	11	14	15	12	12	11
Construction, building services, engineering and planning	9	10	10	9	9	9	9	9	9
Wholesale and retail trade	12	14	14	14	14	16	16	16	15
Transportation and storage	**5**	**5**	**5**	**4**	**5**	**6**	**5**	**5**	**4**
Hospitality, tourism and sport	8	7	6	7	7	7	7	7	7
Information and communication technologies	3	4	3	3	2	2	2	2	2
Creative media and entertainment	8	4	3	3	2	2	2	2	2
Financial, insurance & other professional services	13	8	8	6	6	5	6	6	4
Real estate and facilities management	5	4	3	4	3	3	3	4	3
Government services	8	8	7	7	7	7	8	8	9
Education	10	11	11	11	11	11	11	10	11
Health	6	7	6	7	7	7	8	8	8
Care	5	5	5	6	6	5	6	6	8
Whole Economy	100	100	100	100	100	100	100	100	100
Weighted base	3,726	4,147	2,779	2,515	2,413	2,099	2,382	3,126	1,145
Unweighted bases	*18.925*	*26.614*	*18.998*	*17.015*	*16.534*	*15.044*	*17.467*	*22.418*	*8.486*

Source: Labour Force Survey 2010, ONS

** Sample size too small for reliable estimate.*

In absolute terms, the South East employs the greatest number of individuals in the sector (222,000), followed by London (193,000), the North West (165,000) and the East of England (149,000). This reflects the major transport hubs. For example the South East, London and the East of England have a number of international gateways, with Dover, the channel tunnel, Southampton, Heathrow, Gatwick, Stansted, the Port of Tilbury and Felixstowe, while the North West has the Port of Liverpool and Manchester airport.

Employment in the UK transportation and storage sector, peaked in 2008 with nearly 1.52m workers but since then it has decreased by 69,000 people, most likely as a consequence of the economic climate. Employment in 2010 stands three per cent below the 2002 employment level (Table 2.16) and is one of only five sectors which has seen a contraction in its labour force since 2002. The growing popularity of large scale economies contributes to this trend, as businesses within the sector cut the numbers of staff, but increase their GVA.

The number of business closures across the nations reveals varying employment fortunes between 2002 and 2010. Northern Ireland experienced a positive increase in labour demand of 17 per cent – much greater than the all economy growth of seven per cent. While England, Scotland and Wales all saw a decline in labour of three, four and six per cent respectively.

Table 2.16 Total employment by sector 2002-2010 (UK)('000s)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
	000s	000s	000s	000s	000s	000s	000s	000s	000s
Agriculture, forestry and fishing	394	389	396	421	417	422	448	364	406
Energy production and utilities	434	389	407	422	436	479	486	483	473
Manufacturing	4,153	3,870	3,687	3,615	3,562	3,575	3,368	2,915	2,970
Construction, building services, engineering and planning	2,223	2,333	2,434	2,500	2,560	2,615	2,639	2,875	2,697
Wholesale and retail trade	4,368	4,545	4,536	4,489	4,404	4,349	4,446	4,143	4,140
Transportation and storage	**1,486**	**1,485**	**1,461**	**1,511**	**1,501**	**1,490**	**1,517**	**1,489**	**1,448**
Hospitality, tourism and sport	1,718	1,720	1,730	1,714	1,773	1,807	1,799	1,991	2,046
Information and communication technologies	813	813	839	832	835	851	871	784	761
Creative media and entertainment	1,102	1,139	1,108	1,111	1,138	1,142	1,156	975	987
Financial, insurance & other professional services	1,671	1,662	1,623	1,677	1,696	1,744	1,736	2,038	2,001
Real estate and facilities management	898	869	924	946	984	1,036	1,028	948	978
Government services	2,115	2,166	2,194	2,251	2,282	2,285	2,323	2,265	2,209
Education	2,295	2,414	2,543	2,580	2,642	2,636	2,664	2,939	3,088
Health	1,811	1,881	1,980	2,048	2,079	2,033	2,118	2,038	2,087
Care	1,288	1,338	1,408	1,456	1,479	1,446	1,506	1,721	1,729
Whole Economy	27,908	28,172	28,456	28,740	28,987	29,164	29,382	28,811	28,855
Unweighted base	*247.273*	*238.005*	*230.951*	*227.794*	*222.196*	*221.046*	*217.000*	*203.221*	*194.448*

Source: Labour Force Survey 2010, ONS

Within the sub-sectors of the transport sector, employment is distributed as follows:

- Land transport – 50 per cent of sector employment
- Water transport – three per cent
- Air transport – four per cent
- Warehousing and support activities – 22 per cent
- Postal and courier activities – 21 per cent

Aside from the commuter-friendly characteristics of land transport (proximity to home and work, accessibility and low cost), the large proportion employed within the sub-sector stems from the fact that it includes variety of modes, such as rail, light rail and metro, bus and coach, taxi and private hire, and freight transport by road, which is the dominant means of transporting goods across the UK (DfT 2011d).

2.2.1 European employment

Analysis of Eurostat data reveals the employment patterns by sector across European Nations. The main sectors, in terms of employment in the European Union are manufacturing, wholesale and retail, and health and care. 10.84m individuals work within the transport and storage sector across the European nations. Of these 16 per cent are within Germany, 13 per cent in the UK and 12 per cent in France. In percentage terms, the sector employment averages five per cent across the UK, which is the same as the EU average.

3 The workforce

Chapter Summary

- The dominant occupational groups in the sector are machine operatives and elementary occupations accounting for 60 per cent of employment (compared with 18 per cent in the wider economy)
- The majority of sector employment is concentrated within just 15 occupations, with driving positions accounting for 36 per cent
- In terms of gender / status the sector is dominated by full-time jobs, employees, permanent workers and male workers
- Non-standard working patterns (nights and early mornings, distant travel) and informal recruitment channels across the sector are likely to be limiting the diversity of the workforce, particularly in terms of women
- There has been a decline in the number of young people working in the sector, while the number of older workers has increased reflecting the UK's ageing population
- Recruitment of younger workers is further hampered by age restrictions, negative perceptions of the sector, and a lack of understanding of the sector and the range of roles available, particularly in freight logistics industries
- The number of individuals born outside of the UK working in the sector has increased since 2002 and now accounts for 16 per cent of the workforce. This reflects the global nature of the sector and the expansion of the EU.

This chapter details the occupational structure of the economy and transportation and storage sector, highlighting the prevalent jobs, the working patterns and the characteristics of the workforce.

3.1 The jobs people do

The overall structure of employment for the UK and national economies can be seen in Table 3.1.

The occupations which employ the largest number of people, across the UK economy, are the three higher skilled occupational groups, which together account for 44 per cent of all jobs. There is little difference in the employment distribution between the nations, apart from Northern Ireland. Here the proportion of skilled trade occupations is higher compared to the UK average.

Table 3.1 Employment by occupation and nation, 2010 (UK)

	UK		England		Scotland		Wales		Northern Ireland	
	000s	%	000s	%	000s	%	000s	%	000s	%
Managers and Senior Officials	4,455	15	3,866	16	331	14	173	13	85	11
Professional Occupations	4,028	14	3,454	14	299	12	176	13	100	13
Associate Professional and Technical	4,265	15	3,638	15	353	14	186	14	88	12
Administrative and Secretarial	3,181	11	2,670	11	270	11	135	10	106	14
Skilled Trades Occupations	3,061	11	2,502	10	285	12	149	11	125	16
Personal Service Occupations	2,544	9	2,123	9	226	9	131	10	64	8
Sales and Customer Service Occupations	2,146	7	1,772	7	209	9	111	8	54	7
Process, Plant and Machine Operatives	1,907	7	1,570	6	174	7	99	8	63	8
Elementary Occupations	3,257	11	2,724	11	300	12	153	12	81	11
All occupations	28,842	100	24,319	100	2,446	100	1,311	100	765	100
Unweighted base	*194.372*		*161.438*		*17.020*		*8.690*		*7.224*	

Source: Labour Force Survey 2010 (ONS)

Analysis at a more detailed occupation level reveals that 38 per cent of the UK's total employment is concentrated in 15 occupations (Table 3.2). Given the large number of occupations across the economy, no one occupation dominates.

Table 3.2 Largest occupational groups, UK (2010)

Rank	Occupation	000s	% workforce
1	7111 Sales and retail assistants	1,233	4
2	6115 Care assistants and home carers	741	3
3	4150 General office assistants or clerks	656	2
4	9233 Cleaners, domestics	588	2
5	1132 Marketing and sales managers	532	2
6	4122 Accnts wages clerk, bookkeeper	523	2
7	6124 Educational assistants	513	2
8	3211 Nurses	509	2
9	2314 Secondary eductn teaching prfsnals	445	2
10	2315 Prim & nurs eductn teaching profs	432	1
11	1121 Prod. works & maintenance managers	414	1
12	9223 Kitchen and catering assistants	411	1
13	1163 Retail and wholesale managers	394	1
14	9149 Oth good hndlng & storage occup nec	382	1
15	2132 Software professionals	327	1
	Other occupations	20742	72
	Total workforce	28,842	100
	Unweighted base (000s)	*194.372*	

Source: Labour Force Survey 2010 (ONS)

In the transportation and storage sector, the top three occupational groups are the lower skilled groups of process, plant and machine operatives (40 per cent) and elementary occupations (20 per cent) and the high skilled group of managers and senior officials (11 per cent) (Table 3.3).

Table 3.3 Employment by occupation and sector, 2010 (UK)

	Transportation and storage		All economy	
	000s	%	000s	%
Managers and Senior Officials	155	11	4,455	15
Professional Occupations	33	2	4,028	14
Associate Professional and Technical	99	7	4,265	15
Administrative and Secretarial	140	10	3,181	11
Skilled Trades Occupations	48	3	3,061	11
Personal Service Occupations	66	5	2,544	9
Sales and Customer Service Occupations	39	3	2,146	7
Process, Plant and Machine Operatives	579	40	1,907	7
Elementary Occupations	288	20	3,257	11
All occupations	1,447	100	28,842	100
Unweighted base	*9.730*		*194.372*	

Source: Labour Force Survey 2010 (ONS)

Specific sector jobs role in the occupational groups include:

- Managers and senior officials - transport and distribution managers, storage and warehouse managers, port managers, station managers
- Associate professional and technical - Importers and exporters, train drivers, air traffic controllers, aircraft pilots and flight engineers, ship and hovercraft officers
- Administrative and secretarial - transport and distribution clerks
- Skilled trade occupations - motor mechanics, vehicle engineers
- Personal service occupations - rail travel assistants, air travel assistants
- Process, plant and machine operatives - LGV, van, taxi, bus and coach drivers, seafarers, barge, lighter and boat operatives, rail transport operatives
- Elementary occupations - warehouse operatives, stevedores, dockers, postal workers, mail sorters and couriers

Overtime, the sector has seen an increase in the proportion of workers in the process, plant and machine operatives group. It has risen from 36 to 40 per cent between 2002 and 2010. Elementary workers similarly have experienced a five percentage point increase from 15 to 20 per cent. However, the levels of managers fluctuated slightly between 12 and 14 per cent before reaching 11 per cent in 2010. These changes in occupational proportions reflect the general growth of the sector in the last decade and its dependency on the drivers who directly operate the service.

The occupations structure at a four digit Standard Occupational Classification (SOC) level for the sector is shown in Table 3.4. This shows that 69 per cent work within the 15 job roles, with four of the top six roles being a driving occupation and the other two elementary positions. This demonstrates that the sector is dominated by the lower occupational groups of machine operatives and elementary occupations.

Although LGV and van drivers are transport roles, many drivers work within other sectors such as retail and construction so are not included in the below analysis. ONS (2011) reveals that in total there are 299,000 LGV drivers and 180,000 van drivers.

Table 3.4 Largest occupational groups within sector, UK (2010)

Rank	Occupation	000s	% workforce
1	8214 Taxi, cab drivers and chauffeurs	176	13
2	8211 Heavy goods vehicle drivers	156	11
3	9211 Post wrkr, mail sort, msngr, courir	138	10
4	8213 Bus and coach drivers	114	8
5	9149 Oth good hndlng & storage occup nec	99	7
6	8212 Van drivers	59	4
7	1161 Transport and distribution managers	46	3
8	6214 Air travel assistants	33	2
9	4134 Transport and distribution clerks	31	2
10	4150 General office assistants or clerks	29	2
11	7212 Customer care occupations	23	2
12	4122 Accnts wages clerk, bookkeeper	19	1
13	6215 Rail travel assistants	17	1
14	3514 Train drivers	16	1
15	5231 Motor mechanics, auto engineers	15	1
	Other occupations	436	31
	Total workforce	1,406	100
	Unweighted base (000s)	*9.73*	

Source: Labour Force Survey 2010 (ONS)

Further analysis of the sub-sector reveals further differences in the major occupational structure (Table 3.5).

Table 3.5 Employment by occupation and sub-sector, 2010 (UK) (%)

	Land Transport	Water Transport	Air Transport	Warehousing and Support Activities	Postal and Courier Activities
Managers and Senior Officials	8	16	12	14	12
Professional Occupations	2	*	*	3	*
Associate Professional and Technical	4	33	23	10	2
Administrative and Secretarial	9	*	*	12	10
Skilled Trades Occupations	3	*	*	4	*
Personal Service Occupations	4	*	36	5	*
Sales and Customer Service Occupations	2	*	*	3	4
Process, Plant and Machine Operatives	64	*	*	17	17
Elementary Occupations	4	*	*	31	50
All occupations	100	100	100	100	100

Source: Labour Force Survey 2010 (ONS)

** Sample size too small for reliable estimate*

Industry characteristics determine the prevailing role types within the sectors. Land transport is heavily dependent upon its drivers (e.g. LGV, taxi & private hire, bus and coach), hence account for the largest occupational role, while customer service roles are more prevalent in air transport and thereby make up a large percentage of its workforce, while water transport depends upon ship officers and seafarers. Elementary roles, such as postal workers and couriers, the third largest occupational group in the sector, dominate the postal and courier activities sub-sector.

Warehousing and support activities has the broadest range of employment across the occupational groups. This sub-sector consists of a number of industries which require different skills levels. For example, freight forwarding has a greater need for higher level skills roles like importers and exporters, while warehouse and storage has a greater need for goods handling and machine operatives such as fork-lift truck drivers.

3.2 Working patterns

The following section investigates the working patterns of the employees within the economy and the sector. This includes the working hours, employment status and permanent and temporary employers.

3.2.1 Working hours

- In terms of employment status in the sector, 84 per cent are in full-time jobs, which is greater than the all economy figure of 73 per cent (Table 3.6). Between 2002 and 2010, the sector has witnessed a 21 per cent increase in the number of part-time workers, compared to ten per cent for all economy. The number in full-time jobs has decreased by six per cent in the same period, while the all economy saw a one per cent increase.
- This can be partly explained by the general slowdown of the economy and more people deciding to undertake a part-time job in order to ease their strained budgets. The fact that businesses prefer to employ part-time workers in order to adjust to unpredictable fluctuations in demand is also of significant importance. Additionally, many bus drivers undertake part-time jobs as coach and taxi drivers. Second jobs in low-skilled professions in passenger transport are also popular among people from across the economy.

Table 3.6 Working hours by sector, 2010 (UK)

	Full-time	Part-time	Full-time	Part-time	Weighted base	Unweighted base
	000s	000s	%	%	000s	000s
Agriculture, forestry and fishing	326	79	80	19	406	2.976
Energy production and utilities	435	38	92	8	473	3.244
Manufacturing	2,688	281	91	9	2,969	20.400
Construction, building services, engineering and planning	2,435	260	90	11	2,695	17.917
Wholesale and retail trade	2,549	1,590	62	39	4,139	27.571
Transportation and storage	**1,218**	**229**	**84**	**16**	**1,447**	**9.729**
Hospitality, tourism and sport	1,127	920	55	44	2,046	13.183
Information and communication technologies	682	79	90	10	761	4.875
Creative media and entertainment	737	249	75	25	986	6.186
Financial, insurance & other professional services	1,623	377	81	18	2,001	12.804
Real estate and facilities management	643	334	66	35	977	6.561
Government services	1,800	408	82	19	2,208	15.098
Education	1,872	1,215	61	40	3,087	21.537
Health	1,344	742	64	34	2,086	14.742
Care	1,056	672	61	37	1,728	12.001
All economy	21,083	7,760	73	27	28,843	194.363

Source: Labour Force Survey 2010, ONS

There is some variation in the working hours across the four nations (Table 3.7). Wales has the greatest proportion of part-time workers (23 per cent) in the sector, while Northern Ireland has the least (87 per cent are employed full-time). The sector's proportion of full-time workers is greater than the all economy in each nation, indicating the dominance of full-time working patterns.

Even though the sector is dominated by full-time workers, employees in the sector have more non-standard working patterns. The sector can be characterised by working unsocial hours, such as evening, night and early morning, and during weekends and holidays (European Foundation 2004).

Table 3.7 Working hours by sector and nation, 2010 (%)

	England				Scotland				Wales				Northern Ireland			
	Full-time	Part-time	Weighted base	Unweighted base	Full-time	Part-time	Weighted base	Unweighted base	Full-time	Part-time	Weighted base	Unweighted base	Full-time	Part-time	Weighted base	Unweighted base
	%	%	000s	000s	%	%	000s	000s	%	%	000s	000s	%	%	000s	000s
Agriculture, forestry and fishing	79	21	296	2.112	83	17	51	0.385	85	*	31	0.198	88	*	27	0.281
Energy production and utilities	92	8	346	2.336	91	9	88	0.620	96	*	25	0.157	92	*	14	0.131
Manufacturing	90	10	2,541	17.233	92	8	199	1.431	93	7	138	0.905	93	*	91	0.831
Construction, building services, engineering and planning	90	10	2,268	14.834	93	7	244	1.702	93	7	112	0.717	93	*	71	0.664
Wholesale and retail trade	62	38	3,469	22.822	58	42	352	2.369	57	42	205	1.325	63	37	112	1.055
Transportation and storage	**84**	**16**	**1,251**	**8.292**	**83**	**17**	**117**	**0.822**	**80**	**23**	**46**	**0.308**	**87**	*	**33**	**0.307**
Hospitality, tourism and sport	55	45	1,704	10.849	52	48	198	1.295	51	49	100	0.636	62	38	44	0.403
Information and communication technologies	90	10	675	4.269	89	11	56	0.377	88	*	18	0.114	88	*	13	0.115
Creative media and entertainment	75	25	875	5.406	68	32	64	0.436	70	23	32	0.214	72	*	14	0.130
Financial, insurance & other professional services	82	18	1,768	11.123	78	22	138	0.948	77	22	53	0.358	81	19	41	0.375
Real estate and facilities management	65	35	847	5.623	73	27	75	0.519	63	35	38	0.254	74	*	18	0.165
Government services	81	19	1,835	12.302	84	16	173	1.210	81	23	111	0.744	84	16	89	0.842
Education	60	40	2,624	18.075	64	36	234	1.677	66	32	154	1.059	67	33	75	0.726
Health	64	36	1,712	11.931	65	35	198	1.409	67	31	111	0.771	71	29	64	0.631
Care	61	39	1,409	9.629	60	40	183	1.308	61	40	97	0.665	62	38	40	0.399
All economy	73	27	24,321	161.435	73	27	2,444	17.008	72	27	1,311	8.689	77	23	766	7.231

Source: Labour Force Survey 2010, ONS

** Sample size too small for reliable estimate.*

Sub-sectorally, there is little difference in full-time and part-time workers:

- Land transport – 84 per cent full-time
- Water transport – 86 per cent full-time
- Air transport – 86 per cent full-time
- Warehousing and support activities – 89 per cent full-time
- Postal and couriers – 80 per cent full-time

Some industries that make up the sub-sectors are more dependent on part-time workers than others, with land transport being perhaps the best example. 31 per cent of employed taxi and private hire drivers work on a part-time basis. This is largely dominated by weekend-only workers, who often work as full-time drivers for bus or coach companies during the week. However, due to fact that the two largest industries, freight transport by road and bus and coach workers, are dominated by full-time workers (80 and 86 per cent respectively) the industries differences are masked (ONS 2010).

3.2.2 Employment status

Table 3.8 details the employment status, in terms of employee and self-employed across the UK sectors. The vast majority (83 per cent) of the sector's workforce are employees of businesses, while 17 per cent are classified as self-employed. This differs slightly from the whole economy proportions (86 per cent and 14 per cent respectively), and stems mainly from the fact that unlike other sectors, such as manufacturing or construction, firms in the transportation and storage sector's largest sub-sector, land transportation, can operate a transport service even if they are made up of one single driver with a vehicle.

- Between 2002 and 2010, the sector has witnessed a six per cent decrease in the number of workers classified as employees, compared to a two per cent growth for all economy. The number of self-employed individuals increased by 16 per cent in the same period, similar to the all economy figure of 18 per cent. This can be partially attributed to the 21 per cent increase of part-time workers discussed in section 3.2.1, as many of the relatively new sector entrants set up their own part-time businesses to compensate for shortcomings from their main income sources.

Table 3.8 Employment status by sector, UK, 2010 ('000s)

	Employee	Self-employe	Employee	Self-employed	Weighted base	Unweighted base
	000s	000s	%	%	000s	000s
Agriculture, forestry and fishing	189	202	47	50	405	2.973
Energy production and utilities	446	25	95	5	472	3.240
Manufacturing	2,776	184	94	6	2,968	20.397
Construction, building services, engineering and planning	1,716	964	64	36	2,692	17.897
Wholesale and retail trade	3,731	390	90	9	4,133	27.534
Transportation and storage	**1,194**	**250**	**83**	**17**	**1,447**	**9.729**
Hospitality, tourism and sport	1,817	219	89	11	2,044	13.168
Information and communication technologies	635	124	84	16	761	4.871
Creative media and entertainment	672	310	68	31	987	6.191
Financial, insurance & other professional services	1,706	291	85	15	2,001	12.804
Real estate and facilities management	744	229	76	23	977	6.561
Government services	2,145	58	97	3	2,207	15.091
Education	2,891	188	94	6	3,082	21.507
Health	1,928	155	92	7	2,085	14.740
Care	1,577	140	92	8	1,723	11.971
All economy	24,774	3,952	86	14	28,817	194.200

Source: Labour Force Survey 2010, ONS

There is some variation in the employment status across the four nations (Table 3.9). Wales and Northern have the greatest proportion of self-employed workers within the sector, 23 per cent each, which is much greater than the nations' all economy data (14 and 16 per cent respectively).

Table 3.9 Employment status by sector and nation, 2010 (%)

	England				Scotland				Wales				Northern Ireland		
	Employee	Self-employed	Weighted base	Unweighted base	Employee	Self-employed	Weighted base	Unweighted base	Employee	Self-employed	Weighted base	Unweighted base	Employee	Self-employed	Weighted base
	%	%	000s	000s	%	%	000s	000s	%	%	000s	000s	%	%	000s
Agriculture, forestry and fishing	50	46	295	2.110	49	50	51	0.385	33	62	31	0.197	*	75	*27*
Energy production and utilities	94	6	346	2.334	95	*	87	0.619	99	*	25	0.157	95	*	*14*
Manufacturing	93	6	2,540	17.229	95	5	199	1.432	94	6	138	0.905	93	7	*91*
Construction, building services, engineering and planning	63	37	2,266	14.822	77	23	244	1.701	65	35	112	0.717	55	45	*70*
Wholesale and retail trade	91	9	3,466	22.800	91	9	351	2.359	86	14	204	1.323	84	16	*112*
Transportation and storage	**83**	**17**	**1,252**	**8.294**	**85**	**15**	**117**	**0.820**	**76**	**23**	**46**	**0.308**	**77**	**23**	***33***
Hospitality, tourism and sport	89	10	1,702	10.836	89	11	198	1.295	87	12	100	0.634	82	17	*44*
Information and communication technologies	84	16	674	4.266	82	18	56	0.377	77	*	18	0.113	87	*	*13*
Creative media and entertainment	68	32	875	5.409	76	24	65	0.438	60	39	32	0.214	75	*	*14*
Financial, insurance & other professional services	85	15	1,768	11.122	90	10	138	0.948	81	19	53	0.359	92	*	*41*
Real estate and facilities management	75	24	847	5.624	85	15	75	0.520	78	21	37	0.252	67	*	*18*
Government services	97	3	1,834	12.298	97	3	173	1.209	97	*	111	0.742	99	*	*89*
Education	94	6	2,619	18.049	95	5	234	1.676	96	4	153	1.056	95	*	*75*
Health	92	8	1,712	11.930	94	6	199	1.410	92	8	111	0.769	95	*	*64*
Care	91	9	1,404	9.601	93	6	183	1.306	95	*	97	0.665	90	*	*40*
All economy	86	14	24,301	161.314	89	11	2,442	16.995	85	14	1,309	8.674	84	16	765

Source: Labour Force Survey 2010, ONS

** Sample size too small for reliable estimate.*

Weighted & unweighted bases also include unpaid family workers

High proportions of employees are evident in four of the five sub-sectors:

- Land transport – 72 per cent are employees
- Water transport – 92 per cent are employees
- Air transport – 98 per cent are employees
- Warehousing and support activities – 97 per cent are employees
- Postal and couriers – 88 per cent are employees

Taxi and private hire operators, with the exception of few large companies, tend to be self-employed and most often do not hire any employees. This is the main reason for the land transport (of which taxi and private hire operations make up a large proportion) having the lowest percentage of employees within the sector. Significant numbers of coach drivers tend also to be self-employed rather than employers.

3.2.3 Permanent and temporary employees

- The transportation and storage sector's level of permanent workers is one percentage point greater than the whole economy figure of 94 per cent (Table 3.10). Between 2002 and 2010, the number of permanent workers in the sector contracted by six per cent, compared with a two per cent growth for all economy. However, the number of temporary workers increased by two per cent in the same period, compared to the five per cent decrease witnessed across the whole economy. This trend has become more popular in the current economic climate as it can decrease operating costs and allow more flexibility for employers.

Table 3.10 Permanent and temporary employees by sector, UK, 2010 ('000s and %)

	Permanent	Temporary	Permanent	Temporary	Weighted base	Unweighted base
	000s	000s	%	%	000s	000s
Agriculture, forestry and fishing	181	8	96	4	189	1.306
Energy production and utilities	430	16	96	4	446	3.060
Manufacturing	2652	123	96	4	2775	18.984
Construction, building services, engineering and planning	1648	66	96	4	1714	11.317
Wholesale and retail trade	3573	156	96	4	3728	24.614
Transportation and storage	**1132**	**62**	**95**	**5**	**1194**	**7.970**
Hospitality, tourism and sport	1631	183	90	10	1814	11.563
Information and communication technologies	612	22	97	3	635	4.048
Creative media and entertainment	615	56	92	8	671	4.181
Financial, insurance & other professional services	1651	55	97	3	1706	10.835
Real estate and facilities management	704	39	95	5	743	4.957
Government services	2028	117	95	5	2145	14.642
Education	2563	327	89	11	2890	20.195
Health	1825	103	95	5	1928	13.639
Care	1474	103	93	7	1576	10.953
All economy	23247	1513	94	6	24760	166.200

Source: Labour Force Survey 2010, ONS

The proportion of permanent workers in each of the sub-sectors is:

- Land transport – 95 per cent are permanent
- Water transport – 90 per cent are permanent
- Air transport – 96 per cent are permanent
- Warehousing and support activities – 93 per cent are permanent
- Postal and couriers – 96 per cent are permanent

The sub-sectors are dominated by permanent workers. However, this data masks specific rises in temporary employment seen during Christmas and summer months. For example, in 2011, the Royal Mail had to increase its workforce by 18,000 to cope with the demand of two billion extra Christmas items (Royal Mail 2012). Similarly, inland passenger water transport, experiences large seasonal fluctuations, with demand higher in summer months and hence a larger dependency on temporary seasonal workers.

The main reason behind the high proportion of permanent employment within the air transport sub-sector is the fact that it is heavily regulated and employers want to keep their staff. Additionally, the comparatively high wages have a positive impact on staff retention.

3.3 Workforce characteristics

This section analyses the UK and the transportation and storage sector workforce characteristics of gender, age and ethnicity.

3.3.1 Gender

Across the UK economy 54 per cent of the labour force are male, and this proportion has been stable since 2002. There is very little variation across the UK and nations all economy workforces of male and female workers.

Table 3.11 Employment by gender and nation (2010)

	Male	Female	Total	Male	Female	Total	Unweighted base
	000s	000s	000s	%	%	%	000s
UK	15,439	13,416	28,855	54	46	100	*194.448*
England	13,081	11,250	24,331	54	46	100	*161.501*
Scotland	1,257	1,189	2,446	51	49	100	*17.022*
Wales	692	620	1,312	53	47	100	*8.693*
Northern Ireland	409	358	766	53	47	100	*7.232*

Source: Labour Force Survey 2010, ONS

At 80 per cent of the transportation and storage sector's labour force, men represent the large majority of the workforce (Table 3.12). The sector has a much higher percentage of roles held by men than that seen across the whole economy, 54 per cent. This stems mainly from the traditionally male-dominated character of the sector.

There is some deviation from the sector's UK figure across the nations. In Northern Ireland men make up approximately 88 per cent of the workforce, while in Scotland and Wales this proportion stands at 83 per cent.

Table 3.12 Employment within sector by gender and nation (2010)

	Male	Female	Total	Male	Female	Total	Unweighted base
	000s	000s	000s	%	%	%	000s
UK	1,157	291	1,448	80	20	100	*9.733*
England	993	259	1,252	79	21	100	*8.296*
Scotland	97	20	117	83	17	100	*0.822*
Wales	38	8	46	83	17	100	*0.308*
Northern Ireland	29	*	33	88	*	100	*0.307*

Source: Labour Force Survey 2010, ONS

** Sample size too small for reliable estimate.*

The sub-sector data on gender reveals further gender variations:

- Land transport – 85 per cent male
- Water transport –75 per cent male
- Air transport – 61 per cent male
- Warehousing and support activities – 74 per cent male
- Postal and courier – 78 per cent male

Customer service related professions in the sector tend to be female-dominated, with air assistance (cabin crew) roles largely held by women, contributing to the higher proportion of women seen within air transport, compared to other sub-sectors. Driving roles tend to be held by men, and hence the land transport sub-sector has a large proportion of male workers.

A European Foundation report (2004) reveals some reasons why women are poorly represented particularly in freight transport by road. It includes factors like the work being hard to combine with family life, the high physical workload, and for international drivers the long time spent away from home.

Recruitment methods utilised by companies may further limit the opportunities for non-typical workers (i.e. women and Black, Asian & Minority Ethnic). Marchington *et al.* (2003) found that employers in small road haulage firms (which dominate the sector) use a range of formal and informal methods to attract staff, but word-of-mouth recommendations were widespread. This was either from family and friends of existing staff, or through the 'driver network'.

Employers have recognised the need for action on gender issues and are adopting policies which aim to encourage greater gender balance. For example, one scheme is Women in Logistics UK (2012). This group was formed with the aim to help increase the number of women in the logistics sector, improve life for those women already working and therefore retain their talents, and address the gender imbalance. Membership is available for both men and women and the group provides networking and mentoring opportunities. Another example is a bespoke training programme for women, titled 'Step on the Bus'. It helps both employed and unemployed women to achieve their career aspirations in passenger transport areas of the sector.

In the transportation and storage sector, men occupy the biggest share of jobs in seven of the nine occupational groups (Table 3.13). Only two occupational groups, administrative and secretarial, and personal service occupations are dominated by women (around two thirds in each case). This reflects the overall economy trend, where administrative positions are predominantly held by women.

At a finer level of disaggregation, there are even further differences (ONS 2011b). For example within process, plant and machine operatives we can see that less than one per cent of LGV drivers are women.

Table 3.13 Gender profile by broad occupational group, 2010 (UK)

	Transportation and storage			All economy		
	Male	Female	Total	Male	Female	Total
	%	%	000s	%	%	000s
1 Managers and Senior Officials	76	24	155	65	35	4,455
2 Professional occupations	71	29	33	56	44	4,028
3 Associate Professional and Technical	81	19	99	50	50	4,265
4 Administrative and Secretarial	38	62	140	22	78	3,181
5 Skilled Trades Occupations	96	*	48	92	8	3,061
6 Personal Service Occupations	39	61	66	17	83	2,544
7 Sales and Customer Service Occupations	52	48	39	35	65	2,146
8 Process, Plant and Machine Operatives	95	5	579	88	12	1,907
9 Elementary Occupations	83	17	288	55	45	3,257
All occupations	80	20	1447	54	46	28,842

Source: Labour Force Survey 2010 (ONS)

** Sample size too small for reliable estimate*

Since 2002 there has been a shift in the gender breakdown within some of the broad occupational groups. Albeit small, the number of women in professional occupations increased by 33 per cent, while the number of men decreased by 13 per cent.

The roles of sales and customer service positions have seen an increase in the proportion of male workers since 2002 from 41 to 52 per cent, but overall the numbers working in this group decreased by 32 per cent. This can be explained by the rapid development of technology. For example, the development of online travel booking or delivery tracking systems aids service efficiency and reduces the dependence on a labour force.

3.3.2 Age profile of workforce

The age profile of the UK and nations across the whole UK economy is presented in Table 3.14. This shows that the age profiles across the nations are similar, with a high percentage of the workforce between 45 and 59 year olds.

Table 3.14 Age profile of workforce by nation (2010)

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
16-18	673	2	569	2	58	2	35	3	10	1
19-24	3,037	11	2,541	10	274	11	136	10	85	11
25-34	6,324	22	5,365	22	500	20	267	20	192	25
35-44	7,029	24	5,932	24	589	24	311	24	197	26
45-59	9,331	32	7,826	32	834	34	434	33	236	31
60-64	1,631	6	1,394	6	129	5	79	6	30	4
65 +	831	3	702	3	62	3	49	4	17	2
Total	28,855	100	24,331	100	2,446	100	1,312	100	766	100
Unweighted base	*194.448*		*161.501*		*17.022*		*8.693*		*7.232*	

Source: Labour Force Survey 2010 (ONS)

Since 2002, the total UK working population has remained relatively stable. However, some age categories have shown major shifts in the numbers (Table 3.15). The number of young workers (under 25) has declined by approximately 317,000 workers between 2002 and 2010. This is perhaps linked to the growth in higher education entrants. On the other hand, older workers (over 60) have increased by nearly 876,000 in the same period. This highlights the ageing working population the UK faces, as well as the difficulties young people have entering the job market.

Table 3.15 Age profile of workforce 2002-2010 (UK)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
	000s	000s	000s	000s	000s	000s	000s	000s	000s
Under 18	1,078	1,076	1,077	1,028	976	938	925	765	673
19-24	2,948	2,973	3,072	3,097	3,179	3,224	3,221	3,048	3,037
25-34	6,505	6,361	6,279	6,289	6,250	6,242	6,279	6,186	6,324
35-44	7,317	7,416	7,490	7,525	7,533	7,528	7,442	7,241	7,029
45-59	8,474	8,638	8,748	8,915	9,017	9,046	9,171	9,182	9,331
60-64	1,107	1,186	1,252	1,306	1,405	1,545	1,652	1,650	1,631
65 +	479	522	538	580	625	641	693	739	831
Total	27,908	28,172	28,456	28,740	28,987	29,164	29,382	28,811	28,855
Unweighted base	*247.273*	*238.005*	*230.951*	*227.794*	*222.196*	*221.046*	*217.000*	*203.221*	*194.448*

Source: Labour Force Survey 2010 (ONS)

Table 3.16 highlights the transportation and storage sector's age profile across the UK and the nations. 83 per cent working in the sector across the UK are aged between 25 and 60, with one in ten aged 60 years old and above. Wales has a proportionately higher number of workers over 60 (18 per cent), which means that the sector in Wales could face a disproportionate level of replacement demand for labour as older people retire. Although the change in retirement law and trend towards longer working lifetime may mitigate this to some extent.

Table 3.16 Age profile of sector workforce (by nation)

	UK		England		Scotland		Wales		Northern Ireland	
	000s	%	000s	%	000s	%	000s	%	000s	%
Under 25	92	6	78	6	9	8	3	7	2	5
25-34	269	19	236	19	17	15	9	19	7	22
35-44	381	26	334	27	27	23	10	22	10	30
45-59	555	38	475	38	53	45	16	34	11	34
60+	151	10	129	10	11	9	8	18	3	9
Total	1,448	100	1,252	100	117	100	46	100	33	100
Unweighted base (000s)	*9.733*		*8.296*		*0.822*		*0.308*		*0.307*	

Source: Labour Force Survey 2010 (ONS)

Similar to UK economy, the sector has also seen shifts in the workforce's age profile (Table 3.17). In recent years, the number of older workers in employment in the sector has risen. In 2010, 151,000 individuals aged 60 years old and above were in employment, which is 68 per cent more than in 2002, although those in this age group still only account for a relatively small proportion of those employed (Table 3.17). For people under 25 there has been a decline in numbers of 54,000 or 37 per cent. In 2010 younger workers accounted for only six per cent of the workforce, compared with the 10 per cent in 2002.

Table 3.17 Age profile of sector workforce 2002-2010 (UK)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
	000s	000s	000s	000s	000s	000s	000s	000s	000s
Under 25	146	140	135	138	145	143	124	102	92
25-34	349	340	316	324	314	306	303	265	269
35-44	418	421	425	412	409	414	428	432	381
45-59	483	482	482	531	517	504	529	539	555
60+	90	103	103	105	115	123	132	151	151
Total	1,486	1,485	1,461	1,511	1,501	1,490	1,517	1,489	1,448
Unweighted base (000s)	*12.980*	*12.343*	*11.703*	*11.862*	*11.403*	*11.117*	*11.103*	*10.462*	*9.733*

Source: Labour Force Survey 2010 (ONS)

The age profiles for each of the transportation and storage sub-sectors are highlighted in Table 3.18. While the majority of workers in each sub-sector are between 25 and 59 years of age, it is clear to see that 13 per cent of the land transport workers are over the age of 60. This reflects mainly the elder population of freight and passenger transport drivers, mostly across the road transport operators but also in rail.

Table 3.18 Age profile of sub-sector workforce 2010 (UK)

	Land transport		Water transport		Air transport		Warehousing and Support Activities		Postal and Courier Activities	
	000s	%	000s	%	000s	%	000s	%	000s	%
Under 25	32	4	*	*	*	*	30	10	20	7
25-34	109	15	11	27	16	26	79	25	55	18
35-44	188	26	8	20	19	30	79	25	86	29
45-59	304	42	12	30	20	33	104	33	115	38
60+	92	13	*	*	*	*	26	8	26	9
Total	726	100	41	100	61	100	318	100	302	100

Source: Labour Force Survey 2010 (ONS)

** Sample size too small for reliable estimate*

The low number of young entering the sector can be attributed to multiple factors. Firstly the sector is not seen as a sector of first choice for a career. Young people and the public in general have a poor understanding of the role of transport in the economy and the occupations available (FTA 2011 and Deloitte & Oxford Economics 2011). But the public attitudes towards congestion, road safety concerns (particularly concerning lorries) and environmental concerns were the top anxieties about the logistics sector. As a result, freight is accepted as a 'necessary evil'. These general negative perceptions make it less likely that future generations will see the sector as an attractive place to work.

The regulatory nature of the sector can limit the age in which a person can enter the profession for some roles. For example, the minimum age for cabin crew roles is 18 years old (for some airlines, like British Airways, 19 years old), while up until 2009, an individual had to be at least 21 before they could gain an LGV licence[3]. In addition, the Road Haulage Association (RHA) has expressed concerns of the impact of motor insurance on the firms' ability to bring on young drivers (Transport Select Committee 2010). Many standard premiums are based on the driver's age and experience (minimum 25 years old and 2 years of experience). As such, many firms are having to recruit against this criteria, limiting the number of young drivers. This has the additional barrier that by the age of 25 many individuals have already settled into another career choice. Furthermore, training for new drivers has changed over the years, particularly in smaller firms (Marchington *et al 2003*). New recruits used to start in the yard before progressing to deliveries as a drivers aide, but nowadays it is neither necessary nor affordable to have extra people on delivers, so there are not the same opportunities for young people to develop their careers in this way.

3.3.3 Ethnicity of workforce

Across the whole economy, the ethnicity of the workforce varies by nation (Table 3.19). 11 per cent of the English workforce are BAME but this decreases to three per cent in Scotland and Wales and two per cent in Northern Ireland. This is reflective of the overall population diversity, as England has a much higher ratio of BAME population than the other three home nations.

[3]The Young Drivers Scheme allowed an individual to gain Category C licence at the age of 18 rather than 21 but the introduction of the Driver CPC lowered the age limit to 18

Table 3.19 Ethnicity of workforce across whole economy, four nations (2010)

	White	BAME	Total	White	BAME	Total	*Unweighted base*
	000s	000s	000s	%	%	%	*000s*
UK	26,151	2,686	28,837	91	9	100	*194.336*
England	21,755	2,558	24,313	89	11	100	*161.395*
Scotland	2,370	76	2,445	97	3	100	*17.019*
Wales	1,272	40	1,312	97	3	100	*8.691*
Northern Ireland	754	12	766	98	2	100	*7.231*

Source: Labour Force Survey 2010 (ONS)

88 per cent of the transportation and storage sector roles were held by individuals of white ethnic backgrounds, three percentage points less than all economy figure of 91 per cent (Table 3.20).

Since 2002, the proportion of BAMEs has changed slightly across the economy and the sector. Across the whole economy it has increased from six to nine per cent currently seen. While in the sector it has increased from eight to 12 per cent.

Table 3.20 Ethnicity of workforce within sectors, UK (2010)

	White	BAME	Total	White	BAME	Total
	'000	'000	'000	%	%	%
Agriculture, forestry and fishing	402	*	402	100	*	100
Energy production and utilities	453	20	472	96	4	100
Manufacturing	2,769	199	2,968	93	7	100
Construction, building services, engineering and planning	2,567	130	2,697	95	5	100
Wholesale and retail trade	3,722	416	4,139	90	10	100
Transportation and storage	**1,266**	**180**	**1,445**	**88**	**12**	**100**
Hospitality, tourism and sport	1,766	280	2,045	86	14	100
Information and communication technologies	660	100	760	87	13	100
Creative media and entertainment	913	73	986	93	7	100
Financial, insurance & other professional services	1,776	224	2,000	89	11	100
Real estate and facilities management	852	125	977	87	13	100
Government services	2,037	171	2,208	92	8	100
Education	2,875	210	3,085	93	7	100
Health	1,814	272	2,086	87	13	100
Care	1,526	200	1,726	88	12	100
All economy	**26,151**	**2,686**	28,837	91	9	100

Source: Labour Force Survey 2010 (ONS)

** Sample size too small for reliable estimate.*

Breaking the ethnicity data down into sub-sectors reveals further ethnic workforce characteristics.

- Land transport – 86 per cent white and 14 per cent BAME
- Water transport – 94 per cent white and 6 per cent BAME
- Air transport – 90 per cent white and 10 per cent BAME
- Warehousing and support activities – 91 per cent white and 9 per cent BAME
- Postal and courier – 86 per cent white and 14 per cent BAME

Within land transport there are variations between freight and passenger operators. Passenger land transport, including rail, bus and coach, taxi and private hire tends to be more ethnically diverse than for example freight transport by road where BAME workforce accounts for only two per cent (Skills for Logistics 2010).

3.3.4 Employee country of origin

Table 3.21 highlights the employees' country of origin for the whole economy by nation. The UK average reveals that 87 per cent of workers were born within the UK, but this rises to over 90 per cent in Scotland, Wales and Northern Ireland. England has the highest proportion of non-UK born population.

Table 3.21 Employment by country of birth and nation, 2010

	UK		England		Scotland		Wales		Northern Ireland	
	000s	%	000s	%	000s	%	000s	%	000s	%
UK	25,054	87	20,856	86	2,264	93	1,228	94	706	92
Rest of Europe (EU 27)	1,340	5	1,176	5	85	3	37	3	42	5
Rest of world	2,457	9	2,295	9	96	4	47	4	18	2
Total	28,851	100	24,327	100	2,446	100	1,312	100	766	100
Unweighted base	194.426		161.480		17.022		8.693		7.231	

Source: Labour Force Survey 2010, ONS

Table 3.22 demonstrates the differences of employees' country of birth, across all sectors. The transportation and storage sector has a slightly lower proportion of workers born in the UK compared with the economy average (84 per cent compared to 87 per cent). The proportion born within Europe is the same at five per cent. However, the sector employs proportionally more individuals born across the rest of the world, at 11 per cent compared to nine per cent. The significant concentrations of non-EU born workers occur in metropolitan areas of England, especially in London and the South East, and reflect the demographic make-up of the localities.

Table 3.22 Employment by country of birth and sector, UK (2010)

	UK	Rest of Europe (EU 27)	Rest of world	Total	UK	Rest of Europe (EU 27)	Rest of world	Total
	'000	'000	'000	'000	%	%	%	%
Agriculture, forestry and fishing	377	21	8	406	93	5	2	100
Energy production and utilities	431	15	26	472	91	3	6	100
Manufacturing	2,567	210	193	2,969	86	7	6	100
Construction, building services, engineering and planning	2,446	124	126	2,696	91	5	5	100
Wholesale and retail trade	3,644	177	318	4,140	88	4	8	100
Transportation and storage	**1,213**	**77**	**158**	**1,448**	**84**	**5**	**11**	**100**
Hospitality, tourism and sport	1,630	156	260	2,046	80	8	13	100
Information and communication technologies	640	33	88	761	84	4	12	100
Creative media and entertainment	850	51	87	987	86	5	9	100
Financial, insurance & other professional services	1,719	79	202	2,001	86	4	10	100
Real estate and facilities management	808	55	114	978	83	6	12	100
Government services	2,011	46	152	2,208	91	2	7	100
Education	2,769	106	213	3,088	90	3	7	100
Health	1,737	83	266	2,086	83	4	13	100
Care	1,490	65	174	1,729	86	4	10	100
Other sectors	722	43	71	836	86	5	9	100
All economy	25,054	1,340	2,457	28,851	87	5	9	100

Source: Labour Force Survey 2010 (ONS)

Overtime the number of people born outside of the UK and working in the sector has risen. In terms of those born in Europe the number has risen from 34,000 to 77,000 since 2002. In addition those born within other countries around the world have also increased from 112,000 to 158,000.

This has impacted the proportion of people working in the sector who were born outside of the UK. It currently stands at 16 per cent compared with 10 per cent in 2002. The growth in European individuals could be attributed to the rise in numbers coming from the accession countries (see section 5.4.2 for further information on migrant workers).

Breaking the data down by sub-sector further reveals characteristics in the origin of the workers (Table 3.23).

Table 3.23 Employment by country of birth, by sub-sector, 2010

	Land Transport		Water transport		Air Transport		Warehousing and Support Activities		Postal and Courier Activities	
	000s	%	000s	%	000s	%	000s	%	000s	%
UK	610	84	35	85	47	77	263	83	258	86
Rest of Europe	28	4	*	*	*	*	30	9	11	4
Rest of World	88	12	*	*	10	17	25	8	32	11
Total	726	100	41	100	61	100	318	100	302	100

Source: Labour Force Survey 2010 (ONS)

** Sample size too small for reliable estimate.*

The high percentage of the air transport workforce born outside of the UK is likely to be consequence of the increase in the number of European workers, which resulted from the rapid development of the European networks. For example, budget airlines, such as EasyJet and Ryanair, tend to employ staff from the countries they fly to and in 2010, 71 per cent of international passenger movements at UK airports were to and from European destinations (DfT 2011d). Non-European workers are of significance as well, as carriers try to meet the language needs of customers from growth markets in Asia and the Middle East.

The shipping industry is truly global and as such the labour supply has also become global. Shipping vessels are multicultural environments, often with workers from all over the world on board (the Mackinnon Partnership 2009).

4 Demand for, and value of, skills

Chapter Summary

- The sector offers employment opportunities for those with level 1, basic and employability skills, right through to level 4 and higher qualifications
- The sector is one of the most poorly qualified sectors, with 37 per cent or workers unqualified or qualified below level 2 and only 39 per of managers holding higher level qualifications
- Qualification levels in the sector are affected by number of factors, such as the comparative ageing of the workforce and fact that certain occupations require a vocational licence rather than a formal qualification
- HPWP are not commonly adopted in the sector compared to whole economy. Sector employers are less likely to have a formal process to identify talented individuals. They are the least likely of all sectors to have a training budget and to provide training
- Only 41 per cent of the workforce receive training – the second lowest proportion across the economy and this proportion has been declining in recent years
- EU directives and regulations mean that the sub-sectors of water and air transport undertake training more frequently.

The following chapter investigates the nature of skills within the transportation and storage sector, making a distinction between basic, employability, intermediate and higher skills and it looks at the qualification levels of those working.

It then moves onto the value of skills, investigating High Performance Working (HPW) practices within companies as well as the provision of training, as these are central to the enhancement of skills within employer's workforce. Finally the relationship between investment in skills and training and the extent to which companies compete will be explored.

4.1 Nature of skills used

4.1.1 Type and level of skills

The following section will look at the nature of skills used within the sector. Table 4.1 highlights the predominate skill level and type of skill needed as well as the minimum qualification typically required for the main sector occupations. It shows how the highest qualification levels (3 and 4) are required of the sector's managerial and professional roles. The drivers need to demonstrate mid-level qualifications of Levels 2 and 3, whereas the only group with minimal requirement of Level 1 are the elementary positions, such as cleaners or warehouse operatives.

National Occupation Standards (NOS) are in place for the example job roles in Table 4.1 By using these NOS levels, the industry has determined the minimum level of skills required for each role.

Table 4.1 Nature of skills used in the sector

Broad occupational group	Sector occupations	Predominate level of skill required	Predominate type of skill required	Minimum qualification level typically required
Managers	Owner managers Transport and distribution managers Storage and warehouse managers Transport and service managers Complaints managers Port managers Station managers Signalling managers	Higher skills Basic skills Employability skills	Job specific Transferable managerial skills Leadership ICT Communication Customer service	Level 3 / 4
Professional	Mechanical engineers (Bus and Coach, Rail) Electrical engineers (Rail)	Higher skills Basic skills Employability skills	Job specific technical ICT	Level 3 / 4
Associate professional and technical	Importers, exporters Buyers and purchasing officers, Train drivers, air traffic controller, Aircraft pilots and flight engineers, Ship and hovercraft officers	Higher skills Basic skills Employability skills	Job specific technical skills Customer Service ICT Communication	Level 3 / 4
Administrative and secretarial	Transport and distribution clerks Stock control clerks	Intermediate skills Basic and employability skills	Communication	Level 2 / 3
Skilled trades	Motor mechanics, auto engineers Aircraft maintenance Recovery engineers Vehicle body builders and repairers	Intermediate skills Basic skills Employability skills	Job specific technical skills Customer Service ICT Communication	Level 2 / 3
Personal service	Rail & Air travel assists Cabin crew Leisure & travel service occupations (Waterways) Travel and tour guides Conductors	Intermediate skills Basic skills Employability skills	Customer Service Communication Job specific technical skills ICT	Level 2 / 3
Sales and customer service	Call centre agents and operators Customer care occupations Telephone salespersons	Intermediate skills Basic skills Employability skills	Customer Service Communication	Level 2 / 3
Process, plant and machine operatives	Drivers – LGV, van, bus, coach, taxi Seafarers, barge, lighter and boat ops Crane operatives Rail transport operatives	Intermediate skills Basic skills Employability skills	Job specific technical skills Customer service	Level 2 / 3
Elementary	Warehouse operatives Couriers, Postal workers Stevedores, dockers, slingers	Basic skills Employability skills	Job specific technical skills	Level 1 / 2

4.1.2 Qualification profile

The following focuses on the skills across the economy and sector, measured by qualification level. Measurement by qualification is only one method of skills measurement but it provides useful insight.

Table 4.2 summarises the proportion of the workforce currently qualified to each level across all sectors.

The transportation and storage sector is one of the most poorly qualified of all, with 37 per cent or 533,000 individuals not qualified to level 2. This proportion is much greater than the all economy figure of 23 per cent. Only 16 per cent in the sector have a level 4 qualification, which again is much lower than the all economy total of 37 per cent and the lowest proportion out of all the sectors.

Table 4.2 Qualification profile of workforces within sectors, UK (2010)

	No qualifications	Level 1	Level 2	Level 3	Level 4+	Total	Unweighted base
	%	%	%	%	%	'000s	'000s
Agriculture, forestry and fishing	18	21	22	15	24	406	2.978
Energy production and utilities	6	16	22	22	33	473	3.244
Manufacturing	9	19	21	22	29	2,969	20.404
Construction, building services, engineering and planning	7	16	23	28	27	2,697	17.927
Wholesale and retail trade	11	22	26	22	19	4,140	27.582
Transportation and storage	**11**	**26**	**29**	**19**	**16**	**1,447**	**9.732**
Hospitality, tourism and sport	10	20	27	22	20	2,046	13.183
Information and communication technologies	2	10	15	18	55	761	4.874
Creative media and entertainment	3	10	14	14	59	987	6.193
Financial, insurance & other professional services	2	12	18	17	52	2,001	12.805
Real estate and facilities management	14	23	22	17	23	978	6.565
Government services	2	12	19	20	46	2,209	15.100
Education	3	9	12	13	63	3,088	21.544
Health	3	10	14	12	61	2,087	14.749
Care	5	12	23	24	36	1,729	12.006
All economy	**7**	**16**	**21**	**20**	**37**	**28,854**	**194.437**

Source: Labour Force Survey 2010 (ONS)

A number of factors directly affect the skills levels of the sector:

- A large number of roles in the sector are at a level 2 grade. However, key sector qualifications, such as the vocational licence, which is considered to be a level 2 qualification, are not included in the formal accreditation framework so are not taken into consideration when determining the minimum level of qualifications held by sector employees.
- The comparative ageing profile of employees, especially those that have worked in the sector all of their lives, means there is little tangible benefit from gaining a higher qualification.

The qualification levels for the whole economy, across the nations, can be seen in Table 4.3, while Table 4.4 shows how the levels have changed over time. Across the economy, Scotland has the highest skills levels, while Wales has the least, in terms of the proportion qualified at level 3 and above.

Table 4.3 Qualification levels by nation (2010)

	UK	England	Scotland	Wales	Northern Ireland
	%	%	%	%	%
Level 4 +	37	37	40	37	35
Level 3	20	20	22	19	19
Level 2	21	21	18	22	20
Level 1 and below	23	23	20	22	25
Total	100	100	100	100	100
Weighted base	1,729	1,409	183	97	40
Unweighted base	194.437	161.490	17.022	8.693	7.232

Source: Labour Force Survey 2010 (ONS)

The qualification level proportions across the economy have changed between 2002 and 2010. As previously noted, the number employed in the UK economy has increased. During the same period the number of individuals qualified to level 4 has increased by 36 per cent, from 7.8m to 10.6m, bringing the proportion up from 28 per cent to 37 per cent. While the number of individuals qualified at level 1 and below has decreased by 23 per cent from 8.4m to 6.5m.

Table 4.4 Qualification levels, UK (2002-2010)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
	%	%	%	%	%	%	%	%	%
Level 4 +	28	29	30	31	32	33	33	35	37
Level 3	20	20	20	20	19	19	20	19	20
Level 2	22	22	21	20	22	22	21	21	21
Level 1 and below	30	29	29	29	27	27	26	24	23
Total	100	100	100	100	100	100	100	100	100
Weighted base	27,905	28,165	28,455	28,741	28,986	29,163	29,380	28,810	28,854
Unweighted base	247.232	237.919	172.402	210.643	222.190	221.039	216.986	203.217	194.437

Source: Labour Force Survey 2010 (ONS)

Table 4.5 and Table 4.6 demonstrate the qualification levels for the transportation and storage sector by nation and how they have altered in recent years.

The sector is dominated by a low level of skills (level 2 and below) which is likely to be a reflection of the occupational make-up of the sector witnessed in Chapter 3, which shows that 60 per cent of the workforce are employed within the two lowest occupational groups (machine operatives and elementary workers).

Within the sector, Scotland has the highest skilled workforce, with 43 per cent qualified at level 3 or above. This is a result of the small number of relevant positions in Scotland, leading highly qualified individuals to perform jobs they would be considered overqualified for elsewhere in the country. This is an issue acknowledged by the Scottish Government in their Skills Utilisation Review (2008). Scotland is followed by England, with 35 per cent of its workforce considered as highly skilled, Northern Ireland at 29 per cent and finally Wales at 25 per cent (Table 4.5). This reflects the overall UK economy trends.

Table 4.5 Qualification levels within sector by nation (2010)

	UK	England	Scotland	Wales	Northern Ireland
	%	%	%	%	%
Level 4 +	16	16	21	*	*
Level 3	19	19	22	15	18
Level 2	29	29	24	33	25
Level 1 and below	37	37	33	42	46
Total	100	100	100	100	100
Weighted base (000s)	1,447	1,252	117	46	33
Unweighted base (000s)	9.732	8.295	0.822	0.308	0.307

Source: Labour Force Survey 2010 (ONS)

**Sample size too small for reliable estimate.*

The number of individuals in employment across the sector decreased by three per cent, between 2002 and 2010. However, the number qualified to level 4 and above increased by six per cent or approximately 14,000, changing the overall proportion qualified to this level from 14 to 16 per cent (Table 4.6). At the same time we have seen the absolute number with level 1 and below decrease by 55,000, changing the proportion from 40 per cent in 2002 to 37 per cent in 2010. To a limited extent, this has been caused by the general improvements to the qualification levels across the wider economy. But the sector's increased reliance on technology may also have played a part in the boost given to the number of skilled workers, as familiarity with modern technology is increasingly a job requirement within the sector (European Foundation 2004). This is addressed further in section 6.1.5.

Table 4.6 Qualification levels within sector, UK (2002-2010)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
	%	%	%	%	%	%	%	%	%
Level 4 +	14	15	15	15	16	18	19	15	16
Level 3	21	21	20	20	20	20	19	19	19
Level 2	25	26	26	24	25	25	25	27	29
Level 1 and below	40	38	39	41	39	38	38	39	37
Total	100	100	100	100	100	100	100	100	100
Weighted base (000s)	1,486	1,485	1,461	1,511	1,501	1,490	1,517	1,489	1,447
Unweighted base (000s)	12.980	12.341	8.723	11.000	11.403	11.117	11.103	10.462	9.732

Source: Labour Force Survey 2010 (ONS)

Skills levels across the sub-sectors have vast variations (Table 4.7), reflecting the occupational make-up of the sub-sectors and the entry requirements within these areas.

Table 4.7 Qualification levels within sub-sectors, UK (2010)

	Land Transport	Water Transport	Air Transport	Warehousing and Support Activities	Postal and Courier Activities
	%	%	%	%	%
Level 4 +	13	43	37	16	14
Level 3	19	15	28	19	18
Level 2	30	22	23	29	26
Level 1 and below	38	20	12	36	42
Total	100	100	100	100	100

Source: Labour Force Survey 2010 (ONS)

For land transport, formal qualifications are not necessarily required. This sub-sector is dominated by driving occupations and these roles require the appropriate vocational licence and for professional drivers in vehicles over 3.5 tonne the Driver CPC rather than a qualification level. However, there has been an increase in the use of qualifications and apprenticeships over the past few years, reflecting the availability of funding like Train to Gain and more recently the new government apprenticeship programme. Therefore the number of drivers achieving Level 2 NVQ in PCV Driving doubled from 2009 to 2010. While numbers completing Carry and Deliver Goods and Driving Goods Vehicles apprenticeships have increased year-on-year since 2007/08 (Data Service 2011).

The maritime sub-sector is one of the most heavily regulated in the UK economy and strict licences and standards are required to work within it (the Mackinnon Partnership 2009). Given the importance of the sector, the UK Government provides a package of support mechanisms including a subsidy for seafarer training known as the Support for Maritime Training (SMarT) (Deloitte and Oxford Economics 2011). This scheme covers up to 40 per cent of training costs and provides an incentive for shipping companies to train new cadets. Upon completion of training, cadets receive both an academic qualification and a professional qualification.

The air transport sub-sector has the highest ratio of workers qualified to levels 2 to 4 and above, to those qualified only to level 1 and below. This is partially due to the high qualifications that employers in the sub-sector seek.

Warehousing and support activities, and postal and courier sub-sectors, have been noted for their occupational make-up being dominated by elementary roles, which are generally level 2 positions, so it is perhaps not surprising that the qualification levels in these sub-sectors are relatively low. However, the numbers of warehouse operatives and mail workers achieving apprenticeships is increasing year-on-year (Data Service 2011).

4.1.3 Skill level of managers and professionals

The skills of senior staff members are vital to ensure the competitive nature of the business. However, Table 4.8 shows that the sector is in the top three of all sectors where managers and professionals are without a Level 4 or higher qualification. Only wholesale and retail trade, and hospitality, tourism and sport have greater proportions. This may be partially explained by the fact that some job progression paths within the sector are largely based on experience rather than formal qualifications, with experienced drivers often taking up managerial positions within the land transport sub-sector.

The proportion of managers and professionals without a level 4 or higher qualification across the nations' whole economies has some variation. Across England it stands at 39 per cent, falling to 37 per cent in Scotland, 36 per cent in Wales and only 27 per cent in Northern Ireland.

The data for the sector is only reliable for England and Scotland. In Scotland two thirds of managers and professionals do not have a level 4 or higher qualification, while in England this proportion stands at 59 per cent. Again these are much greater than the all economy totals for the nations.

Table 4.8 Managers and professionals without Level 4 or higher qualifications (% of all managers and professionals)

	UK	England	Scotland	Wales	Northern Ireland
	%	%	%	%	%
Agriculture, forestry and fishing	45	43	*	*	*
Energy production and utilities	49	51	41	*	*
Manufacturing	51	51	51	59	35
Construction	50	51	41	40	*
Wholesale and retail trade	64	64	67	60	50
Transportation and storage	**61**	**59**	**67**	*	*
Hospitality, tourism and sport	66	66	61	70	*
Information and communication technologies	40	40	37	*	*
Creative media and entertainment	38	38	*	*	*
Financial, insurance & other professional services	36	36	38	35	*
Real estate and facilities management	58	59	63	*	*
Government services	31	32	36	29	*
Education	10	11	8	*	*
Health	15	15	*	*	*
Care	30	30	33	*	*
All economy	39	39	37	36	27

Source: Labour Force Survey 2010 (ONS)

** Sample size too small for reliable estimate.*

However, the trend is showing some improvement, both for the sector and economy (Table 4.9 and Table 4.10). Since 2002, the number of managers and professionals in the economy has steadily increased and stands at nearly 8.5m people. Alongside the increase in absolute numbers, we have seen the proportion without a level 4 or higher qualification decrease from 45 per cent to 39 per cent.

Table 4.9 Managers and professionals without Level 4 or higher qualifications 2002-2010 (UK)

		2002	2003	2004	2005	2006	2007	2008	2009	2010
Managers or professionals without L4 or higher qualifications	000s	3,239	3,336	2,554	3,023	3,460	3,471	3,496	3,371	3,283
	%	45	45	33	38	43	42	42	40	39
Weighted base (number of managers and professionals)	*000s*	*7,214*	*7,481*	*7,726*	*7,866*	*8,123*	*8,201*	*8,356*	*8,406*	*8,483*

Source: Labour Force Survey 2010 (ONS)

Within the transportation and storage sector the absolute number of managers and professionals has decreased by 41,000 (18 per cent) between 2002 and 2010 (Table 4.10). During the same timeframe, the number without a level 4 or higher qualification has also decreased by 38,000 (25 per cent), leaving the overall proportion without these qualifications at 61 per cent – a drop from 66 per cent in 2002.

Table 4.10 Managers and professionals without Level 4 or higher qualifications, within sector 2002-2010 (UK)

		2002	2003	2004	2005	2006	2007	2008	2009	2010
Managers or professionals without L4 or higher qualifications	000s	152	167	112	141	157	156	160	131	114
	%	66	68	49	56	64	64	60	68	61
Weighted base (number of managers and professionals)	*000s*	229	245	230	249	245	245	266	194	188

Source: Labour Force Survey 2010 (ONS)

Of the 114,000 managers and professionals without a level 4 or higher qualification, 42 per cent work within the land transport sub-sector, 30 per cent in warehousing, 20 per cent in postal and courier activities and the remaining eight per cent in the water and air transport sub-sectors.

The high number of managers without a level 4 qualification amongst the land transport workforce can be attributed to two factors. Firstly, the experience and time spent with the company rather than the pre-employment training and qualifications facilitate employee promotions to managerial positions. Secondly, the significant volume of the owner-manager category, as the sub-sector heavily relies on small and middle size operators.

4.2 Value of skills

The SSCs base their work on strong conviction that there is a great value to skills and training. SfL reviewed the research evidence available as to the benefits of upskilling in their 2010 Sector Skills Assessment for the Freight Logistics and Wholesale Sector. In summary, upskilling the UK workforce would bring significant benefits to the economy, businesses and individuals. Productivity and skills have been strongly linked. Staff training brings bottom-line benefits for businesses and it has been demonstrated that organisations who train their staff increase their likelihood of surviving. From an individual's perspective, having a strong skill set reduces the chance of unemployment and there is a positive correlation between wages and qualifications.

“Skills are expected to be a driver of future growth for many parts of the economy” (UKCES 2009a, p28).

People 1st recognises that only a motivated and skilled workforce can deliver a world-class integrated passenger transport system, that is recognised for its safety, customer service and efficiency.

In its previous SSA report, People 1st (then GoSkills) recognised that the passenger transport sub-sectors are in general content with the qualifications on offer. However, whilst there are a number of sound building blocks there are also gaps and shortages (further discussed in section 5).

4.3 HPW

High Performance Working (HPW) is an approach to "managing companies that aims to stimulate more effective employee involvement and commitment to achieve high levels of performance" (UKCES 2009b). HPW has the potential to offer benefits to both employers and employees, by ensuring that skills are better used in the workplace. Ultimately better utilisation of skills will contribute to the UK's economic performance.

Skills Utilisation has been explored in depth has been defined as:

> Ensuring the most effective application of skills in the workplace to maximise performance through the interplay of a number of key agents (e.g. employers, employees, learning providers and the state) and the use of a range of HR, management and working practices. Effective skills utilisation seeks to match the use of skills to business demands/needs (Scottish Government, 2008).

The literature review reveals evidence of two specific practices that employers have used to achieve improved skills utilisation in the workplace: Learning Transfer and HPW. Evidence of the implementation and impact of Learning Transfer is limited, while HPW dominates the literature on market driven workplace approach to skills utilisation.

There are a range of definitions for HPW. Many relate to a model of working that is employee-centric with the aim to increase business performance through investing in staff. In an organisation, HPW is noticeable when organisations implement one or more bundles of activity described as High Performance Working Practices (HPWP).

Because HPW is a largely theoretical construct designed to describe observed behaviour, it is hard either to agree which organisations are implementing HPW or on a definite list of HPWPs that an organisation must implement to be deemed HWP.

Research by Ashton and Sung (2002) found that there is a consensus that employee involvement and participation are an essential component of HPW and they note that HPW comprises a set of complementary work practices covering three broad categories: High Involvement, Human Resource practices and Reward and Commitment.

The following section examines the extent employers have embedded some HPW practices. We focus on four HPW indicators initially and then move onto the provision and investment in training before finally investigating the barriers to training employers face.

4.3.1 HPW indicators

Selecting and promoting the right people is a key theme in the literature on HPW (UKCES 2009b). The individuals need not necessarily be recruited externally; they could be from within the organisation. Having a formal process in place to identify 'high potential' or talented individuals can only help a company be competitive.

Table 4.11 reveals that the transportation and storage sector is the second least likely sector to have a formal process in place to identify 'high potential' or talented individuals, after the agriculture sector. This is deeply rooted in the traditional perception of the sector as one which requires mainly limited, easily absorbed skills, like driving. However, this trend is gradually shifting as a variety of additional skills are increasingly more often expected of the sector's workers, including customer service, communication, IT and managerial skills.

The identification of talented individuals is probably more likely to occur in larger establishments within the sector. In larger organisations there tend to be clear progression opportunities and fast track schemes available for talented individuals, with 36 per cent of the sector establishments having formal processes in place to identify 'high potential' individuals (Table 4.11).

Table 4.11 Whether establishment has formal processes in place to identify 'high potential' or talented individuals

	Formal process for identifying 'high potential' individuals									
	Yes, formally documented		Yes, informally		No		Don't know		Unweighted	Weighted base
Agriculture, forestry and fishing	5,652	5	30,105	27	72,671	64	4,348	4	820	112,776
Energy production and utilities	2,191	17	4,077	31	6,385	49	486	4	866	13,138
Manufacturing	15,955	12	41,908	31	72,179	54	3,456	3	4,001	133,498
Construction	21,136	7	89,742	29	185,426	61	8,056	3	4,570	304,360
Wholesale and retail trade	79,322	17	144,464	31	229,455	49	18,075	4	8,093	471,317
Transportation and storage	**12,217**	**10**	**30,841**	**26**	**73,328**	**61**	**4,419**	**4**	**2,400**	**120,805**
Accommodation, food and tourism activities	32,190	15	69,719	32	109,728	50	7,234	3	5,819	218,871
Information and communication	5,976	8	23,608	32	42,403	58	1,136	2	1,261	73,123
Creative media and entertainment	11,873	8	48,322	33	83,861	57	3,495	2	1,959	147,551
Financial, insurance & other professional services	31,220	18	56,823	33	80,911	47	3,669	2	2,680	172,623
Real estate and facilities management	20,259	13	48,382	30	83,504	52	9,000	6	1,745	161,145
Government	11,426	21	16,967	31	25,307	46	1,600	3	1,379	55,300
Education	18,653	32	20,236	34	18,789	32	1,231	2	2,780	58,909
Health	10,508	20	15,684	30	24,879	47	1,427	3	1,739	52,498
Care	25,788	28	26,675	29	32,817	36	6,485	7	2,455	91,765
All economy	320,952	14	702,866	31	1,198,876	52	77,227	3	44,691	2,299,921

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012)

Base: All establishments in Module 1 and Scotland

A further core component of HPW system is motivation. Employees must be motivated to work well and contribute to the goals of the organisation.

Table 4.12, Table 4.13 and Table 4.14 on the following pages demonstrate three measures that are believed to help maintain the motivation of staff and enhance their commitment to their employer (UKCES 2009b).

Table 4.12 demonstrates the extent to which employees have variety in their work.

11 per cent of employers across the sector report that employees do not have variety in their work. This is nearly three times the proportion of the nearest sector, accommodation, food and tourism, where only four per cent do not have variety. This is largely due to the services provided by the sector, constrained by timetables and schedules.

Table 4.12 Extent to which employees have variety in their work

	Extent to which employees have variety in their work											
	To a large extent		To some extent		Not much		Not at all		Don't know		Unweighted	Weighted base
Agriculture, forestry and fishing	76,675	68	24,469	22	7,742	7	2,816	2	1,074	1	820	112,776
Energy production and utilities	5,929	45	4,909	37	1,795	14	406	3	100	1	866	13,138
Manufacturing	67,095	50	48,484	36	12,899	10	3,756	3	1,262	1	4,001	133,498
Construction	179,144	59	88,851	29	24,047	8	9,313	3	3,003	1	4,570	304,360
Wholesale and retail trade	238,562	51	168,884	36	48,318	10	11,692	2	3,861	1	8,093	471,317
Transportation and storage	**53,146**	**44**	**35,613**	**29**	**17,947**	**15**	**13,259**	**11**	**840**	**1**	**2,400**	**120,805**
Accommodation, food and tourism activities	86,140	39	83,543	38	37,117	17	9,289	4	2,782	1	5,819	218,871
Information and communication	46,346	63	21,687	30	3,293	5	417	1	1,381	2	1,261	73,123
Creative media and entertainment	99,587	67	37,290	25	7,267	5	2,237	2	1,170	1	1,959	147,551
Financial, insurance & other professional services	94,803	55	60,363	35	12,493	7	3,148	2	1,816	1	2,680	172,623
Real estate and facilities management	92,156	57	51,012	32	15,579	10	1,561	1	837	1	1,745	161,145
Government	33,925	61	17,273	31	2,855	5	391	1	856	2	1,379	55,300
Education	38,306	65	17,346	29	2,187	4	619	1	452	1	2,780	58,909
Health	26,622	51	19,718	38	5,203	10	694	1	260	**	1,739	52,498
Care	54,001	59	31,224	34	4,410	5	972	1	1,159	1	2,455	91,765
All economy	1,256,316	55	745,134	32	212,192	9	64,300	3	21,979	1	44,691	2,299,921

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012)

Base: All establishments in Module 1 and Scotland

*** denotes a figure greater than 0% but less than 0.5%*

The extent to which employees have discretion over how they do their work is shown in Table 4.13.

Almost half (44 per cent) of employers in the sector report that employees have this discretion ‘to a large extent’, which is similar to the all economy figure. However, seven per cent of employers report that employees do not have any discretion over how they do their work, which is the greatest proportion seen across all the sectors. This may be partially explained by the fact that the technical nature and/or strict safety guidelines relating to certain roles within the sector do not allow for variety, e.g. train drivers and pilots.

Table 4.13 Extent to which employees have discretion over how they do their work

	Extent to which employees have discretion over how they do their work											
	To a large extent		To some extent		Not much		Not at all		Don't know		Unweighted	Weighted base
Agriculture, forestry and fishing	61,757	55	39,087	35	6,625	6	2,485	2	2,821	3	820	112,776
Energy production and utilities	5,809	44	4,957	38	1,467	11	557	4	348	3	866	13,138
Manufacturing	63,859	48	49,442	37	11,926	9	5,326	4	2,945	2	4,001	133,498
Construction	167,066	55	103,337	34	18,624	6	10,627	3	4,706	2	4,570	304,360
Wholesale and retail trade	222,298	47	182,574	39	44,174	9	13,608	3	8,663	2	8,093	471,317
Transportation and storage	**60,073**	**50**	**38,390**	**32**	**12,736**	**11**	**8,160**	**7**	**1,446**	**1**	**2,400**	**120,805**
Accommodation, food and tourism activities	88,190	40	87,712	40	28,331	13	9,926	5	4,712	2	5,819	218,871
Information and communication	48,851	67	20,130	28	3,082	4	614	1	446	1	1,261	73,123
Creative media and entertainment	94,306	64	39,623	27	5,912	4	3,212	2	4,498	3	1,959	147,551
Financial, insurance & other professional services	88,150	51	62,426	36	15,688	9	5,292	3	1,068	1	2,680	172,623
Real estate and facilities management	95,298	59	48,171	30	11,255	7	4,656	3	1,765	1	1,745	161,145
Government	32,235	58	17,718	32	3,674	7	810	1	863	2	1,379	55,300
Education	27,530	47	26,592	45	3,231	5	660	1	897	2	2,780	58,909
Health	22,195	42	21,678	41	6,472	12	1,544	3	608	1	1,739	52,498
Care	48,843	53	36,123	39	3,779	4	1,532	2	1,488	2	2,455	91,765
All economy	1,188,767	52	814,655	35	185,638	8	71,823	3	39,037	2	44,691	2,299,921

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All establishments in Module 1 and Scotland

Flexible working is considered a HPW practice in terms of reward and commitment in Sung & Ashtons (2005) detailed list of practices (in UKCES 2009b).

Different types of flexible working apply to the transport operators on a different scale. For example, flexi hours cannot be available to drivers, constrained by the legislation (for example, tachographs). Annualised hours, on the other hand, are often offered to engineers and technical roles, while staggered hours can be suitable option for back-office staff.

Table 4.14 highlights the extent to which employees have access to flexible working. Across the transportation and storage sector just over a third (37 per cent) of employers offer flexible working 'to a large extent', while 17 per cent do not offer flexible working at all – the highest proportion of all sectors. This stems directly from the sector's characteristics of work based on core timeframes, which assure timely delivery of service.

Table 4.14 Extent to which employees at establishment have access to flexible working

	Employees have access to flexible working											
	To a large extent		To some extent		Not much		Not at all		Don't know		Unweighted	Weighted base
Agriculture, forestry and fishing	48,869	43	41,468	37	12,485	11	8,004	7	1,950	2	820	112,776
Energy production and utilities	4,781	36	4,419	34	2,431	19	1,450	11	58	**	866	13,138
Manufacturing	52,687	39	44,362	33	17,955	13	16,667	12	1,827	1	4,001	133,498
Construction	139,674	46	101,224	33	33,585	11	26,266	9	3,610	1	4,570	304,360
Wholesale and retail trade	176,251	37	168,909	36	64,843	14	56,324	12	4,991	1	8,093	471,317
Transportation and storage	**44,233**	**37**	**38,327**	**32**	**16,329**	**14**	**20,683**	**17**	**1,233**	**1**	**2,400**	**120,805**
Accommodation, food and tourism activities	99,272	45	77,239	35	22,537	10	17,703	8	2,120	1	5,819	218,871
Information and communication	42,992	59	20,273	28	5,342	7	4,226	6	289	**	1,261	73,123
Creative media and entertainment	83,200	56	44,734	30	10,011	7	7,602	5	2,004	1	1,959	147,551
Financial, insurance & other professional services	89,019	52	55,484	32	15,828	9	11,747	7	546	**	2,680	172,623
Real estate and facilities management	77,691	48	52,389	33	16,393	10	13,861	9	811	1	1,745	161,145
Government	34,229	62	15,040	27	3,343	6	1,865	3	823	1	1,379	55,300
Education	14,445	25	21,754	37	12,772	22	9,545	16	393	1	2,780	58,909
Health	14,407	27	23,130	44	9,761	19	5,025	10	174	**	1,739	52,498
Care	38,920	42	35,210	38	9,701	11	6,858	7	1,075	1	2,455	91,765
All economy	1,012,366	44	783,411	34	264,071	11	216,701	9	23,372	1	44,691	2,299,921

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All establishments in Module 1 and Scotland

*** denotes a figure greater than 0% but less than 0.5%*

4.4 Provision of training / investment

Central to the enhancement of skills within the workforce is the provision of training and staff development. The following section will investigate the extent to which training is embedded within the culture of the business. It will then examine the number and proportion of employers that train, the workers who receive the training, whether workers had received any training in the last four and 13 weeks and the type of training employers provide. Finally it will reflect on the barriers employers face in providing training.

4.4.1 Training plans and training budgets

Only 28 per cent of employers across the transportation and storage sector have a training plan. This places the sector in the bottom five of all sectors with such a plan and 10 percentage points lower than the economy figure of 38 per cent.

More concerning is that even fewer employers have a training budget. Only 19 per cent in the sector have one, which is the lowest of all sectors and again 10 percentage points lower than that found across the whole economy.

There are three main reasons for this. Firstly, many operators within the sector cannot afford a training plan, due to their small size – as discussed in section 2.1.3.2, the transportation and storage sector largely consists of SMEs. Secondly, the large majority of the roles within the sector are limited in their scope. And thirdly, the sector generally experiences a low staff turnover.

Nationally, the proportion of employers with a training plan or budget does vary. In general the proportion of sector employers with a training plan or budget is lower than that seen for the whole economy in the nations.

- The sector in England has one per cent fewer employers with a training plan or training budget than the UK sector proportions
- Sector employers in Scotland are more likely to have a training plan (37 per cent) and a training budget (36 per cent), compared to sector employers in other nations.
- In Wales, sector employers are least likely to have a training budget. Here only 13 per cent have one, although a third of companies do have a training plan (32 per cent).
- Nearly a third (32 per cent) of sector employers in Northern Ireland have a training plan and a quarter (23 per cent) have training budget.

4.4.2 The extent of training provided and proportion of workforce receiving training

In total just over 55,000 (45 per cent) of employers in the sector provided any training or staff development. This is the lowest proportion of all the sectors and is 14 percentage points lower than all economy figure of 59 per cent (Table 4.15).

Nationally, the proportion of employers in the sector providing training varies. In Scotland, seven in ten employers in the transportation and storage sector provided training; half of employers in Wales did so and 52 per cent in Northern Ireland. At 43 per cent, England has the lowest proportions of employers who provided training. This may be due to the high proportion of smaller businesses (for example, taxi and private hire), which are generally least likely to undertake training.

Table 4.15 Employers providing training by sector

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Agriculture, forestry and fishing	58,869	53	42,577	54	†7,737	†58	3,536	34	5,019	71
Energy production and utilities	8,743	69	6,858	69	1,040	81	554	67	291	54
Manufacturing	73,972	57	61,935	55	6,629	71	3,464	64	1,944	51
Construction	163,641	53	137,473	53	13,506	63	7,193	55	5,469	51
Wholesale and retail trade	261,948	56	218,681	55	23,692	67	11,347	54	8,228	58
Transportation and storage	**55,004**	**45**	**46,106**	**43**	**5,633**	**70**	**2,103**	**50**	**1,161**	**52**
Accommodation, food and tourism activities	134,314	61	108,618	60	15,665	71	6,570	58	3,461	59
Information and communication	39,090	54	34,418	52	†2,974	†83	1,215	62	483	44
Creative media and entertainment	74,069	52	63,945	51	†5,976	†54	2,690	57	1,457	71
Financial, insurance & other professional services	114,074	67	101,640	66	5,354	64	4,605	80	2,474	73
Real estate and facilities management	95,068	57	85,826	57	†6,652	†55	1,340	44	1,249	67
Government	41,608	76	32,980	74	4,715	85	2,343	87	1,571	77
Education	55,629	86	45,309	85	4,348	97	2,941	92	3,031	92
Health	44,797	86	38,133	85	3,208	99	2,216	79	1,239	84
Care	73,669	84	60,516	84	6,798	81	3,562	81	2,793	86
All economy	1,361,250	59	1,141,560	58	119,847	68	58,171	59	41,668	64
Weighted base	2,299,921		1,960,298		175,115		98,952		65,558	
Unweighted base	87,572		75,053		2,503		6,012		4,004	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All employers

† Treat figures with caution due to small unweighted base size of 50-99 establishments in Scotland.

Employers reported providing training for nearly 538,500 workers in the transportation and storage sector. This is equivalent to 41 per cent of the current workforce and is the second lowest proportion after the information and communication sector (Table 4.16).

Proportionately more workers in the sector in Northern Ireland receive training (63 per cent), compared to 58 per cent in Wales, 44 per cent Scotland and 39 per cent in England.

Table 4.16 Employees receiving training by sector

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Agriculture, forestry and fishing	198,736	43	152,352	43	†25,724	†47	8,993	29	11,667	51
Energy production and utilities	167,507	50	120,687	49	32,976	55	11,072	66	2,772	38
Manufacturing	1,146,654	45	934,516	44	93,562	48	74,719	54	43,857	52
Construction	1,072,552	48	884,923	48	116,140	47	39,666	44	31,826	46
Wholesale and retail trade	2,340,353	50	1,960,109	49	201,879	55	109,603	55	68,761	48
Transportation and storage	**538,494**	**41**	**448,580**	**39**	**49,954**	**44**	**22,489**	**58**	**17,468**	**63**
Accommodation, food and tourism activities	1,221,736	53	1,017,791	53	124,328	55	48,807	49	30,809	50
Information and communication	233,240	38	205,944	37	†15,377	†51	5,255	28	6,663	65
Creative media and entertainment	524,081	48	451,335	47	†30,017	†43	24,215	69	18,513	69
Financial, insurance & other professional services	1,109,888	54	949,712	52	101,444	73	32,505	60	26,224	69
Real estate and facilities management	560,354	47	492,799	47	†36,284	†49	19,985	60	11,286	50
Government	1,004,866	56	835,514	58	82,550	47	49,901	53	36,901	59
Education	1,598,280	63	1,354,826	63	116,696	62	84,527	72	42,231	58
Health	1,300,684	65	1,032,851	64	187,638	81	58,505	49	21,690	52
Care	969,487	64	780,108	64	89,130	63	52,831	84	47,414	64
All economy	14,476,138	53	12,050,111	52	1,337,833	56	661,045	56	427,137	54
Weighted base	27,547,123		23,198,475		2,381,601		1,182,314		784,732	
Unweighted base	2,816,693		2,345,213		201,868		178,922		90,690	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All employees

† Treat figures with caution due to small unweighted base size of 50-99 establishments in Scotland.

The training provision across all European sectors can be demonstrated from data provided by Eurostat, which can provide a useful international comparison, demonstrating how UK sectors compare to our European neighbours.

The data shows that in 2005 the UK provided relatively more training compared to other European countries. 82 per cent of the UK transportation and supporting activities sector[4] employers provided training, compared to the European average of 57 per cent, with the UK proportion being the highest across all the countries. However, in terms of training volume (hours) per employees, the UK transportation sector provided much less – four hours per employee compared to the European average of nine hours, which is the lowest of all European countries alongside Latvia and Romania.

[4] Eurostat data for transportation and supporting activities excluded the postal and courier activities

At a sector level it appears that the UK employers do provide relatively more training compared to its European competitors. However, SfL (2010) research demonstrates that for the logistics aspect of the sector, this is not the case. The extent to which the UK logistics sector trains staff relative to competitor nations is poor. The UK is ranked 25th, with 13 European nations ahead of us. Any advantage we have over them today is likely to be eroded if we continue to perform badly in this area.

4.4.3 Training by occupation

Higher-level occupations, manager and senior officials, received the most training. 52 per cent of employers provided training for this group. However, this was lower compared with the UK economy as a whole, where 61 per cent of employers had provided training to managers.

Compared to the all economy, employers in the sector are more likely to provide training for process, plant and machine operatives and skilled trade occupations (Table 4.17). This is linked to the fact that there are training/safety requirements for these roles, e.g. training for cabin crew, Driver CPC for LGV and PCV drivers.

Table 4.17 Employers providing training to employees by occupational group

	Transportation and Storage		All economy	
	Number	%	Number	%
Managers, Directors and senior officials occupations	28,631	52	825,928	61
Professional occupations	1,062	2	152,106	11
Associate professional and technical occupations	1,580	3	124,610	9
Administrative and secretarial occupations	12,832	23	372,218	27
Skilled trades occupations	10,876	20	192,480	14
Personal service occupations	411	1	129,265	9
Sales and customer service occupations	10,411	19	261,082	19
Process, plant and machine operatives	11,891	22	96,592	7
Elementary occupations	5,640	10	217,981	16
Other	1,344	2	35,410	3
Don't know	1,764	3	20,638	2
Arrange training for all categories of staff employed	25,887	47	714,095	52
Arrange training for some (but not all) categories of staff employed	29,118	53	647,154	48
Weighted base	55,004	100	1,361,249	100
Unweighted base	3,098		66,916	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All establishments providing training

We previously highlighted that nearly 538,500 individuals received training across he sector and Table 4.18 reveals the occupations in which they work.

Individuals working as process, plant and machine operatives received the greatest amount of training in numerical terms, followed by elementary occupations. Together these two groups accounted for 50 per cent of those who received training. Managers accounted for 12 per cent of training provided in the sector.

The data also shows the proportion of training received relative to total employment in each occupation. This measure shows that managers, in the sector, are among the least likely to receive training (32 per cent) and is comparable to the level found among staff in elementary and administrative occupations (34 and 35 per cent respectively).

Personal service and associate professional employees are most likely to receive training. This is most likely due to regulatory requirements. Occupations in these groups include rail and air travel assistants, train drivers, air traffic controllers, aircraft pilots and ship and hovercraft officers. They have a high degree of responsibility towards the public and as such require a greater degree of training. For example, all pilots must pass certain examinations every six months in order to maintain their licence.

Table 4.18 Employees receiving training by occupational group

	Transportation and Storage		All economy	
	Number	%	Number	%
Managers, Directors and senior officials occupations	66,729	32	2,413,145	45
Professional occupations	10,339	45	1,904,780	61
Associate professional and technical occupations	25,960	61	1,022,510	56
Administrative and secretarial occupations	49,858	35	1,607,984	45
Skilled trades occupations	60,145	55	1,041,373	55
Personal service occupations	11,028	77	1,606,254	70
Sales and customer service occupations	44,141	40	1,937,670	55
Process, plant and machine operatives	185,141	43	902,782	47
Elementary occupations	82,108	34	1,938,793	48
Other	3,045	n/a	100,845	n/a
All occupations	538,494		14,476,137	
Weighted base	538,494		14,476,137	
Unweighted base	49,137		1,517,802	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All establishments providing training

Note: % figures refer to % of those working in x occupation who have received training

4.4.4 Training received recently

Across the UK economy, the percentage of employees receiving training in the last four weeks is very similar across England, Scotland and Wales at around 13 per cent, but the proportion is much lower in Northern Ireland (seven per cent) (Table 4.19).

Seven per cent of sector employees received training in the last four weeks, at a UK level. This is the second lowest proportion across all sectors, with agriculture providing the least. Unfortunately, data for the sector is not available for Wales and Northern Ireland, but it is revealed that only eight per cent of sector employees in Scotland and seven per cent in England received training during the same period.

Table 4.19 % of employees receiving training in last 4 weeks, 2010 (all nations)

	UK	England	Scotland	Wales	Northern Ireland
	%	%	%	%	%
Agriculture, forestry and fishing	6	7	*	*	*
Energy production and utilities	12	12	13	*	*
Manufacturing	9	9	9	11	8
Construction, building services, engineering and planning	8	8	9	10	*
Wholesale and retail trade	8	8	9	9	6
Transportation and storage	**7**	**7**	**8**	*****	*****
Hospitality, tourism and sport	11	11	12	15	*
Information and communication technologies	10	10	*	*	*
Creative media and entertainment	8	8	*	*	*
Financial, insurance & other professional services	15	15	17	19	*
Real estate and facilities management	8	8	11	*	*
Government services	17	17	18	16	8
Education	18	19	17	19	*
Health	24	25	21	22	11
Care	20	20	19	26	*
All economy	13	13	13	14	7
Weighted base (000s)	3,642	3,085	317	188	52
Unweighted base (000s)	*24.012*	*20.155*	*2.164*	*1.215*	*0.478*

Source: Labour Force Survey 2010 (ONS)

** Sample size too small for reliable estimate.*

Across the economy and sector there has been slight decline in the proportion of employees receiving training in the last four weeks, between 2002 and 2010 (Table 4.20). It is also clear that the sector proportion has been consistently lower than the all economy figure during this period.

Previously one in ten employees in the sector received training in 2002 but this had fallen to seven per cent by 2010. In absolute numbers this translates to a decrease of 42,000 individuals receiving training across the sector. This can be attributed to the low labour turnover rates and is emphasised by the recession.

Table 4.20 % of employees receiving training in last 4 weeks, 2002-2010 (UK)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
	%	%	%	%	%	%	%	%	%
Agriculture, forestry and fishing	7	7	6	6	6	6	6	6	6
Energy production and utilities	15	14	13	13	13	13	12	11	12
Manufacturing	10	9	9	10	9	9	9	9	9
Construction, building services, engineering and planning	10	9	10	9	9	9	9	9	8
Wholesale and retail trade	11	10	10	10	10	10	9	8	8
Transportation and storage	**10**	**10**	**9**	**9**	**8**	**8**	**8**	**7**	**7**
Hospitality, tourism and sport	13	12	12	11	11	10	10	10	11
Information and communication technologies	13	12	12	11	11	10	10	10	10
Creative media and entertainment	13	12	12	12	11	11	10	9	8
Financial, insurance & other professional services	18	17	17	16	15	15	15	14	15
Real estate and facilities management	14	13	14	12	13	12	12	7	8
Government services	20	20	20	20	19	18	19	19	17
Education	22	21	21	21	20	20	20	20	18
Health	24	25	25	25	24	23	22	24	24
Care	24	25	25	25	24	23	22	21	20
All economy	15	14	14	14	14	13	13	13	13
Weighted base (000s)	4,095	3,987	4,074	4,061	3,949	3,863	3,834	3,685	3,642
Unweighted base (000s)	*35.781*	*33.324*	*32.626*	*31.674*	*29.781*	*28.888*	*27.829*	*25.468*	*24.012*

Source: Labour Force Survey 2010 (ONS)

There are national differences when it comes to receiving training in the last 13 weeks (Table 4.21). A greater proportion of employees in Scotland are likely to have received training (27 per cent), but this falls to 18 per cent in Northern Ireland at an all economy level.

Employees in the sector are again much less likely to have received training than UK's overall workforce.

Table 4.21 % of employees receiving training in last 13 weeks, 2010 (all nations)

	UK	England	Scotland	Wales	Northern Ireland
	%	%	%	%	%
Agriculture, forestry and fishing	13	15	12	*	*
Energy production and utilities	27	27	30	*	*
Manufacturing	18	18	18	20	18
Construction, building services, engineering and planning	18	18	21	18	12
Wholesale and retail trade	16	17	17	15	13
Transportation and storage	**18**	**18**	**19**	**16**	*****
Hospitality, tourism and sport	19	19	20	21	*
Information and communication technologies	20	20	22	*	*
Creative media and entertainment	17	17	18	20	*
Financial, insurance & other professional services	29	29	28	32	17
Real estate and facilities management	16	16	23	18	*
Government services	35	35	35	34	24
Education	38	39	34	38	26
Health	46	47	42	44	32
Care	40	40	40	46	27
All economy	25	25	27	24	18
Weighted base (000s)	7,181	6,065	668	312	137
Unweighted base (000s)	*48.93*	*40.947*	*4.41*	*2.282*	*1.291*

Source: Labour Force Survey 2010 (ONS)

** Sample size too small for reliable estimate.*

Similar to the employees receiving training in the last four weeks, Table 4.22 shows that the proportions have also declined for training in the last 13 weeks across the all economy (by two percentage points) and the sector (by three percentage points).

Table 4.22 % of employees receiving training in last 13 weeks, 2002-2010 (UK)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
	%	%	%	%	%	%	%	%	%
Agriculture, forestry and fishing	15	13	14	13	13	12	13	13	13
Energy production and utilities	33	31	30	28	28	28	26	25	27
Manufacturing	21	20	19	20	19	20	19	18	18
Construction, building services, engineering and planning	19	19	20	19	19	19	19	19	18
Wholesale and retail trade	20	20	20	20	18	18	18	16	16
Transportation and storage	**21**	**21**	**20**	**19**	**19**	**18**	**18**	**17**	**18**
Hospitality, tourism and sport	24	22	22	21	21	20	19	19	19
Information and communication technologies	27	25	24	23	23	22	21	21	20
Creative media and entertainment	24	24	23	23	23	21	21	18	17
Financial, insurance & other professional services	35	33	32	33	30	30	29	29	29
Real estate and facilities management	27	26	27	26	26	25	24	15	16
Government services	40	41	40	39	38	37	36	37	35
Education	44	42	42	42	40	39	40	39	38
Health	45	46	46	47	46	44	44	47	46
Care	45	46	46	47	46	44	44	41	40
All economy	28	28	28	28	27	26	26	26	26
Weighted base (000s)	7,952	7,873	7,917	8,037	7,883	7,681	7,669	7,382	7,359
Unweighted base (000s)	*69.767*	*65.973*	*63.658*	*63.118*	*59.87*	*57.81*	*56.008*	*51.497*	*48.93*

Source: Labour Force Survey 2010 (ONS)

Sub-sector analysis of employees receiving training shows vast variations (Table 4.23). To a large extent, this is driven by the EU directives and requirements. In most parts of the sector, workers have to train and obtain certificates or a licence to be able to work and these requirements are regularly reviewed. For example, the maritime sub-sector offers ships' officers training for up to three years before qualifying and ratings training for 6-18 months (the Mackinnon Partnership, 2009), while aircraft pilots need to pass exams every six months to maintain their licence. It can be anticipated that the proportions within the land transport sub-sector will increase in the coming years as the regulations for Driver CPC are met. This regulation requires that all professional LGV and PCV licence holders undertake 35 hours worth of periodic training in every five year period.

Table 4.23 % of employees receiving training by sub-sector, 2010

	Land Transport	Water transport	Air Transport	Warehousing and Support Activities	Postal and Courier Activities
	%	%	%	%	%
Last 4 weeks	6	12	16	8	6
Last 13 weeks	16	24	40	21	14

Source: Labour Force Survey 2010 (ONS)

4.4.5 Type of training provided

The type of training the employers have funded or arranged for their employees can be seen in Table 4.24. Job specific training dominates, with 83 per cent of employers funding or arranging this within the sector. Two thirds also provide health and safety training but this is possibly being delivered to simply meet legislative requirements. The sector though is much less likely to provide management training compared to the all economy.

Table 4.24 Type of training funded or arranged for employees

	Transportation and Storage		All economy	
	Number	%	Number	%
Job specific training	45,661	83	1,149,860	84
Health and safety/first aid training	38,143	69	970,183	71
Induction training	22,950	42	702,846	52
Training in new technology	26,772	49	641,023	47
Management training	13,351	24	457,763	34
Supervisory training	14,675	27	437,577	32
Personal Development Training*	1,676	3	45,451	3
Other	52	**	4,101	**
None of these	409	1	8,809	1
Don't know	31	**	2,412	**
Weighted base	55,004		1,361,249	
Unweighted base	3,098		66,916	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

*Base: All establishments providing training, ** denotes a figure greater than 0% but less than 0.5%*

NB Column percentages sum to more then 100 since multiple responses allowed.

Employers funding or arranging training were asked if the establishment formally assesses whether the training or development had an impact on the individuals performance. Just under two-thirds (64 per cent) in the sector reported that they did measure the impact of training. This is a similar level to all economy where 65 per cent measure this.

4.4.6 Barriers to training

Employers that had not funded or arranged training for any employees in the previous 12 months were asked their reasons for not doing so. Table 4.25 summarises the responses given across the nations for the sector. These findings are very similar to the responses given across the whole economy.

A belief that all staff are fully proficient and there was no need for training was the predominate reason for not providing training, and was reported by over two thirds (69 per cent) of non-trainers in the sector.

The next most common reasons for not training that were reported by employers were no availability in relevant subject area, and no money for training – both of these reasons were reported by seven per cent of employers. However, 10 per cent of the employers said that training was not their priority. This is most likely a reflection of the tough economic climate that employers have been facing. For example logistics employers rate the recession and economy as the top risk priority for the third year running (FTA 2011).

There is relatively little difference to the barriers of training for the sector across the nations. Although in Wales and Northern Ireland employers are more likely to report that there is no money available for training.

Table 4.25 Barriers to training within sector

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
All our staff are fully proficient / no need for training	45,824	69	41,970	68	*	*	1,275	74	729	68
No money available for training	4,370	7	3,859	6	*	*	245	14	114	11
Training is not considered to be a priority for the establishment	6,900	10	6,519	11	*	*	151	9	120	11
No training available in relevant subject area	4,474	7	4,381	7	*	*	26	1	67	6
Managers have lacked the time to organise training	1,368	2	1,347	2	*	*	20	1	0	0
Learn by experience/Learn as you go	1,688	3	1,644	3	*	*	15	1	28	3
External courses are too expensive	1,930	3	1,892	3	*	*	38	2	0	0
Small firm/training not needed due to size of establishment	715	1	715	1	*	*	0	0	0	0
Employees are too busy to undertake training and development	825	1	692	1	*	*	110	6	24	2
Employees are too busy to give training	1,329	2	1,179	2	*	*	112	6	39	4
Business not operating long enough/New business (inc. takeover trans	1,187	2	1,165	2	*	*	0	0	22	2
Trained staff will be poached by other employers	300	**	286	**	*	*	6	**	8	1
I Don't know what provision is available locally	379	1	379	1	*	*	0	0	0	0
The start dates or times of the courses are inconvenient	544	1	511	1	*	*	0	0	33	3
The courses interested in are not available locally	60	**	60	**	*	*	0	0	0	0
No new staff (only train new staff)	87	**	81	**	*	*	6	**	0	0
The quality of the courses or providers locally is not satisfactory	46	**	46	**	*	*	0	0	0	0
Difficult to get information about the courses available locally	68	**	68	**	*	*	0	0	0	0
Other	1,037	2	710	1	*	*	180	10	28	0
No particular reason	2,855	4	2,738	4	*	*	49	3	68	6
Don't know	501	1	244	**	*	*	5	**	6	1
Weighted base	66,447		61,274		*		1,732		1,072	
Unweighted base	1,606		1,407		*		89		83	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All establishments that do not provide training.

**Suppressed due to unweighted establishment base size <50 in Scotland*

*** Denotes a figures of greater than 0% but less than 0.5%,*

NB Column percentages sum to more then 100 since multiple responses allowed

4.5 Skills and sectoral performance

Today's business environment means that there is an ever greater awareness amongst managers of the financial dimensions of decision making. 'The bottom line' has become a driving force which can determine the direction of the company but in some instances this means only having a short-term focus. Therefore investment in skills training and technological development may be curtailed if there is no prospect of an immediate payback.

The logistics sector operates on profit margins around one to three per cent (DfT, 2011b) and is more concerned with the day to day survival. They are competing on price. For example the FTA (2011) showed that operating costs rose by 6.1 per cent, but road haulage rates rose only by 3.6 per cent. This is further confirmed by a UK Road Haulage Industry Report by Plimsoll (2011) found that 133 companies from top 999 firms sold at a loss for the 2nd year running. Yet the sector is a service-based industry and concepts such as service quality, customer satisfaction and loyalty are becoming ever more important (Saura *et al* 2008). Saura *et al*. continues in their report that companies should provide employees with the training and resources necessary, such as ICT, to provide good customer service. But companies report that lack of funds are a barrier to providing training. We have shown that only 19 per cent have a training budget and the sector is the least likely to provide staff training.

Making clear the return on investments available from training to employers is vital. The association between a highly skilled workforce and the organisational performance has been confirmed as a positive one (Tamkin *et al 2004)*. For example, a five per cent increase in training rate is associated with four per cent increase in productivity, as measured by value added per worker (Dearden *et al 2000)*. Additional figures show, that 47 per cent of employers within the private sector consider that training leads to an increase in profit, while 42 per cent report the same effect on turnover (Cosh *et al* 2003).

The transportation and storage sector is generally dominated by small employers, as 48 per cent of the sector's establishments employ between 2 to 4 of staff. Additionally, 17 per cent of the sector workforce is made up by self-employed operators. This means that many small enterprises rely heavily on their owners' abilities to efficiently manage a business. The importance of managers is further demonstrated when considering that they make up the third largest occupational group in the sector.

Evidence shows that management and leadership, which includes strategic management and business management as well as line management, plays a crucial role in fully implementing HPW and ensuring that the business benefits are optimised (UKCES 2009b). Therefore it could be argued that the large majority of training should be targeted at managers.

However employers' investment in skills development for managers across the sector is limited. The data shows that only 39 per cent of managers in the sector have a level 4 or above qualification, yet employers are least likely to provide training to managers. Only 32 per cent of all sector managers receive training compared to 45 per cent across the economy and those employers that do train are not likely to fund or arrange management training, preferring to provide other job-specific training. This could be impacting on the company's ability to implement HPWP. For example, as previously discussed, six in ten employers have no formal or informal process in place to identify talented individuals, while the extent to which employees have variety in their work is one of the lowest across all sectors.

However, the transportation and storage is the most poorly qualified of all sectors of the economy, with 37 per cent or 533,000 individuals not qualified to level 2. The sector does depend on operational and elementary roles but these roles generally have minimum requirement of a level 2. No investment in skills and low qualifications of the workforce usually go together with low performance and weak or no growth.

Therefore if the sector is to maintain its competitive strategy and look to improve its economic position, developing and utilising the skills of its workforce is important. The logistics sector has shown that utilising strategic business management skills have been paramount recently, with many business boards having to re-evaluate their priorities and adjust their strategies in order to ensure a secure future, describing the change as 'fundamental' (FTA 2011). This in turn requires organisational buy-in to changes, so change and line management is vital to ensure that the workforce work towards the new goals. Further priorities for logistics companies include site safety, reducing accidents on the road, staff security and reducing CO_2 emissions. All of these require training and skills development, including health and safety, driver training, working collaboratively with competitors for back hauling and sharing loads to cut mileage and fuel consumption.

As shown, only by looking across the subsectors, it appears to be obvious that high investment in skills leads to high performance, while no investment in skills and low qualifications of the workforce usually go together with low performance and weak or no growth.

It is also worth mentioning that higher skills levels are not only associated with higher productivity. They can also bring improvements in other areas of operation. The better-qualified workforce is more likely to be aware of the commercial aspects of their employer's business activity and hence more likely to be well positioned to work towards improving the levels of competitiveness.

5 Extent of skills mismatch

Chapter Summary

- One in nine sector employers report having a vacancy. The volume of vacancies in the sector is equivalent to two per cent of total employment; 18 per cent of vacancies are classified as hard-to-fill, which is lower than the all economy figure of 23 per cent
- 42 per cent of hard-to-fill vacancies are a consequence of a low number of applicants with the required skills (i.e. skill shortages)
- Specific occupations like LGV drivers and ship officers do have recruitment and retention issues
- 55,000 workers have skills gaps, with gaps resulting from a deficit of job specific skills the most widely reported, followed by customer service skills
- Around 2/3rds of businesses report that the impact of vacancies, retention & skills gaps has led to loss of business to competitors (higher than across the UK economy proportion of 38 per cent)
- Vacancies are 2 per cent of sector's employment, with 12 per cent of them being SSVs and 18 per cent HTF vacancies.

This chapter sets out to examine the current mismatch of skills in the labour market by examining the demand for and supply for skills. It will examine the skill shortages, where employers have difficulties in recruiting or filling their vacancies, revealing if the labour demand can be met by the labour supply. Furthermore, this chapter analyses the internal labour market of organisations, investigating if workers are proficient or not in their jobs (skills gaps) or if there maybe 'under-employment' whereby the skills of the workforce are not fully utilised. Finally, the chapter will see if the labour supply exceeds the labour demand and whether age and worker behaviour responds to these market signals.

5.1 Extent and nature of vacancies

The nature of vacancies can be described by two means – hard-to-fill vacancies and skill-shortage vacancies:

- Hard-to-fill vacancies (HtFV) - are those vacancies described by employers as being hard-to-fill. Reasons often include skills-related issues, but can simply involve such aspects as poor pay or conditions of employment, poor perceptions of the jobs, or the employer being based in a remote location.
- Skill-shortage vacancies (SSV) are those HtFVs which result from a lack of applicants with the required skills, work experience or qualifications.

5.1.1 Level of vacancies

In 2011, over 13,000 employers in the transportation and storage sector had vacancies, which is one in nine employers. This is a relatively small proportion and it can be attributed to low economic growth, leading to low staff turnover, with the large majority of the workers staying in their current positions. Overall, vacancies and hard-to-fill vacancies, in the sector, each accounted for five per cent of the sector's employment reported (Table 5.1), while skills-shortage vacancies were slightly lower, at four per cent.

There is variation in the incidence of sector recruitment difficulties across the nations. England accounts for the largest share of establishments, and in turn the most vacancies followed by Scotland, Wales and Northern Ireland. However, in terms of hard-to-fill vacancies and skills-shortage vacancies Wales has a greater number than both Scotland and Northern Ireland.

The sector in Scotland accounts for six per cent of the vacancies reported by employers in the nation, while in Northern Ireland this stands at two per cent. However, the proportion of hard-to-fill and skills-shortage vacancies in Scotland is the lowest, with both at two per cent. This indicates that sector establishments in Scotland suffer from fewer recruitment difficulties than the other nations reflecting the general abundance of qualified Scottish workforce compared to the number of jobs available.

Table 5.1 Employers with vacancies, hard-to-fill vacancies and skills shortage vacancies

	Vacancies		HTF vacancies		SSV			
	Number	%	Number	%	Number	%	*Weighted base*	*Unweighted base*
Agriculture, Forestry & Fishing	8,285	3	4,141	5	2,660	4	110,220	1,547
Energy Production & Utilities	1,783	1	635	1	532	1	12,610	1,614
Manufacturing	17,423	6	7,684	8	6,040	9	130,709	7,776
Construction, Building Services Engineering and Planning	22,972	8	11,596	13	9,607	14	306,403	8,961
Wholesale & Retail Trade	50,681	18	13,499	15	9,778	14	470,200	16,150
Transportation and Storage	**13,036**	**5**	**4,127**	**5**	**2,662**	**4**	**122,058**	**4,735**
Hospitality, Tourism and Sport	32,674	12	11,656	13	7,435	11	220,055	11,318
Information and Communication Technologies	9,146	3	3,596	4	3,386	5	72,281	2,510
Creative Media & Entertainment	16,182	6	5,506	6	4,746	7	143,772	3,762
Financial, Insurance & other Professional Services	21,794	8	5,310	6	4,556	7	170,887	5,343
Real Estate & Facilities Management	17,403	6	4,651	5	3,956	6	166,486	3,424
Government Services	8,185	3	1,877	2	1,204	2	54,687	2,605
Education	14,466	5	3,220	4	2,386	4	64,540	5,439
Health	9,577	3	2,820	3	1,842	3	52,370	3,398
Care	15,589	6	3,956	4	2,054	3	87,899	4,763
Not in scope	15,583	6	6,497	7	5,121	8	114,744	4,227
Total	274,779	100	90,771	100	67,965	100	2,299,921	87,572

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All employers with vacancies

Column 3: Share of employers with vacancies

Column 5: Share of employers with HTF vacancies

Column 7: Share of employers with a SSV

In volume terms, the number of vacancies across the economy was nearly 636,000 (Table 5.2), which is relatively low in a workforce of 27m. The transportation and storage sector has 25,734 vacancies, which is equivalent to two per cent of its total employment.

Of the sector's vacancies, 18 per cent are hard-to-fill and 12 per cent are skill-shortage vacancies, which is much lower than all economy figure of 23 and 16 per cent respectively. This indicates that the sector, although having a similar proportion of vacancies to all sectors, does not struggle as much to recruit. This relates directly to the comparatively good performance of the sector at the time when other areas of the UK economy report a slowdown.

Table 5.2 Profile of vacancies by sector

	Vacancies	HTF vacancies	SSV (prompted and unprompted)	Vacancies as a % of employment	HTF vacancies as a % vacancies	SSV as a % vacancies	*Weighted base*	*Unweighted base*
Agriculture, Forestry & Fishing	14,641	5,785	4,238	3	40	29	466,870	19,506
Energy Production & Utilities	9,343	1,590	1,236	3	17	13	333,050	47,228
Manufacturing	40,252	11,834	9,711	2	29	24	2,541,188	291,593
Construction, Building Services Engineering and Planning	47,241	19,103	12,394	2	40	26	2,235,270	150,111
Wholesale & Retail Trade	95,390	17,441	12,619	2	18	13	4,674,684	514,820
Transportation and Storage	**25,734**	**4,739**	**3,182**	**2**	**18**	**12**	**1,320,126**	**114,658**
Hospitality, Tourism and Sport	73,886	18,245	11,179	3	25	15	2,313,487	258,524
Information and Communication Technologies	29,361	5,449	4,937	5	19	17	614,641	53,681
Creative Media & Entertainment	37,885	6,824	5,502	3	18	15	1,086,978	87,953
Financial, Insurance & other Professional Services	58,847	11,732	10,623	3	20	18	2,052,039	112,945
Real Estate & Facilities Management	31,155	5,773	4,252	3	19	14	1,183,601	91,204
Government Services	35,917	9,330	5,938	2	26	17	1,780,058	223,796
Education	34,684	4,984	3,729	1	14	11	2,538,545	387,221
Health	27,811	5,281	3,330	1	19	12	2,004,436	219,765
Care	37,494	5,924	3,335	2	16	9	1,504,729	157,681
Not Within Scope	36,266	9,533	7,248	4	26	20	897,422	86,007
Total	635,907	143,564	103,453	2	23	16	27,547,123	2,816,693

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: Vary

Vacancies as a % of employment based on all employment.

Hard-to-fill vacancies as a % of vacancies based on all vacancies.

SSVs as a % of vacancies based on all vacancies.

The national pattern of vacancies for all sectors can be seen in Table 5.3. England's figures are reflective of the overall UK picture.

Vacancies in Scotland account for two per cent of employment, across the sector and whole economy. There are a relatively small proportion of HtFV and SSV indicating that recruitment in the sector is much easier than that seen across the economy and most other sectors.

The sector in Wales, however, experiences a higher level of HtFVs, where nearly half are hard-to-fill and 29 per cent of vacancies are due to the lack of skills available. Both of which are much greater than across the Welsh economy, indicating that the sector in Wales has greater recruitment difficulties than the economy average.

Northern Ireland vacancies account for one per cent of the sector's employment. Three in five vacancies are hard-to-fill but only one in ten vacancies are due to skills shortage.

Table 5.3 Profile of vacancies by sector and nation

	Vacancies as a % employment				HTF vacancies as a % vacancies				SSV as a % vacancies			
	England	Scotland	Wales	NI	England	Scotland	Wales	NI	England	Scotland	Wales	NI
Agriculture, forestry & fishing	3	†4	2	0	36	†45	87	0	28	†22	85	0
Energy production & utilities	2	7	4	1	11	22	32	49	9	17	22	25
Manufacturing	2	1	2	2	28	39	30	33	23	36	27	29
Construction, Building Services Engineering and Planning	2	2	2	1	42	29	41	27	26	24	34	16
Wholesale & retail trade	2	2	2	2	18	17	23	32	13	10	12	18
Transportation and Storage	**2**	**2**	**3**	**1**	**17**	**6**	**48**	**60**	**12**	**3**	**29**	**11**
Hospitality, Tourism and Sport	3	3	4	2	23	25	56	29	13	17	41	23
Information and Communication Technologies	5	†5	3	3	18	†35	19	13	16	†28	17	13
Creative media & entertainment	3	†2	5	11	20	†1	18	7	16	†0	16	4
Financial, Insurance & other Professional Services	3	2	2	11	19	7	12	44	17	6	12	44
Real estate & facilities management	3	†1	2	1	18	†29	17	0	14	†22	12	0
Government services	2	1	2	2	25	10	46	43	17	5	4	36
Education	1	2	1	1	16	6	6	16	12	2	5	11
Health	2	1	1	1	19	19	17	27	12	9	13	27
Care	3	1	3	3	16	19	20	13	9	16	13	3
Total	2	2	2	2	22	20	36	44	16	14	22	22
Weighted base	*23,198,476*	*2,381,601*	*1,182,314*	*784,732*	*545,064*	*45,749*	*25,542*	*19,552*	*545,064*	*45,749*	*25,542*	*19,552*
Unweighted base	*2,345,213*	*201,868*	*178,922*	*90,690*	*43,960*	*3,186*	*2,999*	*1,759*	*43,960*	*3,186*	*2,999*	*1,759*

Source: UK Commission's Employer Skills Survey (Davies et al, 2012).

Bases vary.

- *Vacancies as a % of employment based on all employment.*
- *Hard-to-fill vacancies as a % of vacancies based on all vacancies.*
- *SSVs as a % of vacancies based on all vacancies.*

† Treat figures with caution due to unweighted establishment base size of 50-99 in Scotland.

5.1.2 Nature of vacancies

In the sector, employers report most vacancies at machine operative level. Four per cent of establishments report a vacancy at this level, which is a higher proportion than the whole economy at one per cent, reflecting the sector's great dependence on the machine operative roles, like drivers, signallers or baggage handlers, which make up the core of its workforce. Marchington *et al* (2003) report the small road haulage firms have particular problems with regards to recruitment and retention of drivers, pointing out some firms have been forced to adopt continuous recruitment activities, including permanent notices in JobCentre Plus. Section 5.4.3 further reveals that more LGV vacancies are available than those seeking such a role. While future employment concerns regarding LGV drivers, managers and ship officers have been widely reported (Ball *et al.* 2012, SfL 2012, SfL 2011, Deloitte and Oxford Economics 2011, the Mackinnon Partnership 2009).

Table 5.4 provides details of the occupational pattern of vacancies for the sector. At 38 per cent, the largest share of vacancies is among machine operatives, followed by elementary staff (21 per cent).

However, the skilled trade occupations like mechanics, auto engineers and repairers, is where the sector struggles in terms of skills shortages. Almost a third of the vacancies in this group are SSVs. The main reasons for this are the general perception of the roles, the poorly perceived career progression and the low levels of training. Additionally, managers experience higher than average SSV levels as proportion of vacancies.

Table 5.4 Profile of vacancies by occupation within sector

	Volume								
	Vacancies	HTF vacancies	SSV	HTF vacancies as a % vacancies	SSV as a % vacancies	*Weighted base (number of vacancies)*	*Unweighted base (number of vacancies)*	*Weighted base (establishments reporting vacancies)*	*Unweighted base (establishments reporting vacancies)*
Managers	1,221	201	186	16	15	1,221	103	692	29
Professionals	*	*	*	*	*	*	*	*	*
Associate professionals	1,628	243	231	15	14	1,628	98	1531	65
Administrative/clerical staff	2,571	382	320	15	12	2,571	152	2491	109
Skilled trades occupations	2,299	938	691	41	30	2,299	149	2144	100
Caring, leisure and other services staff	*	*	*	*	*	*	*	*	*
Sales and customer services staff	1,620	288	253	18	16	1,620	130	1292	88
Machine operatives	9,764	2,154	1,070	22	11	9,764	695	4437	227
Elementary staff	5,528	475	382	9	7	5,528	397	1876	89
Unclassified staff	*	*	*	*	*	*	*	*	*
Total	25,723	4,739	3,183	18	12	25,723	1,857	14752	738

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All vacancies

** Data suppressed due to small (<25) unweighted base of establishments.*

5.1.2.1 Hard-to-fill vacancies and skill-shortage vacancies

So far we have examined the incidences of hard-to-fill vacancies and skill-shortage vacancies. In this section, the reasons why employers consider some vacancies to be hard-to-fill are explored, as well as the impact and the measures taken to overcome them. It will also investigate the skills lacking in connection with skill-shortage vacancies.

Employers with HtFV were asked to provide reasons for considering vacancies to be so. In the sector, 42 per cent are described as caused, at least in part, by a low number of applicants with the required skills, which is on par with the whole economy figure of 40 per cent. Poor terms and conditions offered for the post, and job entailing shift work or unsocial hours as causes were attributed by 27 and 21 per cent of the sector employers respectively. These are both reported at a much higher level within the sector than the whole economy (13 and nine per cent respectively). These are also reasons employers in the logistics sector report as contributing to the sector's poor reputation (SfL 2011).

The impact of HtFV for the sector in the nations can be seen in Table 5.5. An increased workload for staff is the most common impact of recruitment difficulties, and was reported by 85 per cent of the sector's employers with hard-to-fill vacancies. Significantly nearly two thirds (63 per cent) experiencing recruitment difficulties lost business or orders to competitors as a result, which is more than 20 percentage points higher than the all economy figure of 42 per cent.

Other impacts include difficulties meeting customer service objectives (52 per cent), experiencing increased operating costs (40 per cent), and third report a delay in developing new products or services, having difficulties introducing new working practices and the need to outsource work.

Compared to the national economy, the sector in Wales is more likely to report having to withdraw from offering certain products or services (67 compare to 33 per cent), the need to outsource work (56 compared to 28 per cent) and also experience increased operating costs (68 compared to 41 per cent) as a consequence of hard-to-fill vacancies. This is not surprising given the high instances of HtFVs.

Table 5.5 Impact of having hard-to-fill vacancies within sector

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Increase workload for other staff	3,511	85	3,152	86	*	*	187	*63*	*	*
Have difficulties meeting customer services objectives	2,135	52	1,812	50	*	*	195	*66*	*	*
Lose business or orders to competitors	2,586	63	2,338	64	*	*	148	*50*	*	*
Delay developing new products or services	1,381	33	1,136	31	*	*	127	*43*	*	*
Experience increased operating costs	1,634	40	1,373	38	*	*	202	*68*	*	*
Have difficulties meeting quality standards	1,180	29	1,069	29	*	*	74	*25*	*	*
Have difficulties introducing new working practices	1,342	33	1,102	30	*	*	133	*45*	*	*
Outsource work	1,348	33	1,094	30	*	*	166	*56*	*	*
Withdraw from offering certain products or services alto	1,214	29	985	27	*	*	197	*67*	*	*
Have difficulties introducing technological change	1,149	28	1,026	28	*	*	72	*24*	*	*
None	248	6	248	7	*	*	0	*0*	*	*
Don't know	0	0	0	0	*	*	0	*0*	*	*
Weighted base	4,127		3,659		*		295		*	
Unweighted base	216		170		*		33		*	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All employers with hard to fill vacancies,

**Data suppressed as unweighted establishment base < 25 (>50 in Scotland)*

Figures in italics denote base sizes of 25 to 49 and should be treated with caution

NB Column percentages sum to more than 100 since multiple responses allowed

The vast majority of employers in the sector experiencing recruitment difficulties had taken some steps to try to overcome these problems (Table 5.6). Although a higher percentage of sector employers had done nothing (18 per cent compared to 14 per cent across the whole economy).

The most common actions taken by employers in the sector to overcome recruitment difficulties include increasing advertising and recruitment spend (30 per cent) and using new recruitment methods or channels (24 per cent). Employers also redefine existing jobs as means to overcome hard-to-fill vacancies.

Relatively few (two per cent) will look to increase salaries or bring in contractors to do the work or contract it out. This is most likely due to the low margins companies already operate in.

Table 5.6 Measures taken by sector employers to overcome hard-to-fill vacancies

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Increasing advertising / recruitment spend	1,231	30	1,018	28	*	*	*	*	*	*
Using NEW recruitment methods or channels	985	24	824	23	*	*	*	*	*	*
Redefining existing jobs	605	15	587	16	*	*	*	*	*	*
Increasing the training given to your existing workforce	212	5	153	4	*	*	*	*	*	*
Increasing / expanding trainee programmes	165	4	150	4	*	*	*	*	*	*
Being prepared to offer training to less well qualified recruits	218	5	183	5	*	*	*	*	*	*
Bringing in contractors to do the work, or contracting it out	79	2	71	2	*	*	*	*	*	*
Increasing salaries	89	2	83	2	*	*	*	*	*	*
Recruiting workers who are non-UK nationals	48	1	48	1	*	*	*	*	*	*
Making the job more attractive e.g. recruitment incentives, enhanced T&Cs, working hours	43	1	25	1	*	*	*	*	*	*
Other	585	14	572	16	*	*	*	*	*	*
Nothing	760	18	715	20	*	*	*	*	*	*
Don't know	29	1	29	1	*	*	*	*	*	*
Weighted base	4,127		3,659		*		*		*	
Unweighted base	216		170		*		*		*	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All employers with hard to fill vacancies

**Data suppressed as unweighted base < 25 (<50 for Scotland)*

NB Column percentages sum to more than 100 since multiple responses allowed

Employers, with skill-shortage vacancies were asked what particular skills they found difficult to obtain, the results of which can be seen in Table 5.7 for the economy and Table 5.8 for the sector.

Across the economy, job specific skills are the most frequently admitted type of skill lacking reported by nearly two thirds (66 per cent) of employers. It is also the most prevalent in each of the nations (Table 5.7).

Table 5.7 Skills lacking in Skills Shortage Vacancies, whole economy

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Basic computer literacy / using IT	16,832	16	13,842	16	514	8	2,001	35	476	11
Advanced IT or software skills	21,988	21	18,190	21	1,160	18	1,976	35	661	15
Oral communication skills	39,113	38	33,997	39	1,910	30	1,993	35	1,213	28
Written communication skills	33,859	33	28,515	33	2,659	41	1,381	24	1,305	30
Customer handling skills	41,349	40	33,863	39	3,056	47	2,977	53	1,453	33
Team working skills	33,728	33	27,092	31	1,877	29	3,315	59	1,444	33
Written Welsh language skills	1,574	2	0	0	0	0	1,574	28	0	0
Oral Welsh language skills	1,680	2	0	0	0	0	1,680	30	0	0
Foreign language skills	16,773	16	14,601	17	1,451	22	385	7	336	8
Problem solving skills	37,882	37	32,338	37	2,453	38	2,209	39	882	20
Planning and Organisation skills	42,431	41	35,377	41	2,867	44	2,372	42	1,815	41
Strategic Management skills	29,853	29	24,828	29	2,122	33	1,564	28	1,340	31
Numeracy skills	26,775	26	23,194	27	1,866	29	1,149	20	567	13
Literacy skills	30,151	29	25,002	29	1,674	26	2,490	44	985	22
Office admin skills	17,559	17	15,320	18	967	15	797	14	475	11
Technical or practical skills	47,992	46	40,313	46	3,711	57	2,571	46	1,397	32
Job specific skills	68,385	66	56,716	65	5,064	78	4,401	78	2,204	50
Experience/lack of product knowledge	1,668	2	1,523	2	135	2	9	0	0	0
Personal attributes e.g. motivation, work ethos, common sense, initiative, reliability, commitment, punctuality, flexibility)	2,743	3	2,385	3	314	5	17	0	26	1
Other	911	1	835	1	0	0	13	0	62	1
No particular skills difficulties	7,129	7	5,588	6	148	2	135	2	1,258	29
Don't know	3,777	4	3,459	4	102	2	124	2	93	2
Weighted base	103,453		86,950		6,463		5,650		4,390	
Unweighted base	7,197		5,959		367		482		389	

Source:UK Employer Skills Survey 2011, UKCES, 2011

Base: All skills shortage vacancies

NB Column percentages sum to more than 100 since multiple responses allowed

Job specific skills is also the most frequently reported type of skill lacking within the sector, with nearly three quarters (74 per cent) of employers reporting this (Table 5.8). This is a greater problem for the sector than for the economy as a whole.

The lack of basic computer literacy is reported by proportionately more employers within the sector than across the economy. The reason for this is the generally mature workforce, which still needs to get up to speed with the use of technology-based equipment, such as devices using the satellite navigation systems.

Additional skills reported to be lacking by around half of sector employers include oral communications skills, technical or practical skills, customer handling skills, problem solving skills and planning and organisation skills.

The skills lacking in applicants are broadly the same between England and the UK, while within Wales, team working skills is the second most frequently identified as lacking after job specific skills (Table 5.8).

Table 5.8 Skills lacking in Skills Shortage Vacancies within sector

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Basic computer literacy / using IT	681	21	609	23	*	*	54	*15*	*	*
Advanced IT or software skills	665	21	559	21	*	*	89	*24*	*	*
Oral communication skills	1,569	49	1,403	52	*	*	128	*35*	*	*
Written communication skills	979	31	827	31	*	*	113	*31*	*	*
Customer handling skills	1,464	46	1,268	47	*	*	160	*44*	*	*
Team working skills	1,218	38	936	35	*	*	224	*62*	*	*
Written Welsh language skills	39	1	0	0	*	*	39	*11*	*	*
Oral Welsh language skills	28	1	0	0	*	*	28	*8*	*	*
Foreign language skills	397	12	323	12	*	*	53	*14*	*	*
Problem solving skills	1,462	46	1,302	48	*	*	112	*31*	*	*
Planning and Organisation skills	1,452	46	1,254	46	*	*	133	*36*	*	*
Strategic Management skills	919	29	743	27	*	*	137	*38*	*	*
Numeracy skills	832	26	687	25	*	*	107	*29*	*	*
Literacy skills	1,077	34	952	35	*	*	107	*29*	*	*
Office admin skills	601	19	523	19	*	*	40	*11*	*	*
Technical or practical skills	1,510	47	1,275	47	*	*	151	*41*	*	*
Job specific skills	2,354	74	1,978	73	*	*	281	*77*	*	*
Experience/lack of product knowledge	41	1	14	1	*	*	0	*0*	*	*
Personal attributes e.g. motivation, work ethos, common sense, initiative, reliability, commitment, punctuality, flexibility)	43	1	43	2	*	*	0	*0*	*	*
Other	0	0	0	0	*	*	0	*0*	*	*
No particular skills difficulties	237	7	216	8	*	*	21	*6*	*	*
Don't know	70	2	70	3	*	*	0	*0*	*	*
Weighted base	*3,182*		*2,707*		*		*363*		*	
Unweighted base	*242*		*184*		*		*47*		*	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All skills shortage vacancies

**Data suppressed as unweighted base < 25 (<50 in Scotland)*

Figures in italics denote base sizes of 25 to 49 and should be treated with caution

NB Column percentages sum to more than 100 since multiple responses allowed

When comparing the shortages of particular skills within the sector to those seen across the economy, problem solving skills shortages appear to have a higher impact on the sector - 46 per cent of employers with skills shortages in the sector compared with 37 per cent of employers with skills shortages across the economy. Similarly, 46 per cent of employers with skills shortages within the transportation and storage sector report shortages of customer handling skills (40 per cent for across the economy). Basic computer literacy shortages are also of greater importance for the employers within the sector than they are for the employers across the economy (21 per cent of the skills lacking in the sector, compared to 16 per cent across the economy).

5.1.3 Recruitment channels

In the last 2 to 3 years, 15 per cent of employers in the sector took on an individual in their first job on leaving school, college or university. This is the second lowest proportion of all sectors (Table 5.9).

Across the nations there is variation in the recruitment of school leavers. Sector employers in Scotland are most likely to recruit school leavers (19 per cent) while those in Wales are least likely (11 per cent). The sector proportions are much lower than the economy averages in each nation, which reflects the age restrictions many sector employers are faced with (discussed in section 3.3.2).

Table 5.9 Employers recruiting one or more young person over the last 3 years

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Agriculture, forestry & fishing	21,769	20	14,815	19	†2,725	†20	1,183	11	3,046	43
Energy production & utilities	2,660	21	2,080	21	322	25	197	24	61	11
Manufacturing	31,047	24	26,304	23	2,442	26	1,437	27	863	23
Construction, building services engineering and planning	66,741	22	55,108	21	6,498	30	2,973	23	2,161	20
Wholesale & retail trade	120,702	26	101,878	25	9,862	28	5,297	25	3,665	26
Transportation and storage	**18,432**	**15**	**16,069**	**15**	**1,496**	**19**	**476**	**11**	**391**	**17**
Hospitality, tourism and sport	70,608	32	59,071	33	6,164	28	3,583	32	1,789	31
Information and communication technologies	14,960	21	13,659	21	†794	†22	241	12	266	24
Creative media & entertainment	31,843	22	28,704	23	†1,573	†14	1,082	23	484	24
Financial, insurance & other professional services	37,955	22	34,274	22	1,679	20	1,230	21	773	23
Real estate & facilities management	23,229	14	21,827	15	†699	†6	475	16	229	12
Government services	10,268	19	8,375	19	1,084	20	378	14	431	21
Education	28,641	44	24,132	45	1,812	41	1,450	45	1,247	38
Health	13,817	26	11,547	26	938	29	822	29	510	34
Care	26,557	30	22,175	31	1,955	23	1,481	34	947	29
All economy	552,385	24	467,925	24	43,211	25	23,664	24	17,584	27
Weighted base	*2,124,807*		*1,960,298*		*175,115*		*98,952*		*65,558*	
Unweighted base	*85,069*		*75,053*		*2,503*		*6,012*		*4,004*	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: all establishments.

NB: Scottish employers were asked a slightly different question; results cannot be compared directly to UK, England, Wales, or Northern Ireland figures. Scottish employers have not been included in the UK base.

† Treat figures with caution due to small unweighted base size of 50-99 establishments in Scotland.

5.1.4 Staff retention

Table 5.10 demonstrates the proportion of employers who believe they have particular jobs in which they have difficulties retaining staff by sector and nation.

Five per cent of employers in the sector reported retention problems within England and Northern Ireland, with this increasing to eight per cent in Wales.

Table 5.10 Employers with retention problems by sector and nation

	UK (excl. Scotland)		England		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%
Agriculture, Forestry & Fishing	4,954	5	4,236	5	360	3	358	5
Energy Production & Utilities	555	5	484	5	62	8	9	2
Manufacturing	6,493	5	5,883	5	433	8	177	5
Construction, Building Services Engineering and Planning	10,569	4	9,710	4	722	5	138	1
Wholesale & Retail Trade	18,192	4	16,682	4	891	4	619	4
Transportation and Storage	**5,676**	**5**	**5,240**	**5**	**321**	**8**	**115**	**5**
Hospitality, Tourism and Sport	18,345	9	16,670	9	1,126	10	548	9
Information and Communication Technologies	3,084	4	2,948	4	57	3	79	7
Creative Media & Entertainment	5,303	4	4,891	4	306	7	106	5
Financial, Insurance & other Professional Services	6,271	4	5,876	4	339	6	55	2
Real Estate & Facilities Management	5,826	4	5,649	4	139	5	38	2
Government Services	2,496	5	2,200	5	208	8	88	4
Education	2,925	5	2,493	5	267	8	165	5
Health	3,297	7	2,961	7	249	9	87	6
Care	5,134	6	4,615	6	327	7	191	6
Not within scope	6,810	6	6,476	6	247	6	87	3
Whole Economy	105,929	5	97,014	5	6,054	6	2,860	4
Weighted base	2,124,807		1,960,298		98,952		65,558	
Unweighted base	85,069		75,053		6,012		4,004	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All establishments in England, NI, Wales (question not asked in Scotland)

Employers were asked what the main reasons were, as to why they found it difficult to retain staff. Over half (51 per cent) in the sector indicated that the impact of the benefit trap was a reason, which is much greater than across the whole economy, where it was cited by only 27 per cent of employers.

Other reasons given by employers in the sector included not enough people interested in doing this type of work (44 per cent) and the long / unsocial hours associated with the job (42 per cent).

Employers in the sector also remarked that competition from other employers and the fact that other firms offered better wages also contributed to staff retention problems to a greater degree than that experienced across the whole economy.

In efforts to address the retention problems, around a quarter of employers had altered or improved their recruitment methods (26 per cent) or had introduced further training or development opportunities (23 per cent).

One in ten employers increased staff's wages or provided more incentives than normal, but this is much lower than the all economy figure of 22 per cent. This is probably a reflection of the low margins experienced by the sector and in particular freight logistics.

One in four (28 per cent) employers in the sector had not taken any measures to overcome retention difficulties.

Employers that reported having staff retention difficulties were asked what the impact of this was upon the business. Within the sector, 72 per cent reported that there was more strain on management of existing staff in covering the shortage, which is slightly less than the whole economy where it was reported by 79 per cent of employers.

There are a number of areas in which employers in the sector were more likely to report impacts compared to the whole economy. These included the loss of business to competitors (57 compared to 38 per cent), restrictions to business development activities (59 compared to 43 per cent) and difficulties introducing new working practices (43 compared to 29 per cent).

5.2 Extent and nature of skills issues

This section looks at the extent to which employers are experiencing skills gaps among their existing workforce. It focuses on the number, the profile and the causes of skills gaps and the range of skills described as lacking. The consequence these skills gaps have and the actions employers take to overcome them are also examined.

5.2.1 Extent of skills shortages and gaps

Nine per cent of sector establishments reported that they employed staff whom they considered not fully proficient. This equates to over 55,000 workers, four per cent of the total sector workforce that does not have the full set of skills to perform their jobs (Table 5.11). However, compared to the whole economy, the proportion of sector employers with skills gaps is lower.

Table 5.11 Employers and employees with skills gaps by sector

	Employers with skills gaps				Employees with skills gaps			
	Number	%	*Weighted base*	*Unweighted base*	Number	%	*Weighted base*	*Unweighted base*
Agriculture, Forestry & Fishing	10,665	10	110,220	1,547	20,149	4	466,870	19,506
Energy Production & Utilities	2,000	16	12,610	1,614	17,250	5	333,050	47,228
Manufacturing	21,520	16	130,709	7,776	148,007	6	2,541,188	291,593
Construction, Building Services Engineering and Planning	31,925	10	306,403	8,961	99,184	4	2,235,270	150,111
Wholesale & Retail Trade	72,233	15	470,200	16,150	300,344	6	4,674,684	514,820
Transportation and Storage	**11,540**	**9**	**122,058**	**4,735**	**55,391**	**4**	**1,320,126**	**114,658**
Hospitality, Tourism and Sport	43,000	20	220,055	11,318	193,549	8	2,313,487	258,524
Information and Communication Technologies	6,647	9	72,281	2,510	34,775	6	614,641	53,681
Creative Media & Entertainment	9,155	6	143,772	3,762	41,091	4	1,086,978	87,953
Financial, Insurance & other Professional Services	20,954	12	170,887	5,343	92,599	5	2,052,039	112,945
Real Estate & Facilities Management	13,185	8	166,486	3,424	64,302	5	1,183,601	91,204
Government Services	7,980	15	54,687	2,605	94,735	5	1,780,058	223,796
Education	12,304	19	64,540	5,439	94,884	4	2,538,545	387,221
Health	9,776	19	52,370	3,398	101,986	5	2,004,436	219,765
Care	14,886	17	87,899	4,763	78,458	5	1,504,729	157,681
Whole economy	300,941	13	2,299,921	87,572	1,489,540	5	27,547,123	2,816,693

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All employees

Variation in the proportion of sector establishments with skills gaps can be seen across the nations (Table 5.12). In Scotland 15 per cent of establishments reported that they had staff not fully proficient but this only amounted to three per cent of the workforce. While in Wales the same proportion of establishments had skills gaps but the lack of proficiency affected five per cent of the workforce.

Table 5.12 Employers and employees with skills gaps within sector, by nation

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Employers with skills gaps	11,540	9	9,416	9	1,231	15	622	15	271	12
Employees with skills gaps	55,391	4	48,836	4	3,523	3	1,740	5	1,292	5
Employer weighted base	122,058		107,593		8,002		4,214		2,250	
Employer unweighted base	4,735		4,078		152		300		205	
Employment weighted base	1,320,126		1,138,957		114,772		38,478		27,920	
Employment unweighted base	114,658		93,995		11,541		5,832		3,290	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All employees

Machine operatives (e.g. drivers) and elementary staff (e.g. warehouse operatives) are the most often citied roles to lack full proficiency (Table 5.13). These two occupational groups account for 52 per cent of all skills gaps, whilst managers accounting for eight per cent of skills gaps. This largely reflects the employment patterns of the sector.

The density of skills gaps is highest amongst sales and customer service staff, with seven per cent of those employed in these positions described as lacking full proficiency, and elementary staff, where six per cent of those employed have skills gaps.

Table 5.13 Skills gaps by occupation within sector

	Total employment	Number with skills gaps	% with skills gaps
Managers	206,463	4,511	2
Professionals	*	*	*
Associate professionals	42,237	2,051	5
Administrative/clerical staff	142,847	6,434	5
Skilled trades occupations	109,779	5,134	5
Caring, leisure and other services staff	*	*	*
Sales and customer services staff	109,126	7,099	7
Machine operatives	433,563	13,752	3
Elementary staff	238,795	15,309	6
Weighted base	1,320,126	55,391	4
Unweighted base	114,658	4,894	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All employees

** suppressed due to employer base <25*

5.2.1.1 Causes of skills gaps

The most common causes of skills gaps in the sector are a consequence, at least in part, of the worker's training only partially being completed or because they are new to the role. Half of all skills gaps were attributed to these two causes (51 and 50 per cent respectively).

The failure of the employer to provide appropriate training is reported to be a contributing factor in over a quarter (28 per cent) of all skills gaps, which is slightly greater than the whole economy at 23 per cent. Although a higher proportion (36 per cent) reports that training had been provided yet performance had not improved significantly so skills gaps still remain.

Within the nations, the causes of skills gaps for the sector have noticeable differences compared to the nation's whole economies:

- Sector employers in England report that the inability to recruit staff with the required skills and problems retaining staff are more likely to be identified as causes than employers across the England whole economy.
- Sector employers in Scotland are considerably less likely than employers nationally to be encountering each type of skills problem, with the exception of the introduction of new technology.
- In Wales, sector employers were more likely to report that staff lack motivation, that training is currently only partially completed and/or that staff lack motivation as reasons attributing to skills gaps. They are much less likely to attribute skills gaps to individuals being new to the role than across Welsh whole economy.
- The introduction of new working practices, staff lacking motivation and the introduction of new technology were identified more frequently by sector employers in Northern Ireland than employers nationally. However, sector employers are much less likely to report that skills gaps were caused by not receiving the appropriate training.

5.2.1.2 Skills lacking

It is important to understand the nature of skills lacking among the workforce in order to ensure that these can be addressed.

When describing the skills lacking among staff, over half (51 per cent) of employers in the sector described their employees as lacking job specific skills. The next most commonly identified skills lacking were customer handling skills (48 per cent), oral communication skills (47 per cent) and problem solving skills (42 per cent).

Compared with the UK whole economy data, the sector was more likely to cite oral communication skills, written communication skills, numeracy skills, customer handling skills and literacy skills as lacking in the workforce.

The national patterns of skills lacking for the sector compared to the economy national results have a number of issues that stand out:

- In England, employers in the sector are generally less likely to cite planning and organisation skills as lacking, but are more likely to be encountering a lack of oral and written communication skills and numeracy skills than employers nationally. This former can be attributed to the higher proportion of non-UK born workers in England, compared to the other three home nations.
- Sector employers in Scotland are more likely to report that office administration and customer handling skills are lacking compared to the Scottish all economy findings. Job specific and team working skills are much less likely to be cited than nationally.
- In Wales, oral communication skills and team working skills were identified more frequently by sector employers as skills lacking than the Welsh all economy findings. Office administration and technical or practical skills were less likely to be described as lacking.
- Customer handling and team working skills were identified more frequently by sector employers in Northern Ireland than employers across the nation as skills lacking in employees with skills gaps. They were less likely to cite strategic management and advanced IT or software skills.

5.2.1.3 Impact and steps taken to overcome of skills lacking

The impact of skills gaps on employers can be seen in Table 5.14. 71 per cent of sector employers with skills gaps reported an increase in the workload for other staff as a consequence of having staff who are not fully proficient. In some cases the increased workload maybe absorbed by other staff, but some employers may need to pay for overtime or bring in agency workers to cover the work. 58 per cent of sector employers with skills gaps reported that they had led to increased operating costs and 51 per cent lost business or orders to competitors, which are both greater than that seen across the economy (45 per cent and 32 per cent respectively).

Difficulties meeting quality standards or introducing new working practices were perceived to have a negative impact for over two-fifths of employers reporting internal skills gaps within the sector. Skills gaps also hindered the development of new products or services with a third of employers revealing that they had to delay the development of them.

Only three per cent of employers felt that skills gaps had no impact on their business, which is less than eight per cent reported across the whole economy.

Across the UK, data on the consequence of skills gaps is only available for England and Wales. However, this indicates that sector employers in Wales are more likely to cite the impacts compared to sector employers in England and to Wales as a whole.

Table 5.14 Consequences of skills gaps within sector

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Increase workload for other staff	5,283	71	4,280	74	*	*	289	*92*	*	*
Increase operating costs	4,299	58	3,507	61	*	*	239	*76*	*	*
Have difficulties meeting quality standards	3,615	49	3,028	53	*	*	210	*67*	*	*
Have difficulties introducing new working practices	3,178	43	2,062	36	*	*	218	*70*	*	*
Lose business or orders to competitors	3,753	51	2,813	49	*	*	189	*60*	*	*
Delay developing new products or services	2,541	34	1,530	27	*	*	167	*53*	*	*
Outsource work	1,465	20	1,130	20	*	*	177	*56*	*	*
No particular problems / None of the above	210	3	188	3	*	*	5	*2*	*	*
Don't know	11	**	11	**	*	*	0	*0*	*	*
Weighted base	7,428		5,760		*		313		*	
Unweighted base	553		476		*		34		*	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All employers with skills gaps that have impact on establishment performance

**Data suppressed as unweighted establishment base < 25 (<50 for Scotland)*

*** Denotes a figures of greater than 0% but less than 0.5%*

Figures in italics denote base sizes of 25 to 49 and should be treated with caution

NB Column percentages sum to more than 100 since multiple responses allowed

Table 5.15 demonstrates the actions employers across the economy have taken to overcome skills gaps and Table 5.16 shows the sectors response.

Table 5.15 Steps employers have taken to overcome skills gaps, whole economy

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Increase training activity / spend or increase/expand trainee programmes	185,527	82	155,451	82	3,822	79	18,002	83	8,253	86
More supervision of staff	139,442	62	116,865	62	3,186	66	13,381	62	6,009	62
More staff appraisals / performance reviews	123,245	55	103,336	55	2,939	61	12,001	55	4,968	51
Implementation of mentoring / buddying scheme	113,645	50	94,041	50	2,350	49	12,376	57	4,878	51
Reallocating work	76,053	34	62,381	33	1,952	41	7,876	36	3,844	40
Changing working practices	69,850	31	59,408	31	1,499	31	6,406	29	2,537	26
Increase recruitment activity / spend	33,319	15	28,747	15	762	16	2,386	11	1,424	15
Recruiting workers who are non-UK nationals	21,589	10	18,782	10	572	12	1,373	6	862	9
Other	3,156	1	2,742	1	125	3	221	1	69	1
Nothing	3,541	2	2,736	1	36	1	617	3	152	2
Don't know	348	**	322	0	0	0	0	0	25	0
Weighted base	*225,379*		*189,191*		*21,730*		*9,650*		*4,807*	
Unweighted base	*16,506*		*14,313*		*655*		*1,074*		*464*	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All employers with skills gaps who have taken steps to improve the proficiency or skills of these staff, or have plans to do so

*** Denotes a figures of greater than 0% but less than 0.5%*

NB Column percentages sum to more than 100 since multiple responses allowed

Nearly three-quarters (73 per cent) of employers in the sector with skills gaps have responded to skills deficiencies by either increasing the amount of training or spend they provide or expanding their trainee programmes (Table 5.16). This is lower than the response seen across the whole economy, where 82 per cent do this (Table 5.15).

The next most common responses, in the sector, to overcome skills gaps is increase in staff supervision (61 per cent), implementation of mentoring or a buddying scheme (50 per cent) and introducing more staff appraisals or performance reviews (42 per cent). On-the-job training provision, commonly used across the sub-sectors, is a common reason behind the high proportion of mentoring or buddying schemes in place within the sector.

Only two per cent take no action to tackle skills gaps, both across the sector and the whole economy.

Table 5.16 Steps employers within sector have taken to overcome skills gaps

	UK		England		Scotland		Wales		Northern Ireland	
	Number	%	Number	%	Number	%	Number	%	Number	%
Increase training activity / spend or increase/expand trainee	6,068	73	5,060	76	*	*	475	44	*	*
More supervision of staff	5,044	61	4,384	66	*	*	309	28	*	*
More staff appraisals / performance reviews	3,470	42	3,018	45	*	*	267	25	*	*
Implementation of mentoring / buddying scheme	4,133	50	3,237	49	*	*	737	68	*	*
Reallocating work	2,318	28	1,934	29	*	*	154	14	*	*
Changing working practices	2,636	32	2,272	34	*	*	156	14	*	*
Increase recruitment activity / spend	1,256	15	1,008	15	*	*	77	7	*	*
Recruiting workers who are non-UK nationals	531	6	356	5	*	*	36	3	*	*
Other	158	2	151	2	*	*	0	0	*	*
Nothing	157	2	147	2	*	*	0	0	*	*
Don't know	23	*	23	0	*	*	0	0	*	*
Weighted base	*8,314*		*6,640*		*		*449*		*	
Unweighted base	*650*		*562*		*		*43*		*	

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: All employers with skills gaps who have taken steps to improve the proficiency or skills of these staff, or have plans to do so

**Data suppressed as unweighted base < 25 (> 50 for Scotland)*

NB Column percentages sum to more than 100 since multiple responses allowed.

The actions undertaken by sector employers to overcome skills gaps varies across the nations. Employers in England and Scotland are most likely to increase training activity or spend or expand their trainee programmes, while in Wales employers are more likely to implement mentoring or a budding scheme.

Compared to national economies the following differences in actions undertaken by the sector to overcome skills gaps can be seen:

- In England, sector employers are less likely to conduct more staff appraisals or performance reviews or provide more training or expand their trainee programme, but they will provide slightly more staff supervision, than the nation averages.
- Greater staff supervision is more likely to happen in the Scottish transportation and storage sector than nationally but sector employers are less likely to reallocate work or introduce more staff appraisals or performance reviews.
- Sector employers in Wales are less likely to implement any of the solutions to overcome skills gaps compared with the whole Welsh economy, apart from the use of mentoring or buddying schemes.

5.3 Extent of under-employment

Under-employment is defined as individuals being either over-qualified or over-skilled. Someone can be described as being over-qualified if the qualifications they have are higher than the qualifications needed to get into their job. Someone is over-skilled if they have little opportunity to use their past experience, skills or abilities in their job.

In the transportation and storage sector, half of employers report that they have employees who are over-qualified and over-skilled, which is on par with the all economy figure of 49 per cent. In terms of employees this equates to 15 per cent or over 202,800 of the workforce. This means that nearly one in every seven workers in the sector are in jobs for which they are over-qualified and over-skilled.

It is worth noting, that this does not mean that over-qualified individuals do not have skills-gaps in the jobs they are required to perform. Often, the roles they end up doing – despite requiring lower levels of qualifications than the ones represented by those individuals – require specific, often technical skills, which they do not possess. This explains the discrepancy, with the transportation and storage sector being largely overqualified, while at the same time reporting high proportions of skills gaps.

Table 5.17 Extent to which workforce is 'over qualified' and 'over skilled' by sector

	Employers with employees who are over qualified and over skilled				Employees who are over qualified and over skilled			
	Number	%	*Weighted base*	*Unweighted base*	Number	%	*Weighted base*	*Unweighted base*
Agriculture, Forestry & Fishing	42,111	38	110,220	1,547	88,613	19	466,870	19,506
Energy Production & Utilities	5,458	43	12,610	1,614	43,319	13	333,050	47,228
Manufacturing	56,009	43	130,709	7,776	252,633	10	2,541,188	291,593
Construction, Building Services Engineering and Planning	129,922	42	306,403	8,961	369,923	17	2,235,270	150,111
Wholesale & Retail Trade	241,146	51	470,200	16,150	846,216	18	4,674,684	514,820
Transportation and Storage	**61,038**	**50**	**122,058**	**4,735**	**202,809**	**15**	**1,320,126**	**114,658**
Hospitality, Tourism and Sport	131,526	60	220,055	11,318	566,562	24	2,313,487	258,524
Information and Communication Technologies	33,764	47	72,281	2,510	93,637	15	614,641	53,681
Creative Media & Entertainment	66,845	46	143,772	3,762	205,573	19	1,086,978	87,953
Financial, Insurance & other Professional Services	76,826	45	170,887	5,343	312,906	15	2,052,039	112,945
Real Estate & Facilities Management	81,744	49	166,486	3,424	217,791	18	1,183,601	91,204
Government Services	29,384	54	54,687	2,605	256,006	14	1,780,058	223,796
Education	34,623	54	64,540	5,439	341,455	13	2,538,545	387,221
Health	23,566	45	52,370	3,398	225,183	11	2,004,436	219,765
Care	47,114	54	87,899	4,763	258,385	17	1,504,729	157,681
Whole economy	1,118,691	49	2,299,921	87,572	4,456,192	16	27,547,123	2,816,693
Weighted base	2,299,921				27,547,123			
Unweighted base	87,572				2,816,693			

Source: UK Commission's Employer Skills Survey 2011 (Davies et al, 2012).

Base: Vary, "Employers" columns based on all establishments, "Employees" columns based on all employment

Across the nations there are variations in the extent to which the workforce is 'over-qualified' and 'over-skilled':

- 86 per cent or 174,327 of those over-qualified and over-skilled in the sector are based in England and this accounts for 15 per cent of the workforce and is similar to whole economy proportion of 16 per cent.
- One in ten or 19,364 of these workers are located in Scotland. This equates to 17 per cent of the workforce, which is equivalent to whole economy proportion.
- 5,532 individuals are over-qualified and over-skilled in the Welsh transportation and storage sector, which accounts for 14 per cent of the workforce, the same as the whole economy.
- 13 per cent or 3,586 of the Northern Ireland sector workforce are over-qualified and over-skilled. This is slightly lower than the whole economy proportion of 15 per cent.

5.4 Impact of mismatches

The following section looks to see if the mismatch in supply of and demand for skills are reflected in terms of wage returns and through the employment of migrant workers. It then investigates the current supply of labour in terms of unemployed individuals seeking a role in the transportation and storage sector.

5.4.1 Wages

Wage demands can provide an indication of market conditions. If there is a shortage of labour in a specific area then this could lead to workers demanding and receiving wage increases. LGV drivers is one occupation that has seen its annual percentage change in wages double that experienced by all employees and concerns have been raised about a shortage of drivers (SfL 2012).

From an individual's perspective, there is a positive correlation between wages and qualifications and having a strong skill set reduces the chance of unemployment.

The average hourly wage across the sector is lower than that experienced across the economy as a whole, but its growth is proportionate to that across the economy (Table 5.18). But there are variations across the sub-sectors. Land transport and postal and courier activities hourly wage are much lower (£12.24 and £11.42 respectively), while warehouse, water and air transport are much greater (£14.60, £17.23 and £20.71 respectively).

Table 5.18 Average hourly wage by sector (£) (UK)

	2008	2009	2010
	£	£	£
Agriculture, forestry and fishing	10.42	11.18	10.38
Energy production and utilities	15.93	16.41	16.62
Manufacturing	13.86	14.28	14.37
Construction, building services, engineering and pla	14.66	15.29	15.39
Wholesale and retail trade	11.00	11.27	11.36
Transportation and storage	**12.44**	**13.16**	**13.21**
Hospitality, tourism and sport	9.14	9.35	9.52
Information and communication technologies	20.05	20.26	20.40
Creative media and entertainment	17.14	17.29	17.50
Financial, insurance & other professional services	21.06	21.45	21.99
Real estate and facilities management	11.36	11.64	11.71
Government services	14.40	14.87	15.62
Education	14.67	15.39	15.71
Health	14.97	15.79	16.45
Care	10.21	10.30	10.49
All economy	13.94	14.39	14.60

Source: Annual Survey of Hours and Earnings, 2010 (ONS)

The wages are reflective of the occupational makeup where land transport and postal and courier activities are dominated by lower skilled occupations, while water and air transport have a greater proportion of higher skilled occupations.

Among the passenger transport staff, the air transport sub-sector employees are generally paid the most, followed by rail workforce. The land transport sub-sector has some of the lowest paid occupations, with taxi and private hire jobs considered to receive the lowest salaries.

The overall perception of the sub-sectors' prestige is commonly tied to the average earnings. Anecdotal evidence from employers within the passenger transport sub-sector shows that an airplane pilot is generally considered to be more prestigious position than a train driver, while experienced bus drivers decide to move to coach operating companies, when given the opportunity.

5.4.2 Migration

A further potential measure of imbalance between skills available and the skills needed is migration. Both migrants and employers will respond to situations where the skills needed are not effectively met by the skills available. Migrants may be attracted by employment opportunities, and in some instances compete with indigenous workers.

According to the EU's agenda (EC 2010), migration is identified as having a large influence on a country's stock of skills in several ways. In the case of the UK, which qualifies as a one of the top in terms of immigrants to national population ratio, it is the inflow of people rather than the outflow that impacts the sector the most. Often, qualifications held by immigrants gained in their own country of origin are downgraded in their host country. Some problems constraining migration appear in terms of formal recognition and comparability of qualifications. And finally, immigration creates skill mismatch in host countries. However, as suggested by European Commission, the evidence shows these issues have no significant impact on a country's skill mix[5]. In the long term, immigrants with high qualifications eventually have them fully recognised in their host country, even if the process turns out to be lengthy.

The number of workers born overseas in the transportation and storage sector has steadily increased, as seen in section 3.3.4. But also of interest to the sector is the number of migrant workers that registered from the EU Accession countries between July 2004 and March 2009. A joint on-line report reveals that during this period nearly 100,000 workers registered for transportation and storage occupations (UK Border Agency *et al,* 2009). This is 11 per cent of all those who registered in this period. Substantial numbers (76,000) registered for warehouse operative roles. Driving occupations, such as LGV and delivery van also experienced a large number (7,000 and 6,000 respectively). The logistics sector prior to this period did raise concerns of a shortage of LGV drivers but this appeared to be alleviated by the recruitment of accession country workers, followed by the onset of the recession, but concerns regarding future recruitment of LGV positions are returning (SfL 2012, Ball *et al.* 2012).

However, according to the UK Border Agency's Migration Advisory Committee, there are no shortages of labour representing specific occupations within the transportation or storage sector (Home Office 2012).

5.4.3 Skills of the unemployed

The occupational distribution of those out of work, claiming Jobseeker Allowance (JSA) is significantly different from those that are in work across the economy (ONS 2012). 37 per cent of JSA claimants were previously in machine operative or elementary roles and 24 per cent in sales and customer service roles. In comparison only 12 per cent worked in the 'top' three occupational groups (managers, professionals and associate professionals).

[5]Data do not distinguish between legal or illegal, short or long-term migration, or between migration within or into and out of the EU – New Skills for New Jobs, 2010

This would suggest that the sector, which is dominated by machine operatives and elementary roles, has sufficient supply available to fill vacancies at these levels. This is further confirmed when the numbers of claimants seeking a transportation and storage occupation is compared to number of such vacancies notified to JobCentre Plus (Table 5.19). JSA claimants seeking a logistics role outstrips demand for all occupations apart from LGV drivers and postal workers.

The high level of vacancies for postal workers is possibly a reflection of the temporary recruitment model that Royal Mail undertakes in the lead-in to the Christmas period. However concerns regarding the supply of LGV drivers have been previously discussed in sections 3.3.2 and 5.1.2.

Table 5.19 Vacancies and claimant count for key transport occupations (November 2011)

Occupation	Number of vacancies notified	Claimant sought occupation
1133 : Purchasing managers	52	405
1161 : Transport and distribution managers	189	975
1162 : Storage and warehouse managers	556	2,785
3536 : Importers, exporters	40	180
4134 : Transport and distribution clerks	352	520
8211 : Heavy(Large) goods vehicle drivers	25,936	5,080
8212 : Van drivers	9,421	47,325
8219 : Transport operatives n.e.c.	694	205
9141 : Stevedores, dockers and slingers	361	550
9149 : Other goods handling and storage occupations n.e.c.	16,767	118,430
9211 : Postal workers, mail sorters, messengers, couriers	12,563	4,475
Column Total	**66,931**	**180,930**

Source: ONS, NOMIS 2012

5.5 Skills deficiencies hampering growth

The relationship between economic growth and skills shortage is complex, because economic growth often results in labour and skills shortages, and this in turn reduces the potential for further economic growth.

Across the sector, two groups of skill-needs can be identified as the most threatening to the sector's performance; the skills the transportation and storage sub-sectors rely on.

- On one hand, these are the various **job-related technical skills**. Here, the two sub-groups that fall under that category, the job specific skills and technical and practical skills, are more often reported to be of shortage within the sector than they are across the entire economy.
- On the other, since the target of the service provided by the sector is always the customer, the **customer service abilities** are essential in all of the sub-sectors. Both, oral communication skills and customer handling skills that fall under that category, are more often reported as lacking within the sector than they are across the whole economy.
- The skills lacking in the current workforce closely reflect the skills reported missing from applicants. This indicates that employers recruit individuals without the full skill set required, who then need to undertake training to meet the basic job requirements.

The difficulty with the first group of the skills mentioned, the technical and job specific skills, is that they undergo a continuous and rapid development. The fleets of vehicles are being modernised to comply with the environmental standards, but also to improve the UK's competitiveness on the international arena. The support systems are increasingly more often internet-based and undergo recurring improvements, requiring the staff to stay up to date with the most recent versions used by their employers. The potential technical skills deficiencies in that area mean that the operators do not manage to use the full potential of the technology they invested in, hampering the growth of the company.

The second group of skills, the customer service and communication abilities, are increasingly more often expected of operational staff, who are the main labour force of the sector in terms of their numbers, but who in the past were not expected to deal with the customers. Their abilities to adjust are at the core of the operators' further development, as those who do not address the customers' needs easily end up being overtaken by the competition. This is largely linked to the increase of levels in tourism, with large numbers of passengers accustomed to travel across the world able to distinguish between good and bad customer service experience.

As discussed earlier, the transportation and storage sector relies heavily on practical skills, rather than qualifications. These can be obtained through vocational training – either before or on the job – or apprenticeships, but most often are a result of many years of experience within the sector, as the large majority of the workforce is more mature than the workforce in other sectors of the economy.

There are a number of negative impacts to business as a consequence of recruitment difficulties and skills gaps. These include the loss of business to competitors, restrictions in business development and the difficulties in introducing new working practices and they could be hindering companies from being more innovative and thereby restricting the businesses' competitiveness. For example, transport and logistics companies, in particular, are placing a high premium on innovation, with nearly three quarters (73 per cent) of CEOs believing that the new products and services their companies are developing will lead to new revenue opportunities (FTA 2011), so any delay in their development will affect growth. A further risk to growth identified by CEOs was the availability of key skills, which ranked fourth in 2011, up from eighth in 2010.

However, over recent years the transportation and storage sector has undergone a steady growth, as witnessed by the growth in UK GVA levels, GVA per person, the DfT Transport Statistics, and Key Note's 2011 Market Update for the Courier and Express Services. Therefore, an argument can be made that skills shortages are not hampering current growth but if all vacancies, skills gaps and shortages were filled, additional growth could be leveraged from the sector.

6 Drivers of change and their skills implications

Chapter Summary

- Ongoing sectoral regulation will continue to drive up safety quality standards across the sector and drive up demand for skills
- The demographic drivers will lead to ageing of the sector's workforce, as well as its customer base
- A low carbon economy will require behavioural changes within companies, with various roles adapting to 'greener' behaviours
- The uncertain economic climate will require strategic business management and leadership skills to implement efficiencies in the workplace
- Ongoing developments in technology will drive the need for continuous investment in new solutions and development of related skills
- Diversification and fragmentation of consumer choice and needs may lead to niche product and service development

This chapter provides an overview of the major drivers of future demand for, and supply of skills. The analysis follows a common framework (UKCES 2010 p.93) covering political, economic, environmental, social, technological and demographical change, and provides a review of key developments within each driver for the sector.

Exploring the drivers will allow us to indicate the nature and direction of major types of change, and provide a broad analysis of how they may influence skills demand and supply.

6.1 Drivers of change

The drivers have been categorised under seven headings of change, based upon the work of Davies *et al* (2001) (in UKCES 2010). The relationships between the drivers are critical to determining the impact. The dependencies mean that they may mitigate or reinforce each other's impact, and it is therefore important to recognise these dynamics when analysing the trends.

Figure 6.1 The key drivers of change

Source: National Strategic Skills Audit 2010, UKCES

6.1.1 Regulation and governance

Responsibility for legislation for transport sub-sectors across the four home nations is divided between Westminster and the national bodies of Scotland, Wales and Northern Ireland. However, the areas of air transport, regulation of rail services, and international shipping remain under the responsibility of Westminster. In addition, there are a number of international organisations that have an impact on the development of domestic policy and behaviour. In the areas of air transport and shipping, the UK is bound by a number of international agreements, treaties and laws – both on a worldwide basis, via United Nations institutions, and more regionally due to our membership of the European Union. The EU also affects road transport.

Responsibility for driver licensing, conducting driving tests and the Driver CPC are the responsibility of the Driving Standards Agency (DSA) in England, Scotland and Wales, and the Driver and Vehicle Agency (DVA) in Northern Ireland. Across the country, a variety of local transport-related responsibilities such as taxi licensing, is covered by local councils.

6.1.1.1 European Union

European Directives and Regulations affect many areas of the transport sector, increasing the regulations across all sub-sectors (Europa 2011). Recent examples include the Driver CPC (2003/59/EC), the Working Time Directive (2002/15/EC) and the Rights of Passengers in Bus and Coach Transport (Regulation (EU) No 181/2011). These international regulations affect the skills levels, and are a key determinant of training activities.

Compliance training, such as health and safety and the Driver CPC, is a significant motivation for training spend in the sector. For example the Driver CPC introduced in 2008 for PCV drivers and 2009 for LGV drivers requires over 400,000 professional drivers to complete a total of 35 hours of periodic training every five years. This in turn affects the supply side, with training providers, as well as operators, requiring to develop and provide relevant courses. Popular modules include customer service, safe and fuel efficient driving and disability awareness. Quality standards such as ISO9001 are also becoming more sought after in the sector, with contracts seeking such standards, so companies are investing in these.

6.1.1.2 UK transport policy

The Coalition Government has pledged a decentralising of power enabling local governments or in some instances charitable bodies to initiate and fund transport projects

and their day-to-day transport needs without Whitehall involvement (Butcher and Keep 2011). For example the transfer of power from public to third sector has now been implemented in the case of the UK waterways. The public sector's British Waterways have seen their authority in England and Wales transferred to a new charitable trust for the waterways, The Canal & River Trust (DEFRA 2012). This will certainly impact the managerial structure within the sector, with larger attention paid to efficiency and fundraising skills.

It is recognised that the role of the EU in forming transport policy is still expected to grow over the coming years. Therefore, from a UK government perspective, the coalition government regularly releases consultations on areas affecting regulation across the sector. For example, the Department for Transport (DfT) (2011c) consulted on 'Red Tape Challenge' for maritime and rail to ensure that they may operate to their full potential. While more recently the DfT (2011a and 2011e) in response to the 'Consultation on the possibility of allowing an increase in the length of articulated lorries' have announced a ten-year trial of longer semi-trailers. The trial is expected to provide a £33m boost to the haulage industry, because the 13 per cent more loading space will allow for fewer journeys. There will be skills implications relating to the driving of such vehicles and the efficient use of the increased capacity. In addition, planning skills to navigate infrastructure will be required.

In January 2012 The Parliamentary Under-Secretary of State for Transport (Mike Penning) announced a budget of £12m a year for the support for maritime training scheme. This is set against the back drop of a forecasted national shortage of trained seafarers and the need to develop the next generation of UK officers and ratings. The majority of the budget focusses on supporting initial training for cadets studying at junior officer level with the remainder supporting ratings training and ratings to officer conversion training (DfT 2012).

In Scotland, the Scotland Act 1998 divides legislative responsibility for transport between the UK Parliament in Westminster and the Scottish Parliament in Edinburgh. The areas reserved for the central UK regulation are those where it is important to maintain consistency across the country, such as: safety, disabled access, vehicle and driver standards, or certain EU and international regulations.

In Wales, Part 3 and Schedule 5 of the Government of Wales Act 2006 introduced a new mechanism by which legislative competence can be conferred on the National Assembly for Wales, with Parliament's approval.

In Northern Ireland all transport issues are devolved to the Assembly. It passes its own primary legislation, although it often closely shadows that of Westminster. The Department for Regional Development (DRDNI) is responsible for transport policy.

6.1.1.3 Taxation

Like any other services, the transport sector in the UK is subject to taxation. The current value added tax (VAT) rate in the UK stands at 20 per cent, increased from 17.5 per cent in January 2011.

Fuel duty is another centrally-imposed tax that affects the sector. However, certain industries are exempted from paying it, or are required to pay it at a reduced rate.

- Aviation Jet Fuel is exempted from fuel duty and VAT.
- The Bus Service Operators Grant provides a fuel duty rebate to local bus service operators. As of April 2010 the rebate was £0.43 for diesel, £0.2360 for road fuel gas other than natural gas and 100 per cent for biodiesel and bioethanol. Additional rebates are available for increasing fuel efficiency, low carbon emission vehicles and equipping vehicles with Smartcards and GPS tracking equipment.
- UK train operators do not receive a general fuel duty rebate, though in 2006 the duty on biofuels was reduced from 53p to 8p to encourage its introduction for rail use.
- LGVs, taxis, vans, private hire vehicles and coaches, including UK express coach services pay taxation as per other general motorists.

Despite the exemption from VAT, the passenger air industries are taxed through the aviation tax, more commonly known as the Air Passenger Duty. Apart from its financial cost, the most problematic aspect of the tax is its “invisibility” for customers. The airlines are required to present the ticket price upon sales as a combined value of all the charges, including the taxes. There was no increase in 2011 but the decision on 2012 taxation was made on 29th November 2011, and a 10 per cent increase is expected. This is mainly due to the inflation levels, but is commonly feared as a factor that could end the era of cheap flights.

The cost of fuel, particularly for road users (LGV, bus and coach and taxi & private hire) mean that companies are paying closer attention to fuel consumption and seek ways to decrease costs associated with this. One such way is training drivers in eco-driving. It has been calculated that if 90 per cent of LGV drivers were trained in eco-driving £300m in fuel costs per year could be saved (DfT 2009). Furthermore, Transport for London assesses that even within each vehicle type there can be a significant variation in fuel efficiency, in some cases up to 45 per cent, providing considerable scope for fuel savings through an efficient vehicle selection policy (TfL 2006), drawing attention to drivers' abilities to operate the vehicles they are given responsibility over in the most efficient way.

6.1.2 Demographic change

The UK economy and the sector is characterised by an ageing population. 80 per cent of the UK's 2020 workforce are already in the workforce and by 2035 it is expected that 28.6 per cent of the population will be over 60 (ONS 2011) compared to current data of 22.6 per cent. This affects the transport sector in two ways: firstly as an employer and secondly as a service provider.

6.1.2.1 Workforce demographics

As previously shown the trend for younger people (below 25 years of age) working in the sector has declined and now only accounts for six per cent of the workforce, while one in ten are 60 years of age or older. This poses two challenges for the sector.

Firstly, the need to attract younger workers will continue to be a challenge especially in an environment where legislation on age restrictions are in place, coupled with competition from other sectors and a declining proportion of young people projected for the future. Career progression within the sector will be imperative.

At the same time, the raising of the state pension age and the changes in retirement rules may result in a growing proportion of older workers in the sector. Employers will therefore need to accommodate these older workers. For example, acquisition of skills among older workers will, where necessary, need to keep pace with new technologies and ways of working. One concern is the implication of the Driver CPC on the older drivers – a large proportion of LGV drivers are over 55 (22 per cent), they may not have been in a classroom situation since leaving school and could therefore be reluctant to undertake the training, opting to retire instead. This combined with the decreasing numbers gaining their licence, which are both being investigated in a SfL report on LGV drivers (2012 unpublished), reveals real concerns of a forthcoming shortage.

Migrant workers have provided and could continue to provide a source of labour for the sector as evidenced in section 5.4.2. However, a report by the Migration Policy Institute (Migration and the Global Recession, 2009) suggests that as a result of contractions in UK market and growing opportunities in Europe and Poland in particular, almost half of the A8 workers had returned home by the end of 2008. Therefore, there are strong arguments for trying to grow our own skills solutions, whether for new entrants to the labour market or for reskilling older workers.

6.1.2.2 Customer demographics

The ageing population will have implications on how the sector operates as a service provider. An older customer base means that the skills of those working in the transport sector must adapt accordingly. This is a particular concern for the passenger side of the sector. Here the importance of disability awareness and the ability to provide specialist assistance to passengers will become increasingly more significant.

In addition, diversification and fragmentation of consumer choice may pose challenges that the sector needs to address, resulting in niche product and service development. For example, chauffeured transport services for elderly and disabled individuals or the Pedicab services operating in central London (London Pedicabs 2011).

As the transportation and storage sector's core role is to provide a service, the need for customer service skills is essential and requires a continuous improvement. However, given the 46 per cent of employers with SSVs reported to be lacking customer handling skills, this poses a challenge. The 2012 London Olympic Games will be an important event for passenger and freight transport businesses and the level of customer service provided to visitors will need to be world-class. Transport for London will face the greatest challenge, but the impact on transport in expected across the UK (London 2012, 2008).

6.1.3 Environmental change

6.1.3.1 Emission targets

The UK's target to reduce emissions by 80 per cent by 2050 compared to the 1990s levels (HM Government 2011) brings a number of challenges to the whole economy.

Transport activities make an essential contribution to our economic success but also impose a burden upon the environment. Transport has been calculated to comprise around 25 per cent of the UK CO_2 emissions (DECC 2011) with passenger cars accounting for 58 per cent and LGVs 17 per cent.

The Fourth Carbon Budget report shows that there is scope to reduce surface transport emissions by around 26 per cent relative to 2008 levels through lower carbon choices (including electric vehicles), increased penetration of sustainable biofuels and behaviour changes.

The report highlights a number of abatement opportunities all of which have their own skills implications. The abatement opportunities include:

- Improving conventional vehicle efficiency – i.e. low rolling resistance tyres, aerodynamic trailer/bodies
- Scaling up of electric vehicles and plug-in hybrid vehicles
- Modal Shift – from high emitting road to rail or water, or from air to rail for both freight and passenger
- Supply Chain rationalisation – optimising distribution centre locations, sourcing products locally and greater use of consolidation centres
- Vehicle utilisation –car-sharing, increasing load sharing, backloading initiatives and software for routing and load consolidation
- Other – reducing 'just-in-time' business practices and increasing the size and weight of trucks may also provide emissions savings

Additional abatement opportunities include driver training. Training 10 per cent of car and van drivers, and 100 per cent of LGV drivers in eco-driving techniques (e.g. gentle braking and accelerating, not driving with excess weight etc.) could result in an emissions reduction of 0.9MtCO_2 (DECC 2011). To ensure the savings made by driver behaviour continues it is important that the skills are maintained by training and retraining.

From a warehouse perspective, as energy prices and waste disposal increase through the reduction in availability of landfill, there are increasingly skills implications of 'green behaviours' for the workforce, for example, understanding of the value of saving energy and recycling. For passenger transport industries, biofuels are of significant importance in reducing the operators' carbon footprint.

Reducing the carbon footprint will have a number of consequences for the skills within the sector. New skills will be required around the technological solutions that are designed, developed and marketed, drivers will be trained in eco-driving, and monitoring skills for carbon use and knowledge by individual firms of what they want to achieve and how they can achieve this will be needed.

6.1.3.2 Extreme weather

A further impact the sector must consider is the potential of extreme weather and other natural occurrences, a recent example being the Icelandic volcano eruption. The Department of Energy and Climate Change lists extreme weather as an impact of climate change and extreme weather, especially in terms of snow and ice, will affect the sector as witnessed by the early snow in December 2010.

The extreme weather has a number of consequences for the skills within the sector. Individuals in the sector will need to be resourceful to be able to deal with the immediate implications of extreme weather and planning for alternatives in emergencies. Therefore managerial, planning and problem solving skills are crucial here.

6.1.3.3 Alternative energy sources

As the UK seeks to meet its energy target, new energy sources are sought. This has impacted particularly the maritime sector. Liquefied Natural Gas ships have increased, with ports like Milford Haven (Wales) adapting to accommodate these ships. This in turn has impacted on the tugboat industry.

The larger and more complex ships require four tugboats to bring them into dock. These tugs also need to be more powerful and manoeuvrable than previously, and have to go out of the port to provide an escort service to the ships. Technological step-changes to tugboats have led to new, smaller and more powerful boats, and a reduction in the number of crew needed. However the workforce has had to have extra training, especially as many now tow over the bow instead of the stern.

The growth of off-shore power generation is creating a new market for tugs and work boats, as they support its construction and maintenance. This may lead to new skills needs and the development of new relationships between the maritime sector and the off-shore power generation industry.

6.1.4 Economics and globalisation

Transport of freight and people have historically been both a contributor and a benefactor of globalisation. As technology advances, the movement of freight and people has and will continue to become more efficient. For example, information via documents is now transmitted electrically as opposed to post or fax, saving time and money.

However, globalisation also increases the importance of collaboration. In order to achieve efficient global logistics and passenger systems, extensive co-operation and collaboration among private corporations, governments and international organisations is essential (OECD 2002).

The passenger transport's exposure to globalisation is largely through tourism and international business travel. The growing middle classes of China, India and other Asian countries contribute to the changing profile of the average visitor to the UK, impacting on the greater need for cultural sensitivity and language skills within the sector, as well as general customer service skills.

6.1.4.1 Domestic vs global

Transport prices are themselves important drivers of individual and business transport decisions. This can affect transport use and growth and modal split development and can lead to changes in distribution management, location decisions, and spatial planning.

Air transport and the bus and coach operators are perhaps a relevant example. The tough economic situation has impacted passenger airlines, with fewer people travelling. After three years of slowdown, the UK air transport is showing signs of slow-paced recovery (CAA 2011). On the other hand, the bus and coach has had mixed fortunes in the recent economic situation. While domestic coach businesses experience a slowdown, some operators are compensating by increasing their activity internationally (for example National Express and Eurolines). In turn, this impacts the skills requirements of the staff, requiring them to have greater cultural sensitivity and to be prepared to interact with passengers of diverse backgrounds and needs.

The challenging economic situation faced by employers today, the high degree of uncertainty about future economic growth and greater competition means that for many organisations there will be ongoing skills needs among senior managers to be competent in making plans that can cope with uncertainty about product, service and/or labour demands.

6.1.5 Technological change

Technological change has affected the transport sector profoundly in the last ten years, and will probably affect it even more in the next ten years. The desire to improve competitiveness means employers look for technologies to gain greater efficiencies.

6.1.5.1 Vehicle development

Ever more technologically advanced vehicles and aircrafts require up-skilling. This is the case of larger and more efficient aircrafts (Dreamliner, A380), hybrid and fuel-efficient vehicles (London “green bus”), new trains (High Speed 2, Thameslink upgrade, etc.). Technological developments are designed to maximise the capacity of the limited infrastructure available in order to meet the growing demand and will require a well-equipped workforce to operate and maintain them.

Further vehicle developments, such as improving comfort and manoeuvrability are reducing the need for high levels of stamina and strength amongst drivers and thereby increasing the potential pool of labour.

6.1.5.2 E-services and hand-held devices

The growing use of the internet within the home to purchase goods and services has resulted in the logistics sector shifting from business-to-business activity to supplying the end consumer, which increases the need for customer service skills.

Computerisation is helping supply chains to become more tightly and yet more flexibly integrated. Control of stocks, through scanning equipment, allows for tighter planning allowing for lower levels of stock to be held against prospective demand. While automation, for example in warehousing operations, can accelerate and improve the reliability of ‘picking’ and order assembly. In addition, the use of radio-frequency identification (RFID) in tracking the movement of goods and other items and global positioning systems (GPS), aiding the navigation and also the location of vehicles and personnel, play a great role in improving speed, efficiency and logistics planning. The global system for mobile communications has helped to ease cross-border traffic.

The skills implications are an ability to deal with the continually changing technologies on offer, and also the skills to learn to use new technology and adaptability. DHL, in their report Delivering tomorrow: Towards Sustainable Logistics, explore how the sector might change in the future in response to technological developments and the potential for dematerialisation in the future. They argue while new technology means there is a reduction in need for traditional logistics sector, there are more opportunities in express delivery direct to customers.

Among passenger transport the expansion of online commerce, means that there is a growing need for media literacy among staff. Airlines, rail and bus operators have provided the opportunities for buying and/or printing tickets from the comfort of the individual's home but technology has now enabled an era of paperless ticketing. Increasing numbers of train operating companies (TOCs) have introduced a fully mobile train ticketing app, which allows a mobile phone to act as a train ticket. The train staff need to be familiar with the technology and able to operate the Quick Response (QR) code readers, as increasingly more tickets presented on board will be in form of QR codes on screens of hand-held devices.

In addition to the front-line staff, the back-office staff are equally susceptible to technological change. One example here is the new propulsion technology and the way it affects the engineering roles within the UK's waterways industry. Another one is the increased use of technology-based equipment, designed to reduce the operating and engineering costs. This has led to the development of the new National Skills Academy for Rail Engineering. Both of the examples above lead to one clear conclusion: reskilling and up-skilling in maintenance and repairs occupations is now crucial.

6.1.5.3 Simulator development

Technology, such as simulators, plays a crucial role in providing a safe environment for training. Ports are recognised as a dangerous land-based workplace, so safety is paramount. But crane operators still need specialised training. Therefore the development of a simulator for cranes allows for several scenarios and variables to be used, such as bad weather and poor visibility, while training in a safe environment.

6.1.6 Values and identities

The increasingly expected high level of customer service leads employers to ensuring that accurate information is available to travellers when they need it: before and during the journey. This is best achieved through better systems and equipping staff with the capacity of dealing with information. Again, staff need to be able to cope with changing technologies.

Similarly on the logistics side, customers want to be able to have deliveries convenient to their lifestyles, along with the opportunity to track their progress. So more and more companies are offering the choice of delivery dates and times and the ability to track and trace products. However, this requires strong planning skills from the distribution facilities and customer service skills from the deliverers.

Furthermore people's expectations of work over the years have changed. Individuals' attitudes about the sector, particularly the freight logistics, affects the type and number of people choosing to enter. The perception of logistics being low skilled, unsocial, particularly in the case of driving, and the perception of no career progression impacts the quality of entrants into the logistics sector (SfL 2011, FTA 2011). Those with higher educational levels tend to enter other industries and employers are finding applicants have lower than expected entry skill levels, particularly with regards to literacy and numeracy, which in turn means employers providing training to rectify this.

However progress is beginning to be made in promoting the sector with websites such as 'Delivering your Future' and 'Love Logistics' which demonstrate some of the demanding skills needed for posts in the logistics, and the range of professions needed to make a logistics firm successful.

6.1.7 Consumer demand

6.1.7.1 Consumer product choice and budget

As society's standard of living and opportunities continue to rise, expectations change and this is particularly important to the passenger transport sector. Cost efficiency is gathering further momentum, while high customer service also continues to grow in importance. Trains, planes and buses are no longer modes of transport but places for work. Efforts are being made for passengers to have pleasurable and efficiently spent journeys, and the transport operating companies respond with facilities that include: on-board wi-fi, electric sockets for laptops and phone chargers, TV screens and on-board entertainment systems. This requires staff to be familiar with increasingly more complex technologies and requires of them additional job-related technological skills.

In the last decade, consumers have become much more environmentally conscious which is shaping product and service choice (WWF, 2006). For example, customers are becoming more aware of 'local food' and 'locally made products', which impacts the supply chain. However, the economic climate may temper this demand somewhat.

Increased use of the internet and home delivery, as evidenced in the Wholesale and Retail SSA (2012), means consumer demands become not only an indirect influence on logistics firms, but also a direct one. Direct delivery to customers involves more urban freight, which in turn demands consideration and planning of the appropriate use of delivery vehicles, particularly in areas that have low emission zones or congestion charges such as London. In addition, there are likely to be more failed deliveries which are unusual in business-to-business deliveries, but fairly common in customer deliveries. This brings further skills implications around planning and customer service.

6.1.7.2 Tourism

According to the National Travel Survey, only 30 per cent of trips in 2010 in the UK were made for commuting, business or education purposes. This means that the number of leisure-related travel (including shopping, visiting friends and other personal business) makes up the large majority of all travel in the UK.

Tourism growth and increase in leisure-related travel requires even better customer service, as the experience offered to the travellers is expected to focus more on the passengers and the ways to make their experience pleasant and memorable.

In the face of the economic slowdown and growing unemployment numbers (2.62m or 8.3 per cent of the entire workforce in Q3 2011) increasing amounts of people decide to spend their holiday in the UK, reducing the holiday travel costs, but boosting the transport demand in the country. The numbers of UK residents spending their holiday abroad has dropped in the last few years, despite the growth of the UK population. In 2010, 36.4m British residents decided to go for holiday abroad – a one per cent decrease from 36.7m the year before (ONS 2010a)', while the number of domestic tourism trips in July 2011 in Great Britain exceeded that of July 2010 by 11 per cent. The change seems to have largest impact on European land transportation, with 34 per cent drop in the number of UK residents using the Eurotunnel. The second most affected is sea transportation, with 18 per cent drop in number of the British people travelling for holiday abroad by sea.

As the world population continues to grow, so does its middle class. It is estimated that by 2020, over half of the world will be made up by middle class, compared with 30 per cent in 2008 (Deloitte 2011). In the case of some countries this is likely to benefit the UK as it boosts its popularity as a tourism destination. For example, the travel patterns of middle classes of China and India are set to move from domestic to regional and international, with Europe and the UK becoming increasingly more popular destinations. India alone is forecast to have 50m outbound tourists by 2020 (Deloitte 2010). With the strong historical and family ties to Britain, Indian tourists can benefit the UK in ways impossible to overestimate. That's why understanding the desires and motivations of Chinese and Indian travellers will be fundamental to success in these markets.

With growing numbers of overseas visitors, the UK passenger transport is directly exposed to the new tourists' preferences and increasingly expected to address them. This has direct implication on the cultural awareness skills in demand in the UK, specifically among the customer-facing roles. As London is expected to receive over 0.5m visitors from all over the world during the 2012 Olympic Games, it is going to be the most immediate test for current levels of customer service among UK transport providers.

6.2 Scale of drivers

The likelihood of change on the employment and skills under the seven current drivers are summarised below in Table 6.1.

For each driver the issue(s) arising are identified, whether the impact is likely to increase or decrease, the scale of its impact, how it may affect demand for and supply of skills and an indication of the sub-sectors likely to be affected.

Table 6.1 Scale of drivers

Nature of driver and impact on skills	Current, ongoing driver or new driver	Increase or decrease in a) impact, b) scale of effects	Impact on supply of or demand for labour	Impact on demand for skills	Which sub-sectors will be affected
Regulation and governance					
Regulation at sectoral / occupational level (i.e. the Driver CPC and H&S) will raise levels of compliance training	Current, ongoing	Increase in impact, scale of effect will be variable	Demand	Will raise demand for skills: CPD for professional drivers Training for compliance	All
Regulation concerning passenger rights	New	Increase in impact	Demand	Will raise demand for skills: Customer service skills to ensure passenger rights are maintained at high standards	Passenger transport in particular
Decentralisation of power away from Whitehall	Current, ongoing	Increase in impact, scale of effect will be variable	Demand	Will raise demand for skills: Efficiency and Fundraising skills where responsibilities are transferred to charitable bodies	Water
Government support for maritime training	Current, ongoing	Increase in impact	Supply	Will increase the supply of trained seafarers	Water
Taxation	Current, ongoing	Likely to increase in impact, scale will be variable	Demand	Will raise demand for skills: Eco-driving skills	All
Skills and educational policies in the Nations.	Current, ongoing	Increase in impact, scale of effect will be variable	Supply and demand	Will raise demand and supply of skills: Apprentices and other VQ programmes Mentoring and training skills as companies receive incentives to hire apprenticeships	All

Nature of driver and impact on skills	Current, ongoing driver or new driver	Increase or decrease in a) impact, b) scale of effects	Impact on supply of or demand for labour	Impact on demand for skills	Which sub-sectors will be affected
Demographic change					
Low proportion of young workers	Ongoing	Increase in impact	Supply and demand	Will raise demand and supply of skills: Employers will need to implement new/different strategies to attract young workers into the sector	All
Ageing population with varying different consumer requirements	Ongoing	Increased in impact	Demand	Will raise demand for skills: Ability to provide assistance to elders Disability awareness Customer service to meet diversification of consumer choice	All Particularly passenger transport side
Changes in state pension and retirement rules	Ongoing	Increase in impact	Supply	Will raise demand- older workers may have retraining needs	All
Immigration – if restrictions are introduced or migrant workers choose to remain/return to native countries this will affect supply	Ongoing	Likely increase in impact	Supply	Will raise demand for skills: If immigration is restricted or declines will need to train domestic workers	All, Particularly freight in terms of HGV drivers
Environmental change					
Emission targets	Ongoing	Increase in impact, widespread effect	Demand	Will raise demand for skills: Jobs will be adapted to be 'greener' and general environmental awareness will be required. Driving skills to ensure operation of new vehicles – i.e. hybrids, larger planes etc. Efficiency – eco-driving, Monitoring and strategic planning skills Maintenance skills for vehicles	All

Nature of driver and impact on skills	Current, ongoing driver or new driver	Increase or decrease in a) impact, b) scale of effects	Impact on supply of or demand for labour	Impact on demand for skills	Which sub-sectors will be affected
Extreme weather	Ongoing	Expected to increase in impact, effect will be variable	Demand	Increase demand in skills: Management, planning and problem solving skills Customer service and communication skills to provide up to date information to customers	All
Economics and globalisation					
Uncertain economic climate	Current, ongoing	Impact and scale of effect is widespread	Demand	Increase demand in skills: Business management skills to determine strategic planning Leaderships skills for strategic business plan implementation and drive efficiency	All
Competition from overseas operations	Current, ongoing	Impact and scale of effect is variable	Demand	Increase demand in skills: Customer service – overseas operations are known for high customer care standards which mean domestic companies will need to raise their levels to continue to compete	All, Particularly airlines and freight transport
Technological change					
Vehicle development (i.e. hybrids, aerodynamics)	Current, ongoing	Widespread impact	Demand	Increase demand in skills: Modern operating vehicle skills	All
E-services and hand-held devices	Current, ongoing	Impact and scale of effect is wide	Demand	Increase demand in skills: Paperless ticket processing skills Technological literacy	All Particularly passenger transport, warehousing and delivery drivers
Other technology development	Ongoing	Increase in impact	Demand	Increase demand in skills: Exploiting new technologies will require	All

Nature of driver and impact on skills	Current, ongoing driver or new driver	Increase or decrease in a) impact, b) scale of effects	Impact on supply of or demand for labour	Impact on demand for skills	Which sub-sectors will be affected
				entrepreneurship, management and leadership skills	
Values and identities					
Consumer expectations	Current, ongoing	Increase in impact and widespread	Demand	Increase demand in skills: Customer service Communication and information skills	All
Individual career expectations	Current, ongoing	Scale of effect is widespread	Demand and supply	Increase demand in skills: Companies will need to implement strong recruitment plans to ensure they attract entrants	All
Consumer demand					
Consumer expectation of high quality customer service	Current, Ongoing	Increase in impact, widespread scale	Demand	Increase demand in skills: Planning skills	All
Consumer product choice	Current, Ongoing	Impact variable, as recession may influence choices	Demand	Increase demand in skills: Planning skills Customer service	All
Tourism (domestic v global)	Current, Ongoing	Impact variable, as recession may influence choices	Demand	Increase demand in skills: Customer service Cultural awareness Foreign language skills	Mainly Passenger transport but also indirectly freight

6.3 Differences in drivers across the four nations

The seven drivers of changes identified above will impact each of the four nations. But in addition nation specific drivers have been identified below.

6.3.1 Regulation and governance

- England

BIS (2010) *Skills for Sustainable Growth* strategy followed by *Further Education and Skills System Reform Plan* (BIS 2011) sets out the Government's vision for reform of the further education and skills system in order to improve the skills of the workforce, the performance of the economy and engagement in learning in England. Part of the reform includes the expansion of available apprenticeship. The National Apprenticeship Service recognises logistics as a priority sector, and since 2004/5 starts across logistics apprenticeship frameworks have increased by 158 per cent from 3,020 to 7,790 in 2009/10. In the passenger transport sector, employers have also recognised the value of apprenticeships with completions growing from 400 sector-specific apprenticeship certifications in 2007/08 to over 1500 in 2010/11.

- Scotland

Skills for Scotland: *Accelerating the Recovery and Increasing Sustainable Economic Growth* (2010) makes clear the Scottish Government's commitment to training and skills and sets out a flexible, responsive partnership approach to meeting Scotland's skills needs at a crucial point in their economic recovery.

The Scotland Act 1998 divides legislative responsibility for transport between the UK Parliament in Westminster and the Scottish Parliament in Edinburgh. The areas reserved for the central UK regulation are those where it is important to maintain consistency across the country, such as: safety, disabled access, vehicle and driver standards, or certain EU and international regulations.

- Wales

The Welsh Government published a skills and employment strategy in 2008: *Skills that Work for Wales* (WAG 2009). The strategy describes the 'One Wales' ambition for a highly educated, highly skilled and high employment Wales.

Part 3 and Schedule 5 of the Government of Wales Act 2006 introduced a new mechanism by which legislative competence can be conferred on the National Assembly for Wales, with Parliament's approval.

- Northern Ireland

Northern Ireland's skills strategy, *Success through Skills – Transforming Futures* (2011), highlights that prosperity is dependent on the skills of the workforce and its ability to meet the needs of the local market, to support a strong export oriented market and to secure the wealth creating opportunities of the future. The report highlights that 75 per cent of the 2020 workforce have already completed their compulsory schooling, therefore there must be a renewed focus on up-skilling or re-skilling those in work.

In Northern Ireland all transport issues are devolved to the Assembly. It passes its own primary legislation, although it often closely shadows that of Westminster. The Department for Regional Development (DRDNI) is responsible for transport policy.

A key difference in Northern Ireland is that Hire & Reward operators require an 'O' Licence but own account owners do not. There is a push for change in this legislation as approximately 7,500 companies are own account. Enforcement powers of the 'O' Licence in Northern Ireland are much weaker than in England as they are lacking the infrastructure and strength to do this effectively. If the 'O' Licence was to be enforced to the standard which it is in England, then the logistics industry in Northern Ireland could see companies move to the Republic of Ireland, therefore thinning the existing infrastructure for a robust logistics network.

6.3.2 Demographic change

- Scotland and Wales

Scotland is experiencing a period of net-immigration, with 2008/09 net migration standing at 21,700 (Scottish Government 2011). The projected population growth anticipates the total population of Scotland rising from 5.17m in 2008 to 5.54m in 2033. Likewise in Wales, the population is expected to increase from 2.99m to 3.35m in the same period (StatsWales 2011). This will impact both the freight and passenger infrastructures in these countries.

6.3.3 Environmental change

- Northern Ireland

Although the EU and UK are promoting modal shift, rail freight in Northern Ireland has been in major decline for the past 10 years and currently is one of the few networks in Europe that carries no freight (The UKInfo 2011).

6.3.4 Economics and globalisation

- Scotland

The Scottish timber industry is the most productive in the UK and makes a significant contribution to Scotland's economy through jobs in the wood processing industry, forest management and wood haulage (Forestry Commission). This industry has its own specific transport and training requirements and as a growing industry it is vital that training requirements are available.

- Northern Ireland

A further area of debate is fuel prices. The price of fuel in the Republic of Ireland can be as much as 16 pence per litre less than what is paid in Northern Ireland, attracting companies to source fuel from across the border. The revenue loss to the Exchequer in relation to diesel fuel duty has been calculated to be about £230m per year (Select Committee on Northern Ireland Affairs, 2002).

6.3.5 Technological change

Technological change impacts England, Scotland, Wales and Northern Ireland on many different levels and in many different ways.

The most current example comes from within the rail industry. High Speed Rail will improve the speed and quality of transport in England, having only a minor indirect impact on passengers in Scotland, shortening the time of their journey to London, if they decide to change trains and board the bullet-train in Leeds or Manchester. Scottish extension of the High Speed network is a talked-about potential, but no planning decisions have been made at this stage, making it seem a more distant future.

6.3.6 Other drivers

There are no significant differences in the following drivers across the four nations:

- Values and identities
- Consumer demand.

7 Future skills needs

Chapter Summary

- Employment in the transportation and storage sector is projected to increase by 95,000 between 2010 and 2020
- Replacement demand is projected to be 553,000, meaning that there is expected to be 647,000 job openings in the sector over this period
- Growth is driven by a number of drivers including investment in the national infrastructure transport programmes of more than £89 billion
- The main impacts on employment and skills of the drivers include issues around: attracting new recruits; developing and retaining existing staff; the changing skills requirements arising out of new technologies; and increasing demand for customer service skills .

This chapter draws together the evidence on current and likely future economic and job growth.

7.1 Future trends

A number of factors are likely to influence the future trends seen by the transportation and storage sector. Of course the economic situation is likely to have a major impact. *Working Futures 2010-2020* (UKCES 2011) anticipates the transportation and storage sector to expand by seven per cent in terms of employment and in addition to the drivers identified in Section 6, policies in the UK and wider may influence how the skills needs of the sector are likely to be affected in the future.

7.2 Drivers

7.2.1 Regulation and Governance

7.2.1.1 The Plan for Growth and Logistics Growth Review

The UK Government's economic policy objective is to achieve a strong, sustainable and balanced growth that is more evenly shared across the country and between the industries (HM Treasury and BIS 2011). The Government wants to create the right conditions for businesses to succeed, removing barriers that are preventing them performing to their full potential. The second phase of the Growth builds on the programme of reforms set out in the first Plan for Growth (BIS 2011a) and one key area considered is the logistics sector.

The Logistics Growth Review (DfT 2011b) identifies a number of barriers to growth businesses across the logistics sector face:

- The first challenge identified is '**giving industry greater confidence to invest'**. The aim is to remove planning barriers to sustainable logistics developments, with a particular focus on Strategic Rail Freight Interchanges (SRFIs) and the road network. With rail freight anticipated to expand around 30 per cent over the next seven years (MDS Transmodal Ltd, 2011) it is vital that the SRFIs be developed. These are likely to create employment opportunities, initially in the development stage and then later in the logistics sector, where skills may be utilised and developed.
- The second area for action is **'improving the longer term capacity, performance and resilience of our congested road and rail networks'**. The capability and congestion of the road and rail network can be a significant barrier to growth for businesses. Congestion on the road network makes it difficult for businesses to plan and schedule their operations efficiently. Therefore improving real-time communication of information regarding the network may help businesses to make informed decisions on how to route and schedule deliveries. While investment in rail freight schemes, road infrastructure and growth at ports are likely to ensure there is enough capacity for the future.
- The third challenge is **'promoting the image of the sector at local level'**. By working together with local authorities and residents, barriers to efficient business operations, such as night time delivery curfews, can be overcome (FTA 2011). This requires successful engagement between several partners so communication and brokering skills will be key.
- The fourth area is to **'reduce unnecessary regulation'**. Regulation can further squeeze industry margins and reduce the amount of cash that is recycled back into the business for investments, such as training. The Red Tape Challenge looks to see how the aims of existing regulation can be met in the least burdensome way. Discussions have already taken place for the road transportation, and maritime and rail. Actions already agreed include the trail of longer semi-trailers, starting in 2012 (DfT 2011e).

Overcoming these challenges may impact the skills and workforce development needs of the sector. Investment in infrastructure and assets is likely to create employment and workforce development opportunities, while the actions to promote the image of the sector are likely to ensure a supply of skilled workers. This may allow the sector to operate in a productive and competitive manner.

7.2.1.2 Roadmap to a Single European Transport Area

Like other policy areas, transport is affected by decisions and laws made at EU level. Many of our transport laws are driven by EU legislation and these influence workforce development.

The European Commission (EC) published a White Paper 'Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system' in March 2011. This latest White Paper notes that transport is fundamental to our economy and society, but recognises that it is global, so effective action requires strong international cooperation. 40 initiatives have been set out for the next decade to build a competitive transport system, which may also reduce Europe's dependence on imported oil and cut carbon emissions. Approximately 11 of these initiatives will be directly relevant to freight transport, including the shift of road freight over 300km to other modes, such as rail or waterborne transport and ensuring that all core seaports are sufficiently connected to rail freight and where possible inland waterway systems.

A critical area of the EU regulation will be safety, making this aspect the key trend for air transport (with a growing role for the European Aviation Safety Agency), rail (European Railway Safety Directive), bus & coach, and – to a lesser degree – for taxi and private hire and the waterways.

Regulations are likely to continue to change and this is likely to require specific back office skills which would enable compliance with, and – above all – understanding of the complex multilayer regulatory directives coming from both, the EU and the UK government.

7.2.1.3 Government expenditure

There is a growing commitment in Whitehall to invest in the development of infrastructure (HM Treasury & Infrastructure UK 2011). This is dictated by the Governments recognition that the UK lags behind many developed economies in road and rail networks. The expanded National Infrastructure Plan identifies over a hundred transport-related projects, a large majority of which are ongoing or already under-way. These include the London Gateway terminal and logistics centre planned to open in 2013, directly creating more than 36,000 new jobs. A further 25 road, public transport and airport programmes are also planned creating further job opportunities. Based solely on the updated document from November 2011, the infrastructure investment in transport is estimated at £89,321m.

7.2.2 Demographic change

7.2.2.1 Ageing population

So as the so-called baby boomer generation gradually retires, the age profile of the population is of some concern for the passenger transport sector. The ability to assist the elderly and the disabled is already considered very important, but it is expected to become essential in the years to come. For example, London's Victoria Coach Station (VCS) expects this trend to further intensify and to address it, it recently started providing a mobility assistance service where disabled travellers are helped to and from coaches and have access to dedicated mobility assistance waiting room. VCS alone receives around 4,000 requests for personal assistance, all of which have to meet with response from appropriately trained staff. Across the UK, it is estimated that the 60 years old and older population is to grow from 22.3 per cent last year, to 28.6 per cent in 2035. This trend is expected to have a twofold impact on transport businesses, affecting their workforce and their customer base.

The current 45-65 year olds are relatively affluent and will be very likely to spend large amounts of money on comfortable leisure-related travel when retired. But at the same time, not all of those in this age bracket may want to stop working. Changes to the pension and equality legislation are likely to see more over 60s in the labour market. This may require strong statistical forecasting skills and abilities within the passenger transport companies in order to plan for service adjusted to the specific travel-purpose related requirements of the elderly passengers.

At the same time, people management skills are going to be critical, as the operators across the industries are likely to be expected to manage the growing numbers of elderly workforce. The operators may have to plan for adjustments to work patterns accommodating the ageing staff, but at the same time they may require strategies to attract younger employees from the narrowing pool of young labour. As the sector's workforce is already relatively old (41 per cent are 45 years or older), the coming years are likely to be the time for the companies to attract more career-driven graduates. This may pose the biggest challenge for the HR departments and – indirectly – for the marketing and communications staff, requiring of them to cater for the young without scaring away the old. Planning and branding skills are expected to be crucial in addressing this.

7.2.2.2 Population growth

The expected growth of 11 to 14 per cent in the UK population over the next 20 years, means that more goods may be required, and hence transported, and also that there may be more passenger travel (DfT 2010).

McKinsey estimates that the combined effects of population growth and increased travel over the next two decades may lead to increase in the number of passengers on the roads by almost 30 per cent and via rail by 50 per cent, while the number of flights originating in the UK is likely to grow by as much as 75 per cent (Mills *et al* 2011).

It is anticipated, that the population growth is likely to impact on the volume of passengers, boosting their numbers. Air transport sub-sector forecasts that the number of air journeys is expected to reach 85m for international and 11m for domestic return journeys by 2030 and implies an average of a little over one return air journey per UK resident (DfT 2011f). This compares to just under one return journey per UK resident, and 20m visits by foreign residents in 2008. In result of that, the need for engineering skills may increase rapidly in the midterm, as the sector's ability to accommodate the expanded customer base is likely to be crucial to its success.

Stemming from this growth, the needs and expectations of passengers are likely to undergo a significant shift, in turn impacting on the training needed for frontline staff, who may be expected to keep up with the more demanding passengers, especially in the context of customer service. Effective leadership, project management and planning skills may be of highest importance in addressing this trend. Forecasting skills are likely to be essential for the transport to keep up with the population growth.

7.2.3 Environmental change

7.2.3.1 Sustainability

Sustainability is likely to continue to define consumer choices in the years to come. Larger operators are more up-to-speed with low carbon matters and actions are being taken where a recognisable economic, rather than purely environmental benefit is seen. However, these two may be increasingly interconnected in the future, with large groups of customers being convinced of the benefits of "green" solutions, and the profitability profile of environment-friendliness expected to further develop.

The type of fuel used by the vehicles is going to matter more. The air transport sub-sector may gradually move towards becoming fully powered by biofuel. Broader electrification of the British rail networks may increase the demand for electrical engineering skills among the rail workforce, but also the growing numbers of hybrid and electrical vehicles serving the road transport industries are likely to require engineers familiar with the new technology.

The low-carbon agenda is recognised in general terms, but awareness and understanding of the skills implications is still limited among the sector's workforce. However, it is safe to say that as the consumer base becomes more inclined to choose environmentally friendly solutions, the sector's workforce may have to adjust, with carbon reduction skills being crucial. The management of the transport operating companies is likely to be expected to show their commitment in the first place, with good understanding of carbon reduction strategies.

Demand for skills may be created from 'greening' of existing jobs. This includes changing the way existing activities are carried out such as greener, more efficient ways of transporting goods and moving people.

7.2.3.2 Climate change

Over the recent years, the UK has experienced some extreme winter weather conditions, unseen for decades. This has had a severe impact on the transport sector, with train cancellations and airports closures, affecting millions of travellers across the country and the ability of freight transporters to deliver goods (FTA 2011). The freight and passenger transport services will have to be prepared for severe weather conditions to avoid or effectively manage the disruptions.

As David Quarmby suggests in his report, the best way of preventing further damage is by improvements in the field of communication (DfT 2010a), especially within the road transport industries. Better communication with the public through broadcast and electronic media is a priority.

In the case of the rail industry, communication and decision-making should be considered as crucial among station managers. Equipping them with these abilities may lead to improvements in communicating with customers in situations that require a timely response, such as weather-related train cancellations being announced sooner, rather than later. In the air transport, higher investment in de-icing and de-snowing technology may require staff able to operate and maintain new equipment.

7.2.4 Economics and globalisation

The greater availability of jobseekers during the economic slowdown means that a larger pool of candidates is available for the employers to choose from. This may allow the employers to expect more of the staff they recruit. The growing investment in infrastructure and transport, combined with the deteriorating economic environment, may mean that efficiency and customer service skills may become a crucial skillset sought after and valued by transport businesses.

The European Union estimates that the most important impact on employment among the 27 European states is likely to be brought about by fiscal austerity and economic uncertainty (EC 2010). The Union foresees a clear rise in the proportions of the workforce with medium and high formal qualifications and a fall in the share of the workforce with no or low formal qualifications. Translated into the practicalities of the transport sector, this trend is most likely to boost the minimum skill requirements essential to work in any of the sub-sectors. According to the European Commission, functional IT skills, effective communication and project management abilities are most likely to see an upgrade from desirable to essential in the years ahead.

7.2.4.1 Price

As the national economy continues to deteriorate, it is expected that price will matter more for the average consumer. However, some may still prefer to pay a premium for high levels of service, as the general outcome of the recession may be the widening of the gap between the low and high income populations. Passengers will be likely to spend more time searching for good travel deals and planning their journeys ahead of time, in order to grab the best offers available. This may require staff with good promotional and planning skills within the operating companies. The ability to cooperate with online search-engines, travel agents and discount websites (like Groupon, Vouchercloud, etc.) is also likely to be of importance. Additionally, market research skills and benchmarking abilities allowing to compare business processes with industry bests across the world will likely enable operators to stay ahead of the competition.

As more passengers search for price deals and expect to receive the top service in return, the historical association of customer service with high-market may gradually disappear, as competition on low-cost end of the spectrum goes beyond price in trying to attract the customer. Growing popularity of additional services such as Priority Boarding show that in addition to increasing numbers of passengers tempted by low costs, many use budget airlines for the routes they cover rather than for the price they charge. Regardless of the market positioning of a passenger transport operator, customer service skills are likely to remain very important. However, the employees may need to be empowered to address the customer needs in a more autonomous way.

7.2.5 Technological change

7.2.5.1 ICT development

Passengers are keen to make use of technology to better enable them to work when on the move, with connectivity becoming a critical factor. This suggests that passenger transport modes offering wi-fi are likely to have a competitive advantage. On top of that, the passenger transport industries may have to continuously improve their online presence, as the customer base becomes more digitalised and this trend is likely to further increase.

There is extensive evidence of a significant demand for technology professionals, as well as general staff with better understanding of technology used at the job. This may relate to digital technologies increasingly more often used within the sector, like paperless ticket processing skills – for which basic & advanced IT skills and ability to operate QR code readers are likely to be crucial - or operational skills related to on-board ICT systems.

The skills implications of this trend may include boost in demand for IT skills other and job-related new technology skills among the front line staff, including social network marketing abilities, and knowledge of web design and management of content among the back office staff who design and operate web-based solutions in order to keep up with the growing population of netizens using the passenger transport services.

7.2.5.2 New vehicles

Technological advances are occurring at an exponential rate that may lead to improved rolling stock, road vehicles and aircrafts which in turn are likely to require the workforce to have specific technical skills and abilities. With the most recent Government commitment to investment in new projects and improving the existing base (HM Treasury and Infrastructure UK 2011), new technology implementation skills are likely to become crucial among the operators' management. Furthermore according to VisitBritain, by 2040 the UK will be fully connected with the European high-speed rail networks, with visitors from continental Europe being able to reach different parts of the UK by direct rail service. This trend may result in a greater demand for engineers who are familiar with recent and upcoming infrastructure solutions or advancements.

7.2.6 Values and identities

7.2.6.1 Lifestyle

The changing characteristics of people's lifestyles are likely to continue to be critical in determining the service innovation and brand rejuvenation. Offering a service that is memorable will likely become even more important, because passengers – both, more experienced, worldly and given alternative choices, are likely to increasingly expect their means of transport to play an active part in their travel experience, rather than being simply a mode of conveyance. This will partly be dictated by the changing work-habits, like tele-working.

This may contribute to the growing importance of customer service skills. It is likely to require more comprehensive approach to customer service, achieved by ensuring that organisational culture reflects customer needs and that managers support and equip front line staff with the right skills to reflect the expectations of their customers.

7.2.6.2 Value for money

Passengers are becoming increasingly harder to categorise in terms of their status. For instance, the numbers of affluent travellers using Ryanair is expected to grow (Financial Times 2011), as many consumers place greater attention to relative value, than to excessive luxury – not to be mistaken with good customer service.

This may put operators under greater pressure to stay reasonably priced and require service planning skills and advanced business skills of the passenger transport staff. Additionally, as the economic situation deteriorates, more people will be likely to continue the current trend of choosing to holiday within the UK, instead of going abroad. This may play an important role in the expected increase of the domestic passengers (discussed in section 6.1.7.2), who pay particular attention to price and choose their provider based on the availability of travel offers, including family and group tickets.

7.2.7 Consumer demand

Consumer demand within the passenger transport sector is highly determined by other trends that have direct impact on the average transport user. Customer service skills are expected to be essential to accommodate the increasing numbers of foreign and domestic tourists (as discussed in section 6.1.7.2).

The skills implications of tourism growth and the changing profile of the average tourist will likely include:

- customer care: as higher ratio of tourists to commuters means greater expectations of service
- knowledge of foreign languages: more tourists from non-English speaking countries (especially China) is expected to increase pressure on language requirements among the staff
- intercultural sensitivity: more tourists from non-Western societies may increase the importance of intercultural sensitivities and awareness of different norms and habits
- project management and planning skills are likely to be crucial within the industries' back offices, in order to move services closer to passengers' expectations

7.3 Impact on employment and skills

All the drivers explored above are likely to impact the employment and skills within the sector. These have been highlighted at the end of each section but in summary the main impacts include:

- Attracting new recruits
- Developing and retaining existing staff
- Growth of technology within the sector and its impact on the skill-requirements across the sub-sectors
- Greater need for customer service, as consumers' expectations rise.

7.4 Future occupational profile

The below section provides a picture of employment prospects for the period 2010 to 2020. Using the Working Futures series we will demonstrate the way in which the sectors and the occupations within are likely to develop during this period.

7.4.1 Job growth

Table 7.1 shows the projected employment change for the UK as a whole between 2010 and 2020. It estimates a net growth in jobs in the UK of around 1.55m. Employment expansion is expected in six of the occupational groups, while three are expected to contract.

Table 7.1 Workplace job growth by occupation within Whole Economy, UK

Employment growth	2010	2015	2020	2010	2015	2020	2010-2020
	Numbers (000s)			% shares			Net change (000s)
Managers, directors and senior officials	3016	3279	3560	9.9	10.6	11.1	544
Professional occupations	5843	6189	6712	19.2	20.1	21.0	869
Associate professional and technical	3926	4138	4476	12.9	13.4	14.0	551
Administrative and secretarial	3698	3466	3312	12.1	11.2	10.3	-387
Skilled trades occupations	3526	3389	3295	11.6	11.0	10.3	-230
Caring, leisure and other service	2719	2801	3032	8.9	9.1	9.5	313
Sales and customer service	2608	2555	2610	8.6	8.3	8.2	2
Process, plant and machine operatives	1950	1829	1737	6.4	5.9	5.4	-213
Elementary occupations	3173	3209	3274	10.4	10.4	10.2	101
All occupations	30458	30855	32008	100.0	100.0	100.0	1550

Source: Working Futures 2010-2020, UKCES, 2011

The projected employment change for the transportation and storage sector, between 2010 and 2020, can be seen in Table 7.2. An estimated 95,000 additional jobs in the sector will be required. All occupational groups, except for skilled trades occupations (e.g. bus repairers) and process, plant and machine operatives (e.g. drivers) are expected to expand. The forecasted contraction in the case of those occupational groups can be directly attributed to the rapid development of job-related technology, which takes over some responsibilities of these roles. To name a few examples, internet-based travel booking systems decrease the reliance on telephone ticket sellers; TfL are considering a driver-less technology for the London Underground, which if introduced, would lower the dependence on train drivers (BBC 2011).

The greatest positive net change is expected within associate professionals and technical roles, followed by caring, leisure and other service and then management. Process, plant and machine operative roles are expected to decrease by 29,000 come 2020, but they will still account for the largest occupational group with over 515,000 workers or nearly 34 per cent of the sector workforce.

Table 7.2 Workplace job growth by occupation within Transportation and storage,UK

Employment growth	2010	2015	2020	2010	2015	2020	2010-2020
	Numbers (000s)			% shares			Net change (000s)
Managers, directors and senior officials	105	118	131	7.4	8.1	8.6	26
Professional occupations	71	81	92	5.0	5.5	6.0	21
Associate professional and technical	103	115	131	7.2	7.9	8.6	28
Administrative and secretarial	148	152	153	10.4	10.4	10.1	5
Skilled trades occupations	88	83	80	6.2	5.7	5.2	-9
Caring, leisure and other service	89	100	115	6.2	6.9	7.6	26
Sales and customer service	49	56	63	3.5	3.8	4.2	14
Process, plant and machine operatives	543	524	515	38.2	35.9	33.9	-29
Elementary occupations	227	232	240	15.9	15.9	15.8	13
All occupations	1424	1460	1519	100.0	100.0	100.0	95

Source: Working Futures 2010-2020, UKCES, 2011

7.4.2 Replacement demand for the sector

The data above focus on the total number of people that are expected to be employed in particular occupations in the future. This provides a useful indication of areas of change, but it may give a misleading impression of job opportunities and related training requirements.

Occupations where employment is projected to decline may still offer good career prospects, with a number of job openings. This is due to the fact that employers may need to replace workers who leave due to retirement, career moves, mortality or other reasons. This is known as ‘replacement demand’. It is usually much more significant than any change which results from growth in employment in any occupational group. The replacement demand can easily outweigh any negative changes resulting from projected employment decline.

Table 7.3 provides a summary of the replacement demand require for the nine occupational groups for the transportation and storage sector.

Replacement demand is expected to be 553,000 for the sector between 2010 and 2020. This means that over a third of the sector’s current workforce is likely to be replaced. It equates to 4.5 per cent of the total UK requirement. Therefore in total the sector is anticipated to require 647,000 additional workers in the decade.

Table 7.3 Workplace job growth and replacement demand by occupation within Transportation and storage, UK

United Kingdom : Transportation and storage Employment Levels (000s)	1990	2000	2010	2015	2020	2010-2020 Net Change	2010-2020 Replacement Demands	2010-2020 Total Requirement
1. Managers, directors and senior officials	91	93	105	118	131	26	44	70
2. Professional occupations	65	63	71	81	92	21	25	45
3. Associate professional and technical	135	113	103	115	131	28	36	64
4. Administrative and secretarial	117	158	148	152	153	5	65	70
5. Skilled trades occupations	114	93	88	83	80	-9	33	24
6. Caring, leisure and other service	61	87	89	100	115	26	37	64
7. Sales and customer service	29	43	49	56	63	14	16	30
8. Process, plant and machine operatives	561	508	543	524	515	-29	212	183
9. Elementary occupations	195	209	227	232	240	13	83	96
Total	**1,369**	**1,367**	**1,424**	**1,460**	**1,519**	**95**	**553**	**647**

Source: Working Futures 2010-2020, UKCES, 2011

Across the sector, plant and machine operatives are expected to decline, the replacement demand is anticipated to be the greatest of all the occupations, with 212,000 individuals. This means that there may be an overall requirement of 183,000 employees.

Elementary position, the next largest employment group, is anticipated to need 96,000 additional workers (83,000 of these are due to replacement demands), while managers may need 70,000 additional employees.

7.5 Future skill needs

In broad terms, expansion in the number of jobs is most likely to be found in the higher skilled occupations of managers, professionals and associate professional/technical occupations. The other major growth occupation looks likely to be personal service occupations. On the other hand, declines are anticipated in process, plant and machine operatives and skilled trades.

However, these changes in overall growth or decline do not take account the total job requirement because in addition to the new jobs it will be necessary to fill the job opportunities that arise when current workers retire or leave the sector (replacement demand). It is anticipated that all occupational groups may require additional workers.

The skill demands of the future are likely to also include the ones identified as current needs and can be summarised as:

- Management skills – including sector specific technical skills (O licence)
- Analytical skills – Driver hours (digital tachograph), fuel monitoring
- Driving Skills – eco-driving, longer lorries
- Legislative and regulatory knowledge
- Contract and client relationship management (3PL)
- Planning skills – vehicle utilisation, supply chain
- Intermodal strategic planning
- Financial and budgeting skills
- Forecasting and research skills
- Customer service
- Marketing skills
- Adaptability
- Carbon reduction skills
- Electrical engineering skills
- Ship Officer - Navigation, seamanship, IT, Business and Law, marine engineering principles, ship construction and electrics

8 Priority areas for action

Chapter Summary

- There is a need to attract new entrants with the required skills into the sector
- Demand has been demonstrated for all occupational groups but specific roles of concern include ship officers and LGV drivers. One challenge to help attract new entrants is to improve the perceived image of the sector with the public and young
- To address the weak areas of employment within the sector, a number of solutions can be proposed, aiming at targeting people outside employment, accelerating mobility in the workplace and increasing the effectiveness of training
- The failure to develop the sector workforce can easily hamper its growth.

This Sector Skills Assessment has identified current and future trends in demands for skills in the UK over the coming years, using a range of available data sources. In this final chapter we draw together this information and set out some core strategic areas for action in the short, medium and longer term. We focus on the occupations where most attention is required if we are to ensure that the transportation and storage sector has the skills it needs today and in the future to meet the emerging labour market demands, and ultimately maximise economic growth.

The priority actions listed in this chapter are grouped by sub-sector they apply to, either freight logistics or passenger transport. The two sub-sectors differ mainly by the type of service offered – one defined as conveyance of people, the other as management of the flow of goods between origin and destination. This has direct impact on skills requirements and appropriate solutions, which are therefore presented separately.

8.1 Priority areas

Table 8.1 identifies the skills which are strategic priorities for action, both currently and for the future. These are the areas that have been identified in the analysis throughout this report and where there are:

- Current and/or anticipated future skills needs, which are significant in scale or volume already in the labour market, or are expected to be a significant requirement in the future
- Concerns over whether the skills needed will be adequately met

Some of the likely key deficits are about capacity – i.e. insufficient numbers of people with the necessary skills and knowledge, and others are about capability – the number of people exists but their skill sets need to change in order to meet changing needs.

Table 8.1 Occupational priority actions areas

Skill / occupational priority	Sub-sector affected	Degree of certainty – definite, likely, possible, unknown[6]	Magnitude – large, medium small (current and future)[7]	Lead time – short/medium/long[8]	Specific skills
Managers	All	**Definite** There is current as well as future demand for managers. Evidence of above average current SSVs, and existing skills gaps Future trends highlight demands – i.e. organisations expected to be increasingly agile to cope with market change, increasing competition and adopt HPW, ageing population will require different needs leading to niche markets	**Medium** Significant demand for these jobs • 1,221current vacancies • 70,000 future demand 61 per cent do not have Level 4 qualification	**Medium** Takes time to develop and build management capability. Combination of on-the-job and off-the-job training	Leadership and management Strategic & change management Sustainability practices Legislative and regulatory knowledge HPW practices Supply chain rationalisation
Professionals	Land (Rail, Road)	**Unknown**	**Small** demand for these jobs • 45,000 future demand	**Medium** Takes time to develop and build mechanical and engineering capability.	Job specific skills

[6] Likelihood of the drivers demand materialising, and the risk of supply failure
[7] Scale of action required based on magnitude of skills needs. 100,000 workers large, 50,000-100,000 workers medium, less than 50,000 workers small
[8] Seeks to assess the length of time taken to rectify skills deficit. It also considers the absence of alternative preferred strategy to overcome deficit. Long being more than five years, medium three-five years, short less than three years. This measure includes both the learning time required for individuals and the set-up time for any new training or educational provision

Skill / occupational priority	Sub-sector affected	Degree of certainty – definite, likely, possible, unknown[6]	Magnitude – large, medium small (current and future)[7]	Lead time – short/medium/long[8]	Specific skills
Associate professionals	Water Land (rail) Freight Forwarders	**Definite** Evidence of current as well as future demand for ship officers. Future infrastructure projects like Crossrail and HS2 will require train drivers Above average evidence of skills gaps Drive towards sustainable travel (multimodal freight) will increase demand on rail and water	**Medium** demand for these jobs • 1,628 current vacancies • 64,000 future demand	**Long:** Ship Officer (deck and engineering) training requires time spent at sea and on shore at nautical college	Job specific skills (ship officer, aircraft pilot, importers & exporters) Legislative and regulatory knowledge Customer service New technologies
Administrative / clerical	All	**Definite / Likely** Evidence of above average current SSVs and skills gaps Drive towards sustainable travel (multimodal freight) will increase demand on rail and water and addition planning skills for transport clerks	**Medium** demand for these jobs • 2,571 vacancies • 70,000 future demand	**Short /Medium** Takes time to develop and build capability. Combination of on-the-job and off-the-job training	Problem solving Customer service Oral communication Legislative and regulatory knowledge Planning skills Vehicle utilisation Intermodal strategic planning Analytical skills
Skilled trade occupations	Land Air Water	**Definite** Evidence of high level of current SSVs and above average skills gaps New technologies will drive a need for new / upskilled demand of engineering skills	**Small** demand for these jobs • 2,299 current vacancies • 24,000 future demand	**Medium/Long:** Auto engineers training require time	Job specific Problem solving New technologies

Skill / occupational priority	Sub-sector affected	Degree of certainty – definite, likely, possible, unknown[6]	Magnitude – large, medium small (current and future)[7]	Lead time – short/medium/long[8]	Specific skills
Personnel services	Air Land (Rail)	**Possible** HS2 and Crossrail create further demand for rail assistance Growth in tourism will increase skills demand	**Medium** demand for these jobs • 64,000 future demand	**Short /Medium**	Customer Service New technologies Cultural awareness Foreign language
Sales and customer services	All	**Likely / possible** Above average evidence of current SSVs and skills gaps Growth in tourism will increase skills demand	**Small** demand for these jobs • 1,620 current vacancies • 30,000 future demand	**Short /Medium**	Customer service New technologies Cultural awareness
Machine operatives	All	**Definite / Likely** Above average evidence of HtFVs Drivers such as regulation will drive up standards of drivers (i.e. Driver CPC, Rights of Passengers) , while incentives like the SMarT will correct market failure in recruiting seafarers Taxation will encourage fuel efficient driving to lower costs	**Large** demand for these jobs • 9,764 current vacancies • 183,000 future demand	**Medium** Issues about perceived 'attractiveness' of roles (i.e. LGV drivers and seafarers) to potential trainees. Drivers, particularly LGV, require time and training to gain vocational licence, the Driver CPC and to gain the necessary experience required by companies	Driving skills – supply chain specific, eco-driving Driver CPC Customer service Oral communication Sea farers skills New technologies

Skill / occupational priority	Sub-sector affected	Degree of certainty – definite, likely, possible, unknown[6]	Magnitude – large, medium small (current and future)[7]	Lead time – short/medium/long[8]	Specific skills
Elementary	All	**Definite / Likely** Above average evidence of skills gaps The extent of deficits maybe masked by migrants in warehouse roles	**Large** demand for these jobs • 5,528 current vacancies • 96,000 future demand	**Short** Issues about perceived 'attractiveness' of roles (i.e. warehouse operatives) to potential trainees	Employability and basic skills Basic IT skills and new technologies Team working

The transportation and storage sector is the sixth largest of the UK economy by GVA. The forecasts for growth are strong, with an estimated six per cent growth in employment anticipated between 2010 and 2020. However, failure to develop the workforce can easily hamper the sector's growth. A number of areas need to be addressed in order to prevent this from happening.

8.2 Attracting new recruits

The report highlights the need for new recruits. Not only is the sector expected to grow by six per cent in terms of employment but replacement demand of over half a million individuals is projected between 2010 and 2020. Table 8.1 demonstrates the magnitude of skills needs for the occupational groups.

However, some jobs in the sector are not considered as a career of choice due to a number of factors; such as image and perceived lack of career progression (i.e. LGV and ship officer) which is causing immediate and future labour concerns. Others appear to have plenty of individuals seeking such roles (see section 5.4.3), but employers are reporting that applicants are lacking the required skills.

Therefore the challenge is to attract entrants to the sector who have the correct skills required to undertake the job and demonstrate the career development opportunities available. With current high unemployment rates there are opportunities to target and develop those currently not in employment and also help tackle the diversity issues the sector faces.

One solution proposed for freight logistics would be the creation of Local Logistics Community Networks (LLCN) where employer clusters will activate local talent pools and attract new entrants to the sector. These groups will forge connections across the community, such as schools, colleges and Job Centres to raise awareness of the job opportunities and career progression routes the logistics sector offers. Job clubs will support school leavers, graduates, employees facing redundancy and unemployed people get into work, by offering advice, work experience and pre-employment training. A mentoring programme, whereby volunteers, who are senior (active or retired) figures in the local logistics sector, will support and provide guidance to SMEs and their workforce.

While for the passenger transport subsector, targeting low qualification zones to identify those areas of the UK with high unemployment and high sector vacancies may be essential. In these areas, there is a need for action to put in place targeted programmes to promote career opportunities in the sector and develop the required skills to enter job roles. Furthermore, the development of an 'employment academy model' where larger businesses are able to find and train jobseekers with the essential skills and behaviours to enter job roles is likely to be another solution. And finally, it will be crucial for small businesses to receive help in recruiting those formally unemployed by working with larger employers who undertake the selection and initial training, thereby ensuring that new entrants have a suitable skills base and attitude on which to develop their skills.

8.3 Promoting clearer development pathways

In many cases individuals are unaware of personal development options available in the sector. Therefore there is a need to articulate, develop and promote clearer development pathways in order to promote the sector as a career.

The Professional Development Stairway is an Information, Advice and Guidance tool that provides a single framework for careers across the logistics sector. It works on the simple premise that if you enter a logistics profession with or without relevant skills, you can plan your progression to more senior roles by understanding the skills, competencies and training needed to reach the next level. This framework should become the norm for the sector.

For passenger transport specifically, it will be important to review progression routes into the sector to ensure they are fit for purpose and demonstrate how people can best enter specific occupations. This will mean developing new qualifications, but also the development of passenger transport content on the hospitality, travel and tourism's sectors careers website – UKSP (www.uksp.org.uk). Additionally, developing a toolkit of resources to help employers target more women for those occupations where women are currently under-represented, together with development of a mentoring network, bespoke training and networking opportunities for women in passenger transport are also likely to make a desirable difference.

8.4 Professionalising the workforce and increasing business investment in skills development

Professionalising the workforce is a key issue for the transportation and storage sector given the relatively low levels of structured training planning and investment and the high instances of skill gaps across certain occupations.

Establishing a UK Modern Logistics Guild-like organisation and embedding the Professional Development Stairway, a web based career development framework that enables individuals and employers to map required competencies for specific roles, will help professionalise the workforce. Employer bonds (a funding system using bonds from larger employers to underwrite loans to SMEs for apprenticeship training) will help remove the bureaucracy from the financing of apprenticeships and transfer ownership to the sector.

Increasing access for employers to state-of-the-art quality assured skills and training products in order to drive business and performance improvement, will result in smarter investment in skills. The skills and training products will include Licence to Practise feasibility studies for Driving Instructors and Driver CPC trainers, and training supply hubs – groupings of providers in a locality operating within a system by which training supply for the sector is quality assured in the Scotland, Wales and Northern Ireland (England is already support through the National Skills Academy for Logistics).

Introducing an Investors in People offer tailored for the passenger transport sector could help in professionalising the workforce of the subsector. In addition, it will also develop an introductory programme to provide a ‘taster’ for small and micro operators to encourage them to progress to the full standard. If successful, this should provide essential support to smaller businesses to introduce better people-orientated infrastructure.

Return on investment studies will also be undertaken and case studies developed to demonstrate the impact that training is having on a business bottom line in the passenger transport sector. This will be disseminated as part of a campaign to communicate best practice and encourage employers to improve the effectiveness of their training.

Another recommendation may be to pilot voluntary licence to practice schemes across the passenger transport sector. This may possibly include taxi drivers in Derbyshire and an integrated transport infrastructure in Merseyside. In particular, occupations requiring higher and/or management skill needs will be explored as part of this approach. Through these pilots, it is envisaged that there can be a focused approach to training specific occupations and as a result increase and promote the professionalism of these roles.

Just like freight logistics, the passenger transport subsector will require greater support to help employers meet the requirements of Driver CPC (Certificate of Professional Competence). This will specifically help employers find the most effective and relevant training programmes to meet the Driver CPC requirements.

Raising the customer service skills of the passenger transport workforce is critical to address consumer expectations and skill gaps. This will not only address the needs of domestic users, but also international visitors using the transport infrastructure for tourism purposes. There is a need to embed customer service training within employers' broader training programmes.

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Technical appendix

The provision of core data

To ensure consistency and comparability across all 15 SSA reports, data from core labour market information sources was centrally collected, processed and formatted. It was then distributed by the UK Commission to Sector Skills Councils for inclusion within the reports.

Core data was centrally produced from the following sources:

- The Labour Force Survey
- The UK Employer Skills Survey 2011
- Working Futures 2010-2020
- Regional Accounts (information on Gross Value Added)
- Mid Year Population Estimates
- European Continuing Vocational Training Survey
- Business Demography Statistics

Data from the Labour Force Survey, regional accounts and mid-year population estimates was collated, processed and formatted by Cambridge Econometrics and the Institute for Employment Research (IER), Warwick.

Data from the UK Employer Skills Survey 2011 was collated and processed by IFF Research and formatted by the UK Commission.

Data from Working Futures was collated, processed and formatted by IER.

Data from the European Continuing Vocational Training Survey and Business Demography Statistics was collated, processed and formatted by the UK Commission.

All data was quality assured by contractors, the UK Commission and by Sector Skills Councils.

It has been necessary to suppress some data within the reports to adhere to official guidelines regarding data quality. The details of suppression strategies applied to data from specific sources are described in more detail below. Data for Scotland, Wales and Northern Ireland for the three smallest SSA sectors is most likely to be suppressed. These are:

- Agriculture, forestry and fishing
- Energy production and utilities
- Information and communication technologies

Methodological information for core labour market information sources

Method used to derive estimates of gross value added (GVA) per employee job by SSA sector and nation

No official estimates are currently available for the level of productivity by sector and UK nation. The figures presented in this report have therefore been estimated by the UK Commission using the following process.

Levels of workplace gross value added at current basic prices by SIC 2007 Section were derived from the official estimates published by the Office for National Statistics as part of its Regional Accounts series. Levels of employee jobs were taken from the Business Register and Employment Survey for 2009.

The sectoral "footprint" definitions used as the basis for the SSA reports are not coterminous with SIC Sections, however, and in some cases draw on 2-digit SIC divisions. At present the official GVA estimates for nations and regions are only available at a SIC section level.

To overcome this an approach was used which has been developed by Welsh Government to derive gross value added estimates for its priority sectors. This same approach was applied to the SSA sectors across the UK nations. Approximate estimates of GVA at 2-digit level are available for much of the economy from the Annual Business Survey (ABS). These were used to allocate GVA at the 2-digit level with the results being constrained to the official GVA totals by SIC section taken from the Regional Accounts. For those areas of the economy not covered by the ABS, shares of employment at the 2-digit level were used instead, taken from the Annual Population Survey.

Labour Force Survey

About the survey

One of the key data sources used within this report is the Office for National Statistics' (ONS) Labour Force Survey (LFS). The LFS is a survey of households living at private addresses (plus in NHS accommodation and student halls of residence) in the UK.

The survey is carried on a quarterly basis. The sample is made up of around 41,000 responding (or imputed) households in Great Britain every quarter, and around 1,600 households in Northern Ireland. The LFS uses a rotational sampling design which means that, once selected, a household[9]is kept in the sample for a total of five consecutive quarters.

Interviewers can take answers to questions by proxy if a respondent is unavailable. This is usually from another related adult who is a member of the same household. About a third of LFS responses are collected by proxy. Information on individuals aged 16 – 19 most likely to be obtained by proxy.

Full user guidance can be accessed here: http://www.ons.gov.uk/ons/guide-method/user-guidance/labour-market-statistics/index.html

Preparation of LFS data for this report

The UK Commission provided report authors with a core set of tables based on LFS data for mandatory inclusion within Sector Skills Assessment reports. The data within these tables was prepared by two contractors: Cambridge Econometrics (CE) and Warwick Institute for Employer Research (IER).

Data was prepared in three stages:

1. The original survey data was gathered and coded by IER to the categories and classifications required for the SSA tables. This was then sent to CE

2. CE used the data prepared by IER and derived the indicators and aggregated the data to the dimensions required for the tables

3. The UK Commission checked tables and distributed to report authors

Annual data presented within this report is based on an average of four consecutive quarters of data. Data prior to 2009 is based on SIC2003 and data for 2009 and 2010 is based on SIC2007 codes.

[9] Note, it is the address that is selected and not necessarily the particular people who live there.

Reporting of LFS data

In line with ONS convention, annual LFS data presented within this report has been suppressed if individual cell sizes fall below 6,000. This is because cell sizes of fewer than 6,000 are deemed to be low quality estimates.

Analysis of employment uses all four categories of employments status within the LFS: employee, self-employed, government scheme & unpaid family worker.

Please note, some tables present a total for All sectors while others present a total for Whole economy. The values for these totals are different because the Whole economy total includes the 'Not within scope' category (i.e. sectors that don't fall within an SSA sector), whereas All sectors is the total for just the 15 SSA sectors.

UK Commission's Employer Skills Survey 2011

The UK Commission's Employer Skills Survey 2011 (UK Commission's ESS 11) was the first large-scale economy-wide employer skills survey to be conducted across the whole of the UK. The survey was managed by the UK Commission for Employment and Skills and was conducted by three contractors: IFF Research, BMG Research and Ipsos Mori (Davies et al, 2012). The project steering group included representatives from all four nation governments, the Alliance of Sector Skills Councils, the Department for Work and Pensions and the Skills Funding Agency.

Fieldwork was carried out from March to July 2011. Two waves of interviews were conducted. The main survey involved telephone interviews with approximately 87,600 employers and a follow-up survey focusing on investment in training was undertaken with over 11,000 respondents. The data presented within this report draws only on information gathered from the main survey.

The table below provides information on the number of employers interviewed by sector and nation for the main survey.

SSA sector	England	Scotland	Wales	NI	UK
Agriculture, forestry and fishing	1,270	99	133	45	1,547
Energy production and utilities	1,306	106	133	69	1,614
Manufacturing	6,774	182	470	350	7,776
Construction	7,538	300	660	463	8,961
Wholesale and retail trade	13,919	333	1,129	769	16,150
Transportation and storage	4,078	152	300	205	4,735
Accommodation, food and tourism activities	9,630	324	909	455	11,318
Information and communication	2,262	56	111	81	2,510
Creative media and entertainment	3,301	99	227	135	3,762
Financial, insurance & other professional	4,525	146	391	281	5,343

SSA sector	England	Scotland	Wales	NI	UK
services					
Real estate and facilities management	3,113	85	133	93	3,424
Government	2,078	163	188	176	2,605
Education	4,597	164	391	287	5,439
Health	2,912	107	242	137	3,398
Care	4,028	101	338	296	4,763
Not within scope	3,722	86	257	162	4,227
Total	75,053	2,503	6,012	4,004	87,572

UK Commission's ESS 11 is a quota survey. Quotas were set on a size by sector within nation / English region basis. In Northern Ireland and Wales, where more interviews were carried out than the required minimum to get national representation, they were predominately distributed in proportion to the population.

In order to include the maximum number of questions without extending the overall length of the interview, the sample was randomly split in half for some sections, and one set of employers were asked one module of questions, and the other half of the sample different questions.

The survey is a local unit (establishment) survey. This means that for large multi-site organisations several branches/ locations may have been interviewed. The establishment level sampling reflects that the survey asks employers about issues that need to be answered by people with day-to-day contact with employees rather than head office.

Respondents are those who have the best overview of HR and training within the establishment. This will tend to be HR or training managers in large establishments and owner/managers or senior managers within small establishments.

The valid population of establishments being used in UK Commission's ESS 11 is all establishments with the exception of sole traders (this means that establishments with one employee and no working proprietors (for e.g. flower stall at a station, where there is one person working but they don't own it themselves) are included). In addition, establishments with multiple working proprietors but no employees are also included.

Sampling error for the survey results overall and for different sub-groups by which analysis is presented in the report is shown in the table below. Sectoral figures are presented for the 14 SIC 2007 sections which were used for the survey sampling approach.

Figures have been based on a survey result of 50 per cent (the 'worst' case in terms of statistical reliability), and have used a 95 per cent confidence level. Where the table indicates that a survey result based on all respondents has a sampling error of +/- 0.32 per cent, this should be interpreted as follows: 'for a question asked of all respondents where the survey result is 50 per cent, we are 95 per cent confident that the true figure lies within the range 49.68 per cent to 50.32 per cent'.

As a note, the calculation of sampling error has taken into account the finite population correction factor to account for cases where we are measuring a significant portion of the population universe (i.e. even if two sample sizes are the same, the sampling error will be lower if in one case a far higher proportion of the population was covered).

These confidence intervals are based on the assumption of a normal distribution of responses.

Sampling error (at the confidence 95 per cent level) associated with findings of 50 per cent

	Population	Number of interviews	(Maximum) Sampling Error
Overall	**2,299,921**	**87,572**	**+/-0.32**
By country			
England	1,960,298	75,053	+/-0.35
Northern Ireland	65,559	4,004	+/-1.5
Scotland	175,114	2,503	+/-1.94
Wales	98,950	6,012	+/-1.22
By size of establishment			
1-4	1,466,397	18,955	+/-0.99
5-24	648,446	47,770	+/-0.61
25-99	147,319	15,951	+/-1.03
100-249	25,945	3,270	+/-2.27
250+	11,814	1,626	+/-3.12
By sector			
Agriculture	98,458	939	+/-3.18
Mining & Quarrying	2,222	188	+/-6.84
Manufacturing	128,255	7,704	+/-1.08
Electricity, Gas and Water	10,583	1,426	+/-3.35
Construction	241,429	6,654	+/-1.18
Wholesale and Retail	441,365	15,340	+/-0.78
Hotels & Restaurants	167,215	8,471	+/-1.04
Transport and Communications	210,801	7,885	+/-1.08
Financial Services	52,381	1,881	+/-2.22
Business Services	551,612	14,488	+/-0.80
Public Administration	26,058	1,617	+/-2.36
Education	65,499	5,439	+/-1.27
Health and Social Work	140,269	8,161	+/-1.05
Community, Social and Personal Services	163,774	7,379	+/-1.11

Looking specifically at sampling error for SSA sectors at national level, Agriculture in Scotland provides an illustrative example. 99 interviews were completed for this sub-group. Applying the assumptions outlined above, this gives a maximum sampling error of around +/- 10 percentage points. This demonstrates the indicative nature of the detailed survey estimates for smaller sectors.

Within the report, data based on unweighted bases of less than 25 have therefore been suppressed for quality reasons. In addition, data based on unweighted bases of between 25 and 50 have been marked as indicative. More stringent thresholds have been applied in Scotland because of the lower total number of interviews that were conducted. Estimates based on unweighted bases of fewer than 50 have been suppressed, whilst estimates based on bases of 50-99 are marked as indicative in the relevant tables.

Finally, occupations within the survey are defined by 2010 Standard Occupational Classification codes and sectors are defined by 2007 Standard Industrial Classification codes.

Please visit the UK Commission's Employer Surveys website for further information including the full survey report and questionnaire. https://ness.ukces.org.uk/default.aspx

Working Futures

Working Futures 2010-2020 is the latest in a series of detailed projections of UK employment, productivity, labour supply and skills. The projections have been prepared by the Institute for Employment Research (IER) and Cambridge Econometrics (CE) on behalf of the UK Commission for Employment and Skills (UKCES).

The projections are calculated from a number of different data sources, including the Annual Business Inquiry, the Business Register and Employment Survey, and the Labour Force Survey. The results provide a picture of employment prospects up to 2020 by industry, occupation, qualification level, gender and employment status for the UK as a whole, the four nations, and English regions.

As with all projections and forecasts, the results presented in Working Futures should be regarded as indicative of likely trends and orders of magnitude given a continuation of past patterns of behaviour and performance, rather than precise forecasts of the future. At a time of great uncertainty about the short to medium term prospects for the economy, it is important to stress the value of Working Futures in aiding understanding of likely prospects for employment in the longer term (i.e. in 2020). Readers should therefore focus on the relative position of sectors, and occupations in 2020 and treat the projected values as broad indicators of scale rather than exact predictions.

Further methodological details can be found on the UK Commission's website - http://www.ukces.org.uk/publications/working-futures-technical-report

Sector Skills Council Research: Skills for Logistics

Sector Skills Assessment for the UK Logistics and Wholesale Sector (2010):

Methodology:

This report has been compiled using a number of research activities, from desk research to primary research:

- Desk Research:

A review of existing Labour Market Intelligence (LMI) sources was undertaken, with this report drawing on existing data and research reports to investigate the current and future skills demand, productivity issues, recruitment issues, skills needs and skills gaps.

Nationally available data such as the Annual Population Survey (APS), Inter-Departmental Business Register (IDBR), Working Futures for employment projections and the employer skills surveys conducted in each nation, were analysed and used within this report.

- Primary Research

Skills for Logistics undertakes primary research to enhance information available, or to gather information that is not. This includes quarterly employer surveys and further consultations with employers and other stakeholders on key issues and priorities.

A study into the potential feasibility of a UK Modern Logistics Guild (2011)

This research report utilised a range of research methods (triangulation) to ensure that the findings were robust and accurate. To analyse the findings of the primary research statistical techniques and thematic analysis were used. The research involved a number of stages:

- Literature Review:

A thorough and extensive search was undertaken on the guilds both in their historical context and in their role today. This revealed a large amount of detailed research on the role of historic guilds, and less on the role of guilds today. An international perspective was also explored, and we likewise looked at guilds which existed in other sectors of the economy.

- Employer Survey

A survey was selected as a research method to explore both the role of a guild-like organisation and the skills needs in the Logistics Sector. This enabled the research team to explore the opinions and understanding of a large group of people inexpensively and relatively quickly. The survey included both closed questions (quantitative) and open-ended questions (qualitative). The survey was devised internally at SfL to capture the employer's views. None of the questions were mandatory. The survey was uploaded onto *SurveyMonkey* - an online tool, and also available in paper format.

The survey was sent out to over 600 employers who form part of SfL Employer Forum. Membership is open to all logistics employers. There is an Employer Forum in each nation, and the survey was sent to the England, Wales, Scotland and Northern Ireland groups. Thus this was non-random sampling based on population of interest.

- Interviews

Semi-structured interviews were selected as an important research technique for this research study to gather in-depth knowledge and a thorough understanding of issues raised. The interviews included a range of open-ended and closed questions. This approach gave participants and the interviewer the flexibility to explore the topic as appropriate, thus reducing generalisability but increasing reliability and validity. Ten sector specialists and ten Guild specialists were identified and approached by the research team to participate in a semi-structured telephone interview, at a time and date convenient to themselves. The interviews were scheduled to last between 30 and 45 minutes.

- Focus Group

In order to develop and test proposed models of a 'guild-like' organisation for the Logistics Sector, Skills for Logistics ran two focus groups. One was hosted by Andrew Callaghan, Senior SfL Ambassador and the other by Louise Ellman MP, Chair of the Transport Select Committee. Three questions formed the basis of the discussions.

A Looming Driver Shortage? – the evidence behind the concerns (2012)

The purpose of this report is to present the current situation of the UK road freight transport sector, with regards to the labour shortage of professional drivers – Large Goods Vehicles (LGV).

The report is structured into six chapters. Following the introductory chapter, Chapter Two presents an overview of the performance of freight transport in the UK and provides characteristics of the driving employment. Chapter Three investigates the supply of drivers in terms of licence holders and individuals seeking such positions and the demand in terms of vacancies. Chapter Four considers the uptake of Driver Certificate of Professional Competence (Driver CPC) periodic training – a key qualification requirement for all professional LGV drivers come September 2014. Chapter five will draw all the information together. Finally an annex examining in more detail the EU directives and regulations that impact driving occupations is provided as well as details used to calculate the forecasting of the Driver CPC periodic training uptake.

This report draw upon a number of data sources:

- Occupational specific quantitative data generated by SfL and others (including Government departments and agencies, academics and professional associations)
- Qualitative information collected by SfL and other organisations

Sector Skills Council Research: People 1st

Recoding strategy (LFS i.e. employment figures and ABS i.e. GVA)

Air Transport:
= ((SIC 5110 passenger air transport) + (5223 service activities incidental to air transportation))*0.94805

NB – the 0.94805 multiplication here is a proportional reduction to remove aircraft engineers (included as part of SOC 2000 5223) from the workforce figures. It has been calculated by crosstabs of SOC 5223 with SIC 5110 and 5223 then proportionally reducing the total. The same principles have been applied to re-calculate GVA.

Bus and coach:
= (4931 urban and suburban passenger land transport * 0.89194) + (4939 other passenger land transport not elsewhere classified * 1.00000) + (5221 service activities incidental to land transportation * 0.00348)

Light rail and metro:
= (4931 urban and suburban passenger land transport * 0.10806)

Rail:
= ((4910 passenger rail transport, interurban * 1.00000) + (5221 service activities incidental to land transportation * 0.03179)) * 2.10774

NB – the 2.10774 multiplication here is a proportional increase to add rail engineers to the workforce figures. The same principles have been applied to re-calculate GVA.

Taxi operation:
= (4932 taxi operation * 1.00000)

Water transport:
= (5030 inland passenger water transport * 1.00000) * 0.50968

NB – the 0.50968 multiplication here is a proportional reduction to level the workforce numbers out at 2,000 (as agreed by industry bodies to be the definitive figure). The same principles have been applied to re-calculate GVA.

Recoding strategy (IDBR i.e. business establishments and enterprises)

Air transport:
= (SIC 5110 passenger air transport) + (5223 service activities incidental to air transportation)

Bus and coach:
= (4931 urban and suburban passenger land transport * 0.89194) + (4939 other passenger land transport not elsewhere classified * 1.00000) + (5221 service activities incidental to land transportation * 0.00348)

Light rail and metro:
= (4931 urban and suburban passenger land transport * 0.10806)

Rail:
= (4910 passenger rail transport, interurban * 1.00000) + (5221 service activities incidental to land transportation * 0.03179)

Taxi operation:
= (4932 taxi operation * 1.00000)

Water transport:
= (5030 inland passenger water transport * 1.00000) * 0.50968

NB – the 0.50968 multiplication here is a proportional reduction to level the workforce numbers out at 2,000 (as stated by Kevin Marchand to be the definitive figure)

Glossary

ABI	Annual Business Inquiry
ABS	Annual Business Survey
ACI	Airport Council International
BA	British Airways
BAME	Black, Asian and Minority Ethnic
BIS	Department for Business, Innovation and Skills
BRES	Business Register and Employment Survey
CAA	Civil Aviation Authority
CO_2	Carbon Dioxide
CPC	Certificate of Professional Competence
CPD	Continuous Professional Development
DECC	Department of Energy and Climate Change
DELNI	Department for Employment and Learning, Northern Ireland
DfT	Department for Transport
Driver CPC	Driver Certificate of Professional Competence
EC	European Commission
EEA	European Environment Agency
EU	European Union
FTA	Freight Transport Association
GPS	Global Positioning Systems
GVA	Gross Value Added
HPW	High Performance Working
HPWP	High Performance Working Practices
HR	Human Resource
HtFV	Hard-to-fill Vacancies
ICT	Information and Communication Technology
IDBR	Inter-departmental Business Register
JSA	Job Seekers Allowance
LFS	Labour Force Survey
LGV	Large Goods Vehicle
LMI	Labour Market Intelligence
NOS	National Occupation Standards
ONS	Office for National Statistics
PCV	Passenger Carrying Vehicles

QR	Quick Response
RDC	Regional Distribution Centre
RFID	Radio-Frequency Identification
RHA	Road Haulage Association
SfL	Skills for Logistics
SIC	Standard Industrial Classification
SMarT	Support for Maritime Training
SME	Small and Medium sized Enterprises
SOC	Standard Occupational Classification
SRFIs	Strategic Rail Freight Interchanges
SSA	Sector Skills Assessment
SSC	Sector Skills Council
SSV	Skills-shortage-vacancies
TFP	Total Factor Productivity
TOC	Train Operating Companies
UK	United Kingdom
UKCES	UK Commission for Employment and Skills
VAT	Value Added Tax
VQ	Vocational Qualification

List of previous publications

Executive summaries and full versions of all these reports are available from www.ukces.org.uk

Evidence Report 1
Skills for the Workplace: Employer Perspectives

Evidence Report 2
Working Futures 2007-2017

Evidence Report 3
Employee Demand for Skills: A Review of Evidence & Policy

Evidence Report 4
High Performance Working: A Synthesis of Key Literature

Evidence Report 5
High Performance Working: Developing a Survey Tool

Evidence Report 6
Review of Employer Collective Measures: A Conceptual Review from a Public Policy Perspective

Evidence Report 7
Review of Employer Collective Measures: Empirical Review

Evidence Report 8
Review of Employer Collective Measures: Policy Review

Evidence Report 9
Review of Employer Collective Measures: Policy Prioritisation

Evidence Report 10
Review of Employer Collective Measures: Final Report

Evidence Report 11
The Economic Value of Intermediate Vocational Education and Qualifications

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UK Employment and Skills Almanac 2009

Evidence Report 13
National Employer Skills Survey 2009: Key Findings

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Strategic Skills Needs in the Biomedical Sector: A Report for the National Strategic Skills Audit for England, 2010

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Evidence Report 16
Strategic Skills Needs in the Low carbon Energy generation Sector: A Report for the National Strategic Skills Audit for England, 2010

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Horizon Scanning and Scenario Building: Scenarios for Skills 2020

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High Performance Working: A Policy Review

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High Performance Working: Employer Case Studies

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A Theoretical Review of Skill Shortages and Skill Needs

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Creative Media and Entertainment: Sector Skills Assessment 2012

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Information and Communication Technologies: Sector Skills Assessment 2012

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Construction, Building Services Engineering and Planning: Sector Skills Assessment 2012

Evidence Report 66
Real Estate and Facilities Management: Sector Skills Assessment 2012

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