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An Assessment of Skill Needs in Transport



**Department for
Education and Employment**



Skills Dialogue

A comprehensive summary from employers of skills requirements
in the transport sector.

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Contents

Contents	
Foreword	iv
Skills Dialogues: General Introduction	v
Executive Summary	vii
A changing sector	vii
Common strands?	x
Skills implications	xiii
Four key messages	xiv
Industry summaries	xv
1. The Transport Sector	
Sector definition	1
The significance of the transport sector	2
Employment	5
Productivity	7
The Future	7
Changes in markets	8
Changes in technology	11
Government	12
Impact on skills	13
Key questions	13
2. The demand for skills in the sector	14
Employment	14
Part-time work and self-employment	16
Future skill needs	17
Key questions	18
3. The supply of skills to the transport sector	19
Age	20
Gender	22
Ethnicity	22
Qualifications held	23
Unemployment	24
Young new entrants	26
Graduates	26
Training activity	27
Key questions	28
4. Skills shortages and skills gaps	29
Recruitment	30
Earnings	32
Current workforce skill gaps	33
Future skill needs	34
Key questions	35
Appendix 1: Coverage of each NTO defined	36
Appendix 2: Contact details	37
Appendix 3: Bibliography	38
Appendix 4: Additional data	39
Appendix 5: Glossary	44

Foreword

As the representative National Training Organisations (NTOs) for the sector covered by the Transport Skills Dialogue, we welcomed the commitment of the National Skills Task Force to the importance of a sectoral dimension in understanding skills issues.

This Skills Dialogue report brings together the key findings from each of our Skills Foresight programmes existing research, consultations and the outcomes of a seminar convened by DfEE in September 2000 to support the Dialogue process. The process has highlighted the need for useful national data about the transport sector and we look forward to working with DfEE's Skills for Employment Division, the new Learning and Skills Council, Regional Development Agencies and other agencies across the UK to address this.

Transport NTOs are currently preparing their Workforce Development Plans and we look forward to consulting with you over the coming months about our plans. These plans will take forward sector specific-skills and employment issues along with the broad transport sector issues explored in this report. They will provide you with clear guidance both as to sector priorities for workforce development, and on how best to achieve the priorities we have identified, in partnership with the Learning and Skills Council, Regional Development Agencies and other strategic partners across the UK.

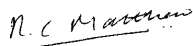
We look forward to working with you to fulfil these hopes.



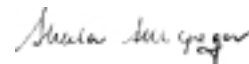
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Skills Dialogues: General Introduction

Background

The second Skills Task Force report* *Delivering Skills for All* found that "insufficient attention is paid to the industry sector dimension of trends in skill needs". The Task Force concluded that "while NTOs [*National Training Organisations*] themselves are doing much good work to enhance the skills information they hold, there is a distinct gap in terms of a mechanism for bringing together information from different sources to provide a coherent assessment for individual industries which could be used by other agencies and to help inform careers guidance".

The Task Force therefore recommended (*Recommendation 8(ix)*) the establishment of a series of "sector dialogues" to supplement discussion of skills needs at individual NTO level. Each dialogue would cover a relatively broad industry grouping, thereby keeping the number small, thus facilitating realistic engagement with national and regional bodies.

The aim of the skills dialogues is to produce high quality reports containing authoritative statements of the skills needs of each sector, updated every two years, which would be useful to local, regional and national policymakers throughout the United Kingdom.

The Transport Dialogue is the third in the series, after engineering and construction. The first round of Skills Dialogues will continue through 2001.

Purpose

The purpose of the dialogues is to improve the quality of skills information available at sector level, and to provide an effective voice for National Training Organisations and employers in their sectors in the planning and implementation of education and training provision, and in informing careers advice and guidance. They will provide policymakers with an effective introduction to each sector in turn and encourage them to follow up with NTOs and others who have more detailed knowledge and understanding which they will be able to make available through sector Foresight reports and Workforce Development Plans.

* All four Skills Task Force reports, and supporting research papers, are available at no charge from DfEE's distributors on (0845) 60 222 60.

Process

Each Skills Dialogue will follow a similar process:

1. Consultations with key organisations, such as NTOs and trade associations, to identify the main skills issues.
2. Collation and analysis of existing research including:
 - each NTO's Skills Foresight Report;
 - the Department for Education and Employment's new, and large scale, Employer Skills Survey 1999 (originally known as ECISD: the extent, causes and implications of skill deficiencies);
 - employment, qualification and skill forecasts sponsored by DfEE.
3. Preparation of a draft Sector Skills Dialogue Report which would support:
 - A Sector Skills Dialogue Seminar attended by employers and other sector representatives;
 - The completion of the final Sector Skills Dialogue Report incorporating the issues raised at the Seminar.

It is important to note that the Skills Dialogues process is a continuing one and no report can ever pretend to be the final word on a subject as fast moving as skills requirements.

Acknowledgements

Much of the data and the analysis in this report comes from material supplied to us by the National Training Organisations, for example from their Skills Foresight reports. We are very grateful to the NTOs, and to everybody else who contributed, for their data and their insights, and for their willing assistance.

Executive Summary

- ◉ We all know about the transport sector. We drive cars, so we know about car servicing and repair. We pass lorries on the motorway. We are passengers on trains and planes, and buses and coaches, (sometimes on ferries too, so we've also experienced ports).
- ◉ Public policy discussion focuses on what capital investment we should commit (the sums involved are always huge), on how to balance investment with concern for our environment, on the price of fuel and the level of taxation attached to it - and, of course, on safety and how to improve it.
- ◉ What we don't hear about is skills. If there is a crisis in the transport sector it is a train crash or a Concorde crash, an anti-motorway protest, another delay in the Channel Tunnel Rail Link, another report setting out the alarming cost of upgrading the London Underground or the west coast main line, or any of a dozen other projects. We don't hear that supermarket deliveries have been cancelled because there are no drivers to drive the trucks, or no port operatives to unload the ships, or baggage handlers to unload the planes. The transport sector does not obviously face a labour shortage as severe as the NHS does, or teaching, or engineering. Is there a problem at all?
- ◉ It is an important question for the sector because an economy-wide analysis such as that included in the Skills Task Force second report might encourage observers to believe that in comparison with other sectors, transport is "not a problem".
- ◉ Participants in the dialogue are clear that the transport sector *does* face pressing skills problems. The report tells of a "shortage of aircraft engineers", "major driver shortages" in the passenger land transport (bus and coach) sector, shortages of vehicle technicians and auto-electricians, of experienced people for marine roles in ports (such as harbourmasters), of technical staff and drivers on the railways, of falling numbers of ex-seafarers and of a "critical shortage of goods vehicle drivers".
- ◉ These anxieties (which originate in the NTOs) are reinforced from a quite different quarter in a report from Heriot-Watt University, which is a partner in the European Union-funded TRILOG Consortium. Their report concluded "There was... widespread concern that the European labour market would not be able to satisfy the demands of the logistics industry up to the year 2005 in terms of employment law, labour flexibility and education/training".

A changing sector

- ◉ Before we consider the question further, let us look below the surface, for the transport sector has been transformed over the last 10 or 15 years.

The bus and rail industries are now in private hands, constrained certainly by Government-appointed regulators, but freed to adopt modern management and people management practices. Ports no longer operate within the National Dock Labour Scheme. British Airways and the airports sector underwent a similar change a little earlier, and showed how sluggish publicly-owned utilities could be transformed into world-class businesses.

These changes impact throughout the organisation, not least on management, which faces a much more complex (and more interesting) task. Management by control, and the (probably) inevitable conflict with trade unions which resulted, is giving way to a much more open, empowering style of management. This is not true everywhere, and only faltering in places, with some firms finding it harder to strike the right balance between private enterprise and public service - but the trend is clear.

Mere passengers have become welcomed customers. Thousands of staff of former public utilities have been on customer care courses - and the difference is evident to every passenger. And it goes well beyond being helpful: behind the smiles is a clear commitment to winning and retaining business in a highly competitive environment. Transport is no longer dominated by operations people - though "shipping the goods" obviously remains the defining core.

Mass marketing of cheap flights by EasyJet, Ryan air and others, has greatly expanded the market for air travel, and with it created exciting business opportunities - including opportunities for cross-industry groupings (Virgin in rail and air, Stagecoach in bus, coach and airports, EasyJet in air and car hire, and so on).

Technological advances mean that distribution and haulage firms can now track their lorries every inch of their journey - and share that information with their customers as part of a seamless integration of the transport stage into a complete logistics package. Business relationships are thereby transformed: a customer becomes a close business partner, not a distant body from whom one collects or to whom one delivers. A modern logistics business is more reminiscent of Mission Control in Houston than the common image of a trucker in a motorway café might suggest.

Technological advances have greatly reduced the need for mechanics simply to "keep the show on the road" - and brought a demand for much greater skill in fault-finding in the workshop, particularly in the electronics which are integral to all modern engines. Yet workshops have also seen a good deal of de-skilling, through changes in organisation and job design. Tasks which once employed an apprentice-trained mechanic can now be done by someone with detailed, but much narrower, knowledge. Think Kwik Fit fitters.

Technological advances also increase the range of options in improving the safety of transport - and operating them deepens the skill requirement. Greater public awareness of safety issues and the possibilities available (everyone knows of Automatic Train Protection after the Paddington crash) increase the pressure on managers in the sector to deliver safety reliably.

- ▶ The transport industries do not operate in isolation, however, changes in the wider economy affect transport too.

For example, there has been a major increase in the proportion of young people staying on at school after GCSEs, and in those attending university. For a sector whose core skills requirement is characteristically at level 2 or 3, that means that many of the most appealing potential recruits may be diverted elsewhere.

The growth of new industries and new occupations presents a continuing challenge to the transport sector to attract and retain talented people. Everyone involved in the dialogue process agreed that much of the transport sector suffers from an image problem, which compounds recruitment difficulties. Many went further and said that much of the image problem is deserved: the industry does include too many firms which offer long hours and low pay. Any improvements which the industry makes to its image need to be seen in the context of changes in the wider economy - the industry is chasing a moving target.

- For all the change, within the sector and beyond, much also remains the same.

The transport industries are essentially about taking things, or people, from A to B safely, profitably and within the agreed time. No amount of technological advance will change this cornerstone of the industry. Participants in the dialogue stressed the importance of being clear about this continuity in the midst of radical change.

Many of those journeys take place at times of day and night which most people regard as unsocial. Long journeys by sea, or air, and some by road and rail, mean nights away from home - and there are fewer people willing to accept that now. These requirements inevitably constrain recruitment.

Safety in transport is prominent in our headlines, but hardly a new concern. Britain's first Government inspectorate was the Railways Inspectorate, set up in the early 1830s: Safety is a fundamental concern for the transport sector and always will be. The public expects that focus (and is less patient with failure now than it was), but it is a business imperative too: unsafe working practices are costly, in lost working time, in lost business, and in increased insurance premiums.

Most of the people who have worked in transport in the past have been men - and transport continues to be dominated by men. When driving a lorry, or emptying the cargo hold of a ship meant lifting the goods yourself, male domination was no surprise. Advances in technology have opened new possibilities for work organisation and job design, but not so obviously changed firms' attitudes to recruiting outside previous patterns or changed the attitudes of potential recruits and those who advise them.

And although the brightest and the best are seizing all these opportunities, the transport sector like others, contains a long tail of firms which are not. Indeed many of them seem to be pulling the other way, cutting corners to win a contract solely on price, for example. Many parts of the sector are passionately competitive and too often that passion cuts across a long-term commitment to investing in the skills of the workforce. That said, some of the solutions which appear to work in larger, more progressive businesses are not easily transplanted into smaller firms. They cannot, for example, offer the career progression which a larger firm can. Perhaps more imagination is called for, and some experimentation, in finding ways of replicating in smaller firms the good practice from the best larger firms?

Common strands?

- ▶ Prompted by this analysis we offered the following eleven 'common strands' to the Dialogue conference in September, set out as a series of 'observations' with linked attempts at drawing out the implications. No one has offered a dissenting view. Even to the extent that the Dialogue provided responses to these questions, we judge that they are still worth reproducing in full because this report is designed to be part of a continuing process and cannot be - and should not pretend to be - the final word. We hope therefore, that they will continue to be valuable as a prompt for reflection, guided by the responses and the facts which are reported here. Here are the observations and the questions:

Observation 1: The three main branches of the armed forces are significant suppliers of recruits to the transport sector.

For example:

- ▶ the Army, for lorry drivers;
- ▶ the RAF, for pilots and engineers;
- ▶ the Royal Navy, for the Merchant Navy (and, to a much lesser extent, for ports).

How much damage has the transport sector suffered as a result of the post-"Peace Dividend" reduction in the armed forces?

Is there scope for the relevant NTOs to work together, and also with the Forces Resettlement authorities, in promoting future careers in the transport sector to ex-regulars? (The promotion of such career "through-ways" might also help the Forces in *their* recruitment).

Observation 2: Most transport careers are two-stage, feeding to, or from, another career.

For example:

- ▶ the Merchant Navy is the major source of marine skills which are either essential or much valued in many shore-based jobs;
- ▶ legal restrictions on driving age, employer preference and insurance costs mean that drivers of lorries, buses, coaches and trains are usually over 25, so must do something else beforehand.

The Merchant Navy, with strong Government (DETR) encouragement, has been developing linked career pathways between sea-based and shore-based employment. Others have taken related action eg RHDTC's Young Drivers Scheme and BPIT's Modern Apprenticeships. Is there more scope to develop such linkages between the stages of a two-stage career path?

Should "second stage" employers be much more actively involved in the first-stage careers of their future employees? For example, a road haulage firm might buy a despatch firm as a nursery for future lorry drivers.

Should employers be more imaginative in targeting young people and building full career paths for them (eg learning the ropes in the warehouse and the transport office before training as a truck driver) - or stop trying, and concentrate on targeting older (25+) people instead?

Observation 3: Most managers in the transport sector can draw on personal experience of relevant operations.

There are pros and cons to this, of course, but does it mean that the operations side of management takes too much prominence and other business development aspects (such as strategy and marketing) too little?

Does it also mean that the potential contribution of those managers who join from outside the sector, whether as graduate trainees, or with some previous experience, is undervalued?

Observation 4: Much of the sector is very structured, with clear hierarchies and clear differentiation between management and workers (influenced, in part, by the licensing and safety environment).

By the standards of the economy as a whole, this approach now makes the sector more traditionally managed than most. Is this the best way to tap and develop the talent of its workforce?

Observation 5: Much of the transport sector was formerly in the public sector (and some still is)

Is there scope for joint training initiatives addressing the cultural legacy (or is it so far in the past now that little legacy remains)?

Additionally, the privatisation and de-regulation of some sectors has led to a decline in training activity. In some sectors this is beginning to show through in skill shortages. Is there more scope for action to address this, and any lessons for the future? (see also 11)

Observation 6: Some parts of the sector are addressing recruitment problems by trying to target non-traditional employees, eg road haulage and passenger land transport, with initiatives targeted on ethnic minorities.

Is there scope for collaborative initiatives? Is it realistic to tap those sectors where ethnic minorities are strongly represented, such as mini-cabs?

How about the gender side of equal opportunities? Many of the sectors are traditionally male-dominated.

Observation 7: Much of the sector suffers from a poor public image even the air industry has lost much of its glamour.

Is there scope for joint work to improve the image?

Observation 8: The transport sector includes some significant geographical clusters - especially round sea and airports, eg Heathrow is also the largest cluster of road haulage firms in Europe.

Is there scope for using this clustering to support joint recruitment initiatives?

Observation 9: Technological change is creating demands for multi-skilling (ie both in technical aspects core to their job, and in related skills such as IT and customer service) and greater differentiation of role, eg creating more Kwik Fit fitters, who are skilled in a more narrowly defined role.

Is the answer more multi-skilling, raising the game of every operative level employee, or does the business opportunity lie at least as much in organisational and job re-design as in traditional responses to skill changes?

Perhaps we should see a delivery driver for a "dot.com" firm as primarily a retail role (with the selling done by someone who happens to drive to meet the customer). The more value the driver adds outside his or her van, the less the role is a "driving" one. Would re-labelling roles help recruitment?

Observation 10: Many jobs are, to a greater or lesser degree, "safety-critical".

Is there scope for joint research, analysis or training?

Observation 11: In order to reduce costs and increase flexibility, most sectors are increasingly relying on sub-contracted labour.

Irish management thinker, Charles Handy has developed the concept of the Shamrock Organisation (eg *The Age of Unreason*, Hutchinson, 1989). In place of a traditional organisation relying overwhelmingly on full-time employees, many companies now organise in three parts.

- ▶ a professional core of highly valued, and often highly paid employees - this is the small group of people whose added value contribution is crucial to a company's success and which sets it apart from its competitors;
- ▶ sub-contractors, who do most of the work (eg maintain the track, drive the lorries, unload the ships);
- ▶ and a flexible workforce of part-time and temporary workers, used by companies to help them to manage the peaks and troughs in demand.

Employers in the sector have less control over the skills workers use and are relying on sub-contractors to provide training. This is less of an issue in the immediate future as ex-employees with a grounding in the industry are re-employed by sub-contractors.

In a world of sub-contracting, who does the long-term succession planning? Who invests in skills for the future? Is there scope for training partnerships between sub-contractors and the purchasers of their work? What would need to happen to bring such partnerships about?

Does too much of the thinking about skills issues concentrate on intermediate level skills (engineers, drivers, etc) and not enough on the scarcer high value-adding skills which really make the competitive difference? (and which no statistics will ever pick up because numbers are tiny).

Who, in the transport sector, belongs to this professional core? How can their contribution be enhanced?

Skills Implications

- ▶ In the short term - *today* - there are many employers in the industry with pressing concerns about recruitment and skills shortages. For many road hauliers, for example, the price of diesel is not their top concern, despite all the noise that particular concern generates: it is driver shortages.
- ▶ At least in the passenger road transport sector the real issue is *staff* shortages, not skill shortages. In other words, there are sufficient people with the right skills, but they choose to work in other industries - which is similar to the problem which the NHS faces with nurses, and puts issues of image (and problematic reality) centre stage.
- ▶ The general approach of this Government, like its predecessor, is that whilst it will offer a subsidy towards the cost of initial training (for example through Modern Apprenticeships), it is for employers to fund the whole cost of training for older employees. In practice this distinction has been boiled down to a question of age, with 25 the outer limit for the subsidised approach. (The extension of New Deal has blurred the distinctions a bit, but it is skill programmes like Modern Apprenticeships which matter more in this context). These distinctions put much of the transport sector at a disadvantage because so many of the initial recruits are over the age of 25. Government-subsidised training through TECs (and their equivalents elsewhere in the UK) has seldom been available to this group.
- ▶ For the longer term, the skills agenda is primarily about opportunity rather than looming crisis. There are volume issues to be addressed - and the road driver issue will get worse if it is not addressed - but the key issues are about improving quality and deepening competence. The best firms within each industry in the transport sector are showing the way - changing their management styles, skilling and continually re-skilling their workforces. They are forging alliances with colleges and universities, and deepening relationships with customers, both business-to-business and business-to-consumer. They are creating long-term career paths and recruitment strategies, rather than sending out sporadic raiding parties into a largely hostile environment.

And yet, we heard few voices in the Dialogue urging greater action on the upskilling front - and none urging greater or more effective Government intervention. That might indicate satisfaction with current policies, or doubt about the extent to which external agencies can truly be useful. It might also indicate an opportunity to raise awareness of what is being done already and to promote the benefits of structured approaches to skills development.

- ▶ And Government, at its best, is working in close partnership. DETR's partnership with the shipping industry, as exemplified in the report *British Shipping* is a striking example of industry and Government reaching a shared understanding of a long-standing issue (the decline of the British merchant fleet) - and crucially, both deciding to do something about it and following through on that commitment.

Four Key Messages

- ▶ **The transport industry is huge and it has a huge appetite for new recruits** - an estimated half a million over the next decade.
- ▶ For all the changes, much of the skill needs of the industry will remain at recognisably the same level: people will still be needed to drive and repair vehicles, unload ships, and so on. **It is therefore very important for the sector that the Government follows through its commitment to ensuring that vocational training receives equal treatment with higher education.**
- ▶ **DfEE needs to change the entry criteria for Modern Apprenticeships.** The current regulations indirectly discriminate against those parts of the sector where initial recruitment is at age 25, or older*.
- ▶ The needs of the transport industry are much the same across the UK - and the **Government should reflect that broad uniformity in taking a national approach when addressing industry issues** (ie rather than passing difficult questions on to the devolved administrations, Regional Development Agencies, local Learning and Skills Councils, and other regional and sub-regional bodies).

* Since this was drafted, Jane Davidson, the Minister for Education and Lifelong Learning for the Welsh Assembly has announced that it will no longer be necessary for apprentices to complete Modern Apprenticeships before their 25th birthday. She also announced the piloting of a new Modern Skills Diploma targeted at adults over the age of 25 and building on Modern Apprenticeships.

Industry Summary: Aviation

Facts

- ▶ Comprises aircraft operators, licensed airports and aircraft and component maintenance organisations.
- ▶ The industry accounts for just over 1,000 companies.
- ▶ Employs around 180,000 full-time equivalent people, of whom:
 - around 25% are in professional or associate professional occupations such as aircraft officers and air traffic controllers;
 - around 25% are from personal service occupations such as travel attendants.
- ▶ 93% of employees are full-time and 65% of these are men.

Trends

Markets

- ▶ Air traffic is expected to grow by 6% over the next 10 years. There is concern that the growth in aircraft numbers will result in more accidents. Given the high reliability of aircraft and their systems, the industry is tackling the “Human Factor” elements of airworthiness and air safety initial programmes and re-training programmes for all safety critical staff.
- ▶ The provision of operational and maintenance facilities remains the core airport operations activity, but business activity is moving towards “real estate” management with the emphasis on franchised retail.
- ▶ The demand for pilots and air cabin crew varies depending on international economic and political activity. The demand for other occupations is less variable, although “direct” customer service jobs can be seasonal.

Technology

- ▶ Commercial airliners are expected to have an operational life of 30-40 years, but older aircraft tend to be labour intensive to maintain, whilst new aircraft require little maintenance particularly in their early life.
- ▶ Most administrative roles are heavily dependent on IT. Many jobs such as flight planning and crew briefing, aircraft scheduling and fare structuring are completely automated. Whilst technical aviation expertise will always be required, the majority of administrative functions are now systems management and some occupations are now “over-skilled”.

Issues

- ▶ There is a shortage of aircraft maintenance engineers. Traditionally, the industry has relied on the armed services and apprenticeships to provide employees. The former has been minimised as a result of restructuring, whilst apprenticeships have given way to FE based training programmes.
- ▶ International regulation of the industry results in pilots, air traffic controllers and licensed aircraft maintenance engineers being regarded as “industry specific”. Most other occupations are “generic” or “contextualised” versions of similar occupations in other industries.
- ▶ The industry has matured and lost much of its glamour, though there continues to be interest by young people in flying careers. Aircraft maintenance along with other engineering jobs, has difficulty competing with better paid careers.

Industry Summary: Merchant Navy

Facts

- ▶ Comprises British-based shipping companies which own or operate ships under British and/or foreign flags, or provide ship management services for British or foreign companies.
- ▶ The industry accounts for under 600 companies in the UK.
- ▶ Employs around 32,000 people, of whom:
 - 24,000 are seafarers (officers and ratings);
 - 8,000 are shore-based staff involved in ship management functions.

Trends

Markets

- ▶ British shipping is the country's fifth largest service-sector earner and seaborne trade is forecast to almost double over the next 15 years.
- ▶ British shipping companies have competed effectively in commercial terms over the last 20 years, but there has been a decline in the number of British owned ships and British officers and ratings employed.
- ▶ Seafaring skills and experience are in demand in many other essential shore-based industries and services across the country, including ports, shipbuilding and marine equipment, surveyors, offshore exploration installations and maritime training colleges. A recent study (1996) concluded that there are 12,000 jobs in these businesses for which about ten years sea-going experience is a pre-requisite.

Technology

- ▶ The British shipping industry is efficient, and modern ships improve productivity by making maximum use of new technology. This has resulted in computer-controlled engine rooms along with high-tech radar and navigation systems.
- ▶ Support functions within the shore-based sub-sector are also requiring ICT skills which are currently in short supply.

Issues

- ▶ The fall in the number of ex-seafarers is having a significant impact on shore-based employment as many of these jobs rely on the recruitment of people with maritime skills. It is anticipated there will be a shortfall of 275 per year by 2004/5 for ex-seafarers to be employed in the shore-based sub-sector.
- ▶ The Government has a new strategy for reviving the shipping industry which includes policy measures designed to develop the UK's maritime skills and secure British seafaring employment. This includes a tonnage tax which allows for taxation to be based on the size of fleet rather than profits. In return there is an obligation to train one new officer cadet every year for every 15 seagoing officers employed.
- ▶ The merchant navy is seeking to bring new and different people into the industry, through new graduate and postgraduate training opportunities, as well as providing career routes through traineeship and apprenticeship programmes.
- ▶ The industry's apparent lack of visibility with the public has affected its image in terms of recruitment.

Industry Summary: Motor Industry

Facts

- ◉ Comprises sale, maintenance and repair of motor vehicles and parts, roadside recovery, vehicle rental and sale of fuel.
- ◉ The industry accounts for just under 70,000 companies.
- ◉ Employs over 566,000 people, of whom:
 - 230,000 are motor mechanics;
 - 75,000 are sales occupations;
 - 61,000 are garage managers and proprietors.

Trends

Markets

- ◉ Increasing international competition will lead to improved marketing and sales skills.
- ◉ Increasing cost pressure from insurance customers are forcing body repairers to keep costs low through increased efficiency.

Technology

- ◉ New technology and design is leading to more sophisticated vehicles, and as a result:
 - vehicle mechanics will need to have more electrical and electronic fault finding skills;
 - mechanics' roles will move from repair to replacing faulty components, and increasingly this will lead to two-tier technicians (fault-finding specialists and mechanics to undertake the repair);
 - small garages will find it difficult to keep up with technology and compete with franchise dealers.
- ◉ IT systems will be implemented throughout the industry and will include computerised estimating of body repairs.
- ◉ New materials will lead to a requirement for new painting techniques.

Issues

- ◉ Poor image, wages and increasing post-16 education staying on rates is leading to a lack of good quality young people entering the industry.
- ◉ The sector is finding it difficult to encourage graduates into management positions.
- ◉ Some training providers are finding it difficult to meet local demand for short course training relating to new technological developments as the cost of the equipment does not make the course viable.
- ◉ There are skill shortages in vehicle technicians, auto-electricians, vehicle body repair and vehicle finishing occupations, partly as a result of low levels of training and a lack of new entrants to the sector.

Industry Summary: Passenger Land Transport

Facts

- ▶ Comprises the bus and coach, taxi and private hire sectors.
- ▶ 7,000 registered bus and coach operators, of which 5,000 operate five vehicles or fewer.
- ▶ Employs over 345,000 people, of whom:
 - 132,000 are taxi and private hire drivers;
 - 122,600 are bus and coach drivers;
 - 11,800 are vehicle maintenance engineers.
- ▶ 12.4% of employees are from ethnic minorities.

Trends

Markets

- ▶ Increasing congestion and public policy focus on an integrated transport strategy is likely to lead to growth in the sector.
 - Passenger vehicle mileage is expected to increase by 33% between 1996 and 2031, leading to a 22% increase in the number of platform staff;
 - Taxi and private hire sector employment has increased by 25% over the last 10 years and is expected to continue to do so in the next decade.
- ▶ Increasing competition is likely to lead to greater focus on meeting the needs of the customer and better and more efficient management.

Technology

- ▶ A whole host of new technology is being introduced which will affect the skills needed, including:
 - Intelligent transport systems providing more information to customers, drivers and managers;
 - Passenger protection systems allowing drivers to pay more attention to safety;
 - Electronic payment systems providing more information on customers and speed up boarding.
- ▶ Vehicle construction, introducing low floor buses and more electronics, will change the skills needed of drivers and vehicle mechanics.

Issues

- ▶ Recruitment in the sector is linked to the economic cycle, with many employees switching to the construction sector in positive economic climates. As a result a major driver shortage exists for both buses and coaches in many parts of the country.
- ▶ There is a lack of technically competent individuals to manage and maintain vehicles and information systems. New technology will increase the demand for such personnel.
- ▶ The skills required of maintenance engineers will change, but it is unlikely there will be a wholesale switch to electronic maintenance due to the cost. More likely is the requirement to change whole sealed systems.
- ▶ The introduction of new technology may require new driving techniques.
- ▶ There is still a public sector legacy amongst the culture of some management.

Industry Summary: Ports

Facts

- ▶ Comprises ports, harbours, private terminals and stevedoring companies.
- ▶ The industry accounts for over 400 companies in the UK.
- ▶ It employs around 25,500 people, of whom:
 - 49% are operatives;
 - 13% are craft or skilled manual workers;
 - 13% are in clerical occupations.
- ▶ 90% are male.

Trends

Markets

- ▶ The abolition of the National Dock Labour Scheme in 1989 has left ports free to develop without the imposition of a regulated quota of dockworkers. The industry is very competitive and customers can demand the conditions under which their cargo will be handled. As a result flexibility and efficiency is vital.
- ▶ Increasingly the customer is demanding zero damage. Those ports which can guarantee zero damage are emerging as the market leaders.

Technology

- ▶ Containerisation and unitisation had a big impact on the industry in the 1970s and 1980s. Cargo which was once carried loose in ships' holds is now stored securely in a trailer or container, necessitating a single crane lift instead of a gang of men working the best part of a day.
- ▶ Computers are becoming increasingly significant in cargo operations as ports seek to reduce the time to load and unload ships. Some container terminals now operate entirely without labour and in many other ports hand-held computers record cargo quantity and quality, with direct links to a mainframe computer, which generates cargo manifests, damage reports and shipping notes.
- ▶ New IT skills are needed by employees across the industry.

Issues

- ▶ Staff turnover is very low and employers have little difficulty recruiting, except in areas of high employment where there is competition for clerical staff with other sectors.
- ▶ The industry is undecided about the use of contract labour to meet its needs. Whilst they provide flexibility, there is a danger that contract labour will not have the required skills and experience, particularly when former registered dockworkers retire.
- ▶ The only area in which skill shortages are anticipated is in the marine field. Ports employ ex-merchant naval officers as pilots or harbour masters, and with the decline in the British flagged fleet in recent years, the number of suitably qualified personnel is in decline.
- ▶ Ports are perceived as attractive places in which to work. However, where employment opportunities exist, employers prefer to recruit people in their twenties with previous work experience rather than school leavers.

Industry Summary: Rail

Facts

- ▶ Comprises passenger and freight rail operations and infrastructure maintenance.
- ▶ Approximately 30 companies are responsible for the operation of the railway network and around 1,000 other organisations are active to some extent.
- ▶ Employs approximately 130,000 people.

Trends

Markets

- ▶ It is forecast there will be a 60% rise in passenger traffic over the next decade. This will increase employment in customer service and construction occupations.
- ▶ The sector is increasingly competitive, with the re-tendering of infrastructure maintenance contracts and passenger service franchises likely to lead to an increase in mergers and acquisitions. This is coupled with:
 - over capacity which has led to sharp falls in the number of manufacturing jobs in traditional railway centres;
 - companies increasingly operating across the transport sector, which may have some impact on the skills and knowledge required of managers.
- ▶ Re-organisation is changing the sector towards a multi-skilled workforce with a significant amount of sub-contracted work in infrastructure renewal and support services such as cleaning.

Technology

- ▶ A whole host of new technology is being introduced which will affect the skills needed including:
 - high speed train development and automatic train protection which may affect the skills of drivers;
 - the maintenance and operation of new signal systems, although the breadth of technology used on the network will mean this will broaden the skills needed, not replace them;
 - increasing use of standardised components in changing the skill needs of maintenance engineers from repairing to replacing.
 - customer communications systems, smart card ticketing and internet information and booking systems increasing the need for IT management.

Issues

- ▶ Important gaps exist in management skills for both managers and supervisors, partly as a result of moving from public to private sector. Greater involvement in contract management is increasing the demand on their commercial skills.
- ▶ Customer service and IT are identified as skills gaps for all levels of staff. There is also a need to upgrade the skills of semi-skilled workers.
- ▶ There are shortages of technical staff and train drivers, and difficulties in recruiting engineers and managers.
- ▶ The negative image of the industry is making it difficult to attract graduate engineers, highly skilled technicians and young people.
- ▶ The industry needs to catch up with the drop in skills and management training undertaken following privatisation.

Industry Summary: Road Haulage and Distribution

Facts

- ▶ Comprises road haulage by general freight companies and nationally recognised industrial and retail companies, the removal and storage of goods from commercial and domestic premises and parcels and courier services.
- ▶ The industry accounts for over 60,000 companies.
- ▶ Employs over 600,000 people, of whom:
 - 480,000 are drivers;
 - 100,000 are warehouse operatives.
- ▶ 70,000 are transport managers.

Trends

Markets

- ▶ Increasing competition will lead to more mergers and take-overs leading to fewer but larger companies. The numbers employed in the sector as a whole is unlikely to change, but the balance between sub-sectors may.
- ▶ Increased partnerships with customers are resulting in hauliers being asked to take on roles such as taking orders, dealing with customer service and monitoring stock levels. As a result an understanding of the customer and their business becomes as important as an understanding of the haulage business.
- ▶ Hauliers are identifying added value services for customers - delivering goods direct to the retail floor or offering "return and clean" services for food trays.

Technology

- ▶ In-cab technology is allowing vehicle performance and movements to be monitored, both as an aid to:
 - managers who will be able to check progress, but will need technical knowledge to operate the equipment and to interpret the increasing volume and detail of information provided;
 - drivers to help understand their driving performance. They will need to be able to use vehicles that are more technically advanced, and contain more computerised equipment.
- ▶ E-commerce will have a significant impact in the sector and there are increasing demands for customer care skills for drivers.

Issues

- ▶ The industry faces a critical shortage of goods vehicle drivers and this will be exacerbated by increased demand and by further regulation of driver hours.
- ▶ Recruitment is difficult in areas of the country where unemployment is low.
- ▶ In all occupations operating ICT tools and using the information they provide will become part of the skill requirement. This will highlight a low level of basic skills competence among the existing workforce.
- ▶ The increasing sophistication of transport and logistics management requires higher levels of skill than in the past. The majority of the industry has little experience of training at this level or in recruiting and retaining graduates.
- ▶ The sector has a poor image with the public and potential employees.

1. The Transport Sector

Key points

- ▶ We have defined the transport sector as being covered by seven National Training Organisations: aviation, passenger land transport (Transfed), Merchant Navy, motor vehicle sales and repair, rail, road haulage and distribution and ports.
- ▶ The transport sector is **the sixth largest sector of the UK economy**, accounting for 5.8% of UK output and a similar proportion of employment.
- ▶ Growth in the sector is expected to be below the UK average.
- ▶ Productivity in the sector is expected to increase as output growth outstrips employment.
- ▶ The sector is spread throughout the UK, broadly reflecting concentrations of population, but with a particularly strong concentration in and around London.

Introduction

- 1.1 This report is about skills - this introductory chapter sets the rest of the report in context. It explains how the transport sector is defined for the purposes of the Skills Dialogue, sets out the importance of the sector to the UK economy and outlines key influences on the sector.

Sector definition

- 1.2 For the purposes of the Transport Sector Skills Dialogue the transport sector is taken to be that portion of the economy covered by the seven National Training Organisations* (NTOs) which are members of the Transport NTOs Forum.

* Aviation Training Association is not recognised as an NTO, but we use this shorthand to include it.

Table 1.1: Transport sector NTOs

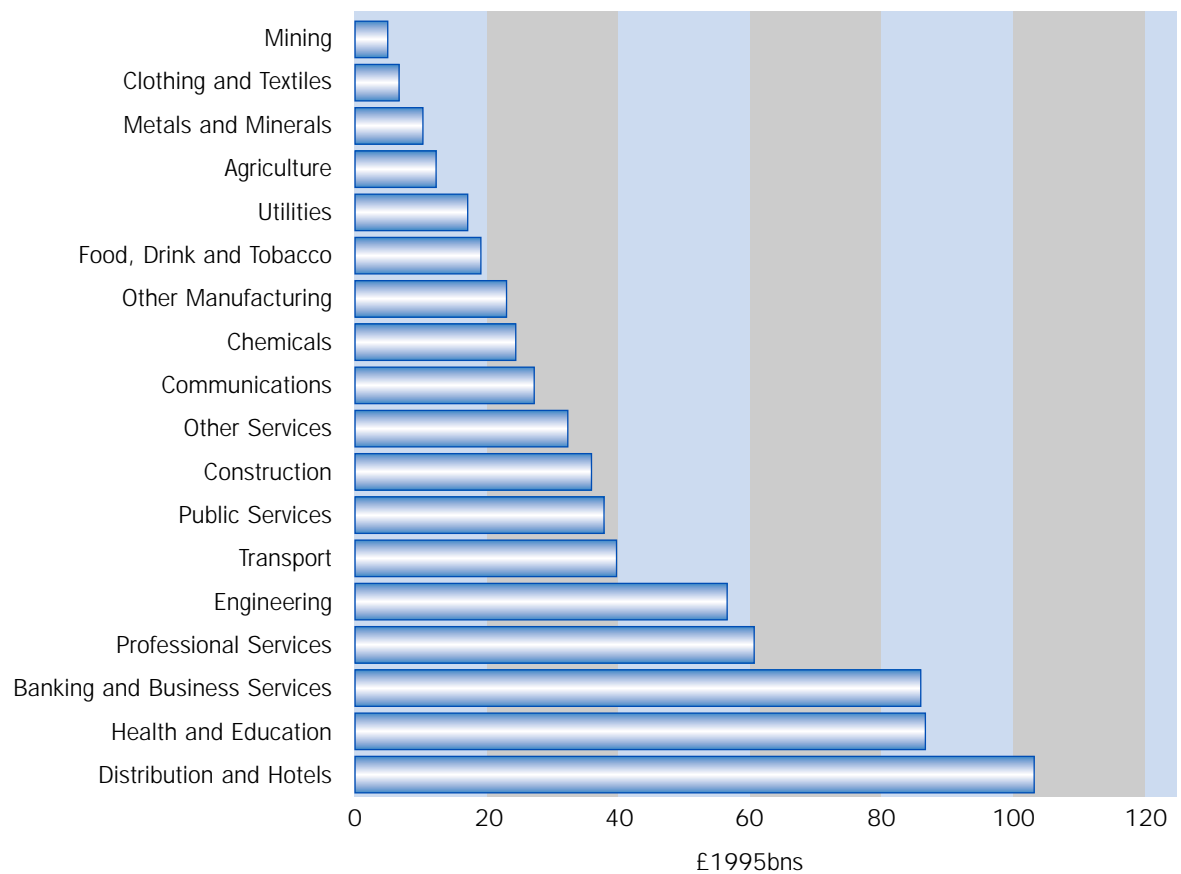
NTO	Coverage
Aviation Training Association (ATA)	Aircraft operators, licensed airports and aircraft and component maintenance organisations
British Ports Industry Training (BPIT)	Ports, harbours, private terminals, stevedoring companies and pilotage organisations
Merchant Navy Training Board (MNTB)	British-based shipping companies which own or operate ships under British and/or foreign flags or provide ship management services for British or foreign companies
Motor Industry Training Council (MITC)	Sale, maintenance and repair of motor vehicles and parts, roadside recovery, vehicle rental and sale of fuel
Rail Industry Training Council (RITC)	Passenger, freight operations and infrastructure maintenance
Road Haulage and Distribution Training Council (RHDTTC)	Road haulage by general freight companies and nationally recognised industrial and retail companies, removal and storage of goods from commercial and domestic premises and parcels and courier services
TRANSFED	Passenger land transport (ie bus and coach, taxi and private hire)

The scope of each NTO is set out in technical detail in appendix 1

- 1.3 We have sought to avoid over-burdening the report with technical detail because the intention of the dialogues is to review each sector as a whole. Readers who seek more detail on individual industries within the sector will find further contacts, and a bibliography, in the appendices. It is worth recording here that the available data does not always enable us to probe issues as thoroughly as we would like, and there are certainly gaps in the available information, which specialists understand well and are seeking to close. Nonetheless, the main points of the analysis are clear, and unaffected by statistical caveat.

The significance of the transport sector

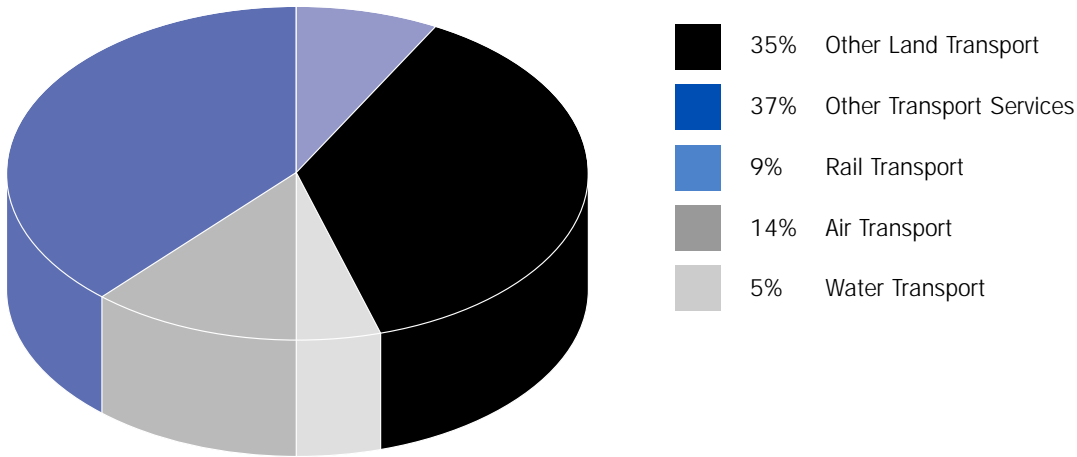
- 1.4 Cambridge Econometrics and the Institute for Employment Research at Warwick University (IER) estimate that in the year 2000 GDP in the transport sector will account for £39.5 billion (at 1995 prices) or 5.8% of all UK output.

Figure 1.1: UK Gross Output by sector (forecast for 2000)

Source: Cambridge Econometrics/IER (July 1999)

- 1.5 Figure 1.1 shows that transport is therefore the sixth largest of the 18 sectors used to disaggregate the UK economy. Distribution, health and education and banking and business services, professional services and engineering are the only larger sectors in output terms.
- 1.6 Figure 1.2 shows the relative contribution of industries within the transport sector. Passenger transport and road freight (35%), along with other transport services (37%), make the greatest contribution to the sector's output (*terms are defined in appendix 5*).

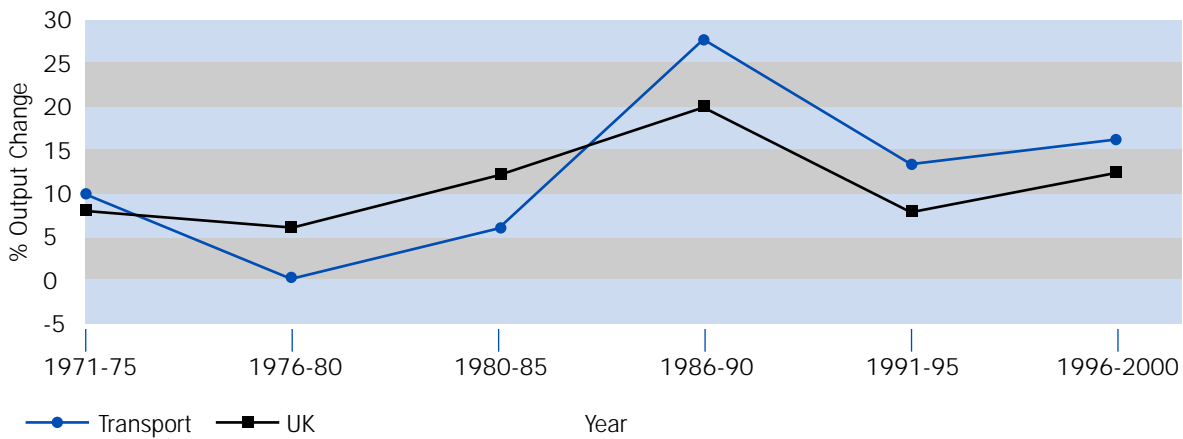
Figure 1.2: Distribution of transport sector gross output (2000)



Source: Cambridge Econometrics/IER (July 1999)

1.7 Since 1985 the transport sector has become increasingly important as sector growth has outstripped that of the economy as a whole (see figure 1.3). Air transport and other land transport, including road haulage, have experienced greatest growth.

Figure 1.3: Gross output growth rates 1971-2000



Source: Cambridge Econometrics/IER (July 1999)

Employment

1.8 There are around 1.7m people employed in the transport sector according to the seven NTOs.

Table 1.2: Employment in the Transport Sector

NTO	Employment Estimate
Aviation	101,000
Merchant Navy	35,000
Motor Industry	566,000
Ports	25,500
Rail	130,000
Road Haulage and Distribution	600,000
Transfed (bus and coach)	270,000
Total	1,727,500

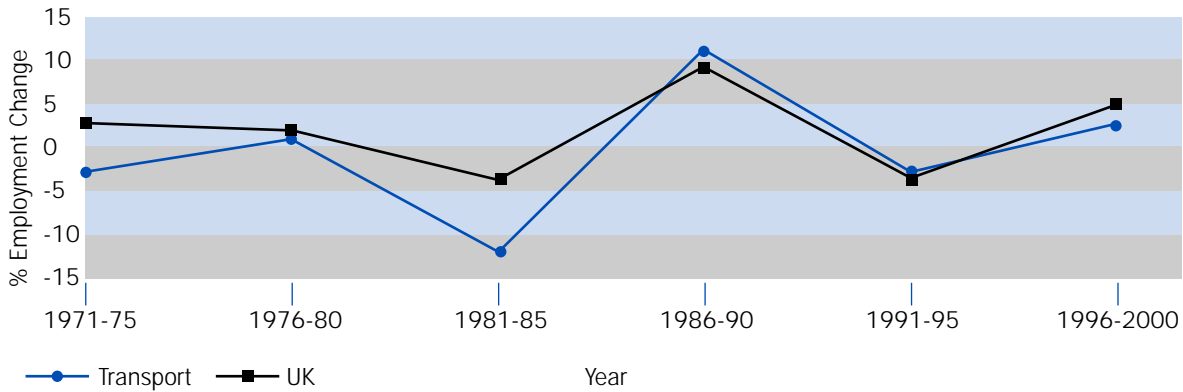
Source: NTOs' Skills Foresight reports, or equivalent

1.9 Cambridge Econometrics' estimate, by contrast, is that there are 1.1 million people employed in the transport sector (4% of all UK employment). The difference between this estimate and the one in Table 1.2 is primarily caused by the omission of the retail motor sector from the Cambridge Econometrics figures: as this accounts for over half a million of the NTOs' total, the two estimates are broadly comparable and we may take 1.7m as a useful guide.

- ▶ However, other sources suggest that on a broad definition the numbers employed may be substantially greater. For example, DETR estimates that there are some **two million vans** in the UK (from which one can reasonably infer the existence of two million van drivers), with the likelihood that this number will grow rapidly with the spread of e-commerce. Not everyone who uses the skill of driving as part of their job is usefully classified as a "driver", however. A telephone engineer, for example, drives a van to get to the next job, but is more obviously part of the telecommunications industry than the transport industry).
- ▶ There is no commonly agreed definition of the size of the transport industry in employment terms and further work would be required to achieve such agreement.

1.10 Employment levels in the sector have broadly changed in line with the UK as a whole over the last ten years, but transport is now a lower proportion of employment than it was in 1971.

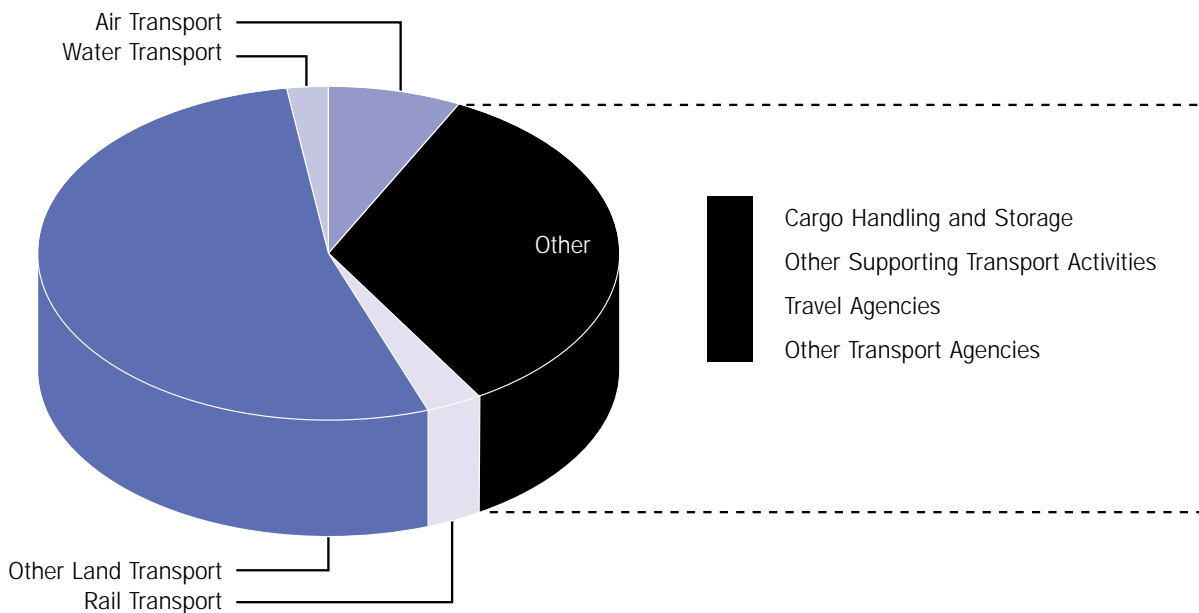
Figure 1.4: Change in employment 1971-2000



Source: Cambridge Econometrics/IER (July 1999)

1.11 As with the contribution to gross output the greatest numbers in the transport sector are employed in the passenger transport and road freight industries (54%), whilst one third are employed in 'other transport services' (which includes cargo handling and storage, and transport agencies). The Labour Force Survey allows us to break down further employment in the latter sub-sector. As illustrated in figure 1.5, employment is split equally (approx) between the four sub-sectors.

Figure 1.5: Transport sector employment

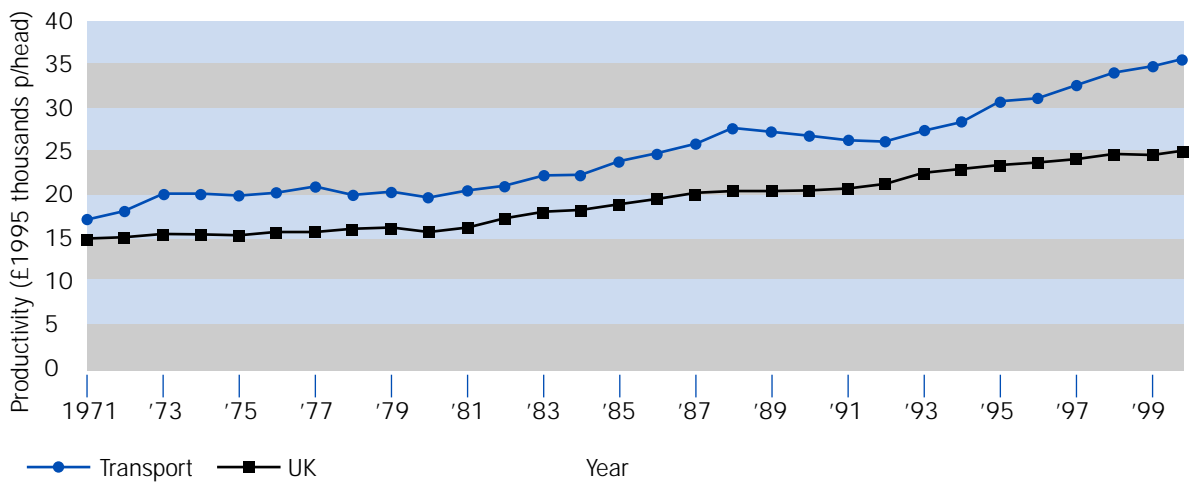


Source: Cambridge Econometrics (July 1999)/Labour Force Survey (Spring 2000)

Productivity

1.12 As illustrated in the previous two sections, over the last 20 years the transport sector has been characterised by significant growth in output coupled with a slight fall in overall employment levels. By implication this is a result of rising productivity in the sector, and as figure 1.6 illustrates this has been significantly greater than the UK average.

Figure 1.6: Output per head 1971 to 2000 (at 1995 prices)

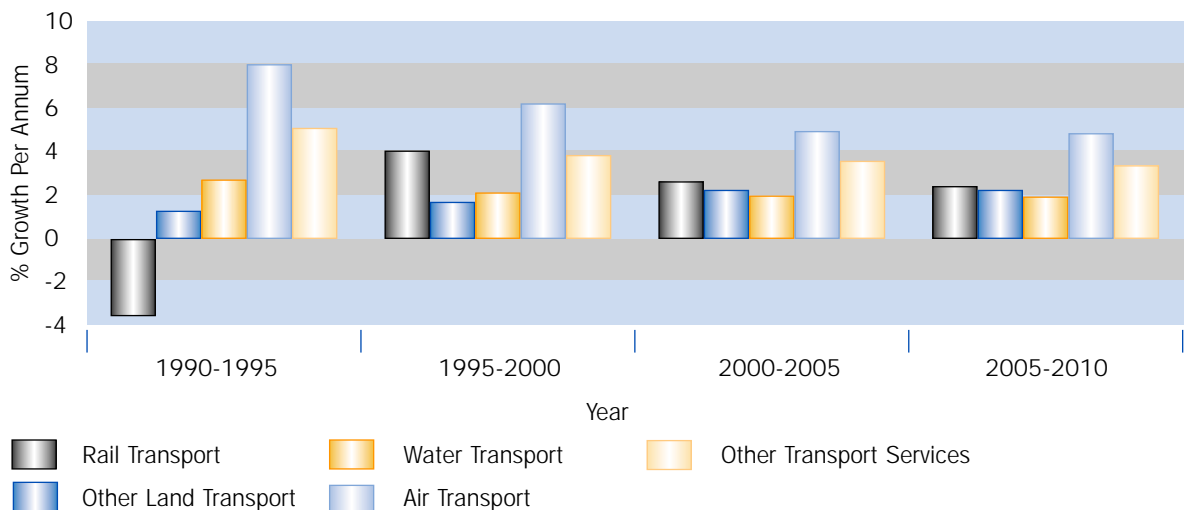


Source: Cambridge Econometrics/IER (July 1999)

The Future

1.13 The forecast for the period up to 2010 produced by Cambridge Econometrics and IER indicates that **growth is expected to slow down** in the transport sector. Both output and employment will still grow, but at a slower rate than the UK average.

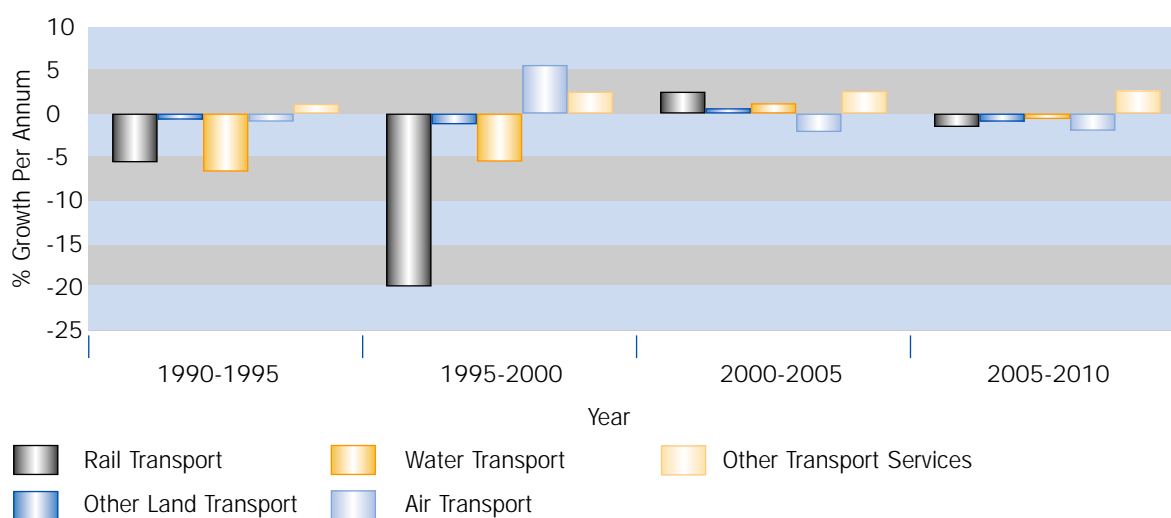
Figure 1.7: Transport sector gross output growth per annum 1990-2010



Source: Cambridge Econometrics (July 1999)

- 1.14 Figure 1.7 shows continuing growth over the next ten years throughout the transport sector, with the strongest growth expected in air transport. With the exception of passenger and freight transport (“other land transport” in the chart), growth will be slower than in the previous decade.
- 1.15 The forecasts indicate that this growth will be accompanied by small rises in productivity in all transport industries, except air transport where it is expected to rise by between 5 and 6% per annum. As figure 1.8 illustrates, overall employment is expected to increase slightly over the next ten years, with the exception of air transport, where higher productivity will result in falls of around 2% per annum, and “other transport services” which will see a growth of over 2% per annum.
- 1.16 Data on employment in the transport sector as a whole below UK level (eg regional distribution) is not readily available except when unhelpfully presented in conjunction with the communications sector. This includes telecommunications, so it introduces various possible distortions. We present the data available in Appendix 4.

Figure 1.8: Transport sector employment change per annum 1990-2010



Source: Cambridge Econometrics (July 1999)

- 1.17 In order to understand the likely impact of these trends on skill needs in the sector it is necessary to understand which key changes are driving the sector and how it is likely to respond. We discuss those changes in terms of markets, technology and legislation.

Changes in markets

- 1.18 The prosperity of the transport sector is linked very closely to the UK’s economic prosperity: the more goods which are produced, the greater the demand for transport to move those goods. The sector’s prosperity therefore reflects, to some extent, that of the wider economy - though the link is clearest with the transport of goods. Changes in the volume and mode of passenger transport are less directly linked to changes in the wider economy, and include transfers to and from private car transport.

1.19 The transport sector - particularly goods transport - has also increasingly felt the impact of external competition. The Employer Skills Survey (1999) identified that over one fifth of companies in the transport sector felt they faced serious competition from low cost foreign imports. Table 1.3 illustrates that output in two of the sub-sectors is very closely related with international trade. Two thirds of output in the water transport industry (the figures include inland waterways as well as sea-borne transport, but the latter far outweighs the former) and 40% of output in the air transport sector is exported. Import penetration of domestic demand is also high in these sectors.

Table 1.3: International trade in the transport sector

Sub-sector	% of sector output exported	% of domestic demand penetrated by imports
Water Transport	66.7	48.6
Air Transport	39.5	35.2
Other Transport Services	5.8	9.4
Other Land Transport	4.2	3.7
Rail Transport	1.2	2.4
UK Average	16.3	17.9

Source: *Employer Skills Survey (1999)*

1.20 The deregulation of markets and lowering of trade barriers both in Europe and worldwide is increasing competition not only for transport sector companies, but also their customers. Even in sectors where there is a relatively low proportion of output exported there is international competition for customers, for example from continental road hauliers or continental ports. This is putting pressure on the sector to reduce costs and to provide a more value added service. The Employer Skills Survey (1999) found that two thirds of companies in the transport sector are planning to improve the quality of existing products or services or to develop new value added services, and 75% of the remainder are planning to increase efficiency.

1.21 The sector is responding to market changes in a number of ways.

- ▶ The consolidation of businesses through mergers and acquisitions, to reduce over-capacity in the market or to increase economies of scale. Large specialist car body repair shops have emerged in order to respond to the increasing requirements of insurance companies to keep costs low. In the bus sector the fragmentation which followed de-regulation has now given way to a new pattern of consolidation as large companies such as Stagecoach and National Express take over smaller operators, and expand beyond buses into railways and airport management. (This creates new challenges for managers in judging strategic opportunities.)

National Express is selling its airports. National Express has put its East Midlands and Bournemouth airports up for sale. A sector analyst quoted in *The Sunday Times* (3.9.2000) said: "National Express is showing the rest of the transport sector the way ahead... airports do not really figure in the modern transport combine".

- ▶ Contracting out core labour in order to reduce fixed costs, and increase flexibility. The abolition of the National Dock Labour Scheme in 1989 resulted in the creation of specialist stevedoring (cargo handling) firms. The maintenance of the rail network is now typically contracted out.
- ▶ More customers are seeking to source the whole logistics package in one contract.
- ▶ More just-in-time working, for example, ensuring that the lorry arrives at the port just in time to drive under the crane - which helps keep time in port, and storage charges, to a minimum.
- ▶ Increased emphasis on customer care in order to keep customers and gain new ones. For example, historically, purchasers of buses have concentrated on the technical aspects of the vehicle, but now the focus is increasingly on how the vehicle improves the service offered to customers. In the rail sector passengers are now "customers" and there are prominent customer service desks at main stations. In the road haulage and distribution industry, an increased customer focus means installation of sophisticated tracking equipment - suppliers and customers share the live data which results. At the lighter end of the road haulage industry, the e-commerce revolution is creating new opportunities for van drivers, who will commonly be the only person an on-line customer speaks to in the entire course of their transaction.
- ▶ More efficient use of employees requires them to be more flexible and multi-skilled. Port workers need cargo handling and IT skills. Drivers take on more tasks outside their cabs, in loading and unloading, or installing new equipment.
- ▶ Expansion into new markets - indeed, creation of new markets. New low price and low cost airlines such as Easyjet and Ryanair have driven the growth of a new market for cheap flights within Europe.
- ▶ Building closer relationships with customers in order to understand and meet their needs more effectively. Major distribution companies are working increasingly closely with customers as part of a tightly managed logistics operation.

1.22 New style employment opportunities also affect the relative appeal to potential recruits of a "traditional" sector such as transport. Much of the sector has a poor image, with connotations of heavy, dirty work, poor working conditions (including nights away from home), low pay and minimal investment in employees' development. The picture varies enormously of course, and the sector boasts some firms which are as enlightened as any in British industry in their employment practices. Most observers concede, however, that much of the poor image is deserved and that most of the scope for action lies with employers themselves.

- 1.23 In the Merchant Navy, a British rating is now a rarity. It is common to hear tales of lorry drivers changing employer for a few pence an hour more in their pay packet. Coach firms unable to crew long-distance European tours any other way are recruiting young Australians and New Zealanders whilst they are over here to see Europe.

Image?

- ▶ “When [Virgin Trains] advertised for 100 new drivers earlier this year, it was overwhelmed with the number of applications it received”.
Source: *People Management*, 8.6.2000.
- ▶ The Eddie Stobart Supporters Club boasts over 20,000 members.

Changes in technology

- 1.24 New technology affects every aspect of the transport sector. Its main impact is to increase the efficiency of operation or improve the service offered to customers, typically through the provision of better information. For example:
- ▶ providing drivers of vehicles, their controllers and their customers, with information on fuel efficiency, journey details, and safety issues;
 - ▶ providing better information to customers, such as through on-line timetables and booking, and the tracking of goods whilst in transit.
- 1.25 Technology can also impact on physical operations:
- ▶ radically reducing the servicing required on vehicles - reducing the demand for servicing skills and reducing the skill level required, but also putting a greater premium on higher-level fault-finding skills;
 - ▶ automating key activities, enabling employees such as drivers to spend more time on safety or customer care;
 - ▶ requiring new work organisation, for example the shift to greater electronics in vehicles is resulting in employers requiring fitters at two levels: specialists to identify faults, and less skilled individuals to do relatively simple component replacement.
- 1.26 The full impact of e-commerce is unclear. It is already changing the way that customers buy goods and services, both in business-to-business and business-to-consumer sectors, placing much more information in the hands of buyers and thereby shifting the nature of the buyer-seller relationship. At one end of the spectrum, the transport sector is a direct beneficiary of increased home shopping, which is increasing in volume, certainly resulting in a greatly increased market for couriers and local deliveries - perhaps also changing the nature of the skill mix of a typical delivery driver. The key attribute of a driver working as the delivery arm of a dot.com company may well not be driving at all, but customer relationship skills, or skills related to product installation.

Government

- 1.27 The transport sector has historically relied on Government for core investment in infrastructure, and even with more privately financed projects in recent years the Government has retained control of policy. The sector is also heavily constrained by Government on health and safety grounds, and consequently through a range of regulatory controls (many of which originate in Brussels, not Westminster). The future skill needs of the sector are therefore heavily influenced by Government activity. The forecasts quoted above, for example, do not take into account the Government's July 2000 ten year transport strategy which is intended to improve the demand for public transport. A major shift towards public transport will at least increase the volume demand for employees, though the increase will not be in direct proportion (a full train requires just one driver, just like a half-full train). It is less clear that the strategy will change the nature of the skills required - except at senior management level, where the demands for strategic and business management skills will continue to grow.
- 1.28 There are six major legislative impacts on the sector.
- ▶ De-regulation and privatisation have provoked many changes in industry and company structures, and in the sector's culture.
 - ▶ The requirement to hold licences for many of the occupations in the sector, from airline pilots to safety engineers. The public benefit of licensing is clear, but the process inevitably adds to employers' costs, restricts workforce flexibility, and constrains recruitment (typically because most licences have minimum age requirements).
 - ▶ There are a wide range of regulatory organisations within the transport sector such as local authorities (whose requirements differ) for taxis, the Strategic Rail Authority for rail franchises, and the Civil Aviation Authority for airlines. Businesses in the sector must therefore keep up with the legislative and licensing framework within which they work and develop the skills to work effectively with public organisations. And in most cases, they must also balance that public good focus with the private good of increasing profitability. To strike that balance requires a skilled response from managers in the sector.
 - ▶ The likely imposition of the Working Time Directive (of the European Commission) is expected by the industry to have a significant impact on the road haulage and distribution sector (because limits on drivers' hours - if tightly defined - will almost certainly mean that employers will require more drivers, thereby raising costs). Exactly what impact the directive might have is not yet certain.
 - ▶ Environmental policy and legislation, and increased consumer interest in environmental issues, affect different parts of the sector in different ways. The fuel duty escalator and road pricing, for example, add to costs for the road haulage and distribution sector, whilst traffic restrictions and new measures to increase public transport services will increase demand for these services.
 - ▶ The Integrated Transport Strategy and the ten year transport plan will increase investment in transport infrastructure, seek to increase the demand for public transport and may affect the proportion of journeys taken by different modes.

Impact on skills

- 1.29 Almost all of these drivers of change will impact on the skills needed by employees in some form, for example:
- ▶ increasing the need for better management skills in response to a more demanding environment and an increasingly sophisticated role;
 - ▶ increasing the need for customer care skills for all employees;
 - ▶ increased use of IT skills, enabling managers to make the best use of emerging technologies and enabling employees to do their work more efficiently or safely.
- 1.30 In the following chapters we seek to explore these issues in more detail by examining the demand for skills and their likely available supply.

Key Questions

- ▶ How far is the poor image of the transport sector deserved? Is transport falling behind more glamorous sectors in image terms? Does it matter? What can be done?
- ▶ The leaders in all industries in the sector are a match for the best companies in the world - but there is a long tail of "the rest". Does it matter? Should public policy ignore "the rest" and concentrate on supporting "the best"?
- ▶ How well is the sector re-training its existing workforce to use new technological opportunities to the full? Do managers see the strategic opportunities?
- ▶ Are legislation and public policy more important than market forces as sector drivers? Does the transport sector require different types of management skills from other industries?

2. The demand for skills in the Sector

Key points

- An estimated 1.7 million people work in the transport sector.
- Total employment will increase by 57,000 (5%) between 1998 and 2009. However, if natural wastage is taken into account, the sector will need to recruit an additional 539,000 employees over the next ten years - equivalent to one new employee for every two employed today.
- Transport drivers and operatives account for one in six (15%) of all jobs in the transport sector and whilst the total number employed is expected to fall in the decade 1998-2009, the sector will still need an additional 70,000 employees (two new employees for every five employed today) to replace those who leave. There are similar requirements for the other large occupations in the sector: clerical and administrative workers, and process plant and machine operatives.
- In July 1999 there were nearly three times as many vacancies in transport-specific occupations notified to the Employment Service compared to vacancies in transport sector companies. This indicates the large number of transport-related jobs in non-transport specific companies (eg delivery drivers working for supermarkets).
- In the future the sector will require more customer handling, team working and communication skills to produce higher quality products and services and to increase efficiency. These skills were in particular demand in the motor vehicle sales and repair sector.

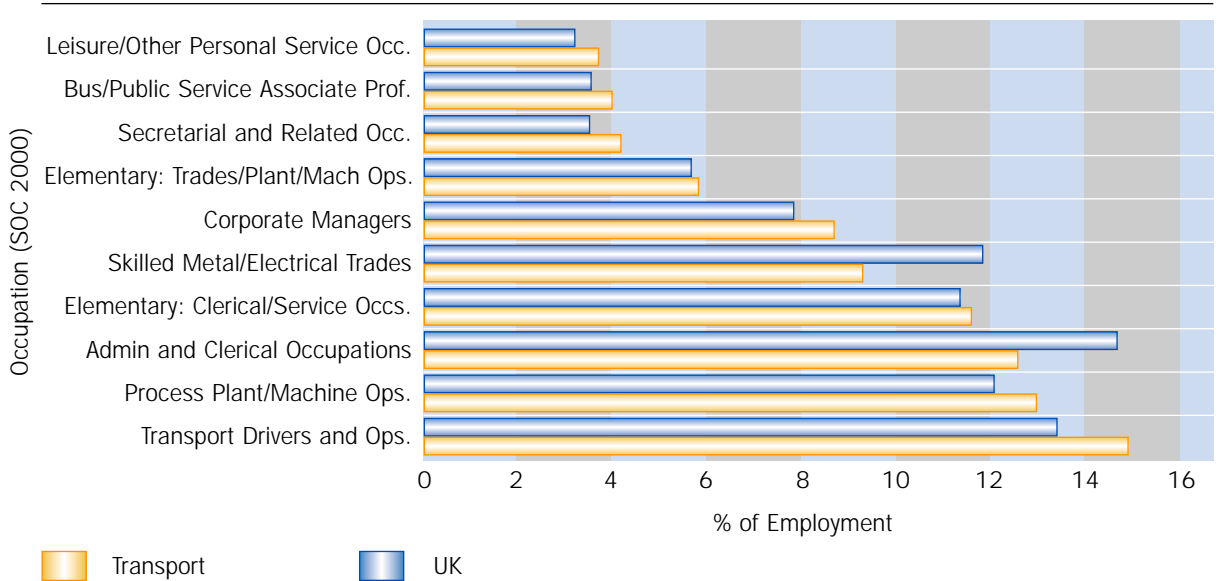
Introduction

- 2.1 This chapter explores issues around labour market demand, in terms of both the numbers of employees required and the skills required of them.

Employment

- 2.2 The previous chapter indicated that 1.7 million people were employed in the transport sector and that this level is expected to grow slightly over the next ten years. This section seeks to understand the types of people employed and how this may change in the future.
- 2.3 The largest occupational groups in the sector are transport drivers and operatives (15%), process plant and machine operatives (13%) and admin and clerical workers (13%) (terms are identified in Appendix 5). As figure 2.1 illustrates, the occupational structure is somewhat different to the average for all UK sectors.

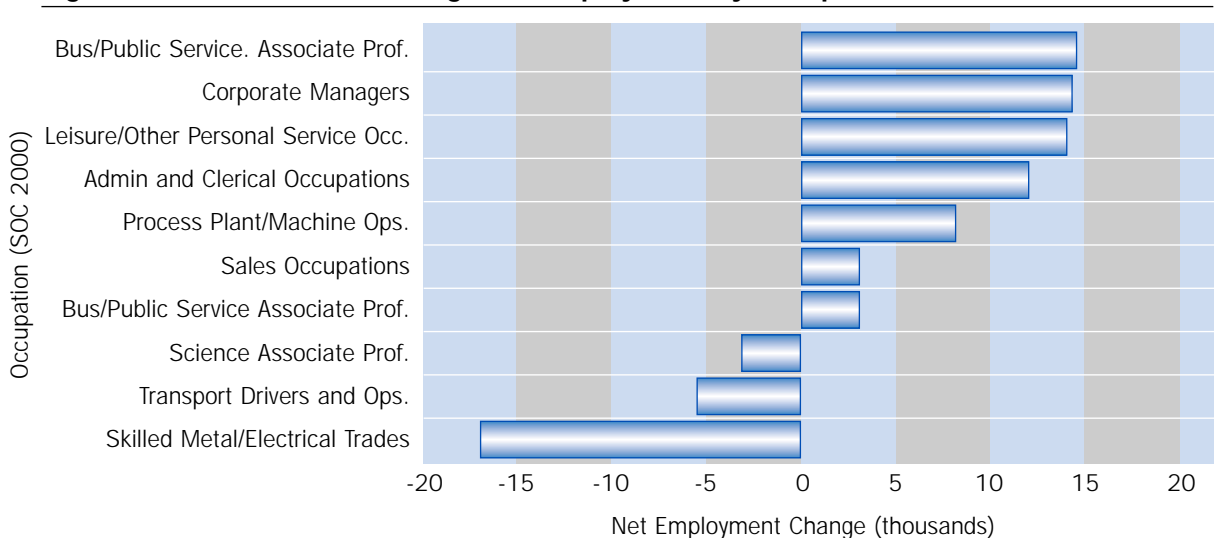
Figure 2.1: Top ten occupations in the transport sector



Source: Cambridge Econometrics/IER 2000

2.4 Over the next ten years the total number of people employed in the sector is expected to increase by 57,000 (5%). Employment in associate professional occupations (eg air traffic controllers), corporate administration and leisure and personal service occupations are expected to grow the most in absolute terms, whilst skilled electrical and metal trades, transport drivers and operatives and science associate professionals are expected to decline in absolute terms (Figure 2.2).

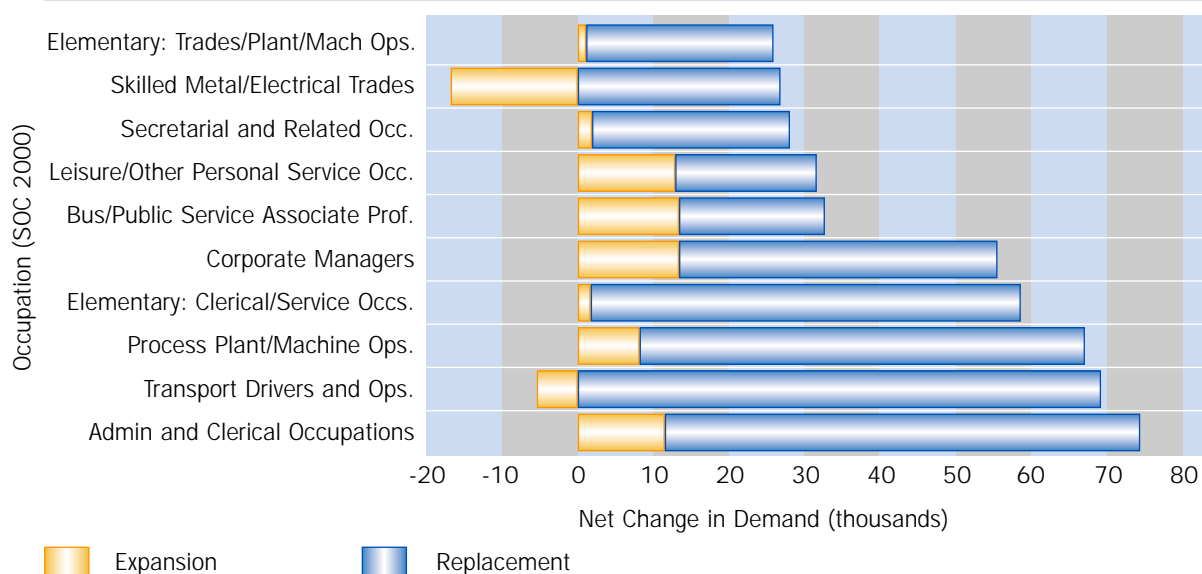
Figure 2.2: Greatest net changes in employment by occupation 1998-2009



Source: Cambridge Econometrics/IER 2000

- 2.5 These forecasts only represent changes in the absolute numbers of employees in each occupation and do not take into account replacement demand - that is recruitment required to replace those leaving because of retirement or for other reasons. When this is taken into account it is estimated the transport sector will need to recruit an additional 539,000 people over the next ten years, equivalent to 46% of the existing workforce. This is 55,000 more people than were required in the decade between 1989 and 1998, so the scale of the task involved in replacing lost workers has increased.
- 2.6 When both expansion and replacement demand are taken into account there will be a significant increase in demand for employees in certain occupations in the sector. Administration and clerical staff (an expansion of 74,000 or 52%), transport drivers and operatives (an expansion of 70,000 or 42%) and process plant and machine operatives (a growth of 67,000 or 46%) will be in particular demand. In addition the sector will need another 55,000 corporate managers (an additional 56%).

Figure 2.3: Expansion and replacement demand by occupation 1998-2009



Source: Cambridge Econometrics/IER 2000

Part-time work and self-employment

- 2.7 The transport sector is characterised by high levels of full-time employment compared with the UK average*.
- 2.8 There are higher than average levels of self-employment amongst transport drivers, and we know that a very high proportion of firms in the road haulage sector operate with only one or two lorries.

* Detailed data are unfortunately only available for the sector in conjunction with the rather different communications sector (see Appendix 4).

2.9 Over the next decade this balance is expected to change, with a small increase in part-time working, though slightly greater than the increase in the economy as a whole (perhaps reflecting the lower starting point). The key changes in terms of occupations are likely to be:

- ▶ a significant shift from full-time to part-time employment for road drivers;
- ▶ an overall reduction in the number of full time skilled metal and electrical trades, offset by a smaller increase in part-time employment;
- ▶ a shift from full-time work in elementary clerical occupations to part-time work and self-employment.

More customer-facing staff on trains

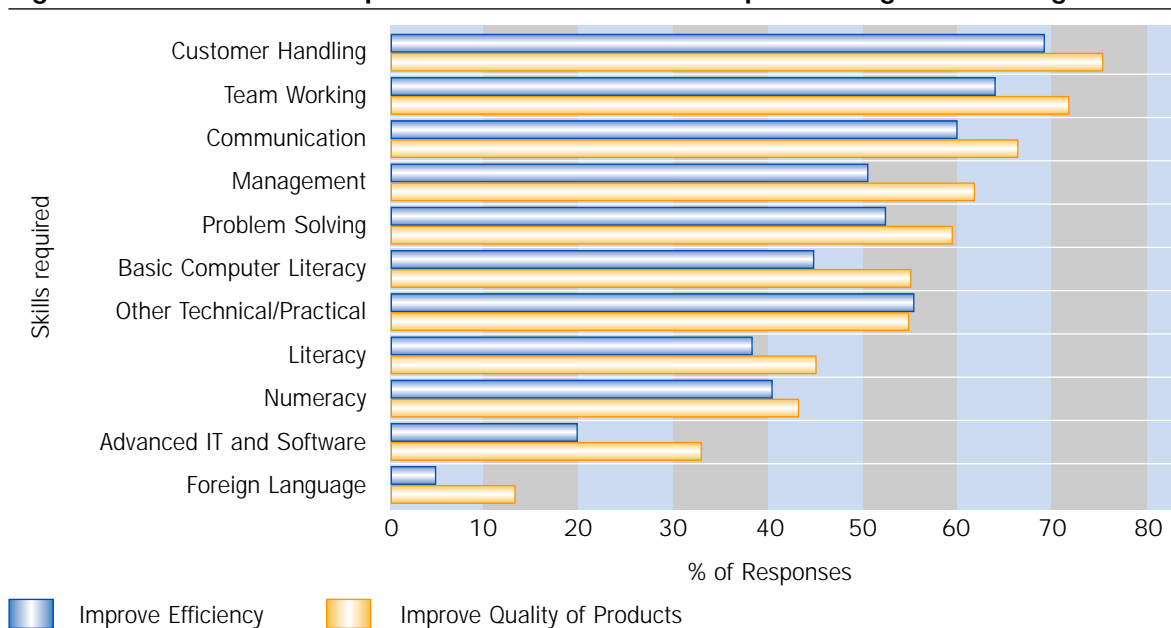
GNER employs 900 on-board staff, excluding drivers, compared with 550 in 1996.
Source: *People Management*, 8.6.2000

Future skill needs

2.10 Chapter 1 highlighted a number of issues for the sector in terms of changes in markets, technology and legislation. The DfEE Employer Skills Survey (1999) provides some indication of how business responds to these changes in terms of improved efficiency or a move to higher quality products or service may impact on the skill needs of employers in the sector.

2.11 Figure 2.4 below illustrates that either of these responses will require the same additional skills from the workforce and that these are quite wide ranging. Customer handling, team working and communication skills will be the most important for both improving efficiency and improving the quality of products.

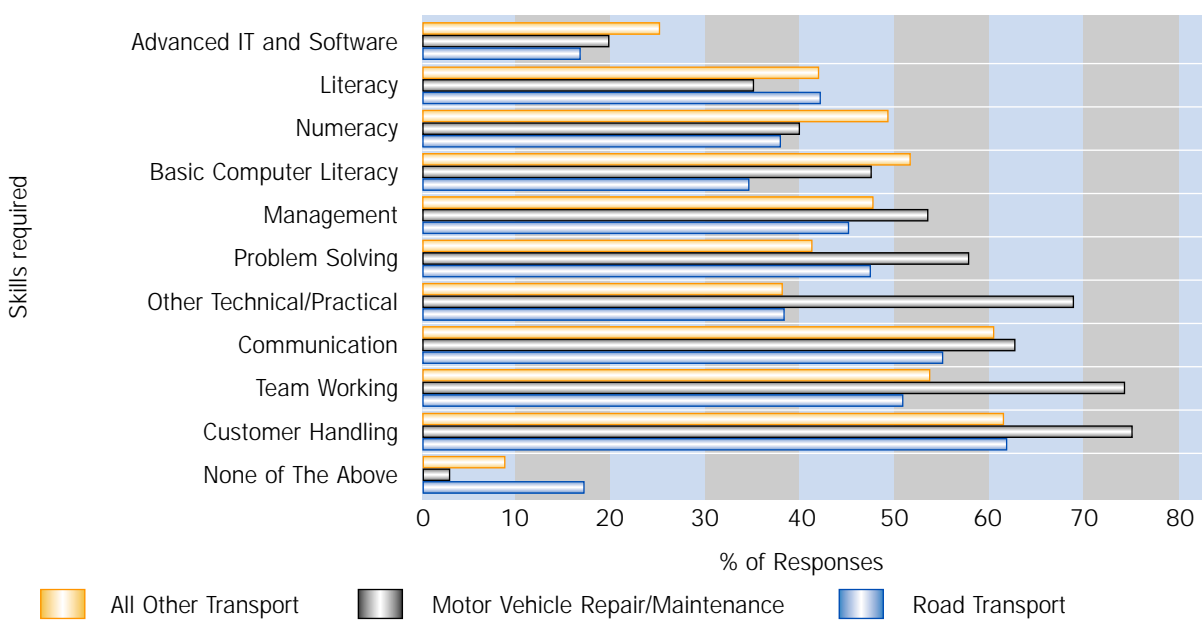
Figure 2.4: Future skill requirements as a result of implementing new strategies



Source: *DfEE Employer Skills Survey 1999*

2.12 There is little difference between the transport sub-sectors in their perception of which skills will be needed in future to increase efficiency. For the motor vehicle sales and maintenance sector, the key needs expected are in customer handling, team working, technical and practical skills. For the “other transport services” sector, however, the focus is on literacy, numeracy and IT skills.

Figure 2.5: Future skills required to increase efficiency



Source: DfEE Employer Skills Survey 1999

Key questions

- ▶ Do you agree that there will be a need for over half a million new people to enter the industry over the next decade in order to meet employer needs?
- ▶ From which groups will these new workers come - young people, females etc?
- ▶ Does the sector have sufficient training (including induction) capacity for this level of recruitment?
- ▶ There are three times as many workers with transport-specific skills (eg drivers) working outside dedicated transport firms (eg for supermarkets) as inside them, yet data about skill shortages primarily focuses on the dedicated transport firms. Are we underestimating the problem?
- ▶ Drivers and operatives are already in short supply: how will the sector deal with an estimated increase in demand of nearly 50% in this occupation. What strategies are there in place to attract more people into this occupation?
- ▶ Is the need for team working, customer handling and communication skills common across the transport sector? If so, are there advantages in joint initiatives - for example for managers responsible for improving customer focus in what has long been an operations-driven environment?

3. The Supply of Skills to the Transport Sector

Key Points

- ▶ The age profile in the transport sector as a whole is similar to that of the UK workforce but there are large differences between sub-sectors. For example just under 15% of the workforce in the motor vehicle sales and repair sector are under 24 - but the proportion is just a third of that (5%) in the other land transport sector (bus, road haulage, taxis etc).
- ▶ The age profile may become an issue for the sector as the population in general is ageing. Mature workers with little experience in the transport sector may replace people leaving who have a large amount of knowledge and skill or alternatively the sector may need to attract more younger people than it does now.
- ▶ The transport workforce is predominantly male and even amongst part-time workers where there are more females employed, they represent a lower proportion than in the economy as a whole. This partly reflects the sector's image and the type of work involved, and partly the lower proportion of part-time work in the sector. The proportion may change with increased part-time working and a higher demand for customer service and communication skills which are perceived to be traditional female strengths. In addition, skills shortages and a greater emphasis on equal opportunities may result in greater recruitment of women.
- ▶ As a whole the workforce in the transport sector includes a higher proportion of ethnic minority workers than average, though the picture varies greatly between sectors.
- ▶ The workforce in the sector is made up of large numbers of people whose highest qualification is equivalent to A levels. Far fewer have degrees compared with the UK average.
- ▶ A high proportion of the workforce has other qualifications which do not readily equate to educational qualifications or NVQs (eg safety certificates, large goods vehicle driving licences).
- ▶ Over one in ten (11%) of the registered unemployed have previously worked in transport specific occupations - mainly people who have worked in vehicle trades or as road transport operatives. This pool of potential employees has decreased in line with general unemployment over the last three years.
- ▶ Employees in the transport sector are less likely to receive training than the UK average, with the exception of the aviation sector.

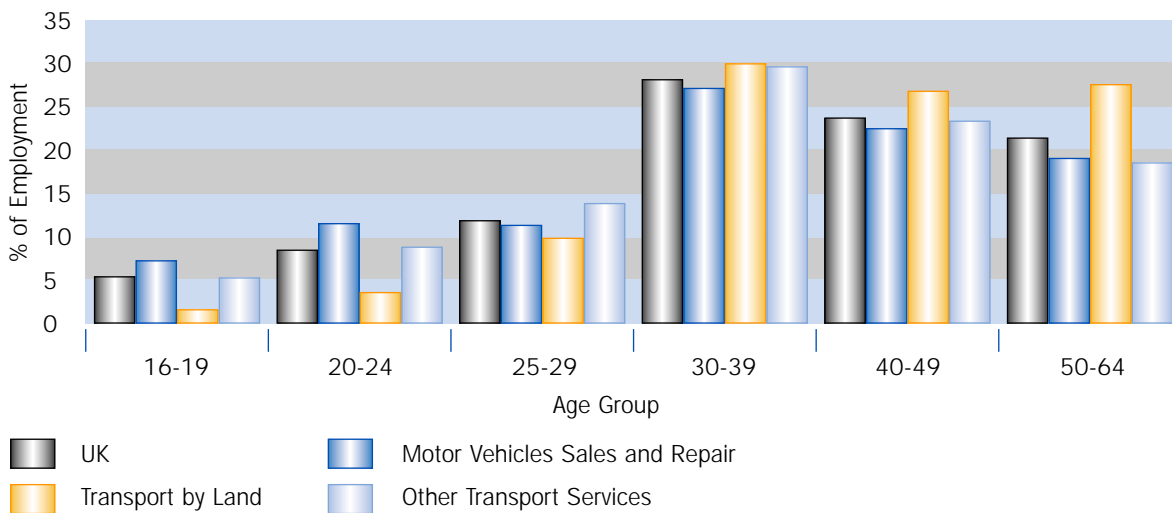
Introduction

3.1 This chapter examines issues associated with the supply of labour to the transport sector, including trends in the working population in general as this is the pool from which the sector will be recruiting.

Age

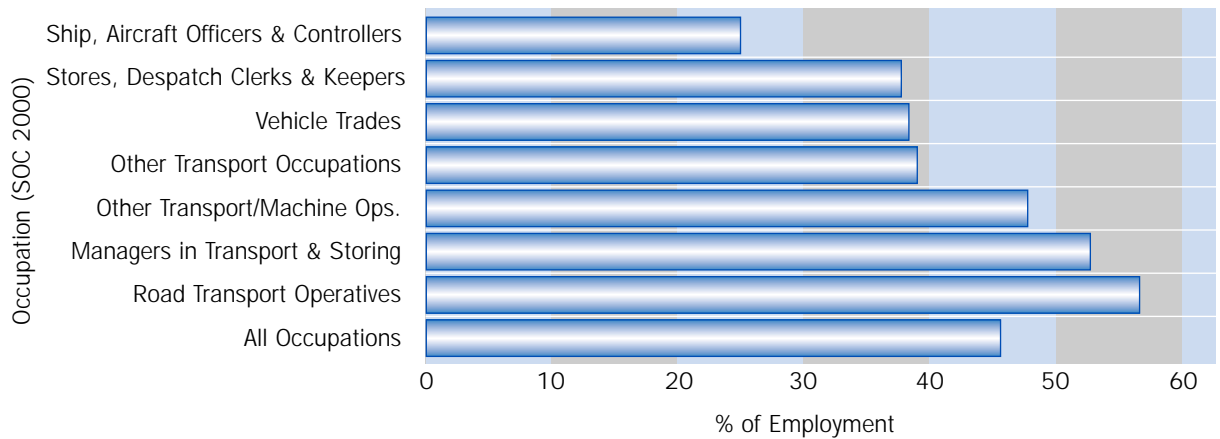
3.2 Overall, the transport sector's workforce age profile is similar to that of the UK workforce in general. But this similarity masks large differences between the profile of different sub-sectors, particularly between land transport and motor vehicles sales and repair.

Figure 3.1: Workforce age profile for various transport sectors



Source: Labour Force Survey, Spring 2000

3.3 This difference in age profile is further illustrated in terms of those employed in transport-specific occupations (as listed in the previous chapter), although not necessarily employed in the transport sector. As figure 3.2 illustrates, road transport operatives and other transport operatives include a higher proportion of employees aged over 40 than the workforce average, as opposed to stores clerks and vehicle trades where fewer are aged over 40.

Figure 3.2: Proportion of employees in transport-specific occupations aged over 40

Source: Labour Force Survey, Spring 2000

- 3.4 In a number of industries such as the land transport sector, a large number of employees are required to hold various licences and certificates which have minimum age thresholds. (For example, large goods vehicle licences are normally only available to those over the age of 21, which means that few young people are employed in the road haulage industry). The preference for slightly older workers (at least age 25) is reinforced by the high cost of insurance for people under 25 and a safety consciousness which is linked to a view that younger people pose (and take) greater risks. In contrast the motor vehicle sales and repair sector has a higher proportion of workers under 25 than the UK average.

Young Drivers Scheme. The Road Haulage and Distribution Training Council, as the sector's national training organisation, operates a scheme to enable young people to obtain large goods vehicle driving licences much younger than is normally permitted, provided that they train through recognised centres. Through the scheme an 18 year old can hold a category C licence, for the smaller LGV vehicles, and they can move on to the C + E licence, for the larger vehicles, before they are 21.

- 3.5 The average age of the UK population is increasing, so the lack of reliance on young people by the sector is beneficial. There are two issues that the sector will need to consider.
- ▶ How will the skills and experience of those retiring be replaced? If the focus is on retraining workers who have previously worked in other sectors, then training programmes will need a different focus to those designed for young people in their first job.
 - ▶ To what extent will the industry rely upon people joining young and slowly developing their understanding of how it works, as opposed to the value of "fresh blood".

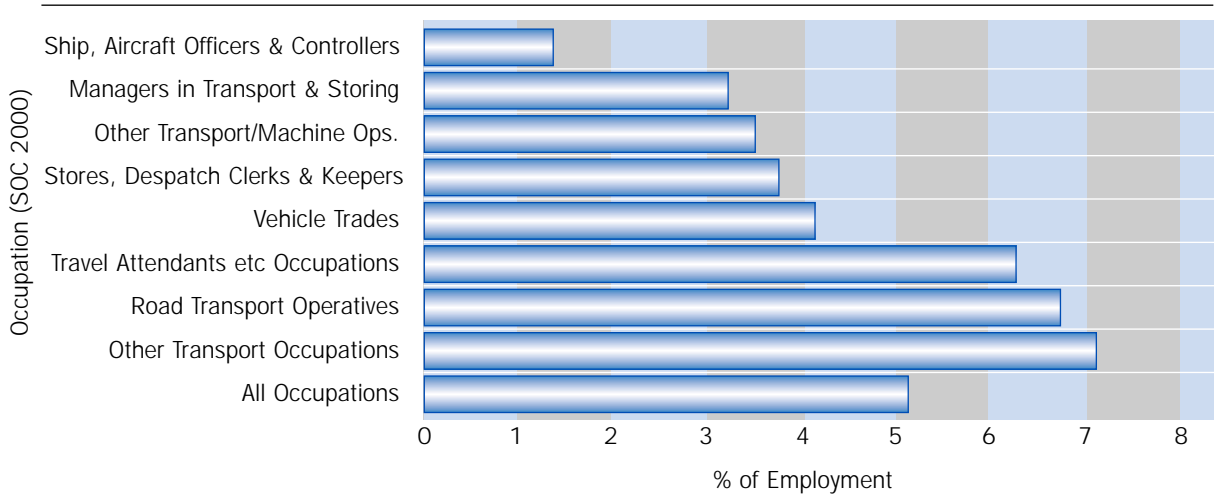
Gender

- 3.6 The transport sector is unquestionably very male dominated. Most of the data, unfortunately, relate to the transport sector in conjunction with the rather different communications sector - though we may reasonably infer something of the scale of how different transport is from the fact that the proportion of men in the combined transport and communications sector is 74% of all employees compared with an average of 54% across the economy as a whole. The same data suggest that a higher proportion of part-time workers are women (60%), which is lower than the UK average of 78% (Cambridge Econometrics/IER 1998 figures).
- 3.7 Women are predominantly employed in non-sector-specific roles such as administration, with a few exceptions such as air cabin crew. This pattern may be explained by the lower proportion of part-time work in the sector and the legacy of attitudes shaped in part by the nature of the work (commonly 'dirty' occupations, requiring heavy lifting, and so on). The forecast slight increase in part-time work in the sector may bring more women into the sector, as may the increased demand for customer handling and communication skills.

Ethnicity

- 3.8 The proportion of the workforce in the transport sector from ethnic minority backgrounds is slightly higher than the UK average, although this does vary a great deal between sectors. For example 8% of employees in the road transport sector are from ethnic minority backgrounds, partly because taxi private hire is a common first job for immigrants, especially in London. Air transport also employs a high proportion of people from ethnic minority backgrounds, perhaps partly as a deliberate customer-facing policy. In contrast, low numbers of ethnic minorities are employed in the road haulage sector.
- 3.9 There are also marked differences in the proportion of the workforce from non-white backgrounds employed in the different transport-specific occupations. In general, the higher skilled occupations include a lower proportion of ethnic minority employment. As figure 3.3 illustrates, workers from the ethnic minorities are most likely to be employed as road transport operatives (such as bus or taxi drivers) and other transport occupations (such as stevedores and drivers' mates).

Figure 3.3: Proportion of workforce in transport-specific occupations from ethnic minorities



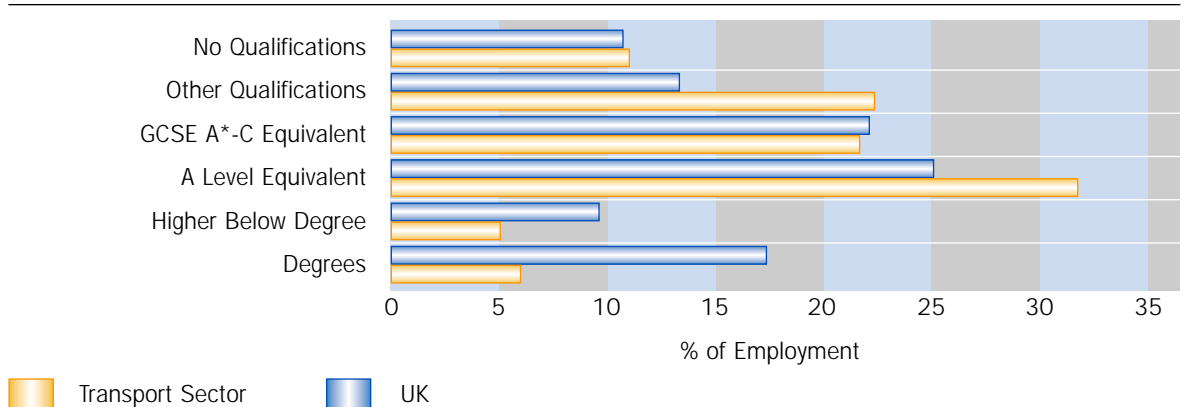
Source: Labour Force Survey, Spring 2000

Qualifications held

3.10 The Labour Force Survey indicates that those employed in the transport sector have on average a lower level of qualifications than the UK average. The proportion with no formal qualifications is almost identical to the national average. The difference lies at the more qualified end of the spectrum, where a much lower proportion of employees in transport have qualifications above NVQ level 3 and its academic equivalents. The proportion of the workforce holding degrees is far lower than the proportion in the UK workforce as a whole - approximately one third.

3.11 It is also striking that the proportion of the transport workforce holding “other qualifications” is much higher than the UK average - which reflects the extent to which many workers in this sector must complete certificates of competence to satisfy a statutory authority. This is a sector which is well-used to formal qualifications, but a high proportion of them are industry-specific.

Figure 3.4: Qualifications held by the workforce

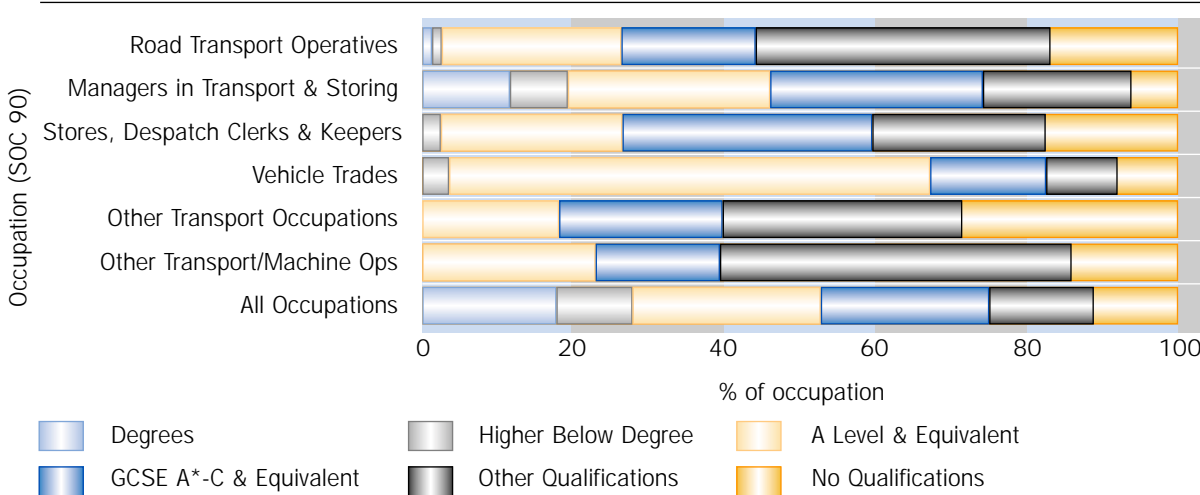


Source: Labour Force Survey, Spring 2000

Exel Logistics Partner University Scheme. Each business unit in Exel Logistics adopts a “partner university”, for example for recruitment presentations. The company has found this an effective way of raising its profile at minimum cost.

3.12 Figure 3.5 illustrates how the type of qualification held varies between transport-specific occupations. For example vehicle trades are most likely to hold an A level or equivalent, which is likely to be an NVQ level 3, reflecting the craft skilled nature of the job. Road and other transport operatives, such as drivers and rail operatives, are most likely to hold a non-recognised qualification, reflecting the sector’s requirement to hold driving licenses and health and safety certificates. Other transport occupations such as stevedores and drivers’ mates are least likely to hold any qualification at all.

Figure 3.5: Qualifications held by employees in transport-specific occupations

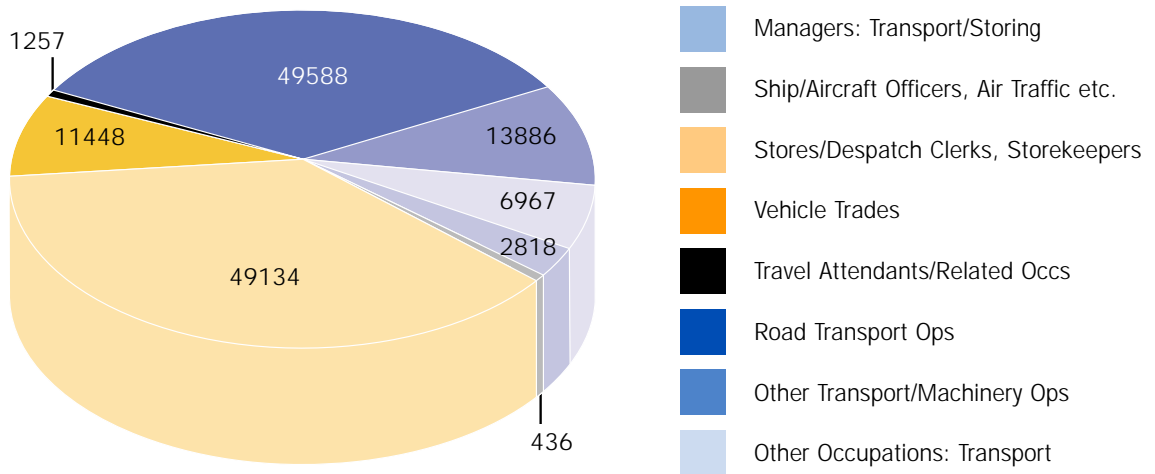


Source: Labour Force Survey, Spring 2000

Unemployment

3.13 Data held by the Employment Service provides an indication of the previous job held by the unemployed (based on individuals’ self-reporting). In July 1999 there were 1.2 million people unemployed and claiming benefit in the UK and 135,500 (11%) of these had previously worked in transport-specific occupations (as defined in chapter 2). This represents a higher proportion than the proportion of the workforce employed in the transport sector (5.8%). This group of unemployed are most likely to have immediate previous experience as transport operatives or stores and despatch clerks.

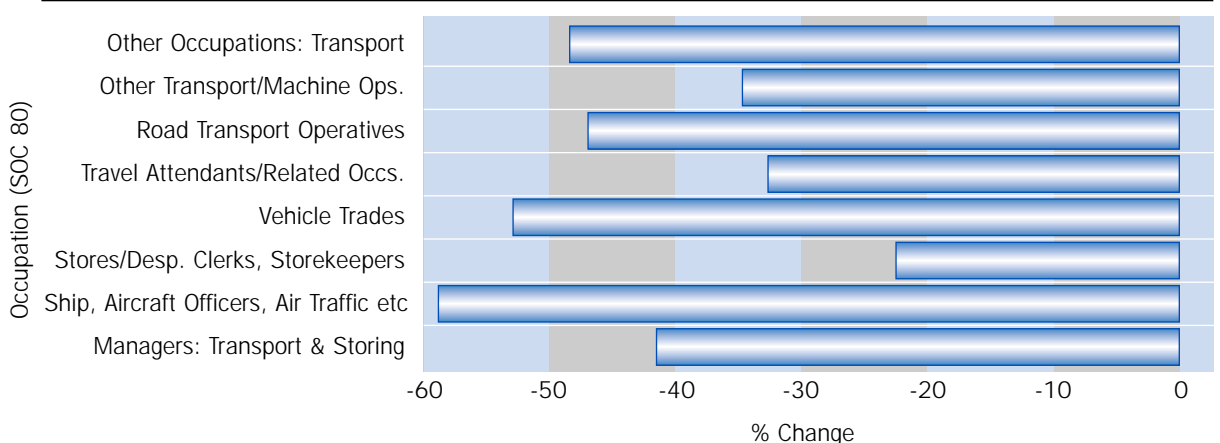
Figure 3.6: Unemployed with immediate transport-specific experience



Source: Employment Service, July 1999

3.14 Between July 1996 and July 1999 the number of unemployed people previously employed in these transport sector occupations fell by 39%, slightly less than the overall fall in UK unemployment of 41%. The greatest fall was in people with immediate experience as ship or aircraft officers (59% or 600 people) and in vehicle trades (53% or 12,812 people). The smallest decline was in people with immediate experience as stores or despatch clerks (23% or 14,500 people) and in travel attendants (33% or 600 people).

Figure 3.7: Change in unemployed with immediate transport-specific experience (July 1996- July 1999)



Source: Employment Service, July 1999

Career Paths Research. British Ports Industry Training and the Merchant Navy Training Board are running a joint project researching career paths. BPIT is interviewing former sea-going employees coming ashore to understand their background - and MNTB is interviewing existing sea-going officers to learn about their career aspirations when they come ashore.

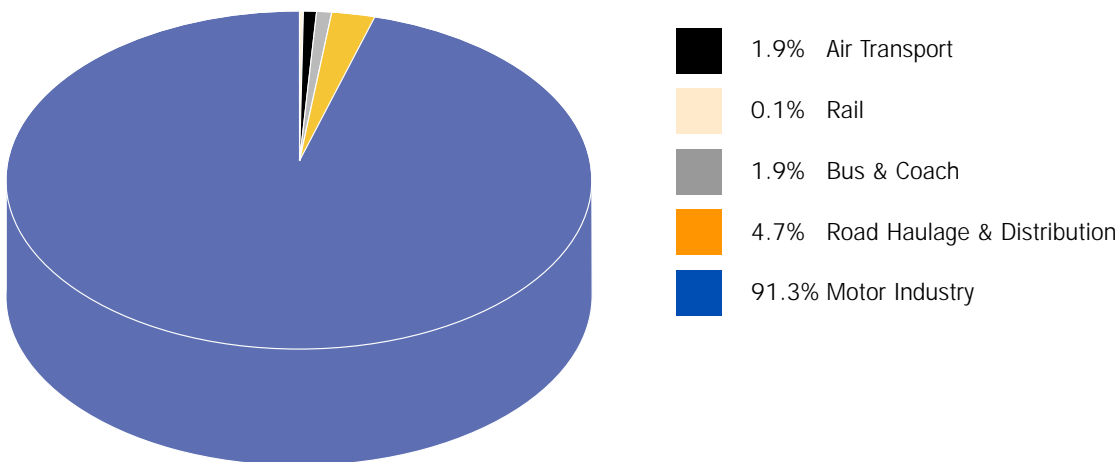
Young new entrants

3.15 Much of the sector does not employ large numbers of young people, but they remain a key source of new recruits to replace those leaving and to meet shortages of labour. However, the sector traditionally has a poor image with young people and recruitment has proved difficult. The sector NTOs have and are introducing measures such as Advanced and Foundation Modern Apprenticeships (AMAs and FMAs) to try and address this issue.

Merchant Navy Day. Sunday 3 September 2000 was “Merchant Navy Day” - the first of what is planned as a regular annual event, designed to raise awareness of the role of the Merchant Navy, including the scope it offers for rewarding careers.

3.16 Whilst Foundation Modern Apprenticeships (formerly National Traineeships) are relatively new, Advanced Modern Apprenticeships (AMAs and formerly Modern Apprenticeships) are starting to impact on the sector, with 25,700 young people having started these since their introduction. The largest number of starts have been in the motor vehicle and sales and repair sector - traditional users of Government-subsidised training routes - where there have been 23,311 starts (91% of the total in the sector).

Figure 3.8: Modern Apprenticeship starts in England and Wales



Source: DfEE Trainee Database, June 2000

NB includes both AMAs and FMAs

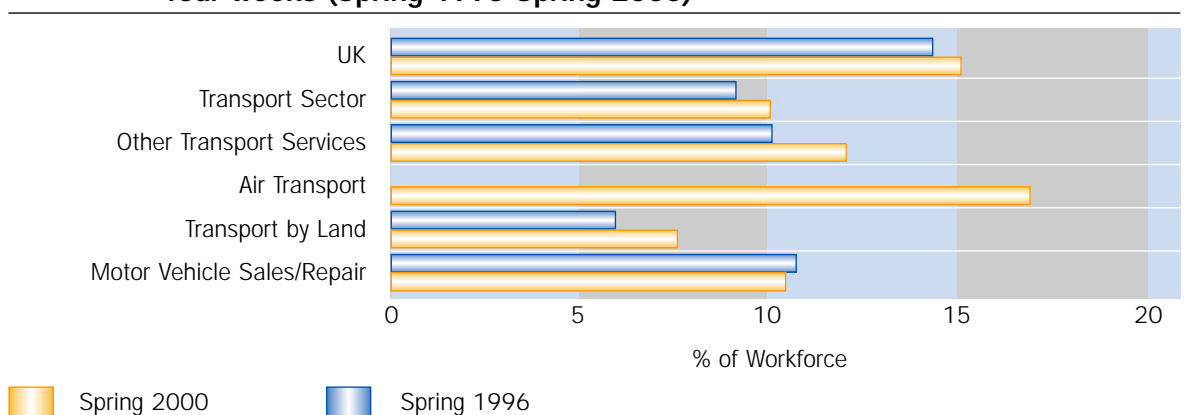
Graduates

3.17 As illustrated earlier, a low proportion of employees in the transport sector are graduates. However, it is important for a number of roles such as engineering and management that the sector attracts a limited number of high calibre graduates. Data from DfEE indicate that in 1998/99 just 775 people enrolled on higher education courses in transport and other business and administration studies. This represents a fall of nearly 25% since 1994/95 and accounts for 0.2% of all higher education enrolments. The majority of these courses (56%) were at undergraduate level.

Training activity

3.18 There is notably less training in the transport sector than the UK average. The Labour Force Survey provided indicators of the number of employees in the sector who have received training in the previous four weeks. On average in spring 2000, 10.1% of employees in the transport sector received training in the previous four weeks. This is an increase from 9.1% in spring 1996, but is still much lower than the UK average of 15.2% in spring 2000 and 13.8% in spring 1996.

Figure 3.9: % of workforce in selected sectors undertaking training in previous four weeks (Spring 1996-Spring 2000)



Source: Labour Force Survey, Spring 2000

Figures are not available for the Air Transport sector in 1996

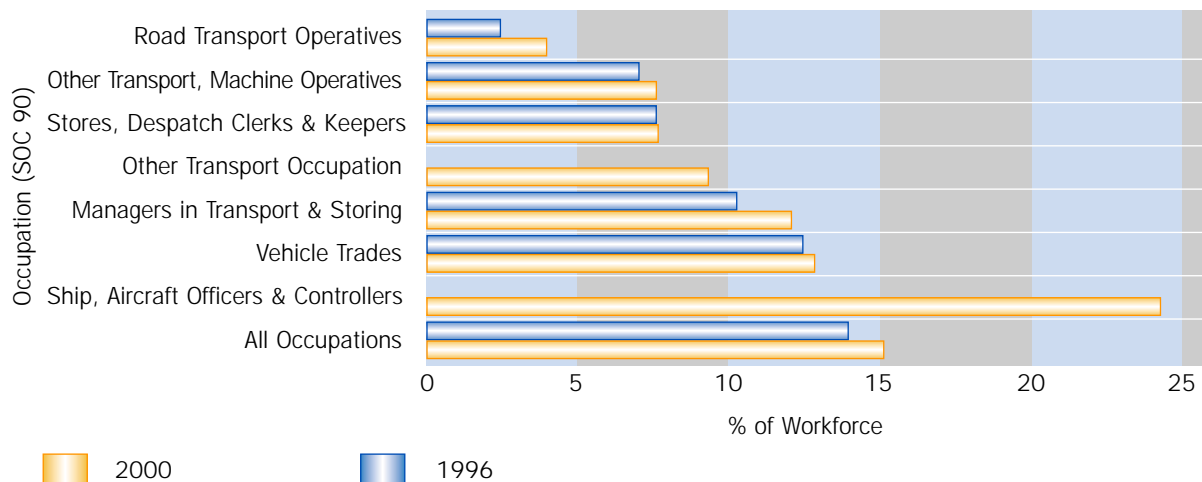
Tonnage Tax encouragement to training. The Government has accepted the recommendation of an industry report which advocated a new taxation regime. It offers companies greater certainty in their tax liability (which previously could vary hugely year by year) in exchange for a commitment to investment in the employment and training of British seafarers.

3.19 Figure 3.9 above illustrates the main differences between sub-sectors which include:

- ▶ training activity is greatest in the air transport sector and is well above the UK average;
- ▶ training activity is lowest in the land transport sector but this has increased over the last four years;
- ▶ training activity in the motor vehicle sales and repair sector stayed relatively stable between 1996 and 2000.

3.20 In terms of transport-specific occupations, figure 3.10 illustrates the difference between training activity for higher skilled occupations such as managers and aircraft officers, and lower skilled occupations such as drivers and stores clerks.

Figure 3.10: % of workforce in transport-specific occupations undertaking training in previous four weeks (Spring 1996-Spring 2000)



Source: Labour Force Survey, Spring 2000

Figures are not available for other transport occupations and ship and aircraft officers in 1996

Key questions

- ▶ Is the older average age of the workforce an issue for the sector? Does the sector have appropriate mechanisms in place for recruiting and training older workers from non-transport sector backgrounds?
- ▶ Is the ageing of the population and the increase in students remaining in education impacting on the motor vehicle maintenance and repair sector and are the successful AMAs and FMAs enough to meet this challenge?
- ▶ What can be done to encourage more women to work in the sector? What can be done to encourage a traditionally male-dominated sector to offer a warmer welcome?
- ▶ Why are there relatively few employees from ethnic minorities in the road haulage, shipping and motor vehicle sales and repair sectors? How can this be addressed?
- ▶ Will the increasing skill requirements, as a result of market and technology change, raise the qualifications required of people in the industry?
- ▶ Is there sufficient training activity in the sector to prepare the workforce for the changes in technology and work organisation in the future?

4. Skills shortages and skills gaps

Key points

- ▶ The labour market has tightened considerably over the last few years and there are now fewer than two unemployed people for every vacancy held at a jobcentre.
- ▶ This tightening of the labour market has resulted in over half the vacancies in the transport sector being 'hard to fill', and one fifth of all vacancies being hard to fill because of skill shortages or deficiencies. The greatest difficulties are in:
 - drivers in the road transport sector - which is much the most pressing business issue in the industry;
 - craft occupations in the motor vehicle sales and repair sector, which include motor mechanics;
 - associate professionals and sales representatives in the other transport sectors.
- ▶ These **recruitment difficulties have resulted in larger than average wage rises** in some occupations, particularly other transport and machinery operatives whose average weekly wage grew by (26%) between 1996 and 1999. This has not been the case in all occupations, for example travel attendants wages fell by 2% during the same period.
- ▶ There are **significant gaps in the skills of the current workforce** in the sector, particularly amongst managers, clerical and sales staff. The road transport sector also has a deficiency of skill amongst its machine operatives, whilst the car sales and repair sector has a particular problem with craft occupations.
- ▶ The most common reason identified for these skills gaps was a failure to train and develop staff, although a number of companies were seeking to address this with more training in the future.
- ▶ **The rail investment programme is threatened** - and possibly also the delivery of the Government's transport strategy - by the shortage of engineers and skilled technicians.
- ▶ The lack of skills is expected to hold back the sector's move to more high quality products and services - both generic skills such as team working and customer handling - and also specific technical skills.

Introduction

4.1 This chapter seeks to bring together issues from the previous two chapters and to identify areas where there may be problems in the supply of skills in the sector. Skill shortcomings could relate to:

- a shortage of people with the relevant skills in the external labour market to fill vacancies;
- gaps in the skills of the current internal workforce to meet current business needs;
- potential gaps in the workforce to meet future skill needs.

Recruitment

- 4.2 A comparison of the number of vacancies held at jobcentres with the number of people unemployed provides an indication of the tightness of the labour market. In July 1999 the vacancy to unemployment ratio was 0.57 - ie there are fewer than two unemployed people for every vacancy. This represents a tightening of the labour market since 1996 when the ratio was 0.33 (ie there were three unemployed people for every vacancy).
- 4.3 A comparison of the previous occupation of unemployed people with the type of notified vacancies provides an indication of where there is a shortage of potential recruits with appropriate experience. Table 4.1 below shows the vacancy to unemployment ratio for the transport-specific occupations defined earlier for July 1996 and July 1999.

Table 4.1: Vacancy to unemployment ratio for transport sector occupations

Occupation (SOC 1990)	July 1996	July 1999
63 Travel Attendants/Related Occupations	1.12	1.20
93 Other Occupations: Transport	0.41	0.65
87 Road Transport Operatives (Drivers)	0.33	0.64
54 Vehicle Trades	0.23	0.50
88 Other Transport / Machinery Operatives	0.25	0.40
14 Managers: Transport / Storing	0.17	0.37
44 Stores / Despatch Clerks, Storekeepers	0.26	0.37
33 Ship / Aircraft Officers, Air Traffic etc	0.20	0.17

The reference numbers in the first column are SOC 1990 codes

Source: Employment Service

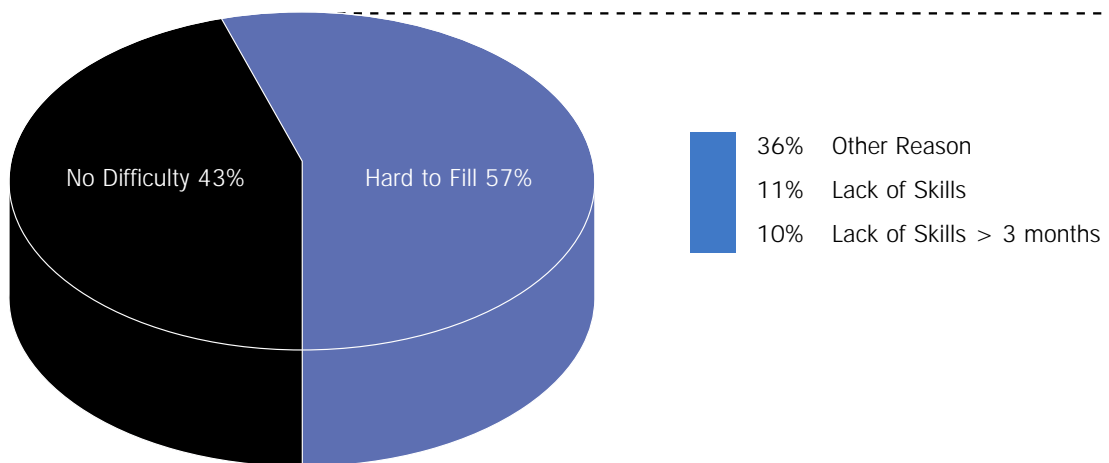
- 4.4 The table indicates that there are more vacancies than unemployed people with immediate relevant experience in travel attendant and related occupations, whilst there are fewer than two experienced unemployed people for every road transport and other transport operative vacancy. For most occupations the trend has been for there to be fewer experienced people per vacancy, which reflects the buoyancy in the economy and low unemployment rates.

4.5 Analysis of the more generic occupations indicates that recruitment is even more difficult, particularly in clerical, administration, catering and security occupations (table 4.2). However it needs to be considered that these occupations normally have a high turnover and that immediate previous experience is less important.

Recruitment difficulties and skill shortages

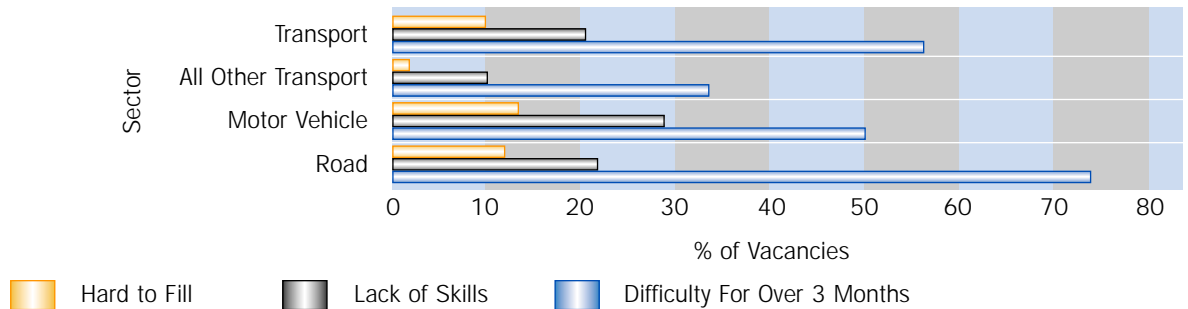
4.6 Results from the DfEE Employer Skills Survey (1999) indicate that in 1999 there were 45,860 vacancies in the transport sector (including motor vehicles sales and maintenance) and that for over half of these vacancies (25,891) employers were finding it difficult to recruit. However, not all recruitment difficulties can be attributed to a lack of skills. Employers reported that 21% of all vacancies were hard to fill because of a lack of skills and that nearly half of these had been vacant for three or more months. This is equivalent to 4,650 vacancies in the sector being difficult to fill over a three month period because of skill shortages.

Figure 4.1: Proportion of vacancies that are hard to fill



Source: DfEE Employer Skills Survey (1999)

Figure 4.2: Hard to fill vacancies by transport sector



Source: DfEE Employer Skills Survey 1999

4.7 Figure 4.2 illustrates the differences between the three transport sub-sectors. Whilst the road transport sector has the highest proportion of vacancies that are hard to fill, fewer of these vacancies are due to skill shortages than in the motor vehicle sales and repair sector, and slightly fewer of these have been vacant for three months or more. 'All other transport' has significantly less difficulty with recruitment.

4.8 In terms of occupations these recruitment difficulties apply particularly to:

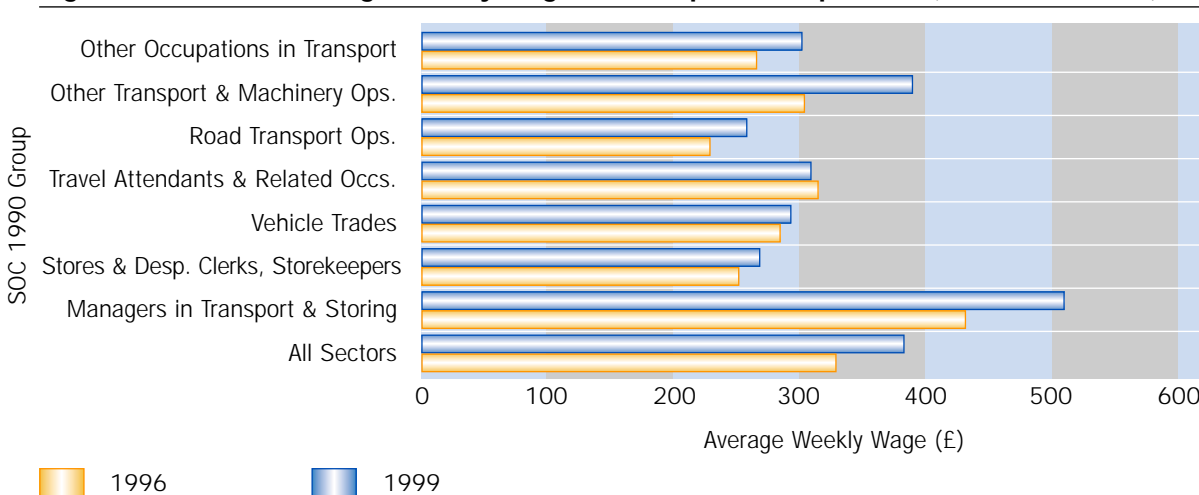
- ▶ drivers in the road sector (the data less clearly point to equivalent problems with drivers in the rail sector, but employers are clear that this sector, too, has a current shortage);
- ▶ motor mechanics and technicians;
- ▶ associate professional and sales and related occupations in the 'other transport' sectors.

Earnings

4.9 A further indication of a tightening of the labour market is the wage level offered to employees. The New Earnings Survey indicates that in 1999 the average gross weekly pay was £380.50 (excluding overtime): this represents an increase of 14% on 1996.

4.10 In terms of the key transport-related occupations in the transport and communications sector, changes in wages have varied between 1996 and 1999, as figure 4.3 illustrates. Other transport operatives wages grew by 26% over the period, whilst the average wages of managers in transport and storage also rose above the UK average (18%) sector. In contrast 'travel attendant and related occupations' wages fell by 2%, whilst those in vehicle trades saw their wages rise by only 3%.

Figure 4.3: Gross average weekly wage in transport occupations (1996 and 1999)

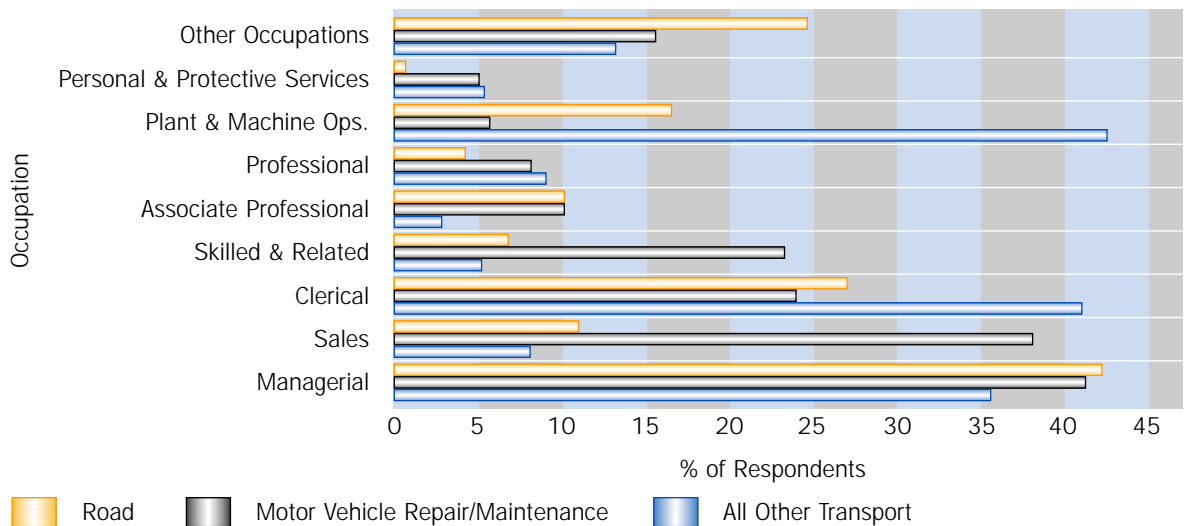


Source: ONS, New Earnings Survey

Current workforce skill gaps

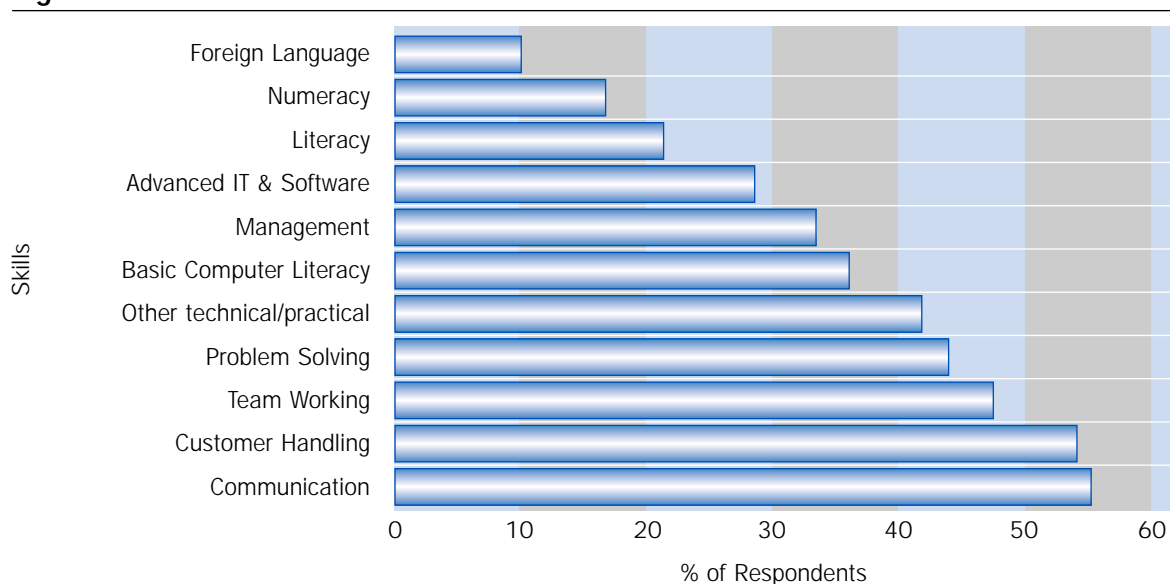
4.11 DfEE's Employer Skills Survey (1999) asked employers to identify whether their current employees were fully proficient at their job, as a means of identifying skills gaps. Over 40% of respondents in the transport sector indicated that there were gaps in their managers' proficiency, whilst around one quarter reported gaps in their clerical (29%) and sales staff (24%). Once again there were differences between industries in the transport sectors (figure 4.4). The main differences were that over 40% of road transport companies identified gaps in the skills of clerical and plant and machine operatives, whilst motor vehicle sales and repair companies were more likely to identify gaps in sales and craft skilled occupations. Other transport sector companies were more likely to identify issues in other general occupations.

Figure 4.4: Occupations where staff lack proficiency



Source: DfEE Employer Skills Survey (1999)

4.12 The main skill gaps were in the areas of communication, customer handling and team working. These are the same skill areas that employers believe they will need in order to improve efficiency or develop higher value added services and products.

Figure 4.5: Skill deficiencies in the workforce

Source: DfEE Employer Skills Survey (1999)

4.13 Companies identified a wide range of reasons for these skills gaps, although the main reason was a failure to train and develop staff (47%). Other major reasons included:

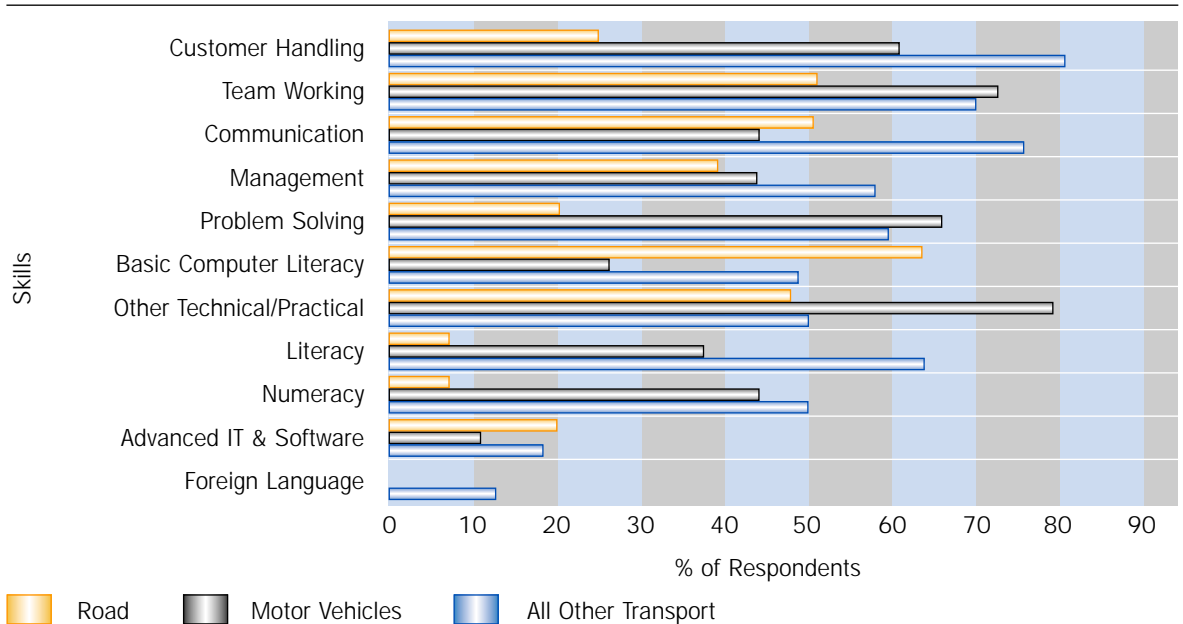
- ▶ development of new services or products (44%);
- ▶ introduction of new technology (43%);
- ▶ introduction of new working practices (43%);
- ▶ recruitment problems, particularly in the road transport sector (44%).

4.14 In response to these skill gaps around three quarters of companies intend to provide further training, and half intend to change working practices in order to accommodate skill deficiencies. The road transport sector is slightly less likely to respond using these methods and more likely to increase recruitment, although one quarter of this sector intend to take no particular action.

Future skill needs

4.15 Chapter 2 identified the skill needs of employers seeking to increase efficiency or improve the quality of their products or services. However DfEE's Employer Skills Survey (1999) identified that 5% of companies in the transport sector as a whole thought they would like to move into new higher quality product or service areas but were unable to do so because of the skills of the workforce. As with those companies that were moving forward, customer handling (70%) and team working skills (63%) were the important missing skills. The main difference between those taking forward action and those being held back because of skill gaps was in the area of technical and practical skills (67%).

Figure 4.6: Skill gaps preventing companies move into higher quality products or services



Source: DfEE Employer Skills Survey (1999)

Key questions

- ▶ Which management skills are lacking in the sector and for which types of managers?
- ▶ How is the industry going to address the shortage in (road) drivers? What else can be done?
- ▶ What more can be done to provide current employees in these occupations with the appropriate skills?
- ▶ Will these recruitment difficulties disappear if the economy takes a down-turn?
- ▶ Is the sector doing enough to address skills issues through training?
- ▶ Is the training infrastructure (both private sector and colleges and universities) up to the job? What more can they and employers do to improve joint understanding and effective working?

Appendix 1: Coverage of each NTO defined

NTO	SIC92 Description	SIC92
Aviation Training Association	Scheduled air transport	62.1
	Non-scheduled air transport	62.2
	Space transport	62.3
	Other supporting air transport	63.23
	Renting air transport equipment	71.23
British Ports Industry Training	Cargo handling	63.11
	Other supporting water transport activity	63.22
Merchant Navy Training Board	Passenger & freight water transport	61.0
	Coastal transport	61.1
Motor Industry Training Council	Sale of vehicles	50.1
	Maintenance and repair	50.2
	Sale of parts	50.3
	Motorcycle sale & repair	50.4
	Retail of fuel	50.5
	Renting of automobiles	71.1
Rail Industry Training Council	Rail transport	60.1
	Other supporting land transport activities	63.21
	Telecommunications	64.2
	Renting other land transport	71.21
	Fair and amusement park activity	92.33
Road Haulage and Distribution Training Council	Freight transport	60.24
	Other supporting land transport activities	63.21
	Activities of other transport agencies	63.4
	Courier services	64.12
Transfed	Other scheduled passenger land transport, including:	60.21
	- inter-city coach services	60.21/1
	- other scheduled passenger land transport	60.21/2
	Taxi operation	60.22
	Other passenger land transport	60.23

Appendix 2: Contact Details

Aviation Training Association

Dralda House
Crendon Street
High Wycombe
Bucks HP13 6LS
Tel: (01494) 445 262
www.aviation-training.org
contact: Tony Hines, Chief Executive

British Ports Industry Association

8 Kings Court
Newmarket CB8 7SG
Tel: (01638) 616 161
www.bpit.org.uk
contact: Bob Jones, Chief Executive

Merchant Navy Training Board

Carthusian Court
12 Carthusian Street
London EC1M 6EZ
Tel: (0207) 417 2800
www.mntb.org.uk
contact: Richard Matthew, Chief Officer

Motor Industry Training Council

201 Great Portland Street
London W1N 6AB
Tel: (0207) 436 6373
www.mitc.co.uk
contact: Sheila McGregor, Chief Executive

Department for Education and Employment

Skills for Employment Division
Room E4d
Moorfoot
Sheffield S1 4PQ
Tel: (0114) 259 3592
www.dfee.gov.uk
contact: Sue Howson

Rail Industry Training Council

B118
Macmillan House
Paddington Station
London W2 1FT
Tel: (0207) 313 1035
www.ritc.org.uk
contact: Jackie Chappell, Chief Executive

Road Haulage and Distribution Training Council

14 Warren Yard
Warren Farm Office Village
Stratford Road
Wolverton Mill
Milton Keynes MK12 5NW
Tel: (01908) 313 360
www.rhdte.org.uk
contact: Ian Hetherington, Chief Executive

Transfed

(Confederation of Passenger Transport)
Imperial House
15-19 Kings Way
London WC2B 6UN
Tel: (0207) 240 3131
www.transfed.org.uk
contact: Peter Huntington, Chief Executive

Institute for Logistics and Transport

11/12 Buckingham Gate
London SW1E 6LB
Tel: (0207) 592 3113
www.iolt.org.uk
*contact: Graham Ewer CB CBE,
Chief Executive*

Department of the Environment, Transport and the Regions

Road Haulage Division
Room 2/11, Great Minster House
76 Marsham Street
London SW1P 4DR
Tel: (0207) 944 2765
www.detr.gov.uk
contact: Judith Ritchie

Appendix 3: Bibliography

Section A: General

DETR *"Transport 2010 - The 10 Year Plan"* July 2000

Institute for Employment Research/Cambridge Econometrics *"Projections of occupations and qualifications"*; March 2000

Office of Science and Technology *"Technology Foresight, Progress Through Partnership 5 - Transport"*; 1995

Section B: Specific to individual sectors

Air Transport

Institute for Employment Research *"Human Resources and Training in the Aerospace and Air Transport Industry"*; July 1997

Oxford Economic Forecasting *"Contribution of the Aviation Industry to the UK Economy"*; November 1999

Merchant Navy

Chamber of Shipping *"Manpower Survey"*; May 1999

DETR *"British Shipping: Charting a New Course"*; December 1998

Merchant Navy Training Board *"Labour market survey of shore staff in shipping companies"*; April 2000

Motor Industry

Motor Industry Training Council *"Skills Foresight Report"*; April 2000

Passenger Land Transport

Confederation of Passenger Transport *"The Passenger Transport Industry in Great Britain - Facts 2000-2001"*; May 2000

TRANSFED *"Skills Foresight Report"*; May 2000

Ports

British Ports Industry Training *"UK Ports Industry Employment Survey"*; November 1998

British Ports Industry Training *"UK Ports Industry Skills Survey"*; January 1999

British Ports Industry Training *(draft) Foresight Report*; July 2000

Rail

RITC *"Skills for the Future in the UK Rail Industry"*; January 2000

RITC *"Skills Foresight for the Rail Industry"*; March 2000

Road Haulage and Distribution

Environment, Transport and Regional Affairs Committee *"Fifteenth Report"*; July 2000

Road Haulage and Distribution Training Council *"Skills Foresight Report for the Road Haulage Sector"*; May 2000

University of Huddersfield, Transport and Logistics Research Unit *"Attracting more managers into logistics"*; July 1999

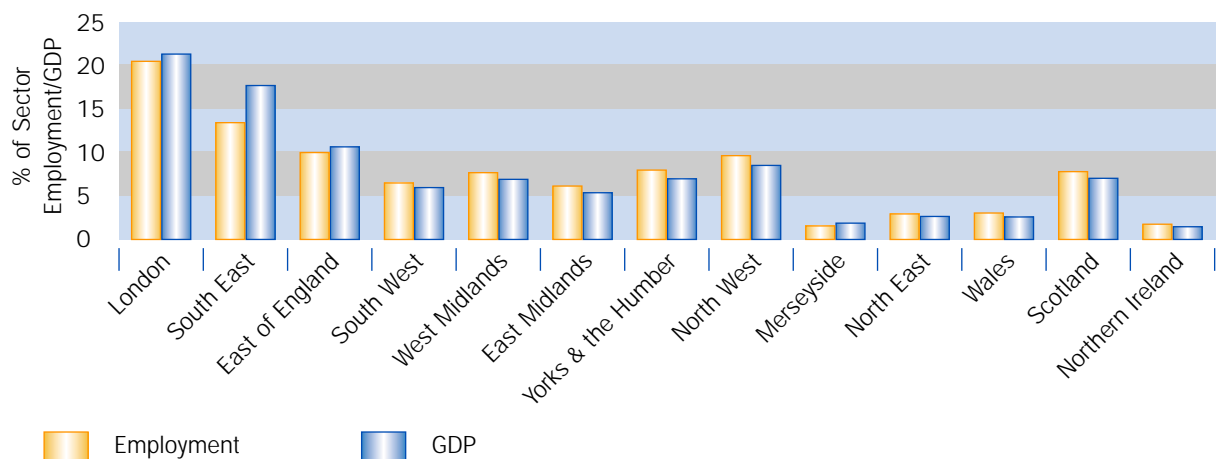
Appendix 4: Additional data

This appendix includes data which was omitted from the main text in order to keep its length within bounds, and which will primarily interest the specialist reader. Some of it uses data for the transport and communications sectors combined, which is unhelpful to the general reader, but of some value to the specialist.

Regional variations

The transport and communications sector is represented throughout the UK, although as figure A1 illustrates the highest level of employment and output is in London, the South East and East of England - which largely reflects the population distribution across the country.

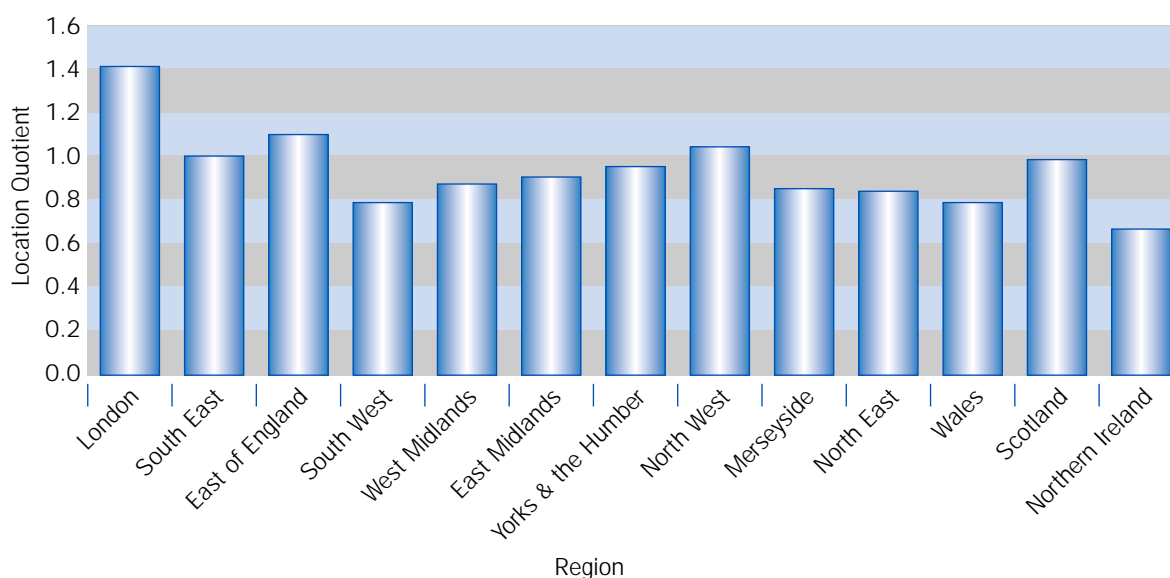
Figure A1: Regional distribution of employment and GDP in the transport and communication sector (2000)



Source: Cambridge Econometrics/IER (July 1999)

Figure A2 shows the relative importance of the transport sector in different parts of the UK (a “location quotient” of 1.0 indicates a geographical concentration of the industry exactly the same as the UK average: a score greater than 1.0 means a concentration greater than the UK average). The table indicates that there is a greater concentration of transport and communications sector employment in London than can be explained by the city’s size alone. (Note that this table includes the communications sector, which probably distorts the picture: unfortunately a regional breakdown is unreliable when disaggregated in greater detail). By contrast, in Northern Ireland, Wales and the South West - which are all more geographically remote areas - the sector is less important in employment terms than population figures would indicate.

Figure A2: Employment location quotients for the transport and communication sector (2000)



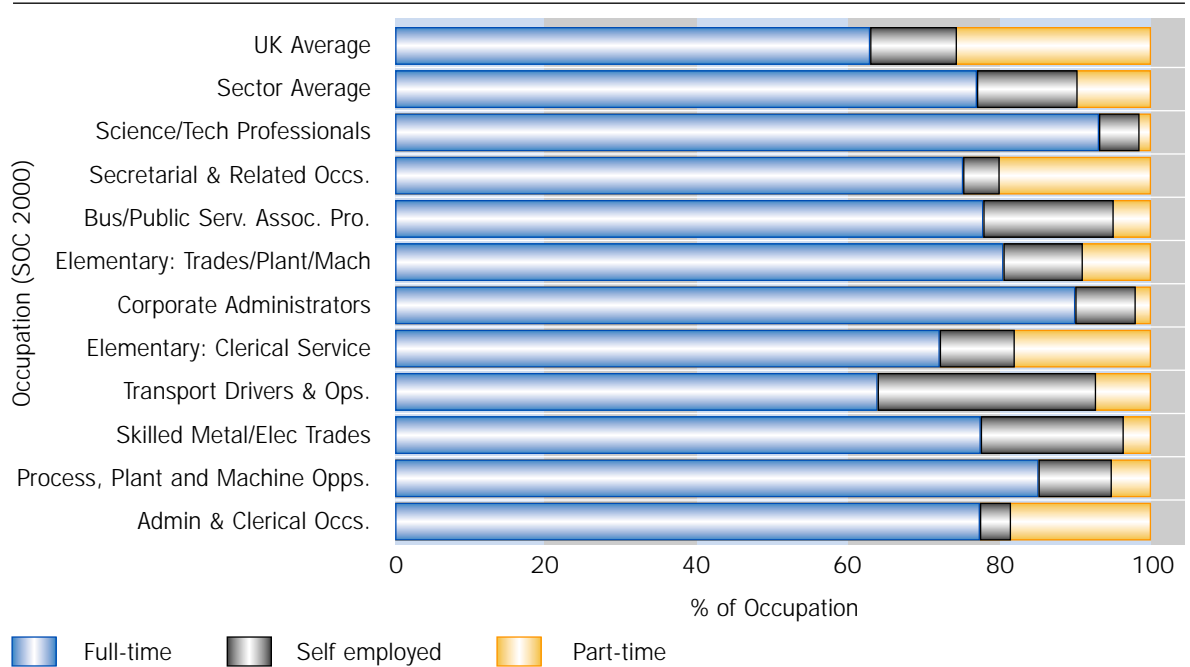
Source: Cambridge Econometrics/IER (July 1999)

Part-time work and self-employment

The transport and communications sector is characterised by high levels of full-time employment (77%) compared with the UK average, although self-employment levels are similar (12%). The main differences between occupations (see figure A3) are:

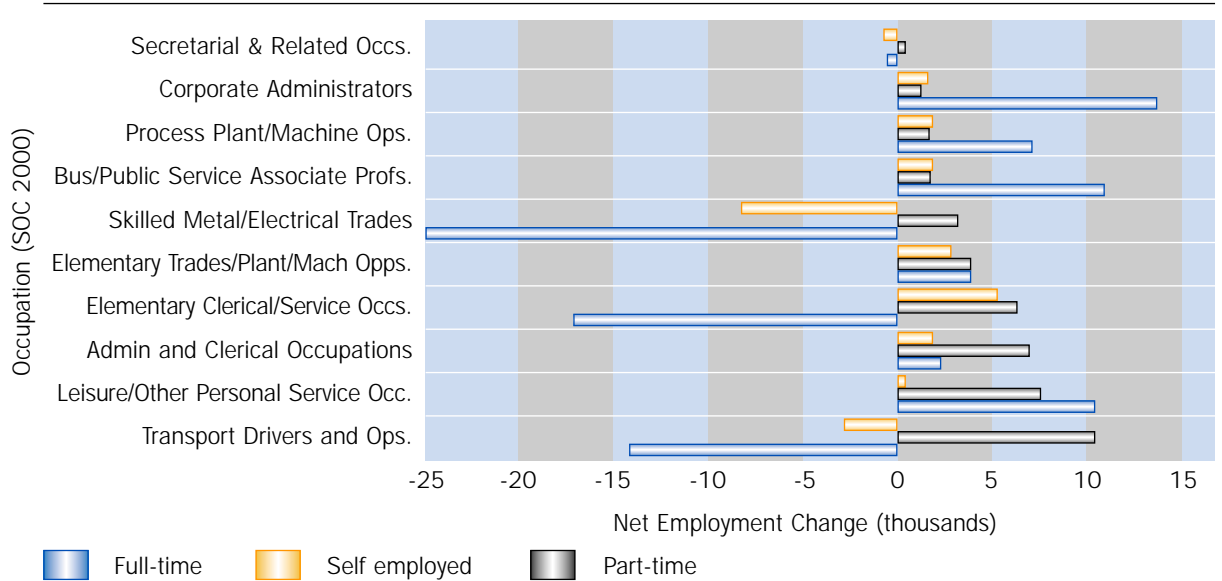
- higher than average levels of self-employment amongst transport drivers and operatives (29%), skilled mechanical and electrical trades (19%) and associate professionals (17%);
- higher than average levels of full-time employment in scientific and technical professional (94%), corporate administrators (90%) and plant, process and machine operatives (86%).

Figure A3: Type of employment by occupation in the transport and communications sector (1998)



Source: Cambridge Econometrics/IER 2000

Figure A4: Changes in type of employment in the major occupations in the transport and communications sector (1998-2010)



Source: Cambridge Econometrics/IER 2000

Vacancies

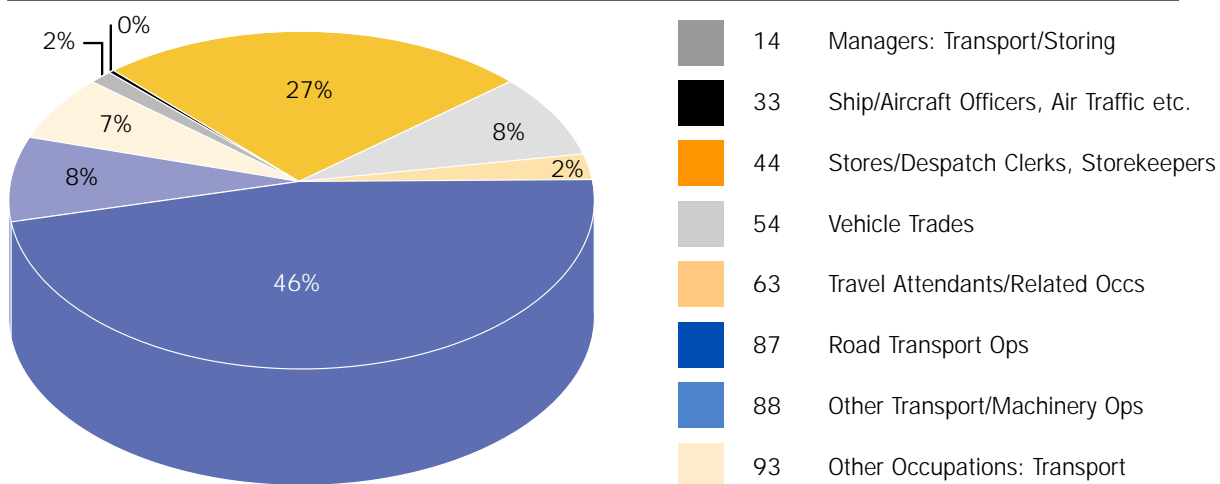
The Employment Service provides information on the type of vacancies advertised at jobcentres. These are thought to account for around one third of all job vacancies and tend to be mostly for lower skilled occupations. In July 1999 there were 23,652 vacancies advertised in jobcentres from the transport sector. This represents 3.5% of all vacancies in Great Britain - which is much lower than transport's share of the national economy. Over half of these vacancies were in the rail and other land transport sector, whilst 39% were in the "other transport services" sector (typically travel agencies).

Between July 1995 and July 1999 the number of vacancies in the transport sector fell by 8.4%, whilst the total number of vacancies across all sectors increased by 1.3%. Over half of this fall is accounted for by the transport services sector, whilst over one third is due to a drop in vacancies in the air transport sector. Vacancies in the rail and other land transport sector remained relatively stable.

The data do not allow a breakdown of vacancies by occupation for each sector. However we can identify:

- ▶ a group of occupations which are specific to the transport sector, for example transport managers;
- ▶ a group of occupations which are more generic but which will be employed by the sector, for example clerical or general managers.

Figure A5: Jobcentre vacancies in transport sector specific occupations (July 1999)



Source: Employment Service (SOC 80)

In terms of transport specific occupations there were 68,617 vacancies advertised in July 1999. This is nearly three times the number of vacancies in the transport sector specific companies and indicates the number of transport related jobs in non-transport specific companies. As figure A5 indicates the greatest number of vacancies was amongst road transport operatives (46%) and storekeepers and despatch clerks (27%).

Between July 1995 and July 1999 the number of vacancies in these occupations increased by 2,135 (3.2%). The key changes were in:

- ▶ road transport operative vacancies increased by 1,800 (6%)
- ▶ vacancies for stores/despatch clerks and storekeepers increased by 1,377 (8%)
- ▶ other transport occupations declined by 1,001 (18%)
- ▶ travel attendants and related occupations vacancies declined by 576 (28%).

Qualifications

Data on qualifications provide partial information on skills. What follows is the most readily available data on qualifications achieved through the further education sector (in England).

Table A6: Qualifications and Student Numbers in Further Education, 1998-99

Area	Number of qualifications	Number of enrolments	Most popular qualification
Air	37	4,187	British Airways/Fares and Ticketing (level 1)
Bus & Coach	18	4,609	Approved Driving Instructor
Motor Industry	171	30,602	C&G 3830 in Repair & Servicing of Road Vehicles Level 1
Rail	5	637	NVQ in Rail Transport - Passenger Services
Road Haulage	70	23,921	Fork Truck Operator (Novice)
Shipping & Ports	90	17,256	Day Skipper Shore Based

Source: Further Education Funding Council

Appendix 5: Glossary

admin and clerical workers	administration and clerical occupations in Government and related, finance, records, communications and general, receptionists (includes stores and despatch clerks)
ATA	Aviation Training Association
BPIT	British Ports Industry Training
business and public service associated professional occupations	conservation, legal, sales, business and finance, public service and transport associate professionals. The latter includes aircraft and ship officers and air traffic planners and controllers
corporate managers	corporate, production, functional, quality/customer care, finance, protective services, health and social services, distribution storage and retail managers (includes transport and stores managers)
DfEE	Department for Education and Employment
elementary clerical/ service related occupations	clerical, cleansing, security and safety, sales and personal services (includes couriers, messengers, catering assistants)
elementary trades/plant/ machinery	agriculture, construction, process and plant and goods handling and storage elementary occupations (latter includes stevedores, porters, slingers, refuse and drivers' mates)
Employer Skills Survey (ESS)	Extent, Causes and Implications of Skills Deficiencies - a new employer survey undertaken for the DfEE's Skills Unit in 1999
FE	Further Education (colleges)
FMA	Foundation Modern Apprenticeship (previously National Traineeship)
GDP	Gross Domestic Product
ICT	Information and Communications Technology/ies
IER	Institute of Employment Research, at Warwick University
leisure and other personal service occupations	hairdressers, housekeepers, personal service and leisure and travel service occupations (includes travel and flight attendants and station staff)
LFS	Labour Force Survey
LSC	Learning and Skills Council
managers in transport and storing	transport managers, stores controllers, warehousing and materials handling managers
MITC	Motor Industry Training Council
MNTB	Merchant Navy Training Board
NTO	National Training Organisation
NVQ	National Vocational Qualification (equivalent to an SVQ)

other transport and machinery operatives	seafarers, rail transport inspectors, supervisors and guards, rail engine drivers and assistants, rail signal operatives and crossing keepers, shunters and points operators, mechanical plant drivers and operators, fork lift truck drivers, crane drivers, other transport and machinery operators
other land transport	Passenger transport (bus, coach, taxi) and road freight
other occupations in transport	stevedores, port operatives, goods porters, slingers, refuse and salvage collectors, drivers mates
other transport services	includes cargo handling and storage, activities of travel agents and tour operators and activities of other supporting transport agencies and operations not included elsewhere
process plant and machine operatives	assemblers and routine operatives, construction operatives, process operatives
RDA	Regional Development Agency (England only)
RHDTTC	Road Haulage and Distribution Training Council
RITC	Rail Industry Training Council
road transport operatives	bus inspectors, road transport depot inspectors and related drivers of road goods vehicles, bus and coach drivers, taxi, cab drivers and chauffeurs, bus conductors
science associate professionals	draughtspersons, IT service delivery and science and engineering technicians (latter includes engineering, electronic and electrical technicians)
ship and aircraft officers	air traffic planners and controllers, aircraft flightdeck officers, ship and hovercraft officers
SIC	Standard Industrial Classification
skilled electrical and metal trades	metal forming, metal machining, electrical trades and vehicle trades (latter includes vehicle mechanics, coach and vehicle body builders, auto electricians, tyres and exhaust fitters)
SOC	Standard Occupational Classification
SQW	Segal Quince Wicksteed Ltd - one of the contractors preparing this report
stores and despatch clerks	stores, despatch and production control clerks storekeepers and warehousemen
SVQ	Scottish Vocational Qualification (equivalent to an NVQ)
Transfed	the NTO for the Bus and Coach sector
transport and communications sector	the communications sector includes courier activities as well as postal and telecommunications activities
transport drivers and operatives	transport drivers, seafarers, rail inspectors, crane drivers etc
travel attendants	travel and flight attendants, railway station staff
vehicle trades	motor mechanics, coach and vehicle body builders, vehicle body repairers, panel beaters, auto electricians, tyre and exhaust fitters

Notes

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