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An Assessment of Skill Needs in Food and Drink Manufacturing

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Foreword

As the representative National Training Organisations (NTOs) for the Food and Drink Manufacturing sector, we welcomed the commitment of the National Skills Task Force to the importance of a sectoral dimension in understanding skills issues.

This report has been developed as a result of a partnership between NTOs, their employers and Government, and has involved consultation with a wide range of partners, including some of the funding and planning bodies who will benefit from this information. It has brought together a wide range of information, including key findings from each of our Skills Foresight programmes, existing research evidence and the outcomes of a conference convened by DfES in July 2001 to support the Dialogue process.

Some of the key messages that have emerged present a clear challenge to the sector

- The demand for workers, both skilled and less skilled, currently exceeds supply
- Within the existing workforce, occupations suffering significant skill gaps include production workers, managers and the traditional craft sectors
- Poor image and profile of work in the industry is exacerbating recruitment difficulties. In particular, there is a need to address the shortage of food scientists and technologists

These challenges will require innovative and flexible solutions to be identified and implemented by the industry, training providers, colleges and the development agencies that support them - across the whole of the UK.

We look forward to working with the Learning and Skills Council (LSC), at national and local level, Regional Development Agencies (RDAs), Careers Services and to strengthening valued partnerships with key organisations in England, Scotland, Wales and Northern Ireland in order to address these challenges.

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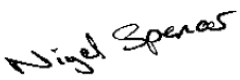

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Skills Dialogues - General Introduction

Skills Dialogues constitute a series of consultations with all major industrial and business sectors, leading to the production of high quality authoritative skills assessments within 16 broad sectors. Dialogues developed from recommendations in the 2nd Report of the Skills Task Force, *Delivering skills for all*, as a means of providing better quality information on changes in skills supply and demand at a sectoral level. They draw on research undertaken by National Training Organisations (NTOs) through Skills Foresight and other projects as well as a wide range of national research on current and future skills needs. Recognising the UK remit of NTOs the dialogue reports reflect the UK perspective as far as possible, although not all the available evidence which underpins the Dialogues is UK wide. Typically, the reports do not provide a region by region analysis but they do attempt to illustrate any major regional differences. The Skills Dialogues operate as a rolling biennial programme with the first four reports already published and the rest of the series due to appear by Spring 2002.

The purpose of the dialogues is to improve the quality of skills information available at a sector level, and to provide an effective voice for NTOs and employers in their sectors in the planning and implementation of education and training provision and in informing careers advice and guidance. They will ensure that industry sector views are well articulated and represented to major stakeholders, such as the Learning and Skills Council (LSC) and its local arms, Regional Development Agencies (RDAs) and careers services. The dialogues are designed to draw on the work of individual NTOs but to cover broader industrial groupings, so as to aid strategic planning and make the information base more manageable.

The assessments produced through the dialogues should also directly contribute to Sector Workforce Development Plans, as the evidence on skill needs will underpin proposed action and influence the nature of relationships with key partners. These plans will form a strategic statement of NTOs' proposed activities, relationships with partners and stakeholders and targets for achievement.

Each report results from a process of consultation with the main organisations in the sector to identify the key issues, and a wide ranging analysis of existing material on skills supply and demand, and factors influencing skill trends. The evidence includes sector specific analysis from the recent national research conducted on behalf of the National Skills Task Force including the Employer Skills Survey (ESS) and Projections of Employment and Qualifications by the Institute for Employment Research as well as the NTOs' own Skills Foresight research. The material is brought together into a draft discussion document for a national seminar, which involves all the key interests in the sector, such as employers, NTOs, Further and Higher Education planning, funding and qualifications' bodies, trade unions, professional associations and government departments.

The final report takes on board the comments from all those involved in the Dialogue and provides a comprehensive analysis of the skill needs and an authoritative statement about skills trends in the sector. We hope they will be useful to policy makers and planners in other parts of the United Kingdom. For example, a series of skills monitoring and forecasting exercises are being undertaken in Northern Ireland and the work on this and other Dialogues will inform the Northern Ireland research.

Overview

The food and drink manufacturing industry is amongst the UK's most vital economic sectors. Food and drink products have a tremendous influence on our lifestyle and prosperity; food and drink manufacturing alone is worth £20 billion a year to the UK economy and it employs more than 900,000 people.

The industry is not restricted to one or two regions but provides employment and wealth across the whole of the UK. It is also both a major importer and exporter; consequently success in European and global markets is essential to all but the smallest of its companies.

In recent years great improvements have been made in efficiency and productivity but - far from being complacent - both sectors are aware that more needs to be achieved.

Widespread efficiency gains have been accompanied by some reductions in the size of the industry's workforce. Nevertheless, demand for workers, both skilled and less skilled, currently exceeds supply.

Replacement of highly skilled workers is a major issue for the industry. A large number of manufacturers suffer from recruitment difficulties, especially among the most highly skilled occupations.

Many of the most serious recruitment difficulties are caused by real shortages of available people with appropriate skills and qualifications. Shortages of skilled butchers and bakers, for example, are contributing to the decline of traditional sectors.

The poor image of work in the industry is also an important factor behind recruitment difficulties. Larger employers have responded by offering more attractive conditions of employment. Improving business-education links, for example, through undertaking projects in primary and secondary schools is also seen as a positive way forward.

The Investors in People initiative has reached more people in food manufacturing than in almost any other industry. In contrast, Modern Apprenticeships are not used to any great extent.

An estimated 40% of the industry's workforce have qualifications that are relevant to their work, but large numbers of process operatives do not have any qualifications at all. Basic skills and personal attributes are of crucial importance for these workers.

The existing workforce suffers from a range of skills gaps, especially among skilled workers such as managers and craftspeople. Overcoming the skills gaps is a continuing challenge for the industry.

As might be expected, smaller food manufacturing companies tend to need more help in identifying and meeting learning needs.

In order that some of the challenges to skills development in the industry can be properly met, there is a need for additional research into some very specific skills issues.

Action plans, that highlight the response required to the skills shortages and gaps identified in this report, are contained within the Sector Workforce Development Plans that have been produced by the industry's National Training Organisations.

These are some of the main findings produced by the Skills Dialogue for Food and Drink Manufacturing and highlighted in this report.

Executive summary

The Industry

The Food and Drink Manufacturing Industry contributes some £20 billion to the UK's annual Gross Domestic Product, a figure which has been growing steadily over many years. However, increased efficiency has meant a trend towards lower employment, although there were some increases in the late 1990s. The industry now employs an estimated 909,000 people in 45,000 business units.

The industry contains many different specialist sub-sectors. Most are represented by National Training Organisations (NTOs) such as the Bakery Training Council, Dairy Training and Development Council, Meat Training Council and Seafish Training. The Food and Drink NTO represents several sub-sectors including 'Biscuits, Cakes, Chocolates and Confectionery', soft drinks and frozen foods.

Demand for skills

The overall trend in employment in the industry has been downward for at least 30 years. Nevertheless, the industry in the South West, East Midlands, Yorkshire and the Humber, North East and Wales has experienced growth in food and drink manufacturing employment over the last decade. In the foreseeable future, the expectation is for the small downward trend to continue in Northern Ireland, Scotland, Wales and all the English regions except the West Midlands and the South East. In these last two, employment levels are expected to remain stable. The reductions in numbers are expected to occur in all occupational groups.

Despite the reduction in the workforce, replacing staff is still an important issue.

The main section of the paper gives estimates of replacement demand for 11 broad occupational groups. The most important of these are:

Occupation	Estimated average annual replacement demand 1998-2009
Senior management	1700
Process and machinery operatives	3200
Skilled butchers, bakers, etc.	1200
Scientists and engineers	350

Supply of skilled workers

The supply of workers for the food manufacturing industry is lower than the demand. This is not surprising since it is wholly consistent with the state of the UK labour market.

Regarding the skills of the available workforce, the industry is less well qualified than the average of the UK population at the higher levels, though it is a little better qualified than other industries in the food production chain. A higher proportion of food and drink employees is qualified to level 2, or its equivalent, than in the whole UK population. It seems that in the better qualified sub-sectors of the industry, around 40% of the workforce have formal qualifications that relate to their jobs. However, a third of process operatives have no qualifications at all and there are two other broad occupational categories that are even less qualified than these.

National Vocational Qualifications and Scottish Vocational Qualifications have had limited impact, although recent evidence shows that progress is being made at levels 1 and 2. Many larger companies use a range of training strategies to address skills weaknesses but Modern Apprenticeships have made only a very small impression. In contrast, Investors in People has made a significant impact.

Current skills issues

Skills shortages - the problems

- Widespread skill shortages have been reported, especially among the more highly skilled occupations

- Employers report that skills shortages lead to increased operating costs, difficulties in meeting customers' needs and problems in introducing new working practices that would increase profits

The 1999 Employer Skills Survey reported that 60% of vacancies in the industry were hard to fill, although only 7% were identified as real skills shortages. More recent NTO research, using a wider definition of skills shortages, identified widespread skills shortages, especially among the skilled butcher and baker occupations.

There is no doubt that many of these vacancies are difficult to fill because of low wages and unattractive working conditions. In this case, the vacancies cannot be described as skills shortage vacancies, though the recruitment difficulties and their consequences are just as important.

Skills gaps

Some of the most important skills gaps in food and drink manufacturing are:

- basic and key skills e.g. communication and teamworking;
- technical and practical skills;
- vocational knowledge;
- generic management skills;
- IT skills among skilled workers;
- personal attributes and attitudes.

Work ethic and an interest in the job are a cause for concern and indicate that overcoming the skills gaps will continue to be a major challenge.

Skills gaps are weaknesses in the existing workforce that prevent a business from achieving its goals. Skills gaps in the food and drink manufacturing industry lead to loss of business to competitors, reductions in customer care and quality of work, and increased operating costs. Gaps in management skills and in generic skills such as communication, teamworking and problem solving, usually limit a company's ability to compete through changing and developing itself.

Examples of occupations that suffer from significant skills gaps include production workers and managers, bakers and butchers. The reasons usually given for skills gaps include the introduction of new working practices and technology, but also simple failures to train and develop the workforce. High levels of staff turnover exacerbate the problems. Many of the larger employers tackle these problems, often quite successfully, but a significant proportion of employers openly admits to taking no action.

Issues arising

1. The skills shortages and recruitment difficulties in skilled baker and butcher occupations are mitigated by the adoption of alternative production methods. However, the difficulties remain so severe that they are contributing to the downward trend in the numbers employed in the skilled occupations. The need for lowly skilled workers is also decreasing but there are increasing needs for level 2 process and machinery operatives. Basic skills are very important to the development of level 2 vocational qualifications.

2. Qualification levels are low throughout the industry. The reasons are failures to train, lack of interest and the deeper seated concerns over relevance of qualifications, public funding of lower level qualifications for adults, and the need for 'academic', vocational and basic skills qualifications.

3. The low commitment to Modern Apprenticeships (MAs) is a serious issue. The need to make MAs more attractive, and the possibility of alternative qualifications and initiatives at level 2, are questions that are under discussion.

4. The main barriers to training are prioritising time and financial resources and, in some cases, the withdrawal of college-based provision. This withdrawal of provision has not been accompanied by the development of attractive alternatives. Some personnel managers have suggested that there may be a case for legislation to ensure adequate staff development over and above that which is required to comply with food safety legislation.

5. Skills gaps are linked to skills shortages and low qualification levels. Personal attributes of employees, such as a work ethic and an interest in the job, underlie the ability to develop skills. The fact that these attributes are a cause for concern in many parts of the industry suggests that overcoming the skills gaps will continue to be a major challenge.

6. Skills shortages and gaps can often be much more damaging in smaller businesses because they have a proportionally greater impact. Small businesses also need more help in identifying and planning to meet learning needs.

7. The food and drink manufacturing industry is important as an employer and contributor to local wealth in all the UK's countries and regions. There are regional differences in skills shortages and gaps but we are some way from understanding the complexity of regional characteristics.

8. The decline in the supply of suitably skilled bakers and butchers is sufficient to contribute to the overall decline in the traditional sectors. Shortages of skilled workers also militate against the survival and development of both small businesses and modern niche suppliers. There may well be a continuing need for limited numbers of traditional craftspeople to contribute to the development of modern production systems.

9. Manufacturing processes are said to fall into 3 broad types. These are identified as continuous, batch, and craft production. The reason for highlighting this issue is that it is possible that benefits could be gained from research that focuses on skills needs linked to different production methods.

10. Many of the issues identified in the report are already the subjects of action by companies, NTOs and governments. However, there is a need for more information, and for a greater understanding of some of the issues so that several specific information needs can be identified.

11. The response to the skills and needs will be nationally driven but locally funded by industry and the Local Learning and Skills Councils, and the equivalent organisations in Northern Ireland, Scotland and Wales. Sector Workforce Development Plans, produced by the industry's National Training Organisations highlight the need for action and identify the partnerships that will address the issues.

Introduction

1.1 Background

The purpose of a Skills Dialogue is to generate useful information by bringing together the best thinking and the most up-to-date information on skills trends and issues in a broad industry sector. This report presents the findings of the Skills Dialogue for Food and Drink Manufacturing. It has been researched, developed and consulted on by Pye Tait Limited.

The report focuses on the trends in employment in food and drink manufacturing and on the demand for, and supply of, skills in the industry. It also explores the important skills issues that are topical in the industry today.

The emphasis in a Skills Dialogue is to focus on the skills issues as they are now, and as they are likely to develop in the future. Skills Dialogues do not describe the actions that are required to address the skills problems that have been identified. This is the function of the Sector Workforce Development Plans that have been produced on behalf of industry sectors by their National Training Organisations (NTOs).

The NTOs that have produced Sector Workforce Development Plans on behalf of food and drink manufacturing are:

- Bakery Training Council;
- Dairy Training and Development Council;
- Food and Drink National Training Organisation;
- Meat Training Council;
- Seafish Training.

The data that underwrites this report is based mainly on the findings of the UK Employer Skills Survey (ESS) and on the Skills Foresight Research undertaken by the NTOs.

The ESS was conducted as part of the work of the Skills Task Force. This has previously been reported in an aggregated form relevant to all industries, but the data relating to food and drink manufacturing have not previously been available for separate analysis.

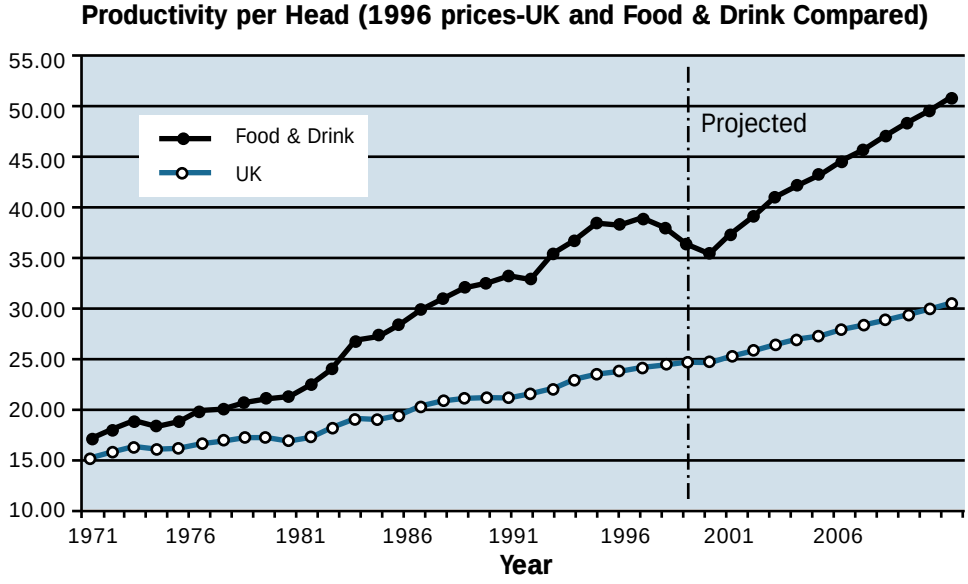
Considerable interest is likely to be generated by this new information on the sector, and by the data collated from the NTO Skills Foresight and Sector Workforce Development Plans that have not yet received wide attention. Nevertheless, the most important parts of the dialogue report are sections 5 and 6, which provide a strong focus on the issues that arise out of the findings reported in the earlier sections.

1.2 Food and drink manufacturing industry

The annual contribution of the food and drink sector, to the UK's gross domestic product (GDP), exceeded £20 billion in 1999. There is a highly positive trend in the industry's contribution to GDP and the industry delivers substantial improvements in efficiency every year. The data presented in the graphs are actual figures for 1971-1998 and forecasts thereafter.

Trend in food and drink manufacturing contribution to GDP (£ millions at 1995 prices)

Efficiency in food and drink manufacturing



Source: IER/Cambridge Econometrics

Main focus

The industry processes and manufactures home-grown and imported foods, soft and alcoholic drinks to serve domestic and export markets, both of which are intensely competitive. Many food manufacturing companies run vertically integrated operations so that import/export, distribution and wholesaling are integral parts of their work. In some sectors, notably bakery and butchery, both traditional and emerging specialist producers process and retail on the same premises. Integration can extend even further. In the poultry sector, for example, there are significant examples of processing companies that are heavily involved in primary production.

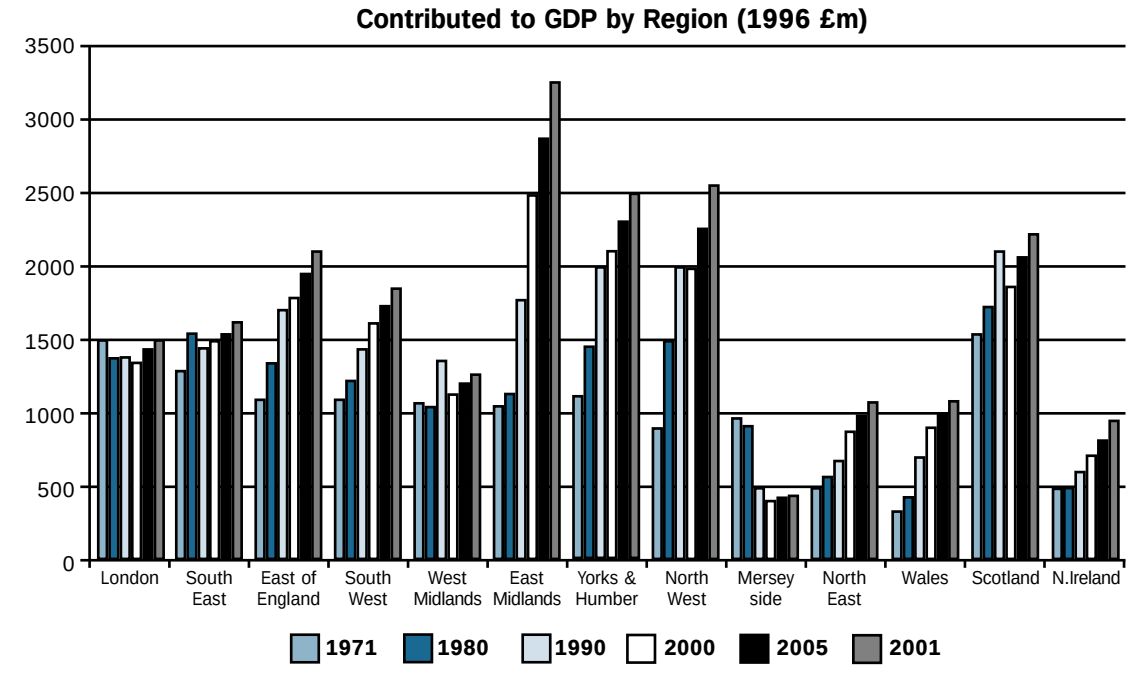
Notwithstanding the integrated nature of the sector, the primary focus of this Skills Dialogue is the skills needed now and in the future in food manufacturing and processing.

The food and drink manufacturing industry is well distributed throughout the UK, although there are obvious geographical concentrations of some industry sub-sectors, such as whisky producers, fish catchers and processors. Some other sub-sectors of the industry are traditionally stronger in certain areas so that concentrations can be recognised in the North West, Yorkshire and Humberside, South West, Northern Ireland and Scotland.

This distribution ensures that all UK and countries and regions, without exception, have strong interests in the industry's success and, by inference, in the skills of the workforce that it employs.

The contribution of food and drink to regional GDP is shown in the following chart. For each region it shows the contribution at 10 year intervals over the last 30 years and forecasts of the contribution as it develops over approximately the next 10 years.

Regional contribution to GDP



Source: IER/Cambridge Econometrics

Diverse employment

The food and drink manufacturing sector comprises some 45,000 business units that employ 909,000 people. Employment in the sector is amazingly diverse encompassing, single handed in-shore fishing boats and milk roundstaff at one extreme and fully integrated multi-national companies employing more than 20,000 people, in a widely varied range of occupations, at the other. In between there are large numbers of small to medium size enterprises, many of which are involved in traditional food production. These are characterised for example by family bakeries and butcher shops. Supermarkets are high profile competitors in the retail markets and are also recognised to be very powerful as customers of food manufacturers and processors.

Brief descriptions of the sub-sectors are given in the following sections.

1.3 Bakery

The majority of the UK's 3,500 bakery companies are involved with all aspects of production, distribution and retailing of a wide range of bread and bakery products.

The sector has been changing steadily for many years. The growth in the number of 'in-store' supermarket bakeries has displaced many of the traditional independent craft bakery firms. Many of the small firms that remain are finding it extremely difficult to compete. In contrast some substantial chains of baker shops and many small specialist bakeries are continuing to compete quite successfully on the high street. There is increasing reliance on 'bake-off' products and many bakeries have evolved to generate a significant proportion of their turnover by selling sandwiches and other snack foods.

The sector employs some 145,000 people, of whom around 33% are exclusively employed in production. Many more are employed in dual roles that involve both baking and selling to retail customers.

1.4 Dairy

The sector has been rationalising and consolidating since deregulation in 1994. It continues to experience reductions in capacity, mergers and acquisitions, rapid technological and operational change and changing customer requirements. In the case of the doorstep delivery business, customer numbers are continuing to fall.

The sector now comprises a number of very large companies offering wide product ranges, and much larger numbers of SMEs. The major supermarkets are the important customers for the largest firms while many of the smaller companies are meeting the demands of specialist or niche markets. Benchmarking evidence suggests that the sector is already comparatively efficient when compared to Europe as a whole.

The sector employs nearly 40,000 people in milk processing, manufacture, and distribution occupations. These numbers have been falling over recent years but it does appear that the trend may have stabilised.

1.5 Food and Drink

The food and drink sector, as represented by the Food and Drink NTO comprises several distinct sub-sectors. Among the larger of these are 'Biscuits, Cakes, Chocolate and Confectionery', soft drinks, and frozen foods.

The sector comprises nearly 6,500 business units that employ around 368,000. More than 70% of the businesses employ fewer than 25 and a further 20% employ under 200. Eight percent are larger companies but these larger companies provide nearly two thirds of the jobs.

A significant proportion of businesses employs casual staff from time to time. This is due in part to the seasonal fluctuations in demand for food processing but it is apparent that casual employment is increasingly required to assist in overcoming skills shortages and gaps.

1.6 Meat

The meat sector comprises some 20,000 businesses engaged in retailing, meat processing and manufacturing, slaughtering and livestock auctioning. Fully 90% of the businesses are retail operations, of which more than 35% are supermarkets. UK consumers spend nearly £11 billion on meat per annum.

Vertical integration is a feature of the meat supply chain as many manufacturers are increasingly involved in wholesaling and many are linked to slaughterhouses. In the poultry sector the integration extends into production so that it is not uncommon to find operators managing the rearing of poultry and the whole process through to wholesaling.

The sector employs more than 220,000 people and most sub-sectors are forecasting growth in employment at the present time (exceptions are auctioning, rendering and independent retailing). It should be noted that this part of the report was written at the height of the foot and mouth crisis. It is still not possible to determine if this will have any significant influence on future employment prospects in the industry.

1.7 Sea fish

The sector employs around 136,000 people in 18,700 businesses. The Sea fish Sector Authority recognises four distinct sub-sectors of the sector. These are:

- catching;
- processors and merchants;
- retailers and fish mongers;
- frying and restaurants.

A particularly challenging feature of the catching sector is the way it has to deal with reducing fish quotas which put ever tighter limits on the amount of fish that can be caught. The impact on the catching fleet is obvious and there is some evidence of a knock on effect on the port-based processing and merchanting sector, especially in North East Scotland.

1.8 Change in food and drink manufacturing

The changes that have taken place in the bakery and dairy industries are typical of wider change taking place throughout food and drink manufacturing. The Employer Skills Survey case study research has contributed more evidence of the changes. It demonstrated that, in a cross section of vigorous and pro-active food manufacturing companies, the drivers of change were:

- competitive pressures;
- changing patterns of consumer demand;
- regulation;
- internal drivers such as changes in ownership, strategy or management.

These drivers of change are equally applicable in all sub-sectors of the industry but it is the increasing use of technology and, in some cases, the development of new working practices that allows the change to take place.

In the sectors that have a tradition of craft production and hand finishing of products, competition from the supermarkets has been a dominant influence and strong driver of change. The buying power of the supermarkets, and the pressure they exert on manufacturing industry to reduce costs, have also contributed to the forces for change throughout the industry. Regulation in areas relating to food safety continues to drive change throughout the food and drink manufacturing industry, but nowhere more strongly than in the meat industry.

On balance, the findings of the ESS suggest that the drivers and enablers of change, severe competition in continuous production operations and continuing shrinkage in the small independent sector, will continue to be associated with growth in more batch production methods.

An additional perspective comes from evidence from the dairy industry, linked to commentaries on developments in meat manufacturing and fish processing. The industries have been responding to pressures by rationalisation, mergers and acquisitions so that small to medium sized independent companies are reducing in number while larger businesses are becoming even more dominant. This frequently allows for increased capital investment in large scale automated production capacity.

Many of the successful smaller businesses choose to compete through adopting a high degree of specialisation.

The involvement of the industry in import/export and a truly global market is worthy of re-emphasis. The competitive pressures and associated risks of trading internationally are significant.

Demand for food and drink manufacturing skills

This section opens by reviewing the skills in use in the industry today. Current numbers, vacancies, national and regional forecasts are considered next. Changing skill priorities and the expectations of change in the occupational mix are then explored. The issue that might be most important - that of the future demand for skilled workers to replace leavers - is considered at the end of the section.

2.1 Skills in the industry today

In such a competitive industry management skills are of crucial importance in all types and sizes of company. The essential areas of management expertise include:

- strategy;
- finance;
- marketing and sales;
- operations;
- people management.

The ESS case studies suggest that, in the most go-ahead companies at least, managers are having to learn to delegate and that junior managers and team leaders are having to develop to be able to discharge these responsibilities. Supervisors, who are tending more and more to function as team leaders rather than traditional supervisors, now need production process management skills, and a range of leadership and staff management skills.

Literacy skills

Many generic skills have been identified as essential to the industry's continued success. For example, in addition to the strong and effective communication skills that are essential in managers and team leaders, it is imperative that operatives possess basic literacy skills that enable them to cope with product labelling, basic record keeping and communications in their work groups.

Other generic skills required are:

- numeracy;
- IT and computing;
- team working;
- taking responsibility;
- problem solving;
- an interest in training and development;
- an ability to cope with change.

Personal attributes

An interest in personal development and an ability to cope with change are as much an issue of attitude as skill. Employees' personal attitudes and attributes are a big issue for the industry.

A positive work ethic and an interest in the job are often identified as attributes that are lacking and it is clear that these underpin the ability to perform at any level in the industry. The ESS states that these factors 'often underlie proficiency in the range of generic and vocational skills needed in food manufacturing'. Personal attitudes and attributes underpin the ability to perform the most basic tasks and to learn the vocational skills and knowledge required in the more highly skilled occupations.

Vocational skills

The vocational skills and knowledge needed include:

- food hygiene;
- health and safety;
- understanding quality;
- understanding the business;
- breadth of skill to facilitate flexibility;
- maintenance skills and multi-skilling;
- manual skills and dexterity.

Multi-skilling is a term that has become much more widely used in recent years. There is a tradition of multi-skilling in some food manufacturing where workers are skilled in both production and customer service roles. This type of multi-skilling is becoming less common whereas there are signs that production workers are sometimes being required to develop machinery operation and maintenance skills in addition to their more traditional manual skills. This new mix of multi-skills is expected to become increasingly common.

It must be recognised that the term 'manual skills and dexterity' encompasses skills at a multitude of different levels. For example, the knife skills of the craft butcher or fishmonger and the artistic and sculpting skills of the craft confectioner are finely honed and are usually associated with a depth of knowledge of raw materials and products. This level of skill can be contrasted with the skills required of a butcher or confectioner on a production line, where he or she may only be required to carry out a very limited range of repetitive tasks. The manual skills of staff in elementary production operations may only need to be very basic, although there are many occupations that require above average levels of strength and physical fitness.

Machinery operation skills have become more important as levels of automation increase and sales and selling skills are probably even more important in the industry now than they were in the days when production and retail sales were largely integrated.

2.2 Employment estimates

A reasonable indication of demand for workers can be arrived at by adding the numbers of vacancies in the industry to the numbers of those currently employed. The numbers employed need to include those in employment, the self-employed, agency and casual workers.

Some of the limitations of this approach need to be stated. Concentrating on numbers takes no account of the levels of skills possessed by the workers - a tacit but unlikely assumption is made that the workers are all appropriately skilled.

The extent to which workers are efficiently employed is ignored, as is the possibility that there is evidence of chronic over or under-staffing. It is likely that the numbers counted in occupations that are suffering from chronic shortages of skilled workers, will be lower than are really needed.

The sector's NTOs estimate food and drink manufacturing's total employment to be 909,000 at the end of the year 2000.

The estimates made by each NTO, as published in their current Workforce Development Plans, are shown in the following table.

Numbers employed by sub-sector

Sector	Numbers
Bakery	145,000
Dairy	40,000
Food and Drink	368,000
Meat	220,000
Sea fish	136,000
TOTAL	**909,000**

These estimates include the numbers employed in food production and processing occupations in companies that are primarily involved in distribution, wholesaling and retailing, as well as manufacturing companies. This is especially true in the bakery, dairy, and meat sectors where companies tend to be highly integrated.

Numbers by occupation

An indication of the proportions employed in many of the main manufacturing occupations in the sector is given in the following table. This is derived from Labour Force Survey data prepared for the 'Projections of Occupations and Qualifications' by the Institute of Employment Research. Occupations have been grouped so that they are as meaningful as possible to the food manufacturing sector. Numbers employed exclusively in retailing and other occupations outside the manufacturing sector have, so far as is possible, been excluded. Thus the total numbers are significantly lower than those given previously for the whole industry.

Occupational mix in food manufacturing

SOC* 2000	Occupations	Numbers in 1998	Percentage
81	Process and machinery operatives	90181	17.6
54	Skilled butchers, bakers etc.	60453	11.8
92	Basic admin./sales/cleaning etc.	52222	10.2
11+12	Senior management	51625	10.1
41+42	Administrative and secretarial	46178	9.0
91	Bottlers, canners, labourers, packers	45856	9.0
82	Drivers and transport operatives	42231	8.3
52	Skilled metal/electrical trades	30590	6.0
71	Sales occupations	28745	5.6
35	Associate professional occupations	24757	4.8
21+31	Scientists and engineers	13394	2.6
	Other	25784	5.0
	TOTAL	**512016**	**100.0**

**SOC 2000 numbers allow jobs to be classified or grouped by 'Standard Occupational Classification'*
Source: IER/LFS

Identifying vacancies

It should be clear that the number in employment in the industry is not, in itself, indicative of the total demand for people. The number of vacancies must be added to the number in employment to arrive at a reasonable estimate of demand. Unfortunately, the vacancy data that is available is not appropriate for use in this way. The two sources referred to are the Employer Skills Survey (ESS) and reports of vacancies from the Employment Service.

The ESS attempted to identify vacancies in the sector and produced an estimate of 9,500 vacancies in September 1999. Nearly 71% of these were for production and process operatives, 7% were in sales and related occupations and 6% were in craft occupations. The overall level of vacancies is virtually the same as that experienced by the wider manufacturing sector, but it represents a lower level of vacancies than in almost any other UK industry. Unfortunately, because this research was conducted in 1999, the figure cannot simply be added to the numbers in employment in 1998.

The numbers of vacancies advertised in job centres in 1998 offer a partial solution in that the time of origin of the data is appropriate but the available data relates to quarterly totals. There is a further weakness in that although many food and drink employers do advertise in job centres, many vacancies are not identifiable in this way.

Vacancies advertised in job centres, 1998

Occupations	Advertised vacancies
Skilled butchers, bakers, fishmongers etc.	3,500
Process and machinery operatives	8,000
Bottlers, canners, packers etc.	20,000

Source: Labour Market Trends

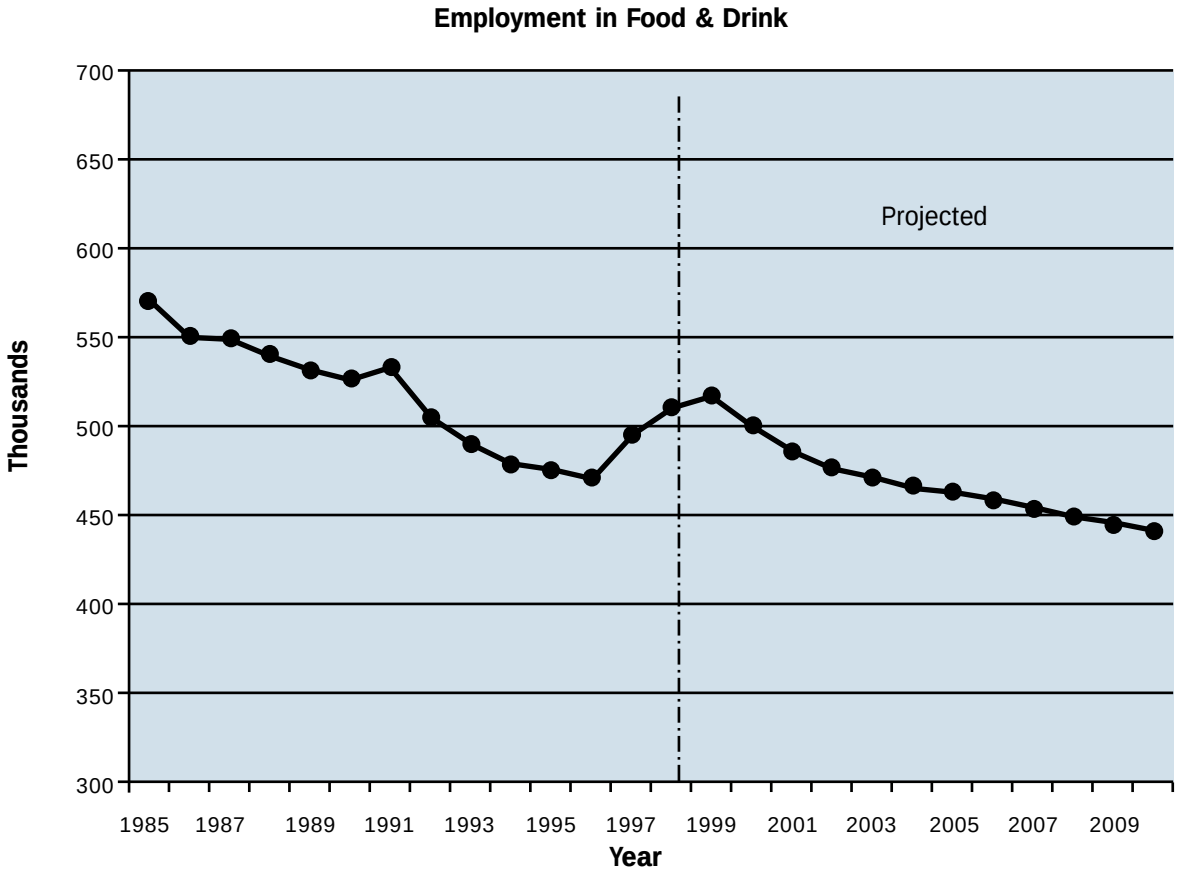
The vacancy data are not precise enough to be added to the numbers in employment to establish a reliable indication of demand. The value is that it confirms that the total demand was somewhat higher than numbers that were working in the industry at the time.

2.3 Employment forecasts

Trends

The substantial efficiency gains that have been made in the sector have had more impact on employment than the growth in demand for food. Thus, overall employment levels in the sector are falling as shown below.

The national trend in employment in food and drink manufacturing



Source: IER

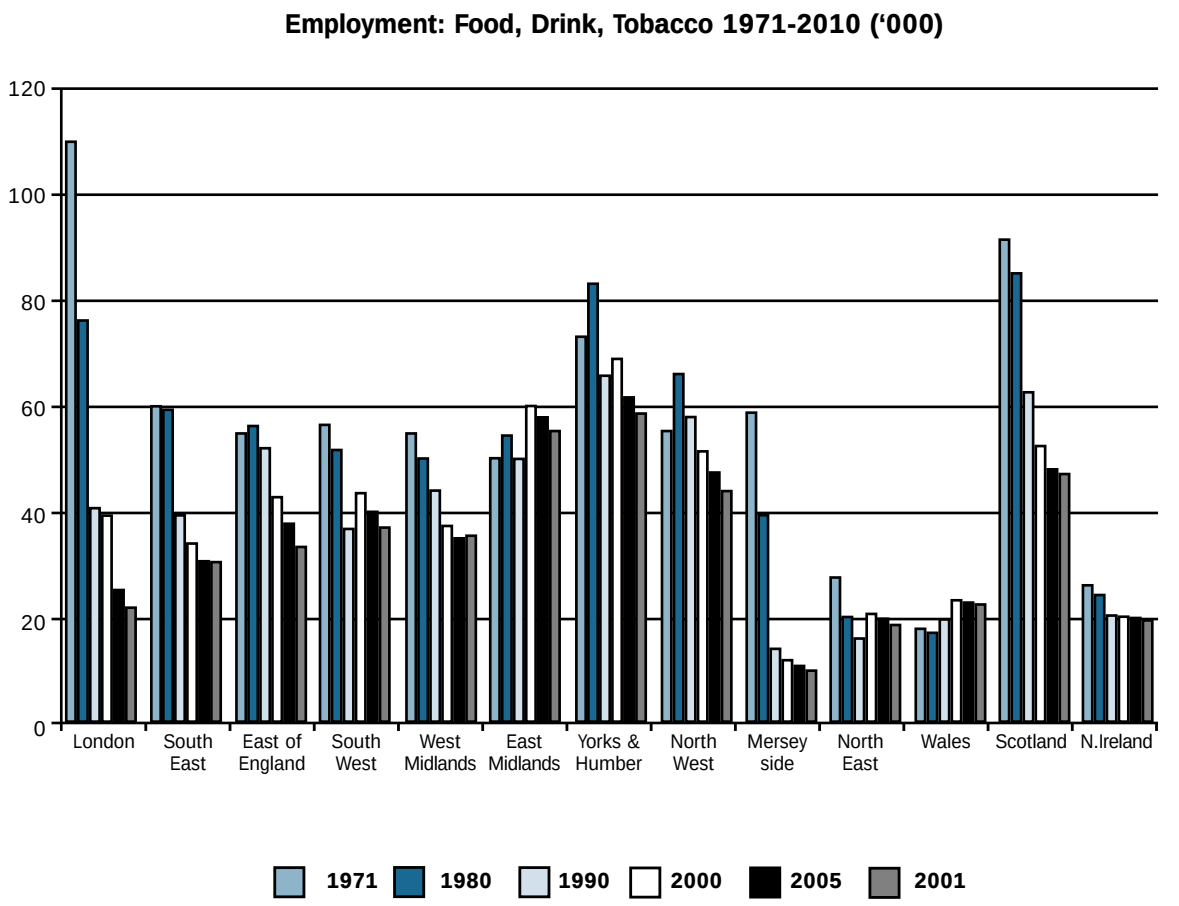
The slow but steady downward trend is forecast to continue, in spite of the fact that recent statistics show quite strong evidence of growth.

2.4 Employment in the regions

The regional trends generally reflect the national picture, although twenty years ago reductions in employment in the industry were quite dramatic in London, Scotland and the South East.

In the last 10 years the South West, East Midlands, Yorkshire and the Humber, the North East and Wales have reversed the trend as they have all shown some growth in employment in the sector. However, on the basis of the forecasts, all regions except the West Midlands and the South East are expected to follow the trend over the next 10 years. Employment in food and drink manufacturing in these two regions is expected to remain broadly stable.

Employment trends in the regions



Source: IER

2.5 Changing skill priorities

Earlier sections have identified that the industry's efficiency has continued to improve, and that there is a tendency for increasing use of automation and batch production methods. The impact on overall employment in the industry has already been illustrated but the implications of these changes on the needs for specific skills have yet to be considered.

The increasing use of technology and automation are associated with a reduction in demand for some of the traditional skills. They might also be expected to generate a need for more scientific and engineering skills at both professional and technician levels, although these increases in need are quite small scale. In addition, there will be a need for a proportion of the production workforce to become more technically able. It may be anticipated that there will be a limited demand for staff with the ability to train up to become truly multi-skilled and so to become capable of working in the production team and on machinery setting, maintenance and problem solving.

Outside these skills areas, new working practices (which are often associated with batch production methods) and increasing use of technology are changing the nature of technical and practical skills that are required. New working practices are increasing the emphasis on team working and employee flexibility within teams so that the skills and attitudes necessary for teamwork and flexibility will continue to become increasingly important. The ability to change quickly and to rapidly learn to make new products will also be very important in batch production. These changes in need will be associated with reductions in the range of opportunities that are available in the industry for unskilled workers.

Increasing regulation will continue to require greater knowledge of food safety issues in all categories of employee, and may well contribute to the need for higher levels of basic skills in production workers who must, for example, be consistently able to interpret product labels.

It must be noted that there are some circumstances where skills are not changing very much. For example, boning meat and filleting fish are knife skills that are still in strong demand and there is limited scope for replacing them unless or until technology offers new and affordable solutions.

Secondly, the skills needed may not be changing very greatly in businesses that choose to compete by using traditional craft production methods although sales and customer service skills are increasingly recognised as a key to future success in these businesses.

The importance of management skills has already been highlighted in section 3.1. Ongoing change in the industry will further increase the importance of management skills but it is also clear that supervisory and leadership skills are increasingly being recognised as pivotal in future competitive success.

In summary, the need will be for a workforce that is more technically able overall, is well able to work flexibly in teams and has higher levels of basic skills than in the past. Workers will also need to be able to change and develop rapidly to meet the needs of new products or process variations. The workforce will still need to be highly skilled in some specific tasks that require high levels of dexterity. In many businesses, sales and customer service skills will be increasingly important while supervisory, leadership and management skills will be essential for the long term success of all sector businesses.

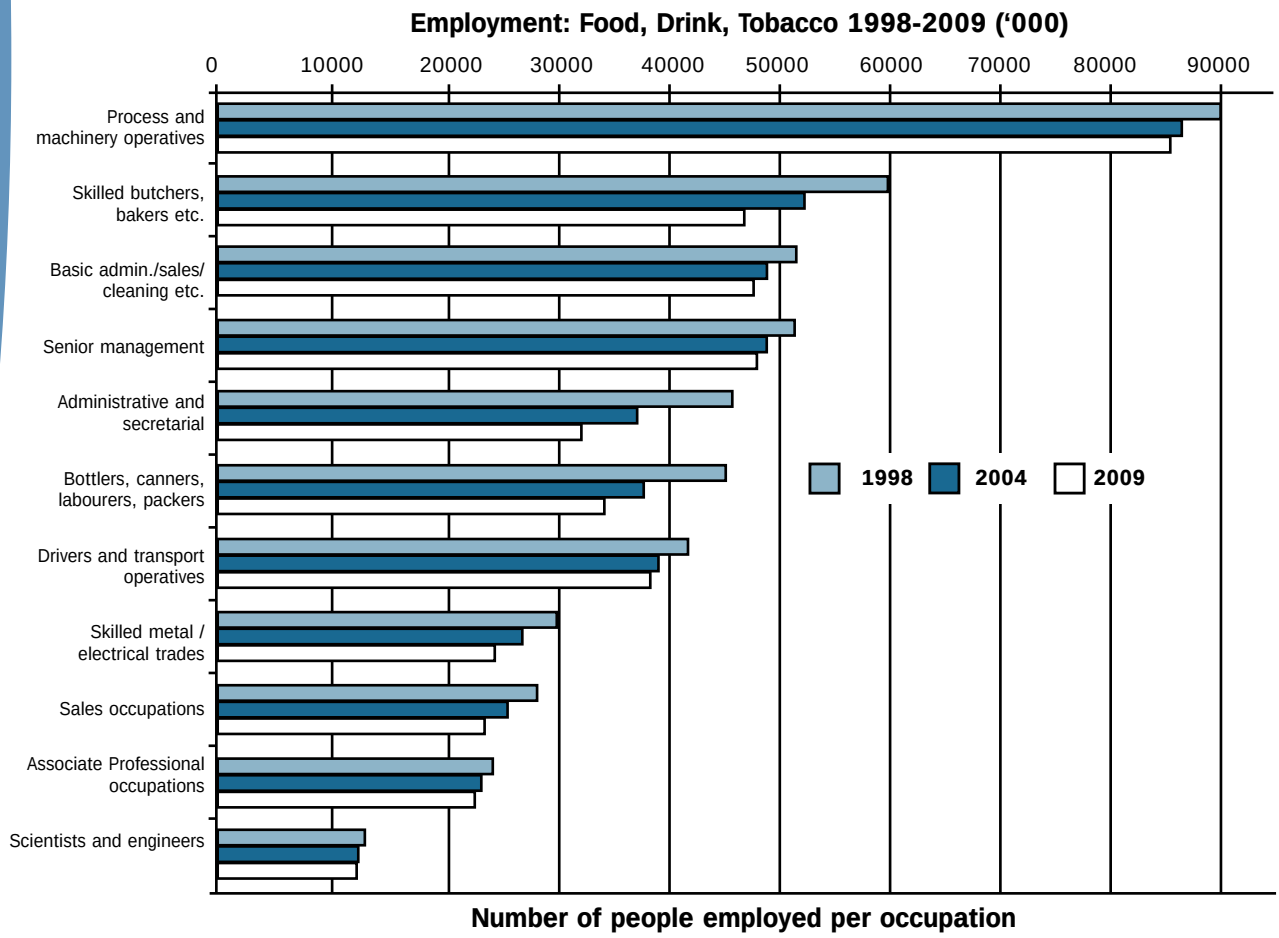
Workers with poor attitudes to work will be increasingly difficult to employ.

Expectations of occupational change

A representation of the expectations of occupational change in the sector, as forecast by the 'Projections of Occupations and Qualifications' (IER) research, is given below.

The forecast is for a reduction in numbers to occur in all occupational groups. The greatest reductions are predicted in administrative and secretarial occupations. Within the production workforce the greatest reductions in numbers are anticipated in unskilled occupations.

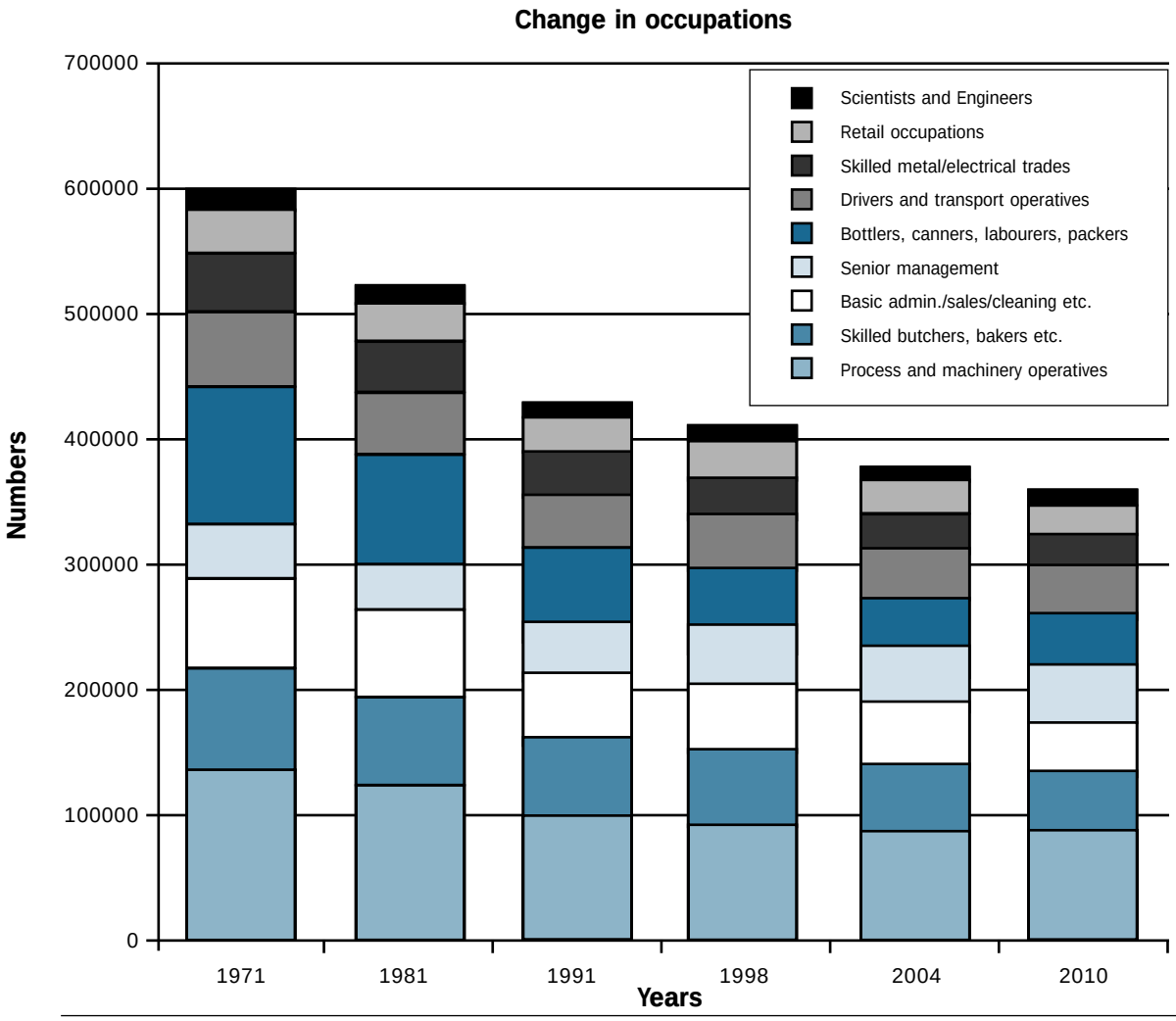
Forecasts of occupational change



Source: IER

An alternative representation of the data demonstrates how reduction in numbers in each broad occupational area has been contributing to the overall shrinkage of the industry's workforce. In interpreting the chart, note that the last three columns represent forecasts and that the time intervals between the selected years vary.

Occupational change in a shrinking workforce



Source: IER

Overall it would seem that the forecasts are for the workforce to continue to contract but more slowly than in recent years. The charts show that in the major production occupations the reductions are forecast to be quite marginal, as indeed they will be in technical, scientific and supporting occupations.

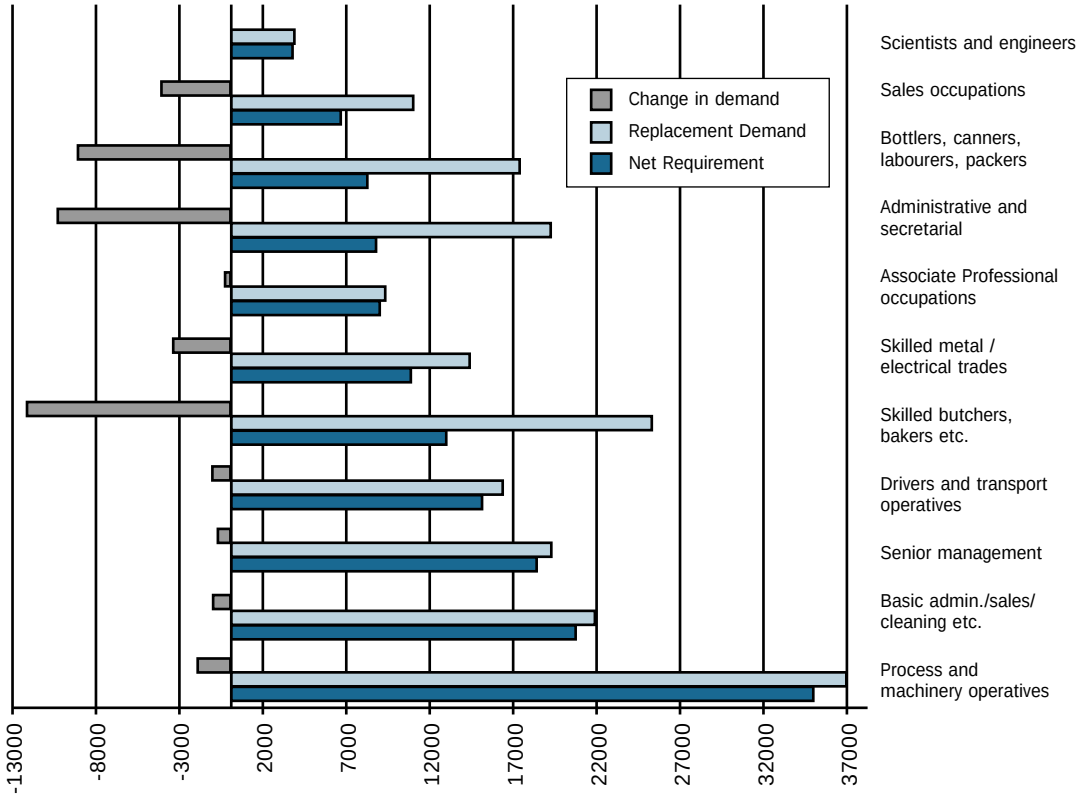
Suggestions that the workforce is still expected to contract, in spite of an apparent reversal of the trend in recent years, might lead to an assumption that replacing workers is not a major issue. This is not the case so replacement demand is the focus of the next section.

2.6 Replacement demand

One estimate for the replacement demands for workers comes from the 'Projections of Occupations and Qualifications' project undertaken by the Institute of Employment Research as a result of the recommendations of the Skills Task Force. Using this source ensures that data is comparable with skills dialogues that are being carried out in other industries, but some of the data does need to be scrutinised by industry experts. See the note concerning alternative estimates of demand.

Replacement demand

Net Requirements in the Food and Drink sector (1998 - 2009)



Source: IER

Calculations based on the forecasts allow estimates to be made of the annual replacement demands in the specific occupational categories. These are given in the following table.

Estimates of average annual replacement demand

Occupation	Estimate of average annual requirements 1998-2009	As a percentage of average requirements from 1991-98
Scientists and engineers	350	67
Sales occupations	600	52
Bottlers, canners, labourers, packers	750	97
Administrative and secretarial	800	47
Associate professional occupations	200	87
Skilled metal/electrical trades	1000	77
Skilled butchers, bakers etc.	1200	55
Drivers and transport operatives	1400	81
Senior management	1700	66
Basic admin./sales/cleaning etc.	1900	75
Process and machinery operatives	3200	105

The estimate of average annual requirements is indicative of the numbers that will be needed in the industry in the next 7-8 years. It might also be reasonable to suggest that these numbers indicate how many people are needed to succeed in appropriate training and education programmes in the short term.

The table also suggests that the demands for new workers in the current decade may be generally quite a lot lower than in the last one. The exception is for workers in the process and production operations that are at the heart of the industry. In these cases demand is expected to be slightly higher than in the period 1991-1998.

Alternative estimates of demand

The NTOs' Skills Foresight reports for the year 2000 offer an additional perspective. The Meat Training Council refers to losing more than 1,000 butchers a year to retirement. The Bakery Training Council estimated a need for 1,150 new skilled bakers each year so that these two sectors present data that indicates that the need for skilled workers may be rather higher than the estimates of average annual requirements given in the table.

The explanation rests in underlying assumptions that are being made. The IER data is based on the assumption that established trends will continue. However, both the MTC and the BTC recognise that shortages of skilled staff are contributing to the trend. Their estimates are indicative of the numbers required to overcome existing skills shortages and hence to reverse, or at least to counter, the trend.

Supply of skills

This section explores the supply of skills, firstly in terms of the availability of people, and secondly in terms of the evidence of the numbers and levels of qualifications that they hold. Trends in qualifications are considered in a national, all-industries, context because of the limited availability of data on qualification trends within the food and drink manufacturing industry. Since the supply of skills to the industry is heavily dependent on participation in education and training this issue is also explored so far as is possible. The section concludes by presenting a summary of the qualifications that are available to the industry.

3.1 Numbers available

The numbers currently available to work in the industry are indicated by the number already in employment and the number of people with appropriate skills who are currently unemployed. The number in employment (909,000) was established in the previous section.

Data from the Labour Force Survey indicates that there is a small pool of unemployed people that might be available to fill vacancies. The pool amounts to a little over 3,000 process operatives and 3,000 skilled workers such as butchers, bakers etc. The pool of unskilled workers is much larger, in excess of 120,000. However, it should be noted that there is nothing to suggest that these people have food industry specific skills or any interest in working in the industry.

The data takes no account of the numbers who currently work in the industry but who are under-employed. This situation can occur when skilled workers find themselves doing less skilled work, perhaps because of changing working practices, or when part-time workers are not able to work as many hours as they would like.

The data suggest that supply of people is somewhat lower than the demand. This is entirely consistent with the state of the UK labour market, which is currently recognised to have the lowest numbers of unemployed people for 25 years. The extent to which this is reflected in real skills shortages is discussed in section 5.

Numbers available in the future

The previous section offered estimates of the numbers of new workers that will be required for the industry in the next 7 years, in the context of a slight reduction in the overall size of the workforce. It is necessary to confirm that there can be sufficient supply of workers to meet this demand.

Office of National Statistics data shows that the national workforce is projected to grow by 5% within 10 years. Growth will come from an increase of 7% in the working population aged 16-24 and increase in the proportion of women in work. A note of caution needs to be sounded over the fact that the number of workers aged between 25-44 will decline by 9%. This suggests that, provided the industry can ensure that it is successful in recruiting enough of the young working population and high proportions of women, the supply of people should be sufficient.

3.2 Workforce qualifications

Unfortunately, knowing the absolute numbers of workers that are available and required in a particular workforce is only a small part of the skills issue. It takes no account of the capabilities of people to do the work that is required of them, so the measure is far from perfect as an indicator of supply of skills. The extent to which the workforce is qualified and experienced to do the work that is required of it is an equally important issue.

The table shows the highest levels of qualifications held by the sector's workforce and compares these with the qualifications held by the wider UK population.

Highest qualifications held by employees in food and drink manufacturing

Qualification level	Food and drink sector (%)	UK whole Population (%)
Degree	8.7	14.3
NVQ/SVQ 4, HNC	3.6	4.7
NVQ/SVQ 3, NC, C&G Adv., A level	12.2	13.4
NVQ2, Trade Apprentice, C&G Craft	14.9	12.3
GCSE/O level	18.6	18.5
NVQ/SVQ 1 or equivalent	8.4	0.4
Other	15.7	23.9
None	17.9	12.5

Source: Labour Force Survey

The data demonstrates that the sector is less well qualified than the average of the UK population at the higher levels but that this is compensated to some extent by a higher proportion of people qualified at level 2 or its equivalent. The Food and Drink NTO has highlighted the fact that qualifications in food and drink manufacturing, though lower than the average of the UK population, are higher than in agriculture and hospitality, industries that operate at opposite ends of the chain of food production.

Most of the industry's NTOs have recently published research findings relating to qualifications in their sectors. Summaries of these findings are given below as they add an additional perspective to the issue of qualifications.

Comparison of the tables for the three industries will demonstrate different emphases in the data. This is because of each NTOs' expert understanding of what is happening and what is required to happen in respect of qualifications in their specific industry or sector.

Workforce qualifications in the bakery industry

Occupation	Qualification level	Percentage qualified
Craft baker	3	15
Craft baker	2	26
Other production workers	2	5
Sales staff	2	4
Proprietor / Manager	3	40

Source: 'Bakery Industry Education and Training Targets', BTC, 1999.

The table shows that about 40% of the industry's key workers are formally qualified for the work that they do. This is reconcilable with the 'highest qualification' figures given in the previous table.

Workforce qualifications in the meat industry

Business category	Employees holding meat hygiene certificates (%)	Employees holding NVQ/SVQ levels 1 or 2 (%)	Managers with management qualification (%)
Wholesale	47	n/a	43
Retail: independent	88	17	46
Retail: in-store	88	11	50
Manufacturing	60	24	29
Abattoir	78	n/a	75
Whole industry*	58	14	39

**Whole industry figures include employees in retail occupations.*
Source: 'Meat Industry SWDP', MTC 2001

This table suggests that the proportion of qualified managers is similar in the meat and bakery sectors. However, it is not possible to make other comparisons because of differences in the ways the data have been collected and presented. It is not possible, for example, to identify qualification levels in specific occupational categories.

Workforce qualifications in the sea fish processing industry

Qualification	Workforce holding the qualification
Health & Safety	5%
Food Hygiene Basic	27%
Food Hygiene Intermediate	< 1%
Food Hygiene Advanced	1%
NVQ/SVQ Food & Drink Manufacturing level 1	2.5%
NVQ/SVQ Food & Drink Manufacturing level 2	5%
NVQ/SVQ Food & Drink Manufacturing level 3	< 1%
Other training (e.g. first aid, HACCP)	3%

Source: Sea Fish Industry LMS, Seafish Training and Standards, 1999

The levels of qualification reported by the Food and Drink and Dairy NTOs are quite similar to those reproduced above.

Exploring qualification levels

Higher level qualifications such as degrees, HNCs and NVQs/SVQs at level 4 clearly have a place in the industry and are important to the industry's future development. Unfortunately, it has proved impossible to source data that is sufficiently detailed to allow a deeper and comprehensive analysis of the higher level qualifications that are appropriate for scientists, engineers and senior management roles.

The Skills Dialogue for engineering, 'An Assessment of Skill Needs in Engineering', DfEE, 2000 suggests that there are sufficient graduate engineers being produced to meet needs. HESA data suggest that the universities are also producing enough graduate food scientists, at around 600 per annum.

At lower levels it appears that there are insufficient engineers qualified at intermediate level. The numbers of relevant food science or technology qualifications that are being awarded by colleges of FE are so small that the Further Education Funding Council counts food manufacturing qualifications in a category that includes the hospitality industry.

National Vocational Qualifications and Scottish Vocational Qualifications have had very limited impact in the sector, although there is evidence of better progress in recent years. The table compares the food and drink workforce with the UK population in terms of the proportion who had NVQs/SVQs as their highest qualification in 1999.

NVQ/SVQs as highest qualifications

NVQ/SVQ level	Food and drink sector (%)	UK whole population (%)
Level 4	<1.0	<1.0
Level 3	1.7	1.5
Level 2	3.4	1.9
Level 1	1.0	<1.0

Source: Labour Force Survey

Evidence of increasing participation comes from the Food and Drink NTO's Sector Workforce Development Plan.

Numbers of Food and Drink NVQs and SVQs awarded

Year	Level 1	Level 2	Level 3	Level 4
2000	1655	3040	132	0
1999	442	1414	52	0

Source: Food and Drink NTO

Some NTOs provide other indicators of success with NVQs/SVQs. The MTC has had successes in promoting NVQs/SVQs in the meat industry as has been demonstrated by the increasing proportion of meat employees who possess level 2 qualifications. The BTC has had particular success in Scotland with bakery SVQs.

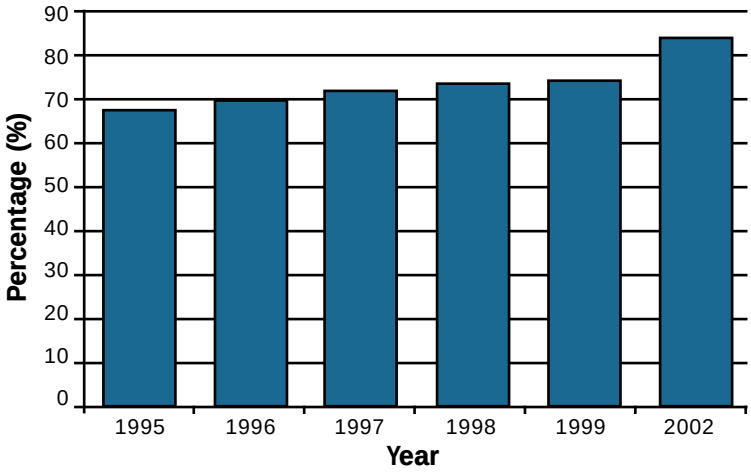
In spite of these small successes it is clear that qualification levels are not high. Estimates, developed from LFS data for the purposes of this dialogue, indicate that more than half the process operatives in the industry are qualified with less than a GCSE at grade C and a third have no qualifications at all. The skilled worker category that includes butchers, bakers and fishmongers is only a little better qualified as 40% have less than a GCSE at grade C and 21% have no qualifications.

3.3 Qualification trends

The increases in qualifications, referred to above, give some cause for optimism. However, most NTOs have not been collecting sector specific qualifications data for long enough to begin to establish trends although some have published targets for their sectors. These are intended to generate increasing volumes of activity in pursuit of qualifications. It is clear that, having published targets, these NTOs will expect to engage in monitoring activities so that data on trends will become readily available in time.

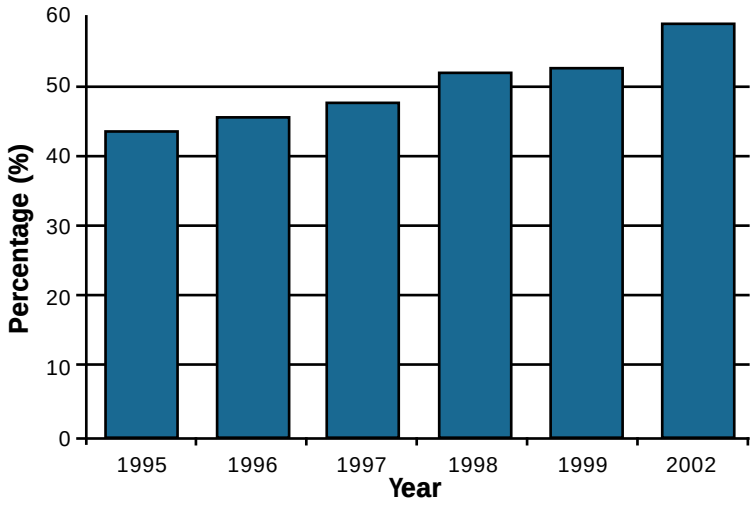
In the absence of industry specific information on trends in qualifications, the population-wide trend is illustrated by the progress towards national targets. The first chart shows the extent of progress towards the level 2 national target for the year 2002.

Target for 19-Year Olds
Progress Towards the Labour Force Survey Measured National Learning Targets for Young People, England, 1995-1999 (Percentage)



The chart demonstrates progress but suggests that the target may not be fully achieved. A similar pattern exists in relation to level 3 targets for 21 year olds, as is shown below.

Target for 21-Year Olds
Progress Towards the Labour Force Survey Measured National Learning Targets for Young People, England, 1995-1999 (Percentage)



The food industry is in a good position to make a contribution to these targets, especially to the level 2 target for young people. However, it should be noted that the industry does not appear to have a need for a high proportion of its employees to be qualified at level 3.

3.4 Participation in education and training

Training is a natural response to skills weaknesses. Some food and drink manufacturers use a range of training responses that include:

- induction;
- basic skills development;
- working on behaviour and attitudes;
- formal identification of skills needs.

The large companies tend to be more active in providing training.

The majority of employers do not employ young people on programmes of structured training. Modern Apprenticeships are making very little impression in any sub-sector of food and drink manufacturing. The DfES MA database records that the total number of starts over the last 5 years is under 1000 and that the proportion of successful completions is low.

The New Deal is being used in some sectors of the industry, notably meat manufacturing.

Access to relevant college based education and training can be very limited. For example, the Bakery Training Council reports that one third of college based provision has been withdrawn over the last three years and the expectation is that the rate of withdrawal is set to continue. The meat industry has experienced similar problems and the Dairy Training Council's Skills Foresight report refers to a range of other difficulties with college provision.

Qualifications

Qualifications, with the exception of obligatory food safety qualifications, have not been generally thought of as particularly important for a high proportion of workers in food and drink manufacturing. The tendency has been to provide enough basic training to prepare workers to make a contribution and then to provide a limited amount of additional training to maintain compliance with legislative requirements.

There are clear indications that this approach has changed in many companies so that structured training and formal vocational and occupational qualifications may become increasingly common. One symptom of this change is indicated by the extent of Investors in People participation in the industry.

The Investors in People (IiP) initiative is having a variable impact on the food and drink sector. On the one hand it is making a very limited impression on smaller companies but data supplied by IiP UK shows that there are 346 recognised organisations in the sector and a further 392 that are committed (as at December 2000). More importantly 'sector penetration', i.e. the proportion of sector employees who work in recognised or committed organisations, is put at 49.5%. This is higher than for any other manufacturing sector and is very near the highest penetration rate in any part of private sector industry.

3.5 The current qualifications framework

level	General Qualifications	Vocational Qualifications	Occupational NVQs/SVQs
5	Doctorate/M Phil/Masters Degree/Higher Honours/ Post Grad/Honours Degree/Bachelors Degree/ Diploma/Certificate		
4		HNC Supervisory Management for the Food Industry HNC/HND Technology of Food HNC/HND Science (Technology of Food/Baking Technology) HNC/HND Science (Food Science) HNC/HND Science (Food Development & Production) HNC/HND Science (Applied Food Studies) HNC Food Supply Management HNC Food Technology and Management HNC/HND Food Technology HNC/HND Food Science and Technology HNC/HND Food Science HNC Food Microbiology HND Food Safety and Hygiene HNC/HND Food Industry Management HNC/HND Food and Nutrition HNC Seafood Science and Technology HNC Baking Technology (and Management) HND Baking Technology and Bakery Process Management HNC/HND Meat Technology and Management HNC Science (Applied Food Studies) (- Dairy) PDC Science (Technology of Food) PDC Science (Cider making)	Food and Drink Manufacturing Operations Laboratory & Associated Technical Activities Meat Processing Management (Technical and Production)

level	General Qualifications	Vocational Qualifications	Occupational NVQs/SVQs
3	A/AS level/ in Design and Technology or Science Scottish Highers/ Advanced Highers HE: Health and Food Technology	National Award in Craft Baking Technology NC/ND Science (Technology of Food) NC/ND Science (Food Science) ND Food and Environmental Health NC/ND Baking Technology (and Management) NC/ND in Chocolate and Sugar Technology Meat Intermediate Technical Certificate Pastry Cooks and Patissiers III Advanced Professional Cake Decoration Certificate Advanced Certificate in Flour Milling 1230 GNVQ in Manufacturing (Advanced)	Food and Drink Manufacturing Operations Laboratory & Associated Technical Activities Meat Processing (Technical Operations) Craft Baking (Technical Operations)
2	GCSEs in Design and Technology (Food Technology) or Science Scottish Standard Grades	National Award in Craft Baking First Diploma - Science (Baking Technology) First Diploma -Science (Food Science) Bakery (Progression Award) Intermediate Professional Cake Decoration Certificate Wired Sugar Flowers Stage 2 Patisserie, Bakery and Confectionery Certificate Pastry Cooks and Patissiers II Intermediate Certificate in Flour Milling (Part 1) GNVQ in Manufacturing (Intermediate)	Distilling Industry Operations Food and Drink Manufacturing Operations Laboratory & Associated Technical Activities Craft Baking (Production Operations/Bake off) Meat and Poultry Plant Operations Meat and Poultry Processing and Manufacturing Operations Meat and Poultry Butchery Operations
1	pre-GCSEs courses	Introductory Professional Cake Decoration Certificate Wired Sugar Flowers Basic GNVQ in Manufacturing (Foundation)	Distilling Industry Operations Food and Drink Manufacturing Operations Meat Processing

Food Hygiene and Food Safety Qualifications available from different awarding bodies across the UK

Food Hygiene

Basic Food Hygiene (Certificate)[1]
Elementary Food Hygiene Certificate
Essential Food Hygiene for the Food Industry (Certificate)
Essential Food Hygiene (Certificate)
Food Hygiene, Foundation, Stage 1 and Stage 2
Food Hygiene Certificate (awarded by two different awarding bodies)
Primary Certificate in Food Hygiene
Intermediate Food Hygiene (Certificate)
Intermediate Food Hygiene Certificate
Advanced Food Hygiene Certificate
Advanced Food Hygiene (Certificate)
Food Hygiene and Safety (Diploma)
Diploma in Advanced Food Safety
Food Hygiene Management (Certificate)
Food Hygiene Management (Diploma)

Food Safety

Meat Safety Certificate
Meat Inspection (Certificate)
Poultry Inspection (Certificate)
Essential HACCP Practice (Certificate)
HACCP Principles and their application
Hazard Analysis Principles and Practice Certificate
Principles of HACCP

Food Hygiene and Safety (Certificate)
First Certificate in Food Safety

Source: QCA

1 A number of contextualised versions of these qualifications have been developed for particular industries.

Current skills issues

4.1 Introduction

Section 4 shows that the demand for skilled workers is rather higher than the supply and that a high proportion of the workforce is not formally qualified for their roles. This imbalance inevitably leads to recruitment difficulties and may well contribute to increasing staff turnover as competing employers make more attractive offers in order to fill their vacancies. The lack of qualifications might reasonably be expected to be linked to a workforce that is, to some extent under-performing.

This section explores the implications of these issues by considering recruitment difficulties, skills shortages and skills gaps in greater depth.

These issues have been quite thoroughly researched in the last two years, largely as a result of the deliberations of the Skills Task Force. The information sources are, once again, the Skills Task Force's Employer Skills Survey and the Skills Foresight analyses carried out and published by the food and drink manufacturing industry's NTOs.

4.2 Recruitment difficulties

4.2.1 The extent of recruitment difficulties

The industry's image as an employer is widely recognised as poor. The nature of the work and working hours are often perceived to be unattractive, while pay and conditions do not always compensate sufficiently. Sometimes these problems are compounded by factory locations that are relatively inaccessible. All in all it is not surprising that companies frequently suffer from recruitment difficulties.

This is illustrated by the ESS that showed that in September 1999, there were some 9,500 vacancies in the food sector in England. Sixty percent of these were described as 'hard to fill'.

Recruitment difficulties are common in food and drink manufacturing throughout England and the UK. Data from the ESS provides an indication of the pattern of recruitment difficulties in the English regions, although caution needs to be applied in interpreting these data because of small samples in some regions. Recruitment difficulties are greatest in London, the South East and Yorkshire and the Humber. They appear to be less acute in the West Midlands, the Eastern region and the North West.

It must be noted that meat industry recruitment difficulties, recorded in the sector's Skills Foresight report, support the placing of the South East and North West as the regions with the highest and lowest levels of recruitment difficulties respectively. However the West Midlands ranks second highest for meat industry recruitment difficulties and there appear to be other distinctive sector variations.

Just as important as regional differences are differences in the industry's sub-sectors. Indications of the sub-sector specific differences in recruitment difficulties can be found in the Skills Foresight work of the sector's NTOs. Brief summaries of NTO findings are given below.

Bakery sector recruitment difficulties
A substantial 70% of employers report difficulties in recruiting skilled bakers. Thirty percent have trouble recruiting adequately competent retail staff and 15% find both supervisory positions and unskilled positions difficult to fill.

Dairy sector recruitment difficulties
Recruitment difficulties are widespread in the dairy sector, but the context within which these difficulties occur may be important. There has been great pressure on the industry and a great deal of rationalisation has taken place. Most recruitment to the sector is now said to be due to workforce turnover and poor retention rates. Turnover is said to be driven by wage competition, unsociable hours and cycles of demand for labour that necessitate short-term contracts and the associated uncertainty among the workers.

The working time directive will apply to doorstep deliveries from 2002 and this is expected to compound existing recruitment difficulties by limiting hours that can be worked, so that more staff are required to deliver the same volume of milk.

Food and Drink sector recruitment difficulties
Twenty six percent of manufacturing sites had experienced hard-to-fill vacancies in the 1998-99 year, the most common reason being a lack of applicants with the required skills and qualifications. Where recruiting had taken place in spite of the difficulties, companies were more likely to have recruited staff without any previous experience of the sector.

Meat sector recruitment difficulties
Over half the companies that reported vacancies in the last two years experienced recruitment difficulties. The greatest problems occur in businesses that employ 10-24 people. Skilled butchers present by far the greatest difficulty but operative positions are also said to suffer from substantial recruitment problems.

The sector is characterised by high turnover of staff, especially in the slaughtering sector. Recruitment of young people into slaughtering and manufacturing is a significant feature of the industry and some sector companies have made good use of the New Deal in helping this recruitment.

Sea fish sector recruitment difficulties
The main difficulties across the breadth of the sector are found in recruiting managers in the processing sub-sector, semi-skilled and unskilled processing operatives, counter sales staff and trawler engineers. It is helpful to record the difficulties by sub-sector.

In processing and merchanting the numbers of vacancies are not very high although there are difficulties in recruiting good senior managers, semi-skilled and unskilled workers.

In fishmongering, half the firms surveyed in the Skills Foresight research reported difficulties recruiting fish handlers and counter staff.

In the frying sub-sector difficulties are reported in recruiting fryers/cooks and, to a lesser extent, counter sales people.

4.2.2 The implications of recruitment difficulties

The findings of the Employer Skills Survey show that food and drink companies recognise several direct implications of recruitment difficulties. These are summarised below.

When management vacancies are hard to fill employers recognise that the consequences are:

- increased operating costs;
- difficulties meeting customer service objectives;
- difficulties in introducing new working practices;
- delays in product development;
- loss of orders to competitors.

When craft and skilled operative vacancies are hard to fill employers recognise:

- increased operating costs;
- difficulties introducing new working practices;
- delays in product development.

When less skilled operative vacancies are hard to fill employers report:

- increased operating costs;
- difficulties meeting required quality standards;
- difficulties meeting customer service objectives;
- difficulties introducing new working practices.

It is clear that, if difficulties in filling vacancies lead to increases in operating costs, competitiveness and profitability must suffer as a direct consequence. Difficulties in introducing new working practices may be even more important as these inevitably restrict a company's ability to change in order to retain the essential competitive edge in a highly competitive market.

Recruitment difficulties therefore present much more of a problem than the simple frustration of trying, unsuccessfully, to recruit.

4.2.3 The response to recruitment difficulties

The ESS demonstrates that the most widely adopted response to recruitment difficulties, for food and drink manufacturing craft skilled occupations, is to substitute technology for labour. Other common responses are to redefine jobs and to increase salaries.

In contrast, the NTO research shows that the industry is fully prepared to take on unqualified and inexperienced workers into the less skilled positions. The NTOs also report that a small number of companies have begun to employ immigrant labour.

Personnel and human resource management responses that feature very strongly in a small proportion of companies include:

- internal communications and involving employees;
- improved recruitment and selection practices;
- improving employee benefits, e.g. holiday and sick pay, pension schemes;
- community involvement.

Other examples of activities that can contribute to overcoming recruitment difficulties emerged from the discussions in the dialogue seminar. They included increasing the level of activity in business - education links, for example by involving young children in gaining an understanding of the industry. Suggestions were made that it is also appropriate to promote the development of new qualifications and courses in food subjects for schools.

It may be highly significant that the option of internal training and development as a means of overcoming recruitment difficulties is only reported by 12% of the respondents to the ESS.

4.3 Skills shortages

Skills shortages are said to exist where there is a lack of adequately skilled and/or qualified individuals available in the accessible labour market.

Recruitment difficulties can be symptomatic of skills shortages, but they may also reflect, or be compounded by, uncompetitive working conditions or ineffective recruitment practices.

4.3.1 The extent of skills shortages

The extent of real skills shortages is explored on a sector by sector basis in the first instance.

Bakery sector

In the bakery sector poor pay is cited as a reason for recruitment difficulties by more than half of the employers. Unsociable hours and a poor general perception of the sector are believed to be almost as influential. These factors indicate that causes of recruitment difficulties are often nothing to do with skills shortages. However, there are at least two areas where serious skills shortages contribute significantly to the recruitment difficulties.

In relation to the occupation of skilled baker, the bakery industry's Skills Foresight report says ' the extent of reports of recruitment difficulties, the consistency with which employers cite 'no-one available' and the recognition of the impact of these difficulties points to a substantial shortage of adequately skilled or qualified people'.

The Skills Foresight report also identifies that 18% of businesses indicate basic skills problems to be a major factor in recruitment difficulties with unskilled workers.

Dairy sector
The dairy sector's Skills Foresight report identifies the following significant skills shortages:

- management;
- production operations;
- engineering;
- rounds staff;
- franchisees;
- LGV drivers.

However, 'the balance of pay and conditions' in the sector is also said to contribute to recruitment difficulties in the case of operatives and doorstep delivery workers so that the causes of recruitment difficulties are not limited to skills shortages, at least in these two occupational categories.

The report gives a very clear indication that poor basic skills are implicated in skills shortages as it states that a 'common practice of weeding out poor basic skills at the recruitment stage means employers are excluding a proportion of otherwise suitable candidates while the national labour pool is dwindling'.

Food and Drink sector
As stated above, the most common reason given for recruitment difficulties in this sector is the lack of applicants with the required skills and qualifications. This applies in both production and engineering occupations and is unequivocally indicative of skills shortages.

The industry is described as having a tendency to respond to skills shortages, in the more lowly skilled occupations, by accepting unqualified people. This factor is likely to be a substantial contributor to difficulties in meeting quality standards that have been shown, in section 5.2, to be a consequence of recruitment difficulties.

Meat sector
Forty-four percent of companies that try to recruit skilled butchers report that applicants lack the requisite level of skills and work experience. A further 22% indicate that a lack of basic skills often compounds the problem. These reports give a clear indication that there are serious skills shortages.

However, the situation is not simple because competition with other employment is also cited as a major concern in butcher recruitment. Supervisor recruitment in the meat industry exhibits a very similar pattern of recruitment difficulties and genuine skills shortages.

Although the industry has a strong record of taking on young people into several of the main occupational areas, problems are widely recognised with the attitude of young entrants to the industry. There is a shortage of young people who are capable of being trained for the more highly skilled butcher occupations.

Sea fish sector

In the sea fish sector there are shortages of semi-skilled and unskilled workers in processing and merchanting. The catching sector experiences local shortages of skippers, for vessels of under 16.5m, and of engineers. Good quality deckhands are also in short supply, although there appears to be much less of a problem in recruiting unskilled deckhands.

4.3.2 Comparisons of shortages by occupation

Whole industry data was researched in the Employer Skills Survey. In this, 'skill-related-shortages' were defined as shortages where the employer identified low numbers of applicants with the required skills, or applicants generally lacking in appropriate work experience or necessary qualifications. This definition has been described as 'very tight' and excludes shortages associated with applicants' weaknesses with attitude, motivation and other personal attributes, and straightforward situations where there are simply very small numbers of applicants. ESS data may therefore be expected to identify rather lower levels of skills shortages than that presented by the NTOs.

Of all the vacancies identified by the ESS, 60% were 'hard to fill' and 7% were both hard-to-fill and 'skill-related'. The table gives the comparative data that shows the extent to which skills shortages affect different broad occupational categories.

Skill related, hard to fill vacancies by occupational category

Occupational category	Skill related, hard to fill vacancies (%)
Managers and administrators	20
Professional occupations	3
Technical and associate professional	17
Clerical/secretarial	4
Craft and skilled	35
Personal and protective service	16
Sales	24
Production and process operatives	<1
Other	47

Source: ESS

These data confirm the high significance of skills shortages in craft and skilled occupations. They also draw attention to the shortages of sales staff, managers, technical and associate professional workers. In contrast, they suggest that there are virtually no shortages of production and process operatives. This apparent conflict with the findings of the NTO research is explained, in part, by the tighter definition of skills related shortages used by the ESS. The timing of the ESS may also be part of the explanation since similar research may well have produced different results at different times of the year.

The ESS identifies some of the skills and attributes that are lacking in applicants to the industry. It confirms the basic skills weaknesses (literacy and numeracy) identified by NTO research and also identifies teamworking, technical and practical skills as lesser problems.

4.4 Skills gaps

Skills gaps are said to exist when employers recognise that their existing workforce has a lower level of skills than is necessary to meet business objectives. They are recognised to lead to a loss of business to competitors, reductions in customer care and quality, and increases in operating costs. In addition, up to 2.5% of firms recognise that withdrawal from particular markets is a consequence of skills gaps while around 10% recognise problems with providing adequate customer service.

The ESS survey findings suggest that, the increasing awareness of skills gaps that arises when companies are trying to move into more profitable work, is indicative of a deeper latent skills gap.

The latent skills gap is usually in generic skills such as communication, customer care, team working and problem solving. Importantly, management skills are frequently recognised as inhibitors to development whenever companies attempt to change. Thus, a company's ability to change and progress is therefore highly dependent on these skills.

Across all industries as a whole, the ESS found that around 20% of employers identify skills gaps in their workforce and this gave rise to an estimate that there were some 1.9 million employees in England who are 'less than fully proficient in their job'. The proportion of manufacturing businesses identifying skills gaps was slightly higher at 21%. The findings support the contention that, proportionately, the problems are greatest with skilled and craft level employees in manufacturing industries, and with sales staff in the retail sectors. They also support the understanding that problems are felt to be somewhat more widespread in the South East and in London.

The table that follows indicates the proportion of food and drink manufacturing companies that reported skills gaps in the main occupational categories.

Food and drink companies reporting skills gaps

Broad occupation category	Percentage of food and drink companies reporting significant skills gaps
Managers and administrators	22
Professional occupations	7
Technical and associate professional	10
Clerical/secretarial	11
Craft and skilled occupations	17
Personal and protective service	4
Sales	10
Operatives	18
Other manual	17

Source: ESS

The supporting data points strongly to the skills gaps being more of a problem in the smallest companies, except in the case of clerical and skilled and craft occupations where the greatest acknowledgement of gaps is in firms employing between 25-100.

The proportion of companies that report specific skills gaps is recorded in the following table.

Percentage of food and drink manufacturers that report specific skills gaps

	Whole workforce	Managers	Skilled	Operatives
Teamworking	43	56	60	58
Communication skills	38	55	52	48
Other technical and practical	31	29	55	56
Problem solving	30	35	38	42
Management	24	46	26	13
Customer handling	22	36	30	3
Basic IT skills	20	32	44	15
Literacy	12	8	27	26
Numeracy	12	8	27	23
Advanced IT	12	19	23	3
Foreign language	5	7	0	2

Source: ESS

In a more general analysis the ESS groups skills gaps into the three categories of personal attributes, generic skills and vocational skills.

It is suggested that personal attributes are given the highest priority. Attributes include factors such as a personal work ethic and an interest in the job. These are said to underlie proficiency in all the other skills needed in food manufacturing.

Generic skills are defined as little different to key skills (communication, number, IT, working with others, improving own learning and performance, problem solving) but they also include the 'ability to cope with change' and 'taking responsibility'. It might be suggested that these last two factors are additional attributes rather than 'skills', but the precise definitions are not the issue here. Reference to the table shows that several generic skills are widely recognised as being in deficit in food and drink manufacturing and that the skills gaps are, if anything, more widely recognised among the higher levels of workers.

The most important examples of vocational skills are, in fact, areas of knowledge. They include food hygiene, health and safety, quality, and business awareness. The practical skills within this category include machinery maintenance, dexterity and manual skills. Reference is also made to multi-skilling.

NTO findings from labour market and Skills Foresight research provide additional indications of sector specific skills gaps. These are reviewed below.

Bakery sector skills gaps
An estimated 20% of bakery employers are completely satisfied with the skills levels of their staff. However, some 30% report gaps in bakery skills and 24% recognise skills gaps in their supervisory, management and retail employees.

Personal skills are an issue for around a quarter of businesses and a fifth of businesses recognise problems with key skills, primarily communication, in a number of their employees.

Dairy sector skills gaps
Thirty seven percent of employers recognise skills gaps, a much higher proportion than in the wider food and drink manufacturing sector. Dairy occupations are, it is suggested, no longer unskilled. Multi-skilling is increasingly common among both engineers and production workers.

The main gaps that have been identified are:

- management (people, personnel and industrial relations);
- basic (operatives and some team leaders);
- generic (transferable);
- sales in doorstep delivery;
- knowledge of legislation in smaller companies;
- technical skills.

Causes of gaps are failure to train and develop, along with some significant change in working practices and technology. Reductions in the number of tiers of management have resulted, in some cases, in line managers having to take more responsibility for personnel functions. In the absence of training and support, this has often left a significant skills gap.

Food and Drink sector skills gaps
Some 14% of businesses identified skills gaps, exactly in line with the pattern in the wider manufacturing sector. The gaps are most usually recognised in the larger companies.

Production occupations seem to suffer from the greatest gaps, usually in job-specific skills. However, using initiative and communication skills were also often recognised as being in deficit.

Meat sector skills gaps
Nearly a quarter of employers are completely happy with the skills of their operatives. Seventeen percent highlight attitude and personal skills gaps, for example reliability and timekeeping and 11% identify basic and key skills problems. Limited numbers of employers acknowledge other gaps such as general gaps in knowledge, butchery skills, hygiene and quality assurance.

Similarly, 23% of employers are completely happy with the skills of their butchers. However, 22% identify skills gaps in butchery skills including knife work, alternative cuts, and meeting the needs of specialist markets. Personal skills and the attitude to work are the next most significant gaps while hygiene routines and multi-skilling are recognised as gaps by 7% of employers.

Sea fish sector skills gaps

The headline skills gaps in the sector are in IT, management, especially in the processing sector that has the larger businesses, hygiene, health and safety and waste (water) management. Food technology is emerging as a skills issue especially in processing and retailing.

Processors and merchants report gaps in basic business management, negotiation and hygiene management skills of managers. IT and financial control skills are identified as skills gaps of clerical staff. There are job-specific gaps, for example in food handling, among the less skilled workers.

Fishmongers recognise a range of gaps. IT is a problem for managers and clerical staff. Communications and customer service are problems for counter staff. Product knowledge is frequently a gap for fish handlers as are the more basic knife skills, filleting skills and recipe knowledge. General knowledge of the industry is lacking amongst new entrants.

In the frying sub-sector the main gaps are in customer service, frying/cooking skills and food hygiene. Skills gaps among managers are recognised as health and safety, general management knowledge and knowledge of financial and accounting practices.

In the catching sector there are gaps in on-board safety and net mending skills amongst deckhands. Skippers and mates often have problems with satellite radio systems and administration skills. Knowledge of responsible fishing methods and care of the catch skills are gaps demonstrated across the workforce in general.

4.5 Reasons for skills gaps - the evidence

Some strong evidence of employers' thoughts on the reasons for skills gaps comes from the ESS. The summary that follows is relevant to all industries and not just to food and drink.

The most commonly cited reasons for skills gaps are:

- new working practices needing new skills;
- failure to train and develop staff.

Other important factors are:

- new products needing new skills;
- recruitment problems;
- new technology;
- inability of the workforce to keep up with change;
- inability of older workers to acquire new skills and knowledge;
- poor labour retention rates.

Many employers also refer to lack of experience and lack of motivation as important reasons for skills gaps.

An analysis of the food and drink manufacturing sector's responses to the ESS identifies reasons for skills gaps in three different categories of employee. These are summarised in the following tables.

Reasons for skills gaps in food and drink manufacturing managers

Reason	Proportion recognising the gap (%)
New working practices needing new skills	60
Failure to train and develop staff	51
New products needing new skills	50
Recruitment problems	46
New technology	44
Inability of the workforce to keep up with change	25
Inability of older workers to acquire new skills	51
Poor labour retention rates	20

Source: ESS

Reasons for skills gaps in skilled and craft workers in food manufacturing

Reason	Proportion recognising the gap (%)
New working practices needing new skills	74
Failure to train and develop staff	44
New products needing new skills	40
Recruitment problems	19
New technology	47
Inability of the workforce to keep up with change	43
Inability of older workers to acquire new skills	48
Poor labour retention rates	21

Source: ESS

Reasons for skills gaps in operatives in food and drink manufacturing

Reason	Proportion recognising the gap (%)
New working practices needing new skills	46
Failure to train and develop staff	54
New products needing new skills	27
Recruitment problems	32
New technology	40
Inability of the workforce to keep up with change	36
Inability of older workers to acquire new skills	28
Poor labour retention rates	29

Source: ESS

4.6 The response to skills gaps

Food and drink sector employers respond to skills gaps by recruiting new workers, changing working practices and through providing training. A high proportion of this training is targeted at meeting regulatory requirements, particularly in relation to food safety.

Other responses include:

- improved induction programmes;
- programmed development of basic skills;
- improved recruitment and selection;
- rewarding the most skilled employees.

The dialogue identified that some large companies could usefully 'mentor' smaller firms and offer co-operative training opportunities. This would seem to have considerable potential especially in subjects, such as food hygiene, where the learning is unlikely to have much impact on competitive factors.

A small but significant proportion of employers openly admit to taking no particular action and it should be noted that the research that has underwritten this report could not address the issues of relevance, quality or results of the actions indicated by the other responses.

Issues arising

This section highlights the main issues that arise out of the dialogue report.

5.1 Supply and demand for skills

The skills shortages and recruitment difficulties associated with skilled baker and butcher occupations are particularly severe. Alternative production methods, many of which require process and machinery operation skills, are mitigating the problems to some extent by reducing the demand for employees with the traditional skills. Nevertheless, the evidence of the extent of recruitment difficulties strongly indicates that the shortages are a severe problem, so that they are contributing to the downward trend in the numbers employed in these roles.

There are clear indications that unskilled workers are going to be required less and less, whereas the 'process and machinery operative' category, many of whom need level 2 qualifications, will need to be recruited quite strongly. The dairy sector has already explicitly recognised the need to recruit and train relatively poorly educated and skilled workers in order to overcome the shortages of skilled operatives. The increases in NVQ/SVQ level 2 achievement in other parts of the industry may well be indicative of some wider acceptance of this imperative.

There are indications from many sources that basic skills become a major issue when developing relatively unskilled people to qualify at level 2.

5.2 Qualifications

Qualification levels are low throughout the industry. This may simply reflect fairly widespread failures to train in all except the mandatory food safety and general health and safety areas, a general lack of interest in qualifications or a much more deep-seated problem.

The relevance and worth of existing qualifications are already being explored in the dairy industry. The relevance and levels of NVQs/SVQs may be contributory factors. Public funding regimes, that concentrate high proportions of the available funds on either full-time or NVQ level 3 education and training, do nothing to encourage the pursuit of valuable, if low level, vocational qualifications among the adult population.

In spite of the progress that has been made with qualifications in recent years it may well be necessary to revisit the whole question of qualifications for operatives and process workers. At other levels, for example those of technician and supervisor/manager, there should be little difficulty in identifying training and qualification opportunities.

There is another issue that might be relevant here. The NTOs have mostly concentrated their research on qualifications that are directly relevant to specific occupations in their industry. Generalised national statistics, not least those that are used in monitoring progress towards national targets, tend to count highest qualifications regardless of their relevance, academic or occupational emphasis. In many cases workers do need to posses both types of qualification even though the levels could be different. This is already reflected in the importance being attached to basic, key or core skills.

5.3 Commitment to Modern Apprenticeships

In the absence of a thriving Modern Apprenticeship (MA) in the industry there is great concern about the ability of the industry to maintain an adequate skills base.

The low commitment to MAs has variously been associated with:

- employers' concerns over the complexity and demanding nature of NVQs which may now be exacerbated by mandatory key skills requirements in MAs;
- the industry recognising a need to qualify process and machinery operatives at level 2 in preference to level 3 (although Foundation Modern Apprenticeships should remove this barrier);
- high turnover of younger employees;
- difficulties in accessing sufficiently flexible training programmes;
- restrictions in public funding that prevent older new entrants to the industry joining the programme.

The evidence on IiP participation may be relevant here. Clearly the concept of IiP has been welcomed in some quarters, typically in the larger companies. It seems that they are applying the concepts implicit in IiP to attract, develop and maintain their workforce. The fact that they appear to choose not to use Modern Apprenticeships in spite of their interest in investing in people does suggest that there are simply too many barriers for employers to overcome.

It should be noted that there are some initiatives under way that can be hoped to address parts of this problem. The Qualifications and Curriculum Authority is attempting to rationalise qualifications and in some cases to reduce their size into bite-sized, industry friendly pieces. Additional work is also underway to develop a system of unitisation that will enable candidates to achieve certification for smaller parts of qualifications.

5.4 Barriers to training

The issues surrounding barriers to training are similar to those relating to Modern Apprenticeships. They have not previously been explored in any depth in this report although some can be identified from earlier discussion. The biggest barrier is probably the difficulty of prioritising the allocation of time and financial resources to training. There are also substantial problems associated with the perception that few benefits accrue from training temporary staff and concerns that qualifications, especially the new key skills, are bureaucratic, too academic and overloaded with jargon. Some employers suggest that the complete absence of public funding for structured training for those who are over 25 years old presents an insurmountable barrier.

In the bakery sector, an important factor is that traditional college based part-time craft training courses are rapidly disappearing. One third of the provision has been withdrawn over the last three years and the expectation is that the rate of withdrawal is set to continue. The meat sector presents a similar picture while the dairy sector's Skills Foresight report refers to other difficulties with college provision. The loss in college based training has not been accompanied by the development of attractive alternatives.

Distance learning through on-line provision from **learndirect** has the potential to overcome some of the barriers.

If it is unacceptable to rely on the limited volumes of training provided by the more far-sighted companies, there may be a case for legislation for mandatory staff development over and above that is required to comply with food safety legislation.

5.5 Skills Gaps

The evidence is that skills gaps are widespread and that employers readily admit that the need for new working practices and the failure to train and develop staff are major causal factors. Other important contributors are skills shortages, poor qualification levels and the lack of commitment to new entrant training by means of major training programmes.

Skills gaps are most widely recognised among managers. The skills that are most in need of development in managers are teamworking, communication and generic management skills. The first two are key skills but the evidence also demonstrates that up to 8% of the recognised skills gaps in managers are in the basic skills of literacy and numeracy. These skills gaps contribute to managers' problems in dealing with bureaucracy and paperwork.

While the extent of skills gaps in managers is not perceived to be very much higher than in other categories of workers, the impact of skills gaps in these key workers is a cause for major concern.

In relation to other occupations, the ESS suggested that personal attributes, such as a work ethic and an interest in the job, underlie proficiency in all the other generic and vocational skills needed in food manufacturing. These personal attributes are a cause for concern in many parts of the industry, but the problems are extremely difficult to address.

These circumstances dictate that overcoming skills gaps is, and will continue to be, a major challenge for the industry.

5.6 Business size

There is little quantitative analysis that explores the extent and impact of different skills issues specifically in food and drink manufacturing businesses of different sizes. Nevertheless, participants in the Skills Dialogue Seminar and individual respondents who responded to the consultation clearly believe that business size is an important consideration.

The reasons for this interest in business size include the expectation that skills shortages and gaps are much more damaging in smaller businesses because one unfilled vacancy, or one person working without adequate skills has proportionately a much bigger impact in smaller businesses. Secondly, it is widely accepted that the smaller businesses need more help in both identifying and meeting learning needs.

Few would doubt that larger businesses are the ones that are best equipped to deal with skills related problems. The larger organisations tend to be the ones that provide structured in-house training schemes, that can offer more attractive benefits packages to overcome shortages and that can allocate sufficient time to planning and evaluating training.

Smaller firms do not usually have the expertise or time to commit to planning training and they often feel that time is not available to release staff for training. Nevertheless, it should be acknowledged that some small businesses are good training organisations, and that some of these do provide broader training and education opportunities than are available in larger companies.

5.7 Regional variation

Food and drink manufacturing is a significant employer and contributor to local wealth throughout the country so that it is an important industry in every one of the UK's countries and regions. In general terms, the trends that exist in the industry, for example in terms of employment and growth in contribution to wealth, are demonstrated in all regions. Nevertheless, food manufacturing and processing feature much more strongly in the development priorities in some regions than in others.

The regional context within which the industry functions is known to differ in other ways. For example, there is evidence that the greatest problems with skills shortages and gaps exist in the South East. Shortages and gaps are much less of a problem in the North West, Scotland and Wales but sub-regional locations such as Edinburgh and Cardiff are said to experience difficulties that are nearly as acute as in the South of England.

The evidence that the meat industry's recruitment difficulties appear not to follow the regional pattern for the whole food manufacturing industry indicates that we are some way from understanding the complexity of regional characteristics.

5.8 A changing craft sector

The issue that is addressed here is different from but strongly linked to the question of supply and demand of skilled workers that was raised in section 5.1.

The need for the traditional high level and breadth of craft skills and knowledge has declined in bakery, butchery and fishmongering. This has largely been associated with the growth of supermarket based retailing and increasing levels of automation in the production process. However, it has already been made clear that recruitment of skilled craftspeople is extremely difficult to the extent that the decline in supply of suitably skilled workers is contributing to the overall decline of the traditional sectors.

Shortages of skilled workers also militate against the survival and development of small businesses and modern niche suppliers.

Further, anecdotal evidence suggests that there is a major need for a limited number of people with highly developed traditional craft skills and knowledge to contribute to the development of modern production systems.

5.9 Production processes

Although the industry breaks down into immediately recognisable sub-sectors, each of which requires distinctive skills in its workforce, it is also likely that skill requirements are closely associated with the type of production process. This factor is highlighted in a report that arose out of the Skills Task Force Employer Skills Survey and was identified as a result of case study research in a small number of food manufacturing companies.

The reason for highlighting this issue is that it is possible that significant benefit could be derived from research that focuses on skills needs linked to the different production methods.

Three main types of production process can be identified. They are:

- continuous or semi-continuous production;
- batch production;
- craft and hand-finishing.

Continuous or semi-continuous production relies on high levels of mechanisation. Manual tasks are kept to a minimum but machine operation skills are at a premium.

In batch production there continues to be a high proportion of relatively lowly skilled manual work although mechanisation is increasingly a feature as the technology is developed and becomes more cost effective.

Craft and hand-finished production relies on manual dexterity and the expert knowledge of the craftsperson. This is the changing craft sector referred to in 5.8, above.

5.10 Information needs

The research and discussions that have underwritten the development of this report have highlighted several areas where there is an incomplete understanding of the issues. There is a need for additional research so that the effort directed at improving skills can be efficiently targeted. Specific information needs include:

- better information on participation and achievement in education and training for the industry;
- readily accessible information on participation in learning programmes, and candidate success with all types of qualifications;
- analysis based on the type of production process and size of business;
- better information relating to the low number/high contribution occupations such as senior scientists and engineers, process plant engineers, food technologists, product developers and a variety of specialist managers;
- detailed analysis of the balance of supply and demand for skilled workers over time;
- information on the cost-benefit relationship associated with training and qualifications in different sub-sectors of the industry.

5.11 The way forward

Many of the issues that have been identified are widely recognised to the extent that they are the subjects of considerable attention at all levels from individual company to national governments.

Competition for labour is forcing some employers to adjust human resource management and staff development practices and there is evidence of considerable commitment to staff development in some companies.

The government is also actively pursuing solutions in some areas, for example in basic skills development and in raising the attainment of school leavers. National Training Organisations have a pivotal role in ensuring that qualifications are relevant and fit for purpose and the new Learning and Skills Council has been established to ensure that some £5.5 million of public funding is appropriately invested in learning opportunities for those over 16 years old.

The current pattern of activity strongly suggests that the solutions that emerge to skills problems are likely to be nationally driven but locally funded, by industry and the Learning and Skills Councils (and the equivalent organisations in Northern Ireland, Scotland and Wales). Learning opportunities will be made available through in-company initiatives and publicly funded institutions. The Sector Workforce Development Plans, recently published by the National Training Organisations for the food and drink manufacturing sector, identify many opportunities for action.

There is much to be done and, in the current climate, partnerships exist that will be able to make major progress in addressing the issues that have been highlighted through the dialogue.

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