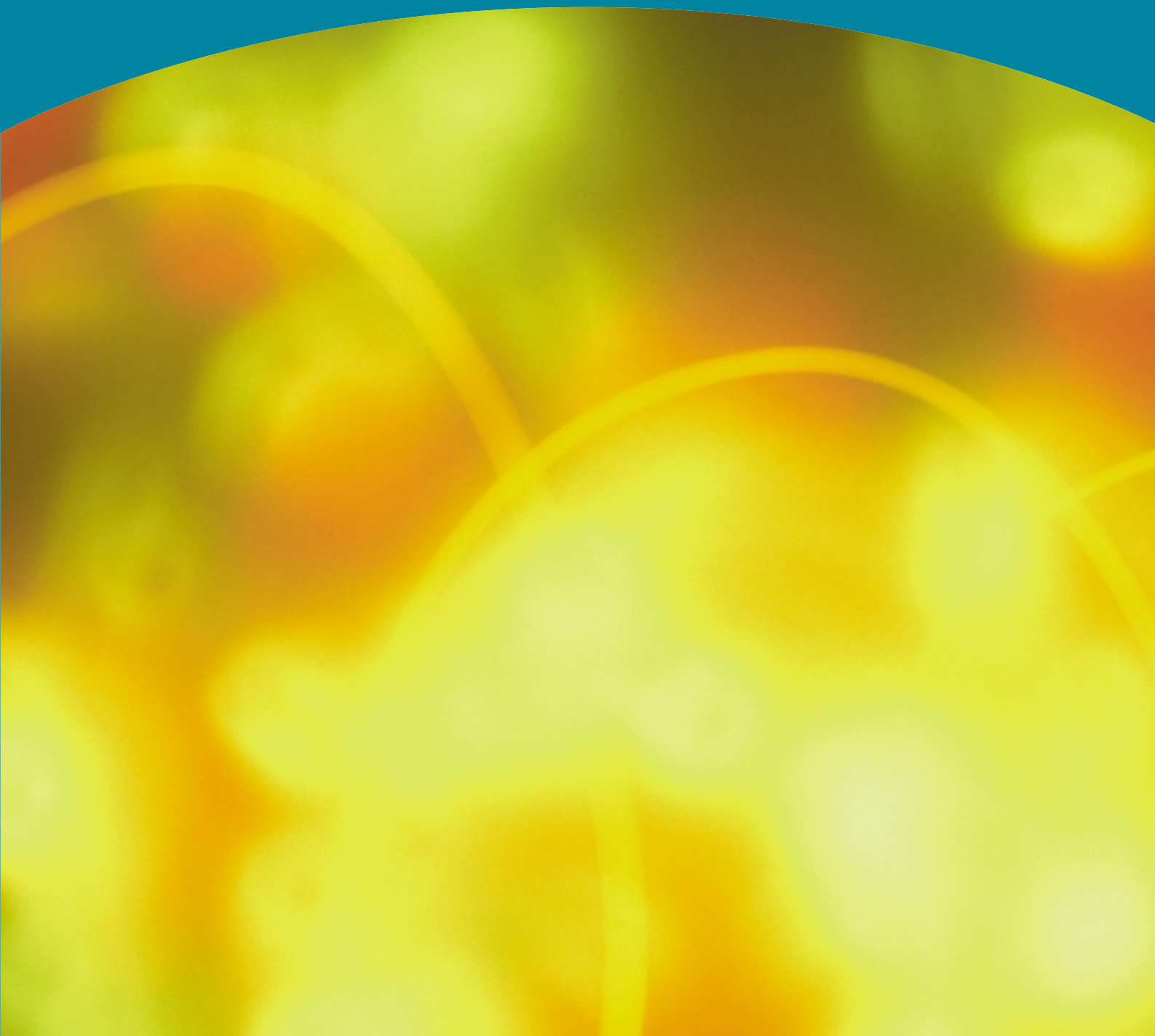
Employers Skill Survey:
Statistical Report



EMPLOYERS SKILL SURVEY

Statistical Report

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Preface and Acknowledgements

This report provides an overview of results from the Skills Task Force (STF) Employers' Skill Survey. It forms part of a wider investigation into the extent, causes, and implications of skill deficiencies, sponsored by DfEE. This research has been carried out under the direction of Terence Hogarth and Rob Wilson at te Institute for Employment Research (IER) at the University of Warwick.

Fieldwork for the survey was undertaken by IFF Research Ltd under the direction of David Spilsbury and Jan Shury. In addition, Nigel Hudson and Gary Clarkson (at DfEE) and Geoff Mason provided many helpful comments at the design and analysis stages. The document was word processed by Sylvia Moore.

Further reports in this series provide more in-depth analysis and discussion of other elements of the project. These include a series of complementary, in depth, case studies of individual sectors.

FOREWORD

The Secretary of State for Education and Employment established the Skills Task Force to assist him in developing a National Skills Agenda. An important part of this remit was to provide evidence on the nature, extent and pattern of skill needs and shortages and their likely future development. The research evidence assembled by the Task Force was summarised in *"Skills for all: Research Report from the National Skills Task Force"*, published in June 2000.

An important contribution to the evidence was made by a major programme of new research. This included two employer surveys, detailed case studies in seven different industries and a review of existing surveys. We are grateful to all those who participated in this research and so contributed to the work of the task force. This report provides more detailed information on one element of this research. Details of associated reports are listed in the rear of this publication.

It should be noted that the views expressed, and any recommendations made, within this report are those of the individual authors only. Publication does not necessarily mean that either the Skills Task Force or DfEE endorse the views expressed.

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All data used in this report comes from the Employers Skills Survey 1999

EXECUTIVE SUMMARY

Background

This project was undertaken to meet the needs of the Skills Task Force (STF) for information on the extent, causes and implications of skill deficiencies.

This document provides an overview of the results of the STF Employers' Survey conducted as part of this project, presenting new survey evidence on the extent and nature of imbalances between skills supply and demand as reported by employers.

Skill Deficiencies

Two different kinds of skill deficiency have been identified:

- external *recruitment difficulties*, focusing in particular on hard-to-fill vacancies and what are referred to as *skill-shortage vacancies*, (external recruitment difficulties explicitly attributed to a lack of job applicants with the required skills, qualifications or work experience)
- internal *skill gaps* (defined as occurring where a significant proportion of existing staff in a particular occupation lack full proficiency at their current jobs).

Evidence from the STF Employers' Survey

The survey evidence demonstrates that the incidence of recruitment problems was widespread, with over 30 per cent of all establishments surveyed in 1999 reporting vacancies, of which 16 per cent were hard-to-fill vacancies. Almost half of the latter were *skill-shortage vacancies* (that is they were skill related).

The other main causes of recruitment difficulty were lack of interest from job-seekers in particular kinds of jobs and low numbers of applicants with the required personal attributes in terms of attitudes and motivation.

Based on the STF Employers' Survey, the grossed up estimate of the total number of vacancies reported by all the establishments in England was approximately 560 thousand. The estimated total number of hard-to-fill and *skill-shortage vacancies* was around 250 thousand and 110 thousand respectively.

The main occupations associated with *skill-shortage vacancies* were craft and skilled trades (accounting for just over a fifth of the total) and associate professional occupations (accounting for somewhat less). Sales occupations and personal service occupations were also significant categories, each accounting for just over a tenth of all such vacancies.

The industries most affected were the craft-intensive construction and manufacturing sectors and two large service industries (finance and business services).

The data demonstrate that hard-to-fill and *skill-shortage vacancies* were more commonly found in the London and South-East regions, both of which have experienced strong employment growth over recent years.

Responses to questions about the kinds of skill sought, lay heavy emphasis on both technical and generic skills.

Skill Gaps

Skill gaps among existing employees were recognised by employers in about one in five of all establishments. Where such gaps were recognised they tended to be limited to a single occupational group although the actual skill content of the shortcoming tended to cover a range of different skills.

In total, it has been estimated that almost 2 million employees in England in 1999 were considered by their employers to be less than fully proficient in their jobs. The largest number of such employees were in clerical and secretarial occupations. When expressed as a proportion of employment in an occupation, however, it was in craft and skilled, personal service and sales occupations that the highest ratios occurred (around 13-14 per cent of employment).

The degree of overlap between internal skill deficiencies and external recruitment difficulties was relatively small. In contrast to *skill-shortage vacancies*, *internal skill gaps* tended to occur in less-skilled occupations such as sales, personal service and operative and assembly occupations.

Not surprisingly, the largest sectors, such as manufacturing and distribution have large shares of all skill gaps. When compared, however, with total employment in the establishments surveyed it is clear that these two sectors also have a more than a proportionate share of such employees.

The regional data reveal that it was in the southern parts of England that respondents anticipated skill gaps having the greatest impact on business in the near future.

Almost half of establishments with skill gaps acknowledged that these were partly due to their own failure to train and develop staff. The main factors felt to be causing skill gaps were the introduction of new working practices, the development of new products, and the introduction of new technology.

The majority of establishments with internal skill gaps defined their problems in terms of employees lacking a desired *mix* of generic and vocational skills.

Skill Deficiencies and Performance

Where they arose, there is evidence that external *recruitment difficulties* have had a significant impact on performance. Though *skill-shortage vacancies* affect a relatively small proportion of establishments at any point in time (about 1 in 12), they have negative consequences for many of these.

The principal effects of skill-shortage vacancies were: difficulties in meeting customer service objectives; delays in developing new products or services; increased operating costs; and difficulties meeting required quality standards.

Where internal *skill gaps* were reported there is evidence that they also had an important impact on an establishment's performance. The main impacts were similar to those attributed to external recruitment problems: difficulties in meeting customer service objectives and required quality standards, along with increased operating costs.

A small but significant proportion of establishments with *skill gaps* reported that this had led to a loss of business to competitors. Moreover, in many others, there was evidence of impacts lowering customer care and quality standards and increasing operating costs. Ultimately, this could have an even greater impact on the volume of business undertaken.

A small but significant proportion of establishments also reported that they anticipated *skill gaps* having an impact on their business in the future. Again the anticipated impact was mainly upon customer care, quality standards and operating costs, although a substantial minority also anticipated that *skill gaps* might lead to a loss of business to competitors.

Respondents' answers to questions about their plans to try to improve their products and services suggest that this requires extensive skill change. Around 40 per cent of respondents in private sector companies indicated that their establishments were planning to improve the quality of their products or services. Much of the skill change required was perceived to be generic, especially in relation to skills such as communication, customer relations, team-working, problem solving, and management skills.

A significant proportion of those establishments which were not planning to make such changes, were planning to improve the efficiency with which they currently operated. This group represented about a quarter of all private sector establishments. The survey data confirm that these changes were also expected to result in demands for new and additional skills.

The survey also provides evidence that existing skill problems may constrain establishments from such improvements although skills were thought to be less of a constraint than financial ones.

Conclusions

The SFT Employers' Survey confirms the importance of skills in any attempt to improve general economic performance.

According to the survey results, the impact of skill deficiencies on both current and expected future performance are important. Though the proportions responding that such problems lead to withdrawal from existing product areas or inability to meet customer service objectives are quite modest (around $2^1/_2$ and 10 per cent respectively), these are quite drastic outcomes.

The evidence also indicates that, when establishments have attempted to move towards higher value-added markets or to otherwise improve their performance, they have revealed a wide range of additional skill requirements to achieve that goal. This suggests that latent skill gaps could be as important as perceived ones.

Perhaps most importantly from a policy perspective, the data confirm that a shortage of skills amongst the existing workforce is a key factor in inhibiting an establishment from achieving such goals. A substantial proportion of establishments reported that they would like to improve the quality of their products or services but they indicated that they were constrained from doing so by the skills available in their existing workforce.

The implication is that there is considerable scope for further investment in skill acquisition if the ambition of securing a long-term improvement in economic performance is to be achieved.

1. INTRODUCTION

1.1 Background

This project was undertaken to meet the needs of the Skills Task Force (STF) for information on the extent, causes and implications of skill deficiencies. This document provides an overview of the results from the STF Employers' Survey conducted as part of this project, presenting new survey evidence on the extent and nature of imbalances between skills supply and demand as reported by employers.

The Department for Education and Employment (DfEE) has undertaken regular surveys of Skills Needs in Britain since the early 1990s. Though these surveys have provided useful information, it was felt that much more comprehensive analysis was required to meet the needs of the STF. This analysis needed to go beyond simply establishing the extent of skill deficiencies, seeking also to improve understanding about the causes and implications of such problems for the long-term performance of the economy.

The general aims and objectives of the wider investigation into the extent, causes, and implications of skill deficiencies project were:

- to focus on skill deficiencies, including recruitment difficulties reported by employers as well as "skill gaps" (that is problems with the skills of the existing workforce);
- to measure the extent and nature of current skill problems;
- to explore the causes of these problems;
- to assess implications of these difficulties for economic performance.

The methodological approach adopted was three pronged[1]:

(i) detailed case studies of establishments in selected sectors were used to probe these questions in depth;

(ii) an intensive, face-to-face interview survey was used to produce detailed quantitative data;

(iii) an extensive telephone survey was conducted in order to enable robust quantitative estimates to be produced at a regional as well as national level.

The present document describes the main results from the surveys of employers.[2] This includes a detailed descriptive analysis of recruitment difficulties, focussing on skill related, hard-to-fill vacancies, and skill gaps.[3]

2 The field work was undertaken by IFF in collaboration with NOP. The design of the survey instruments and the analysis was primarily the responsibility of the Institute for Employment Research (IER), at the University of Warwick.

3 Further detailed econometric analysis of the links between skills gaps and skill deficiencies and economic performance will be reported on separately.

1.2 The Study

The study addresses a number of key questions.

a) What are the skill needs of employers?

b) What is the scale of, and the contribution of a lack of skills to external *recruitment difficulties* facing employers?

c) How do these problems vary by occupation, establishment size, industrial sector, and region?

d) What evidence is there about the existence of internal *skill gaps* within the employed workforce?

e) What are the perceptions of employers about the causes and consequences of such skill deficiencies?

The surveys of establishments were intended to provide a robust quantitative data base upon which to assess the scale of such problems. They were also intended to provide the basis for an analysis of the relationships between skill needs, skill development, and economic performance. This report forms part of a multi-stage process which will examine, in detail, the relationship between skills and the performance of establishments using these data. As such, it provides a broad overview of recruitment problems, skill gaps, and economic performance at an establishment level at the end of 1999.

1.3 Survey Parameters

The employer survey consisted of a total of 27,000 interviews of which 23,000 were conducted by telephone and 4,000 through face-to-face interviews. This compares to 4,000 telephone interviews conducted for the last wave of the Skill Needs in Britain (SNIB) survey in June 1998. In the event, a total of 26,952 interviews were achieved: 3,882 face-to-face and 23,070 over the telephone. The surveys were establishment based. The principal respondent was the senior person responsible for human resource or personnel issues. In establishments with 100 or more employees this was the human resource/personnel director or manager. In establishments with fewer than 100 employees it was the owner, proprietor, or general manager.

The survey also differed from SNIB in terms of its geographic coverage and its coverage by size of employer. Interviewing was restricted to the nine RDA areas of England (whereas SNIB - as its name suggests - extended coverage to Scotland and Wales). All employers surveyed had a minimum of five employees at the specific location sampled; SNIB included only employers with 25 or more employees at the location sampled.

All business sectors (public and private) were covered, with the exception of Agriculture, Hunting and Forestry (1992 SIC codes 01-02), Fishing (1992 SIC codes 05) and Private Households with Employed Persons (1992 SIC codes 95).

1.4 Questionnaire Design and Coverage

The questionnaires were designed in such a manner that the telephone questionnaire forms a sub-set of the face-to-face version. Henceforth, the surveys are simply referred to in the singular as the *STF Employers' Survey.* The base for tables is usually the combined telephone and face-to-face surveys, unless otherwise stated.

A pilot survey of 100 telephone interviews and 50 face-to-face interviews was conducted during June 1999, prior to the main interviewing phase. This was in order to ensure that the questionnaire and the general approach met the objectives of the study and that the length of the interview would not place an excessively onerous burden on employers.[4]

The main stage of interviewing was carried out between August and October 1999 for the telephone survey and between August and November 1999 for the face-to-face survey.

1.5 Response Rates, Sample Design and Approach

The overall response rate from employers was 59 *per cent* for the telephone survey and 54 *per cent* for the face-to-face survey.[5] A full analysis of responses to the survey at overall level and for each of the nine RDAs is available from the authors on request.

The sample was drawn from BT's Business Database, a regularly up-dated list of all establishments with a business telephone line.

The drawn sample was stratified by RDA region, by industry sector (defined against 1992 SIC codes) and by establishment size (in terms of number of employees) using variable sampling fractions. This was done by:

- distributing half the sample equally across the nine RDA regions; and
- distributing the remainder of the sample on a 'probability proportional to size' basis.

Results were grossed up at the analysis stage (on a region by establishment size by industry sector matrix), to population estimates derived from the 1997/98 Annual Employers Survey. The results presented are therefore representative of the 533,616 employers in England who have five or more employees. Results are reported showing the survey totals *(unweighted base)* and the grossed up totals *(weighted base)*.

4 Interviewing on both the face-to-face and telephone stages of the survey was shared between IFF Research Ltd and NOP Business. All interviews were conducted by fully-trained and highly experienced business-to-business interviewers after a personal briefing from members of either the IFF or NOP project teams.

5 Completed interviews as a percentage of contacts.

6 Vacancies can arise due to an excess of demand over supply of the required skills or may be attributable to company- specific factors such as limited efforts at job advertising or the relatively unattractive salaries or job conditions on offer. The former were termed skill-shortages in the first report from the STF.

7 This is quite a narrow definition of 'skill-related', which excludes factors relating to applicants' personal attributes and to general competition among employers for the best applicants.

1.6 Definitional Issues

The analysis of 'skill-shortages' has been hampered frequently by inconsistencies in definition and measurement. Building on the vocabulary used in the first STF report, it was decided to make a clear distinction in the research between two different kinds of skill deficiency or problem with which employers may be confronted:

i. **recruitment difficulties** in the external labour market, focusing on reported hard-to-fill vacancies which are skill related.[6] The latter are referred to as **skill-shortage vacancies**.[7]

ii. internal **skill gaps**, that is, a divergence between firms' current skill levels and those which are required to meet firms' business objectives. These are measured by questions about the lack of proficiency of current staff.

The survey shows that some internal skill gaps are identified and recognised as such by employers. It is possible that some skill gaps may not be reported or may be 'latent' in nature, taking the form of unrecognised deficiencies in the skills required to compete effectively in rapidly changing world markets. This question has been addressed directly in the research, but is dealt with only indirectly in the present document. Together these various problems are referred to as **skill deficiencies**.

1.7 Presentation of Data

The data are presented either with a weighted or unweighted base as described above. On some occasions the base for tables is the number of establishments, on others it is the number of vacancies reported - this is clearly labelled in the tables.

Due to sample size considerations, percentages have not been reported, where the unweighted base is below 25, this is indicated by an asterisk. Where the unweighted base is above 25 but below 50, cell percentages should be treated with caution.

2. RECRUITMENT PROBLEMS

2.1 Introduction

This chapter examines the scale and nature of recruitment problems reported by establishments. Respondents were asked to identify occupations in which they currently had vacancies and then asked to identify those that were proving hard-to-fill. A **recruitment problem** is defined as one where the respondent identifies a vacancy as hard-to-fill. Hard-to-fill vacancies which are skill related are referred to as **skill-shortage vacancies.**

The analysis proceeds by examining the incidence, number, distribution and density of all vacancies, hard-to-fill, and skill-shortage vacancies.[8] The main focus of attention in this Chapter is on skill-shortage vacancies. The causes and impact of recruitment problems and skill-shortage vacancies are explored in Chapter 4.

2.2 Incidence and Number of Vacancies

Approximately 32 per cent of establishments reported vacancies at the time of the survey, *(see Table 2.1).* About 16 per cent of establishments reported hard-to-fill vacancies - that is, approximately half of all establishments with vacancies - but this varied by size of establishment, sector, and region.

The most commonly cited reason for there being a hard-to-fill vacancy was a low number of applicants with the skills required. A low number of applicants generally or with motivation or interest was also commonly cited as the reason for a recruitment problem *(see Figure 2.1)*. Wage levels are often seen as a primary determinant of there being a recruitment problem but this was mentioned by just 18 per cent of establishments with hard-to-fill vacancies.

These responses can be used to refine the definition of those hard-to-fill vacancies which are related to skill problems. Those vacancies where at least one of the following causes was cited by the respondent have been defined as **skill-shortage vacancies**.[9] The relevant causes include:

- low number of applicants with the required skills;
- lack of work experience the company demands;
- lack of qualifications the company demands.

Around half of the reported hard-to-fill vacancies (about 110 thousand in total) were related to a lack of job applicants with the required skills, qualifications or experience, affecting 8 per cent of all establishments.

When looking at the causes of skill-shortage vacancies the responses relating to low number of applicants with skills, or lack of work experience, or qualifications are inevitably more common. (The definition of skill-shortage vacancies depends on a positive response to at least one of these possible answers.) It is notable that the percentage responses are higher in many other areas as well, suggesting a combination of factors reinforces the skill related problems *(see Figure 2.1)*. These data are examined in more detail in Section 2.11 below.

8 Density is defined as vacancies expressed as a proportion of either total employment or of employment in a specific occupation.

9 Note that this is a tight definition of 'skill-related' which excludes factors relating to applicants' personal attributes and to general competition among employers for the best applicants.

Table 2.1 Overall number of vacancies

	% of all establishments reporting	Number of vacancies (a) '000s
All vacancies	32	560
Hard-to-fill vacancies	16	255
Skill-shortage vacancies	8	110
Weighted Base	533572	-
Unweighted Base	26952	-

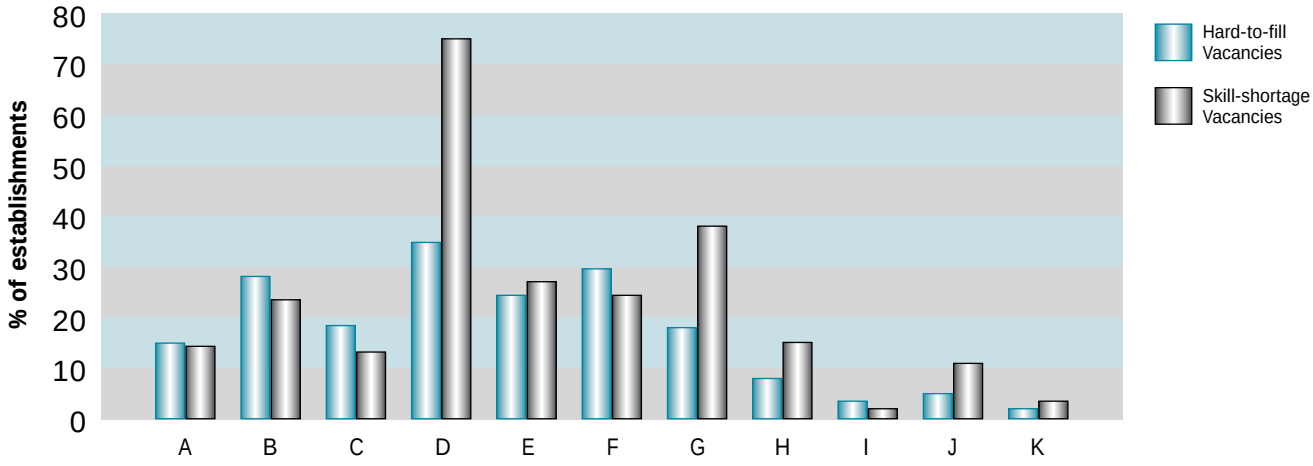
Source: STF Employers' Survey (IER/IFF)

Base: All establishments

Note: (a) Grossed up survey-based estimates (these refer to establishments with five or more employees).

(b) Skill-related hard-to-fill vacancies are defined as those for which at least one of the following causes of hard-to-fill vacancies was cited: 'Low number of applicants with the required skills'; 'Lack of work experience the company demands'; 'Lack of qualifications the company demands'.

Figure 2.1 Reasons for hard-to-fill and skill-shortage vacancies



Source: STF Employers' Survey (IER/IFF)

Key:
- A Too much competition
- B Not enough people interested
- C Company does not pay enough
- D Low number of applicants with skills
- E Low number of applicants with motivation etc.
- F Low number of applicants generally
- G Lack of work experience
- H Lack of qualifications
- I Company location
- J Irregular Hours
- K Other

2.3 Overall Numbers of Vacancies

The analysis so far has focused on the number of establishments as the base for the percentages, presenting the proportion of employers who face recruitment problems. It is also desirable to present the data based on the overall number of vacancies, hard-to-fill vacancies and skill-shortage vacancies, in order to reveal how they are distributed through the economy. This is referred to as the *overall distribution* in the remainder of this document.

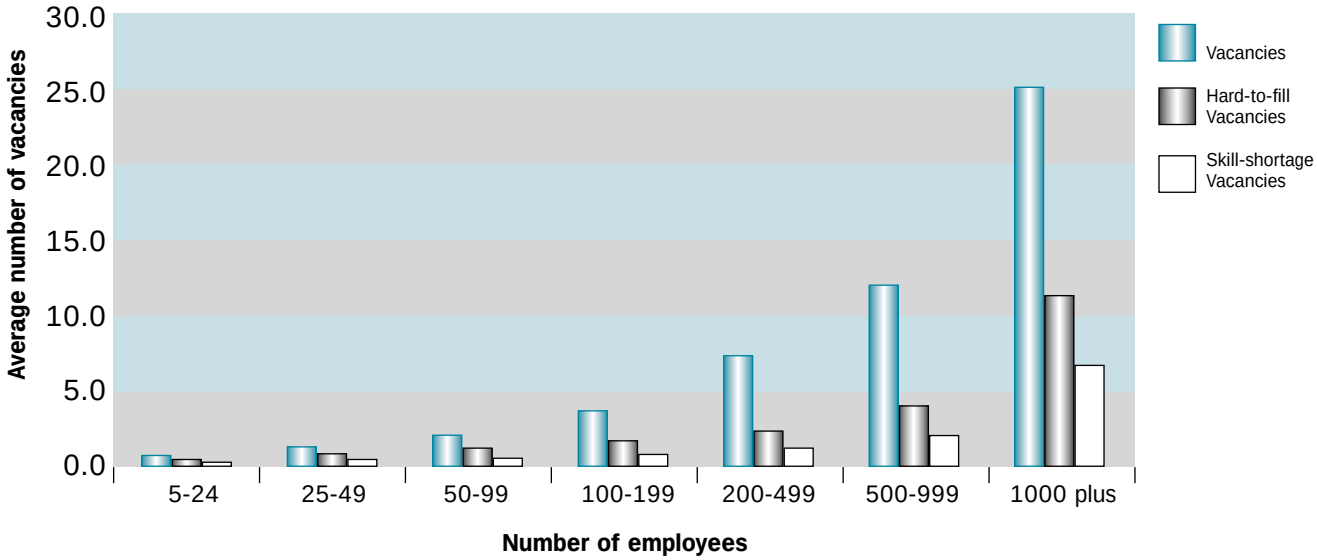
Grossing up the results from the survey suggests that there were approximately 560,000 job vacancies in England within establishments with five or more employees (see Table 2.1). This is equivalent to around 3 per cent of employment.

Many vacancies are of short duration and reflect the natural functioning of the labour market. Given the aims of the research were to quantify skill deficiencies, the emphasis here is on hard-to-fill vacancies and in particular those hard-to-fill vacancies which are related to genuine shortages of skill (*i.e*. skill-shortage vacancies). Approximately 255,000 (46 per cent) of unfilled vacancies reported in the survey were described as hard-to-fill. Of these about 110,000 can be defined as due to skill-shortages in that they were explicitly attributed to a lack of job applicants with the required skills, qualifications or work experience (*see Table 2.1*).

2.4 Variations by Establishment Size

Smaller establishments are less likely to report vacancies. Across all establishments the average number of reported vacancies was 1. Larger establishments reported a much larger number of vacancies (*see Figure 2.2*). In part, this is purely a function of size, the more jobs there are at an establishment the more likely there will be a vacancy reported.

Figure 2.2 Average number of vacancies by establishment size



Source: STF Employers' Survey (IER/IFF)

Larger establishments were also more likely to report some hard-to-fill vacancies (*see Table 2.2*). Approximately 37 per cent of establishments with 1000 or more employees reported hard-to-fill vacancies compared to 15 per cent of those with 5-24 employees, and 19 per cent with 25-49 employees. The propensity to report skill-shortage vacancies is also related to size of establishment (*see Table 2.2*). Whereas 25 per cent of larger establishments reported some skill-shortage vacancies, only 7 or 8 per cent of establishments with fewer than 50 workers reported such vacancies.

The simple measure of the incidence of vacancies provides no information about the relative importance of that vacancy to the establishment. Though larger establishments reported a higher number of vacancies, these will, in general, constitute a small proportion of the workforce. In contrast, one or two hard-to-fill vacancies in an establishment employing a small number of people may constitute a sizeable proportion of the workforce and make a crucial difference. To deal with this problem, much of the analysis in this chapter is based on a measure of density: the number of vacancies expressed as a proportion of total employment. The analysis is confined primarily to those establishments that reported skill-shortage vacancies.

It is apparent that vacancies can comprise a substantial proportion of the workforce. The problem is particularly acute for establishments employing 5-24 people. Though these establishments were less likely to report a hard-to-fill vacancy, when one occurs, the evidence suggests that this may pose a particularly acute problem. Approximately 61 per cent of establishments with 5-24 employees reported that hard-to-fill vacancies accounted for over 10 per cent of the workforce (*see Table 2.3*). For all other sizes of establishment the problem is much less acute: only 16 per cent of establishments with 25-49 establishments reported hard-to-fill vacancies comprising more than 10 per cent of the workforce.

Table 2.2 Hard-to-fill and skill-shortage vacancies by establishment size

	column percentages							
No. of Employees at Establishment	**5-24**	**25-49**	**50-99**	**100-199**	**200-499**	**500-999**	**1000+**	**All**
No. of hard to fill vacancies reported								
% reporting hard-to-fill vacancies	15	19	12	16	17	33	37	16
Average no. reported: hard-to-fill vacancies	0.3	0.5	0.8	1.4	2.2	4.5	13.3	0.5
No. of skill-shortage vacancies reported								
None	93	92	90	87	87	81	75	92
1	4	3	4	4	4	3	3	4
2	2	2	2	2	2	3	1	2
3	1	1	1	1	1	2	1	1
4	0	1	1	1	1	2	1	0
5+	0	1	2	3	5	9	19	1
% reporting skill-shortage vacancies	7	8	10	11	13	19	25	8
Average no. reported: skill-shortage vacancies	0.1	0.2	0.3	0.5	0.8	2.0	7.1	0.2
Total skill-shortage vacancies	56803	12953	12837	8029	8558	4011	6399	109590
Weighted Base	399590	65626	39957	15059	10373	2061	906	533572
Unweighted Base	10417	6426	3770	3361	2236	515	227	26952

Source: STF Employers' Survey (IER/IFF)

Base: All Establishments

TABLE 2.3 Density of skill-shortage vacancies by establishment size

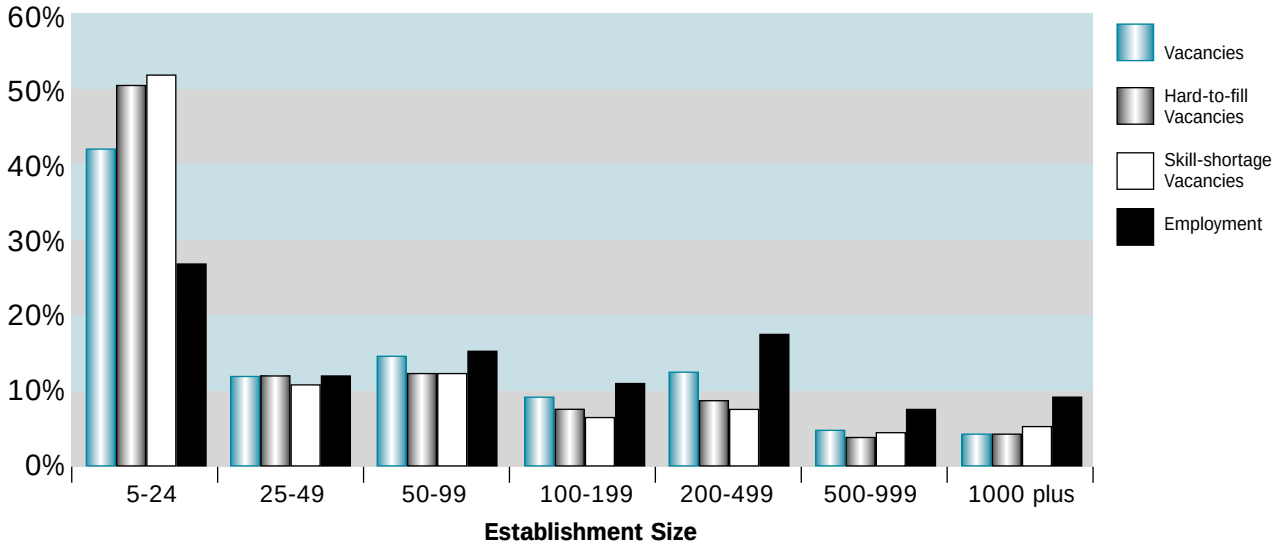
	column percentages							
No. of Employees at Establishment	**5-24**	**25-49**	**50-99**	**100-199**	**200-499**	**500-999**	**1000+**	**All**
Skill-shortage vacancies as a % of the workforce								
1-5%	8	48	66	85	89	93	95	27
6-10%	30	36	21	11	8	5	5	28
11+%	61	16	11	4	3	1	-	45
Total	100	100	100	100	100	100	100	100
Vacancies as a % of Employment (%)	1.22	0.58	0.48	0.40	0.28	0.30	0.39	0.62
Weighted Base	28015	5400	3968	1871	1409	395	226	41284
Unweighted Base	712	555	391	400	312	106	56	2532

Source: STF Employers' Survey (IER/IFF)
Base: All Establishments with skill-shortage vacancies

The overall distribution of vacancies, hard-to-fill vacancies and skill-shortage vacancies by the size of establishments is summarised in *Figure 2.3*. Most vacancies are located in establishments employing between 5 and 24 employees. Such establishments accounted for 42 per cent of all vacancies. Smaller firms accounted for 50 per cent of vacancies that were hard-to-fill and 52 per cent of skill-shortage vacancies.

Smaller firms also accounted for a large share of total employment. There is, however, evidence that skill-shortage vacancies were more of a problem for smaller firms. When expressed as a percentage of total employment, the proportion of skill-shortage vacancies represented 1.2 per cent of all employment for smaller establishments (fewer than 25 employees). This compares to 0.3 - 0.4 per cent for establishments employing 25 or more employees. Smaller establishments accounted for a disproportionately large share of skill-shortages (*see Table 2.3*).

Figure 2.3 Overall distribution of vacancies and employment by size of establishment



Source: STF Employers' Survey (IER/IFF)

2.5 Vacancies by Occupation

Reported vacancies by occupation will reflect the pattern of occupational employment in the economy overall. Various other factors will also be important such as the rate of growth of employment in different occupations, as well as the number of job openings arising due to replacement demand.[10] Another important factor is the propensity to use the internal as opposed to external labour market for filling job openings.

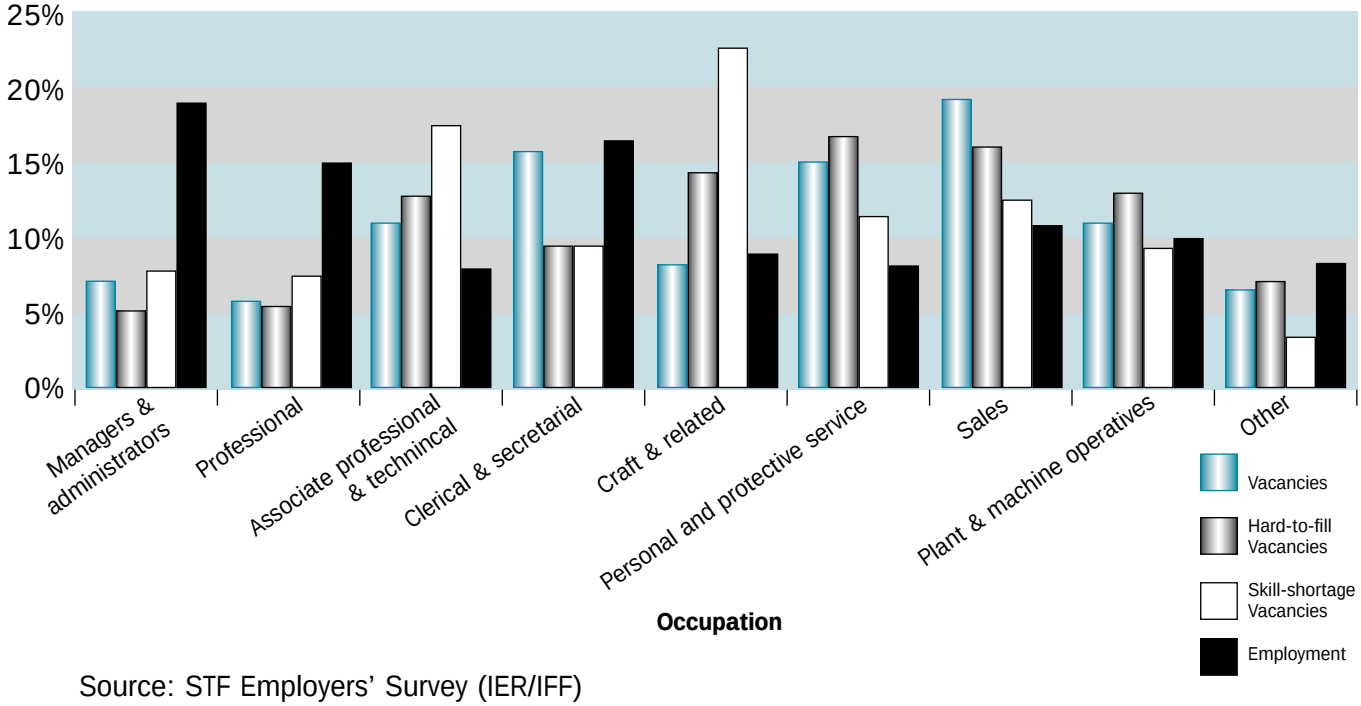
Table 2.4 provides a summary of the pattern of vacancies by occupation and compares this with the overall structure of employment. The shares of vacancies in different occupations are also illustrated in *Figure 2.4*.

This analysis reveals that clerical and secretarial, personal and protective service, and sales occupations accounted for the highest proportions of vacancies and hard-to-fill vacancies (*see Figure 2.4*). There are some notable differences between the distribution of vacancies, hard-to-fill vacancies, and skill-shortage vacancies. Whereas craft occupations accounted for a relatively modest proportion of vacancies (8 per cent) they accounted for 14 per cent of all hard-to-fill vacancies and 22 per cent of skill-shortage vacancies. Conversely, clerical and secretarial occupations and sales occupations accounted for a much lower proportion of hard-to-fill vacancies and skill-shortage vacancies compared with vacancies overall.

Over 20 per cent of skill-shortage vacancies were in craft and skilled occupations, with a further 17 per cent in associate professional and technical occupations. These two occupations accounted for only 17 per cent of total employment in the survey. Around one-quarter of skill-shortage vacancies were found in personal service and sales occupations. This compares with their share of employment in the survey of 19 per cent. The proportions of hard-to-fill vacancies in these occupations were even higher than their shares of skill-shortage vacancies.

10 That is the need to replace those leaving employment for retirement and other reasons.

Figure 2.4 Distribution of vacancies by occupation



Source: STF Employers' Survey (IER/IFF)

Table 2.4 Summary of reported vacancies by occupation

ABSOLUTES/COLUMN PERCENTAGES/RATIOS							
SURVEY-BASED ESTIMATES:	**Total Employment**	**Total unfilled vacancies**	**Total unfilled vacancies as a % of employment**	**Total hard-to-fill vacancies**	**Total hard-to-fill vacancies as a % of employment**	**Total skill-shortage vacancies**	**Total skill-shortage vacancies as a % of employment**
Percentages							
Managers & administrators	15	7	1.5	5	0.5	7	0.3
Professional	15	6	1.3	5	0.5	8	0.3
Associate professional & technical	8	11	4.4	12	2.3	17	1.4
Clerical & secretarial	16	16	3.1	9	0.8	9	0.3
Craft and related	9	8	2.9	14	2.2	22	1.5
Personal & Protective service	8	15	6.0	17	3.0	11	0.9
Sales	11	19	5.7	16	2.2	13	0.7
Plant & machine Operatives	10	11	3.3	13	1.8	9	0.6
Other	8	7	2.7	7	1.2	3	0.2
TOTAL	100	100	3.2	100	1.4	100	0.6
Weighted Base	17552000	560000		255000		110000	
Unweighted Base	2435000	58800		23600		10100	

Source: STF Employers' Survey (IER/IFF)

Base: As specified at column head

Note: (a) Grossed up survey-based estimates (these refer to establishments with 5 or more employees).
(b) Skill-shortage vacancies are defined as those for which at least one of the following causes of hard-to-fill vacancies was cited: 'Low number of applicants with the required skills'; 'Lack of work experience the company demands'; 'Lack of qualifications the company demands'.

Table 2.5 Probability of establishments with hard-to-fill vacancies in one occupation reporting hard-to-fill vacancies in other occupations

COLUMN PERCENTAGES									
SOC	**Managers & administrators**	**Professional**	**Associate professional & technical**	**Clerical & secretarial**	**Craft & related**	**Personal & protective service**	**Sales**	**Plant & machine operatives**	**Other**
Managers & administrators	100	4	4	5	2	3	3	2	3
Professional	4	100	3	4	2	1	2	2	-
Associate professional & technical	6	5	100	5	1	3	4	1	4
Clerical & secretarial	8	6	100	3	2	5	6	2	
Craft & related	3	3	1	3	100	1	1	5	2
Personal & protective service	7	1	4	3	1	100	1	-	14
Sales	7	4	6	7	2	1	100	4	4
Plant & machine operatives	2	3	1	4	4	-	2	100	1
Other	3	-	3	1	1	6	2	1	100

Source: STF Employers' Survey (IER/IFF)

Base: All establishments

Note: Because of problems of small sample sizes it is not possible to replicate this table for skill-shortage vacancies.

Where an establishment reported a hard-to-fill vacancy in an occupation there was the possibility that other hard-to-fill vacancies may be reported in other occupations *(see Table 2.5)*. Because the average number of hard-to-fill vacancies at each establishment was low there was limited variation in the data. Where, however, senior management or professional hard-to-fill vacancies existed there was a slightly greater chance of clerical/secretarial hard-to-fill vacancies being reported as well. Where management or clerical/secretarial vacancies were primarily hard-to-fill, sales occupations were also likely to reported. Overall, the data pointed to hard-to-fill vacancies, at an occupational level for most establishments, not existing in combination.

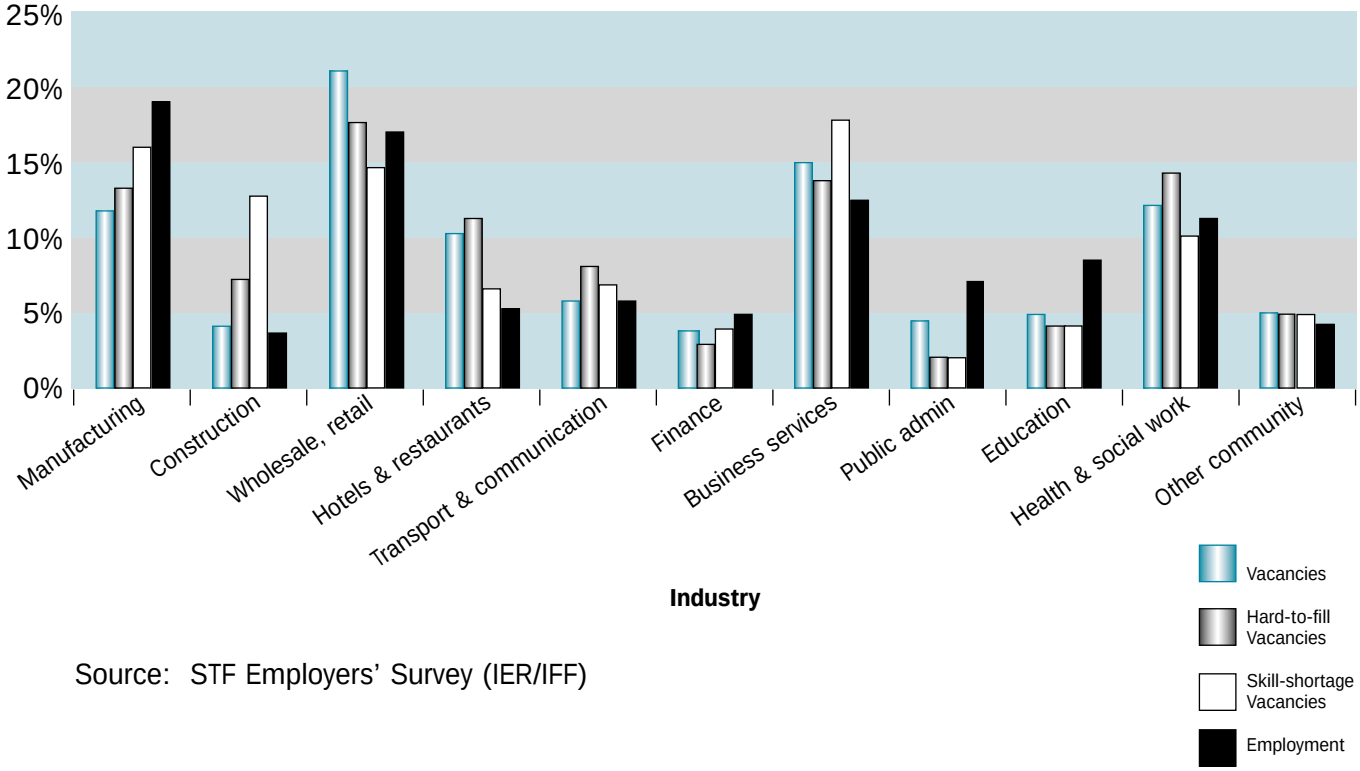
2.6 Vacancies by Sector

Summary of the Total Number of Vacancies by Sector

Figure 2.5 and *Table 2.6* provide a summary of the overall number of vacancies by sector, including a comparison with the total level of employment. Distributive services (wholesale and retail), and business services account for the greatest proportion of vacancies and hard-to-fill vacancies. The distributive sector accounted for 21 per cent of all vacancies, 18 per cent of all hard-to-fill vacancies but only 15 per cent of skill-shortage vacancies; the corresponding proportions for business services were 15, 14 and 17 per cent respectively. Regarding skill-shortage vacancies, construction stands out, accounting for a much bigger share of skill-shortage vacancies (13 per cent) than its share of vacancies as a whole (4 per cent).

By contrast, although an industry like hotels and restaurants has a disproportionately large share of hard-to-fill vacancies, its share of skill-shortage vacancies does not significantly exceed its employment share.

Figure 2.5 Overall distribution of vacancies by sector



Source: STF Employers' Survey (IER/IFF)

Table 2.6 Summary of vacancies analysed by sector

ABSOLUTE/COLUMN PERCENTAGES/RATIOS							
	Total Employment, England	Total unfilled vacancies	Total unfilled vacancies as a % of employment	Total hard-to-fill vacancies	Total hard-to-fill vacancies as a % of employment	Total skill-shortage vacancies	Total skill-shortage vacancies as a % of employment
Weighted Base	17552000	560000		255000		110000	
Unweighted Base	2435000	58800		23600		10100	
Percentages							
Manufacturing	19	12	2.0	14	1.0	16	0.5
Construction	4	4	3.7	8	3.0	13	2.2
Wholesale & Retail	17	21	4.0	18	1.5	15	0.5
Hotels & Restaurants	6	10	5.8	11	2.9	6	0.7
Transport & Communications	6	6	3.4	8	1.9	7	0.7
Financial Services	5	4	2.4	3	0.8	4	0.5
Business Services	13	15	3.7	14	1.6	17	0.8
Public Administration	7	4	2.1	2	0.4	2	0.1
Education	8	5	1.8	4	0.7	4	0.3
Health & Social Care	11	12	3.5	14	1.8	10	0.6
Other Services	4	5	3.9	5	1.8	5	0.7
Miscellaneous Industries (b)	1	1	2.6	1	1.2	1	0.6
TOTAL	100	100	3.2	100	1.4	100	0.6

Source: STF Employers' Survey (IER/IFF)
Base: As specified at column head

Table 2.7 Vacancies and industrial sector

COLUMN PERCENTAGES/AVERAGES/RATIOS														
SECTOR	**Mining & Quarrying**	**Manu' ring**	**Electricity & Water**	**Const' tion**	**Wholesale & Retail**	**Hotels & Rest'nts**	**Transport & Comms**	**Financial Inter'tion**	**Business Services**	**Public Admin**	**Education**	**Health & Social Care**	**Other Services**	**Total**
% of establishments reporting vacancies	16	29	20	28	31	39	32	29	32	33	33	38	67	32
Average number of vacancies per establishment	0.3	0.9	1.9	0.9	0.9	1.2	1.4	1	1.1	1.7	0.8	1.3	0.8	1.0
Total Vacancies	244	66531	1140	23301	118465	56645	36200	20416	83263	25050	25679	68308	28965	557778
Vacancies as a % of employment (%)	0.7	2.0	2.6	3.7	3.9	5.8	3.4	2.4	3.7	2.1	1.78	3.5	3.9	3.2
Weighted Base	737	71231	585	25858	131653	46427	25552	20571	74660	15167	32066	51703	34500	533572
Unweighted Base	51	6109	51	1429	4698	2331	1218	1132	2813	803	1759	2822	1571	26952

Source: STF Employers' Survey (IER/IFF)
Base: All Establishments

COLUMN PERCENTAGES														
	Mining & Quarrying	Manu' Ring	Electricity & Water	Const' Tion	Wholsale & Retail	Hotels & Rest'nts	Transport & Comms	Financial Inter'tion	Business Services	Public Admin	Education	Health & Social Care	Other Services	All Establish ments
No of hard-to-fill vacancies														
% reporting hard-to-fill vacancies	5	17	6	20	15	22	18	13	16	8	14	19	16	16
Average no. reported	0.1	0.5	0.3	0.7	0.3	0.6	0.8	0.4	0.5	0.3	0.3	0.7	0.4	0.5
No. of skill-shortage vacancies														
0	95	91	95	87	94	93	92	92	91	97	94	93	93	92
1	5	5	3	4	4	4	3	4	4	2	4	3	4	4
2	-	3	-	4	2	2	2	2	2	0	2	2	2	2
3	-	1	-	2	0	1	1	1	1	0	0	1	1	1
4	-	1	-	1	0	0	0	-	1	0	0	0	0	0
5+	-	1	2	3	0	1	2	1	1	1	1	1	1	1
% reporting skill-shortage vacancies	5	9	5	13	6	7	8	8	9	3	6	7	7	8
Average no. of skill-shortage vacancies	0.1	0.3	0.3	0.5	0.1	0.2	0.3	0.2	0.3	0.1	0.1	0.2	0.2	0.2
Total skill-shortage Vacancies	35	17546	163	13704	16128	7116	7731	4219	19097	1726	4600	11237	5307	109590
Weighted Base (no. of estabs)	737	71231	585	25858	131653	46427	25552	20571	74660	15167	32066	51703	34500	533572
Unweighted Base	51	6109	51	1429	4698	2331	1218	1132	2813	803	1759	2822	1571	26952

Source: STF Employers' Survey (IER/IFF)

Base: All establishments

Table 2.9 Density of skill-shortage vacancies by industrial sector

COLUMN PERCENTAGES														
	Mining & Quarrying	Manu' ring	Electricity & Water	Const' tion	Wholsale & Retail	Hotels & Rest'nts	Transport & Comms	Financial Inter'tion	Business Services	Public Admin	Education	Health & Social Care	Other Services	Total
Skill-shortage vacancies as a percentage of the workforce														
1-5%	*	34	*	11	22	26	25	29	25	69	50	32	21	27
6-10%	*	26	*	24	31	35	25	24	30	13	21	33	28	28
11+%	*	40	*	65	47	39	50	48	46	18	29	36	51	45
Total	*	100	*	100	100	100	100	100	100	100	100	100	100	100
Skill-shortage vacancies as a % of employment	*	0.5	*	2.2	0.5	0.7	0.7	0.5	0.8	0.1	0.3	0.6	0.7	0.6
Weighted Base	35	6780	27	3398	8547	3400	2153	1557	6610	456	1931	3547	2483	41284
Unweighted Base	3	648	6	204	325	215	120	97	332	41	127	257	126	2532

Source: STF Employers' Survey (IER/IFF)

Base All establishments with skill-shortage vacancies

Incidence of Vacancies by Sector

Information on incidence (*ie* the proportion of establishments reporting vacancies) is given below. Service sector establishments were more likely to report vacancies than those in manufacturing or construction (*see Table 2.7*). Hotels and restaurants and health and social care were more likely to report that they had vacancies than any other sector (38 - 39 per cent of all establishments). In manufacturing, the proportion of establishments reporting vacancies was 29 per cent and it was even lower in mining and quarrying and the utilities.

The incidence of skill-shortage vacancies by sector is shown in *Table 2.8*. It is the construction sector which stands out, with 13 per cent of establishments reporting some skill-shortage vacancies compared to the average of 8 per cent.

The density of skill-shortage vacancies varies little by sector. However, construction reported that in 65 per cent of establishments where such vacancies occurred they constituted over 10 per cent of the workforce (*see Table 2.9*). Such vacancies represented over 2 per cent of total employment in all construction establishments. Hotels and restaurants, transport and communication, business services and other services also have above average ratios of skill-shortage vacancies compared to employment but these are all below 1 per cent of employment.

Distribution by Sector and Occupation

A more detailed picture of the overall distribution of vacancies by occupation and sector is provided in *Table 2.10*. The key results to emerge are:

- vacancies for some occupations are highly sector specific such as sales and related occupations being concentrated in distributive trades, and craft and production and production operatives being located primarily in manufacturing;
- other occupations in which vacancies arose revealed a much greater spread across industries, but even here occupations such as managers are more concentrated in business services
- overall there is a substantial degree of industry-specific occupational vacancies.

A similar analysis to that provided for vacancies can be provided for the overall distribution of hard-to-fill vacancies (*see Table 2.11*). The specific occupation/industry locations of hard-to-fill vacancies are as follows:

- craft and related vacancies are predominantly in manufacturing and construction;
- professional, and clerical and secretarial vacancies are concentrated in business services;
- hard-to-fill vacancies in personal and protective service occupations are mainly in hotels and restaurants;
- sales vacancies are mainly hard-to-fill in distributive trades; and
- production and assembly vacancies are hard-to-fill mainly in manufacturing, and transport and communication.

The overall pattern for skill-shortage vacancies is very similar to that for hard-to-fill vacancies *(see Table 2.12)*. One notable difference is that in manufacturing the relative importance of craft vacancies is much higher than for operatives. For associate professionals skill-shortage vacancies are of relatively greater importance for finance and business services.

Table 2.10 Overall distribution of vacancies by sector and occupation

COLUMN PERCENTAGES										
	Managers & admin	Professionals	Associate Professional & technical	Clerical & Secretarial	Craft & Related	Personal & Protective Service	Sales & Related	Production & Process Operatives	Other	Total
Mining & quarrying	0	0	0	0	0	0	0	0	0	0
Manufacturing	11	10	7	6	35	0	6	41	6	12
Electricity and Water	0	0	0	0	0	0	0	0	0	0
Construction	2	3	2	2	30	0	2	2	4	4
Wholesale, retail trade	15	3	4	13	19	2	69	11	15	21
Hotels & restaurants	7	0	0	3	2	36	3	1	38	10
Transport & communication	4	2	3	9	2	1	2	30	7	6
Finance	4	2	5	11	0	0	4	0	0	4
Business services	31	34	22	20	8	7	9	10	12	15
Public Administration	10	8	4	17	0	1	0	0	0	4
Education	4	23	7	5	0	7	0	1	4	5
Health & Social work	7	11	39	7	1	32	1	2	8	12
Other Community Services	5	5	7	6	1	13	2	0	5	5
DK/NA	0	0	0	1	1	0	1	2	0	1
Total	100	100	100	100	100	100	100	100	100	100
Weighted Base	38990	32724	61099	87279	46749	84035	107681	60218	39003	557778
Unweighted Base	3286	3885	7974	10216	4348	6476	10630	7421	4593	58829

Source: STF Employers' Survey (IER/IFF)

Base: All vacancies

Table 2.10 (continued) Overall distribution of vacancies by sector and occupation

ROW PERCENTAGES												
	Managers & admin	Professionals	Associate Professionals & technical	Clerical & Secretarial	Craft & Related	Personal & Protective Service	Sales	Production & Process Operatives	Other	Total	Weighted Base	Unweighted Base
Mining & quarrying	0	15	9	43	10	0	0	23	0	100	244	29
Manufacturing	6	5	7	8	25	0	9	37	3	100	66531	10856
Electricity and Water	2	8	12	38	8	1	25	5	0	100	1140	222
Construction	3	4	4	7	60	0	10	4	7	100	23301	899
Wholesale, retail trade	5	1	2	10	8	1	63	6	5	100	118465	11761
Hotels & restaurants	5	0	0	5	1	54	7	1	26	100	56645	5265
Transport & communication	4	1	4	23	3	2	5	49	8	100	36200	3521
Finance	8	4	16	49	0	0	21	1	0	100	20416	2451
Business services	15	13	16	20	4	7	12	7	6	100	83263	7219
Public Administration	15	10	10	60	1	2	0	0	1	100	25050	2674
Education	6	29	16	16	1	24	2	2	6	100	25679	2568
Health & Social work	4	5	35	9	0	39	1	2	4	100	68308	7813
Other	7	5	15	17	2	39	7	1	7	100	28965	2217
Community Services DK/NA	1	4	2	12	17	2	29	29	4	100	3569	334
Total	7	6	11	16	8	15	19	11	7	100	557778	58829

Source: STF Employers' Survey (IER/IFF)
Base: All vacancies

Table 2.11 Overall distribution of hard-to-fill vacancies by sector and occupation

COLUMN PERCENTAGES										
	Managers & admin	Professionals	Associate Professionals & technical	Clerical & Secretarial	Craft & Related	Personal & Protective Service	Sales	Production & Process Operatives	Other	Total
Mining & quarrying	*	*	*	*	*	*	*	*	39	4
Manufacturing	16	12	5	6	35	0	7	34	4	14
Electricity & Water	0	0	0	0	0	0	0	0	0	0
Construction	4	3	2	2	37	0	4	2	6	8
Wholesale, retail trade	19	3	4	14	15	2	62	11	10	18
Hotels & restaurants	9	1	0	5	1	37	5	1	40	11
Transport & communication	5	2	3	12	1	0	2	39	7	8
Finance	4	3	4	10	0	0	6	0	0	3
Business services	20	39	22	23	7	8	9	7	15	14
Public Administration	2	4	2	12	0	0	0	0	0	2
Education	10	19	4	3	0	5	1	1	4	4
Health & Social work	4	11	48	8	1	32	2	1	7	14
Other Community Services	6	3	5	6	1	15	2	0	5	5
DK/NA	0	1	0	1	1	0	1	3	1	1
Total	100	100	100	100	100	100	100	100	100	100
Weighted Base	13688	13806	31619	23960	35803	42391	40629	33461	18322	253680
Unweighted Base	1088	1646	4328	2193	2795	3042	2946	3687	1862	23587

Source: STF Employers' Survey (IER/IFF)

Base: All hard-to-fill vacancies

Table 2.11 (continued) Overall distribution of hard-to-fill vacancies by sector and occupation

ROW PERCENTAGES												
	Managers & admin	Professionals	Associate Professionals & technical	Clerical & Secretarial	Craft & Related	Personal & Protective Service	Sales	Production & Process Operatives	Other	Total	Weighted Base	Unweighted Base
Mining & quarrying	*	*	*	*	*	*	*	*	*	*	39	4
Manufacturing	6	5	5	4	36	0	8	33	2	100	34442	4527
Electricity and Water	3	34	8	5	45	5	0	0	0	100	174	44
Construction	3	3	4	2	70	0	9	4	5	100	19223	1425
Wholesale, retail trade	6	1	3	8	12	2	56	8	4	100	44839	3297
Hotels & restaurants	4	0	0	4	1	56	7	1	26	100	28013	2455
Transport & communication	3	1	4	14	2	0	4	65	7	100	20168	1671
Finance	8	6	19	34	0	0	34	0	0	100	7121	712
Business services	8	15	20	16	7	10	10	7	8	100	35151	3043
Public Administration	7	11	12	63	2	3	0	1	1	100	4447	503
Education	14	27	13	8	0	24	2	3	8	100	9619	777
Health & Social work	2	4	43	5	1	39	2	1	4	100	35012	4100
Other	6	3	13	10	3	49	7	1	7	100	13344	838
Community Services DK/NA	1	6	0	7	25	0	14	41	5	100	2089	191
Total	5	5	12	9	14	17	16	13	7	100	253680	23587

Source: STF Employers' Survey (IER/IFF)

Base: All hard-to-fill vacancies

Table 2.12 Overall distribution of skill-shortage vacancies by sector and occupation

COLUMN PERCENTAGES										
	Managers & admin	Professionals	Associate Professionals & technical	Clerical & Secretarial	Craft & Related	Personal & Protective Service	Sales	Production & Process Operatives	Other	Total
Mining & quarrying	0	0	0	0	0	0	0	0	0	0
Manufacturing	20	13	6	6	31	0	12	33	10	16
Electricity & Water	0	1	0	0	0	0	0	0	0	0
Construction	2	4	3	2	41	0	10	5	15	12
Wholesale, retail trade	17	4	6	11	15	2	50	11	7	15
Hotels & restaurants	4	0	0	5	0	36	2	0	47	6
Transport & communication	7	2	4	13	1	1	2	41	7	7
Finance	3	3	5	14	0	0	11	0	0	4
Business services	24	40	29	27	8	10	10	7	5	17
Public Administration	2	3	1	9	0	1	0	0	0	2
Education	14	17	3	4	0	7	1	0	0	4
Health & Social work	4	8	37	5	0	21	1	1	3	10
Other Community Services	6	4	5	5	1	22	1	0	3	5
DK/NA	0	1	0	1	2	0	0	1	1	1
Total	100	100	100	100	100	100	100	100	100	100
Weighted Base	8058	8643	18964	9542	24315	12318	13891	10314	3545	109590
Unweighted Base	577	1093	2522	984	1770	834	893	1088	362	10123

Source: STF Employers' Survey (IER/IFF)

Base: All skill-shortage vacancies

Table 2.12 (continued) Overall distribution of skill-shortage vacancies by sector and occupation

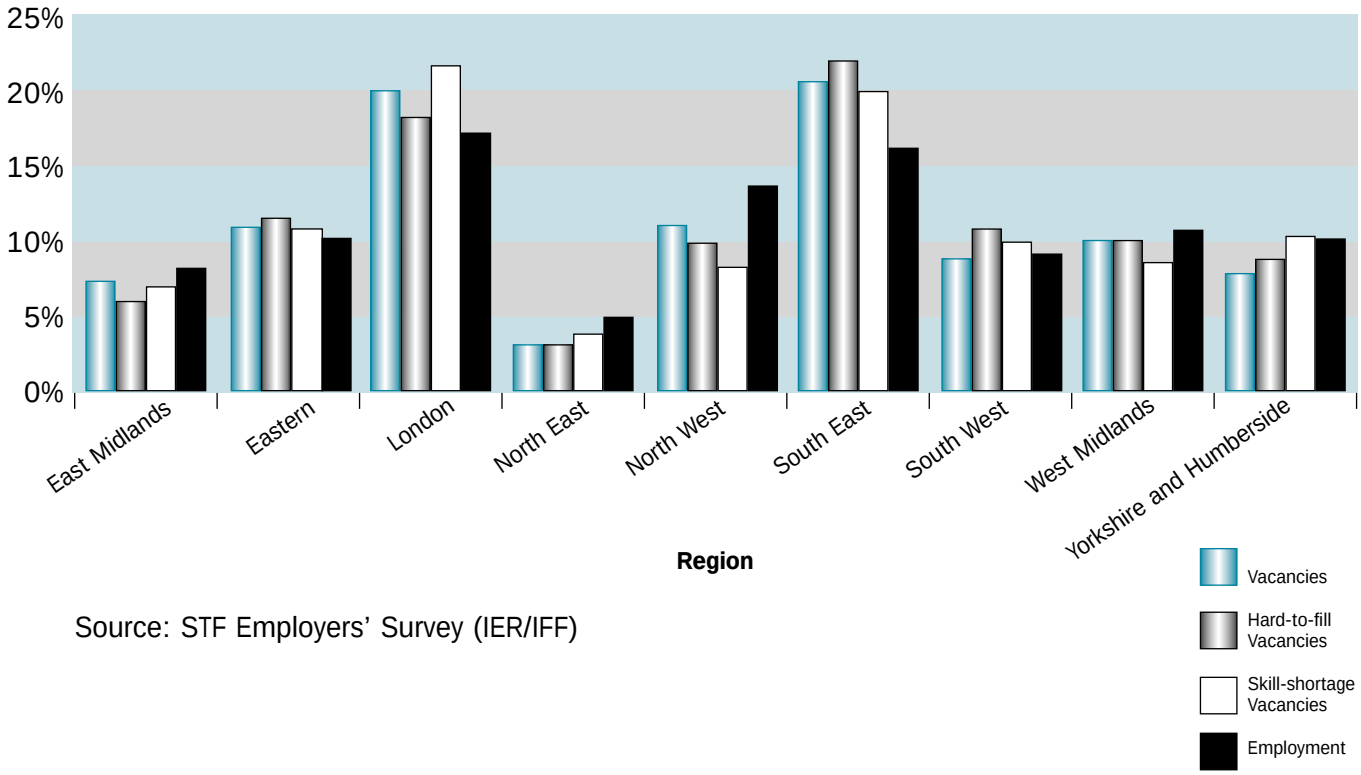
ROW PERCENTAGES												
	Managers & admin	Professionals	Associate Professional & technical	Clerical & Secretarial	Craft & Related	Personal & Protective Service	Sales	Production & Process Operatives	Other	Total	Weighted Base	Unweighted Base
Mining & quarrying	*	*	*	*	*	*	*	*	*	*	35	3
Manufacturing	9	7	7	3	43	0	9	20	2	100	17546	2090
Electricity and Water	0	37	8	2	48	5	0	0	0	100	163	42
Construction	1	2	4	1	73	0	11	3	4	100	13704	927
Wholesale, retail trade	8	2	7	6	22	2	43	7	1	100	16128	953
Hotels & restaurants	4	0	0	6	1	62	3	0	24	100	7116	637
Transport & communication	7	2	10	16	2	1	4	55	3	100	7731	690
Finance	5	6	23	31	0	0	35	0	0	100	4219	453
Business services	10	18	29	13	11	7	7	4	1	100	19097	1736
Public Administration	8	16	16	52	0	7	0	0	0	100	1726	253
Education	24	32	13	8	0	20	3	0	0	100	4600	373
Health & Social work	3	6	62	4	0	23	1	0	0	100	11237	1568
Other Community Services	8	7	19	8	3	51	2	0	2	100	5307	323
DK/NA	1	8	1	13	54	0	6	12	4	100	982	75
Total	7	8	17	9	22	11	13	9	3	100	109590	10123

Source: STF Employers' Survey (IER/IFF)
Base: All skill-shortage vacancies

2.7 The Spatial Pattern of Vacancies

The analysis by region reveals that vacancies were most commonly found in the London and South East regions (*see Figure 2.6*). The North East stands out as having a relatively small proportion of vacancies or hard-to-fill vacancies reported. London has the greatest share of skill-shortage vacancies. Overall, the amount of variation between regions with respect to any of the measures of vacancies is limited.

Figure 2.6 Overall distribution of vacancies, hard-to-fill vacancies and skill-shortage vacancies by region



Source: STF Employers' Survey (IER/IFF)

Table 2.13 Vacancies and region

COLUMN PERCENTAGES/AVERAGES/RATIOS										
	East Midlands	Eastern	London	North East	North West	South East	South West	West Midlands	Yorkshire & Humberside	England
% reporting Vacancies	29	35	36	25	27	38	32	30	29	32
Average of vacancies Number (mean)	0.9	1.1	1.3	0.7	0.8	1.3	1.0	1.0	0.8	1.0
Total number of Vacancies	41144	61512	112230	17683	159842	114471	51968	54512	44417	557778
Vacancies as a % of Employment	2.9	3.4	3.7	2.1	2.5	4.0	3.2	2.9	2.6	3.2
Weighted Base	44714	56071	85879	24616	71663	87156	53140	57274	53059	533572
Unweighted Base	2412	2971	3377	2048	3758	3749	2973	2880	2784	26952

Source: STF Employers' Survey (IER/IFF)
Base: All Establishments

Table 2.14 Hard-to-fill vacancies and skill-shortage vacancies by region

COLUMN PERCENTAGES/AVERAGES/RATIOS										
	East Midlands	Eastern	London	North East	North West	South East	South West	West Midlands	Yorkshire & Humberside	Total
No. of hard-to-fill vacancies										
% reporting hard-to-fill	14	18	18	10	13	21	18	14	15	16
Average no reported	0.4	0.5	0.5	0.3	0.3	0.6	0.5	0.4	0.4	0.5
No. of skill-shortage vacancies reported										
0	93	92	90	96	95	91	93	93	94	92
1	4	4	5	2	2	4	4	4	4	4
2	2	2	3	1	2	3	2	2	2	2
3	1	1	1	0	1	1	1	1	0	1
4	1	1	0	0	0	0	0	1	0	0
5+	0	1	2	1	1	1	1	1	1	1
% reporting skill-shortage vacancies	7	8	10	4	5	9	7	7	6	8
Average no. of vacancies	0.2	0.2	0.3	0.1	0.1	0.3	0.2	0.2	0.2	0.2
Total Skill-Shortage Vacancies	7837	12270	23598	3385	9249	21564	11043	9335	11309	109590
Weighted Base	44714	56071	85879	24616	71663	87156	53140	57274	53059	533572
Unweighted Base	2412	2971	3377	2048	3758	3749	2973	2880	2784	26952

Source: STF Employers' Survey (IER/IFF)

Base: All Establishments

Table 2.15 Density of skill-shortage vacancies by region

COLUMN PERCENTAGES/AVERAGES/RATIOS										
	East Midlands	Eastern	London	North East	North West	South East	South West	West Midlands	Yorkshire & Humberside	England
Skill-shortage vacancies as a % of the workforce										
1-5%	24	30	28	30	28	26	26	25	27	27
6-10%	35	25	30	25	30	24	33	28	29	28
11+%	41	46	43	45	42	51	41	48	44	45
Total	100	100	100	100	100	100	100	100	100	100
Vacancies as a % of employment	0.5	0.7	0.8	0.4	0.4	0.7	0.7	0.5	0.6	0.6
Weighted Base	3287	4614	8913	1116	3607	8404	3966	4081	3296	41284
Unweighted Base	192	341	455	122	259	455	279	225	204	2532

Source: STF Employers' Survey (IER/IFF)

Base: All Establishments with skill-shortage vacancies

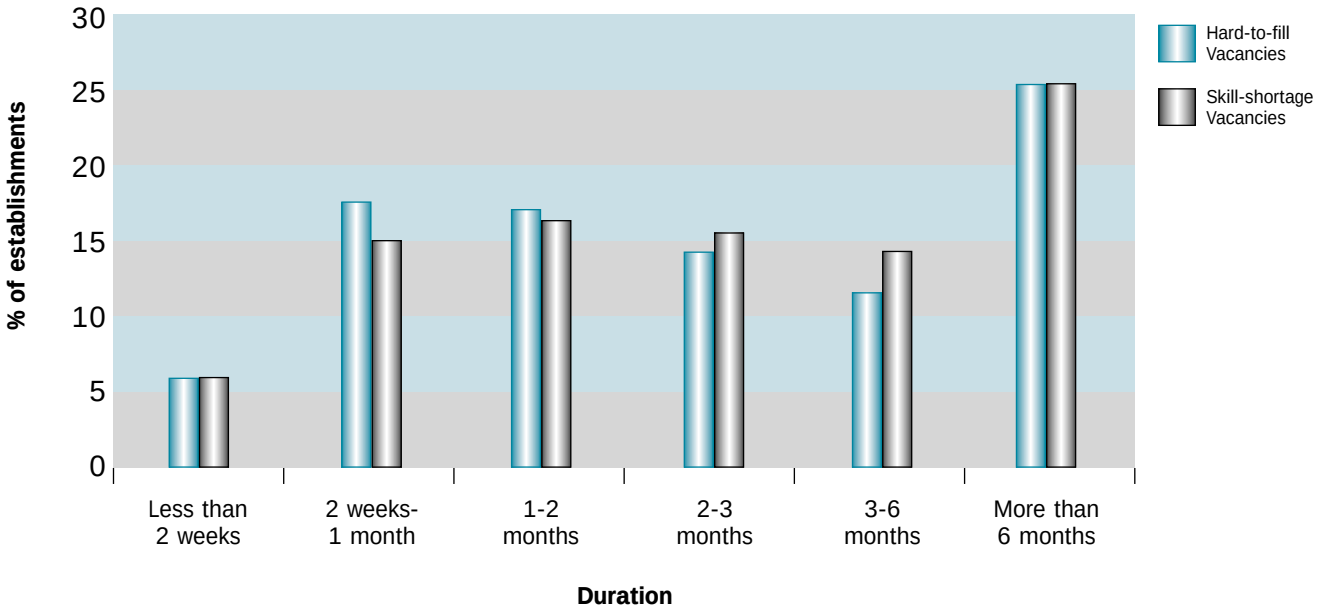
London, the South East and to a lesser extent the Eastern and South West regions show more significant problems with respect to skill-shortage vacancies (*see Table 2.15*). There is little variation by region in the density of skill-shortage vacancies. Of those establishments with skill-shortage vacancies, the percentage reporting that such vacancies accounted for more than 10 per cent of the workforce varies from 41 per cent in the East Midlands and South West, to 51 per cent in the South East. What emerges from the regional data is a crude north-south divide with the London, South East, Eastern and South West regions reporting more hard-to-fill vacancies than the other regions, reflecting in large part the more buoyant economic conditions in these regions.

It is noticeable the regions which reported the highest incidence of hard-to-fill vacancies did not necessarily report the highest densities (*see Table 2.15*).

2.8 Duration of Hard-to-fill Vacancies

Respondents were asked to define whether or not they considered a vacancy as hard-to-fill. An obvious criterion is the duration of time which elapses before a vacancy is classified as hard-to-fill. This raises the question of at which point in time a vacancy commenced compared to the time at which the respondent was interviewed. If the date at which vacancies commenced is more or less random across the sample, then the measures of duration in the survey can provide a good indication of the duration of hard-to-fill vacancies.

Figure 2.7 Duration of hard-to-fill vacancies



Source: STF Employers' Survey (IER/IFF)

Table 2.16 Duration of hard-to-fill vacancies by occupation

ROW PERCENTAGES										
	Less than 2 weeks	2 weeks to 1 month	1-2 months	2-3 months	3-6 months	More than 6 months	DK	Total	Weighted Base	Unweighted Base
Managers and administrators	7	12	22	16	17	16	11	100	13688	1088
Professional	4	10	22	17	19	26	2	100	13806	1646
Associate professional & technical	2	8	13	25	15	32	5	100	31619	4328
Clerical and secretarial	7	19	29	16	12	15	2	100	23960	2193
Craft and related	6	14	14	13	12	31	10	100	35803	2795
Personal and protective Service	8	20	18	10	10	30	4	100	42391	3042
Sales	8	27	18	13	12	19	4	100	40629	2496
Plant & machine operatives	9	24	17	6	11	30	4	100	33461	3687
Other	10	23	17	13	11	26	1	100	18322	1862
All Occupations	6	18	18	14	12	26	5	100	253680	23587

Source: STF Employers' Survey (IER/IFF)

Base: All hard-to-fill vacancies

Table 2.17 Duration of skill-shortage vacancies by occupation

ROW PERCENTAGES										
	Less than 2 weeks	2 weeks to 1 month	1-2 months	2-3 months	3-6 months	More than 6 months	DK	Total	Weighted Base	Unweighted Base
Managers and administrators	8	12	17	15	16	14	18	100	8058	577
Professional	4	10	17	18	20	29	2	100	8643	1093
Associate Professional & technical	2	8	13	29	15	31	3	100	18964	2522
Clerical and Secretarial	9	18	28	24	8	13	2	100	9543	984
Craft and related	5	12	14	11	13	32	13	100	24315	1770
Personal and Protective Service	7	19	22	10	12	29	2	100	12318	834
Sales	11	20	16	13	17	21	3	100	13891	893
Plant & Machine Operatives	5	24	14	9	19	26	3	100	10314	1088
Other	7	19	16	7	14	36	2	100	3545	362
All Occupations	6	15	17	16	14	26	6	100	109590	10123

Source: STF Employers' Survey (IER/IFF)

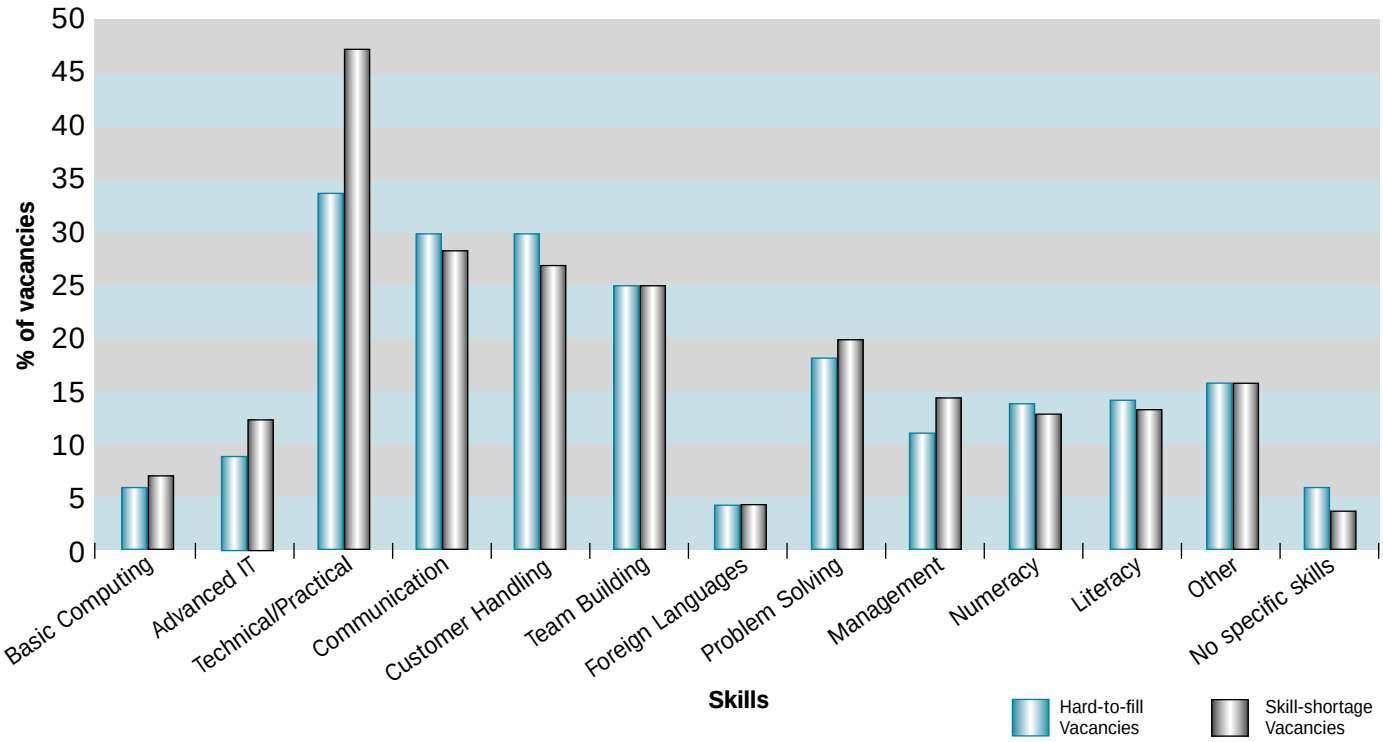
Base: All skill-shortage vacancies

The data revealed that most hard-to-fill vacancies and skill-shortage vacancies have lasted for longer than 6 months (*see Figure 2.7*). There is little difference between the duration of hard-to-fill vacancies and skill-shortage vacancies. Compared to 52 per cent of hard-to-fill vacancies, 56 per cent of skill-shortage vacancies remained unfilled for longer than two months. Duration of vacancy is related to the occupation in which it exists, reflecting perhaps that for some occupations alternative methods of dealing with a job opening can be found (*see Tables 2.16 and 2.17*). Again, across occupations there is little difference between the duration of hard-to-fill vacancies and skill-shortage vacancies. The evidence points towards the weighted average of duration being least for clerical/secretarial, and other managerial occupations and being longest for associate professional and craft occupations. It is notable that a relatively low proportion of hard-to-fill vacancies for managers existed for six months or longer, reflecting possibly the need to find an alternative solution if it has not been possible to recruit someone into a management job.

2.9 Skill Problems Associated with Skill-Shortage Vacancies

Occupation provides a proxy measure of the level at which skills are proving difficult to obtain. The employers survey also obtained information about the particular skills establishments had found difficult to obtain which resulted in a vacancy persisting. (*see Figure 2.8*). Technical and practical skills other than IT, communication, customer handling, and team building were the skills most commonly reported by establishments as accounting for the difficulty of filling a skill-shortage vacancy. Advanced IT, basic computing, and foreign languages were least likely to be reported. It is apparent that the capacity to capture the specific technical competency related to the job that is on offer is the main skill factor associated with the emergence of both hard-to-fill vacancies and skill-shortage vacancies.

Figure 2.8 Skills required for skill-shortage vacancies



Source: STF Employers' Survey (IER/IFF)

The specific skills related to hard-to-fill vacancies and skill-shortage vacancies also vary by occupation *(see Table 2.18 and Table 2.19).* Considering skill-shortage vacancies, the key results to emerge are *(see Table 2.18)*:

- technical/practical skills was mentioned by a significant proportion of respondents with respect to all occupations but especially so amongst craft and skilled manual occupations;
- basic computing is reported as a problem mainly for clerical and secretarial occupations; advanced IT skills tended to be reported as an important barrier for the recruitment of professionals, associate professionals and, to a lesser degree, clerical/secretarial occupations;
- lack of communication skills amongst applicants for sales vacancies were comparatively more important than for other occupations, but clerical and secretarial occupations and management vacancies also require these skills;
- team working was relatively less important a skill problem amongst professional and associate professionals but rated highly amongst personal service and sales occupations;
- literacy and numeracy were reported by a substantial proportion of establishments for each occupation, but especially so amongst clerical/secretarial, personal service and sales occupations.

2.10 General Types of Skills sought for Skill-Shortage Vacancies

The survey suggests that the main types of skill which employers with skill-shortage vacancies found hard to obtain were 'technical and practical' in nature. This was reported by almost half of establishments with such vacancies.

Where generic skills were mentioned these related to: communication (29 per cent of all skill-shortage vacancies) and customer handling (27 per cent). Team-working (25 per cent) and problem-solving (20 per cent) were also important *(see Table 2.1 and Figure 2.8).*

Generic skills were reported as a problem across all occupational categories. Inadequate communication and customer-handling skills were most commonly reported in relation to skill-shortage vacancies for sales, personal service and clerical. Lack of basic computing skills was reported as a problem mainly for clerical positions, while lack of advanced IT skills was mainly associated with professional and associate professional occupations as well as with unfilled clerical jobs.

The high proportion of skill-shortage vacancies requiring technical skills reflects strong demand from establishments seeking to fill craft, operative, associate professional and professional vacancies. As Table 2.20 shows, in these occupational areas, technical skills were often sought without any reference to generic skill requirements. In other occupational areas, however, technical skills were sought in combination with generic skills for sizeable proportions of skill-shortage vacancies, particularly for clerical/secretarial and managerial vacancies.

Table 2.18 Skills sought in connection with hard-to-fill vacancies

% OF ALL HARD-TO-FILL VACANCIES FOR THE OCCUPATION										
Occupations	**Managers & administrators**	**Professional**	**Associate professional & technical**	**Clerical & secretarial**	**Craft & related**	**Personal & protective service**	**Sales**	**Plant & machine operatives**	**Other**	**Total**
Skill										
Basic Computing	9	6	4	19	3	5	7	2	4	6
Advanced IT	11	23	23	16	6	2	4	1	0	8
Other Technical/ Practical	28	45	41	27	62	27	17	29	27	33
Communication	34	20	14	42	17	35	47	26	31	30
Customer Handling	37	15	13	38	11	45	48	21	33	30
Team Working	27	14	11	28	22	32	28	28	32	25
Foreign Language	12	5	2	7	1	4	4	3	4	4
Problem Solving	30	17	14	20	14	20	20	19	14	18
Management	42	19	12	12	5	11	10	6	10	12
Numeracy	9	5	5	20	8	14	17	20	12	13
Literacy	11	7	5	24	9	18	15	20	11	14
Other	13	20	19	14	12	18	14	19	21	16
No specific	4	7	5	7	4	6	6	5	8	6
DK/NS	18	15	23	14	15	21	17	29	23	20
Total	100	100	100	100	100	100	100	100	100	100
Weighted Base	13688	13806	31619	23960	35803	42391	40629	33461	18322	253680
Unweighted Base	1088	1646	4328	2193	2795	3042	2946	3687	1862	23587

Source: STF Employers' Survey (IER/IFF)

Base: All hard-to-fill vacancies

Table 2.19 Skills sought in connection with skill-shortage vacancies

% OF ALL SKILL-SHORTAGE VACANCIES FOR THE OCCUPATION										
Occupations	**Managers & administrators**	**Professional**	**Associate professional & technical**	**Clerical & secretarial**	**Craft & related**	**Personal & protective service**	**Sales**	**Plant & machine operatives**	**Other**	**Total**
Skill										
Basic Computing	9	7	4	23	2	9	9	2	16	7
Advanced IT	11	25	31	20	6	4	6	1	0	13
Other Technical/ Practical	34	48	49	41	68	38	29	49	41	47
Communication	31	18	15	42	18	37	53	27	44	29
Customer Handling	36	15	13	42	11	47	50	23	39	27
Team Working	22	16	10	31	23	36	36	24	46	25
Foreign Language	14	3	2	8	0	6	3	4	2	4
Problem Solving	33	20	14	23	15	24	23	23	15	20
Management	49	20	16	9	4	14	11	11	19	14
Numeracy	7	6	5	25	6	18	23	13	23	12
Literacy	8	8	6	30	8	20	19	13	15	13
Other	13	19	23	13	12	20	13	18	21	16
No specific	3	6	4	4	2	3	2	1	4	3
DK/NS	13	12	13	7	12	17	12	19	7	13
Total	100	100	100	100	100	100	100	100	100	100
Weighted Base	8058	8643	18964	9542	24315	12318	13891	10314	3545	109590
Unweighted Base	577	1093	2522	984	1770	834	893	1088	362	10123

Source: STF Employers' Survey (IER/IFF)

Base: All skill-shortage vacancies

Table 2.20 Skills sought in relation to skill-shortage vacancies

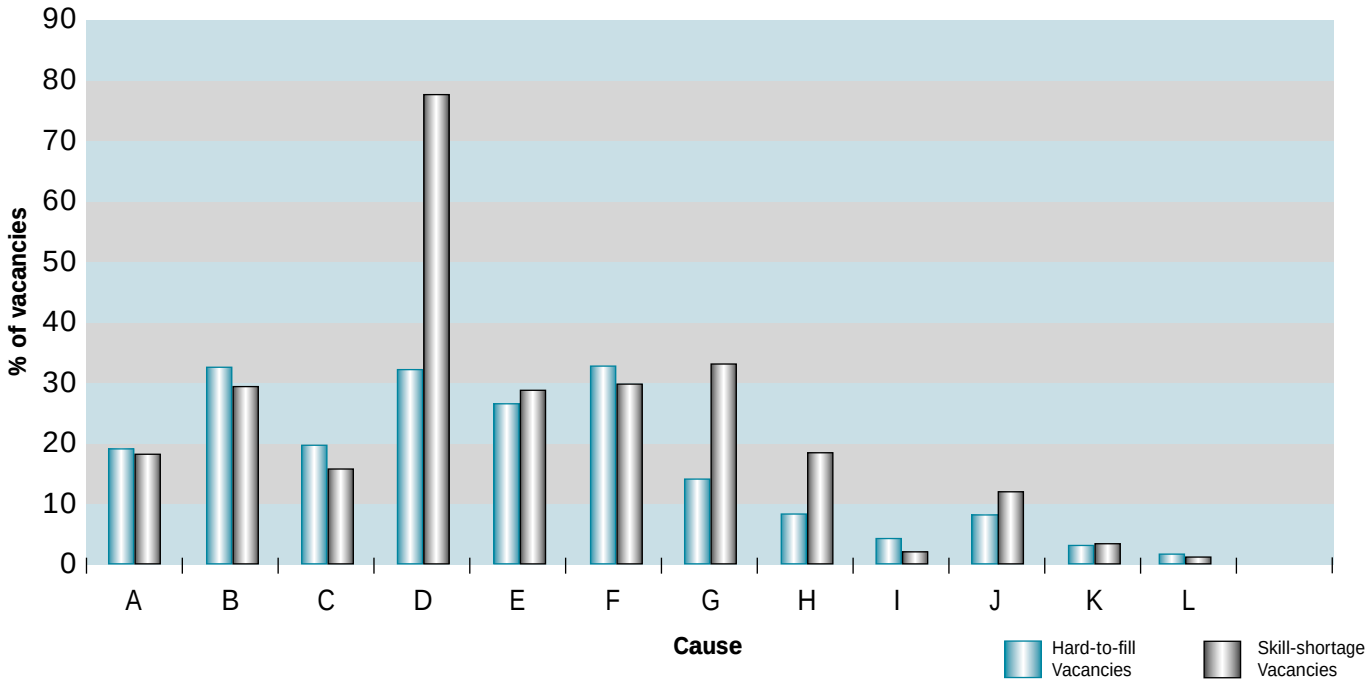
	ROW PERCENTAGES						
	Technical skills only	Generic skills only	Technical and generic skills in combination	Other/non specified types of skill	Total	Weighted Base	Unweighted Base
Managers & administrators	8	38	30	24	100	8058	577
Professional	31	13	31	25	100	8643	1093
Associate professional/technical	44	9	22	25	100	18964	2522
Clerical/secretarial	15	33	36	16	100	9542	984
Craft and skilled	50	13	21	16	100	24315	1770
Personal & protective service	12	33	27	28	100	12318	834
Sales	10	49	21	20	100	13891	893
Plant & machine operative	31	22	19	28	100	10314	1088
Other occupations	19	43	21	17	100	3545	362

Source: STF Employers' Survey (IER/IFF)
Base: All Establishments with skill-shortage vacancies
Note: Technical Skills refer to advanced IT/software skills and other technical/practical skills. Generic Skills refer to basic computer literacy, communication skills, customer handling skills, team working, problem solving, management skills, numeracy and literacy skills.

Generic skills were most likely to be sought in isolation from technical skills for sales and personal service vacancies. The generic category here includes basic numeracy and literacy skills. Literacy was most commonly cited as a problem in relation to clerical/secretarial and sales occupations.

2.11 Causes of Recruitment Problems

Figure 2.9 Causes of hard-to-fill and skill-shortage vacancies



Source: STF Employers' Survey (IER/IFF)

Key:
- A Too much competition
- B Not enough people interested
- C Company does not pay enough
- D Low number of applicants with skills
- E Low number of applicants with motivation etc.
- F Low number of applicants generally
- G Lack of work experience
- H Lack of qualifications
- I Company location
- J Irregular Hours
- K Unattractive conditions of work
- L Other

Hard-to-Fill Vacancies

The main causes of hard-to-fill vacancies were: 'low number of applicants with skills' (34 per cent of all hard-to-fill vacancies); 'low number of applicants generally' (34 per cent) and; 'not enough people interested' (30 per cent) (*see Figure 2.9*). 'Too much competition', 'company does not pay enough' and 'low number of applicants with motivation' were each attributed to 20-25 per cent of all hard-to-fill vacancies.

Skill-Shortage Vacancies

Due to the definition of skill-shortage vacancies, the main causes of skill-shortage vacancies reported were 'low number of applicants with skills' (78 per cent of all skill-shortage vacancies) and 'lack of work experience' (34 per cent). However, 'lack of qualifications' as a cause of skill-shortage vacancies was only attributed to 17 per cent of all skill-shortage vacancies (*see Figure 2.9*). 'Not enough people interested', 'low number of applicants with motivation' and 'low number of applicants generally' were each regarded as being attributable to 30 per cent of skill-shortage vacancies.

SOC COLUMN PERCENTAGES										
Occupations	**Managers & administrators**	**Professional**	**Associate professional & technical**	**Clerical & secretarial**	**Craft & related**	**Personal & protective service**	**Sales**	**Plant & machine operatives**	**Other**	**Totals**
% of establishments reporting										
Too much competition	17	17	21	18	16	19	23	20	18	19
Not enough people interested	25	14	27	21	34	41	32	45	39	33
Company does not pay enough	23	21	17	25	10	27	18	20	24	20
Low number of applicants with skills	38	49	49	32	55	22	24	25	16	34
Low number of applicants with motivation	21	15	11	28	21	31	34	29	29	26
Low number of applicants generally	36	25	40	27	30	40	28	37	36	34
Lack of work experience	28	21	16	14	22	9	16	9	5	15
Lack of qualifications	2	16	13	4	14	7	3	4	3	7
Company location	5	7	4	4	2	5	4	6	5	4
Irregular hours	8	8	8	12	9	6	6	3	3	7
Unattractive conditions of work	3	2	1	5	4	3	2	2	4	3
Other	0	1	2	2	1	1	3	1	2	2
DK/NS	8	4	4	9	5	9	12	6	10	8
Total	100	100	100	100	100	100	100	100	100	100
Weighted Base	13688	13806	31619	23960	35803	42391	40629	33461	18322	253679
Unweighted Base	1088	1646	4328	2193	2795	3042	2946	3687	1862	23587

Source: STF Employers' Survey (IER/IFF)

Base: All hard-to-fill vacancies

Table 2.22 Causes of skill-shortage vacancies

SOC COLUMN PERCENTAGES										
Occupations	**Managers & administrators**	**Professional**	**Associate professional & technical**	**Clerical & secretarial**	**Craft & related**	**Personal & protective service**	**Sales**	**Plant & machine operatives**	**Other**	**Totals**
% of establishments reporting										
Too much competition	17	17	25	18	16	16	15	18	23	18
Not enough people interested	24	15	23	16	36	37	32	36	49	30
Company does not pay enough	27	12	19	16	9	16	13	14	24	15
Low number of applicants with skills	65	79	82	79	81	74	71	80	83	78
Low number of applicants with motivation	25	18	15	27	24	39	49	30	56	29
Low number of applicants generally	37	22	33	20	26	33	28	37	40	30
Lack of work experience	48	34	27	35	32	32	47	28	24	34
Lack of qualifications	4	26	21	11	21	25	10	14	13	17
Company location	3	1	2	3	3	3	3	2	1	2
Irregular hours	12	11	13	20	13	16	8	9	9	13
Unattractive conditions of work	4	2	2	4	3	4	2	3	3	3
Other	0	0	2	2	0	0	0	2	11	1
DK/NS	0	-	0	3	-	1	1	-	1	0
Total	100	100	100	100	100	100	100	100	100	100
Weighted Base	8058	8643	18964	9542	24315	12318	13891	10314	3545	109,590
Unweighted Base	577	1093	2522	984	1770	834	893	1088	362	10123

Source: STF Employers' Survey (IER/IFF)

Base: All skill-shortage vacancies

Reasons for skill-shortage vacancies varied between occupations (*see Table 2.22; Table 2.21* gives the corresponding data for hard-to-fill vacancies.) Where 'too much competition from other employers' was cited as a reason this was more commonly reported in establishments reporting skill-shortage vacancies for associate professional occupations. 'Not enough people doing this kind of job' was more commonly reported amongst establishments with skill-shortage vacancies for occupations other than managers, professionals, associate professionals, and clerical/secretarial. Establishments with skill-shortage vacancies for managers were more likely to report that the 'company does not pay enough'.

Establishments which reported skill-shortage vacancies for managers and sales occupations were much more likely to report that applicants had a 'low level of experience'. 'Low number of applicants with required motivation, personality, attitude' was more commonly reported amongst those occupations where the skill content was relatively modest: clerical/ secretarial, sales, personal service, operative occupations and other manual occupations. Responses relating to the low number of applicants generally were reported fairly evenly across all occupations but was a particular problem for establishments with vacancies for managers and other occupations.

2.12 Solutions to Recruitment Problems

Where hard-to-fill vacancies existed the most common resort was to increase salaries (see Table 2.23). This was a common response across all occupations but less so for craft and related occupations. 'Increase training' and 'redefine existing jobs' were also commonly cited. The former was most commonly cited amongst associate professional hard-to-fill vacancies, and the latter amongst management hard-to-full vacancies.

The questionnaire asked about possible responses to recruitment problems. These include increasing salaries, increase training, redefine existing jobs, and using new technology to substitute for labour. Increasing salaries was also the most common response to skill-shortage vacancies. This applied to 49 per cent of all skill-shortage vacancies compared to 44 per cent of hard-to-fill vacancies. Overall, differences in response to hard-to-fill vacancies and skill-shortage vacancies were limited. (*see Figure 2.10*).

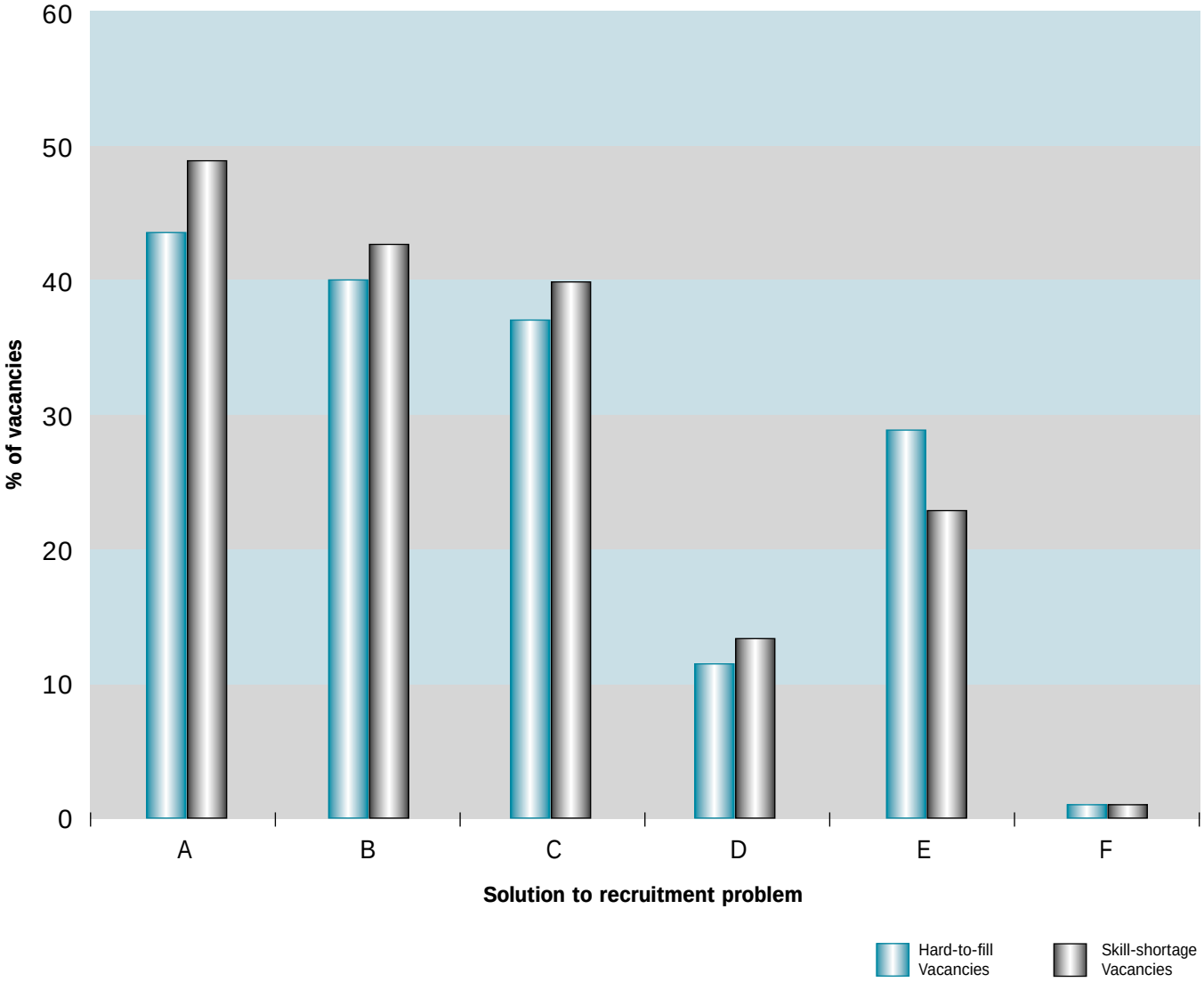
Table 2.23 Solutions adopted to hard-to-fill vacancies by occupation

SOC COLUMN PERCENTAGES										
	Managers & administrators	Professional	Associate professional & technical	Clerical & secretarial	Craft & related	Personal & protective service	Sales	Plant & machine operatives	Other occupations	Total
% of establishments adopting these policies										
Increase salaries	48.0	49.4	42.3	41.1	59.5	45.3	34.7	37.9	39.8	43.8
Increase training	34.5	43.1	50.9	40	41.5	39.3	34.9	37.8	32.9	39.7
Redefine existing jobs	49.4	35.9	46.7	45.7	27.2	35.8	38.6	29.2	35.7	37.2
Use new technology as substitute	11	15.6	15.6	16.6	10.5	7.5	10.8	15.2	8.5	12.0
None of the above	23.5	21.6	21.4	27.7	23.5	32.1	35.5	33.6	30.7	28.7
Don't know	1.3	2.6	1.4	1.3	1	0.9	0.7	0.6	1.5	1.1
Total	100	100	100	100	100	100	100	100	100	100
Weighted Base	13688	13806	31619	23960	35803	42391	40629	33461	18322	253679
Unweighted Base	1088	1646	4328	2193	2795	3042	2946	3687	1862	23587

Source: STF Employers' Survey (IER/IFF)

Base: All hard-to-fill vacancies

Figure 2.10 Solutions to recruitment problems



Key:
- A Increase salaries
- B Increase training
- C Redefine existing jobs
- D Use new technology as substitute
- E None of the above
- F Don't know / not specified

Table 2.24 Solutions adopted to skill-shortage vacancies by occupation

SOC COLUMN PERCENTAGES										
	Managers & administrators	Professional	Associate professional & technical	Clerical & secretarial	Craft & related	Personal & protective service	Sales	Plant & machine operatives	Other	Total
% of establishments adopting these policies										
Increase salaries	50	56	42	49	60	51	42	45	33	49
Increase training	37	48	52	46	44	43	34	47	38	44
Redefine existing jobs	52	39	51	48	27	48	40	26	38	40
Use new technology as substitute	11	14	19	23	9	11	13	13	15	14
None of the above	15	18	20	19	25	23	38	22	26	24
Don't know	2	3	1	2	1	1	0	1	3	1
Total	100	100	100	100	100	100	100	100	100	100
Weighted Base	8058	8643	18964	9542	24315	12318	13891	10314	3545	109590
Unweighted Base	577	1093	2522	984	1770	834	893	1088	362	10123

Source: STF Employers' Survey (IER/IFF)

Base: All skill-shortage vacancies

Where a skill-shortage vacancy existed, employers reported that they were more likely to resort to increasing salaries, increasing training, redefining existing jobs, or using technology to substitute for labour, compared to all hard-to-fill vacancies.

In general, where a skill-shortage vacancy existed for a higher level occupation, establishments were more likely to resort to **some** solution (*see Table 2.24*).

For example, in just 15 per cent of cases, the respondent indicated that the establishment had not adopted any of the above solutions in relation to their skill-shortage vacancies for managers compared to 38 per cent for sales occupations. Increasing salaries, training, and redefining existing jobs was the response most likely to be cited where there was a recruitment problem for managers.

2.13 Conclusions

The evidence demonstrates that the incidence of recruitment problems was widespread, with around 32 per cent of all establishments reporting vacancies.

16 per cent were hard-to-fill vacancies.

About 8 per cent of all establishments in the survey reported having at least one skill-shortage vacancy (roughly half of all establishments with hard-to-fill vacancies of some kind).

Hard-to-fill vacancies are closely correlated with the total number of vacancies overall, which suggests that they occur either as a consequence of labour turnover, and/or employment growth at the establishment level.

The occupational pattern of skill-shortage vacancies is very different to that for vacancies as a whole. Skill-shortage vacancies are predominantly for associate professionals and craft and related occupations whereas vacancies as a whole are heavily concentrated amongst clerical and secretarial, personal service and sales occupations.

Similarly, the sectoral distribution of skill-shortage vacancies is much more heavily concentrated in manufacturing, construction as well as distribution and business services, whereas vacancies as a whole are predominantly in the distribution and business services industries.

Although such problems are more likely to be reported in large establishments this is largely a reflection of their size. There is evidence that these problems are more acute for smaller establishments.

The data demonstrate that relatively few establishments reported labour retention as a cause of having hard-to-fill vacancies; they are much more likely to report that they occurred because of the poor quality or low number of applicants. This may reflect a certain amount of complacency or possibly a failure to recognise internal problems.

Where they arise there is evidence that such recruitment problems have significant impact on performance, especially with respect to customer care and quality standards.

The data also demonstrate that hard-to-fill vacancies and skill-shortage vacancies were more commonly found in the London and South East regions, both of which have experienced strong employment growth over recent years.

3. SKILLS GAPS

3.1 Introduction

The previous chapter has established the extent and nature of skill-related recruitment difficulties. This chapter now considers the evidence from the STF Employers' Survey on skill deficiencies among the existing employees of private firms and public sector organisations.

One measure of internal skill gaps is the extent to which employers perceive their employees' current skills as insufficient to meet current business objectives. In 1998 some 15 per cent of establishments in the SNIB survey identified skill shortcomings of this kind.[11] The main areas of deficiency, which were identified in the SNIB surveys, embraced a wide range of technical and practical skills and shortcomings in generic skill areas such as computer literacy, communication skills, problem-solving skills, and customer handling skills.

The SNIB surveys had the disadvantage that respondents were asked to generalise about the adequacy of workforce skills as a whole in their establishments. In order to gain a more detailed understanding of skill gaps, the STF Employers' Survey asked respondents to comment on an occupation-by-occupation basis about the extent to which employees were 'fully proficient at their current job'.

3.2 Skill Proficiency

In order to gauge the extent of skill gaps respondents were asked:

What proportion of your existing staff at this establishment in (a particular occupation) would you regard as being fully proficient at their current job: all, nearly all, over half, some but under half, very few?

In addition, a supplementary question was put to about half the sample. This follow-up question probed about the percentage signified by an evaluation of 'nearly all' over half *etc*. This suggested a median score of 85 per cent fully proficient[12] in response to the 'nearly all' response. The evaluation of 'over half' had a median of 65 per cent[13].

The responses suggested that, in most cases where not all staff were regarded as fully proficient, employers were referring to relatively small proportions (10-20 per cent) of employees in those occupations as lacking full proficiency. In key occupations, however, such as managers and professionals, even shortcomings on this scale could have damaging consequences for the firms involved.

By combining together the responses to the questions asked about the proportion of staff in each occupation who were fully proficient, the supplementary question which quantified the qualitative responses to this question and the numbers employed in each category, an overall estimate of the number of employees who were not fully proficient can be derived[14].

12 Inter-quartile range 80 per cent - 90 per cent.

13 Inter-quartile range 60 - 70 per cent.

14 The supplementary question asked for clarification on the meaning of 'some but under half' and 'very few '. By extrapolating from the interpretation of the other responses ('nearly all' = 85%, 'more than half' = 65%) values of 35% and 15% respectively were derived for this purpose.

On this basis, it is estimated that there were some 1.9 million employees in 1999 who were less than fully proficient in their jobs. Unfortunately, we have no additional information on the degree of their lack of proficiency. Nevertheless, this gives some indication of the potential scale of such skill deficiencies compared with external recruitment problems. This compares with the estimates in Chapter 2 that there were around half a million vacancies, in total, of which some 110 thousand were skill-shortage vacancies.

Of course, some proficiency shortfalls are to be expected as new employees find their feet or existing staff adjust to new situations. The main focus of attention here is on establishments where a significant proportion of the workforce is regarded as lacking proficiency. This is defined in terms of those cases where, in at least one occupational group, fewer than nearly all employees are fully proficient.

3.3 Measures of Internal Skill Gaps

The focus of analysis in the remainder of this chapter is concerned with those establishments where a substantial internal skills gaps was reported. The analysis concentrates, therefore, on establishments where skill gaps were quite widespread.

Using the answers to the questions on skill proficiency it is possible to derive various alternative measures of internal skill gaps.

One is **establishment based** and provides an estimate of the total number of establishments reporting that fewer than 'all' or 'nearly' all existing staff were fully proficient in any occupation.

A second measure is **employee based** and is an overall estimate of the number of employees who are less than fully proficient. This is based on applying estimates of the proportions of employment in each occupational category regarded as less than fully proficient and summing over all occupations.

The second measure effectively weights the number of establishments with problems by employment, as well as an indicator of the proportion of employees who are less than fully proficient. This provides a measure more directly comparable to the scale of external recruitment difficulties as discussed in Chapter 2.

The survey itself asked various questions where the respondent was left to provide their own interpretation of skill gaps. These were referred to as '**skill shortcomings**' in the questionnaire. Information based on such responses is highlighted by the use of this term in quotation marks. This is the third measure used in this chapter and also in Chapter 4.

3.4 An Initial Estimate of the Importance of Internal skill gaps

An initial establishment estimate of the importance of internal skill gaps can be derived from the answers to the basic question about the proportion of staff who are fully proficient. Internal skill gaps can be defined as existing where lack of full proficiency (as perceived by employers) typically involved a third or more of staff in at least one occupational area.[15]

15 Based on respondents replying that fewer than all or nearly all staff were fully proficient. This definition has the advantage of simplicity. It also covers all the establishments which were asked follow-up questions about the nature, causes and impacts of skill gaps.

Approximately 20 per cent of all establishments revealed such internal skill gaps. In other words, around one in five of establishments in England reported that a substantial proportion of their staff, in one or more occupational areas, were less than fully proficient in their jobs.

The proportions of establishments reporting that all staff were fully proficient varied by occupation, ranging from 52 per cent (in the case of establishments employing sales staff) to 69 per cent (of those employing professional staff) *(Table 3.1)*. Just over a third (35 per cent) of establishments reported a lack of full proficiency in two or more different occupational areas. The proportions of establishments reporting skill gaps ranged from approximately 5 per cent of those employing professionals to 14 per cent of those employing sales staff *(Table 3.1, column 3)*. Skill gaps were reported least in small establishments (employing fewer than 25 people) and in the education and construction sectors. The industries most affected were hotels and restaurants, wholesale and retail, manufacturing, transport and communications, financial services and public administration *(Table 3.2).*

Table 3.1 Internal skill gaps and employee proficiency levels, analysed by occupation

	All staff fully proficient at current jobs (a)	Nearly all staff proficient at current jobs (a)	'Over half' or fewer staff proficient at current jobs (a, b) (Internal skill gaps)	Don't know (a)	Total	% of establishments reporting employment within occupation	Weighted Base	Unweighted Base
Managers & administrators	67	24	8	1	100	98	522109	26558
Professional	69	24	5	2	100	39	205261	12914
Associate professional & technical	64	26	7	3	100	25	132106	9743
Clerical/secretarial	65	25	8	1	100	63	336786	20130
Craft and related	61	28	9	2	100	28	149008	10427
Personal and protective service	56	30	12	2	100	23	119668	7396
Sales	52	33	14	2	100	34	180118	9628
Plant & machine operative	57	30	10	3	100	18	96725	7072
Other	65	24	9	2	100	28	150293	9628

Source: STF Employers' Survey (IER/IFF)
Base: All establishments employing at least one person in respective occupations

Note: (a) The survey question on this topic asked respondents: 'What proportion of your existing staff at this establishment in [each occupation] would you regard as being fully proficient at their current job: all, nearly all, over half, some but under half, very few?'.
(b) Internal skill gaps are defined as the sum of the percentages responding that over half or fewer staff were proficient in their current jobs.

Table 3.2 Incidence of internal skill gaps, analysed by employee size-group and sector

PERCENT OF ESTABLISHMENTS REPORTING INTERNAL SKILLS GAP (A)	
By size of establishment: (number of employees)	
5-24	18
25-49	24
50-99	26
100-199	27
200-499	29
500-999	26
1000-plus	26
All establishments	20
By sector (b):	
Manufacturing	21
Construction	16
Wholesale & Retail	21
Hotels & Restaurants	23
Transport & Communications	20
Financial Services	20
Business Services	18
Public Administration	20
Education	15
Health & Social Care	17
Other Services	21
All Industries and Services	20

Source: STF Employers' Survey (IER/IFF)

Base: All establishments

(a) Refers to establishments where 'over half' or fewer of staff were assessed as being fully proficient at their current jobs in at least one occupation (see Note (a) and *(b) to Table 3.1).*

(b) Mining and quarrying and Electricity and water are not shown due to small cell sizes

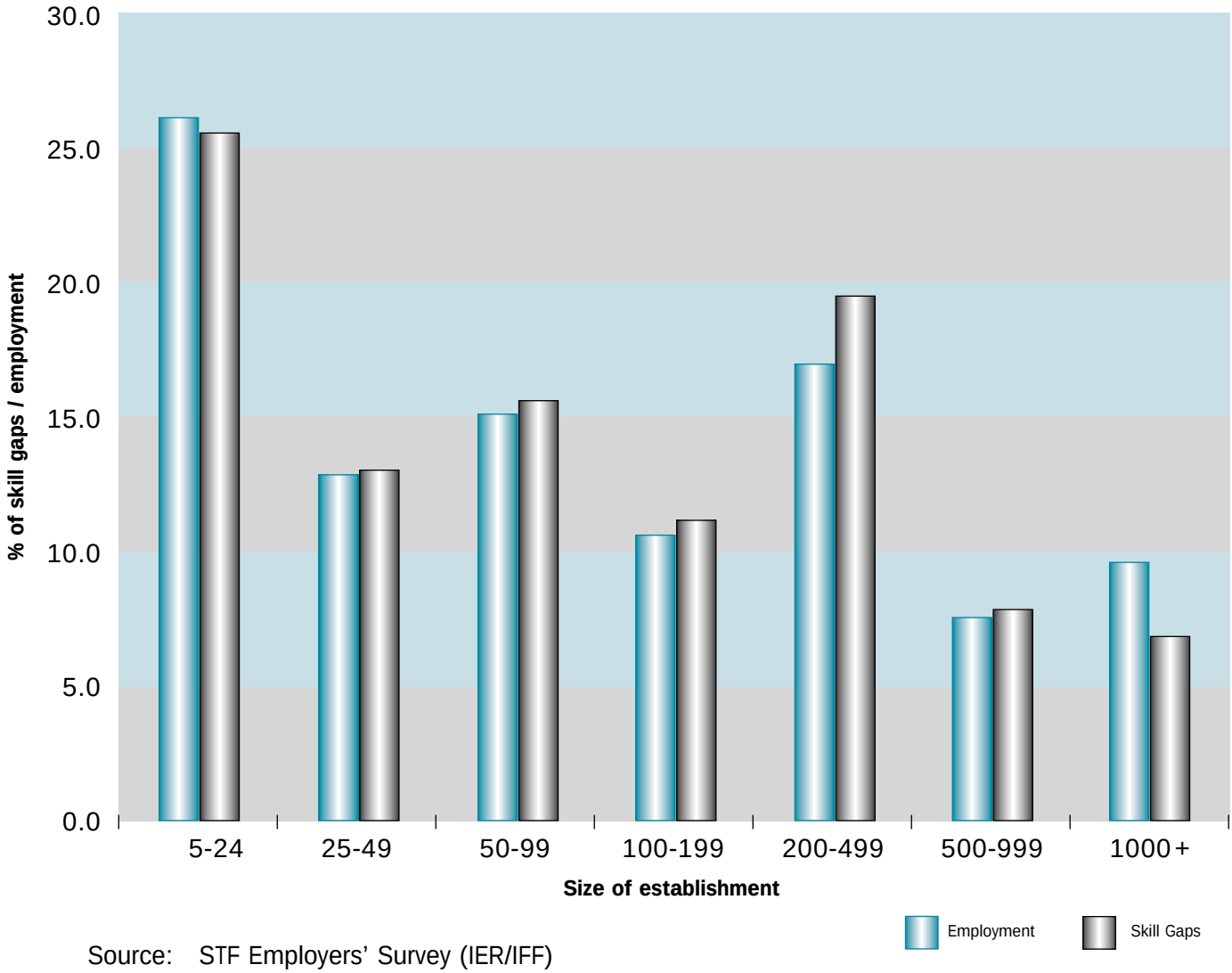
3.5 Estimating Skill Gaps

In order to facilitate a comparison with the overall scale of recruitment problems (the number of vacancies or skill-shortage vacancies) the analysis below uses the employee based measure of internal skill gaps.

Analysis by size of establishment

The distribution of internal skill gaps by size of establishment is presented below (*see Figure 3.1*). The general picture is one of skill gaps being located mainly in smaller establishments, reflecting the overall distribution of employment in the economy.

Figure 3.1 Internal skill gaps and size of establishment



Source: STF Employers' Survey (IER/IFF)

Table 3.3 shows how internal skill gaps are distributed by occupation for establishments of different sizes. When expressed as a percentage of employment, the variation around the 4.9 per cent average for all sizes of establishments suggests an increase with respect to size, except for the very largest establishments.

There are differences in the occupational patterns for establishments of different sizes. Personal service and sales occupations are particularly important for smaller establishments, while for larger establishments, professionals, technicians, and especially in the largest establishments, clerical/ secretarial occupations account for the greatest shares.

Table 3.4 presents a further analysis showing how internal skill gaps for a particular occupation are distributed by size of establishment.

The final row of this table shows that almost 40 per cent of all gaps are concentrated in establishments employing fewer than 50 people. The very smallest establishments (fewer than 25 employees) account for a quarter of all internal skill gaps, and medium sized establishments (200-499 employees) account for about 1 in 5 of employees who were less than fully proficient in their current jobs.

The final column of *Table 3.4* show that the largest number of less than fully proficient employees were in managerial occupations, clerical/secretarial occupations, sales occupations and amongst operatives, each of which accounts for around 125-135 thousand.

The rows of the table suggest that internal skill gaps for professional and associate professional occupations were concentrated in the larger establishments. In contrast, internal skills gaps for lower level occupations tended to be concentrated in smaller establishments.

Table 3.3 Occupational patterns of internal skill gaps by size of establishment

	NUMBER OF EMPLOYEES IN ESTABLISHMENT COLUMN PERCENTAGES							
Occupation	**5-24**	**25-49**	**50-99**	**100-199**	**200-499**	**500-999**	**1000+**	**All establishments**
Managers & administrators	16	11	12	14	15	15	19	15
Professional	6	6	6	5	8	8	13	7
Associate professional & technical	4	4	5	4	5	3	11	5
Clerical/Secretarial	12	14	14	15	15	12	26	15
Craft & related	8	9	9	7	7	9	1	8
Personal & protective Service	16	15	14	10	4	5	7	11
Sales	23	19	15	13	12	11	3	16
Plant & machine operatives	6	10	15	20	21	29	11	15
Other	7	11	10	13	12	8	9	10
Total	100	100	100	100	100	100	100	100
Weighted Base	220484	113188	134054	107227	160293	66811	58227	860283
Unweighted Base	5560	11242	13155	23708	36328	17058	15556	122607
Total skill gaps as a % of employment	4.7	5.1	5.0	5.3	5.3	5.1	3.5	4.9

Source: STF Employers' Survey (IER/IFF)
Base: Internal Skill Gaps: employee based measure
Note: Percentage of all skill gaps for a particular size of establishment.

Table 3.4 Distribution of occupational skill gaps by size of establishment

ROW PERCENTAGES NUMBER OF EMPLOYEES IN ESTABLISHMENT											
Occupation	5-24	25-49	50-99	100-199	200-499	500-999	1000+	Total	Weighted Base	Unweighted Base	Shares of total employment %
Managers & administrators	29	10	13	12	19	8	9	100	124762	17380	4.8
Professionals	22	11	14	10	21	10	13	100	58727	8645	2.3
Associate professional & technical	21	12	18	9	21	5	15	100	41543	5967	3.0
Clerical/Secretarial	22	13	15	13	19	7	12	100	125623	16705	4.4
Craft & related	28	16	18	11	17	9	1	100	66441	9793	4.2
Personal & protective service	37	18	19	11	7	3	4	100	96251	10727	6.8
Sales	38	16	15	10	14	6	1	100	135403	16059	7.2
Plant & machine operatives	11	9	16	17	27	15	5	100	125354	23891	6.9
Other	14	16	16	23	6	6	100	100	86179	13441	5.9
All occupations	26	13	16	12	19	8	7	100	860283	122607	4.9

Source: STF Employers' Survey (IER/IFF)
Base: Internal Skill Gaps: employee based measure

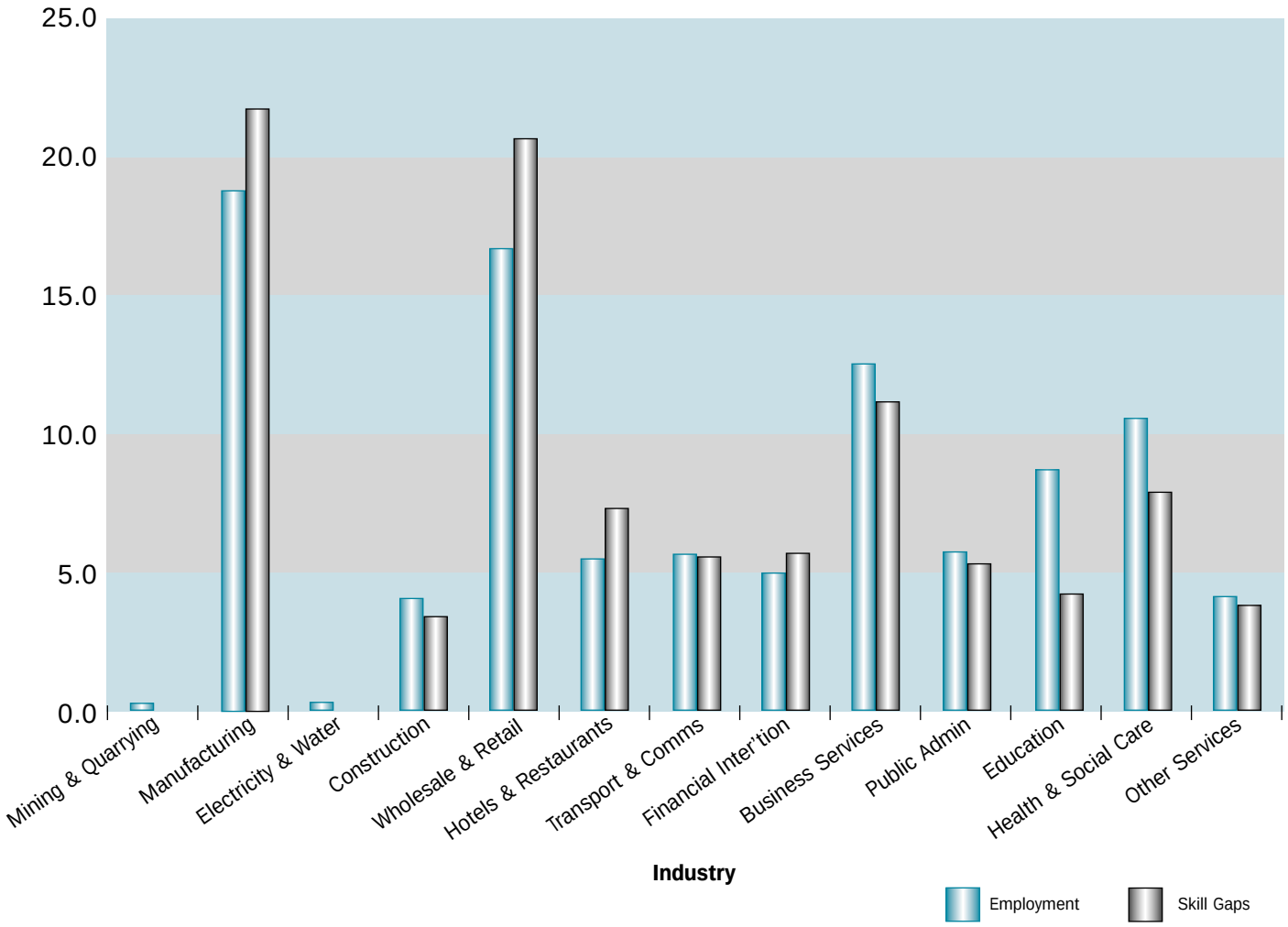
Analysis by sector

The distribution of internal skill gaps by sector is presented in *Figure 3.2*. Overall, there were heavy concentrations of skill gaps in manufacturing, wholesale/retail, and business services. A comparison is made with the overall distribution of employment. Differences are limited, but these two sectors appear to have a disproportionate share of such skill gaps.

Table 3.5 shows how internal skill gaps break down by occupation within sector. This, to some extent, reflects the size of total employment in the sector. However, when expressed as a percentage of total employment, it is clear that the most serious problems seem to be in hotels and restaurants where such gaps account for over 7 per cent of employment. Education and mining and quarrying have the lowest level of gaps expressed as a percentage of employment.

This table also illustrates variations in the occupational pattern of less than fully proficient employees by sector. Not surprisingly, this tends to reflect the occupational concentrations of employment by sector. In hotels and restaurants, for example, the bulk of less than fully proficient employees fall into the personal service occupation group (61 per cent). In manufacturing, craft and skilled occupations (16 per cent) and operatives (42 per cent) are the most significant categories. Less than fully proficient employees in clerical/secretarial occupations are important in a number of sectors (financial intermediation, (53 per cent) and public administration, (50 per cent) being the most notable).

Figure 3.2 Internal skill gaps and industrial sector



Source: STF Employers' Survey (IER/IFF)

Table 3.6 shows how the skill gaps for a particular occupation are distributed across different sectors. It illustrates that there is a strong concentration of less than fully proficient employees in just a few sectors. This, to some extent, reflects the overall distribution of employment. There are high concentrations of gaps for craft and skilled occupations in manufacturing, and for sales occupations in wholesale and retail services.

The sectoral breakdowns for individual occupational groups, therefore, tend to reflect the concentration of occupational employment in certain sectors. For example, the problems in craft and skilled occupations are heavily concentrated in manufacturing but also in construction. Less then fully proficient operatives are concentrated overwhelmingly in manufacturing.

Table 3.5 Occupational pattern of internal skill gaps by industrial sector

Occupation	SECTOR COLUMN PERCENTAGES													
	Mining & Quarrying	Manu'ring	Electricity & Water	Const'tion	Wholsale & Retail	Hotels & Rest'nts	Transport & Comms	Financial Inter'tion	Business Services	Public Admin	Education	Health & Social Care	Other Services	All Industries
Managers & administrators	12	13	23	16	13	10	15	18	18	23	16	14	16	15
Professionals	1	4	3	6	1	1	2	8	14	10	34	9	11	7
Associate & professional technical	0	3	3	5	2	1	2	5	10	4	6	17	3	5
Clerical/ Secretarial	19	7	21	8	7	2	13	53	21	50	11	13	15	15
Craft & related	5	16	4	41	4	5	4	1	5	3	4	4	8	8
Personal & protective service	0	1	0	1	4	61	3	1	4	8	16	27	26	11
Sales	4	5	2	4	53	9	6	14	7	0	1	1	8	16
Plant & machine Operatives	53	42	16	6	7	1	34	0	7	0	0	1	5	15
Other	7	10	28	12	9	9	20	0	13	2	10	13	8	10
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Total skill gaps % of employment	2.2	5.6	5.0	3.6	6.0	7.4	4.9	5.6	4.3	4.2	2.3	3.6	5.1	4.9
Weighted Base	754	185402	2182	22551	180086	72733	51493	47428	96972	49251	32880	68813	37371	860283
Unweighted Base	148	39414	453	2665	21014	8404	6519	7041	11606	6501	4327	8655	3840	122607

Source: STF Employers' Survey (IER/IFF)

Base: Internal Skill Gaps: employee based measure

Table 3.6 Distribution of internal skill gaps by industrial sector

ROW PERCENTAGES SECTOR																	
Occupation	**Mining & Quarrying**	**Manu'ring**	**Electricity & Water**	**Const'tion**	**Wholsale & Retail**	**Hotels & Rest'nts**	**Transport & Comms**	**Financial Inter'tion**	**Business Services**	**Public Admin**	**Education**	**Health & Social Care**	**Other Services**	**Total**	**Weighted Base**	**Unweighted Base**	**Shares of total employment %**
Managers & administrators	0	19	0	3	19	6	6	7	14	9	4	8	5	100	124762	17380	4.8
Professionals	0	12	0	2	4	2	2	7	23	8	19	11	7	100	58727	8645	2.3
Associate & professional technical	0	15	0	3	7	1	2	6	24	5	5	28	3	100	41543	5967	3.0
Clerical/ Secretarial	0	11	0	2	10	1	6	20	16	20	3	7	4	100	125623	16705	4.4
Craft & related	0	44	0	14	11	6	3	1	7	2	2	4	5	100	66441	9793	4.2
Personal & protective service	0	1	0	0	7	46	2	0	4	4	6	20	10	100	96251	10727	6.8
Sales	0	7	0	1	71	5	2	5	5	0	0	1	2	100	135403	16059	7.2
Plant & machine peratives	0	62	0	1	10	1	14	0	6	0	0	1	2	100	125354	23891	6.9
Other	22	1	3	19	8	12	0	15	1	4	11	3	100	100	86179	13441	5.9
All occupations	0	22	0	3	21	8	6	6	11	6	4	8	4	100	860283	122607	4.9

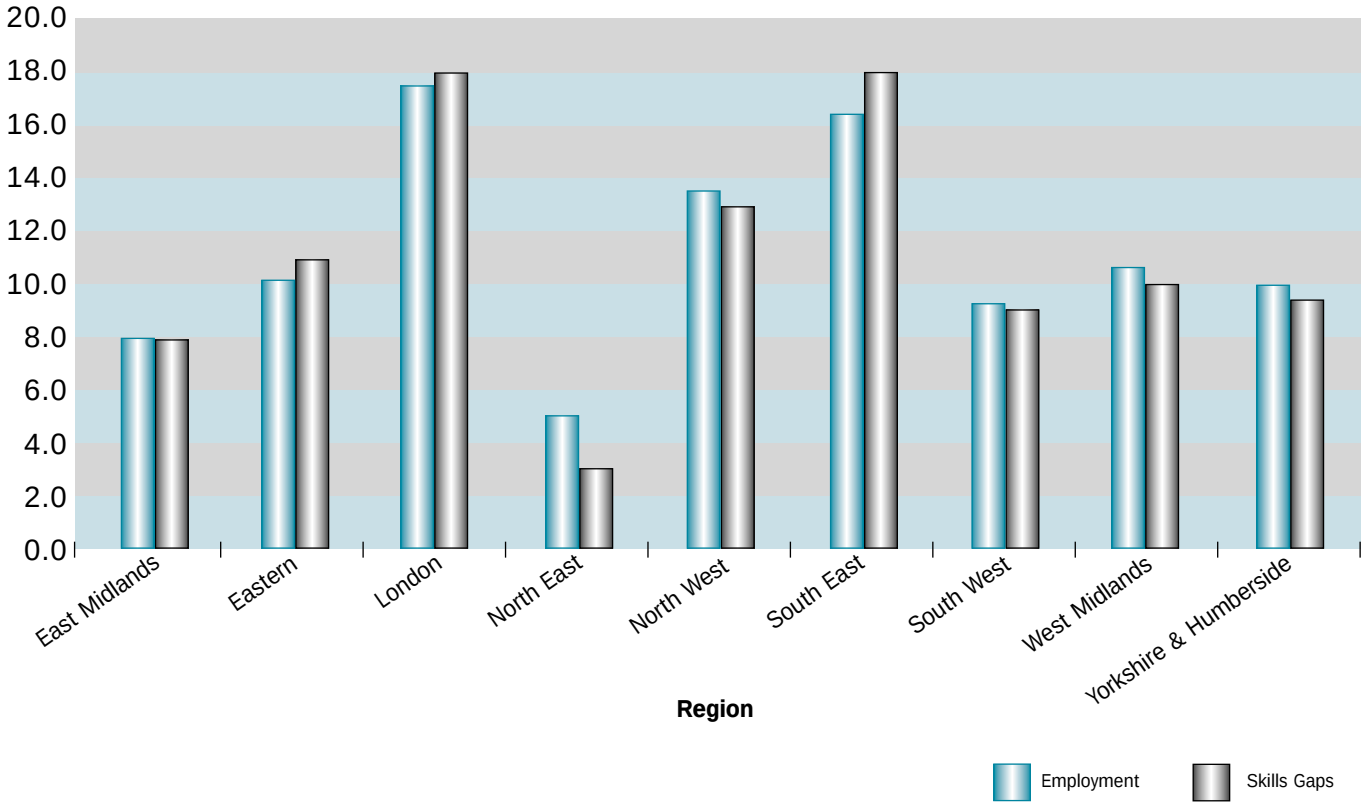
Source: STF Employers' Survey (IER/IFF)

Base: Internal Skill Gaps: employee based measure

Analysis by region

The regional distribution of internal skill gaps largely follows the pattern of distribution for employment as a whole *(see Figure 3.3 and Tables 3.7 and 3.8*). The number skill gaps expressed as a percentage of employment does not vary much across regions. Overall, however, the distribution of internal skill gaps reveals a broad north - south divide with skill gaps being much more apparent in London and the South East, and much less so in the North East. It is also apparent in these specific instances that the distribution of internal skill gaps is somewhat disproportionate to each of the respective region's share of total employment but the differences are not great.

Figure 3.3 Internal skill gaps by region



Source: STF Employers' Survey (IER/IFF)

The different shares across occupational categories also tend to reflect the different occupational structures in the regions *(see Table 3.7)*. For example, in London managers, professionals, and clerical/secretarial occupations are the largest categories. In the East and West Midlands the shares for are significantly above average.

Table 3.8 illustrates that there are some notable differences between occupational categories in the regional distribution of the number of less than fully proficient employees. London, for example, has a high share of the internal skill gaps in higher level occupations (comparing the individual occupation rows with the final row).

Table 3.7 Occupational patterns of internal skill gaps by region

COLUMN PERCENTAGES										
Occupation	**East Midlands**	**Eastern**	**London**	**North East**	**North West**	**South East**	**South West**	**West Midlands**	**Yorkshire & Humberside**	**All regions**
Managers & administrators	12	16	17	11	14	15	16	13	13	15
Professionals	5	5	12	10	5	6	4	4	8	7
Associate & professional technical	4	3	6	5	5	6	7	4	3	5
Clerical/ Secretarial	10	17	20	15	13	15	16	10	10	15
Craft & related	11	8	4	11	8	7	10	10	7	8
Personal & protective service	10	9	11	12	11	12	11	11	15	11
Sales	13	17	16	15	16	18	13	17	13	16
Plant & machine operatives	23	13	9	12	15	11	12	24	19	15
Other	11	11	6	10	12	10	12	8	11	10
Total	100	100	100	100	100	100	100	100	100	100
Weighted Base	71032	93867	157957	29106	111591	158825	79093	81946	76865	860283
Unweighted Base	9916	14752	17776	4973	18592	23557	12795	8457	11790	122607
Total skill gaps % of employment	5.0	5.2	5.2	3.5	4.7	5.5	4.9	4.4	4.4	4.9

Source: STF Employers' Survey (IER/IFF)

Base: Internal Skill Gaps: employee based measure

Table 3.8 Occupational distribution of internal skill gaps by region

ROW PERCENTAGES													
Occupation	East Midlands	Eastern	London	North East	North West	South East	South West	West Midlands	Yorkshire & Humberside	Total	Weighted Base	Unweighted Base	Skill gaps as a share of total employment %
Managers & administrators	7	12	21	3	13	19	10	8	8	100	124762	17380	4.8
Professionals	6	9	31	5	9	17	6	6	11	100	58727	8645	2.3
Associate/ Professional technical	7	7	23	3	13	21	13	8	5	100	41543	5967	3.0
Clerical/ Secretarial	6	13	25	3	12	19	10	6	6	100	125623	16705	4.4
Craft & related	12	11	11	5	13	17	12	13	8	100	66441	9793	4.2
Personal & protective service	8	9	18	4	13	19	9	9	12	100	96251	10727	6.8
Sales	7	12	19	3	13	21	7	10	7	100	135403	16059	7.2
Plant & machine operatives	13	10	11	3	14	14	8	15	12	100	125354	23891	6.9
Other	10	12	12	3	16	19	11	8	10	100	86179	13441	5.9
All occupations	8	11	18	3	13	18	9	10	9	100	860203	122607	4.9

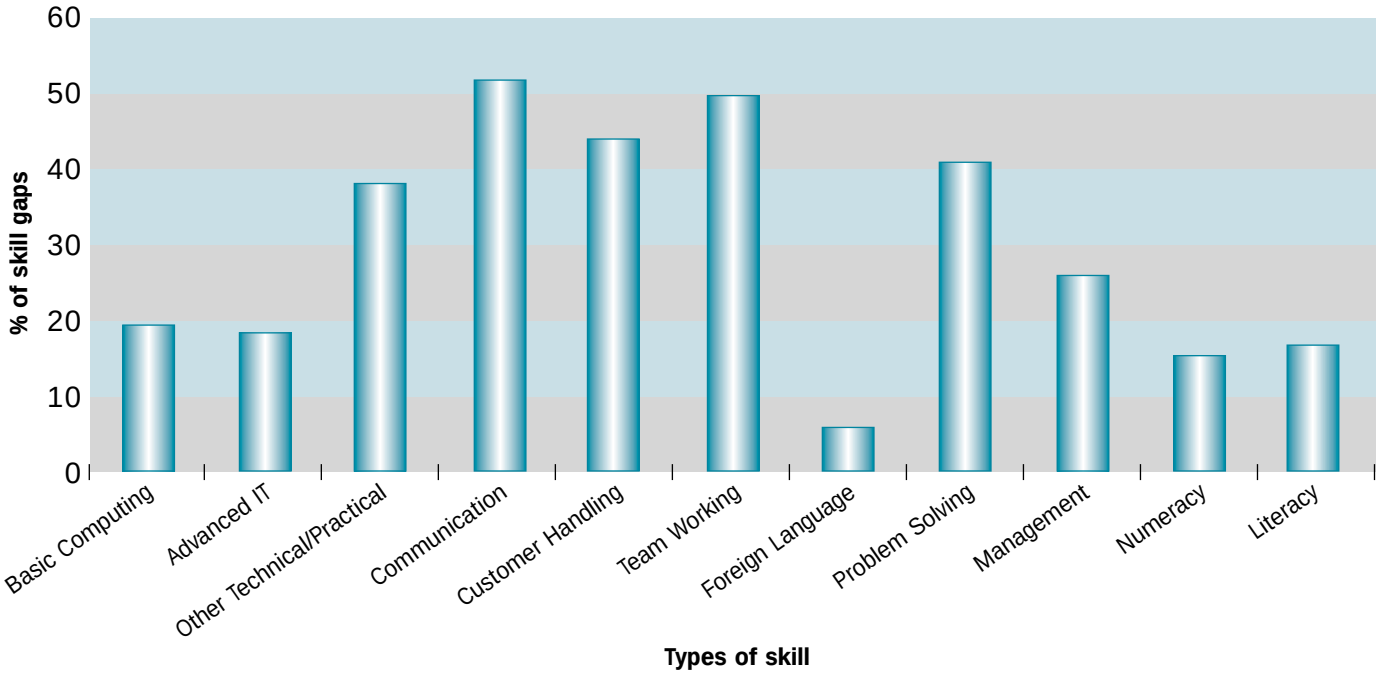
Source: STF Employers' Survey (IER/IFF)

Base: Internal Skill Gaps: employee based measure

3.6 Skill Characteristics of Internal Skill Gaps

Table 3.9 presents an analysis of the skill characteristics of internal skill gaps using the employee based measure by occupation[6] and *Figure 3.4* summarises the *skill characteristics* of reported skill gaps across all occupations.

Figure 3.4 Skill characteristics of internal skill gaps



Source: STF Employers' Survey (IER/IFF)

The key findings to emerge are:

- basic computing skills were most likely to be mentioned with respect to managers, professionals, associate professionals, and clerical and secretarial occupations, although sales occupations and operatives were also frequently mentioned;
- advanced IT skills tended to be mentioned with respect to managers, professionals, associate professionals, and clerical/secretarial occupations, but much less so amongst other manual and non-manual occupations;
- other technical and practical skills, by which is meant the core technical and practical skills required in an occupation other than IT, was one of the most commonly cited skill gaps across all occupations. This was particularly important with respect to associate technical and craft and skilled occupations and operatives;

6 Vacancies can arise due to an excess of demand over supply of the required skills or may be attributable to company-specific factors such as limited efforts at job advertising or the relatively unattractive salaries or job conditions on offer. The former were termed skill-shortages in the first report from the STF.

- communication skills were one of the most commonly cited skill gaps across the board. It was especially important for managers, sales, and personal service workers;
- customer handling was especially important for personal service workers and sales occupations;
- team working was reported as a frequent skill gap across all occupations but was especially important with respect to managers, personal and protective service occupations, sales occupations, and plant and machine operatives;
- foreign language skills were mentioned by few establishments;
- problem solving was mentioned across all occupations;
- management skills were mentioned as a skill gap amongst managers, but were also important for professionals;
- numeracy and literacy skills were mentioned in few instances, but were more likely to be mentioned in lower skill occupations (operatives and assembly, and other manual occupations), where around one quarter of establishments reported this skill gap;

It is apparent that for most occupations skill gaps were multi-faceted. Distinct occupational patterns emerged only with regard to management and to certain skills such as numeracy and literacy. The latter affected lower skill occupations. Computing and IT skill problems related mainly to higher level occupations.

Employers perceived internal skill gaps in terms of generic skill shortcomings (especially in communication, customer handling and team-working skills) *(see Figure 3.4)*. These are reported ahead of the technical and practical skills which underlay many skill-related recruitment difficulties (except for craft and associate professional occupations). However, it is notable that in every occupational area between, roughly, a quarter and a half of establishments with skill gaps defined their problems in terms of employees lacking a desired *mix* of generic and vocational skills *(see Table 3.10)*.

SOC COLUMN PERCENTAGES										
Skill	**Managers & administrators**	**Professional**	**Associate professional & technical**	**Clerical & secretarial**	**Craft & related**	**Personal & protective service**	**Sales**	**Plant & machine operatives**	**Other**	**Total**
Basic Computing	23	24	21	32	14	11	17	19	9	19
Advanced IT	28	34	36	35	11	5	8	10	3	18
Other Technical/ Practical	32	42	46	33	53	32	24	55	30	37
Communication	60	47	43	52	35	57	60	49	50	52
Customer Handling	38	38	37	50	27	62	69	24	39	44
Team Working	54	44	39	45	43	54	52	55	53	50
Foreign Language	11	11	12	5	6	6	4	3	3	6
Problem Solving	48	39	38	38	35	37	42	48	37	41
Management	63	47	31	18	17	16	22	14	10	26
Numeracy	9	8	10	15	11	18	14	27	21	16
Literacy	9	9	16	18	13	20	14	29	23	17
Weighted Base	124762	58727	41543	125623	66441	96251	135403	125354	86179	860283
Unweighted Base	17380	8645	5967	16705	9793	10727	16059	23891	13441	122607

Source: STF Employers' Survey (IER/IFF)
Base: Internal Skill Gaps: employee based measure

Table 3.10 Type of skills sought in relation to internal skill gaps

ROW PERCENTAGES							
	Type of skill sought					Weighted Base	Unweighted Base
Occupation	Technical skills only	Generic skills only	Technical and generic skills in combination	Other/non-specified types of skill	Total		
Managers & administrative	3	42	42	13	100	124762	17380
Professionals	7	30	48	16	100	58727	8645
Associate professional & technical	16	22	45	18	100	41543	5967
Clerical/ secretarial	8	33	45	14	100	125623	16705
Craft and skilled	17	23	39	21	100	66441	9793
Personal & protective service	8	52	26	14	100	96251	10727
Sales	3	61	24	12	100	135103	16059
Plant & machine operatives	11	31	47	12	100	125354	23891
Other	6	49	25	20	100	86179	13441

Source: STF Employers' Survey (IER/IFF)

Base: Internal Skill Gaps: employee based measure

Note: 'Technical skills' here comprise advanced IT and other technical/practical skills; 'Generic skills' comprise communication skills, customer handling skills, team working skills, problem solving skills, basic computer literacy, management skills, numeracy skills and literacy skills

3.7 Overcoming Skill Gaps

Given the impact that skill shortcomings and skill gaps have on the performance of the establishment (as described in Chapter 4), one might expect establishments to try to counter their effects in some manner. Where the respondent indicated that fewer than nearly all employees in an occupational area were proficient, an enquiry was made as to the methods used to overcome such skill gaps (*see Table 3.11*). Where internal skill gaps existed, the most common response was to provide further training (80 per cent of skill gaps) - changing working practices (47 per cent) and increased recruitment (28 per cent) were also common responses. In just 5 per cent of cases no particular solution was cited *(see Table 3.11)*.

The response to skill gaps varied between occupations. Increased recruitment was more likely to be a response with regard to skill gaps amongst personal service occupations, plant and machine operatives, and other manual occupations (*see Table 3.11*). This may reflect the respondents perception of the availability in the external labour market of the skills associated with these occupations. Providing further training to existing staff was a more common response across many occupations, especially so with respect to professional, clerical and secretarial, personal service, and sales staff. Changing working practices was another frequently quoted response by establishments, being mentioned with respect to both manual and non-manual occupations. Relocating work within the company was mentioned by few respondents, regardless of occupation.

3.8 Reasons for Lack of Full Proficiency - Causes of Skill Gaps

Available evidence demonstrates that organisations have been through considerable organisational and technical change over the past twenty years, resulting in new working practices, new machinery, and new skill sets developing on the shopfloor or in the office. This can result in some employees being left behind in the modernisation process, resulting in a lack of full proficiency in the work roles they are now expected to fill.

The evidence from the present survey confirms that respondents perceive the skills associated with new working practices and failure to train and develop staff were the two more important causes of skill gaps. However, a number of other factors were also mentioned (*see Figure 3.5*).

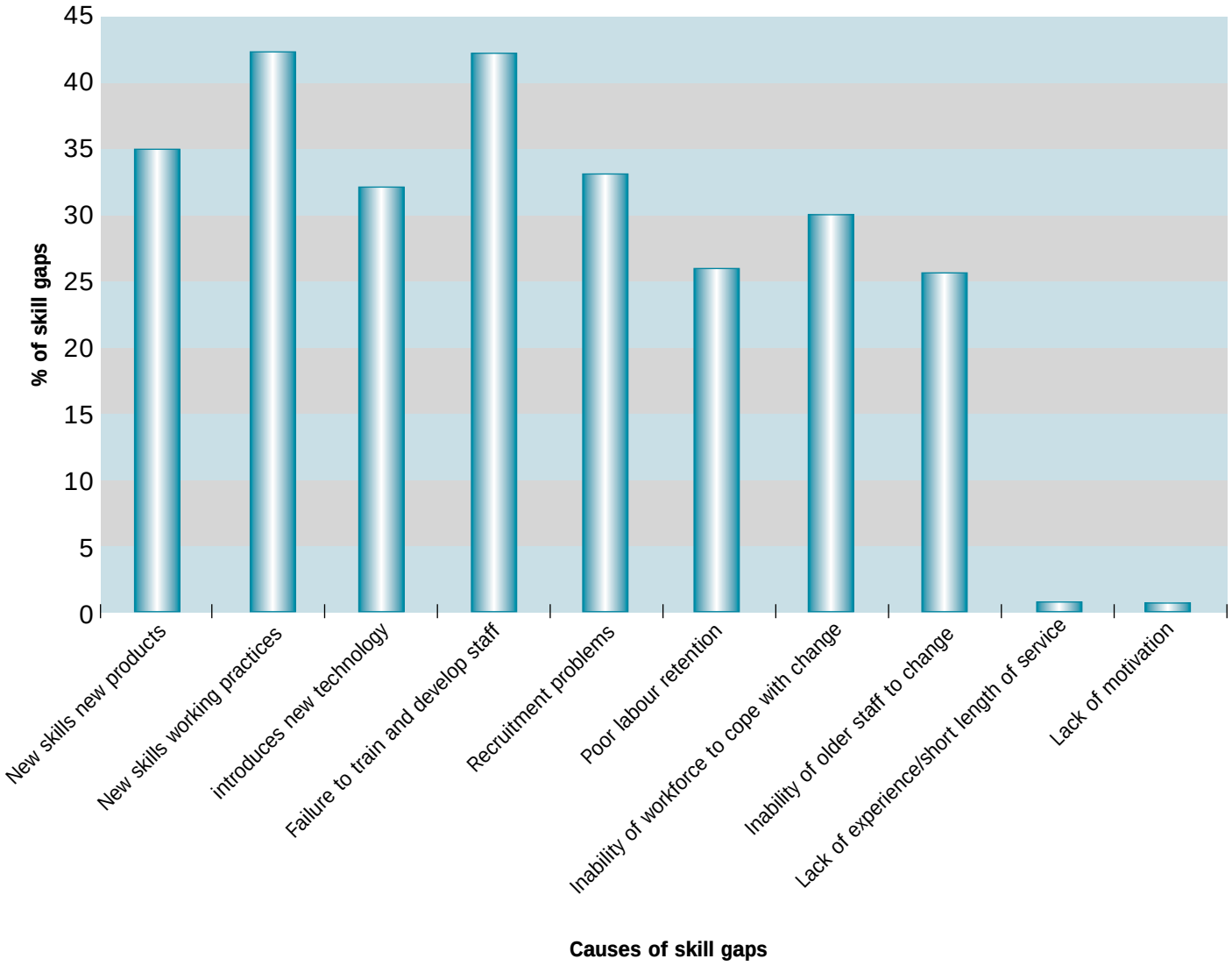
Table 3.11 Action taken to overcome internal skills gaps by occupation

	SOC COLUMN PERCENTAGES								
	Managers & administrators	Professional	Associate professional & technical	Clerical & secretarial	Craft & related	Personal & protective service	Sales	Plant & machine operatives	Other	Total
Increased recruitment	18	25	29	17	27	40	30	33	36	28
Provide further training	74	81	77	84	70	82	87	79	76	80
Change working practices	47	55	41	54	40	43	39	51	51	47
Relocate work within company	2	2	4	4	2	2	2	1	2	2
Other	27	34	26	28	18	15	14	23	21	22
No particular solution	8	2	4	4	6	4	4	5	7	5
Weighted Base	124762	58727	41543	125623	66441	96251	135403	125354	86179	860283
Unweighted	17380	8645	5967	16705	9793	10727	16059	23891	13441	122607

Source: STF Employers' Survey (IER/IFF)

Base: Internal Skill Gaps: employee based measure

Figure 3.5 Main causes associated with internal skill gaps



Approximately 40 per cent of skill gaps were caused in part by their companies failure to train and develop staff - well ahead of the 30 per cent associated with the inability of the workforce to keep up with change. The introduction of new working practices was also associated with approximately 40 per cent of total skill gaps. This cause was ranked just ahead of the development of new products (35 per cent) and the introduction of new technology (32 per cent). These changes contributed to skill shortcomings in nearly all occupational areas although lack of skills required for new product development particularly applied to managerial and professional occupations *(see Table 3.12)*. Recruitment problems were cited as contributing to internal skill gaps in personal service occupations and other occupations where hard-to-fill vacancies derive from unattractive job conditions and job applicants' lack of desired personal attributes as much as lack of skills *(see Table 3.12 and Figure 3.5)*.

A variety of causes give rise to specific occupational skill shortcomings, but what is apparent is the prominence of the failure to develop and train staff as an important contributory factor.

The survey evidence suggests that:

- for managers, professionals, and associate professionals - so called higher level occupations - the introduction of new products and services, working practices, new technology, a failure of older workers to adapt, coupled to a failure by the establishment to train and develop staff, was a major source of lack of proficiency *see Table 3.12*;
- new working practices and technologies, again coupled to a failure to develop and train, was the cause of a lack of proficiency amongst clerical and secretarial workers as well as many other occupations;
- for craft workers, new working practices coupled to recruitment problems were the most commonly cited reasons;
- the main reason for skill shortcomings amongst sales staff and for personal service, and operative and assembly occupations was the failure to develop and train staff.

Table 3.12 Reasons why staff not fully proficient

COLUMN PERCENTAGES										
	Managers & administrators	Professional	Associate professional & technical	Clerical & secretarial	Craft & related	Personal & protective service	Sales	Plant & machine operatives	Other	Total
New skills / new products	41	49	42	37	31	30	35	35	24	35
New skills / new working practices	50	45	35	43	41	38	37	47	35	42
Introduce new technology	38	36	42	48	32	14	25	36	17	32
Failure to train and develop staff	53	40	33	33	39	42	43	48	41	42
Recruitment problems	27	30	32	23	31	44	30	39	41	33
Poor labour retention	20	19	21	19	21	34	27	32	41	26
Inability of workforce to cope with change	37	31	24	28	29	26	24	35	31	30
Inability of older staff to change	34	28	19	25	29	21	22	32	23	26
Lack of experience/ short length of service	1	1	0	1	1	1	2	0	1	1
Lack of motivation	0	0	1	1	1	2	2	1	2	1
Weighted Base	124762	58727	41543	125623	66441	96251	135403	125354	86179	860283
Unweighted Base	17380	8645	5967	16705	9793	10727	16059	23891	13441	122607

Source: STF Employers' Survey (IER/IFF)

Base: Internal Skill Gaps: employee based measure

3.9 Internal Skills Gaps and External Recruitment Problems

In general there was only a small degree of overlap between establishments reporting each kind of skill problem: only some 12 per cent of establishments with *internal skill gaps* also reported having skill-shortage *vacancies*[17]. About 2 per cent of all establishments reported both skill gaps and skill-shortage vacancies. Some 5 per cent of all establishments reported skill-shortage vacancies but no skill gaps. Conversely 17 per cent of all establishments reported internal skill gaps but no skill-shortage vacancies. Three quarters of all establishments reported neither skill gaps or skill-shortage vacancies.

The incidence of internal skill gaps differed from that skill-based external recruitment difficulties in several ways. Firstly, *skill* gaps were most commonly found in relatively low-skilled occupations such as sales, personal service and operative and assembly occupations. By contrast, skill-shortage *vacancies* were at their highest in craft and associate professional occupations which typically require relatively long periods of education and training in order to reach the required skill levels. Secondly, some of the sectors most strongly affected by skill-shortage *vacancies* such as construction and business services did not rank highly in terms of skill gaps.

3.10 Conclusions

Estimates based on the survey data reveal that there were, in total, 1.9 million employees whom their employers thought were not fully proficient in the current jobs. These were spread across some 310 thousand establishments (58 per cent of all establishments). A significant number of establishments (105 thousand, about 20 per cent of all establishments) experienced skill gaps in their existing workforce during 1999[18]. Such internal skill gaps affected approximately 860 thousand employees. Where they were recognised, those problems tended to be limited to a single occupational group although the actual skill content of the shortcoming tended to cover a range of different skills.

How the existence of skill gaps affects organizational performance is considered in the next chapter.

17 From the reverse perspective, only three out of ten establishments with skill-related hard-to-fill vacancies also had internal skill gaps.

18 That is a lack of full proficiency affecting a third or more of employees in at least one occupational area.

4. SKILLS AND PERFORMANCE

4.1 Introduction

This chapter explores the implications of skill deficiencies for establishment performance. It deals primarily with questions that ask the respondent directly for their views of the consequences of skill deficiencies for the performance of the establishment[19]. The interpretation of the answers is generally different between the *public and private sectors*. The present discussion focuses on the private sector results. The analysis draws mainly on results from the telephone survey.

It begins by exploring the respondent's perceptions of the effects of external recruitment difficulties on the establishment's performance. The main focus of attention is on the impact of skill-shortage vacancies.

The following sections highlight the respondents perception of the impact of internal skill gaps on performance. The main emphasis here is on the subset of establishments where fewer than nearly all staff were reported as fully proficient *i.e. where there were skill shortcomings*.

A number of different definitions of internal skill gaps and shortcomings are used, depending upon the information available from the survey. Nevertheless a common pattern emerges, of important impacts on performance.

4.2 Impact of Recruitment Problems on Performance

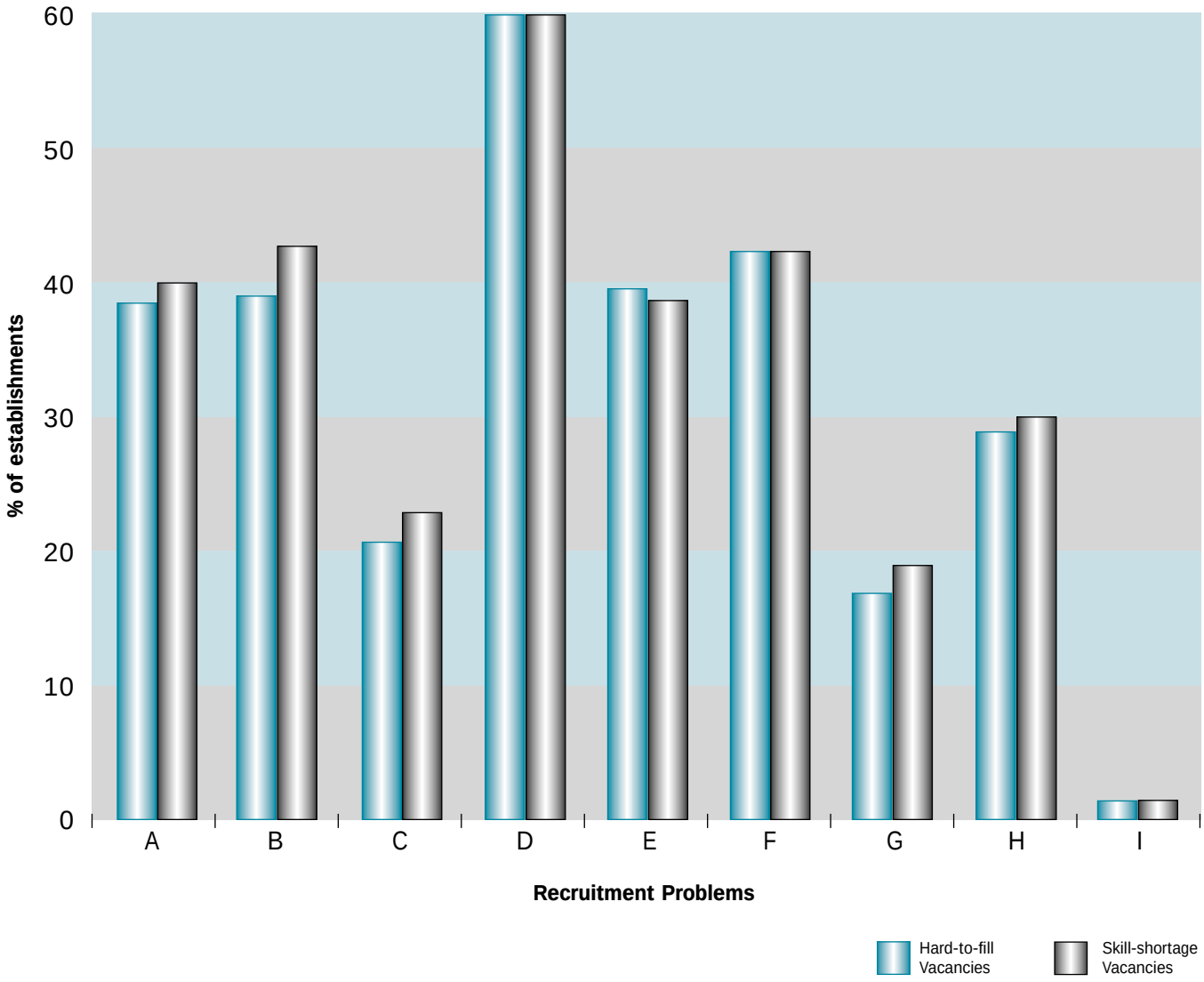
The respondent's perception of impact of recruitment problems on the establishment is dealt with explicitly in the survey. The impact of hard-to-fill vacancies and skill-shortage vacancies on the performance of the establishment is summarised in *Figure 4.1*. The responses can also be analysed with respect to occupation to provide a control for skill level *(see Table 4.1)*. Both show the perceived impacts just for those establishments experiencing these recruitment problems.

Overall, 'difficulties meeting customer service standards' was the most commonly reported response, affecting about 60 per cent of skill-shortage vacancies. 'Delays in developing new products or services' (44 per cent), 'increased operating costs' (42 per cent) and 'difficulties meeting required quality standards' (37 per cent) were also important.

These may be considered relatively mild impacts compared to 'loss of business' or 'delays developing new products or services', but these impacts were reported in both a substantial proportion of those establishments with hard-to-fill vacancies and skill-shortage vacancies. This suggests that recruitment problems are having a serious impact on establishment performance.

19 Other measures of performance such as sales growth, employment growth, exports, etc, have to be related to the corresponding establishment's measures of skill in order to look at the relationship between skill and performance. These relationships will be reported in later work.

Figure 4.1 Impact of recruitment problems on establishment performance



Source: STF Employers' Survey (IER/IFF)

Key:
- A Loss of business or orders to competitors
- B Delays developing new products
- C Withdraw products
- D Difficulties with customer service
- E Difficulties with quality
- F Increased costs
- G Difficulties with technological change
- H Difficulties with organizational change
- I None of the above

Table 4.1 Impact of skill-shortage vacancies on performance by occupation

COLUMN PERCENTAGES										
	Managers & administrators	Professional	Associate professional & technical	Clerical & secretarial	Craft & related	Personal & protective service	Sales	Plant & machine operatives	Other	Total
% of establishments reporting										
Loss of business or orders to competitors	37	36	36	18	53	33	47	45	32	40
Delays developing new products	44	51	61	38	41	37	28	52	40	44
Withdraw products	14	25	24	9	38	22	12	27	22	24
Difficulties with customer service	49	62	56	55	75	48	44	72	77	60
Difficulties with quality	25	32	41	36	32	43	31	51	52	37
Increased costs	25	36	51	36	48	38	20	61	52	42
Difficulties with technological change	23	27	32	19	15	8	10	25	10	19
Difficulties with organizational change	30	28	35	35	28	24	21	31	31	30
None of the above	1	2	1	1	-	2	12	-	-	2
Don't know / not specified	10	10	7	19	5	17	15	9	10	10
Total	100	100	100	100	100	100	100	100	100	100
Weighted Base	8058	8643	18964	9542	24315	12318	13891	10314	3545	109590
Unweighted Base	577	1093	2522	984	1770	834	893	1088	362	10123

Source: STF Employers' Survey (IER/IFF)

Base: All skill-shortage vacancies

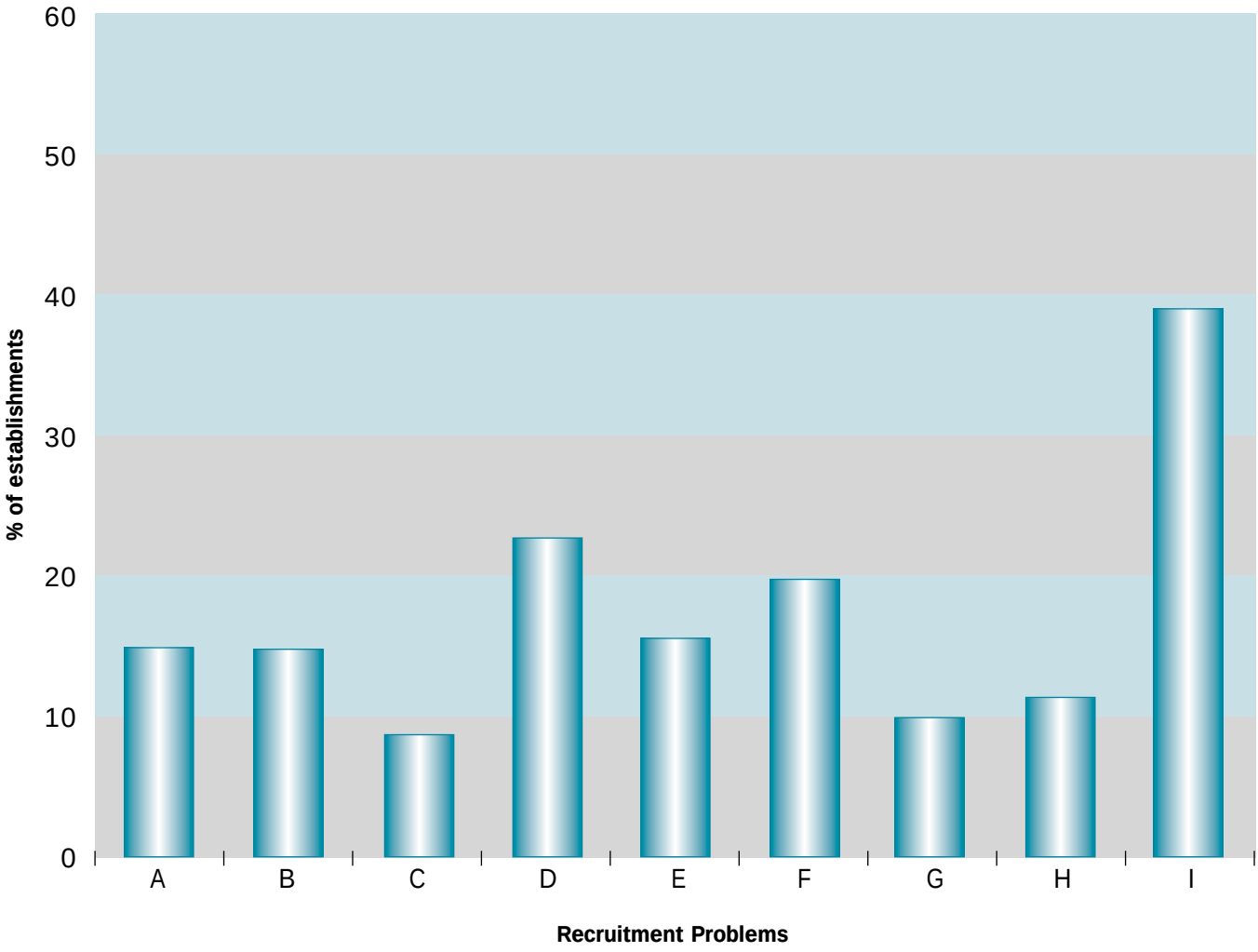
A comparison of the impact of recruitment problems by occupation reveals some notable differences (*see Table 4.1*). Overall, it appears to be skill-shortage vacancies for craft, sales, and operatives that are more likely to have the most serious impact on current establishment performance. In particular, respondents indicated that around 53 per cent of skill-shortage vacancies for craft workers led to a loss of business. For sales occupations and operatives the corresponding figures were 47 and 45 per cent respectively. These are much higher proportions than in any other occupations. In contrast, such recruitment problems relating to managers, professionals, and associate professionals were more likely to lead to an impact such as delays in 'developing new products and services', or 'difficulties with customer service'. These, of course, may have important long-term implications for performance.

These consequences were most severe in small establishments, where the unfilled positions represented relatively large proportions of employment. However, longer-lasting vacancies in craft, associate professional and professional occupations were strongly associated with customer service problems and delays in introducing new products and services in establishments of all sizes.

4.3 Future Impact of Recruitment Problems

All respondents were also asked about the anticipated impact of recruitment problems in general on business performance over the next five years. The majority of establishments reported that they did not anticipate recruitment problems, but a sizeable proportion (41 per cent) did so and listed a range of impacts *(see Figure 4.2)*. An adverse impact on customer care standards and increased operating costs were the most commonly mentioned impacts, affecting 23 and 20 per cent of establishments respectively. It was notable that 15 per cent of establishments reported that recruitment problems were anticipated to cause a loss of business orders and delays in developing new products or services.

Figure 4.2 Anticipated future recruitment problems and their impact on performance



Source: STF Employers' Survey (IER/IFF)

Key:
- A Loss of business or orders to competitors
- B Delays developing new products
- C Withdraw products
- D Difficulties with customer service
- E Difficulties with quality
- F Increased costs
- G Difficulties with technological change
- H Difficulties with organizational change
- I None of the above

4.4 Anticipated Recruitment Problems and Size of Establishments

The larger the size of the establishment the more likely the response that recruitment problems will have an impact on the business - this was particularly marked amongst the largest establishments (1000 or more employees) (*see Table 4.2*).

4.5 Anticipated Recruitment Problems by Industrial Sector

The construction sector was the most likely to respond that it anticipated future recruitment problems closely followed by transport and communication. Around 50 per cent of establishments in the construction sector reported that they anticipated recruitment problems (*see Table 4.3*). Construction was also the sector where respondents were most likely to respond that recruitment problems would lead to a loss of orders. In contrast, 64 per cent of establishments in financial intermediation reported that they did not anticipate recruitment problems and, where they existed, they would be more in relation to customer care. Even in this sector, however, 15 per cent of establishments reported that recruitment problems would lead to a loss of orders.

4.6 Anticipated Recruitment Problems by Region

Establishments in the London and South East regions were most likely to report that they anticipated future recruitment problems (*see Table 4.4*). Regional variation, however, was quite modest, with the London and South East regions tending to report a slightly greater proportion of establishments anticipating recruitment problems having an adverse impact on each of the impact measures. Establishments in the North East region were least likely to report that they anticipated future recruitment problems.

Table 4.2 Anticipated impact of recruitment problems over next five years by size of establishment

COLUMN PERCENTAGES								
Number of employees at establishment	**5-24**	**25-49**	**50-99**	**100-199**	**200-499**	**500-999**	**1000+**	**Total**
% of respondents reporting								
A	15	13	12	11	11	11	12	15
B	14	15	16	15	16	19	24	15
C	9	8	8	7	7	9	13	9
D	22	24	24	25	26	24	37	23
E	16	19	19	19	18	19	25	16
F	19	21	24	25	28	26	32	20
G	10	11	11	12	12	15	19	10
H	12	13	14	13	14	15	22	12
I	61	58	56	56	54	50	43	59
Total	100	100	100	100	100	100	100	100
Weighted Base	399590	65626	39957	15059	10373	2061	906	533572
Unweighted Base	10417	6426	3771	3361	2236	515	227	26952

Source: STF Employers' Survey (IER/IFF)
Base: All Establishments

Key; A Loss of orders
B Delays developing new products
C Withdrawal of services/ products
D Difficulties with customer services
E Difficulties with quality standards
F Increased operating costs
G Difficulties introducing technical change
H Difficulties introducing working practices
I None of these (including no problems)

Table 4.3 Anticipated impact of recruitment problems over next five years by industrial sector

COLUMN PERCENTAGES														
Sector	**Mining & Quarrying**	**Manu'ring**	**Electricity & Water**	**Const'tion**	**Wholsale & Retail**	**Hotels & Rest'nts**	**Transport & Comms**	**Financial Inter'tion**	**Business Services**	**Public Admin**	**Education**	**Health & Social Care**	**Other Services**	**Total**
% of respondents reporting														
A	4	18	13	28	15	16	22	15	15	3	8	8	12	15
B	9	18	13	20	11	14	17	11	17	12	15	16	12	15
C	1	10	9	17	6	9	11	5	9	8	10	10	8	9
D	14	23	26	32	22	26	27	19	21	23	18	21	20	23
E	9	14	11	19	14	22	20	16	15	20	19	19	16	16
F	16	24	29	27	17	20	27	13	20	17	20	21	17	20
G	2	13	7	10	9	6	11	11	12	12	14	10	8	10
H	2	12	6	14	11	12	14	11	11	14	14	17	12	12
I	78	56	66	50	63	57	53	64	60	66	60	59	62	59
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Weighted Base	737	71231	585	25858	131653	46427	25552	20560	74653	15167	32066	51703	34503	533572
Unweighted Base	51	6109	51	1429	4698	2331	1218	1132	2813	803	1759	2822	1571	26952

Source: STF Employers' Survey (IER/IFF)

Base: All establishments

Key:
- A Loss of Business orders
- B Delays developing new products
- C Withdrawal of services/ products
- D Difficulties with customer services
- E Difficulties with quality standards
- F Increased operating costs
- G Difficulties with technical change
- H Difficulties with new working practices
- I None of these (including no problems)

Table 4.4 Anticipated impact of recruitment problems over next five years by region

COLUMN PERCENTAGES										
	East Midlands	Eastern	London	North East	North West	South East	South West	West Midlands	Yorkshire & Humberside	All regions
% of respondents reporting										
A	14	16	16	11	12	17	14	16	13	15
B	14	16	16	11	12	16	14	16	13	15
C	9	10	9	7	6	10	9	8	7	9
D	20	25	24	17	18	28	24	23	18	23
E	15	17	19	12	14	19	17	16	14	16
F	19	20	20	18	16	22	21	21	19	20
G	9	10	12	9	9	12	10	11	9	10
H	12	12	12	11	11	14	13	13	11	12
I	62	58	57	69	62	55	57	60	64	59
Total	100	100	100	100	100	100	100	100	100	100
Weighted Base	44714	56071	85879	24616	71663	87156	53140	57274	53059	533572
Unweighted Base	2412	2971	3377	2048	3758	3749	2973	2880	2784	26952

Source: STF Employers' Survey (IER/IFF)
Base: All Establishments

Key:
A Loss of orders
B Delays developing new products
C Withdrawal of services/ products
D Difficulties with customer services
E Difficulties with quality standards
F Increased operating costs
G Difficulties introducing technical change
H Difficulties introducing working practices
I None of these (including no problems)

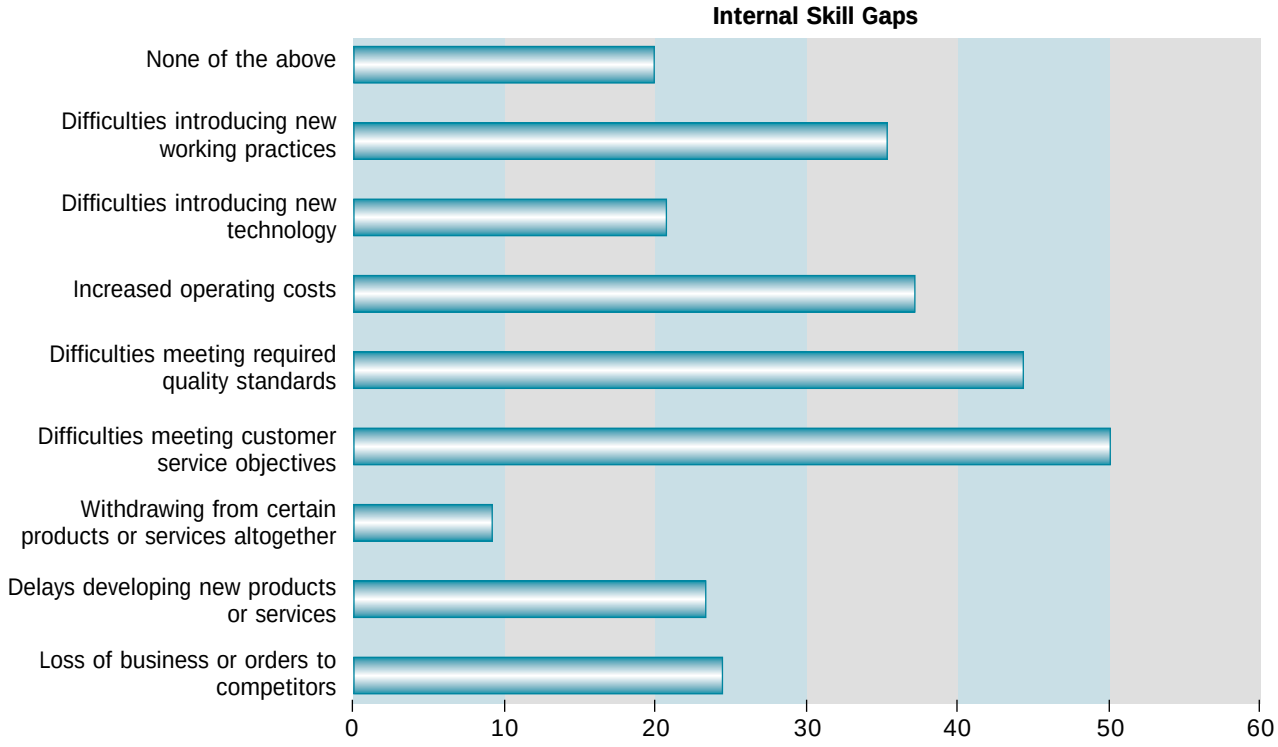
4.7 Impact of *Internal Skill Gaps* on Performance

The previous sections have revealed that the impact of recruitment problems on organisational performance is substantial. With respect to skill gaps and shortcomings amongst the existing workforce one might expect this to have an even more direct impact because it refers to the capacity of existing staff to undertake satisfactorily their current jobs. As noted in Chapter 3, a substantial proportion of establishments reported a skill shortcoming or gap.

The main effects of *internal skill gaps* on business performance were reported as difficulties in meeting customer service objectives and required quality standards (50 and 44 per cent respectively) along with increased operating costs (37 per cent) - Figure 4.3 and Table 4.5 gives the details. The percentages in the table show the proportion of all those who are less then fully proficient in an occupation in those cases where fewer than nearly all staff are fully proficient. By applying these percentages to the final row of the table estimates of the numbers of employees involved for each kind of impact can be assessed.

These problems were widely cited as a consequence of lack of full proficiency in nearly all occupations. In addition, *skill gaps* among existing staff in managerial, professional, associate professional, clerical and craft occupations often hampered the introduction of new work practices. Lack of full proficiency in higher-level occupations also contributed to delays in developing new products and services (*see Table 4.5*).

Figure 4.3 Main impacts of internal skill gaps[a]



Source: STF Employers' Survey (IER/IFF)
Base: All establishments with internal skill gaps
Note: (a) Internal skill gaps, focus on the total number of employees who are less than fully proficient for establishments answering that fewer than nearly all staff are fully proficient.

Meeting customer service and quality standards were the most commonly cited consequences of internal skill gaps. For instance, 45 - 50 per cent of skill gaps amongst personal service staff resulted in a difficulty with customer care or product quality.

Loss of orders to competitors was reported as an impact in 40 per cent of internal skill gaps amongst sales staff and, to a lesser extent, amongst all other occupations *(see Table 4.5)*.

Delays developing new products and services was mentioned in 30 per cent of internal skill gaps amongst managers, and a similar proportion for professional occupations and associate professional occupations.

Internal skill gaps generally have resulted in a somewhat lower proportion of instances of an establishment withdrawing from a market.

Increased operating costs were particularly in evidence where internal skill gaps were identified amongst craft and skilled workers or operatives.

Being able to introduce technical change and new working practices disproportionately affected managers, professionals, associate professionals and clerical and secretarial occupations.

A key finding is that where internal skill gaps are identified in any occupation there are a number of consequences for the performance of the establishment. To some extent this will depend upon the intensity of the skill gap, an element which is examined in greater detail below. However, overall, there is significant evidence that skill gaps inhibit performance.

SOC COLUMN PERCENTAGES										
	Managers & administrators	Professional	Associate professional & technical	Clerical & secretarial	Craft & related	Personal & protective service	Sales	Plant & machine operatives	Other	Total
Loss of orders	25	25	20	13	24	25	37	22	23	24
Delays developing new products	33	33	36	17	26	20	13	26	15	23
Withdraw from markets	10	10	10	5	13	12	7	11	9	9
Difficulties with customer service	48	43	42	48	46	55	58	52	49	50
Difficulties with quality	39	40	34	39	46	50	38	53	50	44
Increased costs	38	34	33	28	45	32	25	58	42	37
Difficulties with technological change	29	26	23	25	25	11	13	25	12	21
Difficulties with organizational change	43	34	32	35	36	34	26	39	32	35
No particular problems	20	16	19	23	15	25	22	15	23	20
Weighted Total	124762	58727	41543	125623	66441	96251	135403	125354	86179	860283
Unweighted Base	17380	8645	5967	16705	9793	10727	16059	23891	13441	122607

Source: STF Employers' Survey (IER/IFF)

Base: Those with internal skill gaps

Table 4.6 Impact of current skill gaps and sales growth category

COLUMN PERCENTAGES						
	Sales Growth Category					
Consequence	Increased great deal	Increased a little	Stayed same	Decreased a little	Decreased great deal	All establishments
loss of business/ orders	28	30	32	36	44	31
delay in developing new products	32	25	31	35	36	28
withdrawal of products/ service	12	12	14	16	18	13
difficulties meeting customer service	50	50	47	53	60	49
difficulties in meeting required quality	43	42	41	48	48	42
increased operating costs	39	36	36	43	47	36
difficulties introducing technological change	25	23	28	36	34	26
difficulties introducing new work practices	38	35	34	43	39	35
none of these	30	27	29	21	25	27
Weighted Base	15501	32991	22251	1191	4669	104985
Unweighted Base	829	1873	1346	742	287	6088

Source: STF Employers' Survey (IER/IFF)
Base: All establishments reporting internal skill gaps

4.8 Current Impact of *Internal Skill Gaps* and Rates of Sales Growth

The final column of *Table 4.6* shows the relative importance of different consequences of skill gaps for establishment performance also allowing for differences in sales growth. The base for the table is all establishments reporting an internal skill gap in at least one occupational area. Thus the final column of data indicates that around 49 *per cent* of establishments with internal skill gaps report that they have a skill gap that has an adverse impact on *their ability to meet customer service objectives*. While only 13 *per cent* suggest that it has resulted in *withdrawal from product areas*, it should be noted that this appears to be a fairly drastic impact. In addition, significant proportions also pick out the

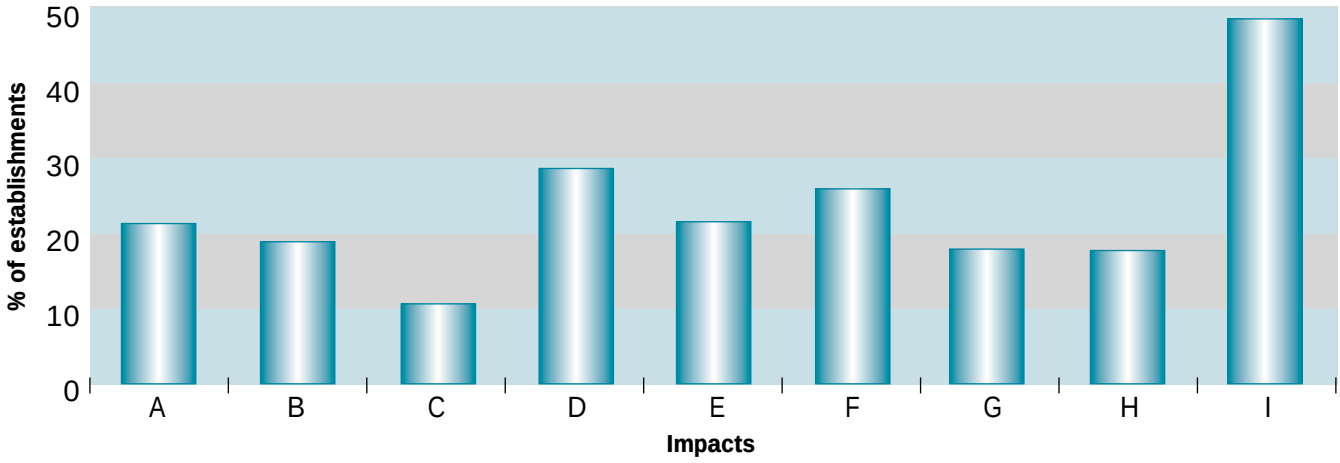
more dynamic problems that will affect company performance into the future, *delays in developing new products* (28 *per cent*), *introducing technological change* (526 *per cent*) and *difficulties in introducing new working practices* (35 *per cent*).

Table 4.6 also sets out the results broken down by change in total sales over the previous 12 months. A "U-shaped" relationship can be seen for most categories of consequence, although the minimum point shifts between the sales "stayed the same" and the sales "increased a little" categories. A further feature is the significantly greater percentages in the "decreased a great deal" category than in the "increased a great deal" category. Thus, while skill gaps are associated with fast-growing establishment losing business/orders, this was a much more significant problem amongst the rapidly declining establishments. In addition, it should be remembered that there is a sample selection problem here, as establishments that closed down (which, on the basis of this evidence, would have experienced even greater skill problems) are not observed.

4.9 Anticipated Future Impact of 'Skill Shortcomings'

All respondents were asked if they anticipated that future 'skill shortcomings' would affect the performance of the organisation. The respondent was left to define 'skill shortcoming'. Approximately 49 per cent of establishments reported that none of the possibilities offered were relevant[20] (i.e. probably that there were no problems) *(see Figure 4.4)*. Again, the most common response was expected problems with customer service (29 per cent) and then loss of business orders and difficulties with quality of products and services (each 22 per cent).

Figure 4.4 Anticipated impact of 'skill shortcomings'[a] over next 2-3 years



Source: STF Employers' Survey (IER/IFF)
Note: (a) As defined by the respondent

Key:
- A Loss of business or orders to competitors
- B Delays developing new products
- C Withdraw products
- D Difficulties with customer service
- E Difficulties with quality
- F Increased costs
- G Difficulties with technological change
- H Difficulties with organizational change
- I None of the above

20 This response could also include some other impacts not listed but these seem fairly exhaustive.

4.10 Anticipated Future Impact of 'Skill Shortcomings' by Establishment Size

The incidence of establishments reporting one or more of the designated consequences increases with size for most categories (*see Table 4.7*). This is the case, for example, in the cases of, 'delay in developing new products/services', 'difficulties meeting customer service objectives', 'difficulties in meeting required qualit'y, 'increased operating costs', 'difficulties in introducing technological change' and 'difficulties in introducing new work practices'. The only consequence that clearly breaks this finding is 'loss of business/orders.' The result for 'withdrawal of products/services' is interesting, as there is little evidence of a rising incidence with size until the very largest size category is reached. The reason is, presumably, that all but the largest size establishments tend to produce a single product or service.

In the overall picture, however, it appears that respondents in smaller establishments are more optimistic about the future with respect to the impact of 'skill shortcomings'. A key question for further investigation is whether it is the more dynamic establishments that are more likely to report an adverse impact stemming from 'skill shortcomings'.

Table 4.7 Anticipated problems of 'skill shortcomings' over next 2-3 years by size of establishment

	COLUMN PERCENTAGES							
Number of employees at establishment	5-24	25-49	50-99	100-199	200-499	500-999	1000+	Total
Loss of business	22	20	20	18	20	20	20	22
Delays developing new products	18	21	22	22	24	27	39	19
Withdrawing products and services	12	11	11	10	12	13	21	11
Difficulties meeting customer service	28	32	34	33	35	37	47	29
Difficulties delivering quality	20	26	27	26	26	30	39	22
Increased quality costs	24	27	30	32	35	37	43	26
Difficulties with technological change	15	19	19	20	21	25	31	16
Difficulties with organizational change	16	20	21	22	23	26	32	18
None of the above	50	46	45	45	43	38	32	49
Weighted Base	399590	65626	39957	15059	10370	2061	906	533572
Unweighted Base	10417	6426	3770	3361	2236	515	227	26952

Source: STF Employers' Survey (IER/IFF)
Base: All Establishments
Note: Percentage will not run to 100 per cent since respondents could give more than one answer.

4.11 Anticipated Future Problems of 'Skill Shortcomings' by Industrial Sector

Loss of business to competitors is probably the worst impact of a 'skill shortcoming'. Around a quarter of service sector organisations in the private sector, and manufacturing establishments anticipated 'skill shortcomings' leading to a loss of business *(see Table 4.8)*. In construction this is over a third. There is the degree of commonality across sectors in their anticipation of the impact of future 'skill shortcomings': failing to meet customer care and standards and, quality standards, and incurring greater operating costs being common perceptions.

The row of *Table 4.8* indicating 'none of the above', shows the percentage of establishments in each sector that do not expect any of the specified problems to arise because of 'skill shortcomings'. The response to this question suggests that only about 50 per cent of establishments indicate that the 'skill shortcomings' will not give rise to any of the designated problems. The figure demonstrates a marked difference between the sectors with the highest and lowest incidence of anticipated problems arising out of 'skill shortcomings'. About 60 *per cent* of establishments in mining and quarrying report that the skill gap will not lead to any of the designated problems, compared to nearly 43 *per cent* in construction.

Table 4.8 also gives the sector breakdown for each of the designated consequences. It can immediately be seen that there are significant differences in the response to each potential problem across the sectors. In the case of *loss of business or orders*, for example, the overall average is just over 21 *per cent* of establishments. This conceals a range including 4 *per cent* in the case of public administration and nearly 36 *per cent* in the case of construction. Other sectors also have high percentages of establishments indicating that 'skill shortcomings' will have an adverse impact *via* loss of business and orders, including electricity and water supply (30 *per cent*), transport and communication (28 per cent)

Table 4.8 Anticipated effects of 'skill shortcomings' over next 2-3 years by industrial sector

COLUMN PERCENTAGES

	Mining & Quarrying	Manu'ring	Electricity & Water	Const'tion	Wholesale & Retail	Hotels & Rest'nts	Transport & Comms	Financial Inter'tion	Business Services	Public Admin	Education	Health & Social Care	Other Services	Total
Loss of business	10	26	30	36	24	22	28	22	22	4	14	11	17	22
Delays developing new products	14	25	14	23	14	17	18	14	23	20	23	21	17	19
Withdrawing products and services	1	13	7	22	9	12	14	6	11	7	14	13	12	11
Difficulties meeting customer service	14	29	40	36	30	31	30	28	28	28	27	26	26	29
Difficulties delivering quality	17	19	24	24	19	26	24	23	20	26	28	25	20	22
Increased quality costs	20	31	35	36	23	25	32	17	25	19	26	25	22	26
Difficulties with technological change	4	20	13	16	15	11	15	16	17	21	24	17	14	16
Difficulties with organizational change	11	18	14	19	16	17	18	15	16	21	23	22	16	18
None of the above	59	45	50	43	51	49	44	53	50	54	47	50	52	48
Weighted Base	737	71231	585	25858	131653	46427	25552	20571	74660	15167	32066	51703	34503	533572
Unweighted Base	51	6109	51	1429	4698	2331	1218	1132	2813	803	1759	2822	1571	26952

Source: STF Employers' Survey (IER/IFF)

Base: All establishments

Note: Percentage will not run to 100 per cent since respondents could give more than one answer.

Withdrawal from a product area might be interpreted as a fairly major adverse effect of a 'skill shortcoming'. *Table 4.8* demonstrates that, in some sectors (see construction), as many as 22 *per cent* of establishments believe that this might be the outcome over the next 2-3 years. It can also be seen that 'skill shortcomings' are perceived as affecting more dynamic activities, such as the speed with which the development of new products takes place and the introduction of technological change.

4.12 Anticipated Future Problems of 'Skill Shortcomings' by Region

Table 4.9 sets out the results relating to the perceived impact by the nine regions of England. Again, it can be seen from the row indicating 'none of the above' that about 50 per cent of all establishments do not anticipate any of the designated problems arising from 'skill shortcomings'. There is a fairly wide range of opinion across regions, from 44 per cent in the South East (*i.e.* the region with the highest incidence of anticipated future problems) to 56 per cent in the North East (the lowest recorded rate of anticipated problems). Note that the result for London is close to that of the South East, while those of the North West and Yorkshire and Humberside are close to that of the North East.

Almost 25 *per cent* of establishments in London report that 'skill shortcomings' will result in a loss of business/orders, compared with only 17 *per cent* in the North East. Indeed, over 13 *per cent* of establishments in London indicate that skill problems are likely to result in them withdrawing from certain products or services, compared with only 9 *per cent* in the North East.

This probably reflects the different perceptions of the nature of changes in industrial structure and pace of growth in the London, South East, Eastern, and South West regions. In the North East for example, only 12 per cent of establishments anticipated 'skill shortcomings' leading to a loss of business compared to 24 per cent in both the London and South East regions. Though the impact is likely to be worse in the south this reflects more the success of the region and consequent inability of skill development to keep pace with regional economic growth. The North East may appear to suffer least from the impact of 'skill shortcomings' but this is probably little more than a consequence of a static regional economy requiring relatively little skill change.

Table 4.9 Anticipated effects of 'skill shortcomings' over the next 2-3 years by region

COLUMN PERCENTAGES										
	East Midlands	Eastern	London	North East	North West	South East	South West	West Midlands	Yorkshire & Humberside	Total
Loss of business	22	23	24	17	18	24	21	22	19	22
Delays developing new products	19	19	22	15	16	21	19	19	17	19
Withdrawing products and services	12	12	13	9	9	13	12	11	11	11
Difficulties meeting customer service	27	31	32	24	25	33	29	29	25	29
Difficulties delivering quality	20	23	25	18	19	23	22	22	20	22
Increased quality costs	27	27	27	25	22	28	25	25	25	26
Difficulties with technological change	15	16	18	16	15	17	15	17	16	16
Difficulties with organizational change	18	18	19	16	15	18	18	18	17	18
None of the above	49	47	46	56	52	44	50	49	53	49
Weighted Base	44714	56071	85879	24616	71663	87156	53140	57274	53059	533572
Unweighted Base	2412	2971	3377	2048	3758	3749	2973	2880	2784	26952

Source: STF Employers' Survey (IER/IFF)

Base: All Establishments

4.13 Anticipated Impact of Skill Deficiencies: Comparison of Current Position with the Next 2-3 Years

Table 4.10 undertakes a comparison of the results on anticipated problems relating to the current position and those for the next two to three years. The most obvious feature is the higher percentages of establishments that perceive a *future* problem. This is partly the consequence of the longer time period over which the future is considered (*i.e.* 2-3 years as opposed to the current position). It may also reflect the continuing tightening labour market position. Though there are some differences in the ranking of the different consequences, the ordering is fairly stable for the two periods. 'Failure to meet customer service objectives', the 'difficulties of meeting required quality objectives' and 'increased operating costs', are the top three consequences in both columns of rankings.

4.14 Higher Quality Products and Service Areas and Skill Needs

Respondents were asked about plans to improve the quality of their existing products or services *(see Table 4.11)*. To provide a context for the statements that were read out, respondents were also asked about the anticipated strength of their market position over the next five years. Only a small proportion of establishments - 8 per cent - were not in agreement that their market would be strong over the next five years. Against this business background, 39 per cent of private sector establishments reported that the statement that they were 'currently or were about to implement plans to move into higher quality product areas with higher profit margins' was fairly or very applicable. For the public sector a slightly different statement was read out relating to improving the 'ability to meet customers' needs' to which 86 per cent of respondents found to be either 'very' or 'fairly' applicable to their current situation.

Table 4.10 Comparison of current and anticipated future problems

	Consequence			
	Current		Next 2-3 years	
	%	Rank	%	Rank
Loss of business/orders	6	5	22	4
Delay in developing new products	6	6	19	5
Withdrawal of products/service	3	8	11	8
Difficulties meeting customer service	10	1	29	1
Difficulties in meeting required quality	8	2	22	3
Increased operating costs	7	3	26	2
Difficulties introducing technological change	5	7	16	7
Difficulties introducing new work practices	7	4	18	6
None of these	2		49	
Weighted Base	533572		533572	
Unweighted Base	26952		26952	

Source: STF Employers' Survey (IER/IFF)
Base: All Establishments

Table 4.11 Expectations and plans of establishments

ROW PERCENTAGES							
	Very applicable	Fairly applicable	Not very Applicable	Not at all applicable	Total	Weighted Base	Unweighted Base
The market for our main product or service will remain strong for 5 years	56	29	5	3	100	533572	26952
We are currently implementing or about to implement plans to move into higher quality product areas with higher profit margins (private sector)	13 (17)	16 (22)	16 (20)	30 (35)	(100)	421407	21078
We are currently implementing plans to improve our ability to meet customer needs (public sector)	12 (58)	6 (28)	1 (6)	1 (6)	(100)	112165	58754
We are currently implementing/ about to implement plans to improve quality of services/ products	36	33	12	16	100	533572	26952
We have no plans to move into higher quality product areas but we do have plans to achieve higher efficiency	37	34	9	14	100	128975	5918

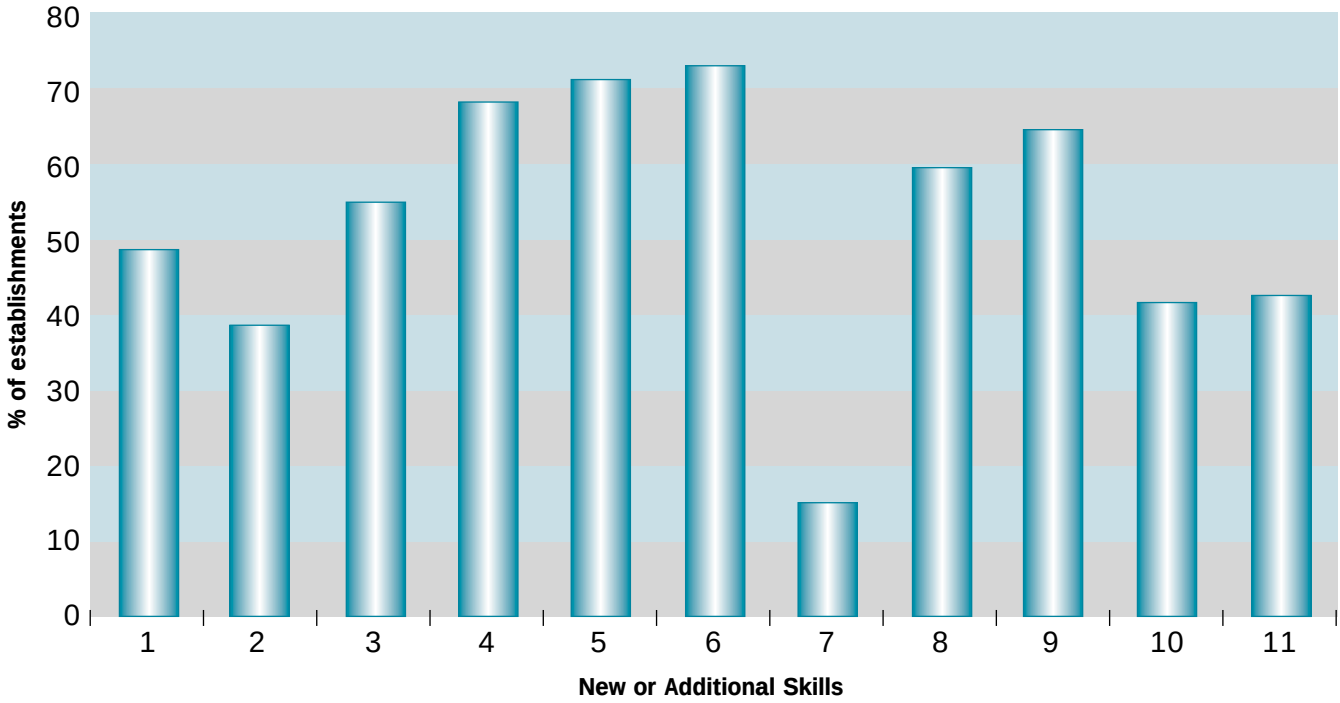
Source: STF Employers' Survey (IER/IFF)
Base: All Establishments
Note: Table excludes don't knows; figures in parentheses are percentages for private sector/public sector respectively

In the public and private sectors combined, a majority of establishments indicated that they were 'currently or were about to improve the quality of their products and services', 69 per cent stating that this statement was either 'very' or 'fairly' applicable, (penultimate row of *Table 4.11*).

Overall, the results reveal that a majority of establishments were in the process, or were about to commence, plans to improve the range of their products and services, but a much smaller proportion were doing so to achieve higher profit margins. One may interpret this as improvements taking place to maintain rather than advance an establishment's product or service market position.

If establishments were in the process of moving into higher quality product or service areas (regardless of whether or not it was to increase profits) they were asked about new or additional skill needs that would result from such a change (*see Figure 4.5*).

Figure 4.5 New or additional skills required: plans to improve quality



Source: STF Employers' Survey (IER/IFF)

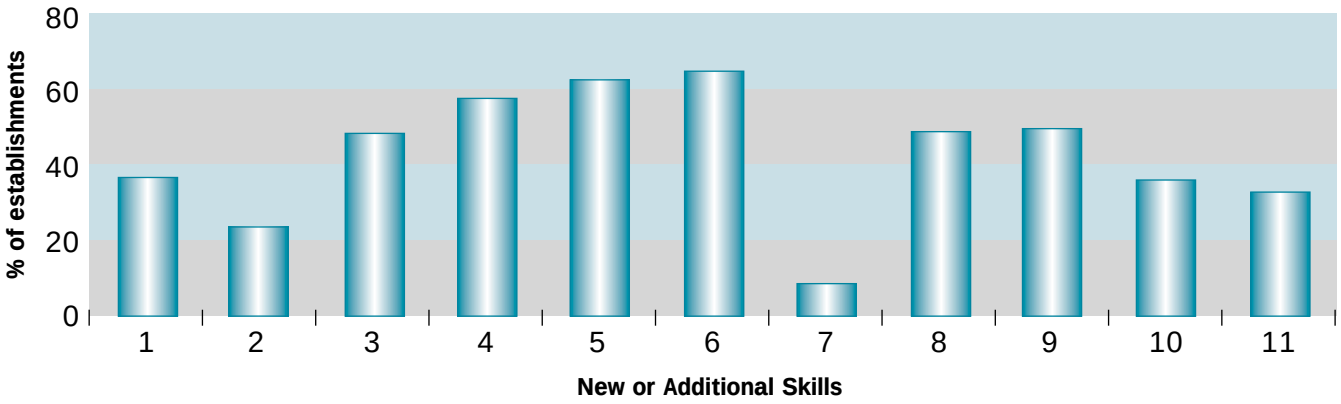
Key:
1 Basic Computing
2 Advanced IT
3 Other technical practical
4 Communication
5 Customer Handling
6 Team Working
7 Foreign languages
8 Problem Solving
9 Management
10 Literacy
11 Numeracy

The results reveal that the demand for new or additional skills, resulting from moves to improve quality, covered a wide range. These included: communication, customer handling, team working, problem solving, and management skills. The clear message is that improvements to the quality of the range of services provided requires extensive skill change, much of which is generic rather than related to specific occupational skills.

4.15 Improving Efficiency and Skill Requirements

Around a quarter of all establishments had no plans to move into higher quality product or service areas *(see Table 4.11)*. They were then asked if they had plans to achieve higher efficiency with their existing products and services. Approximately 37 per cent of those respondents felt that this was 'very' applicable to their situation, 34 per cent 'fairly', 9 per cent 'not very', and 14 per cent 'not all' applicable. They were then asked what new or additional skills they would require to achieve greater efficiency *(see Figure 4.6)*.

Figure 4.6 New or additional skills required: plans to improve efficiency



Source: STF Employers' Survey (IER/IFF)

Key:
1 Basic Computing
2 Advanced IT
3 Other technical practical
4 Communication
5 Customer Handling
6 Team Working
7 Foreign languages
8 Problem Solving
9 Management
10 Literacy
11 Numeracy

Again the data reveal that where establishments intended to introduce change, in this instance to improve efficiency, a wide range of new or additional skills were required. Approximately 65 per cent of establishments looking to improve their efficiency required team working skills, 62 per cent customer handling, and 57 per cent communication skills.

Table 4.12 Constraints on improving quality of products and services

	ROW PERCENTAGES						
	Very applicable	Fairly applicable	Not very Applicable	Not at all applicable	Total	Weighted Base	Unweighted Base
We would like to move into new, higher quality products or services but cannot afford the high level of capital commitment	11	10	15	56	100	129745	5952
We would like to move into high quality or product/ service markets but lack required skills	4	7	16	66	100	129745	5952

Source: STF Employers' Survey (IER/IFF)
Base: All Establishments not intending to move into higher quality product/ service areas

4.16 Skill Constraints and Attempts to Change Performance

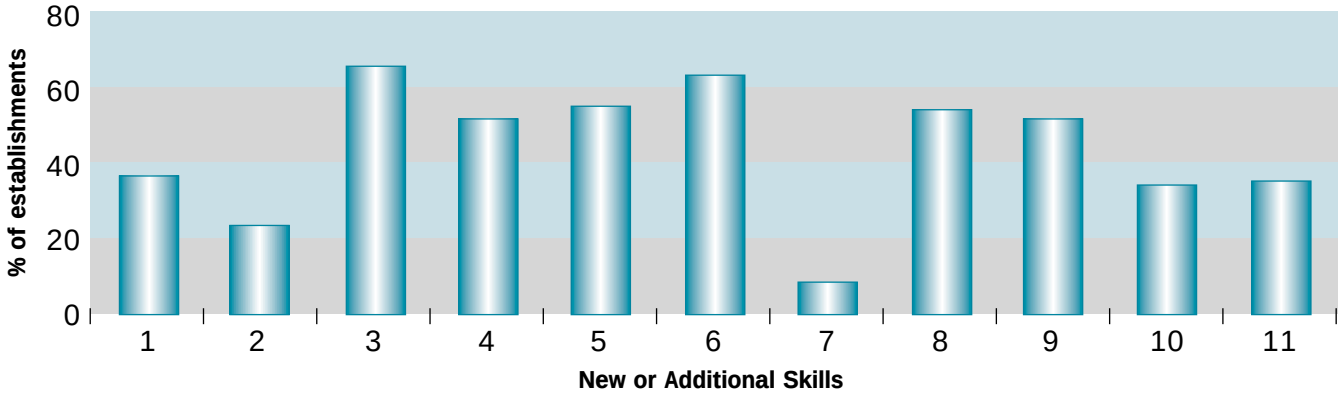
Establishments that indicate that they are not planning to move to a higher quality product are also of interest. This group of establishments were asked about whether there were financial or skill constraints preventing them from attempting to move up-market. *Table 4.12* provides the proportion of establishments (base: all not planning to move to a higher quality) that agreed with the following two statements were "not at all", "not very", "fairly" or "very" applicable.

> "We would like to move into new, higher quality product or service areas but we cannot afford the high level of capital investment required"
> "We would like to move into new, higher quality product or service areas but we lack the required skills in the workforce"

These two constraints enable a useful comparison, giving some feel for the potential importance of skills *vis-à-vis* other problems faced by firms and other organisations[21]. In interpreting the results, it should be remembered that not all of the establishments asked would want to move up market. Thus, it seems unlikely that high percentages of establishments would report "very applicable". Nevertheless, *Table 4.12* shows that about 21 *per cent* respond with either fairly or very applicable to the financial barrier question and about 11 *per cent* give the corresponding responses to the skills barrier question. It should also be borne in mind that there is considerable evidence that establishments only begin to recognise skill gaps when they actually attempt to change their goals or performance. Thus, the proportions in the "very" and "fairly" categories are likely to be underestimates for those establishments that would in principle like to move up-market.

If skill was a constraint on improving the quality of products or services, respondents were asked to identify the new or additional skills that they needed to overcome that constraint *(see Figure 4.7)*. Technical/practical, communication, customer handling, and team working were the most commonly mentioned skills, and to a lesser extent problem solving and management.

Figure 4.7 New or additional skills required: where skill is a constraint



Source: STF Employers' Survey (IER/IFF)

Key:
1 Basic Computing
2 Advanced IT
3 Other technical practical
4 Communication
5 Customer Handling
6 Team Working
7 Foreign languages
8 Problem Solving
9 Management
10 Literacy
11 Numeracy

21 Note, however, that the two constraints may not be entirely independent: (i) the quality of the workforce the firm can attract may depend upon its current financial situation (and its ability to raise money for capital investments); equally, the ability to raise finance for investment may depend upon the quality of its current workforce.

Smaller establishments were more likely to find such statements 'very' or 'fairly' applicable, but the proportions were small (*see Table 4.13*). Manufacturing establishments and transport and communication sectors were the industries that were most likely to report that capital investment was a constraint (*see Table 4.14*). It was manufacturing, construction, and hotel sectors that were most likely to report that skills were a constraint on improving the quality of their products and services. From a regional perspective, differences are insignificant (*see Table 4.15*).

Table 4.13 Skill constraint as a barrier to achieving higher value added by establishment size

COLUMN PERCENTAGES								
Number of employees at establishment	**5-24**	**25-49**	**50-99**	**100-199**	**200-499**	**500-999**	**1000[a]+**	**Total**
We would like to move into high quality markets but lack capital investment required								
Very applicable	12	9	6	3	3	2	4	11
Fairly applicable	11	9	7	4	3	6	-	10
Not very Applicable	15	13	15	16	15	9	17	15
Not at all Applicable	55	60	59	54	48	56	41	56
Don't know	8	9	14	24	32	26	39	9
We would like to move into higher quality markets but lack skills required								
Very applicable	4	4	3	2	2	2	-	4
Fairly applicable	7	9	7	6	5	9	4	7
Not very Applicable	16	16	16	16	18	12	24	16
Not at all Applicable	67	65	64	58	52	60	43	66
Don't know	6	6	10	19	24	20	29	7
Weighted Base	103668	13968	7670	2347	1759	250	83	129745
Unweighted Base	2725	1435	773	528	376	65	23	5952

Source: STF Employers' Survey (IER/IFF)

Base: All Establishments not planning to move into higher quality or product service areas

[a] The results in this column are based on just 23 cases and so should be treated with caution.

Table 4.14 Skill constraint as a barrier to achieving higher value added by industry

COLUMN PERCENTAGES														
Sector	**Mining & Quarrying**	**Manu'ring**	**Electricity & Water**	**Const'tion**	**Wholsale & Retail**	**Hotels & Rest'nts**	**Transport & Comms**	**Financial Inter'tion**	**Business Services**	**Public Admin**	**Education**	**Health & Social Care**	**Other Services**	**Total**
We would like to move into higher quality markets but lack the capital investment required														
Very applicable	*	15	*	13	7	11	18	3	7	17	17	13	9	11
Fairly applicable	*	15	*	7	10	10	16	4	7	5	9	10	10	10
Not very applicable	*	17	*	15	16	16	16	10	18	-	8	9	15	15
Not at all applicable	*	48	*	62	52	58	44	66	61	64	61	60	60	58
Don't Know	*	6	*	3	15	6	6	17	7	14	6	8	6	9
We would like to move into higher quality markets but lack skills required														
Very applicable	*	8	*	7	2	3	4	2	3	7	2	4	2	4
Fairly applicable	*	11	*	8	7	8	10	3	7	9	7	6	6	7
Not very Applicable	*	19	*	17	17	15	17	13	18	4	8	11	17	16
Not at all Applicable	*	59	*	67	63	70	65	67	68	66	79	74	70	66
Don't know	*	4	*	1	11	4	5	15	5	15	3	6	6	7
Weighted Base	342	20012	153	9920	32142	10983	7238	4853	18690	1610	4061	11023	8079	129745
Unweighted Base	24	1490	14	511	1057	508	293	241	624	57	175	586	336	5952

Source: STF Employers' Survey (IER/IFF)

Base: All establishments not planning to move into higher quality product or service market areas

Table 4.15 Skill constraint as a barrier to achieving higher value added by region

COLUMN PERCENTAGES										
	East Midlands	Eastern	London	North East	North West	South East	South West	West Midlands	Yorkshire & Humberside	Total
We would like to move into high quality markets but lack capital investment										
Very applicable	14	10	9	14	10	10	9	10	14	11
Fairly applicable	11	13	7	9	9	9	10	12	12	10
Not very applicable	13	13	15	14	17	16	14	15	16	15
Not applicable	54	54	59	53	55	58	60	57	50	56
Don't know	9	10	11	10	11	7	8	6	8	9
We would like to move into high quality markets but lack skills										
Very applicable	4	4	3	4	4	4	3	5	3	4
Fairly applicable	8	7	8	6	6	8	8	8	7	7
Not very applicable	18	18	14	15	16	16	16	16	19	16
Not applicable	64	65	68	67	65	66	67	68	65	66
Don't know	7	6	8	9	8	6	6	4	6	7
Weighted Base	10419	13536	19042	5793	18377	23904	13286	12532	12857	129745
Unweighted Base	503	674	711	458	843	883	664	614	602	5952

Source: STF Employers' Survey (IER/IFF)

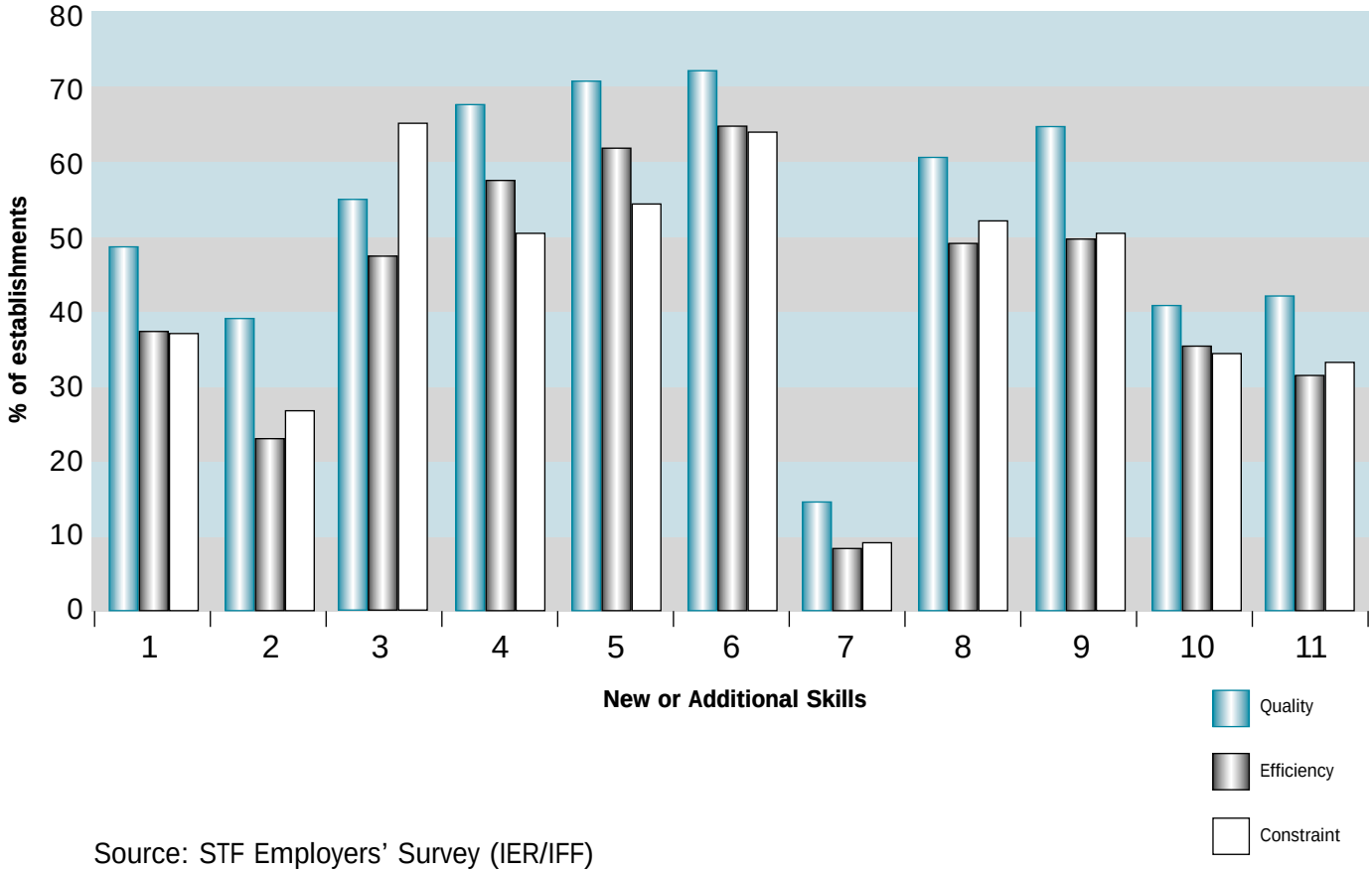
Base: All Establishments not planning to move into higher quality product or service market areas

4.17 Plans to Improve and Resulting Skill Needs

It is possible, using the survey, to explore skill needs of those establishments that: (i) were currently, or were planning to improve the quality of their products and services; (ii) were currently or were planning to improve their efficiency if they had no plans to improve quality; and (iii) those instances where a lack of skills in the existing workforce constrained the ability of the establishment to improve the quality of its products or services.

A comparison of the new or additional skills required in each of the three instances mentioned above reveals that the demand for specific skills follows a similar pattern in each case (*see Figure 4.8*). The key difference is that the proportion of establishments in the relevant sample was greater for each skill mentioned in those instances where establishments were currently moving or planning to move to higher quality compared to either (ii) or (iii). Given that this group of establishments were in the process of change, and explicitly considering their skill needs, they may be better placed to assess the additional skills required by such change.

Figure 4.8 Comparison of skill needs



Source: STF Employers' Survey (IER/IFF)

Key:
1 Basic Computing
2 Advanced IT
3 Other technical practical
4 Communication
5 Customer Handling
6 Team Working
7 Foreign languages
8 Problem Solving
9 Management
10 Literacy
11 Numeracy

4.18 Skill Constraints, Attempts to Improve Performance and Establishment Size

It is widely suggested in the existing literature that financial constraints are particularly important amongst small firms. *Table 4.16* provides empirical confirmation of this result (bearing in mind that the data are establishment and not firm based). The results shown in this table have been aggregated both in terms of the combination of *fairly* and *very applicable*, and in terms of establishments with over 200 employees. This avoids the problems of small sample sizes for some cells.

The first row of *Table 4.16* indicates that, while nearly 24 *per cent* of the smallest establishments indicate a financial constraint, this falls to only 9 *per cent* of those with more than 200 employees. The result for skill constraints being very applicable, shown in the second part of the table is somewhat different, showing little variation by size, initially rising with establishment size from 12 to 13 *per cent*, before falling away again to 9 *per cent*. Again, those establishments that are currently not setting higher goals and not currently changing, tend to underestimate the skill requirements of doing so. The final group of rows shows the ratio of financial to skill problems. This falls from a ratio of two for the smallest establishments to one for the largest category. In other words, for establishments with over 200 employees, skills are just as significant a barrier as finance.[22]

Table 4.16 Reasons for not "moving up-market" by establishment size

	COLUMN PERCENTAGE					
	5 to 24	25-49	50-99	100-199	Over 200	Total
Financial constraint						
Very or fairly applicable	24	19	14	9	9	23
Not very applicable	16	14	18	21	21	16
Not at all applicable	60	66	68	70	70	61
Total	100	100	100	100	100	100
Weighted Base	95902	12671	6584	1782	1474	118380
Unweighted Base	2554	1301	672	399	320	5246
Skills constraint						
Very or fairly applicable	12	13	11	9	9	12
Not very applicable	17	18	18	20	22	17
Not at all applicable	71	69	71	71	69	71
Total	100	100	100	100	100	100
Weighted Base	97885	13084	6898	1904	1606	121376
Unweighted Base	2608	1349	700	427	358	5437
Ratio (Financial / Skills)						
Very or fairly applicable	2.0	1.5	1.3	1.0	1.0	1.9
Not very applicable	0.9	0.8	1.0	1.1	1.0	0.9
Not at all applicable	0.8	1.0	1.0	1.0	1.0	0.9
Total	1.0	1.0	1.0	1.0	1.0	1.0

Source: STF Employers' Survey (IER/IFF)

[22] Of course, the result does not say anything about differences in the intensity of the problem across establishment size - only the incidence.

4.19 Skill Constraints, and Attempts to Improve Performance by Sector

The sector results are set out in *Table 4.17*. Again, the 'fairly' and 'very' applicable categories are amalgamated because of small cell frequencies. The sector results will be driven by a variety of other factors (e.g. establishment size and region) - nevertheless they are of considerable interest in their own right. It can be seen, for example, that skill deficiencies appear to be particularly important in manufacturing, but also in mining and quarrying, construction and transport and communication. The ratio of finance to skill barriers is highest in education and lowest in electricity and water supply, which is the only sector for which the skill barrier exceeds the financial barrier. However, this is based on a very small sample.

4.20 Skill Constraints, and Attempts to Improve Performance by Region

The regional differences in the perceptions of skill deficiencies as a barrier to moving to higher quality products are shown in *Table 4.18*. They are modest. While around 10 - 11 per cent of the establishments in Yorkshire and Humberside and the South West report that a lack of skills stops them from moving to higher quality products, this rises to just 13 *per cent* in the cases of many other regions including South East and the West Midlands. The lowest ratio of finance to skills barriers occurs in London and the South East.

4.21 Skill Constraints, and Attempts to Improve Performance by Turnover

This survey also provide evidence about whether recent growth performance (and the factors that underlie that performance) influences the perceptions about the constraints on moving to a higher quality product. The results shown in *Table 4.19* suggest that there is a monotonic and strongly increasing relationship between the perception of a financial barrier and poorer growth performance. They confirm that establishments with declining sales have major financial problems. A similar relationship exists between perceptions of a skill barrier and poorer growth performance, although there is a slight down-turn in the "decreased a great deal" sales growth category. Nevertheless, about 20 *per cent* of establishments where sales are declining report that a lack of skills prevent them from moving up-market.

Table 4.17 Reasons for not “moving up-market” by industry sector

COLUMN PERCENTAGE/RATIOS

	Mining & Quarrying	Manu'ring	Electricity & Water	Const'tion	Wholsale & Retail	Hotels & Rest'nts	Transport & Comms	Finance	Business Services	Public Admin	Education	Health & Social Work	Other Community	Total
Financial Constraint														
Very or fairly applicable	*	32	*	20	20	22	36	8	15	25	27	24	20	23
Not very applicable	*	18	*	15	18	17	17	12	19	0	8	10	16	16
Not at all applicable	*	50	*	64	61	61	47	79	66	75	65	66	64	61
Total	*	100	*	100	100	100	100	100	100	100	100	100	100	100
Weighted Base	311	18867	147	9629	27321	10371	6788	4040	17417	1386	3815	10149	7564	118381
Unweighted Base	22	1330	13	491	842	471	258	186	551	47	162	531	311	5246
Skills Constraint														
Very or fairly applicable	*	19	*	15	10	11	14	6	10	18	9	10	8	12
Not very applicable	*	20	*	17	19	16	18	15	19	4	9	12	18	17
Not at all applicable	*	61	*	68	71	73	68	79	71	77	82	79	74	71
Total	*	100	*	100	100	100	100	100	100	100	100	100	100	100
Weighted Base	316	19196	147	9781	28616	10596	6892	4132	17843	1366	3926	10372	7619	121377
Unweighted Base	23	1378	13	497	896	486	269	196	573	46	165	550	314	5437
Ratio (Finance / Skills)														
Very or fairly applicable	*	1.7	*	1.3	2.0	2.0	2.6	1.3	1.5	1.4	3.0	2.4	2.5	1.9
Not very applicable	*	0.9	*	0.9	0.9	1.1	0.9	0.8	1.0	0.0	0.9	0.8	0.9	0.9
Not at all applicable	*	0.8	*	0.9	0.9	0.8	0.7	1.0	0.9	1.0	0.8	0.8	0.9	0.9
Total	*	1.0	*	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Source: STF Employers' Survey (IER/IFF)

Table 4.18 Reasons for not "moving up-market" by region (rda)

COLUMN PERCENTAGES										
	East Midlands	Eastern	London	North East	North West	South East	South West	West Midlands	Yorkshire & Humberside	Total
Financial constraint										
Very applicable	15	11	10	16	11	11	10	11	15	12
Fairly applicable	12	15	8	10	10	10	11	13	13	11
Very or Fairly	27	26	18	26	21	21	20	24	28	23
Not very applicable	14	14	17	15	18	17	15	16	18	16
Not at all applicable	59	60	66	59	61	62	64	61	54	61
Total	100	100	100	100	100	100	100	100	100	100
Weighted Base	9489	12170	1700	5188	16450	22243	12287	11751	11800	118381
Unweighted Base	442	587	606	400	741	772	596	561	541	5246
Skills constraint										
Very applicable	4	4	4	4	4	5	3	5	3	4
Fairly applicable	9	8	8	6	7	8	8	8	7	8
Very or fairly	13	12	12	10	11	13	12	13	11	12
Not very applicable	19	19	15	16	18	16	17	17	20	17
Not at all applicable	68	69	73	73	71	70	72	70	69	71
Total	100	100	100	100	100	100	100	100	100	100
Weighted	9708	12737	17569	5301	16882	22510	12482	12067	12121	121377
Unweighted	456	621	631	410	764	793	617	583	562	5437
Ratio (Financial / Skills)										
Very applicable	3.8	2.8	2.5	4.0	2.8	2.2	3.3	2.2	5.0	3.0
Fairly applicable	1.3	1.9	1.0	1.7	1.4	1.3	1.4	1.6	1.9	1.4
Very or fairly	2.1	2.2	1.5	2.6	1.9	1.6	1.7	1.8	2.5	1.9
Not very applicable	0.7	0.7	1.1	0.9	1.0	1.1	0.9	0.9	0.9	0.9
Not at all applicable	0.9	0.9	0.9	0.8	0.9	0.9	0.9	0.9	0.8	0.9
Total	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Source: STF Employers' Survey (IER/IFF)

Table 4.19 Reasons for not "moving up-market" by turnover growth

COLUMN PERCENTAGE/RATIOS						
	Turnover Growth Category					
	Increased a great deal	Increased a little	Stayed the same	Decreased a little	Decreased a great deal	Total
Finance constraint						
Very or fairly applicable	14	20	25	35	39	23
Not very applicable	15	18	16	16	10	16
Not at all applicable	71	62	59	49	51	61
Total	100	100	100	100	100	100
Weighted Base	14885	33413	34436	12336	5734	111897
Unweighted Base	597	1498	1499	574	274	4963
Skill constraint						
Very or fairly applicable	10	10	12	20	18	12
Not very applicable	15	19	17	17	15	17
Not at all applicable	75	71	70	63	67	71
Total	100	100	100	100	100	100
Weighted	15061	33897	35027	12627	5734	114914
Unweighted	643	1658	1607	618	281	5639
Ratio (Finance / Skills)						
Very or fairly applicable	1.4	2.0	2.1	1.8	2.2	1.9
Not very applicable	1.0	0.9	0.9	0.9	0.7	0.9
Not at all applicable	0.9	0.9	0.8	0.8	0.8	0.9
Total	1.0	1.0	1.0	1.0	1.0	1.0

Source: STF Employers' Survey (IER/IFF)

4.22 Skills Needed for Improved Performance

As *Table 4.20* shows, the majority of establishments seeking to move to higher value added product strategies and/or improve the quality of existing products and services, specified their new or additional skill requirements in terms of *combinations of generic and vocational skills*. These skill sets have much in common with those sought in order to fill recognised, internal skill gaps (*see Tables 3.9 and 3.10*). The findings are supported by the case study evidence on new skill requirements resulting from company responses to competitive market pressures in a variety of industries.

Similar responses about the need for new or additional skills were made by those establishments which had no plans to improve product quality but did plan to achieve higher efficiency. The high level of awareness of the new or additional skills required to move to a higher value added product strategy or meet higher quality and efficiency standards goes a long way to explaining why nearly half of all establishments in the survey anticipated problems arising in the next two or three years due to skill shortcomings among their employees.

In an effort to probe the relationship between product strategies and skills still further, those establishments which had no plans to move up-market were asked if they wished to move into new, higher quality product areas but were constrained from doing so by either financial or skill constraints. The results show that skill constraints were generally outweighed by financial constraints and particularly so in the case of establishments which had recently experienced a fall in sales. In this context skills are at most regarded as a second order problem. Indeed, as described above, the evidence from case studies of establishments suggests that, when changes in product strategy do occur, they are often undertaken without much prior consideration of the new skills which will be required. Subsequently, internal skill gaps may be recognised and steps taken to try and solve the problems. In some cases these efforts are expected to succeed; in other cases concerns about future skill shortcomings remain (as captured in the survey results).

Table 4.20 Types of new or additional skills required to move into higher quality product or service areas

	ROW PERCENTAGES						
	Technical skills only	Generic skills only	Technical and generic skills in combination	Other/non-specified types of skill	TOTAL	Weighted	Unweighted
By size of establishment:							
5-24	6	17	68	8	100	295921	7665
25-49	5	14	73	8	100	51658	4991
50-99	5	13	75	7	100	32288	2997
100-199	3	11	80	5	100	12712	2833
200-499	2	10	82	5	100	8615	1860
500-999	5	7	82	6	100	1811	450
1000-plus	2	10	82	5	100	822	204
By sector:							
Manufacturing	7	12	71	10	100	51218	4619
Construction	8	10	73	9	100	15938	918
Wholesale & Retail	5	20	67	8	100	99510	3641
Hotels & Restaurants	3	32	56	9	100	35443	1823
Transport & Communications	4	17	70	9	100	18314	925
Financial Services	5	12	77	6	100	15718	891
Business Services	7	10	76	8	100	55970	2189
Public Administration	6	8	77	9	100	13557	746
Education	9	9	75	6	100	28005	1584
Health & Social Care	5	19	69	7	100	40680	2236
Other Services	5	16	73	6	100	26424	1235
TOTAL	6	16	70	8	100	403827	21000

Source: STF Employers' Survey (IER/IFF)
Base: All establishments moving into higher quality product/service areas and/or seeking to improve quality of existing products/services
Note: 'Technical skills' here comprise basic computer literacy, advanced IT and other technical/practical skills; 'Generic skills' comprise communication skills, customer handling skills, team working skills, problem solving skills, management skills, numeracy skills and literacy skills.

4.23 Market Position, Recruitment Difficulties and Skill Proficiency

It is interesting to compare the relationships between market position and recruitment problems as opposed to skills gaps. One might expect establishments operating at the higher quality end of the product market spectrum, or those introducing changes to move up the value-added ladder, to experience greater recruitment problems, if only because they require new or additional skills. Establishment responses however, to the statements about a 'standard quality product…' and 'a high quality product…' varied little with the respect to the existence of recruitment problems (*see Table 4.21*). Those establishments experiencing recruitment problems were as likely as those not doing so to report that they found either statement 'very' or 'fairly' applicable. A similar result occurs with respect to the proficiency of the current workforce.

A somewhat different perspective is obtained by comparing the recruitment problems and skills proficiency of those establishments which reported that they would like to improve the quality of their products and services but were unable to do so either because of a lack of capital or because they lacked the necessary skills in their existing workforce *(see Table 4.22)*. With respect to capital availability, a greater proportion of establishments reported that the statement was 'not at all' applicable where their staff were not all fully proficient. Where skills were a constraint, a larger proportion of establishments reported that the statement was 'not at all' applicable where no recruitment problems existed (68 per cent) compared to those establishments where recruitment problems existed (56 per cent). This provides further evidence that recruitment problems can have a significant impact on the performance of an establishment. Similarly, where not all staff were fully proficient in their existing jobs, a greater proportion of establishments reported that the statement was 'not at all' applicable (47 per cent) compared to those establishments where all staff were fully proficient (67 per cent). Again the evidence suggests that skill deficiencies, however defined, have a significant impact on the capacity of establishments to develop their products and services.

Table 4.21 Current product market position, recruitment problems and skill proficiency

	COLUMN PERCENT			
	Hard-to-fill vacancies		Skill Shortcoming	
	Yes	No	Yes	No
Standard quality products that compete mainly on price (private sector)				
Very applicable	26	27	26	27
Fairly applicable	37	38	41	37
Not very applicable	19	18	19	18
Not at all applicable	17	16	13	18
Don't know	1	1	1	1
High quality product tailored to customer requirements (private sector)				
Very applicable	59	59	52	61
Fairly applicable	25	25	30	23
Not very applicable	9	9	11	8
Not at all applicable	6	7	7	7
Don't know	-	1	-	1
Currently implementing plans to move into service areas with higher profits (private sector)				
Very applicable	20	15	18	16
Fairly applicable	22	20	23	20
Not very applicable	20	20	21	20
Not at all applicable	34	39	34	40
Don't know	4	6	4	6
Total	100	100	100	100
Weighted Base	74641	346765	101195	317815
Unweighted Base	4428	16650	5842	14080

Source: STF Employers' Survey (IER/IFF)
Base: All Private Sector Establishments

Table 4.22 Constraints on changing product market position, recruitment problems and skill proficiency

COLUMN PERCENT				
	Hard-to-fill vacancies		Skill Shortcoming	
	Yes	No	Yes	No
We would like to move into higher quality product or service areas but cannot afford high level of capital investment				
Very applicable	11	11	13	10
Fairly applicable	11	10	11	10
Not very applicable	18	14	17	14
Not at all applicable	51	57	51	57
Don't know	10	9	8	9
We would like to move into higher quality or product/ service markets but lack required skills in workforce				
Very applicable	9	3	6	3
Fairly applicable	12	7	11	7
Not very applicable	16	16	19	16
Not at all applicable	56	68	58	68
Don't know	8	6	7	6
Total	100	100	100	100
Weighted Base	19402	110344	25733	103159
Unweighted Base	1045	4907	1045	4907

Source: STF Employers' Survey (IER/IFF)
Base: All Establishments not intending to move into higher quality product or service areas

4.24 Conclusions

This chapter has considered links between skills and economic performance. Focussing on those skill deficiencies that are perceived to have an impact on current establishment performance, the effect on the establishment's performance is examined for those reporting an adverse impact. A significant proportion of all establishments report such problems.

Where skill gaps or shortcomings were reported they had an impact on an establishment's performance, especially in relation to customer care, quality standards, and operating costs. A significant proportion of establishments with skill gaps or shortcomings reported that this had led to a loss of business to competitors. Moreover, in many others, if the impact of such problems was to lower customer care and quality standards and increase operating costs, there will be, ultimately, an even greater impact on the volume of business undertaken.

Looking to the future, a significant proportion of establishments reported that they anticipated skill gaps or shortcomings having an impact on their business. Again the anticipated impact was mainly upon customer care, quality standards, and operating costs, although a substantial minority also anticipated that such problems might lead to a loss of business to competitors.

The regional data reveal that it was the more dynamic areas of England that anticipated skill gaps or shortcomings having an impact on business in the near future and suggests that it is the more dynamic establishments that foresee skill being a restraint on their business.

The factors leading to skill gaps or shortcomings included the introduction of new products and services, working practices, and technology onto the shopfloor and into the office. Many respondents also reported that a failure to develop and train staff contributed to the emergence and continuing existence of skill gaps or shortcomings.

When asked about their plans to try to improve their products and services, respondents answers make it clear that this requires extensive skill change. Around 40 per cent of respondents in private sector companies indicated that their establishments were planning to improve the quality of their products or services. Much of the skill change required was perceived to be generic, especially skills such as communication, customer relations, team-working, problem solving and management skills. A significant proportion of those establishments which **were not** planning to make such changes, **were** planning to improve the efficiency with which they currently operated. This group represented about a quarter of all private sector establishments. The survey data confirms that these were also expected to result in demands for new and additional skills.

The survey also provides evidence on the role of skills in constraining establishments from such improvements. Although skills were thought to be less of a constraint than finance, over a tenth of establishments reported that skills were a constraint. This included both technical and generic skills.

According to the survey results, the impact of skill deficiencies on current and expected future performance are both important. Although the proportions responding that such problems lead to withdrawal from existing product areas or inability to meet customer service objectives are quite modest, (around 21/2 and 10 per cent respectively), these are quite drastic outcomes. It seems clear that impacts of skill problems, both current and anticipated are potentially significant.

The chapter has also considered the skills implications of attempts to improve performance. This leads into a discussion of whether the evidence from the surveys suggests that skill gaps may be under-reported. It is argued that evidence from the face to face survey, in particular, indicates that, if all establishments attempted to raise their goals and performance towards those of the best performing ones, this would reveal a host of hitherto unperceived skill deficiencies.

The face-to-face survey includes much more information on the goals and performance of the establishment than the telephone questionnaire. This enables, in principle, a more sophisticated analysis of the reported goals and aspirations as well as the performance of the establishments, including analysis of their skill implications. This allows an examination of the skill implications of moving towards “best-practice” - in other words, isolating the existence and scale of latent skill gaps.

Overall, though employers may regard skills as a ‘second rate’ issue when considered against financial constraints on performance, this would appear to under-estimate the actual impact of skills in organizational performance. The evidence points to skill-shortage vacancies and skill gaps limiting organizational performance in a number of ways. Moreover, the extent of skill-shortage vacancies and skill gaps suggests that the availability of skills acts as a significant constraint on national economic performance.

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