



UK COMMISSION FOR  
EMPLOYMENT AND SKILLS

# **UK Commission's Employer Skills Survey 2011: Northern Ireland National Report**

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# **UK Commission's Employer Skills Survey 2011: Northern Ireland Results**

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# Foreword

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Across the globe governments are all facing the same challenge – achieving economic growth. Businesses are key to this achievement, and Northern Ireland's employers are facing the same challenges and opportunities as the rest of Europe: the impacts of the global economic climate, developments in technology, changes in consumer demands, funding challenges, and the squeeze on consumption as consumers continue to tighten their finances.

Returning the economy to positive growth and achieving global competitiveness is dependent on the ability of businesses to adapt, innovate, enter new markets and improve productivity. Harnessing and developing the skills and talents of the workforce is central to enabling Northern Ireland's businesses to step up to this challenge, improving prosperity and meeting the needs of the local economy.

The evidence on the value of skills and training investment to individuals, business, and the economy cannot be understated: for example, businesses that don't train are twice as likely to close down as those that do. Despite this, the UK is losing ground compared to international competitors in terms of its stock of skills, and training by Northern Ireland's employers has now fallen below 2005 levels. We need to ensure that we develop an ambitious economy, which sees development of the right skills to support the recovery.

For the most part the labour market can meet the requirements of employers, but this simple statement masks a number of recruitment difficulties: there are still too many employers lacking the skilled people they require; these deficiencies tend to be persistent through time; despite evidence of businesses trying to grow their workforce, even at this time, employers are finding it difficult to find suitably skilled applicants for all their vacancies. This later point also shows there are still opportunities for workers with the right skills and qualifications regardless of the economic climate.

For our young people, however, these opportunities may be in occupations and sectors that do not traditionally recruit them, whilst openings in occupations (such as Sales and Customer Services and Elementary occupations) that do tend to employ young people and help them gain experience are declining. Further, although Northern Ireland's small businesses are proving to be engines of growth, accounting for the majority of the increase in vacancies, smaller businesses are more likely to emphasise the importance of experience and recruit informally, both of which disadvantage young people.

As the Northern Ireland Adviser on Employment and Skills my role is to provide evidence based employment and skills advice to the Minister for Employment and Learning and the UK Commission for Employment and Skills. The UK Commission's Employer Skills Survey Northern Ireland Report provides an essential piece in that evidence jigsaw, from the all-important perspective of employers.

The Survey provides a comprehensive analysis of the skills businesses need in Northern Ireland; the pressures they face in accessing or developing those skills; their responses to such difficulties; whether and how much they train and why they don't. We are immensely pleased to conduct this research with UK employers and, for this report, are grateful to the more than 4,000 businesses in Northern Ireland, across all sectors, who participated in the research.

This survey has been possible because the four governments of the UK made adjustments and changes to the surveys they used before in order to achieve a joined-up understanding of the UK labour market. This report, focusing on Northern Ireland, provides valuable information on the Northern Ireland labour market and an illustration of the analysis which can be mined from the survey data, including:

- A consistent time-series analysis, using the Northern Ireland Skills Monitoring Survey, going back to 2005;
- Analysis which shows different underlying patterns of skill deficiency and training investment by sector, business size and occupation.

I hope you find this report informative. Over the autumn we will be releasing further data from the survey and are keen to encourage business, individuals and partners across Northern Ireland to analyse the data in greater depth, exploring the issues from their own perspectives and informing their own evidence bases with this robust, comparable and time-series resource.

We are also keen to get feedback on how we could make our research even more relevant. If you have any feedback or queries, or would like to know more about the Commission's other research, please e-mail [info@ukces.org.uk](mailto:info@ukces.org.uk), quoting the report title.

# Acknowledgements

Many individuals and organisations have been involved in the design and execution of the of the UK Commission's Employer Skills Survey 2011. This report focuses on the findings from interviews undertaken in Northern Ireland. Particular thanks are given to the 4,000 businesses in Northern Ireland who responded to the questionnaire. IFF were the lead contractor and undertook the interviews in Northern Ireland as well as preparing the tables and figures for this report, they were supported by BMG Research and Ipsos MORI who undertook much of the fieldwork in the other UK nations.

The project was sponsored by the four UK governments who came together to ensure the delivery of this first UK employer skills survey was possible. A steering group was established to guide the direction of the project. Members attending this group were: Mark Langdon, Department for Business, Innovation and Skills (BIS); Dominic Rice, BIS; Kathy Murphy, BIS; Euan Dick, Scottish Government; Sarah Munro, Scottish Government; Joanne Corke, Welsh Government; Graeme Belshaw; Department for Employment and Learning Northern Ireland (DELNI); Linda Bradley, DELNI; Tim Devine, DELNI; Mauricio Armellini, Department for Work and Pensions (DWP); Jacqui Hansbro, DWP; Alasdair Yeo, DWP; Anthony Clarke, Department for Education (DFE); Muriel Bankhead, Alliance of Sector Skills Councils; Sally Walters, Alliance of Sector Skills Councils; Helen Lindsay, Alliance of Sector Skills Councils and Mark Spilsbury of the UK Commission for Employment and Skills.

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# Glossary

This glossary gives a short guide to the key terms used in this report:

<b>Establishment (also referred to as workplace, business, employer, site)</b>	A single location of an organisation with people working at it.
<b>Vacancy density</b>	The number of vacancies as a proportion of all employment.
<b>Hard-to-fill vacancies</b>	Vacancies which are proving difficult to fill, as defined by the establishment (from question: “Are any of these vacancies proving hard to fill?”).
<b>Hard-to-fill vacancy density</b>	The number of hard-to-fill vacancies as a proportion of all vacancies.
<b>Skill-shortage vacancies (SSVs)</b>	Vacancies which are proving difficult to fill due to the establishment not being able to find applicants with the appropriate skills, qualifications or experience.
<b>Skill-shortage vacancy density</b>	The number of skill-shortage vacancies as a proportion of all vacancies
<b>Skills gaps</b>	A “skills gap” is where an employee is not fully proficient, i.e. is not able to do their job to the required level. See Appendix B.
<b>Skills gap density</b>	The number of staff reported as being not fully proficient as a proportion of all employment.

**Sector**

For definitions of the different sector groupings used in this report please refer to Appendix C.

**Occupations**

For definitions of the occupational groups used in this report please refer to Appendix D.

# UK Commission's Employer Skills Survey:

## Northern Ireland National Report

### Key Findings

	2011	2008	2005
<b>Vacancies and skill-shortage vacancies</b>			
% of establishments with any vacancies	10	12	11
% of establishments with any hard-to-fill vacancies	4	4	6
% with SSVs	3	3	4
% of all vacancies which are SSVs	28	18	n/a
Number of vacancies	19,800	17,400	n/a
Number of hard-to-fill vacancies	6,400	5,100	n/a
Number of skill-shortage vacancies	5,500	3,100	n/a
<b>Skills gaps</b>			
% of establishments with any staff not fully proficient	12	22	10
Number of skills gaps	33,600	58,700	n/a
Number of staff not fully proficient as a % of employment	5	8	n/a
<b>Training</b>			
% of establishments training staff over the last 12 months	63	74	67
% of establishments providing off-the-job training in the last 12 months	47	53	34
% of workforce trained	60	n/a	n/a

*Note the question routing for skills gaps has changed over time, more detail is given in chapter four.*

*n/a: question not asked or not asked in a comparable manner in previous years' surveys*

*Source: Skills surveys: 2011 – UKCESS 2011; 2008 – NISMS 2008; 2005 – NISMS 2005.*

# Executive Summary

## Introduction

The UK Commission's Employer Skills Survey 2011 is the key UK data source on employer demand for and investment in skills. This report focuses on the 2011 results from Northern Ireland's employers on their skills challenges, recruitment and training activities and looks back at the earlier Northern Ireland Skills Monitoring Surveys (NISMS) allowing time-series comparisons from 2005 and 2008.

The survey results form a rich source of information about: the extent and nature of employer demand for skills; employer involvement in skills development activities and their approaches to workforce development; the experiences of skill deficiencies across different groups of employers. Results are presented by size, sector, occupation, and geography.

## The nature of Northern Ireland's establishments

Differences in experiences and practices will depend upon key characteristics of Northern Ireland's employers such as their size, sector, location, whether they are part of a larger organisation or not and whether the site is part of the public, private or voluntary sector.

Most business establishments in Northern Ireland are small: 79 per cent employ fewer than 10 people. However, large organisations (employing 50+) account for two-fifths (43 per cent) of overall employment. There has been a slight increase in the average site size since 2005. One third of sites in Northern Ireland were part of a multisite organisation, and eighty per cent of establishments were part of the private sector, six percentage points less than in 2005.

The largest numbers of establishments operate in the Wholesale and Retail, Business Services and Construction sectors. The sectoral mix of employers has changed since 2005. There have been decreases in the proportion of establishments in the Manufacturing and Wholesale and Retail sectors, and increases in the proportion of establishments in the Construction and Transport and Communications sectors.

Establishment size varies greatly from sector to sector. The Construction, Community, Social and Personal Service Activities and Agriculture sectors were dominated by small establishments. The Manufacturing, Health and Social Work, Public Administration and Education sectors were dominated by larger employers.

By geography Belfast contains a substantial share of Northern Ireland's large organisations: it contains only 21 per cent of employers but 32 per cent of workers. The Southern, South East and South West regions continue to be populated by smaller establishments, similar to 2005 and 2008.

### **Recruitment and skills shortages**

At the time of the survey (March-July 2011), 10 per cent of establishments in Northern Ireland reported having a vacancy. Although the percentage of establishments reporting a vacancy has declined slightly, the total number of vacancies grew from 17,400 in 2008 to 19,800 in 2011. And the number of vacancies available per 100 employees (vacancy density) rose from 2.4 to 2.7 during this same period.

For the most part the labour market can meet the requirements of employers. In 2011 four per cent of all establishments reported having a vacancy that they were having difficulty filling i.e. that was "hard-to-fill". This remains unchanged from 2008. However the total number of vacancies reported as hard-to-fill rose during this period to 6,400, representing a third of all vacancies (32 per cent, a rise of 3 percentage points from 2008).

Three per cent of Northern Ireland's establishments reported in 2011 having a vacancy that they were having difficulty filling specifically due to a lack of skills, qualifications or experience in applicants for the role (i.e. a "skill-shortage vacancy"). This is the same as 2008. A total of 5,500 skill-shortage vacancies were reported across Northern Ireland (2,400 more than in 2008). This means that 28 per cent of all vacancies were hard-to-fill due to skills shortages, which is a 10 percentage point rise compared to 2008.

This high proportion of vacancies that are proving hard-to-fill due to a lack of skilled recruits is higher than seen previously and offers a considerable challenge to Northern Ireland's recruiting employers, at the same time as individuals are experiencing high unemployment rates.

Within this overall picture of vacancies that are increasingly difficult-to-fill due to a lack of skilled recruits, the survey results show:

- concentrated pockets of vacancies and skills deficiency, reporting greater than average levels in 2011, and greater than average increases since 2008 that are unevenly distributed across the economy;
- areas of the economy which experienced *decreased* or *increased* density of skill-shortage vacancies between 2008 and 2011 in contrast to the overall trend.



### *Employer size*

The total number of vacancies was similar for both the smallest employers with fewer than five employees (6,200) and larger employers with more than 50 employees (6,800). However it was the smallest establishments that saw the greatest growth in vacancies between 2008 and 2011. In all other establishment sizes, all three vacancy measures decreased. The decline in vacancies was especially large for establishments with five to 10 staff.

While Northern Ireland's smallest employers are recovering well from the economic downturn in terms of vacancy growth, they are finding these vacancies difficult to fill; 41 per cent of vacancies were reported by the smallest establishments as hard-to-fill. This compares with 33 per cent among the largest establishments. Both of these groups of employers reported a rise in the number and density of hard-to-fill vacancies between 2008 and 2011, whereas other size bands of employers reported decreases. The overall proportion and number of vacancies that were skills shortage vacancies also follows a similar pattern, with the smallest and largest groups of employers standing out – around third of their vacancies were skills shortage vacancies.

Thus, it appears that the smallest and largest establishments in Northern Ireland are demanding more skill, and perhaps, are growing, but that growth is at risk by a lack of access to suitable skills in the labour market. In contrast, in England, it is the mid sized establishments (employing between 25 and 199 staff) that experience this trend. Due to the structure of the business population in Northern Ireland, all employers are categorised as 'larger' establishments once they employ over 50 staff.

### *Sector*

There were substantial differences in the number of establishments reporting vacancies across sectors.

The largest number of vacancies was in Business Services (6,800), which saw an increase of 5 percentage points in the proportion of establishments reporting vacancies between 2008 and 2011 (and an additional 4,200 vacancies compared to 2008). Correspondingly the sector had one of the largest increases in the number of hard-to-fill vacancies between 2008 and 2011; in particular, the proportion of vacancies reported as skills shortage vacancies (vacancy density) increased from 24 to 33 per cent, and the absolute number of skill-shortage vacancies rose from 600 to 2,300.

Public Administration and Health and Social Work both showed a large decline in the proportion of establishments with a vacancy over the period 2008 to 2011 (17 and 10 percentage point declines respectively) reflecting public sector spending cuts (this follows earlier vacancy growth over the period 2005 to 2008). Smaller vacancy declines were seen in Transport and Communications, Construction, Manufacturing and Wholesale and Retail.

A number of sectors were struggling more than average to find suitable applicants for their vacancies. The Community, Social and Personal Service sector had seven per cent of establishments reporting a hard-to-fill vacancy in 2011, a 4 percentage point rise compared to 2008. This sector also reported a higher than average proportion of its vacancies as skills shortage vacancies (27 per cent). In the Hotels and Restaurants sector six per cent of establishments reported skills shortage vacancies, this equates to a quarter of vacancies in this sector being skills-shortage vacancies.

Some sectors however were experiencing a less challenging time compared to average finding the right people for their vacancies. Only three per cent of establishments in the Education sector had vacancies that were hard-to-fill and the Health and Social Work sector saw the biggest decreases in all three measures of hard-to-fill vacancies. Between 2008 and 2011 the Health and Social Work sector also saw the largest decrease in skill-shortage vacancies with the percentage of employers reporting them dropping from eight to three per cent, the skills shortage vacancy density decreased from 32 to 21 per cent.

### *Geography*

The prevalence of vacancies varies considerably across the six sub regions of Northern Ireland.<sup>1</sup> Belfast reported the most vacancies by far (8,200) and the highest vacancy density (3.5 per cent). Employers in the North East region had the fewest vacancies (1,200) and the vacancy density was the lowest in the South and South East regions (1.8 per cent). Taken across the 2005 to 2011 period as a whole, only the Belfast and Northern region have higher proportions of establishments with vacancies at the end of the period compared to the beginning of the period.

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<sup>1</sup> Regions based on Northern Ireland's 'Workforce Development Forums'.

The Belfast region had the most hard-to-fill vacancies by all three indicators (incidence, volume and density). Belfast employers were only slightly more likely than average to report vacancies as skills-shortage vacancies (4 per cent of establishments), however it moved from having an average proportion of its vacancies in skills shortage in 2008 (14 per cent) to being the region with the highest proportion of vacancies in skills shortage in 2011 (42 per cent). The number of skills shortage vacancies in Belfast increased substantially from 900 to 3,500 between 2008 and 2011. The South West region had the second highest density of skills-shortage vacancies (37 per cent of vacancies).

Some regions were less likely to be having difficulties finding the right staff. Establishments experiencing the fewest hard-to-fill vacancies were in the Northern region (two per cent of sites, 10 per cent vacancy density and 500 vacancies) and the North West region (two per cent of sites, 16 per cent vacancy density and 200 vacancies). Between 2008 and 2011 the Northern region saw the largest drop in hard-to-fill vacancy density (from 31 to 10 per cent).

### *Occupation*

Between 2008 and 2011 the occupations that saw the largest increases in vacancies (in terms of vacancy density and number of vacancies) were Professionals, Skilled Trades and Machine Operatives. Whereas Sales and Customer services saw the largest decline.

Professionals had the highest skill-shortage density (60 per cent) in 2011 and the highest number of skills shortage vacancies (1,200). Skilled Trade occupations were also struggling, having 1,000 skill-shortage vacancies, 27 per cent of vacancies were skills-shortage vacancies. This compares with Administrative and Clerical occupations that had the lowest proportion (four per cent) and lowest number of this type of vacancy.

### *Cause and impact*

Nearly half of establishments reporting hard-to-fill vacancies believed their hard-to-fill vacancy problem was linked to a lack of qualifications (46 per cent). The second most common cause was too much competition from other employers (cited by 40 per cent of employers).

This varies though considerably by size and location of establishment. For the largest employers (those employing over 50 staff) both of these reasons were stated by over 70 per cent of establishments reporting hard-to-fill vacancies, similarly over 60 per cent in the Belfast region stated lack of qualifications or too much competition from other employers. However for the smallest establishments the causes of hard-to-fill vacancies were much more wide-ranging which suggests a diverse group of smaller employers facing a more varied set of challenges.

While the majority of employers are not struggling with hard-to-fill vacancies, 90 per cent of establishments who have them report an impact on their business which can be significant. The most commonly reported consequence of hard-to-fill vacancies was the increased workload for other staff (73 per cent), followed by delays developing new products or services (47 per cent).

### **Internal Skills Mismatch**

This section considers the proficiency of existing staff, the causes and impact of any skills gaps experienced by employers.

Most of Northern Ireland's employers have the skills they require, however 33,600 employees (five per cent of all employees) were deemed not fully proficient (have a skills gap) and 12 per cent of establishments reported having at least one employee with a skills gap. The incidence of skill gaps appears to have declined at the overall level; a reduction in skills gaps is seen across all size bands, sectors, occupations, and geographies.

Incidence of skills gaps increases with establishment size from seven per cent for sites with fewer than five staff to 36 per cent for sites with more than 50 workers, but the proportion of the workforce with a skill gap was broadly consistent. The pattern of skills gaps increasing with employer size replicates the pattern seen in both 2005 and 2008.

Some occupations and industries are impacted by skills gaps more than others. There was a broad correlation between incidence and density of skill gaps across sectors with the exception of Education and Public Administration. Whereas Public Administration and Education sectors have relatively high incidence, the density was far lower, this suggests that skill gaps were more diffuse across these sectors. Incidence was highest and above average for establishments in the Hotels and Restaurants, Wholesale and Retail and Public Administration sectors (with 18, 17 and 16 per cent of establishments respectively reporting a skill gap) and the incidence in terms of proportion of the workforce was highest in the Hotels and Restaurants sector. These three sectors all had an above average incidence of skills gaps in 2008, and for Hotels and Restaurants and Public Administration this trend stretches back to 2005.

By occupation, seven per cent of staff in Elementary and Sales & Customer Services positions were described as lacking full proficiency, this compares with two per cent of Professionals and three per cent of Managers. Elementary and Sales & Customer Service occupations also had an above average percentage of staff with skills gaps in 2008, suggesting this is a persistent problem over time for these groups.

By geography the incidence of skill gaps was highest for organisations in the Belfast, Northern and South West regions (13 per cent of sites) though broadly in line with the overall average and the lowest in the North West region (nine per cent). The density ranged from a high of seven per cent of the workforce in the South West region to three per cent in Belfast region.

The most common cause of skill gaps was staff being new to the role and training only being partially completed, with 49 per cent and 52 per cent of all skill gaps, respectively, being attributed at least partly to these reasons.

Where skills gaps exist, their impact can be significant, 70 per cent of employers reported that their skill gaps were having an impact on the business; as with hard-to-fill vacancies, the most commonly reported consequence of a skill gap was an increase in the workload for other staff, reported by 58 per cent of establishments. This was followed by an increase in operating costs (36 per cent), and difficulties introducing new working practices (29 per cent).

Skill gaps were much more common than skill-shortage vacancies (skill gaps affect 12 per cent of establishments compared with three per cent for skills shortage vacancies), 14 per cent of establishments were suffering from either form of skill deficiency and only one per cent were affected by both.

## **Employer Investment in Training and Workforce Development**

Three-fifths of establishments in Northern Ireland (63 per cent) provided some form of training for any of their staff in the previous 12 months and almost nine in 10 (88 per cent) provided either training or workforce development. The overall incidence of training declined between 2008 and 2011 by 11 percentage points following an earlier increase of seven percentage points between 2005 and 2008. As a result, incidence of training in 2011 was generally below 2005 levels. While this decline is a reflection of the difficult trading environment, the reduced incidence of training may have long term consequences for the competitiveness of the Northern Ireland economy.

The incidence of training varies by site size, sector and by occupation of the employee. As in previous years the largest establishments were more likely to provide training, this trend has been further exaggerated in 2011. The smallest establishments were much more likely to cut training between 2008 and 2011, training fell for these establishments by 13 percentage points compared to three per cent in the largest establishments (with over 50 staff). Similar to 2008 employers in the Education and Public Administration sectors were the most likely to provide training, and contrary to the overall picture there was barely any change between 2008 and 2011 in the proportion of these employers doing any training. In contrast, the Construction and Manufacturing sectors saw drops of over 20 percentage points in total training compared to 2008, moving these employers from having around average training levels in 2008 to below average levels in 2011.

The occupations with the lowest amount of training were Administration and Clerical and Elementary (45 and 47 per cent of workforce received training within the past 12 months, respectively). The occupation with the highest incidence of training was Caring, Leisure and Other Services (82 per cent).

## **Conclusions**

The Employer Skills Survey series allows employers' recruitment, skills deficiencies and training levels to be tracked over time, and in turn can be related back to the economic climate to see how employers have been affected by the recession and ongoing uncertainty.

Both the percentage of establishments reporting vacancies and the proportion of establishments reporting hard-to-fill and skill-shortage vacancies have decreased over the period from 2005 to 2011, although the density and volume of all types of vacancy has risen. Employers believe that most hard-to-fill vacancies and all skill-shortage vacancies (by definition) were caused by applicant-related issues such as lack of skills, qualification and experience (although other factors, such as competition for workers from other employers are also at play). Thus, in order for the labour market of Northern Ireland to meet current employer demand, there is a need to make sure people with the right skills and qualifications are finding the right jobs. Raising employer ambition to move towards higher specification and quality goods and services in order to grow the economy and increase prosperity in Northern Ireland, could exacerbate such shortages unless accompanied by a skills focus in business and economic growth.

In Northern Ireland, skill gaps currently affect 12 per cent of establishments and five per cent of the workforce. Pockets where skills gaps are more likely than average to occur by size, sector, and occupation tend to be consistent through time. Although the incidence of skill gaps has declined since 2008, this does not necessarily mean that the workers are better at their jobs today. Due to the recession, establishments may be less likely to innovate in their working practices, to introduce new technology or to introduce new products or services. Since technological change is a major cause of skill gaps, the decline seen since 2008 may reflect lower investment by employers in innovation rather than an improvement in proficiency of the workforce. The reduction in skill gaps could also reflect the impact of downsizing since firms are probably most likely to lay off staff that are not fully proficient in their jobs first.

The incidence of training has declined in recent years and is currently below 2005 levels but the majority of employers do invest in the training and further development of their workforce. However training was unevenly distributed among workers. In particular, it was those in low skilled occupations, those employed in small businesses and those who work in specific sectors, such as Agriculture and Construction who receive least training. For small businesses in particular this trend of low training levels is persistent through time.

Some groups of employers face multiple skills issues; these may impede their economic recovery in the future. The smallest employers in Northern Ireland are the most likely of all size bands to have a vacancy which is proving hard to fill due to a lack of suitably skilled applicants, yet it continues to be the smallest employers who are least likely to train their existing staff.

Similarly the South West region experienced multiple issues, it had the second highest density of skills shortage vacancies, and the highest skills gaps density across the regions – however employers in this region (as in 2008) were the least likely to be training their staff. By occupation, a high proportion of the workforce employed in Elementary occupations had skills gaps, but were the least likely to be trained by their employers. Finally the Hotel and Restaurant sector is not only struggling with a high proportion of its vacancies being skills shortage vacancies, but was also the sector with the highest proportion of staff with a skills gap.

The impact of the recent recession on Northern Ireland can be seen in this survey. Establishments are investing less in training. However there are still opportunities for workers with the right skills and qualifications as the number of hard-to-fill and skill-shortage vacancies are higher than ever.

Generally, the survey reveals variations on all skill deficiency and training measures by sector, size, geography and occupation. This report provides the detailed analysis that shows the information available at these levels.

The results discussed in this report concentrate on key elements of the survey that can be compared with the previous Northern Ireland Skills Monitoring Surveys capturing the time series position. For a broader story on the training investment behaviour of employers, and how this fits into the wider integrated approach to managing the business, please refer to the UK Report 'UK Commission's Employer Skills Survey 2011: UK Results' (<http://www.ukces.org.uk/publications/employer-skills-survey-2011>).



# 1 Introduction

The UK Employer Skills Survey 2011 (UKCESS 2011) is the key source of information on employer demand for and investment in skills. It the first UK-wide employer skills survey, and is one of the largest employer skills surveys undertaken in the world, comprising over 87,500 achieved interviews, among large and small businesses in every sector. The full UK report is published on the UKCES website.<sup>2</sup>

This report not only focuses on the results from the 4,004 achieved interviews for Northern Ireland in 2011, but it also makes comparisons with earlier Northern Ireland Skills Monitoring Survey (NISMS) results for 2005 and 2008. In comparing back to these previous surveys we can consider how employers have been impacted by recent economic conditions and examine the changing skills issues they face. Results are presented by size, sector, occupation, and sub-national geography.

The unit of analysis is the establishment. Interviews were undertaken with the most senior person at this establishment with responsibility for recruitment, human resources and workplace skills.<sup>3</sup> In small establishments, this individual is quite likely to be “the employer,” whilst in large establishments this individual is quite likely to be responding on behalf of “the employer”.

The statistics contained in this report have been constructed on a consistent basis that reflects the population of Northern Ireland employers surveyed in previous years (i.e. in 2005 and 2008). The population surveyed varies slightly across the different nation states that comprise the UK and, therefore, the results contained in the present report are **not directly comparable** with those contained in UK, England, Wales and Scotland reports.<sup>4</sup>

The survey results form a rich source of information about: the extent and nature of employer demand for skills; employer involvement in skills development activities and their approaches to workforce development; the experiences of skill deficiencies across different groups of employers.

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<sup>2</sup> The UK Commission's Employer Skills Survey 2011: UK Results' <http://www.ukces.org.uk/publications/employer-skills-survey-2011>

<sup>3</sup> Question S2.

<sup>4</sup> England and Wales sampled from the population of: (i) all establishments with 2 or more employees; (ii) establishments with 2 working proprietors. Scotland and Northern Ireland sampled from the population of: (i) all establishments with 2 or more employees; (ii) establishments with 1 employee and no working proprietors.

The aim of this report is to provide a summary of the evidence relevant to a range of audiences, including individuals, employers, researchers, as well as local and national government bodies.

The data presented in the report tables and charts can be downloaded in spreadsheet format here: <http://www.ukces.org.uk/assets/ukces/docs/supporting-docs/UKESS11-NI-Report-Data-Tables.xml>

## **1.1 Methodological overview**

The UK Commission's Employer Skills Survey 2011 was a telephone-based survey. It was conducted in three parts: a core population survey of UK workplaces, and two (smaller) follow-up surveys of workplaces which had provided training for some of their employees in the 12 months preceding the survey, one looking at employers' investment in training ("Investment in Training Survey"), the other at whether employers that had trained their staff would have liked to have provided more workforce development ("Skills Equilibrium Survey").<sup>5</sup> This report only discusses the results of the core survey for Northern Ireland.

Below we briefly summarise the key features of the methodology adopted across the surveys. Further details can be found in Appendix B and the separate technical report.

### **1.1.1 Sampling**

The sample analysed in this report comprises establishments (i.e. individual sites of an organisation) where at least one person is employed. It encompasses establishments across the full geographical spread of Northern Ireland, in all sectors of the economy (across the commercial, public and charitable spheres). It should be noted that the presence of establishments from multi-site organisations in the survey means that in some instances interviews will have been completed with more than one site of an organisation.

A stratified random approach was taken to sampling the core survey, using population statistics from ONS's Inter-Departmental Business Register (IDBR), and setting quotas for establishment size crossed by sector within each region.

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<sup>5</sup> Results from the Skills Equilibrium Survey can be found in the UK Report and are not discussed here.

### 1.1.2 Questionnaire

The core survey questionnaire was designed in several stages, with the co-operation of the four constituent nations of the UK. There were considerable pressures on the questionnaire both in terms of balancing the need for consistency across the UK with the need for continuity with legacy questionnaires; and also in terms of the drive to cover a wide range of issues without over-burdening employers and creating a lengthy questionnaire. The questionnaire was extensively piloted in May 2010 and again in February 2011, an exercise which included 10 follow-up cognitive interviews.

### 1.1.3 Fieldwork

Fieldwork for the core survey was undertaken between March and July 2011, involving interviews averaging around 24 minutes in length.

Table 1.1 shows the number of establishments on which the data in this report is based, and the survey response rate.

**Table 1.1 Survey response rates**

	Total interviews	Interviews in Comparable Population	Response rate
<b>Core survey</b>	4,004	4,004	57%

*All interviews carried out in UKCESS 2011 were in the comparable population.*

### 1.1.4 Data weighting

Findings from the core survey for this report have been weighted and grossed up to reflect the total population of establishments in Northern Ireland with at least one person employed in them. The weighting was designed and undertaken within six regions of Northern Ireland (based on the definitions of the Workforce Development Forum regions), on an interlocking size and sector basis. Separate weights have been generated which allow findings to be presented (i) based on the number of workplaces reporting a particular experience, and (ii) based on the number of employees and/or job roles affected by different challenges. The approach taken matched that used in the 2008 Northern Ireland Skills Monitoring Survey.

## 1.2 Reporting conventions

The survey was carried out at an establishment level; the terms “establishment”, “employer”, “workplace” and “business unit” are used for this interchangeably throughout this report to avoid excessive repetition and to aid reading.

The scale and scope of data collected by the UK Commission's Employer Skills Survey 2011 means that it is a valuable research resource supporting detailed and complex statistical analysis of the inter-relationships between employer characteristics, and their practices and experiences. The findings presented in this report have been produced through a more descriptive exploration of the data; the document should not be read as a statistical report. A table showing confidence intervals is shown in Appendix E to give some indicative guidance as to what can be considered a "significant" difference at sub-group level. Throughout the report unweighted base figures are shown on tables and charts to give an indication of the statistical reliability of the figures. These figures are always based on the number of *establishments* answering a question, as this is the information required to determine statistical reliability. Therefore, where percentages are based on "all vacancies", the base figure quoted is the number of establishments with vacancies.

As a general convention throughout the report, figures with a base size of fewer than 25 establishments are not reported (with a double asterisk, "\*\*", displayed instead), and figures with a base size of 25 to 49 are italicised with a note of caution.

In tables, "zero" is denoted as a dash "-" and an asterisk "\*" if the figure is larger than zero but smaller than 0.5.

## 2 Nature of establishments in Northern Ireland

### Chapter Summary

Most establishments in Northern Ireland are small: 79 per cent employ fewer than 10 people. However, large establishments (employing 50+ staff) account for two-fifths (40 per cent) of overall employment. There has been a slight increase in the average employer size since 2005.

The greatest numbers of employers operate in the Wholesale and Retail, Business Services and Construction sectors. The sector mix of employers has changed since 2005. The biggest changes were seen in the decrease in proportion of employers in the Manufacturing and Wholesale and Retail sectors. Increases were seen in the proportion of organisations in the Construction and Transport and Communications sectors.

Employer size varies greatly from sector to sector. The Construction, Community, Social and Personal Service Activities and Agriculture sectors are dominated by small establishments. The Manufacturing, Health and Social Work, Public Administration and Education sectors are dominated by larger employers.

The Belfast region contains many large establishments: it has only 21 per cent of sites, but 32 per cent of workers. The Southern, South East and South West regions are dominated by smaller employers. This has not changed much since 2005. Around three in 10 (29 per cent) sites in Northern Ireland are part of a multisite organisation.

Eight per cent of establishments are part of the public sector, six percentage points less than in 2005.

## 2.1 Introduction

This report explores and measures the skills challenges that employers in Northern Ireland face and the training activity that they engage in. In order to give some context to the findings that are presented throughout this report, and to facilitate understanding of the differences in employers' experiences and practices, this section describes some of the key characteristics of Northern Ireland's employer population. These include their size, sector, location, whether they are part of a larger organisation and whether the establishment is part of the public, private or third sector. This chapter also makes comparisons with 2005 and 2008 data when it is available.

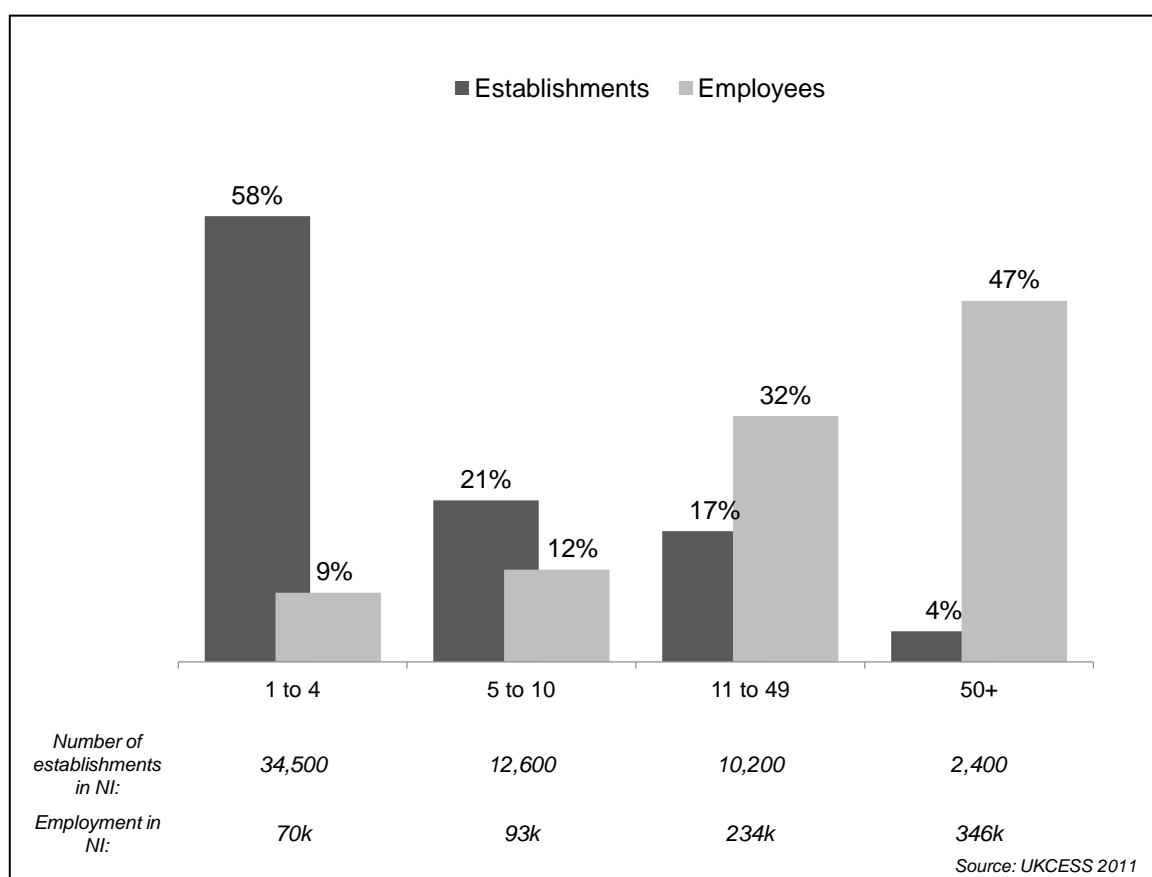
## 2.2 Size

Most business establishments in Northern Ireland are small: 58 per cent employ fewer than five people and 21 per cent employ between five and 10 people. Sites employing 50 or more staff represent only four per cent of all establishments but account for two-fifths (47 per cent) of overall employment.

Although some of these employers were part of multi-site establishments (see section 2.5), most of the small establishments were probably small or medium sized enterprises (SMEs), defined as being organisations which as a whole have 250 or fewer staff working for them. The UK Commission's Employer Skills Survey measured the total size of the workforce across multi-site establishments and identified which organisations were true small or medium enterprises (SMEs) and which were not. It found that all establishments with fewer than 25 employees were (part of) true SMEs, as were most establishments with 25 to 99 employees (two thirds of them were, 66 per cent).<sup>6</sup>

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<sup>6</sup> 'The UK Commission's Employer Skills Survey 2011: UK Results' <http://www.ukces.org.uk/publications/employer-skills-survey-2011>, p10.

**Figure 2.1 Distribution of establishments and employees by site size**

Since 2005, there has been a trend toward larger establishment size in Northern Ireland (see Table 2.1). In 2005, 61 per cent of establishments had fewer than five people, that figure declined to 58 per cent in 2011. There has been a corresponding increase in the proportion of sites employing 11 to 49 people (from 14 per cent in 2005 to 17 per cent in 2011).

**Table 2.1 Distribution of establishments by employer size over time**

	2005	2008	2011
<i>Number of establishments</i>	50,418	57,750	59,732
<i>Column %</i>	%	%	%
1-4	61	56	58
5-10	22	22	21
11-49	14	18	17
50+	3	4	4

Source: ONS IDBR except 2011: UKCESS 2011

## 2.3 Sector

In this report, economic and other activities are primarily described in terms of 14 sectors, defined by the Standard Industrial Classification (SIC), for more information see Appendix C<sup>7</sup>; these sectors are shown in Figure 2.2 below. Most of these sectors are dominated by commercially-focused organisations whose aim is to generate profit. However, each of the sectors will also include a proportion of establishments whose motivation is more social and/or which operate under funding from local or central government. In a small number of sectors, the majority of establishments operate outside of a commercial imperative, such as Public Administration, Education and Health and Social Work<sup>8</sup>.

The greatest numbers of Northern Ireland establishments operate in Wholesale and Retail (18 per cent), Business Services (14 per cent) and Construction (12 per cent). By contrast, the Electricity, Gas & Water Supply (one per cent) and Finance Services (three per cent) sectors account for very small proportions of establishments in Northern Ireland.

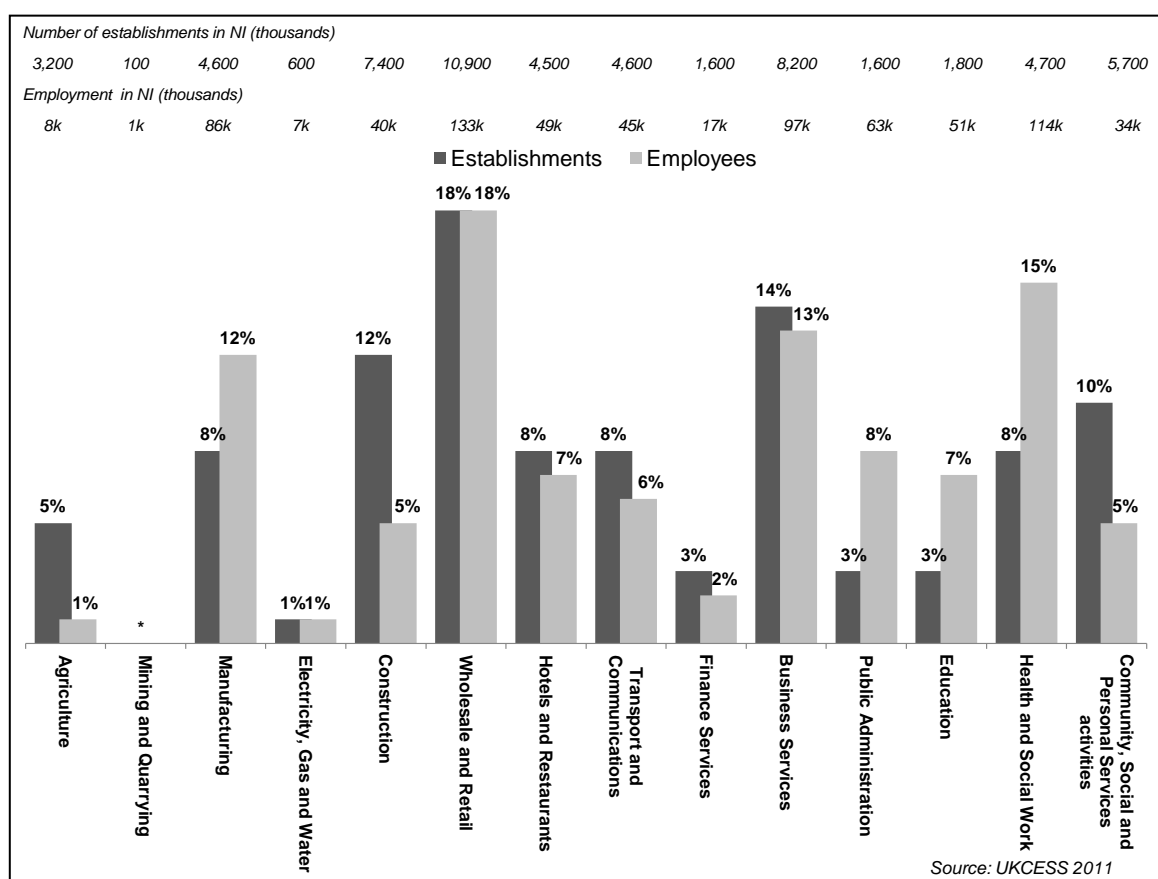
The number of establishments and their size profile differ greatly by sector. The Construction, Community, Social and Personal Service activities and the Agriculture sectors are dominated by small establishments. This is illustrated in Figure 2.2, which shows that these sectors contain a much larger share of establishments than employees (for example, 12 per cent of Northern Ireland's establishments were part of the Construction sector but only five per cent of employees work in this sector). The Manufacturing, Health and Social Work, Public Administration and Education sectors were dominated by larger employers. As Figure 2.2 shows, these sectors contain a relatively small share of Northern Ireland's establishments compared with their share of workers. For instance, the Health and Social Work contains eight per cent of establishments but 15 per cent of workers. The Health & Social Work, Public Administration and Education sectors were also dominated by establishments which rely on public funding.

As seen throughout this report, there were many differences between larger and smaller establishments. For example, larger establishments were more likely to report a skills gap (see Chapter 4) and were more likely to provide training to their staff (see Chapter 5).

<sup>7</sup> Full details of the SIC codes associated with each sector are presented in Appendix C of this report. For more information on SIC classifications, see Lindsay Prosser (ed.) UK Standard Industrial Classification of Economic Activities 2007 (Basingstoke: Palgrave Macmillan, 2009)

<sup>8</sup> Even in these sectors, there are some establishments which are commercially focused.



**Figure 2.2 Distribution of establishments and employees by sector**

The sector mix of employers has changed since 2005 (Table 2.2). The biggest changes were seen in the proportion of establishments in the Manufacturing sector (down from 12 per cent in 2005 to eight per cent in 2011) and in the Wholesale and Retail (down from 26 to 18 per cent) sector. Increases were seen in the proportion of establishments in the Construction sector (from seven per cent to 12 per cent) and Transport and Communications sector (from six per cent to eight per cent). The proportion in the other sectors has remained roughly the same. There was no data collected from the Agriculture sector in previous years and in 2011 Agriculture contained five per cent of establishments, which helps explain why the decreases in the Manufacturing and Wholesale and Retail sectors were not met with corresponding increases in other sectors.

**Table 2.2 Sector share of employment over time**

	<b>2005</b>	<b>2008</b>	<b>2011</b>
<i>Number of establishments</i>	<i>50,418</i>	<i>57,750</i>	<i>59,732</i>
<i>Column %</i>	<i>%</i>	<i>%</i>	<i>%</i>
Agriculture	-	-	5
Mining and Quarrying	*	*	*
Manufacturing	12	7	8
Electricity, Gas and Water	*	*	1
Construction	7	9	12
Wholesale and Retail	26	24	18
Hotels and Restaurants	9	8	8
Transport and Communications	6	5	8
Finance Services	2	2	3
Business Services	15	17	14
Public Administration	*	2	3
Education	5	5	3
Health and Social Work	7	9	8
Community, Social and Personal Services activities	10	11	10

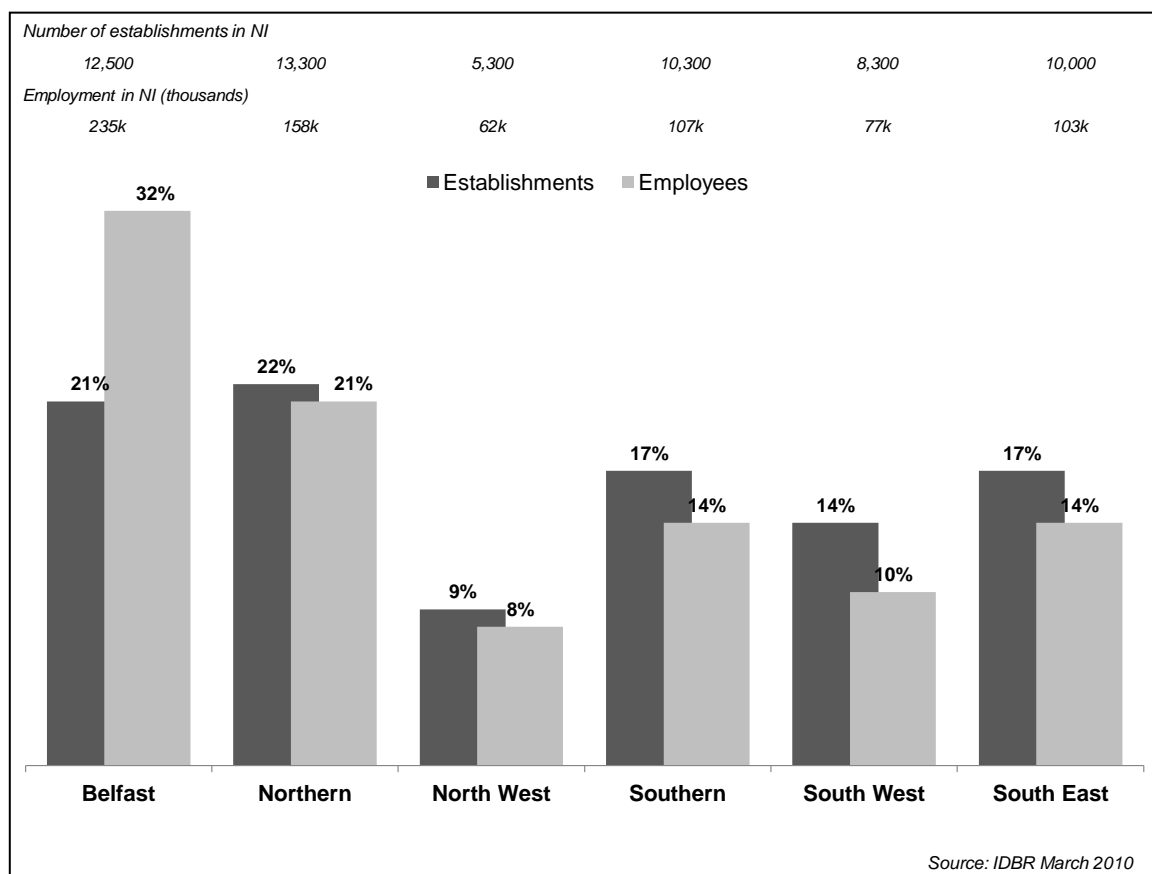
*Source: 2005: NISMS 05; 2008: NISMS 08; 2011: UKCESS 2011.*

*‘\*’ denotes a figure above 0 but below 0.5; ‘-’ denotes a figure of zero. No interviews were achieved in the Agriculture sector in 2005 or 2008; it is thus not possible to estimate the share of employment this sector holds from the survey.*

## **2.4 Region**

Sub-national breakdowns are presented for six regions in Northern Ireland.<sup>9</sup> The Northern and Belfast regions each contain a fifth of Northern Ireland’s organisations (22 per cent and 21 per cent, respectively (see Figure 2.3), a higher proportion than the other regions). The Belfast region was dominated by large sites: it has only a fifth of employers but a third of workers. The Southern, South East and South West regions contain predominately smaller organisations. The Southern and South East regions each contain 17 per cent of establishments but only 14 per cent of workers; the South West region contains 14 per cent of establishments but only 10 per cent of workers.

<sup>9</sup> Regions are based on the six Workforce Development Forums that were established in conjunction with the Department for Employment and Learning in order to address skills development needs on a regional basis.

**Figure 2.3 Distribution of establishments and employees by region**

As Table 2.3 shows, there has not been much of a change in the geographic distribution of employers throughout Northern Ireland since 2008. The Belfast region has seen a slight decrease in the proportion of establishments that it contains, and the South West region a slight increase.

**Table 2.3 Time series for the distribution of establishments by region**

	2008	2011
<i>Number of establishments</i>	57,750	59,677
<i>Column %</i>	%	%
Belfast	22	21
Northern	22	22
North West	9	9
Southern	17	17
South West	13	14
South East	17	17

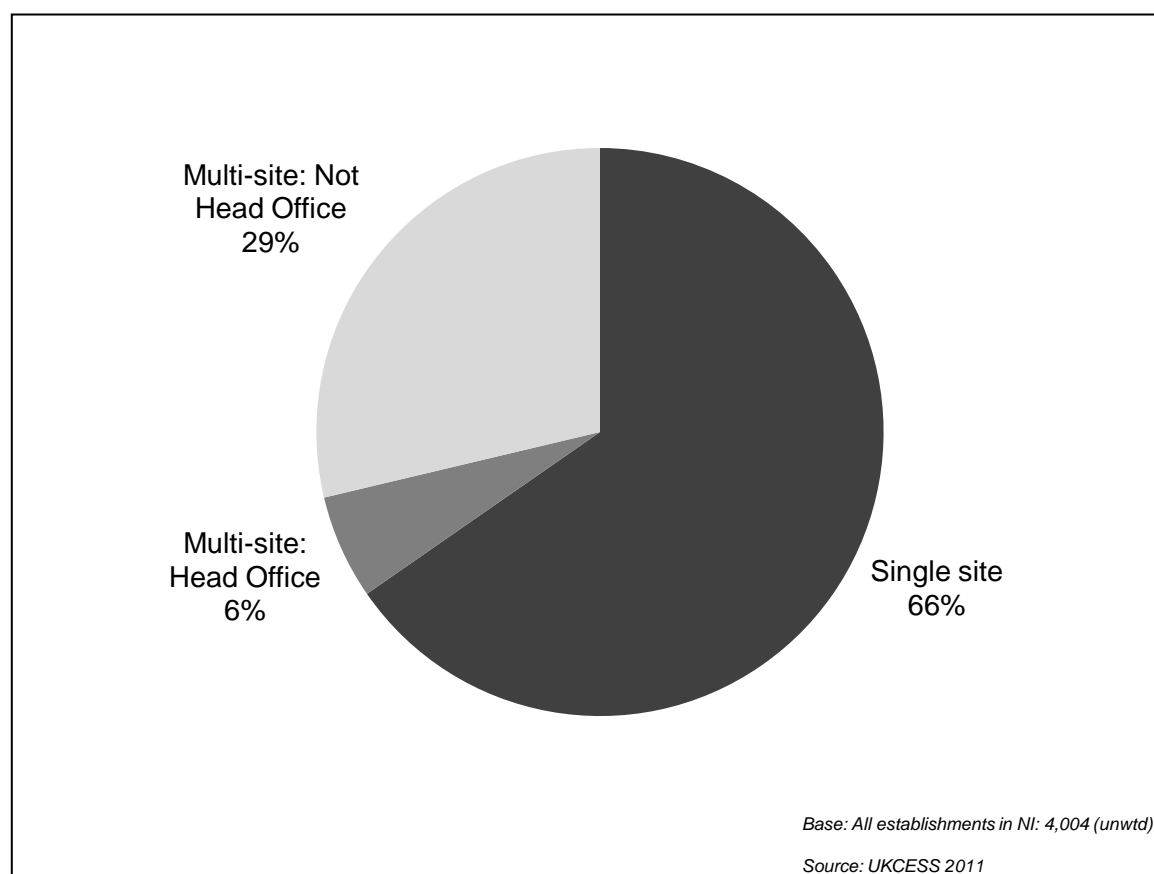
Source: ONS IDBR

*In 2005 the regions were defined differently, so no comparable data is available*

## 2.5 The structure of establishments

The size of an establishment is important in that it determines both what skills and employment challenges employers face and the ways in which they react to these challenges. However, establishments can be part of wider organisations, and this can bring a different dimension to their experience and practice. A third of all establishments in Northern Ireland (35 per cent) were part of a larger organisation (see Figure 2.4).

**Figure 2.4 Organisational structures**

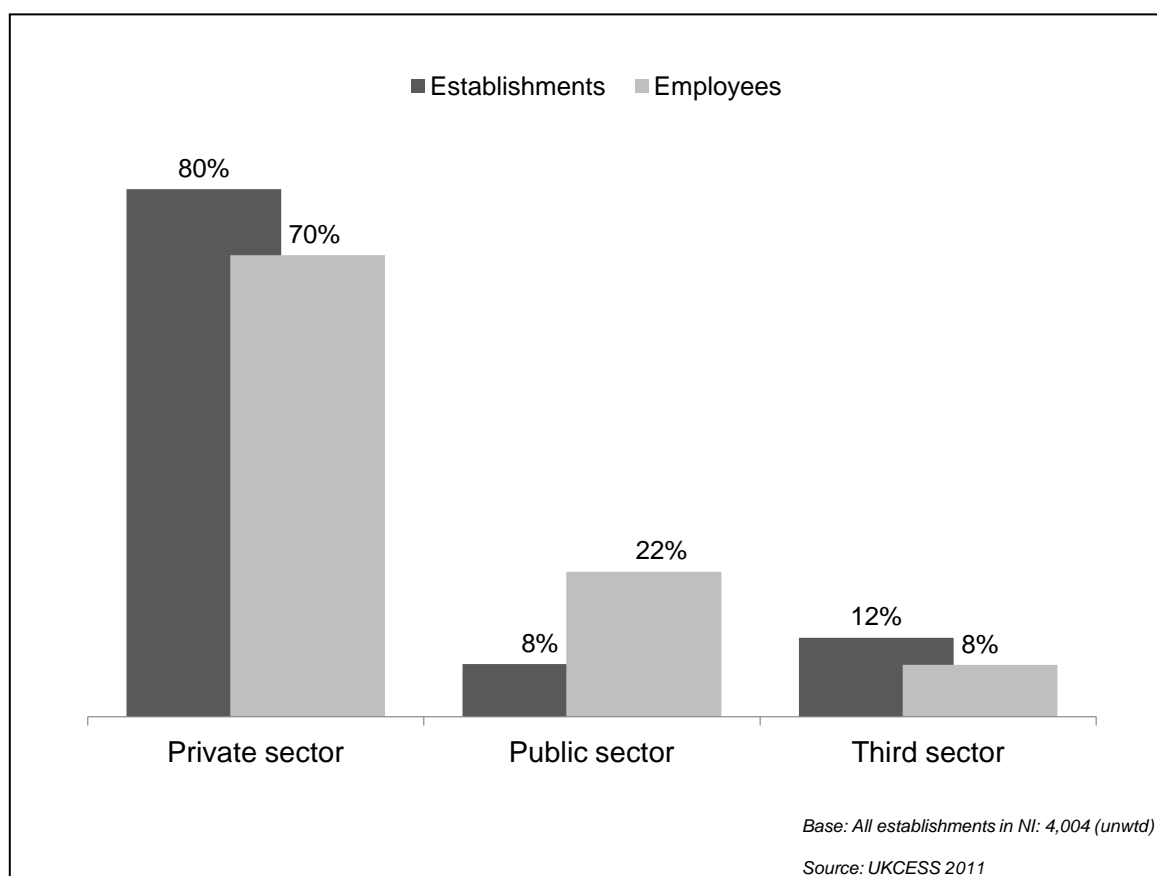


The survey confirms that decisions about recruitment and training were most commonly taken at site level. Two-thirds of establishments in Northern Ireland were single site organisations (66 per cent) and therefore have full responsibility and autonomy when it comes to decisions about recruitment and training; a further six per cent were the Head Offices of multi-site organisations, and as such we can assume that they too have full autonomy in these areas. This leaves three in 10 establishments in Northern Ireland which operate within larger organisations with a head office located elsewhere, which were likely to cede some control of training decisions elsewhere, but recruitment and labour market issues are experienced at the local level.

## 2.6 Private and public sector establishments in Northern Ireland

Most establishments in Northern Ireland (80 per cent) describe themselves as operating in a commercial sphere, with small minorities operating in the public sector (eight per cent) and in the third sector (12 per cent). As Figure 2.5 shows, establishments in the public sector tend to be larger than those in the private sector and the proportion of the workforce that they employ was far greater than the proportion of establishments they account for (the public sector contains eight per cent of establishments but 22 per cent of employees)

**Figure 2.5** Distribution of establishments and employment among the public, private and voluntary sectors



Between 2008 and 2011 the share of Northern Ireland's establishments in the private sector has remained relatively stable. Similarly, the shares of organisations in the public sector and third sector during this period have changed very little.

**Table 2.4**      **Distribution of establishments between the private, public and voluntary sectors over time**

	<b>2008</b>	<b>2011</b>
<i>Unweighted base</i>	<i>4,000</i>	<i>4,004</i>
<i>Column %</i>	<i>%</i>	<i>%</i>
Private Sector	81	80
Public Sector	8	8
Third Sector	11	12

*Base: all establishments*

*Source: Skills surveys: 2011 – UKCESS 2011; 2008 – NISMS 08*

*In 2005 an “other” category was included, so data is not directly comparable.*

## **2.7 Conclusions**

Most business establishments in Northern Ireland were small; roughly eighty per cent of sites employ fewer than 10 people. The sectors with most establishments were Wholesale and Retail, Business Services and Construction.

Belfast is dominated by larger establishments, whereas in the Southern, South West and South East regions smaller sites are more prevalent. Overall there has been little change in the geographic distribution of employers throughout Northern Ireland since 2008.

Since 2005, there has been a slight increase in the average site size in Northern Ireland. Over this time period, the proportion of establishments in the Manufacturing and Wholesale and Retail sectors has declined and the percentage of sites in the Construction and Transport and Communications sectors has increased. There has been very little change between 2008 and 2011 in the proportion of employers in the private, public, and voluntary sectors.

### 3 Recruitment and skills shortages

#### Chapter Summary

At the time of interview, ten per cent of establishments in Northern Ireland had a vacancy (equating to 19,800 vacancies), four per cent had a vacancy they considered to be hard-to-fill (equating to 6,400 hard-to-fill vacancies or 32 per cent of all vacancies) and three per cent had a vacancy that was hard to fill due to a lack of skills, qualifications or experience in applicants (a skill-shortage vacancy, or SSV) (equating to 5,500 skills-shortage vacancies or 28 per cent of all vacancies).

Since 2008:

- The number of vacancies has increased slightly;
- The proportion of vacancies that were hard-to-fill vacancies has increased slightly (from 29 per cent of total vacancies to 32 per cent of total vacancies);
- Skill-shortage vacancies have increased substantially (from 18 per cent of total vacancies in 2008 to 28 per cent of total vacancies in 2011).

The majority of employers get what they need from the labour market; however there are concentrated pockets of skills deficiency spread unevenly across the economy. The sectors with the highest proportion vacancies in skills-shortage vacancies included Public Administration (49 per cent of vacancies), Business Services (33 per cent), and Hotels and Restaurants (25 per cent).

By occupation, the Professionals group had the highest volume and density of both hard-to-fill vacancies and skills-shortage vacancies by far (63 per cent of vacancies were hard-to-fill and 60 per cent were skills-shortage vacancies).

By region, the Belfast Region had the highest incidence, volume and density of hard-to-fill vacancies and skills-shortage vacancies (48 per cent and 42 per cent of totally vacancies respectively).

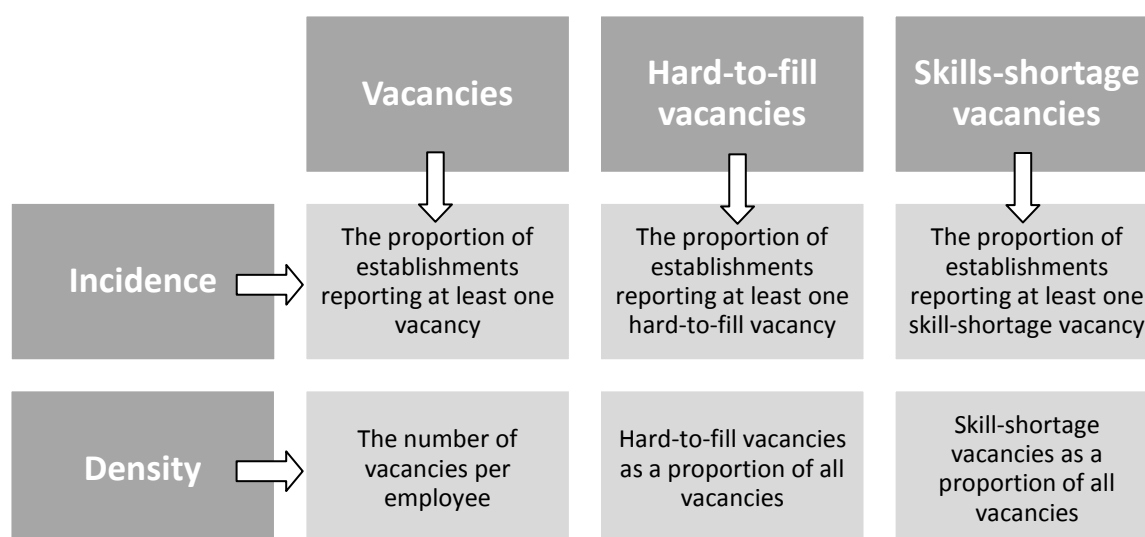
Of those employers with hard-to-fill vacancies over 90 per cent reported they had an impact on the operation of the business. The most commonly reported impact of hard-to-fill vacancies was on the workload of existing staff (cited by 73 per cent of establishments). The most commonly reported causes of hard-to-fill vacancies were linked to lack of qualifications (mentioned by 46 per cent of establishments) and too much competition from other employers (cited by 40 per cent of establishments).

### 3.1 Introduction

Due to the recent recession, employers are operating in a tough and unclear climate. Therefore, it is likely that employers were cautious about taking on new staff and current employees may be disinclined from changing jobs at the risk of giving up relative job security.

Northern Ireland data from the UK Employer Skills Survey provides a detailed understanding of levels of employer demand for labour in 2011 and the ability of the market to meet such demand in terms of the incidence in vacancies. This chapter sets the context for then exploring imbalances and mismatches in the labour market in subsequent chapters.

The measures of skill shortage utilised in the report are outlined in Appendix B. The main measures used in the present chapter are as follows:



This chapter focuses on vacancies, hard-to-fill vacancies and on skill-shortage vacancies. The chapter will examine the incidence and volume of vacancies and hard-to-fill vacancies by site size, sector, region, occupation and over time.<sup>10</sup> It will then explore the causes of hard-to-fill vacancies and the impact such vacancies have on the establishment and staff. Then this chapter will examine skill-shortage vacancies and examine the incidence, density, volume and changes over time.

<sup>10</sup> As noted in chapter 2, regions are based on the six Workforce Development Forums established in conjunction with the Department for Employment and Learning in order to address skills development needs on a regional basis.



## 3.2 What is the level of demand for new staff?

At the time of the survey, 10 per cent of establishments in Northern Ireland reported at least one vacancy. The overall vacancy density (vacancy per employee) was 2.7 per cent. This section explores how the incidence, volume and density of vacancies vary by site size, sector and region and discusses how the pattern of vacancies in Northern Ireland has changed over time. For a description of the sectors and occupations used in this chapter please refer to Appendix C and D.

### 3.2.1 Incidence of vacancies by establishment size, sector and region

The proportion of establishments with a vacancy increases with size (see Table 3.1). This reflects the fact that larger establishments were more likely to have someone to replace than smaller establishments.

The effects of size are controlled for in the final column of Table 3.1, in the measure of vacancy density, which is the ratio of vacancies per employee. There is little variation in establishment size with the major exception of the smallest establishments which have four times more vacancies per employee than the other size bands.

Agriculture has the lowest proportion of establishments reporting vacancies and also the lowest vacancy density (vacancy per employee).<sup>11</sup> Much higher proportions of establishments with vacancies can be found in the mainly public sector groups: Public administration (22 per cent); Education (17 per cent); and, to a lesser extent, Health and Social work (13 per cent). While the Business Services sector has a fairly high proportion of establishments reporting vacancies (13 per cent), it has by far the highest ratio of vacancies per employee (seven per cent). Hotels and Restaurants (14 per cent and three per cent) and Community, Social and Personal Services activities (15 per cent and 4.2 per cent) show fairly high combinations of both the proportion of establishments with vacancies and vacancy densities.

Important differences can be seen across the Northern Ireland regions. The North West, Southern, South West and South East regions all have about eight or nine per cent of establishments reporting vacancies and all have around 1.8-1.9 per cent of vacancies per employee (vacancy densities). On the other hand, the Belfast region has about 16 per cent of establishments reporting vacancies, by far the highest proportion, and 3.5 per cent vacancy density. The Northern region falls between the Belfast region and the other four.

<sup>11</sup> This probably reflects the structure of the farming sector with a very high proportion of small and very small farms. Even small farms generally only involve one person full time with, in some cases, part time or seasonal help. *Statistical Review of Northern Ireland Agriculture 2010*. [http://www.dardni.gov.uk/dard\\_stats\\_review\\_2010.pdf](http://www.dardni.gov.uk/dard_stats_review_2010.pdf)

**Table 3.1 Incidence, volume and density of vacancies: 2011**

		% of establishments with a vacancy	Number of vacancies	Vacancy density
	<i>Unwtd base</i>	%	Rounded to nearest 100	%
Total	4,004	10	19,800	2.7
<b>Size</b>				
1-4	1,330	7	6,200	8.8
5-10	1,196	8	1,700	1.9
11-49	1,149	17	5,000	2.2
50+	329	39	6,800	2.0
<b>Sector</b>				
Agriculture	33	2	100	0.8
Mining and Quarrying	15	**	**	**
Manufacturing	348	10	1,300	1.6
Electricity, Gas and Water	54	4	100	0.9
Construction	367	4	400	1.0
Wholesale and Retail	736	9	2,000	1.5
Hotels and Restaurants	335	14	1,500	3.0
Transport and Communications	303	8	1,600	3.4
Finance Services	139	10	300	1.8
Business Services	515	13	6,800	7.0
Public Administration	107	22	2,100	3.4
Education	287	17	600	1.2
Health and Social Work	433	13	1,700	1.5
Community, Social and Personal Services activities	332	15	1,400	4.2
<b>Region</b>				
Belfast	926	16	8,200	3.5
Northern	879	11	5,200	3.3
North West	386	8	1,200	1.9
Southern	662	9	1,900	1.8
South West	469	9	1,500	1.9
South East	682	8	1,900	1.8

*Base: All establishments in Northern Ireland.*

*Percentages in Column 3 are based on all employment, percentages therefore represent the number of vacancies as a proportion of all employment.*

*Number of vacancies rounded to nearest 100.*

*\*\*\* denotes base size under 25: too low to report. Figures in italics denote base size <50: treat figures with caution.*

### 3.2.2 Time trends in the incidence of vacancies

The percentage of establishments reporting at least one vacancy has fallen slightly between 2005 and 2011 (see Table 3.2). There was a small rise in the number of vacancies from 17,400 to 19,800 between 2008 and 2011 which reflects the increase in the number of establishments in Northern Ireland from 57,800 to 59,700 (see Table 2.3).

**Table 3.2 Incidence, volume and density of vacancies: time series**

	2005	2008	2011
<i>Base</i>	4,126	4,000	4,004
<i>Column %</i>	%	%	%
% of establishments with a vacancy	11	12	10
Number of vacancies	n/a	17,400	19,800
Vacancy density	n/a	2.4	2.7

*Base: All establishments in Northern Ireland.*

*“Vacancy density” figures are based on all employment, percentages therefore represent the number of vacancies as a proportion of all employment.*

*Number of vacancies rounded to nearest 100.*

*‘n/a’ denotes the question was not asked / was not asked in a comparable manner in that year’s survey.*

Table 3.3 illustrates how the different results break down for different sizes of establishment. Only information about the proportion of establishments reporting a vacancy is available in all three years. The figures suggest that the main change between 2005 and 2008 was in the 50+ category (rising from 42 to 48 per cent). The two smallest size categories (one to four and five to 10 employees) remained unchanged.

The position from 2008 to 2011 was quite different. Here the proportion of establishments reporting vacancies fell for all but the smallest size group and the falls were quite large (falling 7 percentage points for the five to 10 group, falling 5 percentage points for the 11-49 group, and 9 percentage points for the 50+ employee group). By contrast, the one to four size group rises from five to seven per cent over the period 2008 to 2011. Referring back to Table 2.1 (which looked at the distribution of establishments by employer size over time), the growth in just under 2,000 establishments from 2008 to 2011 was almost entirely within the smallest size group (a growth of 2,300 establishments), compared with falls in the five to 10 and 11-49 categories.

It is perhaps not surprising, therefore, that the number of vacancies shows broadly the same pattern, although, despite a growth in the number of establishments in the 50+ category, both the proportion reporting vacancies and the number of vacancies both fall for this size group between 2008 and 2011.

Vacancy densities fell for all but the smallest size group, where the number of vacancies per employee rose nearly threefold. Almost all of the fall in vacancy density was concentrated in the five to 10 size group, where the ratio of vacancies per employee declines from 3.4 per cent in 2008 to 1.9 per cent in 2011.

**Table 3.3 Incidence, volume and density of vacancies: time series by size**

		2005	2008	2011
<i>Column %</i>		%	%	%
<b>Size</b>				
<b>1-4</b>	<i>Base:</i>	1,044	1,098	1,330
% of establishments with a vacancy		5	5	7
Number of vacancies		n/a	2,100	6,200
Vacancy density		n/a	3.1	8.8
<b>5-10</b>	<i>Base:</i>	735	1,006	1,196
% of establishments with a vacancy		15	15	8
Number of vacancies		n/a	2,900	1,700
Vacancy density		n/a	3.4	1.9
<b>11-49</b>	<i>Base:</i>	1,506	1,395	1,149
% of establishments with a vacancy		24	22	17
Number of vacancies		n/a	5,200	5,000
Vacancy density		n/a	2.3	2.2
<b>50+</b>	<i>Base:</i>	841	501	329
% of establishments with a vacancy		42	48	39
Number of vacancies		n/a	7,300	6,800
Vacancy density		n/a	2.1	2.0

*Base: All establishments in Northern Ireland within each sizeband.*

*"Vacancy density" figures are based on all employment, percentages therefore represent the number of vacancies as a proportion of all employment.*

*Number of vacancies rounded to nearest 100.*

*'n/a' denotes the question was not asked / was not asked in a comparable manner in that year's survey.*

In terms of the sectoral changes, the incidence of vacancies are presented in Table 3.4. Vacancy volume and density over time by sector for 2008 and 2011 are presented in Appendix A, Table A1.

**Table 3.4 Incidence of vacancies: time series by sector**

		<b>2005</b>	<b>2008</b>	<b>2011</b>
<i>Column %</i>		%	%	%
<b>Sector</b>				
<b>Agriculture</b>	<i>Base:</i>	0	0	33
% of establishments with a vacancy		**	**	2
<b>Mining &amp; Quarrying</b>	<i>Base:</i>	17	10	15
% of establishments with a vacancy		**	**	**
<b>Manufacturing</b>	<i>Base:</i>	700	522	348
% of establishments with a vacancy		12	11	10
<b>Electricity, Gas and Water</b>	<i>Base:</i>	18	22	54
% of establishments with a vacancy		**	**	4
<b>Construction</b>	<i>Base:</i>	229	280	367
% of establishments with a vacancy		8	5	4
<b>Wholesale and Retail</b>	<i>Base:</i>	784	787	736
% of establishments with a vacancy		9	11	9
<b>Hotels and Restaurants</b>	<i>Base:</i>	181	226	335
% of establishments with a vacancy		14	14	14
<b>Transport and Communications</b>	<i>Base:</i>	324	216	303
% of establishments with a vacancy		13	9	8
<b>Finance Services</b>	<i>Base:</i>	135	133	139
% of establishments with a vacancy		15	7	10
<b>Business Services</b>	<i>Base:</i>	456	557	515
% of establishments with a vacancy		9	8	13
<b>Public Administration</b>	<i>Base:</i>	74	178	107
% of establishments with a vacancy		36	39	22
<b>Education</b>	<i>Base:</i>	339	313	287
% of establishments with a vacancy		15	18	17
<b>Health and Social Work</b>	<i>Base:</i>	456	362	433
% of establishments with a vacancy		16	23	13
<b>Community, Social and Personal Services activities</b>	<i>Base:</i>	413	394	332
% of establishments with a vacancy		8	12	15

*Base: All establishments in Northern Ireland within each sector.*

*\*\*\* denotes base size under 25: too low to report. Figures in italics denote base size <50: treat figures with caution.*

The Public Administration sector has seen a notable fall in the proportion of establishments with vacancies but despite this the volume of vacancies has risen slightly. Health and Social work has seen large declines in incidence and volume whereas the declines in Education were marginal.

Of the other sectors, three showed declines in the proportion of establishments reporting vacancies over both the 2005-2008 and 2008-2011 periods: Manufacturing, Construction and Transport and Communications. Financial Services and Business Services had declines in the proportions reporting vacancies in the first period (eight and one percentage points respectively; however both had increases in the 2008-2011 period (three and five percentage points respectively).

The numbers of vacancies within certain sectors changed quite markedly. Despite a slight fall in the proportion of establishments with a vacancy, Transport and Communications show a rise of 1,100 vacancies between 2008 and 2011 (linked to a growth in vacancy density of 1.5 percentage points). However, Business Services saw by far the largest rise as vacancies increased over two and a half times over this period, linked to the 5 percentage point rise in the proportion of establishments reporting vacancies between 2008 and 2011, as well as the rise in vacancy density of 3.9 percentage points.

There are, however, some large falls in vacancies between 2008 and 2011 in certain sectors. Wholesale and Retail was one such sector, displaying a fall of 1,600 vacancies, linked to a two percentage point reduction in the proportion of establishments with vacancies and a one percentage point decline in the vacancy density rate. The sector with the largest fall in vacancies, however, was Health and Social work with a 1,700 fall in vacancies over this period, associated with a 10 percentage point fall in the proportion of establishments with a vacancy and a 1.6 percentage point fall in the density ratio

Table 3.5 shows how the results reported in Table 3.2 break down at the regional level. We are restricted to looking at change over 2008 to 2011 as there is no comparable regional data available for 2005.

Belfast, and the Northern region showed an increase in the number of vacancies between 2008 and 2011. In both regions, there was an increase of about 2,000 vacancies and a corresponding increase in the vacancy density. However the proportion of establishments reporting a vacancy did not increase in Belfast.

The South East and South West regions saw declines in vacancies. The decline was larger in the South East region which had 1,300 fewer vacancies in 2011 than 2008. Both regions saw corresponding declines in the vacancy densities and in the proportion of establishments reporting a vacancy.

**Table 3.5 Incidence, volume and density of vacancies: time series by region**

		<b>2008</b>	<b>2011</b>
<i>Column %</i>		%	%
<b>Region</b>			
<b>Belfast</b>	<i>Base:</i>	979	926
% of establishments with a vacancy		16	16
Number of vacancies		6,300	8,200
Vacancy density		2.8	3.5
<b>Northern</b>	<i>Base:</i>	788	879
% of establishments with a vacancy		9	11
Number of vacancies		3,000	5,200
Vacancy density		1.9	3.3
<b>North West</b>	<i>Base:</i>	395	386
% of establishments with a vacancy		10	8
Number of vacancies		1,200	1,200
Vacancy density		2.0	1.9
<b>Southern</b>	<i>Base:</i>	657	662
% of establishments with a vacancy		11	9
Number of vacancies		1,800	1,900
Vacancy density		1.7	1.8
<b>South West</b>	<i>Base:</i>	514	469
% of establishments with a vacancy		13	9
Number of vacancies		1,900	1,500
Vacancy density		2.6	1.9
<b>South East</b>	<i>Base:</i>	667	682
% of establishments with a vacancy		11	8
Number of vacancies		3,200	1,900
Vacancy density		3.2	1.8

*Base: All establishments in each region.*

*“Vacancy density” figures are based on all employment, percentages therefore represent the number of vacancies as a proportion of all employment.*

*Number of vacancies rounded to nearest 100. In 2005 the regions were defined differently, so no comparable data is available*

Table 3.6 shows how the volume and density of vacancy results vary by occupation. There are no data for 2005 and, hence, only the changes from 2008 to 2011 are discussed.

Changes in total numbers of vacancies were again the outcome of at least three determinates: changes in the size of the occupational group; changes in the proportion of establishments with a vacancy; and changes in vacancy density.

Between 2008 and 2011 the occupations that saw the largest increases in vacancies (in terms of vacancy density and number of vacancies) were Professionals, Skilled Trades and Machine Operatives. Whereas Sales and Customer services saw the largest decline.

**Table 3.6 Volume and density of vacancies: time series by occupation**

<i>Column %</i>		<b>2008</b>	<b>2011</b>
<b>Occupation</b>	<i>Base:</i>	<b>% 4,000</b>	<b>% 4,004</b>
<b>Managers</b>			
Number of vacancies		800	400
Vacancy density		0.8	0.4
<b>Professionals</b>			
Number of vacancies		1,300	2,000
Vacancy density		2.5	2.8
<b>Associate Professionals</b>			
Number of vacancies		2,200	2,200
Vacancy density		3.7	5.8
<b>Admin / Clerical</b>			
Number of vacancies		2,400	2,200
Vacancy density		2.3	2.0
<b>Skilled Trades</b>			
Number of vacancies		900	3,600
Vacancy density		1.7	5.2
<b>Caring, Leisure and Other services</b>			
Number of vacancies		2,800	2,100
Vacancy density		4.2	2.9
<b>Sales / Customer services</b>			
Number of vacancies		3,400	1,700
Vacancy density		3.8	1.8
<b>Machine Operatives</b>			
Number of vacancies		800	1,700
Vacancy density		1.3	2.7
<b>Elementary</b>			
Number of vacancies		2,600	2,100
Vacancy density		1.9	1.7

*Base: All establishments in Northern Ireland.*

*“Vacancy density” figures are based on all employment, percentages therefore represent the number of vacancies as a proportion of all employment in that occupation.*

*Number of vacancies rounded to nearest 100.*

*No data exist for this occupational breakdown in the 2005 survey.*



### **3.3 The ability of the market to meet employer demand for new staff**

In 2011, four per cent of all establishments in Northern Ireland reported having a vacancy that was hard to fill. At the time of the interview, there were around 6,400 vacancies that were hard-to-fill, representing a third of all vacancies (32 per cent). This section explores how hard-to-fill vacancies vary by employer size, sector, occupation and region and discusses changes over time.

#### **3.3.1 Hard-to-fill vacancies by size, sector, occupation and region**

Table 3.7 sets out the proportion of establishments reporting a hard-to-fill vacancy, the number of hard-to-fill vacancies and the percentage of vacancies that were hard to fill. The proportion of vacancies that are hard to fill is referred to as the “density” of hard-to-fill vacancies (see Section 3.1 above and Appendix B). Table 3.7 indicates that, overall, 32 per cent of vacancies were hard to fill.

As Table 3.7 shows, the smallest establishments (one to four staff) had the highest proportion of vacancies that were hard-to-fill (41 per cent), followed by the largest establishments with 50+ staff (33 per cent). Organisations in the middle two categories (five to 10 and 11-49) had the smallest proportion of vacancies that were hard-to-fill (23 per cent and 24 per cent, respectively).

The relatively high incidence of hard-to-fill vacancies in the smallest sized (one to four staff) establishments is consistent with their relatively high vacancy density (8.8) compared with other establishment sizes. The large incidence of hard-to-fill vacancies is probably the result of the growth in the number overall vacancies for the smallest establishments) between 2008 and 2011 (from 2,100 to 6,200 and a corresponding increase in density (from 3.1 to 8.8) (see Table 3.3).

There is still some expectation that larger establishments will have more vacancies and, therefore, the potential for more hard-to-fill vacancies. However, many other factors are at play, for example, larger establishments might have more formal HR practices in place that reduce the potential for hard-to-fill vacancies or they might deal with more specialist skills that raise the probability of experiencing hard-to-fill vacancies.

The next part of Table 3.7 examines the sectoral differences in the incidence, volume and density of hard-to-fill vacancies. In general, the sectors with the highest incidence of vacancies also had the highest incidence of hard-to-fill vacancies, but there are also other factors that could play a role in determining whether vacancies are hard-to-fill, such as the terms and conditions of work within the sector (e.g. wages and unsocial hours of work).

**Table 3.7 Incidence, volume and density of hard-to-fill vacancies: 2011**

	% of establishments with a hard-to-fill vacancy		Number of hard-to-fill vacancies	% of vacancies that were hard to fill	
	<i>Unwtd base</i>	%		<i>Unwtd base</i>	%
Total	4,004	4	6,400	524	32
<b>Size</b>					
1-4	1,330	3	2,600	89	41
5-10	1,196	2	400	105	23
11-49	1,149	5	1,200	198	24
50+	329	10	2,200	132	33
<b>Sector</b>					
Agriculture	33	-	-	1	**
Mining and Quarrying	15	**	**	0	**
Manufacturing	348	4	400	40	28
Electricity, Gas and Water	54	2	*	4	**
Construction	367	2	100	18	**
Wholesale and Retail	736	3	500	83	23
Hotels and Restaurants	335	6	400	61	30
Transport and Communications	303	3	400	33	26
Finance Services	139	2	100	16	**
Business Services	515	3	2,300	73	33
Public Administration	107	7	1,100	28	52
Education	287	3	100	52	15
Health and Social Work	433	5	500	67	29
Community, Social and Personal Services activities	332	7	500	48	37
<b>Region</b>					
Belfast	926	5	3,900	172	48
Northern	879	2	500	105	10
North West	386	2	200	36	16
Southern	662	4	700	71	35
South West	469	4	600	60	38
South East	682	3	500	80	28

*Base: Columns 1 and 2: all establishments; Column 3: all establishments with vacancies*

*Percentages in Column 3 are based on all vacancies, rather than all establishments with vacancies; figures therefore show the percentage of vacancies which are hard-to-fill.*

*Number of hard-to-fill vacancies rounded to nearest 100.*

*“\*\*” denotes base size under 25: too low to report. Figures in italics denote base size <50: treat figures with caution. “\*” denotes a figure above 0 but below 0.5; “-” denotes a figure of zero.*

The highest proportions of establishments with hard-to-fill vacancies can be found in Public Administration (seven per cent) and in Community Social and Personal Services activities (both seven per cent). The former of these had the highest proportion of establishments with vacancies (22 per cent) and the latter had the third highest proportion of vacancies (15 per cent) – see Table 3.1. Hotels and Restaurants also had a fairly high proportion of establishments with vacancies (14 per cent) and was the third highest in terms of the proportion of establishments with hard-to-fill vacancies (six per cent). Education, however, which had the second highest proportion of establishments with vacancies (17 per cent), was close to the bottom end in terms of hard-to-fill vacancies (with only three per cent).

The base number of establishments reporting hard-to-fill vacancies within sectors in the survey means we need to use data on the density of hard-to-fill vacancies with some caution. Whilst the Public Administration sector records by far the highest proportion of vacancies that were hard-to-fill (52 per cent), it is on a relatively low base size. However, that the sector is experiencing greater than average difficulties is plausible given both the continuing pay freeze and the uncertainty over job security in that sector. Business Services, also has an above average density of hard-to-fill vacancies (33 per cent) and the highest total of hard-to-fill vacancies of any sector (2,300), reflecting the size of the sector in employment terms.

The incidence of hard-to-fill vacancies varied substantially across Northern Ireland. The Belfast region had the largest number of hard-to-fill vacancies with 3,900. The Northern region, despite being the most populous region, was near the bottom in terms of number of vacancies. The Belfast region had the highest density (hard-to-fill vacancies formed 48 per cent of total vacancies), followed by the Southern and South West regions (35 and 38 per cent, respectively). The Northern and North West regions had the lowest density of hard-to-fill vacancies (10 and 16 per cent of total vacancies, respectively).

### **3.3.2 Changes in the incidence of hard-to-fill vacancies over time**

Table 3.8 considers the aggregate trends in hard-to-fill vacancies over time. Only data on the proportion of establishments with a hard-to-fill vacancy are available for all three years and these suggest that the proportion of establishments experiencing this problem has fallen between 2005 and 2011 (six to four per cent), although the position remained unchanged between 2008 and 2011 (four per cent in both years). These patterns show no close relationship with the changes in overall vacancies reported in Table 3.2 above.

**Table 3.8 Incidence, volume and density of hard-to-fill vacancies: time series**

	<b>2005</b>	<b>2008</b>	<b>2011</b>
<i>Base</i>	4,126	4,000	4,004
<i>Column %</i>	%	%	%
% of establishments with a hard-to-fill vacancy	6	4	4
Number of hard-to-fill vacancies	n/a	5,100	6,400
<i>Base</i>	<i>n/a</i>	745	524
% of vacancies that were hard to fill	n/a	29	32

*Base: Rows 1 and 2 all establishments; Row 3: all establishments with vacancies Percentages in Row 3 are based on all vacancies, rather than all establishments with vacancies; figures therefore show the percentage of vacancies which are hard-to-fill.*

*Number of hard-to-fill vacancies rounded to nearest 100. 'n/a' denotes the question was not asked / was not asked in a comparable manner in that year's survey.*

*Note that in 2005 and 2008 the question was termed "difficult to fill" rather than "hard-to-fill", and was asked separately for each occupation rather than being asked overall before breaking it down into occupations.*

The changes in hard-to-fill vacancy density (hard-to-fill vacancies as a proportion of all vacancies) and total numbers of hard-to-fill vacancies both show increases between 2008 and 2011, similar to the pattern we saw for vacancies (Table 3.2). The density of hard-to-fill vacancies increased by 3 percentage points from 29 to 32 per cent, while the number of hard-to-fill vacancies rose by 1,300 between 2008 and 2011

Table 3.9 breaks the aggregate hard-to-fill vacancy changes down by establishment size. There have been significant declines in the percentages of establishments reporting hard-to-fill vacancies in all but the smallest establishment category: the five to 10 group fell from eight per cent to two per cent over the period as a whole; the 11-49 group declined from 10 to five per cent; and the largest, 50+ category fell from 19 to 10 per cent. The smallest establishment category, one to four employees, was between two and three per cent for all three years.

On the other hand, Table 3.9 shows that the density of hard-to-fill vacancies differed between the middle two size groups (both exhibiting declines in density) and the largest and smallest (both exhibiting increases in density).

**Table 3.9 Incidence, volume and density of hard-to-fill vacancies: time series by size**

		2005	2008	2011
<i>Column %</i>		%	%	%
<b>Size</b>				
<b>1-4</b>	<i>Base:</i>	1,044	1,098	1,330
% of establishments with a hard-to-fill vacancy		3	2	3
Number of hard-to-fill vacancies		n/a	700	2,600
	<i>Base:</i>	n/a	70	89
% of vacancies that were hard to fill		n/a	33	41
<b>5-10</b>	<i>Base:</i>	735	1,006	1,196
% of establishments with a hard-to-fill vacancy		8	4	2
Number of hard-to-fill vacancies		n/a	900	400
	<i>Base:</i>	n/a	132	105
% of vacancies that were hard to fill		n/a	30	23
<b>11-49</b>	<i>Base:</i>	1,506	1,395	1,149
% of establishments with a hard-to-fill vacancy		10	8	5
Number of hard-to-fill vacancies		n/a	1,800	1,200
	<i>Base:</i>	n/a	295	198
% of vacancies that were hard to fill		n/a	35	24
<b>50+</b>	<i>Base:</i>	841	501	329
% of establishments with a hard-to-fill vacancy		19	18	10
Number of hard-to-fill vacancies		n/a	1,700	2,200
	<i>Base:</i>	n/a	248	132
% of vacancies that were hard to fill		n/a	23	33

*Base: Rows 1 and 2 of each sizeband all establishments; Row 3: all establishments with vacancies.*

*Percentages in Row 3 are based on all vacancies, rather than all establishments with vacancies; figures therefore show the percentage of vacancies which are hard-to-fill.*

*Number of hard-to-fill vacancies rounded to nearest 100.*

*'n/a' denotes the question was not asked / was not asked in a comparable manner in that year's survey.*

*Table 3.8 notes changes to the question between 2011 and previous years.*

Table 3.10 disaggregates the incidence of hard-to-fill vacancies by sector for 2005, 2008 and 2011. No change data are again available for Agriculture, Mining and Quarrying and Electricity, Gas and Water. Changes in the number and density of hard-to-fill vacancies by sector for 2008 and 2011 are reported in Appendix A (Table A2).

**Table 3.10 Incidence of hard-to-fill vacancies: time series by sector**

		<b>2005</b>	<b>2008</b>	<b>2011</b>
<i>Column %</i>		<i>%</i>	<i>%</i>	<i>%</i>
<b>Sector</b>				
<b>Agriculture</b>	<i>Base:</i>	0	0	33
% of establishments with a hard-to-fill vacancy		**	**	-
<b>Mining &amp; Quarrying</b>	<i>Base:</i>	17	10	15
% of establishments with a hard-to-fill vacancy		**	**	**
<b>Manufacturing</b>	<i>Base:</i>	700	522	348
% of establishments with a hard-to-fill vacancy		7	6	4
<b>Electricity, Gas and Water</b>	<i>Base:</i>	18	22	54
% of establishments with a hard-to-fill vacancy		**	**	2
<b>Construction</b>	<i>Base:</i>	229	280	367
% of establishments with a hard-to-fill vacancy		7	1	2
<b>Wholesale and Retail</b>	<i>Base:</i>	784	787	736
% of establishments with a hard-to-fill vacancy		5	3	3
<b>Hotels and Restaurants</b>	<i>Base:</i>	181	226	335
% of establishments with a hard-to-fill vacancy		7	6	6
<b>Transport and Communications</b>	<i>Base:</i>	324	216	303
% of establishments with a hard-to-fill vacancy		5	3	3
<b>Finance Services</b>	<i>Base:</i>	135	133	139
% of establishments with a hard-to-fill vacancy		9	2	2
<b>Business Services</b>	<i>Base:</i>	456	557	515
% of establishments with a hard-to-fill vacancy		6	4	3
<b>Public Administration</b>	<i>Base:</i>	74	178	107
% of establishments with a hard-to-fill vacancy		13	15	7
<b>Education</b>	<i>Base:</i>	339	313	287
% of establishments with a hard-to-fill vacancy		5	3	3
<b>Health and Social Work</b>	<i>Base:</i>	456	362	433
% of establishments with a hard-to-fill vacancy		8	12	5
<b>Community, Social and Personal Services activities</b>	<i>Base:</i>	413	394	332
% of establishments with a hard-to-fill vacancy		3	3	7

*Base: Rows 1 and 2 of each sector all establishments; Row 3: all establishments with vacancies.*

*Percentages in Row 3 are based on all vacancies, rather than all establishments with vacancies; figures therefore show the percentage of vacancies which are hard-to-fill.*

*Number of hard-to-fill vacancies rounded to nearest 100. “\*\*” denotes base size under 25: too low to report. Figures in italics denote base size <50: treat figures with caution. ‘-’ denotes a figure of zero. Table 3.8 notes changes to the question between 2011 and previous years.*

Of the sectors where public sector activities are concentrated, Public Administration shows that, despite the fall in the proportion of establishments reporting hard-to-fill vacancies (by eight percentage points), a large increase in hard-to-fill vacancy density (39 percentage points) and, the increase in establishments in this sector, result in an increase in the number of hard-to-fill vacancies. In the (mainly public sector) Health and Social Work sector there was a decrease in the proportion of establishments reporting hard-to-fill vacancies (seven percentage points), a decline in the number of establishments and a major decline in the density of hard-to-fill vacancies (20 percentage points), which combine to cause the number of hard-to-fill vacancies to fall by 1,200.

Of the other sectors, two stand out. The Community, Social and Personal Services activities sector had a loss of establishments over the period, but a growth in the proportion experiencing hard-to-fill vacancies (four percentage points) and in the density of hard-to-fill vacancies (18 percentage points). Business Services had the largest increase in the number of hard-to-fill vacancies, but no combination of the three main driving forces alone explains this, so the answer must lie in changes in establishment size, occupational mix or some or some other factor.

Table 3.11 shows trends in hard-to-fill vacancies by region. There were differences in the changes taking place in hard-to-fill vacancies across the regions in Northern Ireland between 2008 and 2011, as shown in Table 3.11 (no comparable data is available for 2005). The proportion of establishments reporting hard-to-fill vacancies remained steady in Belfast and the North West region, and increased slightly in the Southern region, while the other regions experienced falls. The South West region experienced the greatest fall from 7 per cent of establishments in 2008 compared to 4 per cent in 2011.

There were marked differences in the changes in the proportion of vacancies that were hard to fill (the density of hard-to-fill vacancies) across regions. The Belfast region was the only area that saw a large increase in the number of hard-to-fill vacancies (2,500) and in the density (26 percentage points). This is consistent with the large increase in overall vacancies in Belfast seen in Table 3.5 above. Interestingly, the incidence, volume and density of hard-to-fill vacancies decreased in the Northern region which was the only other region to see a notable increase in overall vacancies between 2008 and 2011 (see Table 3.5).

The incidence of hard-to-fill vacancies saw little change in the North West and Southern regions, which is consistent with Table 3.5, which showed no change in the incidence of overall vacancies. In the South West and South East regions, the incidence of hard-to-fill vacancies declined between 2008 and 2011. Again this is consistent with the decline in the overall vacancies seen above (see Table 3.5).

**Table 3.11 Incidence, volume and density of hard-to-fill vacancies: time series by region**

		<b>2008</b>	<b>2011</b>
<i>Column %</i>		<i>%</i>	<i>%</i>
<b>Region</b>			
<b>Belfast</b>	<i>Base:</i>	979	926
% of establishments with a hard-to-fill vacancy		5	5
Number of hard-to-fill vacancies		1,400	3,900
	<i>Base:</i>	222	172
% of vacancies that were hard to fill		22	48
<b>Northern</b>	<i>Base:</i>	788	879
% of establishments with a hard-to-fill vacancy		3	2
Number of hard-to-fill vacancies		900	500
	<i>Base:</i>	129	105
% of vacancies that were hard to fill		31	10
<b>North West</b>	<i>Base:</i>	395	386
% of establishments with a hard-to-fill vacancy		2	2
Number of hard-to-fill vacancies		200	200
	<i>Base:</i>	59	36
% of vacancies that were hard to fill		15	16
<b>Southern</b>	<i>Base:</i>	657	662
% of establishments with a hard-to-fill vacancy		3	4
Number of hard-to-fill vacancies		600	700
	<i>Base:</i>	118	71
% of vacancies that were hard to fill		32	35
<b>South West</b>	<i>Base:</i>	514	469
% of establishments with a hard-to-fill vacancy		7	4
Number of hard-to-fill vacancies		800	600
	<i>Base:</i>	95	60
% of vacancies that were hard to fill		41	38
<b>South East</b>	<i>Base:</i>	667	682
% of establishments with a hard-to-fill vacancy		4	3
Number of hard-to-fill vacancies		1,200	500
	<i>Base:</i>	122	80
% of vacancies that were hard to fill		38	28

*Base: Rows 1 and 2 of each region all establishments; Row 3: all establishments with vacancies.*

*Percentages in Row 3 are based on all vacancies, rather than all establishments with vacancies; figures therefore show the percentage of vacancies which are hard-to-fill.*

*Number of hard-to-fill vacancies rounded to nearest 100.*

*Table 3.8 notes changes to the question between 2011 and 2008.*

*In 2005 the regions were defined differently, so no comparable data is available*



**Table 3.12 Volume and density of hard-to-fill vacancies: time series by occupation**

<i>Column %</i> <b>Occupation</b>		<b>2008</b> %	<b>2011</b> %
<b>Managers</b>	<i>Base:</i>	4,000	4,004
Number of hard-to-fill vacancies		300	100
	<i>Base:</i>	74	33
% of vacancies that were hard to fill		38	31
<b>Professionals</b>	<i>Base:</i>	4,000	4,004
Number of hard-to-fill vacancies		400	1,300
	<i>Base:</i>	86	93
% of vacancies that were hard to fill		29	63
<b>Associate Professionals</b>	<i>Base:</i>	4,000	4,004
Number of hard-to-fill vacancies		700	300
	<i>Base:</i>	149	82
% of vacancies that were hard to fill		33	14
<b>Admin / Clerical</b>	<i>Base:</i>	4,000	4,004
Number of hard-to-fill vacancies		500	300
	<i>Base:</i>	162	101
% of vacancies that were hard to fill		20	14
<b>Skilled Trades</b>	<i>Base:</i>	4,000	4,004
Number of hard-to-fill vacancies		500	1,100
	<i>Base:</i>	58	69
% of vacancies that were hard to fill		55	30
<b>Caring, Leisure and Other services</b>	<i>Base:</i>	4,000	4,004
Number of hard-to-fill vacancies		1,100	700
	<i>Base:</i>	110	72
% of vacancies that were hard to fill		40	31
<b>Sales / Customer services</b>	<i>Base:</i>	4,000	4,004
Number of hard-to-fill vacancies		800	300
	<i>Base:</i>	124	70
% of vacancies that were hard to fill		24	20
<b>Machine Operatives</b>	<i>Base:</i>	4,000	4,004
Number of hard-to-fill vacancies		200	500
	<i>Base:</i>	59	33
% of vacancies that were hard to fill		23	**
<b>Elementary</b>	<i>Base:</i>	4,000	4,004
Number of hard-to-fill vacancies		500	300
	<i>Base:</i>	127	79
% of vacancies that were hard to fill		20	14

*Base: Row 1 all establishments; Row 2: all establishments with vacancies in that occupation.*

*Percentages in Row 2 are based on all vacancies, rather than all establishments with vacancies; figures therefore show the percentage of vacancies which are hard-to-fill.*

*Number of hard-to-fill vacancies rounded to nearest 100. "\*\*\*" denotes base size under 25: too low to report. Figures in italics denote base size <50: treat figures with caution.*

*Table 3.8 notes changes to the question between 2011 and 2008.. No data exist for this occupational breakdown in the 2005 survey.*

Turning finally to the trends in hard-to-fill vacancies by occupation, it can be seen from Table 3.12 that only Professionals had increases in both the density and number of hard-to-fill vacancies (34 percentage point and 900 vacancy increases). Comparison of the Professionals results with the decline in hard-to-fill vacancies for Elementary occupations is in line with expectations about the up-skilling of the workforce. The largest decrease in the number of hard-to-fill vacancies was in Sales and Customer Services, with an accompanying fall in the density of four per cent.

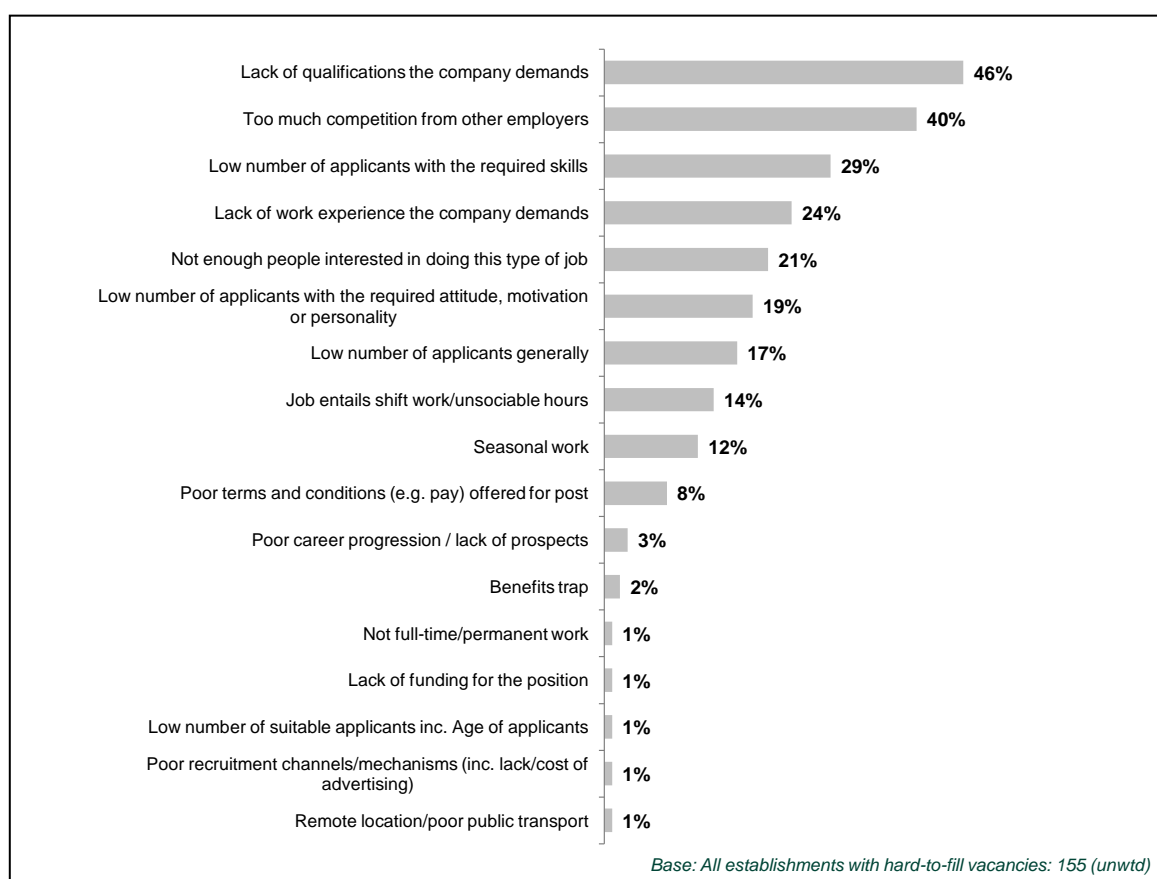
### **3.4 Causes of hard-to-fill vacancies**

Understanding the causes of hard-to-fill vacancies is a prerequisite to introducing effective measures aimed at easing recruitment difficulties and improving the effectiveness of the labour market. Most importantly, it can help identify where there were problems finding applicants with the requisite skills to fill the role. Figure 3.1 shows the main reasons employers cite for recruitment difficulties, which can be broadly split into three areas: issues with the applicants, issues related to the job role, and issues with more general labour market conditions.

The main causes of hard-to-fill vacancies tend to be related to the quality of applicants: lack of qualifications was cited by 46 per cent of sites with a hard-to-fill vacancy, low numbers with the required skills by 29 per cent, lack of work experience by 24 per cent and poor attitude, motivation or personality by 19 per cent. The quantity of applicants was another common problem - not enough people interested in doing this type of job was cited 21 per cent of the time, and low numbers of applicants generally was cited 17 per cent of the time.

The only commonly reported difficulty with more general labour market conditions was high levels of competition, reported by 40 per cent of establishments.

Difficulties attracting applicants due to issues specifically with the job role, such as unsociable hours (14 per cent), seasonal work (12 per cent) and poor terms (eight per cent) were less commonly reported.

**Figure 3.1 Main reasons given for having hard-to-fill vacancies**

*Results are based on hard-to-fill vacancies rather than establishments with hard-to-fill vacancies; the figures therefore show the proportion of hard-to-fill vacancies caused by each factor reported by employers.*

*Note: Summed percentages exceed 100 per cent because of multiple responses*

Table 3.13 sets out the data available on the causes of hard-to-fill vacancies. Due to the small numbers of establishments in each category when broken down by sector and some regions, this limits the information available. The overall results suggest that a lack of qualifications amongst applicants was the most important (unprompted) cause of hard-to-fill vacancies; while this factor was important across all establishment sizes, it was most important amongst the largest establishments (73 per cent of those with hard-to-fill vacancies report this source in the 50+ category). Too much competition from other employers was also an important source of hard-to-fill vacancies, with 40 per cent of all establishments reporting this cause. This result was driven almost entirely by the smallest and largest establishments, with 37 per cent of the former and 70 per cent of the latter indicating this cause.

**Table 3.13 Causes of hard-to-fill vacancies (unprompted) by site size and region**

	<i>Base (unwtd)</i>	Lack of qualifications the company demands	Too much competition from other employers	Low number of applicants with the required skills	Lack of work experience the company demands	Not enough people interested in doing this type of job	Low number of applicants with the required attitude, motivation or personality	Low number of applicants generally	Job entails shift work/unsociable hours	Seasonal work	Poor terms and conditions (e.g. pay) offered for post
		%	%	%	%	%	%	%	%	%	%
<b>Total</b>	155	46	40	29	24	21	19	17	14	12	8
<b>Size</b>											
1-4	44	32	37	48	39	46	39	34	31	29	9
5-10	27	21	6	35	7	16	5	14	3	1	4
11-49	52	35	2	25	27	8	16	10	7	-	8
50+	32	73	70	9	8	1	*	3	1	-	7
<b>Region</b>											
Belfast	51	67	63	26	23	22	22	20	20	19	5
Southern	31	14	0	7	20	22	10	13	5	0	13

*Base: All establishments reporting hard-to-fill vacancies*

*Results are based on hard-to-fill vacancies rather than establishments with hard-to-fill vacancies; the figures therefore show the proportion of hard-to-fill vacancies caused by each factor reported by employers.*

*Note: Summed percentages exceed 100 per cent because of multiple responses ‘-’ denotes a figure of zero; ‘\*’ denotes a figure larger than zero but smaller than 0.5. Figures in italics denote base size <50: treat figures with caution. Sectoral breakdown and regions other than Belfast and Southern have small sample sizes (<25) and are not included in the table.*

Looking across establishment sizes, there was a something of a dichotomy between the largest establishments and the other categories – just two causes dominate the responses of the 50+ group: lack of qualifications amongst applicants and too much competition from other employers. The low response in the 50+ group to issues concerning a lack of skills or experience suggests that they were less important than the qualifications candidates have or that they can be imparted through training and other forms of skills development within the organisation.

A further feature of the establishment size results was that the diversity of responses was much larger amongst the smaller than the larger enterprises. This was largely to be expected as the number of establishments was larger and, almost certainly their range of activities was likely to be greater amongst smaller than larger enterprises. For example, the smallest size group will include everything from corner shops to professional accounting firms and high technology start-ups.

A final interesting distinction between the smallest three and the largest establishment size categories was the switch between the emphasis on qualifications (the most commonly cited cause) to that on skills and experience (the third and fourth most common causes of hard-to-fill vacancies overall). A lack of skills was clearly the most dominant source of the problem amongst the one to four and five to 10 size categories and the second most important source amongst the 11-49 group. A lack of experience was the second most important source amongst the one to four category and the most important source amongst the 11-49 category. This contrasts with the larger establishments, who were far more concerned about lack of qualifications.

The two regions for which there was information were clearly quite different in terms of the sources of their hard-to-fill vacancy problems. The Belfast region emphasises qualifications first (67 per cent of establishments with hard-to-fill vacancies notes this source), and skills and experience second and third (26 and 23 per cent respectively). In the Southern region only a lack of experience and a lack of interested in doing this type of job stand out. The differences suggest that establishment sizes and the nature of production activities in these two regions are probably very distinct.

### **3.4.1 Impact of hard-to-fill vacancies**

Over ninety-per cent of establishments (91 per cent) with a hard-to-fill vacancy said that the vacancy has had an impact (Figure 3.2). The most common response was that employers attempt to cope by giving the associated tasks to other staff (73 per cent of all establishments), which, in some cases, may include themselves, particularly amongst smaller establishments. This work “overload” will give rise to some of the other problems reported by employers, such as delays in product development (47 per cent), failing to meet customer service objectives (43 per cent) and, for example, a loss of business (41 per cent) and / or higher costs (36 per cent, e.g. because of the need for overtime of the staff affected).

Hard-to-fill vacancies often hindered innovation and change: 47 per cent of establishments reported delaying new products, 36 per cent reported difficulties introducing new working practices and 24 per cent had difficulties introducing technological change.

Between a quarter and two-fifths organisations felt that the hard-to-fill vacancy impacted the bottom line: 41 per cent lost business to competitors, 36 per cent cited increased operating costs, 29 per cent withdrew products or services and 26 per cent outsourced work.

Thus, it seems that the presence of a vacancy that was hard-to-fill can give rise to a range of adverse consequences not only across establishments, but even within the same establishment (see Figure 3.2 below).

**Figure 3.2 Impact of hard-to-fill vacancies**

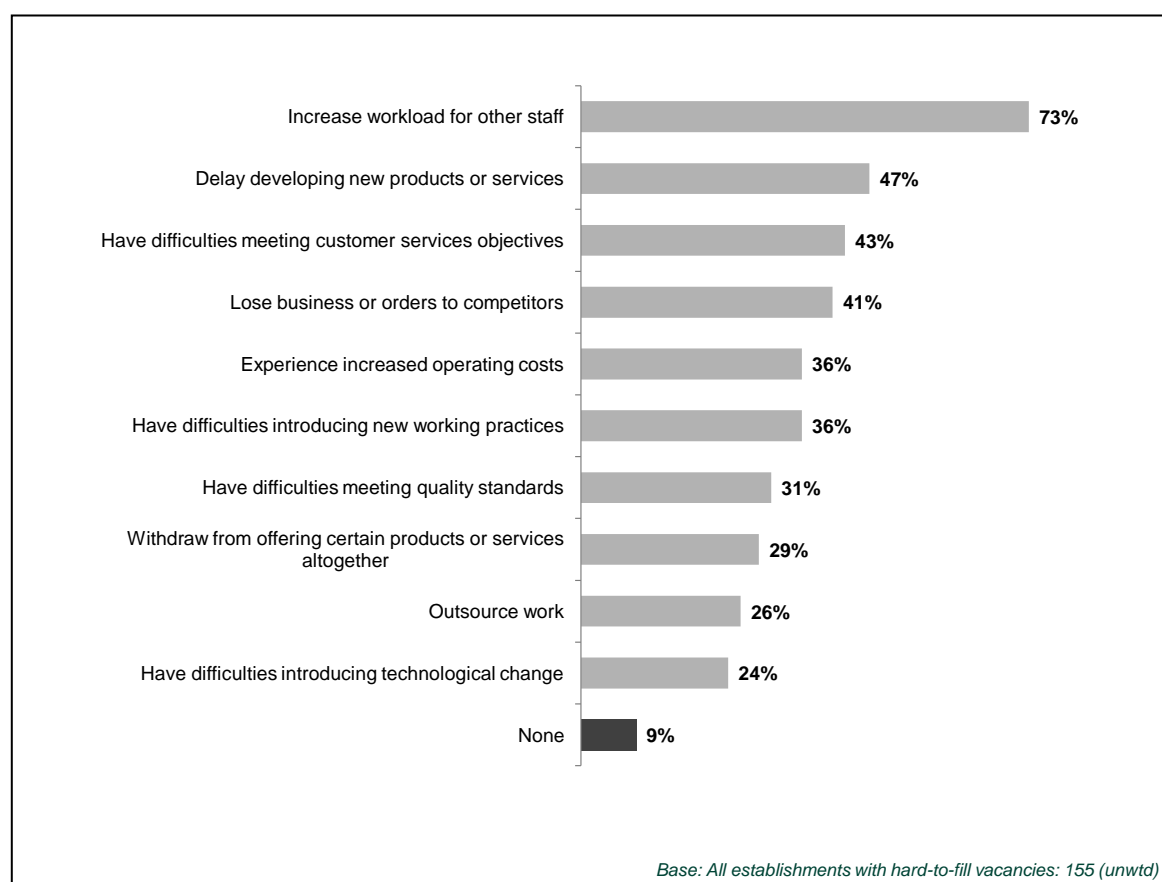


Table 3.14 sets out the (unprompted) views of the impacts of hard-to-fill vacancies, broken down by establishment size and region. Again, the larger number and greater diversity of activities amongst smaller size categories appears to be reflected in the greater range of impacts thought relevant. For example, the size categories less than five and five to 10 appear much more likely to use outsourcing than the largest two categories. The smallest size group was the most likely to report an impact of hard-to-fill vacancies on their ability to introduce technological changes. As suggested by the aggregate results, the increased workload for other staff was the most important result for three of the four size categories and the second most important result for the five to 10 size group.

The two regions for which data are available again show very different impacts. While the increased workload was the most important in both Belfast and the Southern regions (72 and 88 per cent respectively), the latter was considerably higher than the former. The next most important impact for the Southern region was the delay in developing new products or services (60 per cent), but this only elicited a response of 19 per cent in the Belfast region. Another four impacts were considerably more common in the Southern region than in Belfast: lose business or orders to competitors (49 compared with 31 per cent); experience increased operating costs (50 compared with 34 per cent); have difficulties introducing new working practices (54 compared with 20 per cent); and withdraw from offering certain products or services altogether (32 compared with 13 per cent).

**Table 3.14 Impact of hard-to-fill vacancies (unprompted) by site size and region**

	<i>Base (unwtd)</i>	Increase workload for other staff %	Delay developing new products or services %	Have difficulties meeting customer services objectives %	Lose business or orders to competitors %	Experience increased operating costs %	Have difficulties introducing new working practices %	Have difficulties meeting quality standards %	Withdraw from offering certain products or services altogether %	Outsource work %	Have difficulties introducing technological change %
<b>Total</b>	<i>155</i>	73	47	43	41	36	36	31	29	26	24
<b>Size</b>											
1-4	<i>44</i>	73	52	41	52	38	40	31	37	32	34
5-10	<i>27</i>	59	44	60	33	27	21	25	14	34	6
11-49	<i>52</i>	79	43	41	30	43	36	33	27	11	13
50+	<i>32</i>	73	30	41	14	22	28	28	10	11	19
<b>Region</b>											
Belfast	<i>51</i>	72	19	46	31	34	20	26	13	27	25
Southern	<i>31</i>	88	60	46	49	50	54	23	32	28	24

*Base: all establishments reporting hard-to-fill vacancies*

*Note: Summed percentages exceed 100 per cent because of multiple responses*

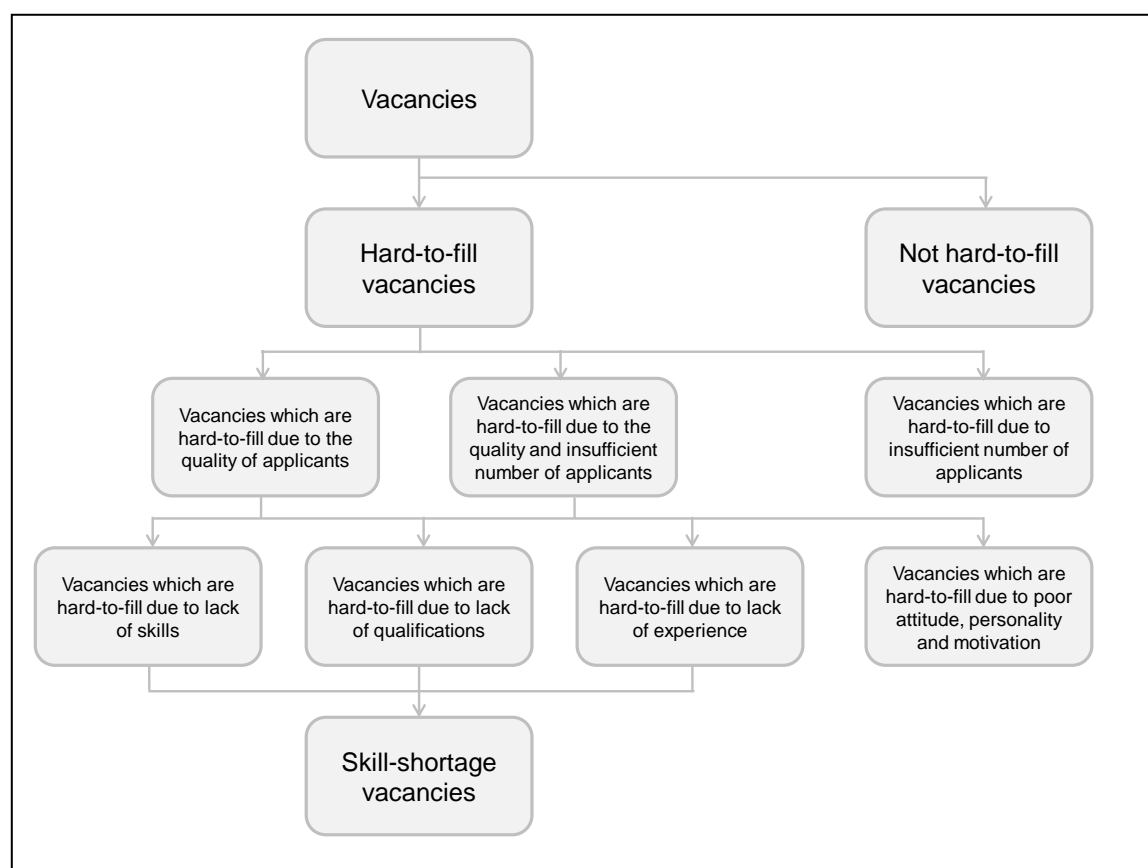
*Figures in italics denote base size <50: treat figures with caution. Sectoral breakdown and regions other than Belfast and Southern have small sample sizes (<25) and are not included in the table.*

### 3.5 Skill-shortage vacancies

The discussion now turns to a subset of the hard-to-fill vacancies – those vacancies at the time of the survey that employers had difficulties filling due to a lack of skills, qualifications or experience amongst the applicants for the role (a “skill-shortage vacancy”). It should be borne in mind that, while such vacancies may be extremely important, their incidence and numbers will be smaller than for all hard-to-fill vacancies and, thereby, sample sizes become quite small.

As discussed above, recruitment difficulties were commonly caused by issues relating to the applicants, be it quality or quantity. Hard-to-fill vacancies caused specifically by a lack of skills, qualifications or experience among applicants are known as “skill-shortage vacancies”<sup>12</sup>. Where there was an issue with the attitude, personality or motivation of applicants, these are not skill-shortage vacancies. Figure 3.3 shows a “map” of how skill-shortage vacancies are defined.

**Figure 3.3 Skill-shortage vacancies route map**



<sup>12</sup> Employers were first asked to give their reasons for not being able to fill vacancies spontaneously (i.e. without being presented with a list of possible reasons). Any employers not reporting skills-related issues were then prompted as to whether any of their hard-to-fill vacancies were proving hard-to-fill due to a lack of skills, experience or qualifications among applicants, and these responses combined to give an overall picture of the incidence and volume of skill-shortage vacancies in the market.



### 3.4.1 Incidence of skill-shortage vacancies

Table 3.15 shows the overall results for Northern Ireland over the three years 2005, 2008 and 2011. Comparing the results with Table 3.2, it can be seen that, while the proportion of establishments reporting skill-shortage vacancies formed about one fifth of the establishments reporting all kinds of vacancies in 2005 (two per cent out of eleven per cent with vacancies), this rose to one quarter in 2008 (three per cent out of twelve per cent with vacancies) and just over one third in 2011 (three per cent out of 10 per cent with vacancies). In addition, while the number of skill-shortage vacancies formed 18 per cent of all vacancies in 2008, this rose to 28 per cent by 2011.

Table 3.15 shows that skill shortages are on the rise. While the proportion of establishments reporting skills-shortage vacancies was relatively constant, both the number of skills-shortage vacancies and the density increase between 2008 and 2011. Between 2008 and 2011, the number of skills-shortage vacancies increased from 3,100 to 5,500 and the density increased from 18 per cent of total vacancies in 2008 to 28 per cent in 2011 (see Table 3.15).

**Table 3.15 Incidence, volume and density of skill-shortage vacancies over time**

	2005	2008	2011
<i>Base</i>	4,126	4,000	4,004
<i>Column %</i>	%	%	%
% of establishments with a skill-shortage vacancy	4	3	3
Number of skill-shortage vacancies	n/a	3,100	5,500
<i>Base</i>	n/a	745	524
Skill-shortage vacancy density (% of vacancies that were SSVs)	n/a	18	28

*Base: Rows 1 and 2 all establishments; Row 4: all establishments with vacancies Percentages in Row 4 are based on all vacancies, rather than all establishments with vacancies; figures therefore show the percentage of vacancies which are hard to fill due to skill shortages.*

*Number of skill-shortage vacancies rounded to nearest 100. 'n/a' denotes the question was not asked / was not asked in a comparable manner in that year's survey.*

Table 3.16 disaggregates the findings in Table 3.15 by establishment size. The proportion of vacancies that were skills-shortage vacancies was the highest for the very smallest (less than five staff) and very largest (50+ staff) establishments. This was consistent with the trends seen in the incidence of hard-to-fill vacancies discussed above (see Section 3.2.1).

The incidence of skills-shortage vacancies did not show much of a change in the three smallest size categories. The largest change took place in the 50+ group, which fell back between 2008 and 2011 by four percentage points to eight per cent.

**Table 3.16 Incidence, volume and density of skill-shortage vacancies: time series by employer size**

		2005	2008	2011
Column %		%	%	%
Size				
<b>1-4</b>	<i>Base:</i>	1,044	1,098	1,330
% of establishments with a skill-shortage vacancy		2	1	2
Number of skill-shortage vacancies		n/a	600	2,000
	<i>Base:</i>	n/a	70	89
% of vacancies that were skill-shortage vacs		n/a	29	33
<b>5-10</b>	<i>Base:</i>	735	1,006	1,196
% of establishments with a skill-shortage vacancy		6	3	2
Number of skill-shortage vacancies		n/a	500	300
	<i>Base:</i>	n/a	132	105
% of vacancies that were skill-shortage vacs		n/a	17	19
<b>11-49</b>	<i>Base:</i>	1,506	1,395	1,149
% of establishments with a skill-shortage vacancy		6	5	4
Number of skill-shortage vacancies		n/a	1,100	1,100
	<i>Base:</i>	n/a	295	198
% of vacancies that were skill-shortage vacs		n/a	22	21
<b>50+</b>	<i>Base:</i>	841	501	329
% of establishments with a skill-shortage vacancy		10	12	8
Number of skill-shortage vacancies		n/a	900	2,100
	<i>Base:</i>	n/a	248	132
% of vacancies that were skill-shortage vacs		n/a	13	30

*Base: Rows 1 and 2 of each sizeband all establishments; Row 3: all establishments with vacancies. Percentages in Row 3 are based on all vacancies, rather than all establishments with vacancies; figures therefore show the percentage of vacancies which are hard to fill due to skill shortages.*

*Number of skill-shortage vacancies rounded to nearest 100. 'n/a' denotes the question was not asked / was not asked in a comparable manner in that year's survey.*

The largest establishments (50+ staff) in Northern Ireland saw the biggest increases in the density of skills-shortage vacancies (increasing 17 percentage points, see Table 3.15). The number of skills-shortage vacancies increased from 900 to 2,100 between 2008 and 2011. However, as the number of overall vacancies in this size band declined in this time period (see Table 3.3), this suggests that the increase in skills-shortage vacancies was driven by an increase in the proportion of vacancies that were hard to fill as a result of a skill shortage rather than an absolute increase in the number of vacancies. Thus, the overall vacancies in the largest establishments are declining but the proportion of vacancies that are skills-shortage vacancies is increasing.

The number of skills-shortage vacancies also increased in the smallest establishments from 600 in 2008 to 2,000 in 2011. However, the density only increased slightly, from 29 per cent in 2008 to 33 per cent in 2011. Thus, the increase in the absolute number of skills-shortage vacancies was driven largely by an increase in the overall number of vacancies in very small establishments (see Table 3.3) which resulted from growth in the number of small establishments in Northern Ireland.

The changes over time in the incidence of skill-shortage vacancies by sector for 2005, 2008 and 2011 are set out in Table 3.17. The volume and density of skill-shortage vacancies by sector in 2008 and 2011 can be found in Appendix A (Table A3). Change information is again missing for Agriculture, Mining and Quarrying and Electricity, Gas and Water due to the small base sizes available in these sectors.

Taking the 2005 to 2011 period as a whole, there were no major changes in the proportion of establishments reporting skill-shortage vacancies, with a number increasing or decreasing by one or two percentage points. The largest change between 2005 and 2011 was an increase of two percentage points in Community, Social and Personal Services. The fairly minor changes over the period as a whole, however, conceals one more important off-setting change in the two sub-periods in Health and Social Work, where the proportion of establishments reporting skill-shortage vacancies rises by three percentage points (2005-2008) and then falls by five percentage points (2008-2011).

There was a diversity of experiences with regard to changes in skill-shortage densities across sectors, i.e. the proportion of vacancies that are skills shortage vacancies (Table A3 in Appendix A). Only three exhibit falls, those in Transport and Communications (six percentage point decline), Education (three percentage point decline) and Health and Social Work (11 percentage point decline). Of those showing increases, Hotels and Restaurants and Business Services both show nine percentage point rises.

**Table 3.17 Incidence of skill-shortage vacancies: time series by sector**

		2005	2008	2011
<i>Column %</i>		%	%	%
<b>Sector</b>				
<b>Agriculture</b>	<i>Base:</i>	0	0	33
% of establishments with a skill-shortage vacancy		**	**	-
<b>Mining &amp; Quarrying</b>	<i>Base:</i>	17	10	15
% of establishments with a skill-shortage vacancy		**	**	**
<b>Manufacturing</b>	<i>Base:</i>	700	522	348
% of establishments with a skill-shortage vacancy		5	4	3
<b>Electricity, Gas and Water</b>	<i>Base:</i>	18	22	54
% of establishments with a skill-shortage vacancy		**	**	2
<b>Construction</b>	<i>Base:</i>	229	280	367
% of establishments with a skill-shortage vacancy		4	1	1
<b>Wholesale and Retail</b>	<i>Base:</i>	784	787	736
% of establishments with a skill-shortage vacancy		3	2	2
<b>Hotels and Restaurants</b>	<i>Base:</i>	181	226	335
% of establishments with a skill-shortage vacancy		5	4	6
<b>Transport and Communications</b>	<i>Base:</i>	324	216	303
% of establishments with a skill-shortage vacancy		3	2	3
<b>Finance Services</b>	<i>Base:</i>	135	133	139
% of establishments with a skill-shortage vacancy		4	2	2
<b>Business Services</b>	<i>Base:</i>	456	557	515
% of establishments with a skill-shortage vacancy		5	3	3
<b>Public Administration</b>	<i>Base:</i>	74	178	107
% of establishments with a skill-shortage vacancy		6	6	6
<b>Education</b>	<i>Base:</i>	339	313	287
% of establishments with a skill-shortage vacancy		2	2	3
<b>Health and Social Work</b>	<i>Base:</i>	456	362	433
% of establishments with a skill-shortage vacancy		5	8	3
<b>Community, Social and Personal Services activities</b>	<i>Base:</i>	413	394	332
% of establishments with a skill-shortage vacancy		2	1	4

*Base: Row 1 all establishments.*

*Number of skill-shortage vacancies rounded to nearest 100. ‘\*\*\*’ denotes base size under 25: too low to report. Figures in italics denote base size <50: treat figures with caution. ‘-’ denotes a figure of zero;*

Table 3.18 considers the changes in the incidence, volume and density of skill-shortage vacancies by region. The changes in the proportion of establishments reporting skill-shortage vacancies between 2008 and 2011 were minimal; the greatest change was in the South West region, which exhibited a two percentage point fall.

**Table 3.18 Incidence, volume and density of skill-shortage vacancies: time series by region**

		<b>2008</b>	<b>2011</b>
<i>Column %</i>		<i>%</i>	<i>%</i>
<b>Region</b>			
<b>Belfast</b>	<i>Base:</i>	979	926
% of establishments with a skill-shortage vacancy		3	4
Number of skill-shortage vacancies		900	3,500
	<i>Base:</i>	222	172
% of vacancies that were skill-shortage vacs		14	42
<b>Northern</b>	<i>Base:</i>	788	879
% of establishments with a skill-shortage vacancy		2	2
Number of skill-shortage vacancies		500	400
	<i>Base:</i>	129	105
% of vacancies that were skill-shortage vacs		18	9
<b>North West</b>	<i>Base:</i>	395	386
% of establishments with a skill-shortage vacancy		1	2
Number of skill-shortage vacancies		100	100
	<i>Base:</i>	59	36
% of vacancies that were skill-shortage vacs		11	7
<b>Southern</b>	<i>Base:</i>	657	662
% of establishments with a skill-shortage vacancy		2	3
Number of skill-shortage vacancies		400	500
	<i>Base:</i>	118	71
% of vacancies that were skill-shortage vacs		20	25
<b>South West</b>	<i>Base:</i>	514	469
% of establishments with a skill-shortage vacancy		5	3
Number of skill-shortage vacancies		500	500
	<i>Base:</i>	95	60
% of vacancies that were skill-shortage vacs		29	37
<b>South East</b>	<i>Base:</i>	667	682
% of establishments with a skill-shortage vacancy		3	2
Number of skill-shortage vacancies		600	500
	<i>Base:</i>	122	80
% of vacancies that were skill-shortage vacs		20	25

*Base: Rows 1 and 2 of each region all establishments; Row 3: all establishments with vacancies.*

*Percentages in Row 3 are based on all vacancies, rather than all establishments with vacancies; figures therefore show the percentage of vacancies which are hard to fill due to skill shortages.*

*Number of skill-shortage vacancies rounded to nearest 100.*

*In 2005 the regions were defined differently, so no comparable data is available*

Three regions have changes in the density of skill-shortage vacancies of five percentage points or less during the period 2008 to 2011 (North West, Southern and South East), while the South West had a increase of eight percentage points, Northern a decline of 9 percentage points and Belfast a rise of 28 percentage points. Belfast also has by far the largest increase in the number of skill-shortage vacancies (2,600), driven by a substantial rise in skill-shortage vacancy density, as well a small increase in establishments reporting skill-shortage vacancies.

Finally, moving to occupations, the results from Table 3.19 suggest that two occupations in particular show important changes between 2008 and 2011: Professional Occupations have a 37 percentage point rise in the density of skill-shortage vacancies, linked to an increase of 900 skill-shortage vacancies; Skilled Trades which, while exhibiting a 24 percentage point fall in the density of skill-shortage vacancies, nevertheless show a rise of 600 in the number of such vacancies reflecting a rise in the number of vacancies for this occupation.

**Table 3.19 Volume and density of skill-shortage vacancies: time series by occupation**

		<b>2008</b>	<b>2011</b>
<i>Column %</i>		<i>%</i>	<i>%</i>
<b>Occupation</b>	<i>Base:</i>	<i>4,000</i>	<i>4,004</i>
<b>Managers</b>	<i>Base:</i>	<i>4,000</i>	<i>4,004</i>
Number of skill-shortage vacancies		200	100
	<i>Base:</i>	<i>74</i>	<i>33</i>
% of vacancies that were skill-shortage vacs		25	31
<b>Professionals</b>	<i>Base:</i>	<i>4,000</i>	<i>4,004</i>
Number of skill-shortage vacancies		300	1,200
	<i>Base:</i>	<i>86</i>	<i>93</i>
% of vacancies that were skill-shortage vacs		23	60
<b>Associate Professionals</b>	<i>Base:</i>	<i>4,000</i>	<i>4,004</i>
Number of skill-shortage vacancies		500	300
	<i>Base:</i>	<i>149</i>	<i>82</i>
% of vacancies that were skill-shortage vacs		24	13
<b>Admin / Clerical</b>	<i>Base:</i>	<i>4,000</i>	<i>4,004</i>
Number of skill-shortage vacancies		300	100
	<i>Base:</i>	<i>162</i>	<i>101</i>
% of vacancies that were skill-shortage vacs		12	4
<b>Skilled Trades</b>	<i>Base:</i>	<i>4,000</i>	<i>4,004</i>
Number of skill-shortage vacancies		400	1,000
	<i>Base:</i>	<i>58</i>	<i>69</i>
% of vacancies that were skill-shortage vacs		51	27
<b>Caring, Leisure and Other services</b>	<i>Base:</i>	<i>4,000</i>	<i>4,004</i>
Number of skill-shortage vacancies		700	600
	<i>Base:</i>	<i>110</i>	<i>72</i>
% of vacancies that were skill-shortage vacs		26	28
<b>Sales / Customer services</b>	<i>Base:</i>	<i>4,000</i>	<i>4,004</i>
Number of skill-shortage vacancies		200	300
	<i>Base:</i>	<i>124</i>	<i>70</i>
% of vacancies that were skill-shortage vacs		5	17
<b>Machine Operatives</b>	<i>Base:</i>	<i>4,000</i>	<i>4,004</i>
Number of skill-shortage vacancies		100	200
	<i>Base:</i>	<i>59</i>	<i>33</i>
% of vacancies that were skill-shortage vacs		14	**
<b>Elementary</b>	<i>Base:</i>	<i>4,000</i>	<i>4,004</i>
Number of skill-shortage vacancies		300	200
	<i>Base:</i>	<i>127</i>	<i>79</i>
% of vacancies that were skill-shortage vacs		12	8

*Base: Row 1 of each occupation all establishments; Row 2: all establishments with vacancies in that occupation. Percentages in Row 3 are based on all vacancies, rather than all establishments with vacancies; figures therefore show the percentage of vacancies which are hard to fill due to skill shortages.*

*Number of skill-shortage vacancies rounded to nearest 100. '\*\*' denotes a figure larger than zero but smaller than 0.5. '\*\*\*' denotes base size under 25: too low to report. Figures in italics denote base size <50: treat figures with caution.*

*No data exist for this occupational breakdown in the 2005 survey.*

### 3.6 Conclusions

The percentage of establishments reporting vacancies, hard-to-fill and skill-shortage vacancies have changed very little over time. However, in terms of the total number of vacancies and the vacancy density, both hard-to-fill and skill-shortage vacancies have increased since 2008. In 2008, 29 per cent of all vacancies were hard-to-fill vacancies compared with 32 per cent in 2011. The increase in the proportion of vacancies due to skill-shortages was even greater: skills-shortage vacancies formed 18 per cent of vacancies in 2008 and 28 per cent in 2011.

At an overall level most employers are able to successfully recruit from the labour market. However there are significant pockets of concentration where there are problems for some groups of employers.

Between 2008 and 2011, the number of vacancies declined in all establishment sizes except for the smallest size group of organisations (one to four staff), which saw a substantial increase in the number of overall vacancies (from 2,100 to 6,200).

Hard-to-fill vacancies and skill-shortage vacancies in Northern Ireland were concentrated in the smallest (one to four staff) and largest (50+ staff) establishments. The incidence of hard-to-fill vacancies and skills-shortage vacancies increased between 2008 and 2011 in both of these size categories and little change was seen for the middle-size organisations.

The sector and occupation data indicate that demand for staff in Northern Ireland is concentrated in “white collar” positions. The Professional occupation saw an increase in vacancies between 2008 and 2011. In 2011, the Professional occupation had the largest proportion of hard-to-fill vacancies (63 per cent of vacancies) and skills-shortage vacancies (60 per cent of vacancies). Demand for employees is concentrated in sectors which employ professionals. The Business Services sector saw the largest increase in vacancies between 2008 and 2011 (from 2,500 vacancies in 2008 to 6,800 vacancies in 2011), and had above average proportions of vacancies that were skills-shortage vacancies.



The Skilled Trades occupation is another role in which there has been a high demand for workers. Between 2008 and 2011, the number of vacancies in the Skilled Trades occupation increased substantially (from 900 to 3,600). However the proportion of those vacancies that were hard to fill declined from 55 per cent in 2008 to 30 per cent in 2011. The density of Skilled Trades skills-shortage vacancies also declined from 51 per cent of vacancies in 2008 to 27 per cent of vacancies in 2011, which brings the occupation close to the average. Perhaps the changes in the Skilled Trade roles were driven by the Manufacturing sector, which saw declines in the density of hard-to-fill vacancies (from 41 per cent of vacancies in 2008 to 28 per cent of vacancies in 2011) and skills-shortage vacancies (from 30 per cent of vacancies in 2008 to 24 per cent of vacancies in 2011), re-positioning from above average to average levels.

The Health and Social Work and Wholesale and Retail sectors saw the largest decreases in the incidence of vacancies between 2008 and 2011. In the Health and Social Work sector, the number of vacancies declined from 3,400 in 2008 to 1,700 in 2011 (density also dropped from 3.1 to 1.5). The density of hard-to-fill vacancies for this sector declined from 49 per cent of vacancies in 2008 to 29 per cent in 2011 and the density of skills-shortage vacancies dropped from 32 per cent to 21 per cent. In the Wholesale and Retail sector and the related Sales/Customer Service occupation, the volume of overall vacancies declined between 2008 and 2011. However, both the Wholesale and Retail Sector and the Sales/Customer Service occupation saw increases in the density of skills-shortage vacancies.

The Belfast region saw large increases in the volume of all types of vacancies between 2008 and 2011 and has the highest density of all types of vacancies currently. Between 2008 and 2011, the number of vacancies increased from 6,300 to 8,200 (the density increased from 2.8 to 3.5), the proportion of vacancies that were hard to fill increased from 22 per cent to 48 per cent and the proportion of vacancies there were skills-shortage vacancies increased from 14 per cent to 42 per cent. Thus, employers in this region were having difficulties finding people with the right qualifications to fill the new jobs available.

The Northern region saw the largest increase in the number of vacancies between 2008 and 2011 (from 3,000 to 5,200) and in vacancy density (from 1.9 to 3.3). However, this region has a relatively low incidence of hard-to-fill and skills-shortage vacancies compared to the other regions. Furthermore, the proportion of vacancies that were hard-to-fill and were skills-shortage vacancies decreased between 2008 and 2011 (the density of hard-to-fill vacancies decreased from 31 per cent to 10 per cent and the density of skills-shortage vacancies declined from 18 per cent to 9 per cent). This data reflects that fact that, relative to the rest of Northern Ireland, the Northern economy contains a larger share of employment in areas in which hard-to-fill vacancies and skills-shortage vacancies are declining (such as Manufacturing) and less dependent on employment in areas such as the Public Administration sector and the Professional occupation in which hard-to-fill vacancies and skills-shortage vacancies are increasing.

Most hard-to-fill vacancies and all skill-shortage vacancies (by definition) were caused by applicant-related issues such as lack of skills, qualification and experience (86 per cent of hard-to-fill vacancies were skills-shortage vacancies). Thus, in order for the labour market of Northern Ireland to meet employer demand, there needs to be a better match between the skills and qualifications of workers and jobs. The trends suggest pockets of demand for more highly qualified occupations, such as Professional and Skilled Trades occupations, and sectors that employ highly qualified staff, such as Business Services. As Northern Ireland moves towards higher specification and higher quality goods and services, it is possible that issues of hard-to-fill vacancies and skill-shortage vacancies will intensify.

## 4 Internal Skills Mismatch

### Chapter Summary

In 2011, skill gaps existed in 12 per cent of establishments in Northern Ireland, making up five per cent of the workforce. This chapter explores how the experience of skill gaps varies with:

- site size - incidence of skill gaps generally increased with the size of establishment (from seven per cent for sites with fewer than five staff to 36 per cent for establishments with 50+ workers) but the proportion of the workforce with a skill gap was broadly similar across size groups;
- sector - incidence was highest for organisations in the Hotels and Restaurants, Wholesale and Retail and Public Administration sectors (with 18, 17 and 16 per cent of establishments respectively reporting a skill gap). The proportion of the workforce with a skills gap was highest in the Hotels and Restaurants sector, at 10 per cent;
- region - incidence of skill gaps was highest for organisations in the Belfast, Northern and South West regions (13 per cent of sites) and lowest in the North West region (nine per cent). The percentage of the workforce ranged from seven per cent in the South West to three per cent in Belfast region;
- occupation - highest in Elementary and Sales and Customer Services positions, with seven per cent of staff described as lacking full proficiency and lowest for Professionals (two per cent);
- over time – it is the same groups of employers that have a above average proportion of their workforce with skills gaps suggesting a persistent problem for some occupations and sectors.

This chapter also explores the causes of skill gaps and finds that the most common cause was staff being new to the role and, related to this, training only being partially completed, with 49 per cent and 52 per cent of all skill gaps respectively being at least partly attributed to these reasons.

This chapter also discusses the impact of skill gaps and finds that the most common consequence was an increase in the workload for other staff (reported by 58 per cent of sites with a skill gap).

## 4.1 Introduction

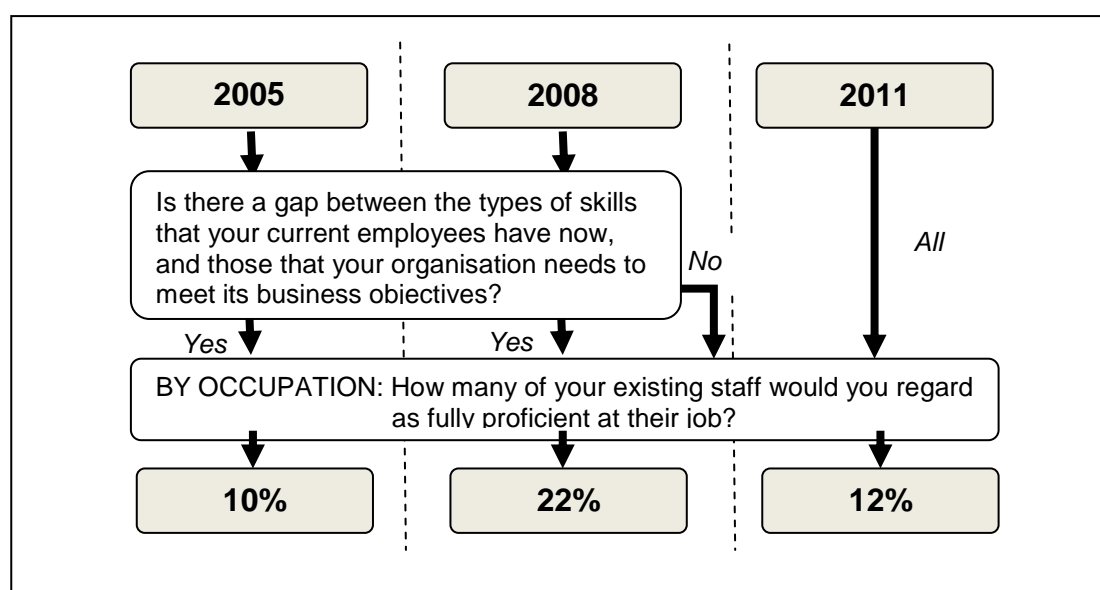
A skill gap exists when at least one member of staff is not fully proficient at their job, which will have an impact on the efficient functioning of establishments. The majority of establishments in Northern Ireland regard their workers as being fully proficient at their job roles; just 12 per cent report having at least one member of staff that is not fully proficient in 2011. The main measures used in the present chapter are:

- skill gaps incidence – the proportion of establishments reporting a skill gap;
- skills gap density – workers who have insufficient skills to proficiently carry out their assigned tasks as a proportion of all workers.

This chapter will focus on skill gaps, exploring their incidence and density over time by site size, sector, region and occupation. This chapter will review the causes and impacts of skill gaps. Finally, this chapter will compare the incidence of skill gaps with the incidence of skill-shortage vacancies.

While time series are presented in this chapter for skills gaps it should be noted that the way the skills gaps measures were reached in 2005, 2008 and 2011 differs. In 2005 and 2008 the main skills gap question was preceded by an overall question asking whether the skills of staff overall were sufficient to meet business objectives. In 2005 only those saying “Yes” at this question were asked whether staff in each occupation were proficient; in 2008 all employers were asked whether staff in each occupation were proficient irrespective of their answer to the first question. Figure 4.1 summarises the route map to the overall skills gaps measure in each year.

**Figure 4.1 Skills gaps route map 2005, 2008, and 2011**



Care must therefore be taken in interpreting the skills gaps time series. The results show a large fall in establishments reporting skills gaps between 2008 and 2011, from 22 per cent to 12 per cent. Some of this fall is likely to be the result of an actual fall in skills gaps and some the result of the question change. In 2008 14 per cent of establishments said that the skills of their staff were not sufficient to meet *business objectives*, this is a narrower question than the overall skills gaps measure we report in this chapter. Given that 12 per cent of establishments reported a skills gap in 2011 using the broader measure, this indicates it is likely there has been a fall in skills gaps between 2008 and 2011 irrespective of question changes. For this reason, the analysis presented focuses on variations to the average over time rather than absolute changes in numbers or levels.

## **4.2 The incidence, volume, density and distribution of skill gaps**

The majority of Northern Ireland establishments (88 per cent) surveyed in 2011 reported that their entire workforce was regarded as being fully proficient at their job roles. Only 12 per cent reported having at least one member of staff that is not fully proficient (a 'skill gap'). This amounts to around 33,600 Northern Ireland workers or five per cent of the workforce (the skill gap density).

**Table 4.1 Incidence, volume and density of skills gaps: 2011**

		% of establishments with a skills gap	Number of gaps	Skills gap density
	<i>Unwtd base</i>	%	Rounded to nearest 100	%
Total	4,004	12	33,600	5
<b>Size</b>				
1-4	1,330	7	2,600	4
5-10	1,196	13	3,400	4
11-49	1,149	23	11,000	5
50+	329	36	16,700	5
<b>Sector</b>				
Agriculture	33	11	400	6
Mining and Quarrying	15	**	*	2
Manufacturing	348	14	5,400	6
Electricity, Gas and Water	54	4	100	1
Construction	367	6	1,000	3
Wholesale and Retail	736	17	8,600	6
Hotels and Restaurants	335	18	4,800	10
Transport and Communications	303	9	1,900	4
Finance Services	139	11	700	4
Business Services	515	11	3,500	4
Public Administration	107	16	1,400	2
Education	287	12	800	2
Health and Social Work	433	9	3,200	3
Community, Social and Personal Services activities	332	9	1,600	5
<b>Region</b>				
Belfast	926	13	8,100	3
Northern	879	13	6,500	4
North West	386	9	2,900	5
Southern	662	10	5,500	5
South West	469	13	5,100	7
South East	682	11	5,400	5

*Base: All establishments*

*Number of gaps rounded to nearest 100. \*' denotes a figure larger than zero but smaller than 0.5. \*\*\*' denotes base size under 25: too low to report.*

The incidence of skill gaps increased between 2005 and 2008, and skill gaps declined between 2008 and 2011 (see Table 4.2). As indicated in section 4.1 care must be taken in interpreting these changes due to changes in the question. The recession may have led to a decline in the incidence of skill gaps if employers began laying off workers (and choosing to lay off workers that were not fully proficient) or if employers stopped investing and innovating to cut costs and therefore did not require workers to adapt, eliminating a common cause of skill gaps (see Section 4.3).

**Table 4.2 Changes in the incidence, volume and density of skill gaps over time**

	<b>2005</b>	<b>2008</b>	<b>2011</b>
<i>Base</i>	4,126	4,000	4,004
<i>Column %</i>	%	%	%
% of establishments with a skill gap	10	22	12
Number of skill gaps	n/a	58,700	33,600
Skill gap density ( <i>% of workforce with gaps</i> )	n/a	8	5

*Base: All establishments*

*Number of gaps rounded to nearest 100. n/a' denotes the question was not asked / was not asked in a comparable manner in that year's survey.*

*Note changes to questions described in section 4.1*

While the incidence of skill gaps increases with the size of establishment, the proportion of staff described as having a skill gap shows very little variation with establishment size similar to the overall pattern seen in 2008 (see Table 4.3). In 2011 four per cent of the workforce employed by establishments with fewer than five staff were described as not fully proficient as were five per cent of workers at sites with more than fifty staff members. The time trend for skill gaps was the same regardless of employer size: between 2005 and 2008 the incidence increased but then declined between 2008 and 2011.

**Table 4.3 Incidence, volume and density of skill gaps: time series by site size**

		<b>2005</b>	<b>2008</b>	<b>2011</b>
<i>Column %</i>		%	%	%
<b>Size</b>				
<b>1-4</b>	<i>Base:</i>	<i>1,044</i>	<i>1,098</i>	<i>1,330</i>
% of establishments with a skill gap		4	12	7
Number of skill gaps		n/a	4,500	2,600
% of workforce with skill gaps		n/a	7	4
<b>5-10</b>	<i>Base:</i>	<i>735</i>	<i>1,006</i>	<i>1,196</i>
% of establishments with a skill gap		13	28	13
Number of skill gaps		n/a	7,700	3,400
% of workforce with skill gaps		n/a	9	4
<b>11-49</b>	<i>Base:</i>	<i>1,506</i>	<i>1,395</i>	<i>1,149</i>
% of establishments with a skill gap		23	39	23
Number of skill gaps		n/a	18,600	11,000
% of workforce with skill gaps		n/a	8	5
<b>50+</b>	<i>Base:</i>	<i>841</i>	<i>501</i>	<i>329</i>
% of establishments with a skill gap		32	52	36
Number of skill gaps		n/a	27,900	16,700
% of workforce with skill gaps		n/a	8	5

*Base: All establishments*

*Number of gaps rounded to nearest 100. n/a' denotes the question was not asked / was not asked in a comparable manner in that year's survey.*

*Note changes to questions described in section 4.1*

The incidence of skill gaps varies by sector (See Table 4.4). The Hotels & Restaurants (18 per cent of establishments), Wholesale and Retail (17 per cent) and Public Administration (16 per cent) sectors showed the highest incidence of skill gaps in 2011. The overall proportion of staff in the Hotels & Restaurants sector with skill gaps was also higher than average (10 per cent in 2011, see Appendix A, Table A4). For these three sectors the problem of skills gaps has been persistent over time, all three sectors had an above average proportion of establishments reporting skills gaps in 2011 and 2008, and this same trend stretches back to 2005 for Public Administration and Hotels and Restaurants.

Overall the time trends were consistent across sectors. The incidence of skill gaps increased between 2005 and 2008 and then decreased again between 2008 and 2011 as the recession hit.



**Table 4.4 Incidence of skill gaps: time series by sector**

		<b>2005</b>	<b>2008</b>	<b>2011</b>
<i>Column %</i>		<i>%</i>	<i>%</i>	<i>%</i>
<b>Sector</b>				
<b>Agriculture</b>	<i>Base:</i>	<i>0</i>	<i>0</i>	<i>33</i>
% of establishments with a skill gap		<i>**</i>	<i>**</i>	<i>11</i>
<b>Mining &amp; Quarrying</b>	<i>Base:</i>	<i>17</i>	<i>10</i>	<i>15</i>
% of establishments with a skill gap		<i>**</i>	<i>**</i>	<i>**</i>
<b>Manufacturing</b>	<i>Base:</i>	<i>700</i>	<i>522</i>	<i>348</i>
% of establishments with a skill gap		<i>8</i>	<i>28</i>	<i>14</i>
<b>Electricity, Gas and Water</b>	<i>Base:</i>	<i>18</i>	<i>22</i>	<i>54</i>
% of establishments with a skill gap		<i>**</i>	<i>**</i>	<i>4</i>
<b>Construction</b>	<i>Base:</i>	<i>229</i>	<i>280</i>	<i>367</i>
% of establishments with a skill gap		<i>8</i>	<i>19</i>	<i>6</i>
<b>Wholesale and Retail</b>	<i>Base:</i>	<i>784</i>	<i>787</i>	<i>736</i>
% of establishments with a skill gap		<i>8</i>	<i>24</i>	<i>17</i>
<b>Hotels and Restaurants</b>	<i>Base:</i>	<i>181</i>	<i>226</i>	<i>335</i>
% of establishments with a skill gap		<i>16</i>	<i>37</i>	<i>18</i>
<b>Transport and Communications</b>	<i>Base:</i>	<i>324</i>	<i>216</i>	<i>303</i>
% of establishments with a skill gap		<i>5</i>	<i>21</i>	<i>9</i>
<b>Finance Services</b>	<i>Base:</i>	<i>135</i>	<i>133</i>	<i>139</i>
% of establishments with a skill gap		<i>11</i>	<i>26</i>	<i>11</i>
<b>Business Services</b>	<i>Base:</i>	<i>456</i>	<i>557</i>	<i>515</i>
% of establishments with a skill gap		<i>9</i>	<i>19</i>	<i>11</i>
<b>Public Administration</b>	<i>Base:</i>	<i>74</i>	<i>178</i>	<i>107</i>
% of establishments with a skill gap		<i>21</i>	<i>32</i>	<i>16</i>
<b>Education</b>	<i>Base:</i>	<i>339</i>	<i>313</i>	<i>287</i>
% of establishments with a skill gap		<i>12</i>	<i>22</i>	<i>12</i>
<b>Health and Social Work</b>	<i>Base:</i>	<i>456</i>	<i>362</i>	<i>433</i>
% of establishments with a skill gap		<i>13</i>	<i>17</i>	<i>9</i>
<b>Community, Social and Personal Services activities</b>	<i>Base:</i>	<i>413</i>	<i>394</i>	<i>332</i>
% of establishments with a skill gap		<i>12</i>	<i>13</i>	<i>9</i>

*Base: All establishments*

*Number of gaps rounded to nearest 100. “\*\*” denotes base size under 25: too low to report. Figures in italics denote base size <50: treat figures with caution.*

*Note changes to questions described in section 4.1*

**Table 4.5 Incidence, volume and density of skill gaps: time series by region**

		<b>2008</b>	<b>2011</b>
<i>Column %</i>		<i>%</i>	<i>%</i>
<b>Region</b>			
<b>Belfast</b>	<i>Base:</i>	<b>979</b>	<b>926</b>
% of establishments with a skill gap		25	13
Number of skill gaps		20,100	8,100
% of workforce with skill gaps		9	3
<b>Northern</b>	<i>Base:</i>	<b>788</b>	<b>879</b>
% of establishments with a skill gap		22	13
Number of skill gaps		11,900	6,500
% of workforce with skill gaps		8	4
<b>North West</b>	<i>Base:</i>	<b>395</b>	<b>386</b>
% of establishments with a skill gap		23	9
Number of skill gaps		5,200	2,900
% of workforce with skill gaps		8	5
<b>Southern</b>	<i>Base:</i>	<b>657</b>	<b>662</b>
% of establishments with a skill gap		22	10
Number of skill gaps		6,600	5,500
% of workforce with skill gaps		6	5
<b>South West</b>	<i>Base:</i>	<b>514</b>	<b>469</b>
% of establishments with a skill gap		22	13
Number of skill gaps		7,000	5,100
% of workforce with skill gaps		10	7
<b>South East</b>	<i>Base:</i>	<b>667</b>	<b>682</b>
% of establishments with a skill gap		18	11
Number of skill gaps		7,900	5,400
% of workforce with skill gaps		8	5

*Base: All establishments*

*Number of gaps rounded to nearest 100.*

*Note changes to questions described in section 4.1. In 2005 the regions were defined differently, so no comparable data is available*

The incidence of skill gaps in Northern Ireland varied by region but not dramatically so. The Belfast, Northern and South West regions had the largest proportion of sites with a skill gap in 2011 (13 per cent) and the North West region had the smallest proportion (nine per cent). In terms of skill gaps reported as a percentage of the workforce: South West had the largest proportion (seven per cent of workers) and Belfast the smallest proportion (three per cent). The Belfast region had a relatively high percentage of employers reporting a skill gap but only a small proportion of the workforce having a gap because the region was dominated by larger sites unlike the South West region, which was dominated by smaller establishments.

The time trend for the regions between 2008 and 2011 showed the same pattern as for sectors, the incidence of skill gaps declined for all regions. In terms of the percentage of workforce with skills gaps these were most concentrated in the South West region in both 2008 and 2011, in both years the region had the highest proportion of its workforce with skills gaps and above average, suggesting this issue is persisting over time for the region.

Table 4.6 shows the volume and density of skill gaps by occupation. The volume of skill gaps as a percentage of the workforce varied by occupation. People employed in unskilled or semi-skilled occupations like Elementary and Sales & Customer Services positions were the most likely to have skill gaps, with seven per cent of staff in each of those occupational groups described as lacking full proficiency. Both of these occupations also had a higher than average proportion of workforce with a skills gap in 2008, suggesting skills gaps are a continuing problem for these occupations over time. Conversely those in more highly skilled occupational areas, such as Professionals and Managers, were the least likely to be described as having skill gaps (two and three per cent respectively).

**Table 4.6 Volume and density of skill gaps: time series by occupation**

<i>Column %</i>		<b>2008</b>	<b>2011</b>
<b>Occupation</b>	<i>Base:</i>	<b>%</b> 4,000	<b>%</b> 4,004
<b>Managers</b>			
Number of skill gaps		8,000	2,600
% of workforce with skill gaps		8	3
<b>Professionals</b>			
Number of skill gaps		2,100	1,500
% of workforce with skill gaps		4	2
<b>Associate Professionals</b>			
Number of skill gaps		4,300	1,300
% of workforce with skill gaps		7	3
<b>Admin / Clerical</b>			
Number of skill gaps		7,100	3,200
% of workforce with skill gaps		7	3
<b>Skilled Trades</b>			
Number of skill gaps		4,800	4,100
% of workforce with skill gaps		10	6
<b>Caring, Leisure and Other services</b>			
Number of skill gaps		3,500	3,000
% of workforce with skill gaps		5	4
<b>Sales / Customer services</b>			
Number of skill gaps		10,900	6,600
% of workforce with skill gaps		12	7
<b>Machine Operatives</b>			
Number of skill gaps		3,900	2,500
% of workforce with skill gaps		7	4
<b>Elementary</b>			
Number of skill gaps		14,000	8,900
% of workforce with skill gaps		10	7

*Base: Row 1 all establishments; Row 2 all establishments with staff in each occupation.*

*Number of gaps rounded to nearest 100.*

*No data exists for this occupational breakdown in the 2005 survey. Note changes to questions described in section 4.1*

### **4.3 Causes of skill gaps**

The main causes of staff not being fully proficient are presented in Figure 4.2. Results are based on skill gaps rather than establishments with gaps; the figure shows what proportions of skill gaps were caused by the various factors reported by employers. Respondents could give more than one cause for each skill gap.

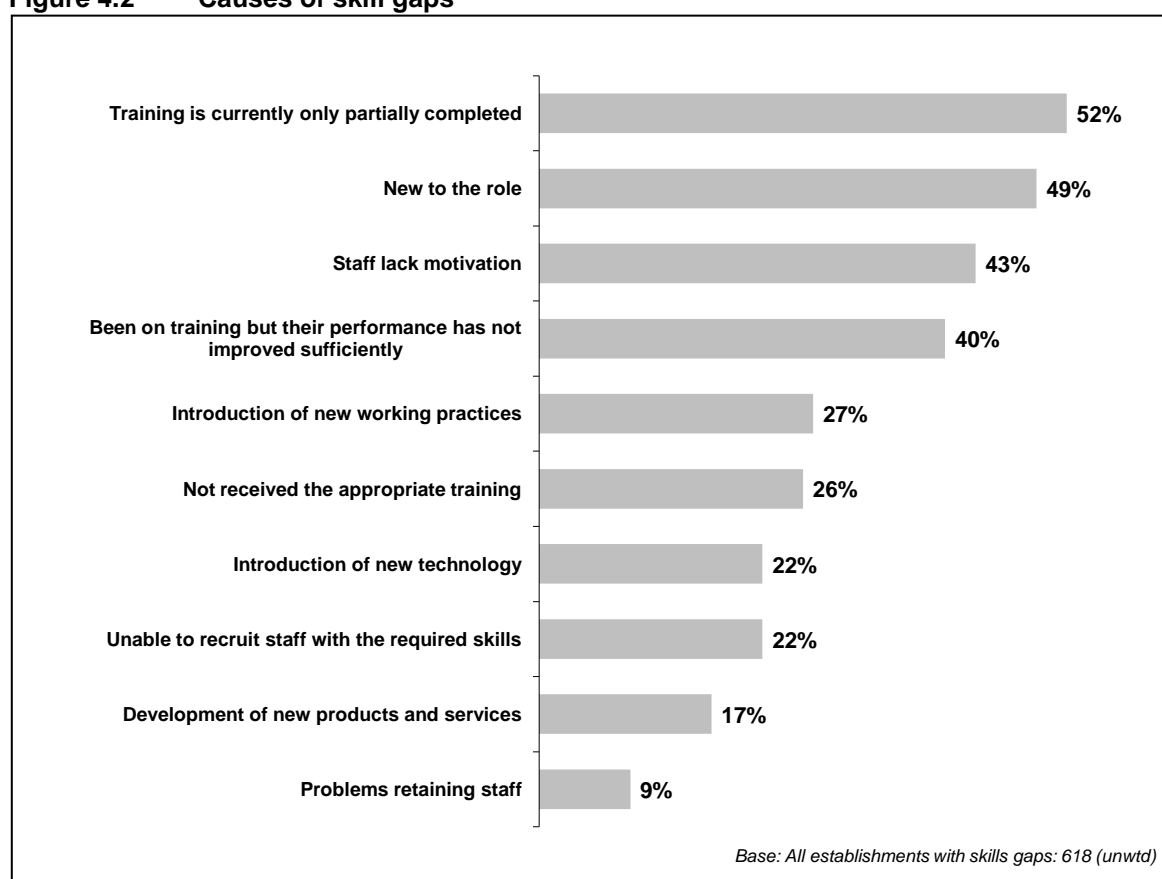
Staff being new to the role (either because they have recently started the job or have recently been promoted to a higher level role) and, related to this, training only being partially completed were the most common causes of skill gaps, with respectively 49 per cent and 52 per cent of all skill gaps being at least partly attributed to these reasons.

Other training related factors, such as where training proved to be ineffective and where staff did not receive the appropriate training were also quite common causes (explaining at least in part 40 per cent and 26 per cent of skill gaps, respectively). A requirement for (further) training was also implicit in those skill gaps arising from the introduction of new working practices (27 per cent), the introduction of new technology (22 per cent) and the development of new products or services (17 per cent).

Another common cause of skill gaps was staff lacking motivation, cited as a factor 43 per cent of the time.

Although employers were less likely to cite recruitment-related factors as causes of skill gaps, one in five skill gaps (22 per cent) resulted in part from an inability to recruit appropriately skilled individuals and one in ten gaps (nine per cent) arose from retention difficulties. In both cases the underlying implication was that experienced staff had left and employers had to fill these positions with people who do not have the required skill set.

**Figure 4.2 Causes of skill gaps**



*Percentages are based on all skills gaps followed up rather than all establishments with skills gaps, figures therefore show the proportion of skills gaps caused by each stated reason.*

Table 4.7 shows the causes of skill gap by site size, sector and region. Larger establishments were more likely to report problems caused by lack of motivation by staff, unsuccessful training and introduction of new working practices. Small organisations were more likely to have skill gaps caused by staff not receiving the training they needed. Staff turnover was more of a problem of midsized establishments.

Employees being new to the job role or still in training were major causes of skill gaps in all the sectors other than the Wholesale and Retail and Education. Employees not receiving the training they needed were most likely to be cited in the Manufacturing, Health and Social Work and in the Community, Social and Personal Service Activities sectors. The Hotels and Restaurants, Business Services and Education sectors were most likely to report that training did make a difference.

Changes in working practices, new technology and the development of new products and services were most likely to be cited as significant factors in the Education and Transport and Communication sectors.

Skill gaps relating to staff turnover were mostly commonly cited by the Hotels and Restaurants sector. The Manufacturing sector had problems recruiting (but not retaining) staff and the Community, Social and Personal Services and Transport and Communications sectors reported problems retaining staff. The Hotels and Restaurants and Transport and Communication sectors were the most likely to cite problems with staff lacking motivation.

As discussed above, the incidence of skill gaps did not vary dramatically throughout the regions of Northern Ireland but some regional variations were seen in the reasons given for the skill gap. Skill gaps due to staff being new or in training were most likely to be cited in the North West region. Establishments in the North West region were also more likely to cite training failure and staff motivation as causes of skill gaps.

Skill gaps due to changes in the job such as introduction of new working practices, new products/services and new technology were more likely to be cited as causes of skill gaps in the Northern and South East regions.

Problems with recruiting and/or retaining staff were more likely to be cited in the Northern, North West and Belfast regions.

**Table 4.7 Causes of skill gaps by establishment size, sector and region**

	Base (unwtd)	Training is currently only partially completed %	New to the role %	Staff lack motivation %	Been on training but their performance has not improved sufficiently %	Introduction of new working practices %	Not received the appropriate training %	Introduction of new technology %	Unable to recruit staff with the required skills %	Development of new products and services %	Problems retaining staff %
<b>Total</b>	618	52	49	43	40	27	26	22	22	17	9
<b>Size</b>											
1-4	82	58	54	27	24	17	32	21	22	16	9
5-10	148	60	50	25	33	14	24	14	16	14	3
11-49	253	44	44	49	37	30	25	20	24	14	16
50+	135	55	50	45	46	28	25	26	21	20	5
<b>Sector</b>											
Agriculture	4	**	**	**	**	**	**	**	**	**	**
Mining and Quarrying	2	**	**	**	**	**	**	**	**	**	**
Manufacturing	55	67	54	25	22	27	39	40	37	21	1
Electricity, Gas and Water	3	**	**	**	**	**	**	**	**	**	**
Construction	28	61	31	31	44	35	33	17	17	7	-
Wholesale and Retail	160	35	35	45	43	23	16	18	12	15	8
Hotels and Restaurants	88	54	66	60	52	18	29	15	37	19	20
Transport and Communications	41	67	55	60	46	56	25	43	12	37	16
Finance Services	20	**	**	**	**	**	**	**	**	**	**
Business Services	67	52	55	37	49	23	16	10	8	12	6
Public Administration	22	**	**	**	**	**	**	**	**	**	**
Education	33	23	35	42	49	58	15	40	11	12	2
Health and Social Work	49	59	43	43	37	25	36	10	32	15	1
Community, Social and Personal Services activities	46	73	54	49	38	44	35	31	11	35	23
<b>Region</b>											
Belfast	156	47	46	37	39	23	29	20	13	19	12
Northern	132	58	53	45	41	35	34	28	29	23	10
North West	51	74	61	57	57	29	36	19	33	12	15
Southern	88	42	48	45	44	27	20	24	23	18	6
South West	86	44	43	40	39	15	22	14	16	9	3
South East	105	58	47	41	28	32	14	27	23	17	7

Base: All establishments with skills gaps

Percentages are based on all skills gaps followed up rather than all establishments with skills gaps, figures therefore show the proportion of skills gaps caused by each stated reason.

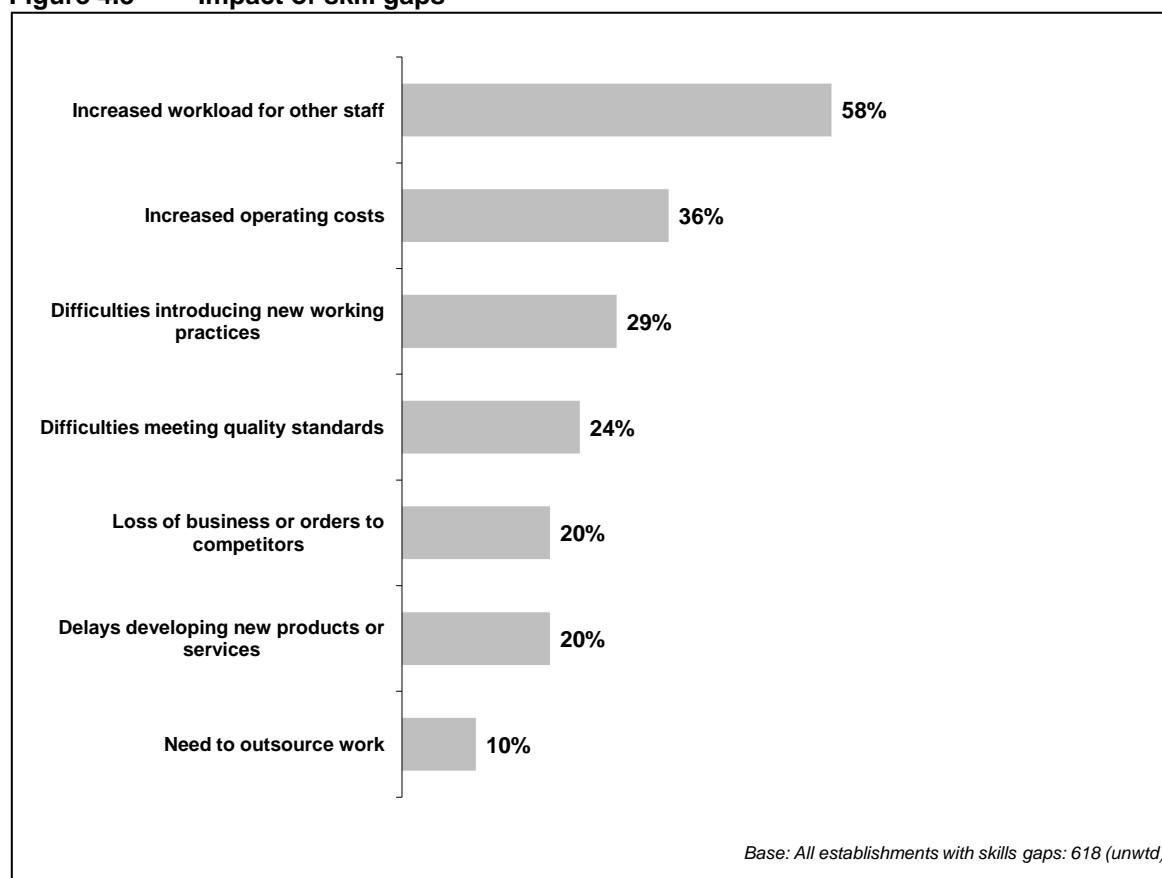
'\*\*' denotes base size under 25: too low to report. Figures in italics denote base size <50: treat figures with caution. '-' denotes a figure of zero.

## 4.4 Impact of skills gaps

This section examines the impact of skill gaps on employers. In the case of skill gaps, establishments at least have a designated person in place, doing the job, even though their performance is below par. Those with a skill-shortage vacancy generally have nobody in the post they are trying to fill. While it is not clear which will be more debilitating for the establishment, the evidence is that skill gaps are more prevalent than skills-shortage vacancies, so cause a more wide-spread problem across the economy. Overall, 70 per cent of establishments said their skills gaps had an impact on how their establishment performs.

Like hard-to-fill vacancies, the most common impact of skill gaps was more work for other staff (cited by 58 per cent of establishments in Northern Ireland). While, in some cases, an increased workload can be absorbed by other staff, some employers will need to pay for overtime or bring in agency staff to cover the work: 36 per cent of establishments with skill gaps reported that the gap led to increased operating costs and 10 per cent reported that they had to outsource work.

**Figure 4.3 Impact of skill gaps**





Difficulty in meeting quality standards was an adverse consequence for around a quarter of establishments reporting internal skills deficiencies (24 per cent). Skill gaps hindered innovation in working practices (29 per cent had difficulties introducing new working practices) and hampered the development of new products and services (20 per cent of establishments with skill gaps have had to delay the development of new products and services as a result of their staff lacking full proficiency).

Around a fifth of those with skill gaps (20 per cent) reported that they had lost business or orders to competitors as a result of these skill gaps.

Table 4.8 shows the impact of skill gaps by site size, sector and region. The impact of skill gaps did not follow a clear trend based on establishment size. Midsize and larger organisations were more likely to cite increased workload for other staff and difficulties meeting quality standards. Increases in operating cost were more likely to be factors for the smallest and largest sites and smaller employers were more likely to need to outsource work.

Employers in the Health and Social Work and Community, Social and Personal Service Activities sectors were the most likely to cite an increase in workloads for other staff based on skill gaps (70 per cent of establishments with a skills gap). Quality was most likely to suffer in the Hotels and Restaurants and Community, Social and Personal Service Activities sectors.

Employers in the Hotels and Restaurants and Transport and Communications sectors were the most likely to report increase in operating costs (41 per cent of establishments with a skills gap citing this factor). Establishments in the Construction sector (22 per cent) were the most likely to have to outsource based on skill gaps. More than a quarter of establishments in the Community, Social and Personal Service Activities, Wholesale and Retail and Finance sectors reported loss of business as a result of skill gaps.

Problems with innovation in working practices were most likely to be reported in the Health and Social Work (35 per cent of organisations) sectors. One fifth of employers in the Manufacturing, Business Services, Health and Social Work and Community, Social and Personal Service Activities sectors with a skills gap reported delays in developing new products or services as result of skill gaps.

**Table 4.8 Impact of skill gaps by site size, sector and region**

	<i>Base (unwtd)</i>	Increased workload for other staff	Increased operating costs	Difficulties introducing new working practices	Difficulties meeting quality standards	Loss of business or orders to competitors	Delays developing new products or services	Need to outsource work
		%	%	%	%	%	%	%
Total	618	58	36	29	24	20	20	10
<b>Size</b>								
1-4	82	55	43	30	20	21	28	13
5-10	148	55	24	19	15	16	12	7
11-49	253	64	35	34	31	25	22	9
50+	135	59	42	31	31	15	8	9
<b>Sector</b>								
Agriculture	4	**	**	**	**	**	**	**
Mining and Quarrying	2	**	**	**	**	**	**	**
Manufacturing	55	52	37	24	13	17	22	12
Electricity, Gas and Water	3	**	**	**	**	**	**	**
Construction	28	46	34	24	30	4	19	22
Wholesale and Retail	160	55	33	32	18	28	21	11
Hotels and Restaurants	88	64	41	26	41	22	18	7
Transport and Communications	41	47	41	33	28	18	15	5
Finance Services	20	**	**	**	**	**	**	**
Business Services	67	60	31	22	17	19	21	10
Public Administration	22	**	**	**	**	**	**	**
Education	33	46	20	32	35	9	18	9
Health and Social Work	49	70	33	35	32	6	22	11
Community, Social and Personal Services activities	46	74	34	34	42	29	24	12
<b>Region</b>								
Belfast	156	58	33	26	32	16	21	9
Northern	132	61	32	24	13	17	13	3
North West	51	64	29	26	23	10	10	5
Southern	88	56	48	41	22	34	36	15
South West	86	49	34	28	25	17	23	19
South East	105	64	40	32	31	27	17	10

*Base: All establishments with skills gaps*

*‘\*\*’ denotes base size under 25: too low to report. Figures in italics denote base size <50: treat figures with caution.*

## 4.5 Combined skills deficiencies

The previous chapter examined skill-shortage vacancies and this one has explored skill gaps. The identification of these two measures as separate phenomena may not reflect how employers experience them, however. It is possible that one employer's skill shortages are another employer's skill gaps (i.e. one employer faced with insufficiently skilled candidates may choose to leave post(s) vacant, resulting in a skill shortage, while another may choose to recruit someone under the ideal skills threshold, resulting in a skill gap).

Skill gaps were much more common than skill-shortage vacancies. In 2011, 33,600 establishments reported having a skill gap (12 per cent of all establishments) and only 5,500 reported a skill-shortage vacancy (three per cent of establishments). It is useful to combine the two separate indicators into a single measure: the proportion of establishments who report that they face a skills deficiency, i.e. a skill gap, skill-shortage vacancy or both. When expressed in this way, as shown in Table 4.9 which also summarises key skills deficiency measures from both this and the previous chapter, we can see that 14 per cent of establishments were suffering from either form of skill deficiency (one per cent reported both).

**Table 4.9 Combined skill deficiencies (internal and external)**

		2011
<i>Column %</i>		%
<b>Skill-shortage vacancies</b>	<i>Base:</i>	4,004
% of establishments with a skill-shortage vacancy		3
Number of skill-shortage vacancies		5,500
	<i>Base:</i>	524
Skill-shortage vacancy density ( <i>% of vacancies that were SSVs</i> )		28
<b>Skills gaps</b>	<i>Base:</i>	4,004
% of establishments with a skill gap		12
Number of skill gaps		33,600
Skill gap density ( <i>% of workforce with gaps</i> )		5
<b>Combined</b>	<i>Base:</i>	4,004
% with SSV only		2
% with skill gap only		11
% with both		1
% with either		14

*Base: All establishments, except for Skill-shortage vacancy density which is all establishments with vacancies.*

Figure 4.4 shows how the incidence of skill-shortage vacancies and skill gaps increases with site size. Larger employers have more employees and therefore it makes sense that more large sites would have at least one employee with a skill gap (seven per cent of establishments with less than five staff reported a skill gap compared to 33 per cent of sites with 50+ employees). Larger employers tend to have more job openings and therefore more skill-shortage vacancies.

**Figure 4.4 Incidence of skill-shortage vacancies and/or skill gap by size**

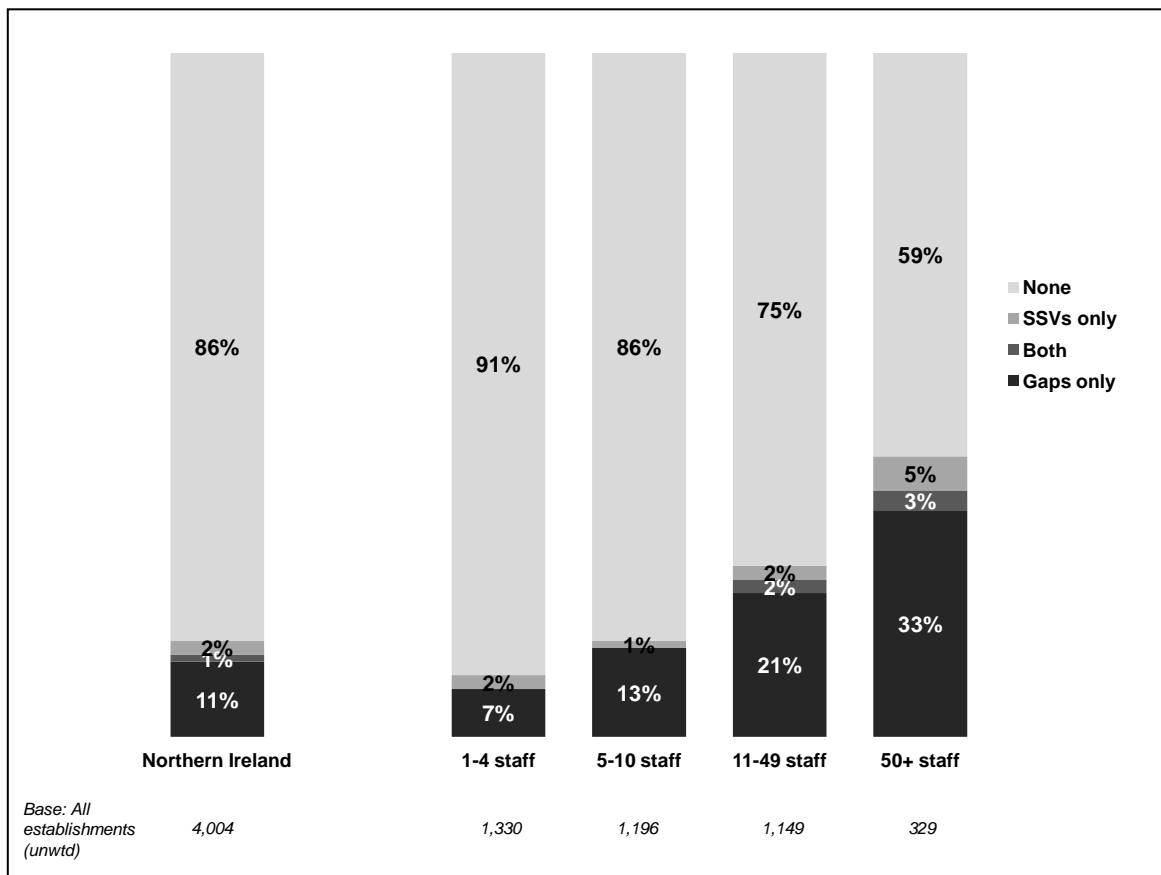


Figure 4.5 shows the incidence of skill gaps and skills-shortage vacancies in different sectors. The Hotels and Restaurants (21 per cent), Wholesale and Retail (17 per cent) and Public Administration (16 per cent) sectors were the most likely to report a skill gap. The Hotels and Restaurants and Public Administration were also the most likely sectors to have skills-shortage vacancies (six per cent). However, there was not always a correlation between skill gaps and skills-shortage vacancies: The Wholesale and Retail sector did not report many skills-shortage vacancies despite having a high incidence of skill gaps.

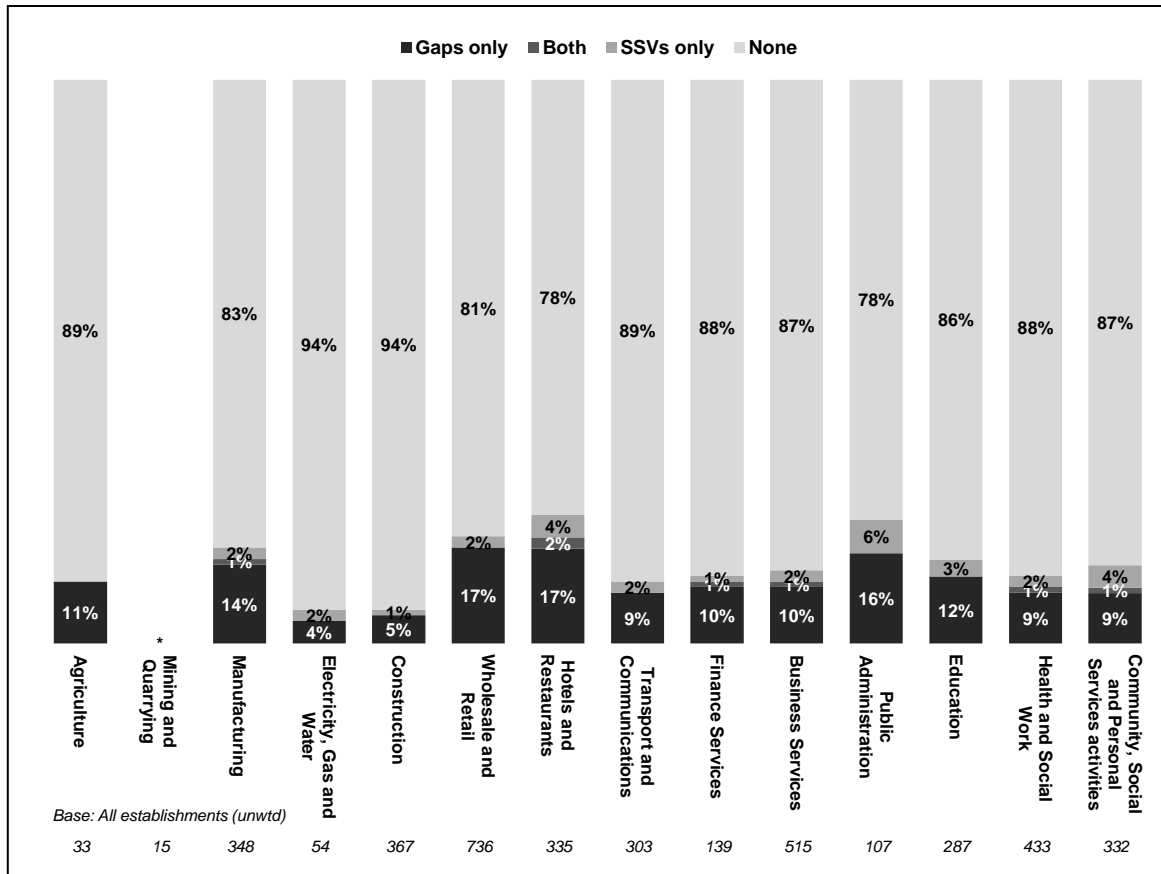
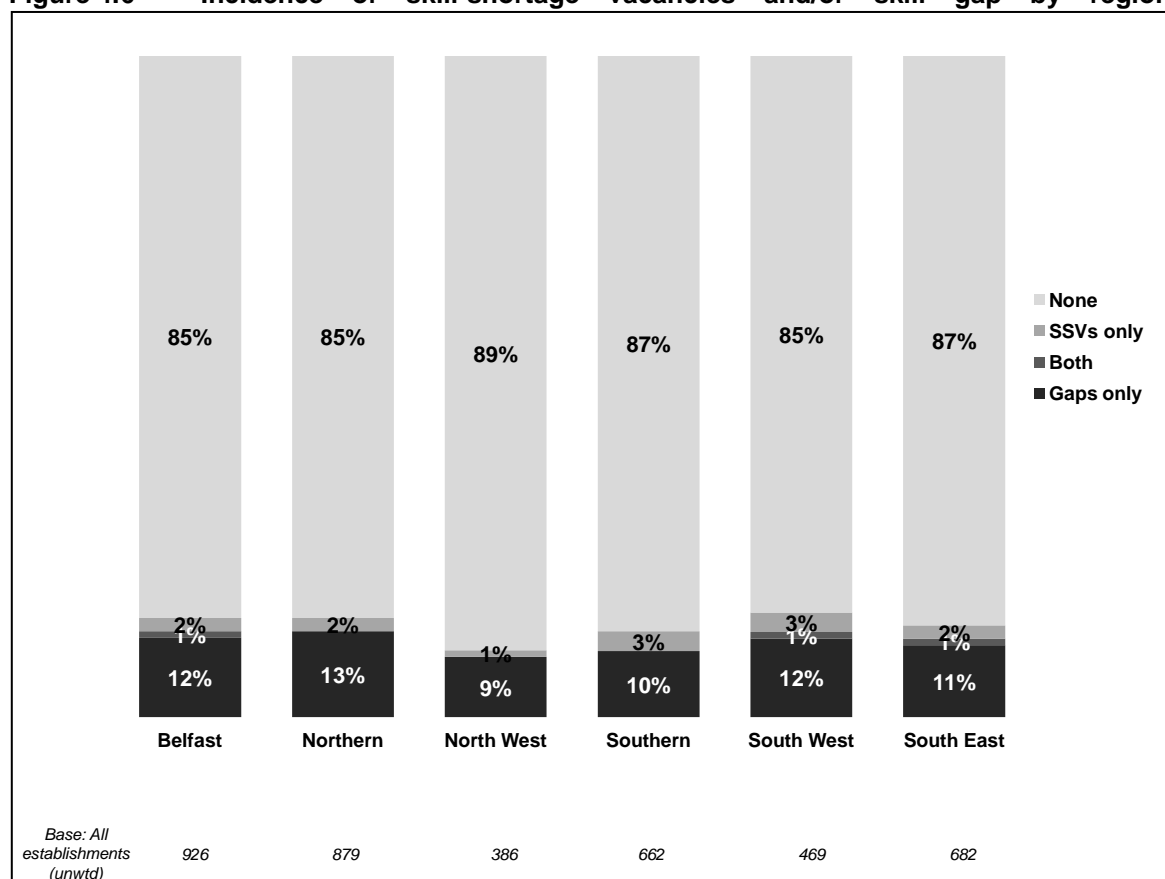
**Figure 4.5 Incidence of skill-shortage vacancies and/or skill gap by sector**

Figure 4.6 overleaf shows the distribution of skill gaps and skills-shortage vacancies throughout the regions of Northern Ireland. The North West region had the lowest incidence (nine per cent of establishments) and the North and South West regions had the highest incidence (13 per cent each). Here there was more of a correlation between the incidence of skill gaps and skills-shortage vacancies. The North West region also had the lowest incidence (one per cent of sites) of skills-shortage vacancies and the South West the highest (four per cent).

**Figure 4.6 Incidence of skill-shortage vacancies and/or skill gap by region**

## 4.6 Conclusions

This chapter addresses the skill gaps, which exist when employees are not fully proficient at their job. Only a minority of employers experience skills gaps, but where they do this has a significant impact. In 2011, skill gaps affected 12 per cent of establishments and five per cent of the workforce in Northern Ireland. The overall incidence of skill gaps has declined since between 2008 and 2011 by all three measures. The incidence of skill gaps appears to have declined at the overall level, but this does not necessarily mean that the workers are better at their jobs today. Due to the recession, establishments may be less likely to innovate in their working practices, to introduce new technology or to develop new products or services. Since technological change is an important cause of skill gaps, the decline seen since 2008 may reflect lower investment by employers in innovation rather than an improvement in proficiency of the workforce. The decline in the incidence of skill gaps could also reflect selective downsizing by organisations: employers may be more likely to lay off a worker who is not fully proficient than one who is.

Skill gaps were most problematic in jobs with low wages and low skill requirements, such as the Elementary and Sales/Customer Service occupations and jobs in the Hotels and Restaurants sector. Skill gaps affected 10 per cent of the workforce in the Hotels and Restaurants sector and seven per cent of the workforce in the Elementary and Sales/Customer Service occupations. These patterns of sectors and occupations experiencing higher levels of skill gaps are consistent through time.

The incidence of skill gaps was highest in the South West region (affecting seven per cent of the workforce) and the lowest in the Belfast region (three per cent of the workforce). The difference between the regions probably reflects the difference in the relative prominence of sectors and occupations which experience a high level of skill gaps.

The most commonly reported cause of skill gaps was staff being new to the role and, related to this, training only being partially completed, with 49 per cent and 52 per cent of all skill gaps respectively being at least partly attributed to these two reasons.

Even though they affect a minority of establishments and workers, skill gaps can adversely impact on business performance, increase costs, and hinder innovation and delay the development of new products and services. Effective use and development of skill is needed avoid such mismatch and for Northern Ireland to remain competitive in the global economy. The development of high value added business strategies will further increase skill gaps, which will impact adversely on the success of such strategies unless remedial action is taken.

## 5 Workforce Development

### Chapter Summary

Three-fifths of establishments in Northern Ireland (63 per cent) provided some form of training for any of their staff in the previous 12 months and almost nine in 10 (88 per cent) provided either training or wider learning activities. The incidence of training varies by site size (larger sites were more likely to provide training) and sector (establishments in the Education and Public Administration sectors were the most likely to provide training, establishments in the Agriculture sector were the least likely).

The overall incidence of training increased between 2005 and 2008, and declined between 2008 and 2011. As a result, the incidence of training in 2011 was generally below 2005 levels.

The occupations with the lowest amount of training were Administration and Clerical and Elementary (45 and 47 per cent of workforce, respectively). The occupation with the highest incidence of training was Caring, Leisure and Other Services (82 per cent of the workforce received training within the past 12 months).

### 5.1 Introduction

Developing skills is a key part of securing growth and prosperity in the UK and calls for a transformation in the way that the skill system works for employer-led training.

This chapter reports on the training and wider development activity undertaken by employers in Northern Ireland. More specifically, the chapter discusses the proportion of establishments that engage in training or wider learning activities and how this varies by site size, sector and region. This chapter also explores trends in training over time and the quantity of training provided to staff by occupation.

Throughout this chapter, unless otherwise stated, an employer is described as providing training if in the previous 12 months they had funded or arranged one or both of the following for any of their employees based at their site:

- off-the-job training or development: training away from the individual's immediate work position, whether on their premises or elsewhere;
- on-the-job or informal training or development: activities which take place at the individual's immediate work position which would be recognised as training by recipients.



Training in the survey defined in this way intended to capture all activity which employers and employees would recognise as training. However, broader activity can take place which leads to skill development but which may not be classified as training. For this reason, the 2011 survey asked establishments whether they had engaged in any broader development activities, specifically: supervision to ensure that employees were guided through their job role over time; opportunities for staff to spend time learning through watching others perform their job roles; and allowing staff to perform tasks that go beyond their strict job role and providing feedback on how well they had done.

Some care should be taken when interpreting the time series results for training. In 2005 and 2008 the placement of the questions on off and on-the-job training was different and different to 2011, though the questions themselves and definitions are unchanged. The reasons for not providing off-the-job training were asked of employers before whether they provided on-the-job training, and in 2005 a suite of questions relating to off-the-job training was asked before whether they provided on-the-job training.

## **5.2 Incidence of Training**

Almost two thirds of workplaces in Northern Ireland had funded or arranged either on-the-job and/or off-the-job training for at least one of their employees in the 12 months preceding the survey (63 per cent). Slightly more had provided on-the-job training (49 per cent of all workplaces) than off-the-job training (47 per cent); a third of workplaces (33 per cent) provided both types of training.

Table 5.1 provides data on the overall incidence of training in Northern Ireland in 2005, 2008 and 2011. In 2005, 67 per cent of establishments provided training; this incidence increased to 74 per cent in 2008 and then declined to 63 per cent in 2011.

Since 2005, there has been a trend moving from on-the-job training to off-the-job training. Even though the overall incidence of training declined between 2008 and 2011, the incidence of establishments that engaged in only off-the-job training increased, from eight per cent in 2005 to 13 per cent in 2008 to 14 per cent in 2011. The incidence of establishments providing only on-the-job training over the time period declined from 34 per cent in 2005 to 16 per cent in 2011.

**Table 5.1 Incidence and volume of training: time series**

	<b>2005</b>	<b>2008</b>	<b>2011</b>
<i>Base</i>	<i>4,126</i>	<i>4,000</i>	<i>4,004</i>
<i>Column %</i>	<i>%</i>	<i>%</i>	<i>%</i>
Total doing any training	67	74	63
Off-the-job only	8	13	14
On-the-job only	34	21	16
Both off- and on-the-job training	26	40	33
Do not train	32	26	37

*Base: All establishments*

*Note changes to questions over time described in section 5.1*

The likelihood that training was provided in a workplace was closely related to the number of staff working at the establishment. Half (51 per cent) of workplaces with fewer than five staff provided any training in the previous 12 months, rising to three-quarters (73 per cent) of those where five to 10 staff were employed, and to 95 per cent where 50+ or more people were employed. Results by size of establishment are presented in Figure 5.1.

Larger establishments were more likely to provide both on-the-job and off-the-job training because they were providing more training in general. Smaller establishments more often only offer one form of training or the other. However, smaller sites were more likely to provide only off-the-job training than larger establishments despite having a lower training rate. This was probably because smaller organisations have less staff and facilities onsite than larger establishments and therefore were more likely to have to outsource their training.

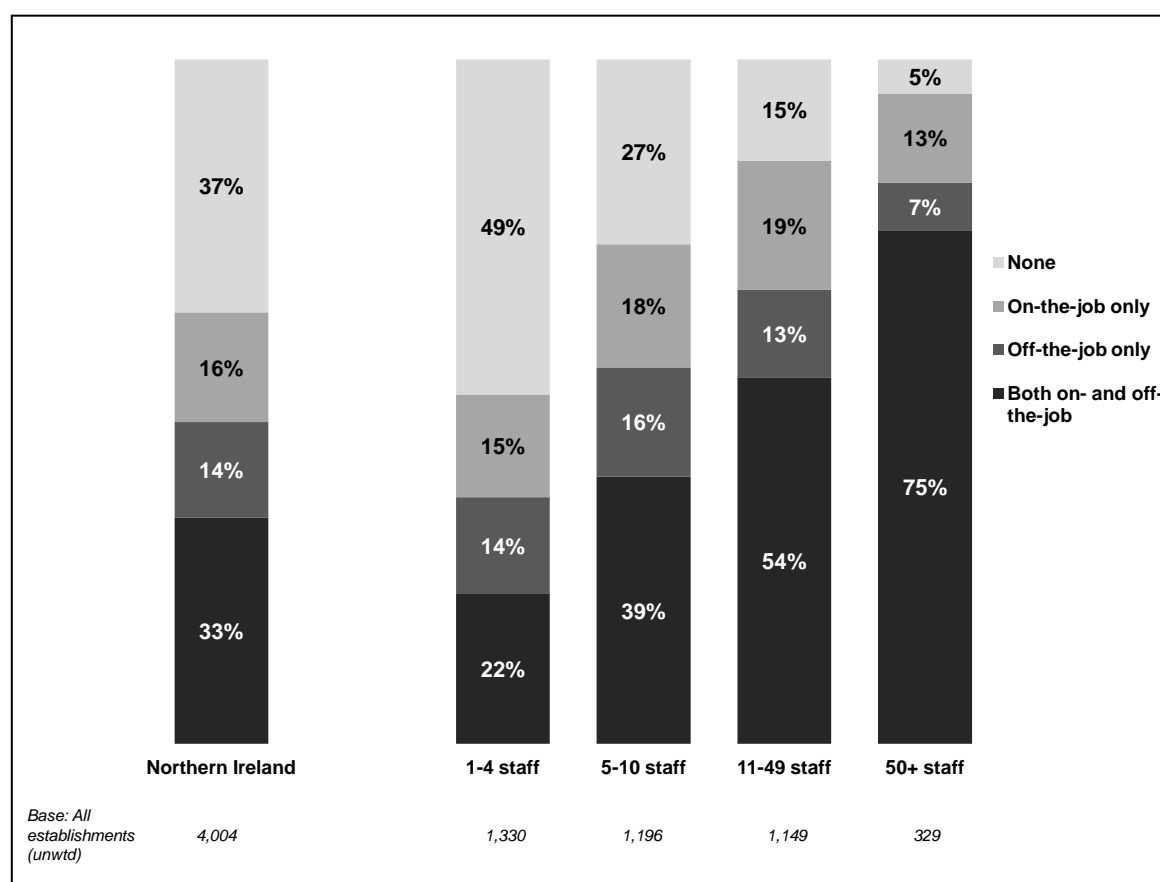
**Figure 5.1 Incidence of on-the-job and off-the-job training by site size**

Table 5.2 shows the proportion of establishments offering some form of training (either on-the-job or off-the-job or both) as a function of site size for 2005, 2008 and 2011. The trends show that the pattern of larger establishments being more likely to provide training is consistent over time.

The incidence of training decreased between 2005 and 2011 for all sizes. For the smallest sites (less than five staff) and the largest organisations (50+ staff), the incidence of training was slightly lower in 2011 than it was in 2005. The decline over the whole period was much more significant for midsized sites. Between 2008 and 2011 however the smallest establishments were much more likely to cut training, training fell for these smallest establishments by 13 percentage points (compared to 3 percentage points for the largest establishments), this further exaggerates the differences in training levels by size band.

**Table 5.2 Incidence and volume of training: time series by establishment size**

		<b>2005</b>	<b>2008</b>	<b>2011</b>
<i>Column %</i>		<i>%</i>	<i>%</i>	<i>%</i>
<b>Size</b>				
<b>1-4</b>	<i>Base:</i>	<b>1,044</b>	<b>1,098</b>	<b>1,330</b>
Total doing any training		52	64	51
Off-the-job only		9	16	14
On-the-job only		29	20	15
Both off- and on-the-job training		14	27	22
Do not train		48	36	49
<b>5-10</b>	<i>Base:</i>	<b>735</b>	<b>1,006</b>	<b>1,196</b>
Total doing any training		89	81	73
Off-the-job only		8	10	16
On-the-job only		46	27	18
Both off- and on-the-job training		35	44	39
Do not train		11	19	27
<b>11-49</b>	<i>Base:</i>	<b>1,506</b>	<b>1,395</b>	<b>1,149</b>
Total doing any training		97	92	85
Off-the-job only		7	11	13
On-the-job only		35	20	19
Both off- and on-the-job training		54	62	54
Do not train		3	8	15
<b>50+</b>	<i>Base:</i>	<b>841</b>	<b>501</b>	<b>329</b>
Total doing any training		99	98	95
Off-the-job only		4	4	7
On-the-job only		24	11	13
Both off- and on-the-job training		72	83	75
Do not train		1	2	5

*Base: All establishments*

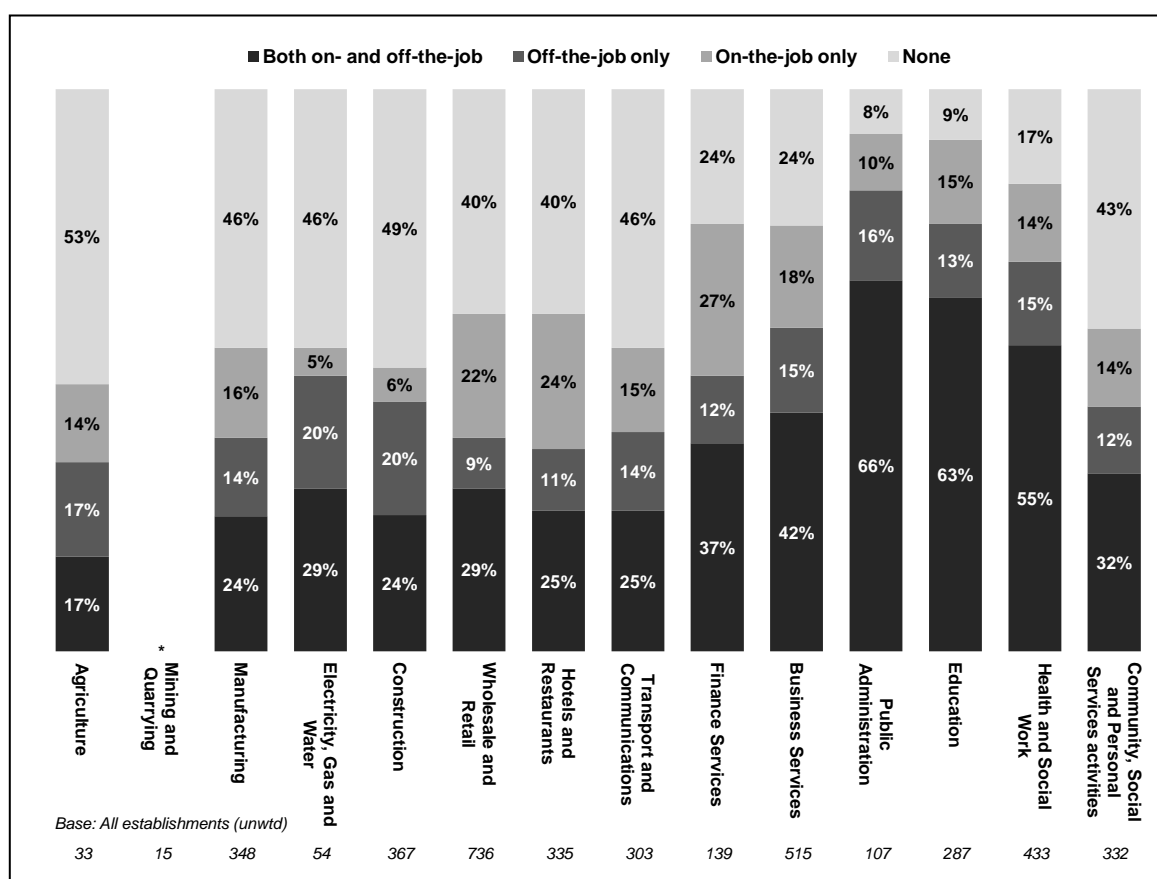
*Note changes to questions over time described in section 5.1*

The incidence of training varies widely by sector, as shown in Figure 5.2. There are four broad categories:

- those with a low incidence of training, sectors in which less than half of employers provided training in the last 12 months. This applies to Agriculture, in which only 47 per cent of establishments provided training. This sector was dominated by smaller sites which were less likely in general to train than larger organisations;

- those with a mid-level incidence of training – with more than half of establishments in the sector providing off- or on-the-job training in the last 12 months. This applies to Construction (51 per cent), Transport and Communications (54 per cent), Manufacturing (54 per cent), Electricity, Gas and Water (54 per cent), Community, Social and Personal Service activities (57 per cent), Hotels and Restaurants (60 per cent) and Wholesale and Retail (60 per cent);
- those with a high level of training – where around three-quarters of establishments provided training over the past 12 months. This applies to the Business Services and Financial Services sectors (both with 76 per cent).
- those with a very high incidence of training – covering Health and Social Work (83 per cent), Education (91 per cent) and Public Administration (92 per cent). As discussed in Chapter 2, these three sectors all have a relatively high proportion of larger establishments and have a large number of establishments in the public sector.

**Figure 5.2 Incidence of on-the-job and off-the-job training by sector**



**Table 5.3 Incidence of training: time series by sector**

		<b>2005</b>	<b>2008</b>	<b>2011</b>
<i>Column %</i>		<i>%</i>	<i>%</i>	<i>%</i>
<b>Sector</b>				
<b>Agriculture</b>	<i>Base:</i>	<i>0</i>	<i>0</i>	<i>33</i>
Total doing any training		<i>**</i>	<i>**</i>	<i>47</i>
<b>Mining &amp; Quarrying</b>	<i>Base:</i>	<i>17</i>	<i>10</i>	<i>15</i>
Total doing any training		<i>**</i>	<i>**</i>	<i>**</i>
<b>Manufacturing</b>	<i>Base:</i>	<i>700</i>	<i>522</i>	<i>348</i>
Total doing any training		<i>60</i>	<i>76</i>	<i>54</i>
<b>Electricity, Gas and Water</b>	<i>Base:</i>	<i>18</i>	<i>22</i>	<i>54</i>
Total doing any training		<i>**</i>	<i>**</i>	<i>54</i>
<b>Construction</b>	<i>Base:</i>	<i>229</i>	<i>280</i>	<i>367</i>
Total doing any training		<i>64</i>	<i>72</i>	<i>51</i>
<b>Wholesale and Retail</b>	<i>Base:</i>	<i>784</i>	<i>787</i>	<i>736</i>
Total doing any training		<i>66</i>	<i>63</i>	<i>60</i>
<b>Hotels and Restaurants</b>	<i>Base:</i>	<i>181</i>	<i>226</i>	<i>335</i>
Total doing any training		<i>66</i>	<i>71</i>	<i>60</i>
<b>Transport and Communications</b>	<i>Base:</i>	<i>324</i>	<i>216</i>	<i>303</i>
Total doing any training		<i>66</i>	<i>67</i>	<i>54</i>
<b>Finance Services</b>	<i>Base:</i>	<i>135</i>	<i>133</i>	<i>139</i>
Total doing any training		<i>81</i>	<i>93</i>	<i>76</i>
<b>Business Services</b>	<i>Base:</i>	<i>456</i>	<i>557</i>	<i>515</i>
Total doing any training		<i>65</i>	<i>79</i>	<i>76</i>
<b>Public Administration</b>	<i>Base:</i>	<i>74</i>	<i>178</i>	<i>107</i>
Total doing any training		<i>97</i>	<i>93</i>	<i>92</i>
<b>Education</b>	<i>Base:</i>	<i>339</i>	<i>313</i>	<i>287</i>
Total doing any training		<i>88</i>	<i>90</i>	<i>91</i>
<b>Health and Social Work</b>	<i>Base:</i>	<i>456</i>	<i>362</i>	<i>433</i>
Total doing any training		<i>84</i>	<i>89</i>	<i>83</i>
<b>Community, Social and Personal Services activities</b>	<i>Base:</i>	<i>413</i>	<i>394</i>	<i>332</i>
Total doing any training		<i>66</i>	<i>69</i>	<i>57</i>

*Base: All establishments*

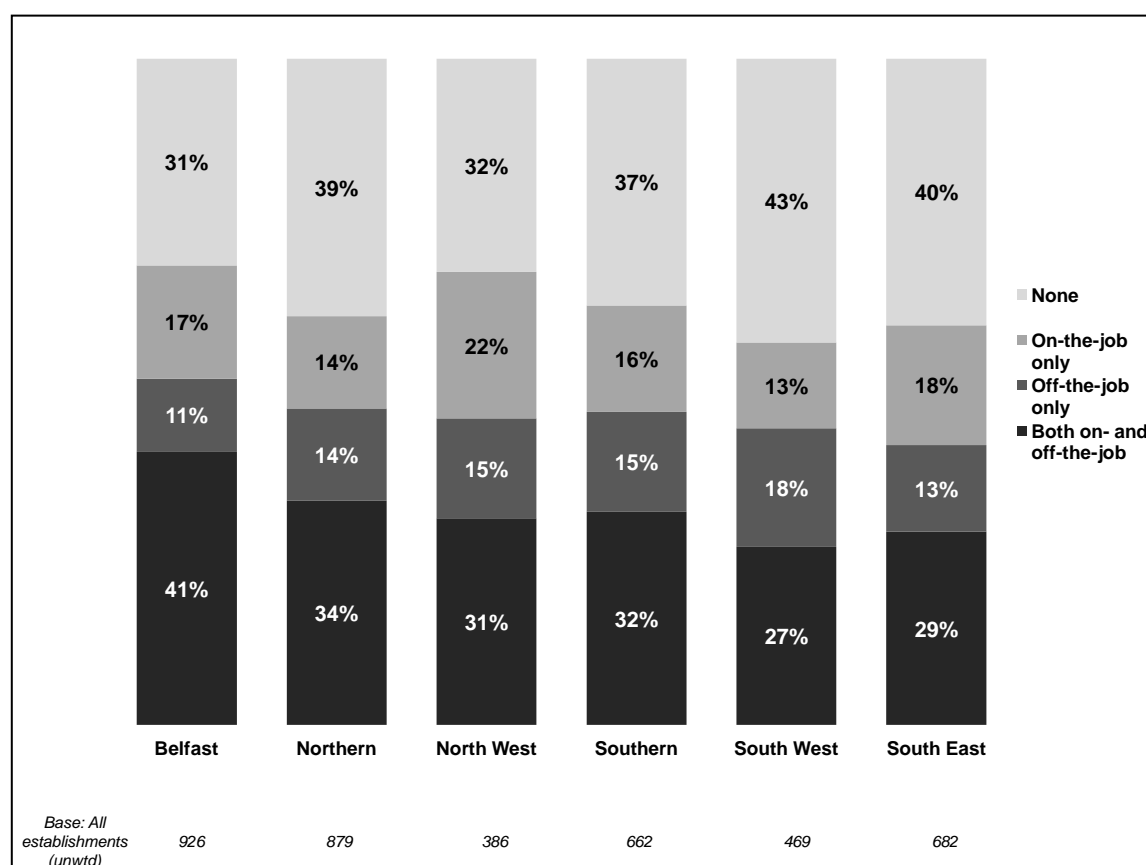
*\*\*\* denotes base size under 25: too low to report. Figures in italics denote base size <50: treat figures with caution. Note changes to questions over time described in section 5.1*

In almost every sector for which there was data, the incidence of job training increased between 2005 and 2008 and declined between 2008 and 2011. The incidence of training in 2011 was lower than in 2005 in most sectors. The exceptions were Business Services (2011 was 11 percentage points higher than 2005 but below the 2008 peak), and Education (training increased over the time period from 85 per cent in 2005 to 91 per cent in 2011). In almost every sector, the incidence of sites engaging in off-the-job only training increased between 2005 and 2011 (see Appendix A, Table A5).

Employers in the Education and Public Administration sectors were consistently the most likely to provide training in 2005, 2008, and 2011. The Construction and Manufacturing sectors saw the greatest drops in training between 2008 and 2011 (falling over 20 percentage points), this moved employers in these two sectors from having around average training levels in 2008 to below average in 2011.

Figure 5.3 shows the incidence of training through the sub regions of Northern Ireland. Establishments in the South West region were the least likely to provide training (57 per cent had provided training in the prior 12 months) and establishments in the Belfast region were the most likely (69 per cent). In most of the regions, there was a slight preference towards on-the-job training but off-the-job training was preferred in the South West region.

**Figure 5.3 Incidence of on-the-job and off-the-job training by region**



**Table 5.4 Incidence of training: time series by region**

		<b>2008</b>	<b>2011</b>
<i>Column %</i>		%	%
<b>Region</b>			
<b>Belfast</b>	<i>Base:</i>	979	926
Total doing any training		77	69
Off-the-job only		12	11
On-the-job only		18	17
Both off- and on-the-job training		47	41
Do not train		23	31
<b>Northern</b>	<i>Base:</i>	788	879
Total doing any training		72	61
Off-the-job only		11	14
On-the-job only		25	14
Both off- and on-the-job training		36	34
Do not train		28	39
<b>North West</b>	<i>Base:</i>	395	386
Total doing any training		74	68
Off-the-job only		7	15
On-the-job only		25	22
Both off- and on-the-job training		42	31
Do not train		26	32
<b>Southern</b>	<i>Base:</i>	657	662
Total doing any training		71	63
Off-the-job only		10	15
On-the-job only		19	16
Both off- and on-the-job training		41	32
Do not train		29	37
<b>South West</b>	<i>Base:</i>	514	469
Total doing any training		68	57
Off-the-job only		14	18
On-the-job only		23	13
Both off- and on-the-job training		32	27
Do not train		32	43
<b>South East</b>	<i>Base:</i>	667	682
Total doing any training		81	60
Off-the-job only		24	13
On-the-job only		20	18
Both off- and on-the-job training		36	29
Do not train		19	40

*Base: All establishments*

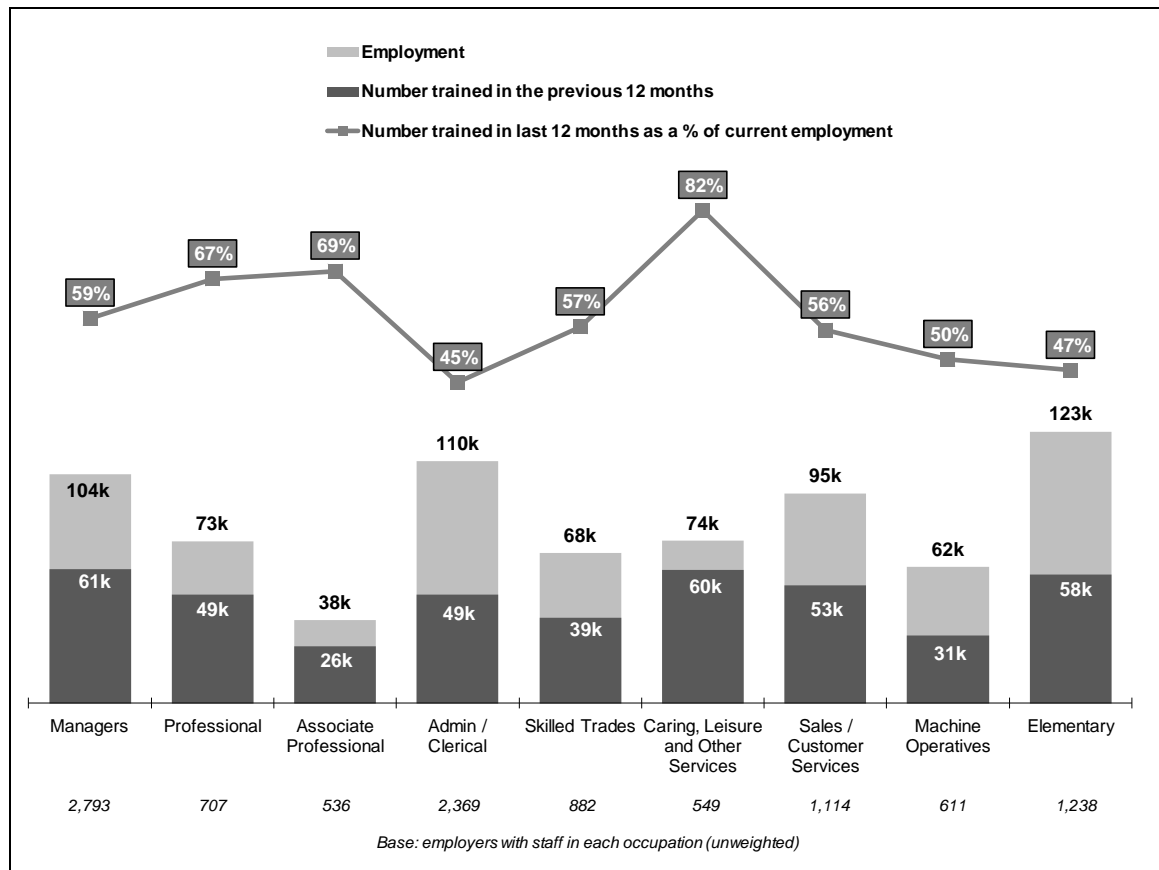
*Note changes to questions over time described in section 5.1. In 2005 the regions were defined differently, so no comparable data is available*

As Table 5.4 shows, all the regions of Northern Ireland experienced a decline in the incidence of training between 2008 and 2011. Again there was a rising trend towards off-the-job only training for most regions (with the exception of Belfast and the South East). In both 2008 and 2011 establishments in the South West were the least likely to provide training for their staff.



Figure 5.4 shows the amount of training provided by occupations in terms of proportion of workforce trained. This measure based on the employees is not available from 2005 and 2008 so data are presented for 2011 only. The occupations with the lowest amount of training were Administration and Clerical and Elementary (45 and 47 per cent of workforce, respectively). The occupation with the highest incidence of training was Caring, Leisure and Other Services (82 per cent of workforce received training within the past 12 months).

**Figure 5.4 Incidence of training by occupation**



### 5.3 Incidence of training and wider learning activities

Broader activity can take place in establishments which leads to skill development but which may not be classified as training. For this reason the UK Commission's Employer Skills Survey 2011 also asked employers whether they had engaged in any broader development activities, specifically:

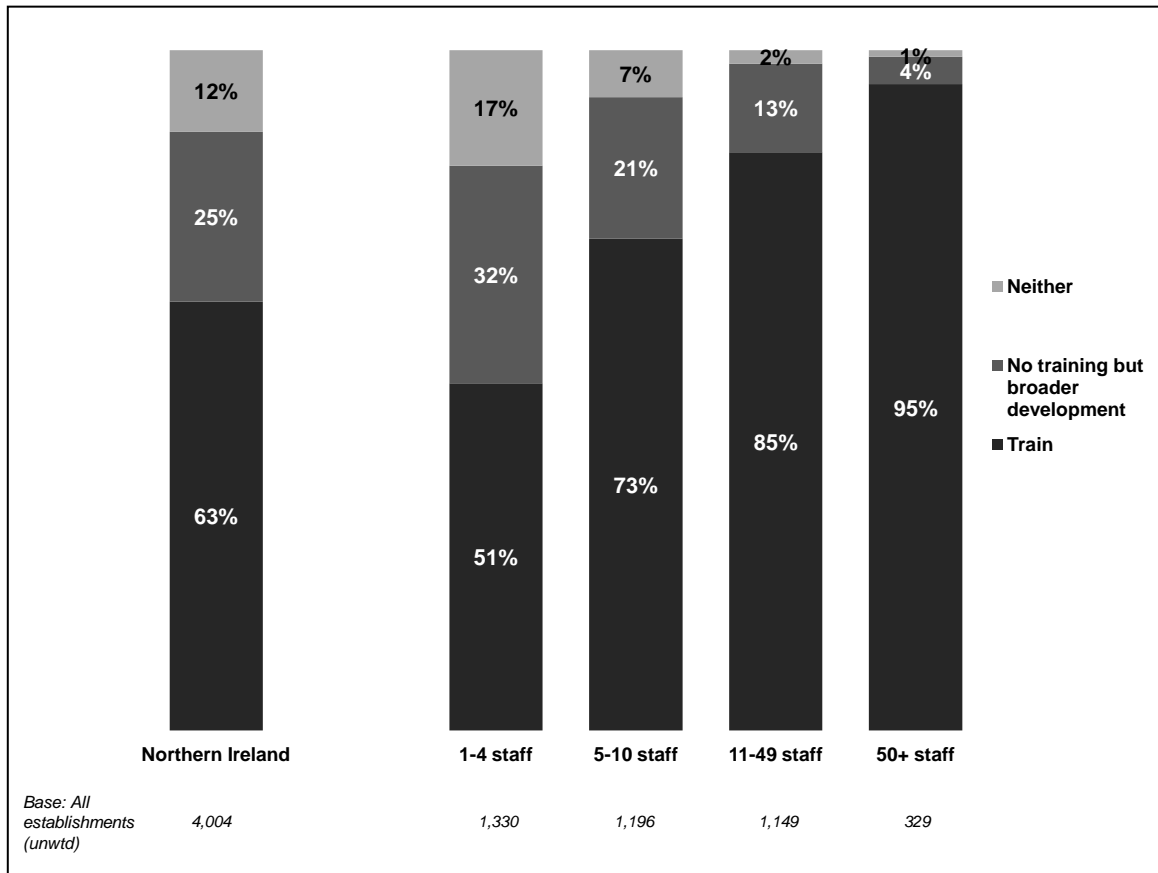
- supervision to ensure that employees are guided through their job role over time;
- opportunities for staff to spend time learning through watching others perform their job roles;
- allowing staff to perform tasks that go beyond their strict job role and providing feedback on how well they had done.

This section explores the proportion of workplaces that have funded or arranged training or further development for their staff over the previous 12 months, and how this varies by size, sector and location of the employer.

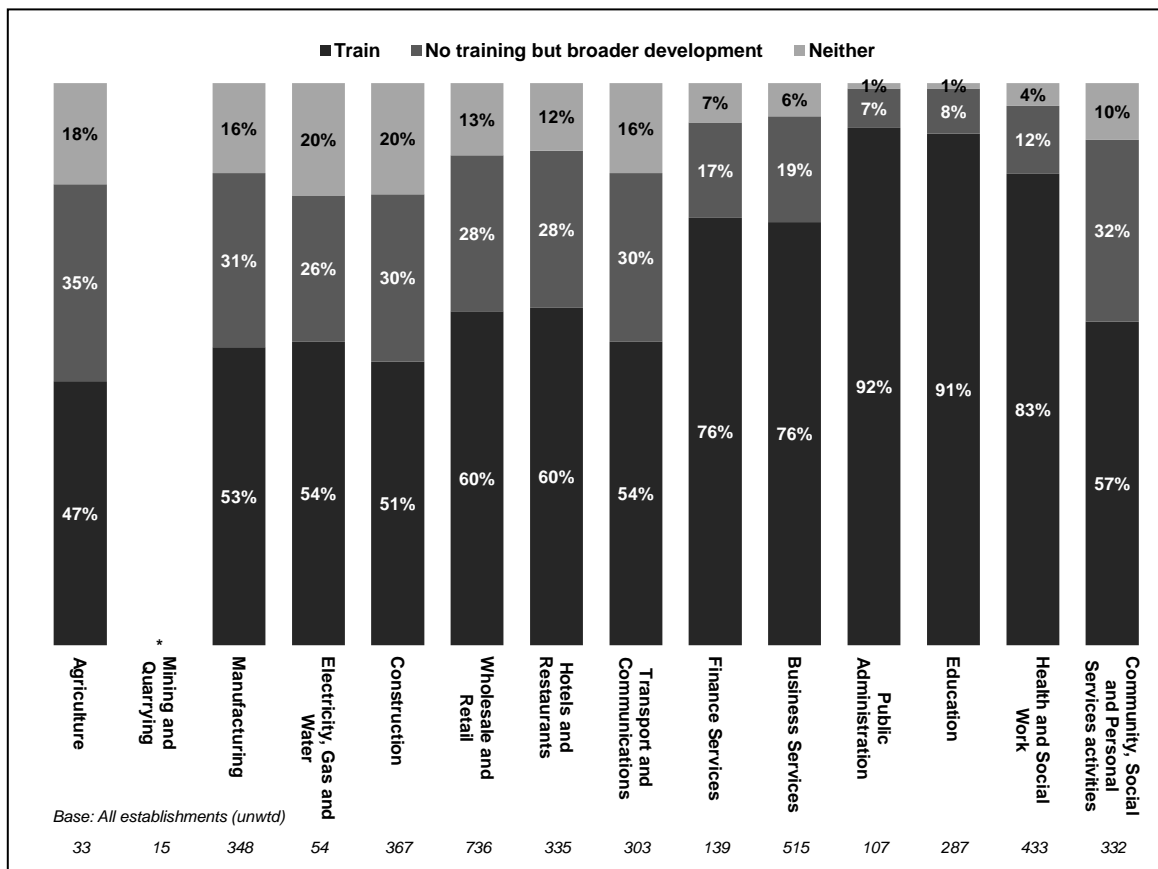
In 2011, more than sixty per cent of workplaces in Northern Ireland had funded or arranged training for at least one of their employees in the 12 months preceding the survey (63 per cent) and an additional quarter (25 per cent) provided further development. Twelve per cent of establishments provided neither training nor further development (See Figure 5.5).

As Figure 5.5 shows, larger establishments were much more likely to provide training than smaller sites. Fifty-one per cent of organisations with fewer than five staff provided training in 2011 but ninety-five per cent of establishments with 50+ staff did. The gap closes when further development is taken into account: eighty-three per cent of the smallest sites (one to four staff) provided either training or further development compared with ninety-nine per cent of the largest sites. Still 17 per cent of the smallest establishments did not provide any training or further development compared with one per cent of the largest organisations. Larger employers in general were more likely to provide training because they have more workers to begin with and they have more internal resources to organize and provide training.

**Figure 5.5 Incidence of training and/or further development by site size**



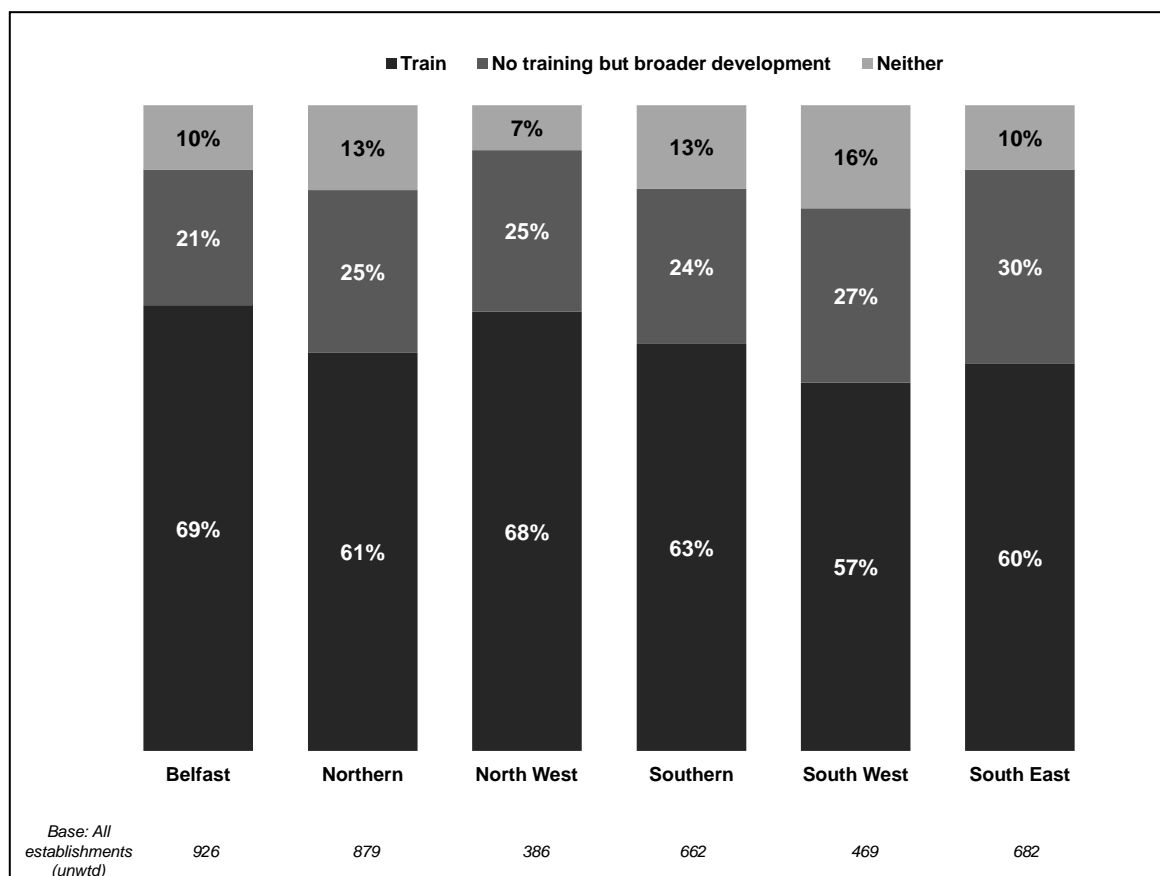
**Figure 5.6 Incidence of training and/or further development by sector**



Once further development was taken into account, a substantial majority (88 per cent) of organisations in all sectors provided some form of assistance to their staff, but, even so, this means that 12 per cent provided no form of training or broader development activity. Establishments in the Education (99 per cent) and Public Administration (99 per cent) sectors were the most likely to provide either training and/or development (Figure 5.6). Sites in the Electricity, Gas and Water and Construction sectors were the least likely (80 per cent).

Figure 5.7 shows the incidence of training and broader development in the six regions of Northern Ireland. Establishments in the South West region were the least likely to provide training and/or further development (16 per cent of sites provided neither) and organisations in the North West region the most likely (only seven per cent provided neither). There was some regional variation in the preference for further development versus training: firms in the Belfast region provided the most training and employers in the South West region provided the most further development.

**Figure 5.7 Incidence of training and/or further development by region**



## 5.4 Conclusions

Although the majority of employers do invest in the training and further development of their workforce, it is unevenly distributed. In particular, it is those in low skilled occupations, those employed in small businesses and those who work in specific sectors, (e.g. Agriculture and Construction) who receive least training.

Smaller establishments were much less likely to provide training than larger establishments. In 2011, 49 per cent of establishments with one to four staff did not provide training compared with only five per cent of establishments with 50+ staff.

The incidence of training also varies substantially by sector. The incidence of training was highest in sectors which contain a large number of public sector employers and large employers. In the Education and Public Administration sectors, 91 and 92 per cent of establishments respectively, provided training in the 12 months leading to the survey. In contrast, only 47 per cent of establishments in the Agriculture sector and only 51 per cent of establishments in the Construction sector provided training.

Geographically, establishments in the North West and Belfast regions were the most likely to provide training (68 per cent and 69 per cent of establishments provided training in the last twelve months, respectively). Employers operating in the South East and South West regions were the least likely (60 per cent and 57 per cent of establishments, respectively provided training in the past 12 months).

The incidence of training increased between 2005 and 2008, declined between 2008 and 2011, and was below 2005 levels in 2011. This trend seems contrary to the need for Northern Ireland to move, at least in the longer term, to a higher skills, higher value added economy. They should also be seen against the increased importance of hard-to-fill vacancies and skill-shortage vacancies (e.g. the increased densities of these types of vacancies) that have emerged during the recent difficult trading period.

## 6 Conclusions

This report has presented the results for Northern Ireland from the UK Commission's Employer Skills Survey 2011. This is a large scale employer survey undertaken for the whole of the UK and covering a wide range of topics including recruitment difficulties, internal skills gaps, and employer investment in training. This report has compared the 2011 results for Northern Ireland to the previous 2008 and 2005 Northern Ireland Skills Monitoring Surveys, which has allowed us to consider how changes in the economic climate have impacted upon employers. This concluding chapter summarises the key messages from the report for Northern Ireland.

### 6.1 Recruitment

The evidence on vacancies gives us some insight into employer confidence in Northern Ireland, and the message is mixed. In 2008 12 per cent of establishments were taking on new staff, and it is likely that this was before the recession had fully hit. By 2011 the proportion of establishments taking on new recruits had fallen to 10 per cent; however the total number of vacancies actually rose slightly, as did the number of vacancies available per 100 employees (vacancy density). This indicates that although fewer employers are taking on new staff, of those that are they are confident to do so in greater numbers.

This trend in vacancies suggests that employer's recovery from the economic downturn may be uneven, with some pockets of employers much more likely to be in a position to take on new staff than others. The survey shows that the smallest establishments (with less than five staff), establishments in the Business Services sector, establishments located in Belfast or the Northern Region, and those employing Professionals, Skilled Trades, and Machine Operatives were the most likely to report increases in vacancies. These groups of employers (or establishments employing those occupations) are more willing and more able to take on staff than they were in 2008.

Although the percentage of establishments reporting vacancies has declined since 2008, the proportion of establishments reporting hard-to-fill and skill-shortage vacancies has increased. In fact, the total number of vacancies and the vacancy density of both hard-to-fill and skill-shortage vacancies was higher than the period just before the recession hit in 2008. In 2008, 29 per cent of vacancies were hard to fill compared with 32 per cent in 2011. The increase in the proportion of vacancies due to skill-shortages was even greater: skill-shortage vacancies formed 18 per cent of vacancies in 2008 and 28 per cent in 2011. This suggests that in some areas Northern Ireland's employers are not fully coping with the overall increase in the number of vacancies.

Most hard-to-fill vacancies and all skill-shortage vacancies (by definition) are caused by applicant-related issues such as lack of skills, qualification and experience. Thus, in order for the labour market of Northern Ireland to meet employer demand, there is a need to make sure people with the right skills are finding the right jobs. Another common cause of vacancies being difficult to fill in was that there is too much competition from other employers; this problem appears to be much more acute in Northern Ireland compared to other nations in the UK.

Any move to accelerate business strategies aimed at improving product and service specification and quality will exacerbate such shortages and, while these continue, any such “up-market” strategies are unlikely to be successful unless accompanied by skills development at firm, sector or wider levels.

## **6.2 Concentrated pockets of skills deficiencies**

Skills deficiencies measured by this project cover both internal skills gaps, where staff are not fully proficient to perform their job role, and external skills shortages where establishments are having difficulties finding people with the appropriate skills to fill vacancies.

Both are experienced by a minority of establishments (12 per cent of establishments had skills gaps and three per cent skill-shortage vacancies), but this overall picture masks concentrated pockets of skills deficiencies in the economy that have the potential to affect the current economic recovery and future growth. These pockets are unevenly spread across the economy.

While Northern Ireland's smallest employers are recovering well from the economic downturn in terms of vacancy growth, they are finding these vacancies difficult to fill; 33 per cent of vacancies were reported by the smallest establishments as hard-to-fill due to a lack of suitably skilled applicants.

Thus, it appears that the smallest and largest establishments in Northern Ireland are demanding more skill, and perhaps, are growing, but that growth is at risk by a lack of access to suitable skills in the labour market. In contrast, in England, it is the mid sized establishments (employing between 25 and 199 staff) that experience this trend. Due to the structure of the business population in Northern Ireland, all employers are categorised as ‘larger’ establishments once they employ over 50 staff.

Skills-shortage vacancies, reported by three per cent of establishments overall, are most likely to be experienced by establishments in the Public Administration and Hotel and Restaurants sectors where six per cent of establishments have a skill-shortage vacancy. And although the proportion of establishments reporting skills-shortage vacancies was in line with the overall average among establishments in the Business Services sector (three per cent), the difficulties were more concentrated than average – a third of vacancies in this sector are proving difficult to fill due to a lack of suitably skilled applicants.

Skills-shortage vacancies were most common among the Professionals and Skilled Trades occupations in numeric terms (1,200 and 1,000 vacancies respectively). This represented well over half of vacancies in the Professionals occupation being difficult to fill due to a lack of skills (60 per cent of vacancies). These are both job roles that will tend to require a higher level of skills, longer training requirements on entry and also skills which are likely to be quite specific to the industry they are in, whereas occupational groups which are less affected by skill-shortage vacancies (such as Elementary occupations, Administrative and Clerical, and Sales and Customer Services) will involve skills that are more transferrable between industries.

Employers in the Belfast region were slightly more likely than average to report skills-shortage vacancies (four per cent of establishments). The density and number of skills shortage vacancies was also highest in the Belfast region. The region saw a big change in the proportion of vacancies that were hard-to-fill due to skills between 2008 and 2011, rising from 14 to 42 per cent of vacancies and the overall number of skills shortage vacancies increasing from 900 to 3,500. This change has moved Belfast from having a below average proportion of vacancies in skill-shortage, to being well above the average in 2011.

### **6.3 Internal skills gaps**

Skill gaps currently affect 12 per cent of establishments and five per cent of the workforce, a decline since 2008. The survey findings can only report those employers that are aware of the skills gaps they face, and other evidence of the low-skill equilibrium at work within the UK (for example see original paper by Finegold and Soskice, 1988) suggests that many employers not registering problems may be doing so because of a lack of desire to build up skills, innovate, grow and move up the value chain. Hence the survey results on the extent of skills gaps may in reality mask a much deeper problem reflecting under recognition of skills deficiencies and a lack of employer ambition.



As levels of training have not increased over this period, hypotheses for why skills gaps have fallen might be that perhaps fewer people have been moving jobs and so have had time to become proficient in the role they are performing. More pessimistically, it could be that due to the recession, establishments have been less likely to innovate their working practices, to introduce new technology or to introduce new products or services that would require employees to improve their skills and may be reflected in transient skills gaps while they get up to speed. The reduction in skill gaps could also reflect the impact of downsizing since firms are most likely to lay off staff not fully proficient in their jobs first.

Even though skill gaps characterise a relatively small proportion of establishments and workers, they were more prevalent than skill-shortage vacancies. Skill gaps can adversely impact on business performance by increasing cost, hindering innovation and delaying the development of new products and services. Thus, the development of high value added business strategies in parallel with effective skills use and development by firms in Northern Ireland are critical to avoid such mismatches and remain competitive in the global economy.

Again, some groups of employers are impacted by skills gaps more than others. Incidence of skills gaps increases with establishment size from seven per cent for sites with fewer than five staff to 36 per cent for sites with more than 50 workers, but the proportion of the workforce with a skill gap was broadly consistent across all size bands.

Hotels and Restaurants, Wholesale and Retail and Public Administration sectors were all more likely than average to report skills gaps (with 18, 17 and 16 per cent of establishments respectively). These three sectors all had an above average incidence of skills gaps in 2008, and for Hotels and Restaurants and Public Administration this trend stretches back to 2005. In terms of proportion of the workforce skills gaps impact upon, this was highest in the Hotels and Restaurants sector (10 per cent of the workforce). The Public Administration and Education sectors also had a relatively high percentage of establishments reporting skills gaps, however this did not translate to high proportion of all employment in these sectors (skills gaps density), which suggests skills gaps are relatively diffuse in these two sectors.

Elementary and Sales & Customer Services positions were most likely to be reported as having staff lacking full proficiency (7 per cent of staff). Both of these occupations also had an above average proportion of staff with skill gaps in 2008, suggesting this is a persistent problem over time for these two occupations. By contrast Professionals and Managers were the most likely to be fully proficient, with only two per cent of staff having a skills gap.

Incidence of skills gaps was highest in Belfast, Northern and South West regions (13 per cent of sites) though broadly in line with the overall average, the lowest incidence was in the North West region (nine per cent). The density of skills gaps ranged from seven per cent of the workforce in the South West region to 3 per cent in Belfast region.

## 6.4 Provision of training

Three-fifths of establishments in Northern Ireland (63 per cent) provided some form of training for any of their staff in the previous 12 months and almost nine in 10 (88 per cent) provided either training or workforce development. However the overall incidence of training declined between 2008 and 2011 by 11 percentage points following an earlier increase of 7 percentage points between 2005 and 2008. As a result, incidence of training in 2011 was generally below 2005 levels. While this decline is a reflection of the difficult trading environment, the reduced incidence of training could have long term consequences for the competitiveness of the Northern Ireland economy.

This trend of falling training seems contrary to the desire for Northern Ireland to move, at least in the longer term, to a higher skills, higher value added economy. The fall should also be seen against the increased importance of hard-to-fill vacancies and skill-shortage vacancies that have emerged during the recent difficult trading period.

Although the majority of employers do invest in training and provide further workplace learning opportunities for their workforce, it is unequally distributed. In particular, it is those in low skilled occupations, those employed in small businesses and those who work in specific sectors, (such as Agriculture and Construction) who receive least training.

Smaller employers were much less likely to provide training than larger employers, and this trend is persistent through time. In 2011, 49 per cent of establishments with one to four staff did not provide training compared with only five per cent of establishments with 50+ staff.

The incidence of training also varies substantially by sector. The incidence of training as in previous years continues to be highest in sectors which contain a large number of public sector employers and large employers. In the Education and Public Administration sectors, 91 and 92 per cent of establishments respectively, provided training in the 12 months leading to the survey. In contrast, only 47 per cent of establishments in the Agriculture sector and only 51 per cent of establishments in the Construction sector provided training.

The occupations with the lowest amount of training were the Administration and Clerical and Elementary occupations (45 and 47 per cent of workforce, respectively). By contrast, 82 per cent of the workforce in Caring, Leisure and Other Service occupations had received training within the last 12 months.

Geographically, employers in the North West and Belfast regions were the most likely to provide training (68 per cent and 69 per cent of establishments provided training in the last twelve months, respectively). Employers operating in the South East and South West regions were the least likely (60 per cent and 57 per cent of establishments, respectively provided training in the past 12 months), for the South West region this appears to be a consistent trend over time.

Overall the 2011 figures suggest that while there is confidence to take on new staff (evidenced by a rise in the volume of vacancies), employer's willingness and ability to invest in their current staff has decreased as the knock-on effects of the economic downturn have hit. With the UK back in recession at the time of writing, it is essential that employers retain a focus on their people to ensure they are well placed to drive economic recovery and also benefit from any upturn that does occur in the coming months and years.

## **6.5 Employer Skills in the economic context**

This report looks at time series comparisons back to 2005; in this period the UK economy has seen boom years, followed by a recession and then the first tentative steps towards recovery. The wealth of data on recruitment, skills and training collected over this period casts light on how employers have been affected by the recession and ongoing uncertainty in the economic climate.

Some groups of employers face multiple skills issues; these may impede their economic recovery in the future. The smallest employers in Northern Ireland are the most likely of all size bands to have a vacancy which is proving hard to fill due to a lack of suitably skilled applicants, yet it continues to be the smallest employers who are least likely to train their existing staff. Similarly the South West region had the second highest density of skills shortage vacancies, and the highest skills gaps density across the regions – however employers in this region (as in 2008) were the least likely to be training their staff. A high proportion of the workforce employed in Elementary occupations had skills gaps, but were the least likely to be trained by their employers. Finally the Hotel and Restaurant sector is not only struggling with a high proportion of its vacancies being skills shortage vacancies, but was also the sector with the highest proportion of staff with a skills gap.

The results also show that regardless of changes in the economic climate some of the same skills issues persist through time. The smallest establishments are consistently less likely to train their staff compared to other sized employers, and the proportion of their vacancies that are skill-shortage vacancies (around a third) is persistently high. By sector and occupation it is the same groups of employers that continue to have the highest proportions of employers with a skills gap – the Hotels and Restaurants, Wholesale and Retail and Public Administration sectors, and the Elementary and Sales and Customer Service occupations. However skill-shortage vacancies by occupation and sector appear to be more fluid over time.

The overall impact of the recent recession on Northern Ireland can still be seen in the results of this survey – the incidence of training has declined in recent years and is currently below 2005 levels and the decrease in skill gaps seems unlikely to reflect a more proficient workforce, but lower employer investment in innovation and other activities that require higher skill levels. There are still opportunities for workers with the right skills and qualifications as the number of hard-to-fill and skill-shortage vacancies is higher than ever, which should provide an incentive for individuals and employers to invest in training and other learning opportunities. There is clearly also a need for employers to consider whether they are currently being as ambitious as they might be, but greater ambition will also require a greater commitment to training and other workplace learning activities.

The results discussed in this report have concentrated on key elements of the survey that can be compared with the previous Northern Ireland Skills Monitoring Surveys capturing the time series position. For a broader story on the training investment behaviour of employers, and how this fits into the wider integrated approach to managing the business, please refer to the UK Report 'UK Commission's Employer Skills Survey 2011: UK Results' (<http://www.ukces.org.uk/publications/employer-skills-survey-2011>).

## **6.6 Further avenues for analysis and future reports**

This report has used the Northern Ireland data from the UK Commission's Employer Skills Survey 2011 to update the findings and examine changes from the previous Northern Ireland Skills Monitoring series. There is, however, much more that can be done with the rich data available from the 2011 survey.

We have published reports comparing results across the whole of the UK, as well as releasing a series of broader sectoral studies. Analysis of other areas of the survey, including High Performance Working Practices (HPWP), and more detailed analysis for Scotland and Wales is being undertaken. There is also the potential for advanced analysis techniques, such as regression and cluster analysis to potentially draw out further information on themes such as retention, recruitment and training. There is the scope to look at how different themes and trends fit together, and more broadly how employer characteristics and local labour markets can be used to predict likely behaviour. In this way the data allows deeper understanding of the challenges and the opportunities employers face in tackling the skill deficiencies which test growth and business success, and raise ambitious demand for highly skilled people in UK businesses.

## Appendix A: Time series tables

**Table A1 Incidence, volume and density of vacancies: time series by sector**

		2005	2008	2011
<i>Column %</i>		%	%	%
<b>Sector</b>				
<b>Agriculture</b>	<i>Base:</i>	0	0	33
% of establishments with a vacancy		**	**	2
Number of vacancies		n/a	**	100
Vacancy density		n/a	**	0.8
<b>Mining &amp; Quarrying</b>	<i>Base:</i>	17	10	15
% of establishments with a vacancy		**	**	**
Number of vacancies		n/a	**	**
Vacancy density		n/a	**	**
<b>Manufacturing</b>	<i>Base:</i>	700	522	348
% of establishments with a vacancy		12	11	10
Number of vacancies		n/a	900	1,300
Vacancy density		n/a	1.2	1.6
<b>Electricity, Gas and Water</b>	<i>Base:</i>	18	22	54
% of establishments with a vacancy		**	**	4
Number of vacancies		n/a	**	100
Vacancy density		n/a	**	0.9
<b>Construction</b>	<i>Base:</i>	229	280	367
% of establishments with a vacancy		8	5	4
Number of vacancies		n/a	500	400
Vacancy density		n/a	1.6	1.0
<b>Wholesale and Retail</b>	<i>Base:</i>	784	787	736
% of establishments with a vacancy		9	11	9
Number of vacancies		n/a	3,600	2,000
Vacancy density		n/a	2.5	1.5
<b>Hotels and Restaurants</b>	<i>Base:</i>	181	226	335
% of establishments with a vacancy		14	14	14
Number of vacancies		n/a	1,500	1,500
Vacancy density		n/a	3.2	3.0
<b>Transport and Communications</b>	<i>Base:</i>	324	216	303
% of establishments with a vacancy		13	9	8
Number of vacancies		n/a	500	1,600
Vacancy density		n/a	1.9	3.4
<b>Finance Services</b>	<i>Base:</i>	135	133	139
% of establishments with a vacancy		15	7	10
Number of vacancies		n/a	200	300
Vacancy density		n/a	1.2	1.8
<b>Business Services</b>	<i>Base:</i>	456	557	515

% of establishments with a vacancy		9	8	13
Number of vacancies		n/a	2,500	6,800
Vacancy density		n/a	3.1	7.0
<b>Public Administration</b>	<i>Base:</i>	<b>74</b>	<b>178</b>	<b>107</b>
% of establishments with a vacancy		36	39	22
Number of vacancies		n/a	2,000	2,100
Vacancy density		n/a	3.3	3.4
<b>Education</b>	<i>Base:</i>	<b>339</b>	<b>313</b>	<b>287</b>
% of establishments with a vacancy		15	18	17
Number of vacancies		n/a	1,000	600
Vacancy density		n/a	1.2	1.2
<b>Health and Social Work</b>	<i>Base:</i>	<b>456</b>	<b>362</b>	<b>433</b>
% of establishments with a vacancy		16	23	13
Number of vacancies		n/a	3,400	1,700
Vacancy density		n/a	3.1	1.5
<b>Community, Social and Personal Services activities</b>	<i>Base:</i>	<b>413</b>	<b>394</b>	<b>332</b>
% of establishments with a vacancy		8	12	15
Number of vacancies		n/a	1,200	1,400
Vacancy density		n/a	2.9	4.2

*Base: All establishments in Northern Ireland within each sector.*

*“Vacancy density” figures are based on all employment, percentages therefore represent the number of vacancies as a proportion of all employment.*

*Number of vacancies rounded to nearest 100. ‘n/a’ denotes the question was not asked / was not asked in a comparable manner in that year’s survey. ‘\*\*\*’ denotes base size under 25: too low to report. Figures in italics denote base size <50: treat figures with caution.*

**Table A2 Incidence, volume and density of hard-to-fill vacancies: time series by sector**

		2005	2008	2011
<i>Column %</i>		%	%	%
<b>Sector</b>				
<b>Agriculture</b>	<i>Base:</i>	0	0	33
% of establishments with a hard-to-fill vacancy		**	**	-
Number of hard-to-fill vacancies		n/a	**	-
	<i>Base:</i>	n/a	0	1
% of vacancies that were hard to fill		n/a	**	**
<b>Mining &amp; Quarrying</b>	<i>Base:</i>	17	10	15
% of establishments with a hard-to-fill vacancy		**	**	**
Number of hard-to-fill vacancies		n/a	**	**
	<i>Base:</i>	n/a	1	0
% of vacancies that were hard to fill		n/a	**	**
<b>Manufacturing</b>	<i>Base:</i>	700	522	348
% of establishments with a hard-to-fill vacancy		7	6	4
Number of hard-to-fill vacancies		n/a	400	400
	<i>Base:</i>	n/a	65	40
% of vacancies that were hard to fill		n/a	41	28
<b>Electricity, Gas and Water</b>	<i>Base:</i>	18	22	54
% of establishments with a hard-to-fill vacancy		**	**	2
Number of hard-to-fill vacancies		n/a	**	*
	<i>Base:</i>	n/a	2	4
% of vacancies that were hard to fill		n/a	**	**
<b>Construction</b>	<i>Base:</i>	229	280	367
% of establishments with a hard-to-fill vacancy		7	1	2
Number of hard-to-fill vacancies		n/a	100	100
	<i>Base:</i>	n/a	20	18
% of vacancies that were hard to fill		n/a	**	**
<b>Wholesale and Retail</b>	<i>Base:</i>	784	787	736
% of establishments with a hard-to-fill vacancy		5	3	3
Number of hard-to-fill vacancies		n/a	800	500
	<i>Base:</i>	n/a	137	83
% of vacancies that were hard to fill		n/a	23	23
<b>Hotels and Restaurants</b>	<i>Base:</i>	181	226	335
% of establishments with a hard-to-fill vacancy		7	6	6
Number of hard-to-fill vacancies		n/a	500	400
	<i>Base:</i>	n/a	59	61
% of vacancies that hard to fill		n/a	33	30
<b>Transport and Communications</b>	<i>Base:</i>	324	216	303
% of establishments with a hard-to-fill vacancy		5	3	3
Number of hard-to-fill vacancies		n/a	100	400
	<i>Base:</i>	n/a	42	33
% of vacancies that were hard to fill		n/a	27	26
<b>Finance Services</b>	<i>Base:</i>	135	133	139
% of establishments with a hard-to-fill vacancy		9	2	2
Number of hard-to-fill vacancies		n/a	100	100



	<i>Base:</i>	<i>n/a</i>	<i>11</i>	<i>16</i>
% of vacancies that were hard to fill		<i>n/a</i>	<i>**</i>	<i>**</i>
<b>Business Services</b>	<i>Base:</i>	<i>456</i>	<i>557</i>	<i>515</i>
% of establishments with a hard-to-fill vacancy		<i>6</i>	<i>4</i>	<i>3</i>
Number of hard-to-fill vacancies		<i>n/a</i>	<i>700</i>	<i>2,300</i>
	<i>Base:</i>	<i>n/a</i>	<i>68</i>	<i>73</i>
% of vacancies that were hard to fill		<i>n/a</i>	<i>27</i>	<i>33</i>
<b>Public Administration</b>	<i>Base:</i>	<i>74</i>	<i>178</i>	<i>107</i>
% of establishments with a hard-to-fill vacancy		<i>13</i>	<i>15</i>	<i>7</i>
Number of hard-to-fill vacancies		<i>n/a</i>	<i>300</i>	<i>1,100</i>
	<i>Base:</i>	<i>n/a</i>	<i>79</i>	<i>28</i>
% of vacancies that were hard to fill		<i>n/a</i>	<i>13</i>	<i>52</i>
<b>Education</b>	<i>Base:</i>	<i>339</i>	<i>313</i>	<i>287</i>
% of establishments with a hard-to-fill vacancy		<i>5</i>	<i>3</i>	<i>3</i>
Number of hard-to-fill vacancies		<i>n/a</i>	<i>200</i>	<i>100</i>
	<i>Base:</i>	<i>n/a</i>	<i>64</i>	<i>52</i>
% of vacancies that were hard to fill		<i>n/a</i>	<i>21</i>	<i>15</i>
<b>Health and Social Work</b>	<i>Base:</i>	<i>456</i>	<i>362</i>	<i>433</i>
% of establishments with a hard-to-fill vacancy		<i>8</i>	<i>12</i>	<i>5</i>
Number of hard-to-fill vacancies		<i>n/a</i>	<i>1,700</i>	<i>500</i>
	<i>Base:</i>	<i>n/a</i>	<i>122</i>	<i>67</i>
% of vacancies that were hard to fill		<i>n/a</i>	<i>49</i>	<i>29</i>
<b>Community, Social and Personal Services activities</b>	<i>Base:</i>	<i>413</i>	<i>394</i>	<i>332</i>
% of establishments with a hard-to-fill vacancy		<i>3</i>	<i>3</i>	<i>7</i>
Number of hard-to-fill vacancies		<i>n/a</i>	<i>200</i>	<i>500</i>
	<i>Base:</i>	<i>n/a</i>	<i>75</i>	<i>48</i>
% of vacancies that were hard to fill		<i>n/a</i>	<i>19</i>	<i>37</i>

*Base: Rows 1 and 2 of each sector all establishments; Row 3: all establishments with vacancies.*

*Percentages in Row 3 are based on all vacancies, rather than all establishments with vacancies; figures therefore show the percentage of vacancies which are hard-to-fill.*

*Number of hard-to-fill vacancies rounded to nearest 100. 'n/a' denotes the question was not asked / was not asked in a comparable manner in that year's survey. '\*\*' denotes base size under 25: too low to report. Figures in italics denote base size <50: treat figures with caution. '-' denotes a figure of zero; '\*' denotes a figure larger than zero but smaller than 0.5.*

*Note that in 2005 and 2008 the question was termed "difficult to fill" rather than "hard-to-fill", and was asked separately for each occupation rather than being asked overall before breaking it down into occupations.*

**Table A3 Incidence, volume and density of skill-shortage vacancies: time series by sector**

		<b>2005</b>	<b>2008</b>	<b>2011</b>
<i>Column %</i>		<i>%</i>	<i>%</i>	<i>%</i>
<b>Sector</b>				
<b>Agriculture</b>	<i>Base:</i>	0	0	33
% of establishments with a SSV		**	**	-
Number of skill-shortage vacancies		n/a	**	-
	<i>Base:</i>	n/a	0	1
% of vacancies that were SSVs		n/a	**	**
<b>Mining &amp; Quarrying</b>	<i>Base:</i>	17	10	15
% of establishments with a SSV		**	**	**
Number of skill-shortage vacancies		n/a	**	**
	<i>Base:</i>	n/a	1	0
% of vacancies that were SSVs		n/a	**	**
<b>Manufacturing</b>	<i>Base:</i>	700	522	348
% of establishments with a SSV		5	4	3
Number of skill-shortage vacancies		n/a	300	300
	<i>Base:</i>	n/a	65	40
% of vacancies that were SSVs		n/a	30	24
<b>Electricity, Gas and Water</b>	<i>Base:</i>	18	22	54
% of establishments with a SSV		**	**	2
Number of skill-shortage vacancies		n/a	**	*
	<i>Base:</i>	n/a	2	4
% of vacancies that were SSVs		n/a	**	**
<b>Construction</b>	<i>Base:</i>	229	280	367
% of establishments with a SSV		4	1	1
Number of skill-shortage vacancies		n/a	100	100
	<i>Base:</i>	n/a	20	18
% of vacancies that were SSVs		n/a	**	**
<b>Wholesale and Retail</b>	<i>Base:</i>	784	787	736
% of establishments with a SSV		3	2	2
Number of skill-shortage vacancies		n/a	400	300
	<i>Base:</i>	n/a	137	83
% of vacancies that were SSVs		n/a	10	15
<b>Hotels and Restaurants</b>	<i>Base:</i>	181	226	335
% of establishments with a SSV		5	4	6
Number of skill-shortage vacancies		n/a	200	400
	<i>Base:</i>	n/a	59	61
% of vacancies that were SSVs		n/a	16	25
<b>Transport and Communications</b>	<i>Base:</i>	324	216	303
% of establishments with a SSV		3	2	3

Number of skill-shortage vacancies	n/a	100	200
Base:	n/a	42	33
% of vacancies that were SSVs	n/a	19	13
<b>Finance Services</b>	Base:	135	133
% of establishments with a SSV	4	2	2
Number of skill-shortage vacancies	n/a	100	100
Base:	n/a	11	16
% of vacancies that were SSVs	n/a	**	**
<b>Business Services</b>	Base:	456	557
% of establishments with a SSV	5	3	3
Number of skill-shortage vacancies	n/a	600	2,300
Base:	n/a	68	73
% of vacancies that were SSVs	n/a	24	33
<b>Public Administration</b>	Base:	74	178
% of establishments with a SSV	6	6	6
Number of skill-shortage vacancies	n/a	100	1,000
Base:	n/a	79	28
% of vacancies that were SSVs	n/a	6	49
<b>Education</b>	Base:	339	313
% of establishments with a SSV	2	2	3
Number of skill-shortage vacancies	n/a	100	100
Base:	n/a	64	52
% of vacancies that were SSVs	n/a	15	12
<b>Health and Social Work</b>	Base:	456	362
% of establishments with a SSV	5	8	3
Number of skill-shortage vacancies	n/a	1,100	400
Base:	n/a	122	67
% of vacancies that were SSVs	n/a	32	21
<b>Community, Social and Personal Services activities</b>	Base:	413	394
% of establishments with a SSV	2	1	4
Number of skill-shortage vacancies	n/a	100	400
Base:	n/a	75	48
% of vacancies that were SSVs	n/a	8	27

Base: Rows 1 and 2 of each sector all establishments; Row 3: all establishments with vacancies.

Percentages in Row 3 are based on all vacancies, rather than all establishments with vacancies; figures therefore show the percentage of vacancies which are hard to fill due to skill shortages.

Number of skill-shortage vacancies rounded to nearest 100. 'n/a' denotes the question was not asked / was not asked in a comparable manner in that year's survey. '\*\*' denotes base size under 25: too low to report. Figures in italics denote base size <50: treat figures with caution. '-' denotes a figure of zero; '\*' denotes a figure larger than zero but smaller than 0.5.

**Table A4 Incidence, volume and density of skill gaps: time series by sector**

		<b>2005</b>	<b>2008</b>	<b>2011</b>
<i>Column %</i>		<b>%</b>	<b>%</b>	<b>%</b>
<b>Sector</b>				
<b>Agriculture</b>	<i>Base:</i>	0	0	33
% of establishments with a skill gap		**	**	11
Number of skill gaps		n/a	**	400
% of workforce with skill gaps		n/a	**	6
<b>Mining &amp; Quarrying</b>	<i>Base:</i>	17	10	15
% of establishments with a skill gap		**	**	**
Number of skill gaps		n/a	**	**
% of workforce with skill gaps		n/a	**	**
<b>Manufacturing</b>	<i>Base:</i>	700	522	348
% of establishments with a skill gap		8	28	14
Number of skill gaps		n/a	5,500	5,400
% of workforce with skill gaps		n/a	7	6
<b>Electricity, Gas and Water</b>	<i>Base:</i>	18	22	54
% of establishments with a skill gap		**	**	4
Number of skill gaps		n/a	**	100
% of workforce with skill gaps		n/a	**	1
<b>Construction</b>	<i>Base:</i>	229	280	367
% of establishments with a skill gap		8	19	6
Number of skill gaps		n/a	2,500	1,000
% of workforce with skill gaps		n/a	8	3
<b>Wholesale and Retail</b>	<i>Base:</i>	784	787	736
% of establishments with a skill gap		8	24	17
Number of skill gaps		n/a	14,400	8,600
% of workforce with skill gaps		n/a	10	6
<b>Hotels and Restaurants</b>	<i>Base:</i>	181	226	335
% of establishments with a skill gap		16	37	18
Number of skill gaps		n/a	7,300	4,800
% of workforce with skill gaps		n/a	16	10
<b>Transport and Communications</b>	<i>Base:</i>	324	216	303
% of establishments with a skill gap		5	21	9
Number of skill gaps		n/a	1,900	1,900
% of workforce with skill gaps		n/a	7	4
<b>Finance Services</b>	<i>Base:</i>	135	133	139
% of establishments with a skill gap		11	26	11
Number of skill gaps		n/a	1,300	700
% of workforce with skill gaps		n/a	7	4
<b>Business Services</b>	<i>Base:</i>	456	557	515
% of establishments with a skill gap		9	19	11
Number of skill gaps		n/a	7,700	3,500

% of workforce with skill gaps		n/a	10	4
<b>Public Administration</b>	<i>Base:</i>	74	178	107
% of establishments with a skill gap		21	32	16
Number of skill gaps		n/a	4,000	1,400
% of workforce with skill gaps		n/a	6	2
<b>Education</b>	<i>Base:</i>	339	313	287
% of establishments with a skill gap		12	22	12
Number of skill gaps		n/a	2,300	800
% of workforce with skill gaps		n/a	3	2
<b>Health and Social Work</b>	<i>Base:</i>	456	362	433
% of establishments with a skill gap		13	17	9
Number of skill gaps		n/a	8,700	3,200
% of workforce with skill gaps		n/a	8	3
<b>Community, Social and Personal Services activities</b>	<i>Base:</i>	413	394	332
% of establishments with a skill gap		12	13	9
Number of skill gaps		n/a	2,900	1,600
% of workforce with skill gaps		n/a	7	5

*Base: Col 1 and 2 All establishments; Col 3 All establishments with staff in each occupation.*

*Number of gaps rounded to nearest 100.*

*n/a' denotes the question was not asked / was not asked in a comparable manner in that year's survey. '\*\*\*' denotes base size under 25: too low to report. Figures in italics denote base size <50: treat figures with caution.*

*Note that in 2005 and 2008, the question was preceded by an overall question asking whether the skills of staff overall were sufficient to meet business objectives. In 2005 only those saying "no" at this question were asked whether staff in each occupation were proficient; in 2008 all were asked whether staff in each occupation were proficient irrespective of their answer to the overall question.*

**Table A5 Incidence and volume of training: time series by sector**

		2005	2008	2011
<i>Column %</i>		%	%	%
<b>Sector</b>				
<b>Agriculture</b>	<i>Base:</i>	0	0	33
Total doing any training		**	**	47
Off-the-job only		**	**	17
On-the-job only		**	**	14
Both off- and on-the-job training		**	**	17
Do not train		**	**	53
<b>Mining &amp; Quarrying</b>	<i>Base:</i>	17	10	15
Total doing any training		**	**	**
Off-the-job only		**	**	**
On-the-job only		**	**	**
Both off- and on-the-job training		**	**	**
Do not train		**	**	**
<b>Manufacturing</b>	<i>Base:</i>	700	522	348
Total doing any training		60	76	54
Off-the-job only		7	9	14
On-the-job only		34	28	16
Both off- and on-the-job training		18	39	24
Do not train		40	24	46
<b>Electricity, Gas and Water</b>	<i>Base:</i>	18	22	54
Total doing any training		**	**	54
Off-the-job only		**	**	20
On-the-job only		**	**	5
Both off- and on-the-job training		**	**	29
Do not train		**	**	46
<b>Construction</b>	<i>Base:</i>	229	280	367
Total doing any training		64	72	51
Off-the-job only		11	23	20
On-the-job only		27	11	6
Both off- and on-the-job training		25	38	24
Do not train		36	28	49
<b>Wholesale and Retail</b>	<i>Base:</i>	784	787	736
Total doing any training		66	63	60
Off-the-job only		3	10	9
On-the-job only		39	28	22
Both off- and on-the-job training		23	25	29
Do not train		34	37	40
<b>Hotels and Restaurants</b>	<i>Base:</i>	181	226	335
Total doing any training		66	71	60
Off-the-job only		2	10	11
On-the-job only		49	29	24
Both off- and on-the-job training		15	32	25
Do not train		34	29	40
<b>Transport and Communications</b>	<i>Base:</i>	324	216	303
Total doing any training		66	67	54
Off-the-job only		6	5	14
On-the-job only		37	34	15

Both off- and on-the-job training	24	28	25
Do not train	34	33	46
<b>Finance Services</b>	<i>Base:</i>	<i>135</i>	<i>133</i>
Total doing any training	81	93	76
Off-the-job only	13	7	12
On-the-job only	34	34	27
Both off- and on-the-job training	34	52	37
Do not train	19	7	24
<b>Business Services</b>	<i>Base:</i>	<i>456</i>	<i>557</i>
Total doing any training	65	79	76
Off-the-job only	13	18	15
On-the-job only	28	18	18
Both off- and on-the-job training	24	43	42
Do not train	35	21	24
<b>Public Administration</b>	<i>Base:</i>	<i>74</i>	<i>178</i>
Total doing any training	97	93	92
Off-the-job only	10	6	16
On-the-job only	16	19	10
Both off- and on-the-job training	70	69	66
Do not train	3	7	8
<b>Education</b>	<i>Base:</i>	<i>339</i>	<i>313</i>
Total doing any training	88	90	91
Off-the-job only	9	17	13
On-the-job only	25	6	15
Both off- and on-the-job training	53	67	63
Do not train	12	10	9
<b>Health and Social Work</b>	<i>Base:</i>	<i>456</i>	<i>362</i>
Total doing any training	84	89	83
Off-the-job only	13	12	15
On-the-job only	21	22	14
Both off- and on-the-job training	50	55	55
Do not train	16	11	17
<b>Community, Social and Personal Services activities</b>	<i>Base:</i>	<i>413</i>	<i>394</i>
Total doing any training	66	69	57
Off-the-job only	12	16	12
On-the-job only	29	11	14
Both off- and on-the-job training	24	42	32
Do not train	34	31	43

*Base: All establishments*

\*\*\* denotes base size under 25: too low to report. Figures in italics denote base size <50: treat figures with caution.

Note that in 2008 the reasons for not providing off-the-job training was asked before whether they provided on-the-job training, and in 2005 a whole suite of questions relating to off-the-job training was asked before whether they provided on-the-job training; care should therefore be taken when interpreting time series results.

## Appendix B: Technical Appendix

The UK Commission's Employer Skills Survey 2011 was a telephone-based survey. It was conducted in two parts: a general population survey of UK workplaces (wave 1) and a (smaller) follow-up survey of workplaces which had provided training for some of their employees in the 12 months preceding the survey (wave 2). The data presented in this report are from wave 1 of the survey, results for Northern Ireland for wave 2 of the survey can be found in the UK report.

Below we briefly summarise the key features of the methodology adopted across both surveys. Further details can be found in the separate technical report which accompanies this report.

### B.1.1 Survey sampling

The survey was designed to be representative of all establishments in the UK where at least one person is employed. It encompasses establishments across the full geographical spread of the UK, in all sectors of the economy (across the commercial, public and charitable spheres). This report uses the same population as that sampled for the 2008 Northern Ireland Skills Monitoring Survey (NISMS).

The core survey adopted a stratified random sample approach. Targets were set, on an interlocking basis, for the numbers of interviews to be achieved with establishments:

- operating in each of 14 SIC-defined sectors – half of all interviews within each geographical area were allocated evenly between the sectors and the other half in proportion to the number of establishments in that sector;
- within each of seven size bands defined by the number of employees on the payroll (within each sector within each country) – interviews were allocated using a modified *probability proportionate to size* approach (i.e. in line with the size of the workforce in each size band within the sector) in such a way as to maximise coverage of the workforce). Note that whilst the size analysis in this report uses four size bands, the original sampling was based on a more detailed seven bands: 1-4, 5-9, 10-24, 25-49, 50-99, 100-249 and 250+.

The profile of the population was established through the Office for National Statistics (ONS) based on data from the IDBR (March 2010 statistics).



Sample (contact details for establishments) was sourced from a commercial database of establishments, supplemented by some records supplied through the IDBR (in order to ensure full representation of establishments in certain non-commercial sectors in particular).

The follow-up survey (wave 2) also adopted a stratified random sample approach. For this survey, initial targets were set for the numbers of interviews to be achieved according to the nature of the training the establishment provided (i.e. whether on-the-job training only, off-the-job training only, or a combination of the two); for each group of trainers, quotas were then set against an inter-locked country by size matrix.

All of the establishments interviewed for the follow-up survey had previously been interviewed as part of the core survey (and had given their permission to be contacted for further research)

### **B.1.2 Survey questionnaire**

The core survey questionnaire was designed in several stages. An initial questionnaire was piloted by IFF Research in May 2010 as part of the design work for the UK Commission's Employer Perspectives Survey, to ensure that the scope of the two surveys was complementary.

Subsequent to this initial development phase, the UK Commission managed a task and finish group of representatives from the four UK governments and IFF Research, where the initial questionnaire was reviewed and revised question by question bearing in mind the desire for time series analysis for all constituent nations.

There were considerable pressures on the questionnaire both in terms of balancing the need for consistency across the UK with the need for continuity with legacy questionnaires; and also in terms of the drive to cover a wide range of issues without over-burdening employers and creating a lengthy questionnaire. In order to address issues of length, a modularised questionnaire design was developed where certain sections were split and only asked of half of the respondents. The report makes clear where questions were split in this way; further details are provided in the Technical Report.

A second pilot survey was then conducted in February 2011, involving 100 interviews and 10 follow-up cognitive interviews.

Surveys of employer training expenditure have previously only been conducted in England (following up the English National Employer Skills Surveys in 2005, 2007 and 2009) and in Northern Ireland (in 2008); employer skills surveys in Scotland and Wales have not included a follow-up exploration of training expenditure. The questionnaires used for the previous English and Northern Irish surveys were identical, and this questionnaire was used again for this 2011 UK-wide survey.

### B.1.3 Survey fieldwork

Fieldwork for the core survey was undertaken between March and July 2011, and involved over 87,500 interviews, averaging around 24 minutes in length. In Northern Ireland 4,004 interviews were undertaken.

Fieldwork for the follow-up survey of training expenditure was undertaken in May to August 2011, and involved more than 11,000 interviews with establishments who had taken part in the first survey. Around 1,000 of these interviews were undertaken in Northern Ireland.

An overall response rate of 40 per cent was achieved for the main survey, with 75 per cent response to the follow-up survey. Response rates in Northern Ireland and in Wales were much stronger for the main survey than those in England and Scotland.

**Table B1 Survey response rates**

	UK	England	Northern Ireland	Scotland	Wales
<b>Main survey</b>					
Interviews	87,572	75,053	4,004	2,503	6,012
Response rate	40%	39%	57%	39%	55%
<b>Follow-up survey</b>					
Interviews	11,117	7,929	1,002	685	1,501
Response rate	75%	76%	73%	75%	69%

Source: UKCESS 2011

### B.1.4 Data weighting

Findings from the core survey have been weighted and grossed up to reflect the total population of UK establishments with at least one person employed. The weighting strategy used for the data in this report is based on that used in the Northern Ireland Skills Monitoring Survey 2008, on an interlocking size by SSC basis within region. Separate weights have been generated which allow findings to be presented (i) based on the number of workplaces reporting a particular experience, and (ii) based on the number of employees and/or job roles affected by different challenges.

The scale and scope of data collated by the UK Employer Skills survey means that it will stand as a valuable research resource, supporting detailed and complex statistical analysis of the multiple inter-relationships between employer characteristics, and their practice and experiences. The findings presented in this report have been produced through a more descriptive exploration of the data; the document should not be read as a statistical report.

### B.1.5 The relationship between the different vacancy measures

#### All vacancies

To understand the relationship between the different overall vacancy measures, consider the following tautological relationship,

$$\begin{aligned} \text{Total vacancies} & \quad \quad \quad (B.1) \\ &= \left( \frac{\text{number of vacancies}}{\text{all employment}} \right) \times \left( \frac{\text{all employment}}{\text{all establishments}} \right) \times \text{all establishments} \end{aligned}$$

or

$$\begin{aligned} \text{Total vacancies} &= \text{vacancy density} \times \text{average establishment size} \times \\ & \quad \text{number of establishments} \end{aligned} \quad (B.2)$$

So the total number of vacancies should rise with the density of vacancies, if the number and average size (number of employees) of establishments remains constant. The same can be said for the other two parts of the relationship, for example, total vacancies will rise if the number of establishments increases, if vacancy density and average establishment size remain constant. Clearly, if all three component parts increase, the total vacancies will rise, but if all of the components are changing in different directions at the same time, then different outcomes are possible.

The corresponding tautological relationship relating to the proportion of establishments reporting at least one vacancy takes a different route:

$$\begin{aligned} \text{Total vacancies} &= \left( \frac{\text{establishments with vacancies}}{\text{all establishments}} \right) \times \\ &\quad \left( \frac{\text{all vacancies}}{\text{establishments with vacancies}} \right) \times \text{all establishments} \quad (\text{B.3}) \end{aligned}$$

or

$$\begin{aligned} \text{Total vacancies} &= \text{proportion of establishments with vacancies} \times \\ &\quad \text{average vacancies per establishment with vacancies} \times \text{all establishments} \quad (\text{B.4}) \end{aligned}$$

So the total number of vacancies should rise with the proportion of establishments with at least one vacancy, if the average number of vacancies per establishment with vacancies and the total number of establishments remain constant. The same can be said for the other two parts of the relationship, for example, total vacancies will rise if the number of establishments increases, if the proportion of establishments with vacancies and the average number of vacancies in establishments with vacancies remain constant. Clearly, if all three component parts increase, the total vacancies will rise, but if all of the components are changing in different directions at the same time, then different outcomes are possible.

An alternative way of viewing the relationship between the proportion of establishments with one vacancy and the total number of vacancies is as follows:

$$\begin{aligned} \text{Total vacancies} &= \left( \frac{\text{establishments with vacancies}}{\text{all establishments}} \right) \times \\ &\quad \left( \frac{\text{all vacancies}}{\text{establishments with vacancies}} \right) \times \left( \frac{\text{all establishments}}{\text{all employment}} \right) \times \text{all employment} \quad (\text{B.3a}) \end{aligned}$$

or

$$\text{Total vacancies} = \text{proportion of establishments with vacancies} \times$$

$$\text{average vacancies per establishment with vacancies} \times \text{inverse of establishment size} \times \text{all employment} \quad (\text{B.4a})$$

*inverse of establishment size*  $\times$  *all employment*

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

Hard-to-fill vacancies are a subset of all vacancies; so the proportions of establishments with at least one hard-to-fill vacancy will be less than or equal to the proportion with at least one vacancy, the hard-to-fill vacancy density (e.g. hard-to-fill vacancies as a proportion of all vacancies) will be less than or equal to the overall vacancy density and the number of hard-to-fill vacancies will be less than or equal to the overall number of vacancies.

It can be seen that equation (B.1) can be rewritten with hard-to-fill vacancies replacing all vacancies. By implication, all of the factors, such as average employment and total number of establishments will also influence the observed total number of hard-to-fill vacancies. In addition, however, an alternative form of measuring hard-to-fill vacancy density is used in the present study. This is obtained by simply to divide equation (B.1) written in hard-to-fill form with the same equation for total vacancies, which yields:

$$\frac{\text{Hard-to-fill vacancies}}{\text{All vacancies}} = \frac{\text{hard-to-fill vacancies}}{\text{all employment}} \bigg/ \frac{\text{all vacancies}}{\text{all employment}} \quad (\text{B.5})$$

Hence, hard-to-fill vacancy density is quite different to the overall density of vacancies.

Skills shortage vacancies are a subset of hard-to-fill vacancies and the density measure is calculated in the same way as equation B.5,

$$\frac{\text{Skill-shortage vacancies}}{\text{All vacancies}} = \frac{\text{skill-shortage vacancies}}{\text{all employment}} \bigg/ \frac{\text{all vacancies}}{\text{all employment}} \quad (\text{B.6})$$

## Appendix C: Industry Coding

Each establishment was allocated to one of 14 sectors, based on their Standard Industrial Classification (SIC). SIC 2007 was used to classify establishments using the following method. Using the four-digit Standard Industrial Classification (SIC) supplied for each record from the Experian database, a description of business activity was read out to each respondent. If they agreed that this description matched the main activity undertaken at the establishment, then the SIC on Experian's database was assumed to be correct. If however the respondent felt the description did not correspond to their main business activity at the site, a verbatim response was collected to find out what they do (see question A7 on the survey; questionnaire available at [www.ukces.org.uk](http://www.ukces.org.uk)). At the analysis stage this was coded to a four-digit SIC which was then used as the basis for allocation into sector.

The table below shows the 14 sectors and their corresponding SIC 2007 definitions.

Sector	SIC 2007
1. Agriculture	A - Agriculture, forestry and fishing (01-03) Including farming, hunting and other related service activities, forestry and logging, fishing and aquaculture
2. Mining & Quarrying	B - Mining and quarrying (05-09) Including mining of coal, metals, sand/stone/clay, and extraction of crude petroleum and natural gas
3. Manufacturing	C - Manufacturing (10-33) Including manufacture of food and beverage, textiles, chemicals and chemical products, basic pharmaceutical products, other mineral products, manufacture of metals and metal products, machinery, computer and electronic products and equipment, motor vehicles and other transport equipment, furniture, and repair and installation of machinery and equipment
4. Electricity, Gas and Water	D - Electricity, gas, steam and air conditioning supply (35) E - Water supply, sewerage, waste management and remediation activities (36-39) Including electric power generation, transmission and distribution, manufacture of gas and distribution of gaseous fuels, steam and air conditioning supply, water collection, treatment and supply, sewerage and waste collection, treatment and disposal activities and materials recovery

Sector	SIC 2007
5. Construction	<p>F - Construction (41-43)</p> <p>Including the construction of buildings, civil engineering (constructing roads, railways and other utility projects), demolition, and specialised activities such as electrical installation, roofing and scaffold erection</p>
6. Wholesale and Retail	<p>G - Wholesale and retail trade; repair of motor vehicles and motor cycles (45-47)</p> <p>Including sale, maintenance and repair of motor vehicles, parts and accessories, non-vehicle wholesale (for example agriculture, food, household goods), and the retail trade of all products whether in stores, stalls, markets, mail order or online</p>
7. Hotels and Restaurants	<p>I - Accommodation and food service activities (55-56)</p> <p>Including hotels, campsites, youth hostels, holiday centres, villages and other short stay accommodation, restaurants and takeaways, event catering and licensed clubs, pubs and bars</p>
8. Transport and Communications	<p>H - Transport and storage (49-53)</p> <p>J - Information and communication (58-63)</p> <p>Including land, water and air transport (passenger and freight), warehousing and support activities for transportation, postal and courier activities, publishing (books, journals, newspapers etc and software/computer games), television, film and music production, broadcasting, telecommunications, computer programming and consultancy, information service activities (e.g. data processing and hosting)</p>
9. Financial Services	<p>K - Financial and insurance activities (64-66)</p> <p>Including banks and building societies, activities of holding companies, trusts, funds and similar financial entities, credit granting, pensions, insurance and reinsurance</p>

Sector	SIC 2007
10. Business services	<p>L - Real estate activities (68)</p> <p>M - Professional, scientific and technical activities (69-75)</p> <p>N - Administrative and support service activities (77-82)</p> <p>Including the buying, selling and renting of real estate, legal activities, accounting, bookkeeping and auditing, management consultancy, architectural and engineering activities, scientific research and development, advertising and market research, specialist design, photographic activities, translation and interpretation, veterinary activities, renting and leasing of tangible goods (motors, household, machinery), employment agencies, travel agencies and tour operations, security and investigation activities, office administration and business support</p>
11. Public Administration	<p>O - Public administration and defence; compulsory social security (84)</p> <p>Including administration of the State and economic and social policy of the community, provision of services to the community as a whole such as defence activities, foreign affairs, justice and judicial activities, fire service and compulsory social security activities</p>
12. Education	<p>P - Education (85)</p> <p>Including pre-primary, primary, secondary and higher education, other education (such as sports, driving schools, cultural education), educational support activities</p>
13. Health and Social work	<p>Q - Human health and social work activities (86-88)</p> <p>Including Hospitals, medical and dental practices, residential care, social work activities</p>
14. Other Community, Social and Personal Services	<p>R - Arts, entertainment and recreation (90-93)</p> <p>S - Other service activities (94-96)</p> <p>Including performing arts, libraries and museums, gambling and betting, sports facilities, amusement and recreation activities, activities of membership organisations (religious, political, trade union, professional), personal services (hairdressing, beauty, textile cleaning, well-being activities,</p>



Sector	SIC 2007
	funeral activities)
<i>NOT COVERED IN SURVEY</i>	<p>T - Activities of households as employers; undifferentiated goods and services producing activities of households for own use (97-98)</p> <p>U - Activities of extraterritorial organisations and bodies (99)</p> <p>Including households as employers of domestic personnel, private households producing goods for own use</p>

## Appendix D: Occupational Coding

The occupational data collected in the survey were collected both pre-coded and verbatim. The former included the occupational breakdown of employment (question D5 to D8) where respondents were asked how many of their workforce fell into each of the nine major (one-digit) Standard Occupation Classification (SOC) 2010 categories (Managers, Directors and Senior Officials through to Elementary Occupations). However, on vacancy measures (for example the occupations in which vacancies exist – question C2) this information was collected verbatim. This was then coded at the analysis stage, where possible to a four-digit level SOC, if not three, two- or one-digit level.

Examples of what might fall into each occupational band are as follows:

<b>Occupational group</b>	<b>Primary sectors (Agriculture, manufacturing, construction etc)</b>	<b>Service sectors (retail, business, finance, transport etc)</b>	<b>Public sector (Public Admin, Health, Education etc)</b>
<b>Managers, Directors and Senior Officials</b>	Site managers, Department Heads, Shift Managers (not supervisors)	Directors, Managers / Branch/site managers, shift managers (not supervisors)	Police inspectors and above, department heads, Head teachers, Senior Officials
<b>Professionals</b>	Professional engineers, software and IT professionals, accountants, chemists, scientific researchers	Solicitors, lawyers, accountants, IT professionals, economists, architects, actuaries	Doctors, nurses, midwives, teachers, social workers, librarians
<b>Associate Professionals</b>	Science and engineering technicians, lab technicians, IT technicians, accounting technicians	Insurance underwriters, finance/investment analysts and advisers, writers/journalists, buyers, estate agents	Junior police/fire/prison officers, therapists, paramedics, community workers, H&S officers, housing officers
<b>Administrative staff</b>	Secretaries, receptionists, PAs, telephonists, bookkeepers	Secretaries, receptionists, PAs, communication operators, market research interviewers, clerks	Secretaries, receptionists, PAs, local government officers and assistants, office assistants, library and database assistants
<b>Skilled Trades</b>	Farmers, electricians, machine setters / tool makers, carpenters, plasterers	Motor mechanics, printers, TV engineers, butchers	Chefs
<b>Caring, Leisure and Other Service Occupations</b>	Care assistants, nursery nurses	Travel agents, travel assistants, hairdressers, housekeepers	Care assistants, home carers, nursery nurses, ambulance staff, pest control, dental nurses, caretakers
<b>Sales and customer service</b>	Customer facing roles: sales staff and call centre agents	Sales assistants and retail cashiers, telesales, call centre	Customer care operations

occupations	agents		
<b>Process, plant and machine operatives</b>	Routine operatives, drivers, machine operators, sorters and assemblers	HGV, van, fork-lift, bus and taxi drivers	Drivers, vehicle inspectors
<b>Elementary occupations</b>	Labourers, packers, goods handling and storage staff	Bar staff, shelf fillers, catering assistants, waiters/waitresses, cleaners	Labourers, cleaners, road sweepers, traffic wardens, security guards

## Appendix E: Sampling Error and Statistical Confidence

Sampling error for the survey results overall and for different sub-groups by which analysis is presented in the report is shown in Table E1. Figures have been based on a survey result of 50 per cent (the 'worst' case in terms of statistical reliability), and have used a 95 per cent confidence level. Where the table indicates that a survey result based on all respondents has a sampling error of  $\pm 0.32$  per cent, this should be interpreted as follows: 'for a question asked of all respondents where the survey result is 50 per cent, we are 95 per cent confident that the true figure lies within the range 49.68 per cent to 50.32 per cent'.

These confidence intervals are based on the assumption of a normal distribution of responses.

**Table E1 Maximum Sampling error (at the confidence 95 per cent level) associated with findings of 50 per cent**

	Number of interviews	(Maximum) Sampling Error
<b>Overall</b>	4,004	$\pm 1.55$
<b>By size of establishment</b>		
1-4	1330	$\pm 2.69$
5-10	1196	$\pm 2.83$
11-49	1149	$\pm 2.89$
50+	329	$\pm 5.4$
<b>By sector</b>		
Agriculture	33	$\pm 17.06$
Mining & Quarrying	15	$\pm 25.3$
Manufacturing	348	$\pm 5.25$
Electricity, Gas and Water	54	$\pm 13.34$
Construction	367	$\pm 5.12$
Wholesale and Retail	736	$\pm 3.61$
Hotels & Restaurants	335	$\pm 5.35$
Transport and Communications	303	$\pm 5.63$
Financial Services	139	$\pm 8.31$
Business Services	515	$\pm 4.32$
Public Administration	107	$\pm 9.47$
Education	287	$\pm 5.78$
Health and Social Work	433	$\pm 4.71$
Community, Social and Personal Services	332	$\pm 5.38$
<b>By region</b>		
Belfast	926	$\pm 3.22$
Northern	879	$\pm 3.31$
North West	386	$\pm 4.99$
Southern	662	$\pm 3.81$
South West	469	$\pm 4.53$
South East	682	$\pm 3.75$

## Appendix F: Weighted base sizes

Throughout this report figures have been reported next to their unweighted base sizes to demonstrate statistical reliability. For reference, the following table shows the weighted number of establishments this represents for the key measures in the report.

	Weighted base
<b>Overall</b>	<b>59,732</b>
<b>Chapter 3: Employers, recruitment and skills shortages</b>	
With a vacancy	6,196
With a hard-to-fill vacancy	2,151
With a skill-shortage vacancy	1,664
<b>Chapter 4: Internal Skills Mismatch</b>	
With at least one skills gap	7,121
<b>Chapter 5: Workforce development</b>	
Providing any training	37,627
On-the-job training only	9,663
Off-the-job training only	8,253
Both on- and off-the-job training	19,711
Providing no training for staff	22,105

## Appendix G: Unweighted base sizes

This annex shows a reference table of the key unweighted base sizes used in this report. Note that throughout the report, figures are not reported where the base is under 25 and are highlighted in italics where the base is 25 to 49.

	Overall	Vacancies	Establishments with... Hard-to-fill vacancies	Skills gaps	Estab's that train
Northern Ireland	4,004	524	155	618	2,891
<b>Size</b>					
1-4	1330	89	44	82	717
5-10	1196	105	27	148	882
11-49	1149	198	52	253	979
50+	329	132	32	135	313
<b>Sector</b>					
Agriculture	33	1	0	4	20
Mining and Quarrying	15	0	0	2	6
Manufacturing	348	40	19	55	208
Electricity, Gas and Water	54	4	2	3	39
Construction	367	18	6	28	208
Wholesale and Retail	736	83	20	160	513
Hotels and Restaurants	335	61	22	88	233
Transport and Communications	303	33	11	41	181
Financial Services	139	16	5	20	111
Business Services	515	73	22	67	412
Public Administration	107	28	5	22	99
Education	287	52	8	33	265
Health and Social Work	433	67	18	49	374
Community, Social and Personal Service activities	332	48	17	46	222
<b>Region</b>					
Belfast	926	172	51	156	722
Northern	879	105	23	132	624
North West	386	36	9	51	286
Southern	662	71	31	88	476
South West	469	60	17	86	321
South East	682	80	24	105	462
<b>Occupation</b>					
Managers	2,793	33	10	134	1,765
Professionals	707	93	29	55	536
Associate Professionals	536	82	19	50	365
Administrative/ Clerical staff	2,369	101	18	154	1,176
Skilled Trades occupations	882	69	35	93	502
Caring, Leisure and Other services	549	72	20	52	448
Sales and Customer services	1,114	70	16	179	671
Machine Operatives	611	22	12	54	327
Elementary staff	1,238	79	18	156	620

## Appendix G: Bibliography

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## List of previous publications

*Executive summaries and full versions of all these reports are available from [www.ukces.org.uk](http://www.ukces.org.uk)*

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**Skills for the Workplace: Employer Perspectives**

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**Working Futures 2007-2017**

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**High Performance Working: A Synthesis of Key Literature**

Evidence Report 5

**High Performance Working: Developing a Survey Tool**

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**Review of Employer Collective Measures: Empirical Review**

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**Review of Employer Collective Measures: Policy Prioritisation**

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**UK Employment and Skills Almanac 2009**

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**National Employer Skills Survey 2009: Key Findings**

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Evidence Report 15



**Strategic Skills Needs in the Financial Services Sector: A Report for the National Strategic Skills Audit for England, 2010**

Evidence Report 16

**Strategic Skills Needs in the Low carbon Energy generation Sector: A Report for the National Strategic Skills Audit for England, 2010**

Evidence Report 17

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**National Employer Skills Survey for England 2009: Main Report**

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**UK Employer Perspectives Survey 2010**

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Evidence Reports present detailed findings of the research produced by the UK Commission for Employment and Skills. The reports contribute to the accumulation of knowledge and intelligence on skills and employment issues through the review of existing evidence or through primary research. All of the outputs of the UK Commission can be accessed on our website at [www.ukces.org.uk](http://www.ukces.org.uk)

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