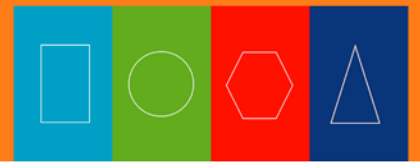# Vacancy Overview 2014

May 2015

Vacancy Overview 2014

A report produced by the Skills and Labour Market Research Unit (SLMRU) in SOLAS for the Expert Group on Future Skills Needs
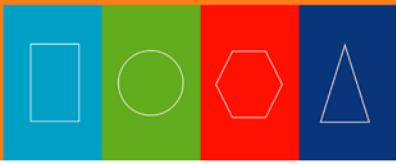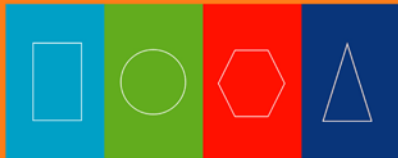
May 2015

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Foreword

The Vacancy Overview 2014 report is the fifth in a series of annual reports produced by the Skills and Labour Market Research Unit (SLMRU) in SOLAS on behalf of the Expert Group on Future Skills Needs. The report provides an overview of the demand for labour and skills in Ireland through identifying trends in advertised job vacancies. These findings should provide important information for those involved in education and training provision, career guidance and policy makers.

The analysis in this report is based primarily on newly advertised vacancies from two sources, namely vacancies advertised through the Public Employment Service (DSP Jobs Ireland) and a private recruitment agency (IrishJobs.ie). In 2014, DSP Jobs Ireland vacancies were most prevalent for elementary (e.g. cleaning, security and catering), personal services (e.g. care workers) and skilled trades (e.g. chefs, electricians, metal and construction trades) occupations. IrishJobs.ie vacancies occurred most frequently for IT professionals, business and sales associate professionals and administrative roles.

Positioning the vacancy analysis within the labour market context indicated that vacancies were occurring due to a combination of expansion demand (recent employment growth was particularly noticeable for occupations in skilled trades, associate professionals and personal services occupations) and replacement/turnover demand (across all occupational groups but particularly for personal services, sales and elementary occupations).

Foreign languages, especially German, continued to be in demand for a number of roles (primarily sales positions at associate professional levels) and a third level qualification was a prerequisite for many advertised jobs, particularly for professional positions. A high level of experience was key for managerial positions whereas for sales and customer services occupations (particularly door-to-door salespersons and sales assistants) half of the vacancies had no minimum level of experience required.

The volume of vacancies advertised through the two sources increased on the previous year (particularly for professionals, skilled trades and operatives). This, in combination with an increasing number of mentions of difficult to fill vacancies and job creation announcements in the media, points to a continued strengthening of demand in the jobs market.

Una Halligan

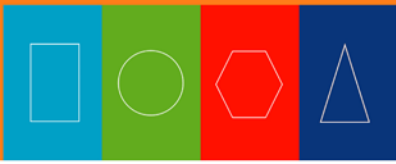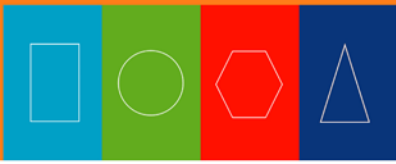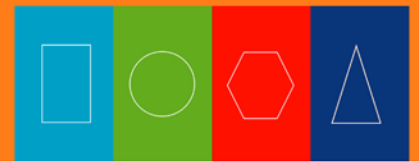Chairperson, Expert Group on Future Skills Needs

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Key Findings

Overall

In 2014, on average 5,700 vacancies were advertised each month through the Department of Social Protection (DSP) Jobs Ireland and 2,500 vacancies through the IrishJobs.ie; this represents an increase in notifications for both sources since 2013.

DSP Jobs Ireland vacancies

In 2014, DSP Jobs Ireland vacancies were primarily for elementary, personal services and skilled trades occupations (combined accounting for over a half of all notified vacancies). The occupations which appeared most frequently were:

- Care workers and home carers (accounting for 12% of all DSP Jobs Ireland vacancies)
- Sales assistants (5%), primarily for part-time positions
- Chefs (4%)
- Other administrative occupations (4%), mainly mystery shoppers
- Kitchen and catering assistants (4%)
- Collector salespersons and credit agents (4%), e.g. field/door to door sales agents
- Business sales executives (3%), e.g. sales representatives/agents
- Nurses (3%), mainly notified through recruitment agencies.

IrishJobs.ie vacancies

In 2014, vacancies notified to IrishJobs.ie were primarily for professional and associate professional occupations (these combined accounted for almost two thirds of IrishJobs.ie vacancies), with the following appearing most frequently:

- IT professionals (accounting for 11% of all IrishJobs.ie vacancies in 2014; primarily programmers and software developers)
- Sales, marketing and related associate professionals (10%), e.g. inside sales representatives, sales accounts and business development managers, marketing executives
- Business, finance and related associate professionals (8%), e.g. financial advisor/analysts, financial accounts managers, audit managers
- Business, research and administrative professionals (7%), in areas such as project management, risk analysts, management consultants and business analysts, accountants
- Administrative occupations (finance) (6%), in fund accounting, multilingual accounts payable/receivable clerks and payroll coordinators
- Engineering professionals (4%), e.g. process engineers, design and development engineers).

Job Vacancy Index

The index of job vacancy notifications shows that the volume of notifications to the IrishJobs.ie continued to increase, while vacancies advertised through DSP Jobs Ireland have remained relatively close to the base (set in January 2009).

Labour market context

- **Employment growth (expansion demand):** professionals and skilled trades accounted for the largest share of employment in quarter 3 2014; the 1.5% growth in employment since quarter 3 2013 relates primarily to growth in employment in skilled trades, associate professionals and personal services occupations.

- **Transitions (expansion, replacement demand and turnover):** most of the movement in professional occupations was associated with persons changing employer whereas for skilled trades, movement into the occupation was primarily related to persons previously unemployed.

Job search analysis

Approximately one quarter of all transitions into employment was for those previously unemployed. An analysis of the methods used by unemployed persons in searching for a job reveals that on average two thirds of unemployed persons stated they utilised the services of public/private employment agencies when searching for a job. Between the first quarters of 2013 and 2014, with the fall in the numbers unemployed, the share and numbers contacting public employment agencies declined, whereas the numbers contacting only private employment agencies increased marginally.

Language skills

Demand for language skills was particularly for associate professional positions (e.g. business sales executives) followed by sales, professionals and administrative roles. German was the most frequently mentioned language required, followed by French, Spanish and Dutch.

Education/ experience required

Vacancies for professional occupations were by far the most likely to require a third level degree qualification while administrative positions had the highest share of vacancies requiring a part or full professional qualification (financial and accounting roles). Sales/customer service positions had the highest share of vacancies with no minimum level of either education or experience required; managerial vacancies were most likely to request a minimum of two to six years' experience.
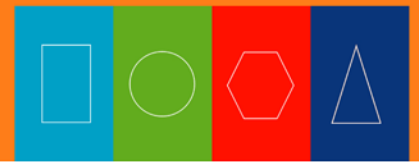
Employment permits

Professionals accounted for 69% of all new employment permits issued in 2014, compared to 36% in 2010. There was an increase in the number of new permits issued between 2013 and 2014, relating primarily to the reintroduction of medical employment permits and further increases in the number of permits issued to IT professionals.

Difficult to fill vacancies

The number of difficult to fill vacancies mentioned in the Recruitment Agency Survey conducted by the SLMRU in October 2014 showed increases compared to the situation one year previously. Professional occupations (in IT, engineering, science, health, business and limited openings in construction) accounted for two thirds of all difficult to fill mentions, with a further 15% for associate professional occupations (including technicians and sales related).

Job announcements

Job creation announcements in the media were mostly for IT professionals and sales related occupations, followed by operative and associate professional positions (primarily in sales/marketing); expansion demand was also confirmed through job announcements by IDA client companies in 2014, most pronounced for the IT sector, high-tech manufacturing and business.

1. Introduction

Aim of the report

This report is produced annually by the Skills and Labour Market Research Unit (SLMRU) in SOLAS on behalf of the Expert Group on Future Skills Needs (EGFSN) in order to provide an overview of the demand for labour through identifying trends in advertised job vacancies.

What data is examined?

- Vacancy data: newly advertised vacancies through DSP Jobs Ireland (Public Employment Services) and IrishJobs.ie (a private recruitment agency)
- The Recruitment Agency Survey, conducted by the SLMRU in October 2014, which seeks to identify difficult to fill vacancies
- Employment permit data, provided by the Department of Jobs, Enterprise and Innovation (DJEI), which indicates where employers were unable to find suitable candidates within the Irish labour market and the broader European Economic Area (EEA)
- Job announcements in the media and confirmed by IDA client companies, which indicates future demand in the short-medium term.
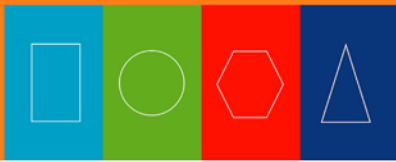
Are there limitations to the data?

Yes, these are detailed in Section 2. Despite these limitations, when the data is interpreted with caution, it can provide a useful insight into the developments in Ireland's labour market.

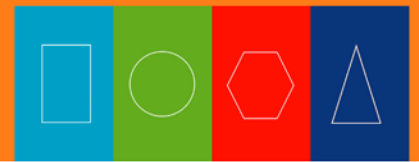## What conclusions can be drawn from the findings?

An examination of vacancy data provides an insight into which occupations have vacancies occurring most frequently in the labour market. These findings should not be treated in isolation, but instead examined alongside other labour market data sources in order to assess if these vacancies are occurring due to expansion demand, replacement demand or turnover and to what extent they indicate shortages of labour and skills. If interpreted in this way, the trends highlighted from this analysis can provide significant insights for stakeholders in areas where education and training should be focused, where sourcing from abroad through work permits is required, or where an examination of working conditions should be monitored.

What is the structure of the report?

- Section 2 details the vacancy data utilised, along with the limitations of these data sources
- Section 3 provides an overview of both employment trends in 2013/2014 and vacancy trends
- Sections 4 to 12 provide vacancy trends at an occupational level; this analysis is set out for each occupation according to occupation and job title, education and experience; the occurrence of these occupations in the Recruitment Agency Survey, employment permit data and job announcements is also profiled
- Section 13 details the policy implications of the findings from the report

- Section 14 is a new addition to the report, authored by Izabela Wowczko of SOLAS, which utilises data mining techniques on the job descriptions of IT vacancies advertised through IrishJobs.ie in order to ascertain the type of job titles occurring most frequently and the skills and competencies required for these jobs.

2. Data

Vacancy Data

The vacancy data presented in this report is drawn from the *newly* advertised job vacancies in the following sources:

- DSP Jobs Ireland: the Public Employment Service (PES) collects all vacancies advertised by employers through the National Contact Centre in the Department of Social Protection (DSP); the vacancy data presented here excludes vacancies advertised as part of Work Placement and JobBridge schemes, but does not exclude vacancies advertised by recruitment agencies

- IrishJobs.ie vacancy data: gathered from the IrishJobs.ie online vacancy advertising service; the analysis includes only IrishJobs.ie vacancies advertised by an employer and excludes vacancies advertised by recruitment agencies.

Trend

The focus of this report is on vacancies that occurred in 2014. In order to deliver an overview of trends, a five year analysis is provided where possible.

Level of experience and education

The level of experience sought for positions advertised is available from both IrishJobs.ie and DSP Jobs Ireland, although in slightly different formats. For each occupational group, the source which has the most vacancies for each occupational group is utilised to report on this variable. The level of education required is only available for positions advertised through IrishJobs.ie and is therefore not reported on for occupations where most vacancies are advertised through DSP Jobs Ireland.

General vacancy data limitations

- Vacancies may be advertised through channels not captured in the analysis (e.g. social media, recruitment agencies, employer websites), leading to an underestimation of the true demand; this may be particularly true in the case of certain foreign languages (e.g. Mandarin) where employers may prefer to advertise the vacancy in the language being sought or in countries where fluency in that language is commonplace

- Vacancies may be advertised simultaneously through several channels, leading to multiple counting and an overestimation of the true demand

- The extent to which vacancies are arising due to expansion demand (the creation of a new position by an employer), replacement (a person leaving an already existing position), turnover (the rate at which an employer gains and loses employees), or other reasons cannot be inferred from the available data

- There is the possibility of an occupational bias in any given advertising channel: for instance, despite a gain in the market share for managerial and higher skilled job advertisements in recent years, the distribution of vacancies advertised through DSP Jobs Ireland remains skewed towards skilled trades, caring/leisure services and elementary occupations; on the other hand,

job vacancies advertised through IrishJobs.ie are skewed towards managerial, professional and associate professional occupations

- While it was possible to identify and exclude Work Placement and JobBridge vacancies from the DSP Jobs Ireland data, it was not possible to do so from the IrishJobs.ie vacancy data; however, as the Work Placement and JobBridge schemes are administered and advertised through DSP Jobs Ireland, their occurrence in other data sets is likely to be low and therefore unlikely to skew the data unduly.

Source specific data limitations

- The vacancy refreshing facility available to employers on the IrishJobs.ie website makes it possible for a previously advertised vacancy to occur as a new vacancy in the same or following month, which may lead to an overestimation of the true number of new vacancies

- DSP Jobs Ireland vacancy data relates to the number of posts advertised, whereas IrishJob.ie data reports on the number of vacancies only with no indication of the number of posts involved

- While not an issue with DSP Jobs Ireland vacancies (given the vacancy validation procedures in place), difficulties in distinguishing between true vacancies and non-substantiated advertisements in the IrishJobs.ie data can lead to an overestimation of the true demand

- Despite having unique reference codes in the IrishJobs.ie data set, the same job can appear in the data more than once, thus inflating the perceived demand

- IrishJobs.ie vacancies have been assigned an occupational code using Cascot software which automatically assigns a code based on key words or word segments found in the job description; in some cases the match may be erroneous (e.g. anti-money laundering may be mistaken for laundering services), and as such this has the potential to reduce the accuracy of the data

- The DSP Jobs Ireland vacancies are assigned codes manually (using a MANCO occupational coding system) which are then mapped by the SLMRU to Standard Occupational Classification (SOC) codes; this re-coding process has the potential to diminish the accuracy of the data.

Given the above data limitations, the analysis focuses on the **qualitative** aspects of newly advertised vacancies. The objective is **not to quantify** the number of vacancies but rather to examine the types of jobs and skills most frequently appearing in the data sources captured. When vacancy trends are presented, they are included merely as an indication of movement in the vacancies from the two sources rather than the overall vacancy market.

Vacancy Index

An overall vacancy index is detailed in Section 3 for both vacancy sources with a more detailed analysis by occupation in Appendix B. It is noted that seasonality was present in the DSP Jobs Ireland data for the overall vacancy time series and in the vacancies data for skilled trades, sales and customer service occupations, and operatives. As the analyses are primarily qualitative, the presence of seasonality does not impact on the findings presented in this report.
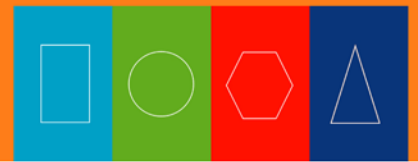
SLMRU Recruitment Agency Survey

The Skills and Labour Market Research Unit (SLMRU) in SOLAS has conducted a recruitment agency survey every six months since January 2008. It is designed to gather the views of recruitment agencies in respect of the occupations for which vacancies, in their experience, are proving difficult to fill. Almost 120 recruitment agencies were contacted and asked to participate in a telephone interview. The findings of the most recent survey[1], which took place in October 2014, are presented for each occupational group.

Employment permit data

Employers, where necessary, employ workers from non-EEA countries through employment permit schemes. While the data on newly issued employment permits, provided by the DJEI, may be used to highlight occupations for which employers experience difficulty in sourcing staff from within the EEA countries, it should be interpreted with caution:
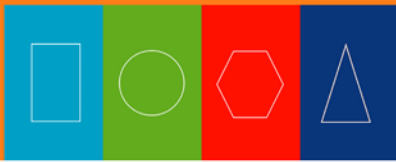
▪ new employment permits may be issued to persons already residing in Ireland but who have changed employer

▪ new employment permits may be issued to spouses/partners/dependants of certain categories of existing employment permit holders although the incidences of this occurring have declined in recent years[2].

Job announcements

Announcements in the media (national newspapers) indicating the creation or loss of jobs have been documented by the SLMRU since 2010. Job announcements over the period January to December 2014 are summarised and presented for each occupational group, thereby highlighting areas in which job opportunities are arising as well as those where expansion activities may occur in the short-medium term. Job creation expected to arise from foreign direct investment (FDI) in Ireland, supported by the IDA, is also included.

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[1] Only those recruitment agencies who reported having difficult to fill vacancies (38 of the respondents) participated in the survey. As such, it is considered that the 38 responses represent the majority of the recruitment agency market.

[2] Only spouses/dependants of persons who attained their employment permit before 1 June 2009 were eligible for an employment permit under the spousal/dependant scheme up to the enactment of the Employment Permits Amendment Act 2014 in October 2014.

3. Overview of Vacancies

This section provides:

1) **A profile of the labour market in terms of employment levels, where job openings are occurring and the methods used by unemployed persons when seeking work**; this is done through an examination of overall employment trends by occupational group; transitions into employment (from unemployment, inactivity, other occupations (inter-occupational) and within occupations (intra-occupational)); methods used by unemployed persons when seeking work is examined through an analysis of the CSO's QNHS Job Search questions

2) **An overall examination of the vacancy data** specifically looking at trends, regional distribution, and occupations where vacancies are occurring most frequently; in addition, an examination of employment permit trends is provided to ascertain where the skills in the labour market were not sufficient to meet demand.

Labour Market Context

Vacancies occur when new positions are created or when a vacated position requires replacement. By examining the level of employment growth and transitions into employment, it is possible to attain an indication of the level of movement occurring for each occupational group. Table 3.1 provides details of employment levels, transitions into employment and the share of vacancies for each vacancy source.
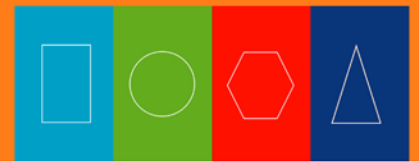
Table 3.1 Occupational distributions of employment, employment growth, transitions[3] and vacancies, 2014

	Employment			Transitions into employment, 2014					IrishJobs.ie Vacancies 2014		DSP Jobs Ireland Vacancies 2014	
	Total Employment Q3 2014*	% Share of Employment	% Change Q3 2013-Q3 2014	Unemployment to employment	Inactivity to employment	Inter in	Intra	Total transitions	Share of Total Employment	Share of Total Vacancies	Share of Total Employment	Share of Total Vacancies
Managers	152,800	8%	3.2%	4,900	5,900	6,000	6,800	23,600	1%	6%	1%	2%
Professionals	341,900	18%	-3.6%	14,600	14,500	8,900	30,400	68,400	3%	31%	1%	7%
Associate Professionals	225,900	12%	4.7%	14,900	10,900	9,100	16,600	51,500	4%	31%	3%	11%
Admin/Secretarial	212,900	11%	0.4%	13,600	13,300	11,400	17,400	55,700	2%	13%	2%	7%
Skilled Trades	311,000	16%	6.6%	24,800	16,100	6,800	19,400	67,100	0%	5%	3%	16%
Personal Services	152,400	8%	6.4%	9,700	13,400	5,000	16,300	44,400	0%	2%	8%	17%
Sales	161,600	8%	1.3%	14,700	24,200	8,300	18,600	65,800	1%	6%	5%	11%
Operatives	140,700	7%	-5.0%	12,300	7,000	11,000	12,200	42,500	1%	4%	5%	10%
Elementary	217,700	11%	-1.0%	24,300	37,600	12,200	28,600	102,700	0%	2%	7%	20%
Total	**1,926,900**	**100%**	**1.5%**	**133,900**	**142,900**	**78,800**	**166,300**	**521,900**	**2%**	**100%**	**4%**	**100%**

*Excludes Other/Not Stated category and therefore the employment numbers do not tally

Source: CSO QNHS, IrishJobs.ie, DSP Jobs Ireland

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[3] Persons with no previous occupation (e.g. new entrants to the labour market) are included for the first time.

Employment and employment growth

The CSO's Quarterly National Household Survey (QNHS) was utilised to provide the level of employment in each occupational group in the most recent quarter and the level of employment growth that occurred since the previous year. Table 3.1 shows that at 18% (or over 340,000), professionals accounted for the largest share of persons employed in the third quarter of 2014, followed by those employed in skilled trades (at 16%).

Between quarter 3 2013 and quarter 3 2014 there was an overall growth in the numbers employed of 28,000, or 1.5%. The level of growth varied across occupational groups with skilled trades experiencing the largest gains at 6.6% (including for farmers, carpenters and chefs), with declines occurring for professionals (primarily related to falls in the number of doctors and teachers) and operatives (related to assemblers and routine operatives).
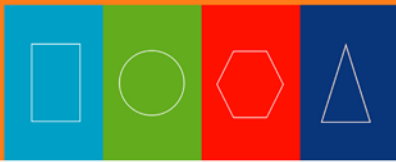
Transitions into employment

Employment growth indicates job opportunities associated with expansion demand. However, transitions analysis suggests that for almost all occupational groups, vacancies occur for reasons other than expansion demand; for instance, while employment for elementary occupations contracted, over 40,000 vacancies occurred due to churn. An examination of transitions[4] into employment in 2014 reveals the following key findings (see Table 3.1):

- Almost half of all transitions were for persons already in employment, reaching 57% for professional occupations
- For those already in employment, activity was recorded both for those moving between occupations (inter, 15% of all transitions into employment) and within occupations (intra, 32% of transitions); for all occupations excluding skilled trades, sales and elementary, intra-occupational movements accounted for the largest number of transitions
- Of all the transitions into employment recorded in 2014, over 130,000 (or 26%) were for those who were previously unemployed with skilled trades and elementary occupations accounting for the largest numbers in this group; elementary occupations accounted for the largest number of persons who transitioned from inactivity to employment.

The Job Churn analysis conducted by the CSO[5] estimated that in 2013, approximately 570,000 job hirings occurred; this is higher than the numbers estimated by the transitions analysis as different data sources were used and the transitions data excludes persons with no previous occupation (e.g. new entrants to the labour market). If an estimate of 500,000 openings a year are assumed, the vacancies examined in the two sources here (combined totalling more than 100,000) would represent 20% of the vacancy market.

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[4] A more detailed analysis of labour market transitions is available in the annual *National Skills Bulletin* produced by the Expert Group on Future Skills Needs.
[5] http://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=JCA01&PLanguage=0

Are the vacancies sources representative?

This leads to the question of whether the vacancy sources utilised here are representative of activity in the labour market at occupational level. Table 3.1 shows that the distribution of vacancies in both DSP Jobs Ireland and IrishJobs.ie differs from the employment distribution across occupations and moreover differs from each other; while professional vacancies are overrepresented in IrishJobs.ie, there is an underrepresentation of these occupations in DSP Jobs Ireland; conversely there is a greater share of DSP Jobs Ireland vacancies in lower skilled occupations. However, these two sources combined are broadly in line with the transitions analysis with a high level of transitions in professional occupations reflected in the IrishJobs.ie data and those occurring for skilled trades, sales and elementary occupations were reflected in the DSP Jobs Ireland vacancy data.

Vacancy index

Figure 3.1 provides a vacancy index for DSP Jobs Ireland[6] and IrishJobs.ie. The vacancy index shows that DSP Jobs Ireland has, for the most part, been above the base level (set in January 2009) for most of the period from 2009 to 2014, reaching a peak of 171.4 in June 2011. IrishJobs.ie have seen a more significant growth in vacancy notifications occurring since January 2009, with the index peaking at 342.2 in May 2012; the gap between the two sources has been widening since the start of 2011 with a gap of over 180 points in December 2014. A further examination by occupation is provided in Appendix B which shows the gap between the two sources was widest for associate professional, administrative and operative vacancies.

It should be borne in mind that the number of DSP Jobs Ireland vacancies are more than twice that of IrishJobs.ie in absolute terms (on average 5,700 PES vacancies per month compared to 2,500 for IrishJobs.ie in 2014) and the level of DSP Jobs Ireland vacancies did not fall to as low a base during the recession as did vacancies for IrishJobs.ie.

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[6] Notified vacancies for 1,300 film extras in 2013 through DSP Jobs Ireland were excluded from the analysis in this report.
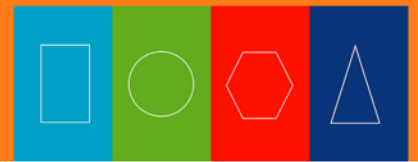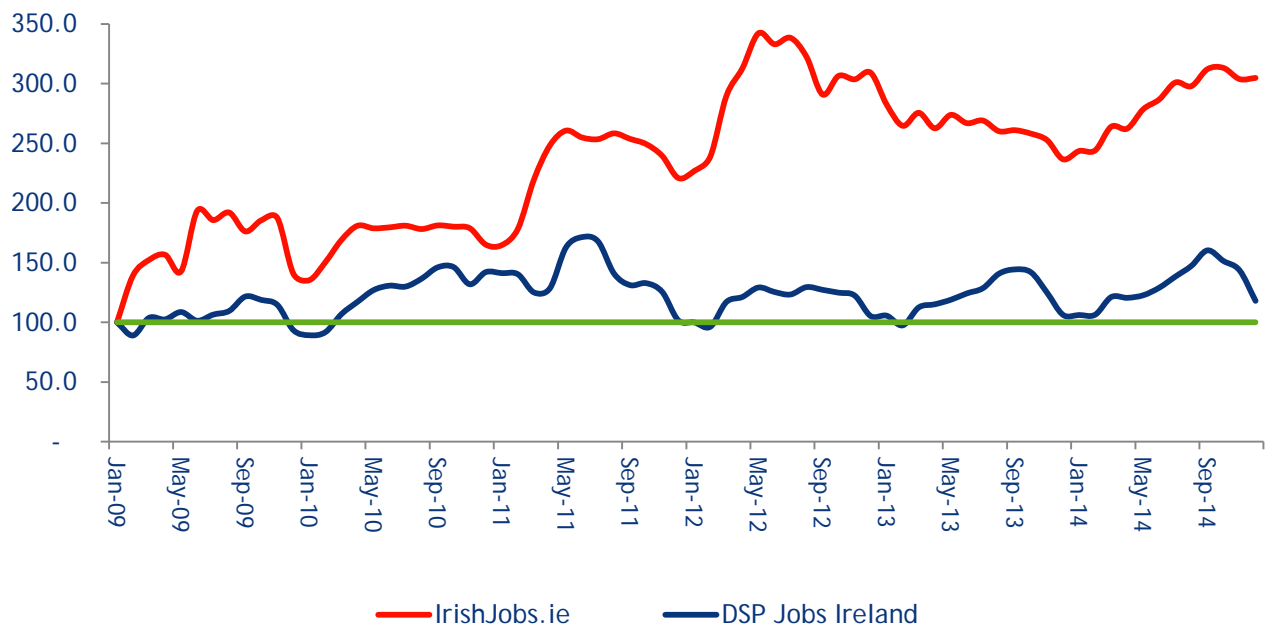
Source: IrishJobs.ie and DSP Jobs Ireland (3 month moving average)

Vacancy by county

Figure 3.2 provides a breakdown of vacancies by county for both DSP Jobs Ireland and IrishJobs.ie. For the IrishJobs.ie vacancy data, 15% of vacancies were excluded as multiple locations were provided or positions were for outside of Ireland. DSP Jobs Ireland vacancies were only for counties in the Republic of Ireland whereas IrishJobs.ie vacancy data took account of all counties in Ireland. For both sources, Dublin had the highest volume of vacancies, followed by Galway and Cork. For DSP Jobs Ireland there was also a high volume of vacancies in Kildare, with the lowest numbers occurring in counties such as Leitrim, Waterford and Roscommon. For IrishJobs.ie vacancies, the lowest volume occurred for Cavan, Laois, Leitrim and Roscommon.
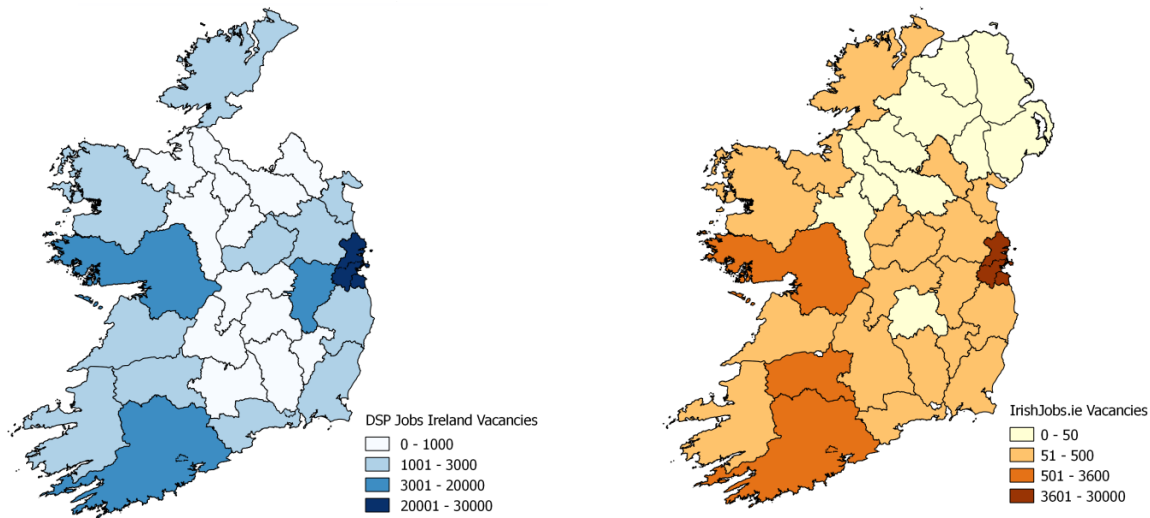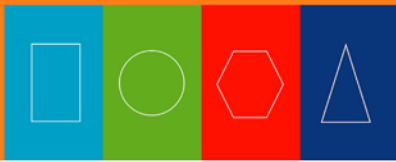
Figure 3.2 Vacancies by county, 2014

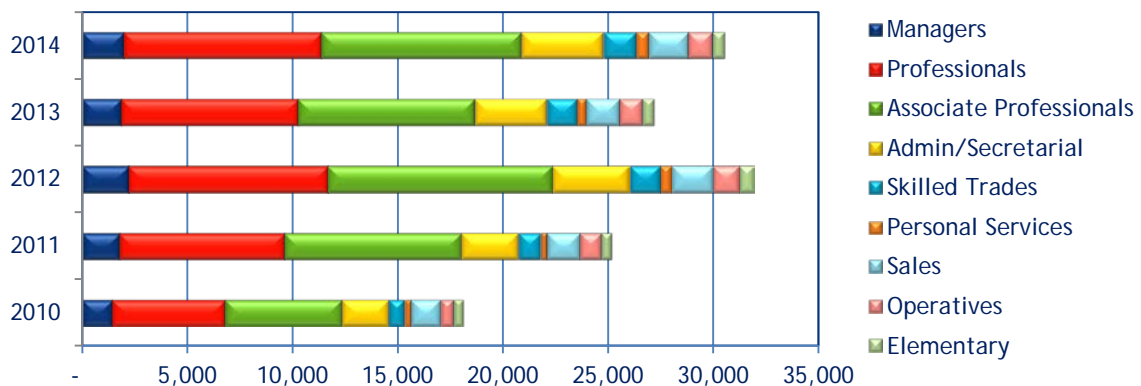Source: IrishJobs.ie and DSP Jobs Ireland

Occupational Trends

This section examines the distribution of vacancies across both DSP Jobs Ireland and IrishJobs.ie and how this distribution has changed over time. An analysis of changes in employment permit data also provides an insight into the broad occupations where employers are seeking skills from outside of the EEA.
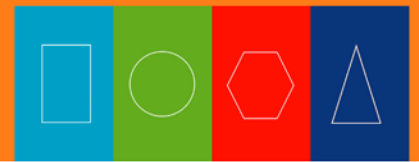
Vacancies by Occupation

The breakdown of vacancies notified through IrishJobs.ie for each occupational group is detailed in Figure 3.3. Over the five-year period, professionals and associate professionals accounted for the largest share of vacancies, each accounting for almost a third of all vacancies advertised with IrishJobs.ie. While increases in the number of vacancy notifications occurred across all occupations since 2013, professionals and associate professionals experienced the largest gains.

Figure 3.3 IrishJobs.ie vacancies by broad occupation, 2010-2014

Source: IrishJobs.ie

DSP Jobs Ireland vacancies are skewed towards the lower skilled occupations with managers, professionals and associate professionals combined accounting for on average a quarter of all notified vacancies (Figure 3.4). While agency vacancies are excluded from the IrishJobs.ie data, it has not been possible to exclude recruitment agency vacancies from the DSP Jobs Ireland data, which has the potential to inflate vacancy notifications in some areas and the extent to which they represent employment opportunities is not clear.

There was a decline in the number and share of vacancies for associate professionals in recent years (the decline since 2013 relates primarily to a reclassification of mystery shoppers from associate professionals to administrative occupations), while there was an increase in the number of professional vacancy notifications (relating to an increase in notifications for nurses, primarily through recruitment agencies). There was a noticeable increase in both the number and share of vacancies for skilled trades in recent years with a 34% increase since 2013. Elementary occupations continue to account for 20% of all vacancy notifications to this source.

Figure 3.4 DSP Jobs Ireland vacancies by broad occupation, 2010-2014
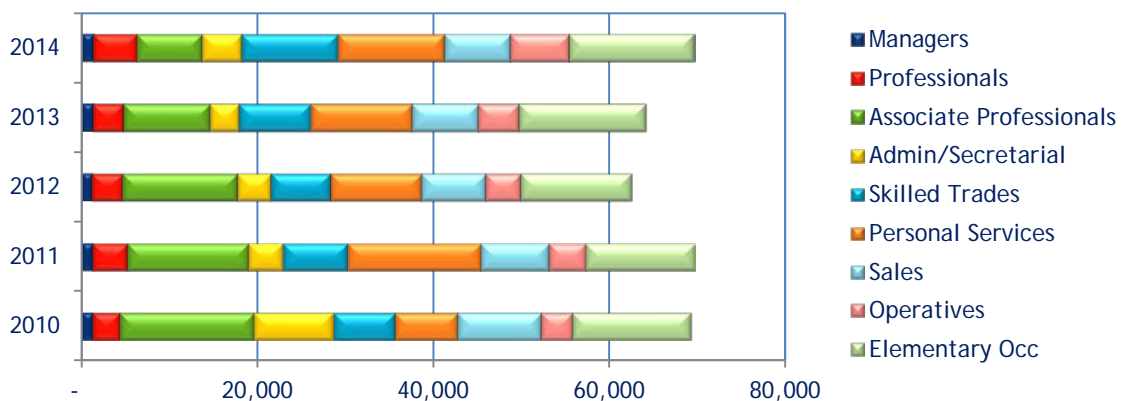
Source: DSP Jobs Ireland

Employment permits by occupation

Due to the change in the employment permit scheme in October 2014[7], only those new permits issued between January and September 2014 are reported (Figure 3.5). Even accounting for this, the number of new permits issued in 2014 was a third higher than in 2013. The number of permits issued for professional occupations accounted for 69% of all new permits issued in 2014; new permits for this occupational group have grown each year since 2010, related primarily to IT vacancies and in relation to the growth since 2013, to the reintroduction of medical employment permits[8] . Elementary occupations accounted for 17% of all new permits issued in 2010, declining to 1% in 2014.

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[7] The Employment Permits (Amendment) Act 2014 came into effect in October 2014 with the introduction of nine classes of employment permits. The effect of the new legislation is to increase the focus of economic migration to Ireland on skills, rather than labour shortages.
[8] In January 2014, new arrangements came into effect where all non-EEA doctors working in the State required an employment permit; in previous years, channels other than the employment permit scheme were used for medical doctors.

Figure 3.5 Employment permits by broad occupation, 2010-2014
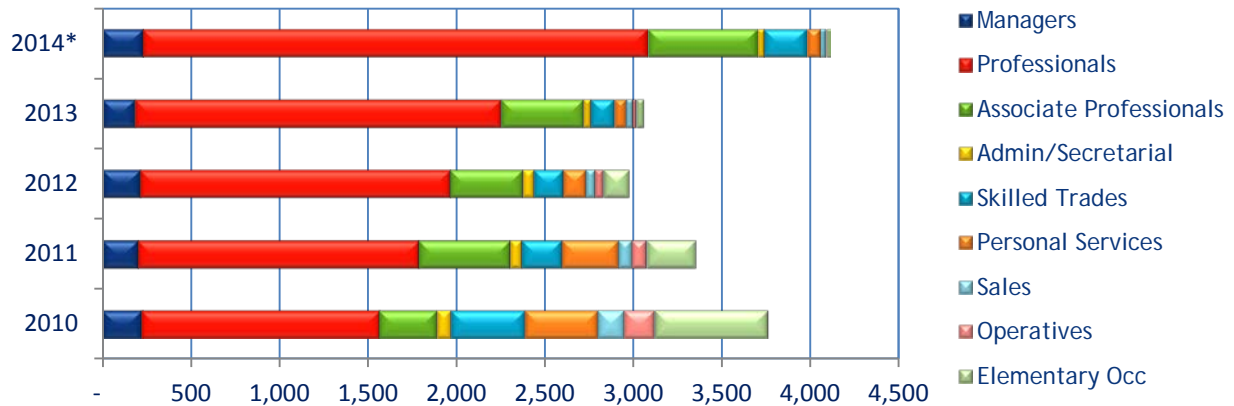

*2014 refers to January to September only

Source: DJEI

Language skills

An analysis was carried out of the languages most often cited in vacancy notifications in 2014 for both IrishJobs.ie and DSP Jobs Ireland (Figure 3.6). The key findings were as follows:

- For both vacancy sources, associate professionals (mostly sales positions) accounted for the largest number of vacancies where a specific foreign language was stated; this was followed by sales and customer service, administrative roles and professional occupations

- German was the most prominent language mentioned, followed by French

- The relatively high number of vacancies with language requirements in skilled trades (primarily related to the DSP Jobs Ireland dataset) was due to vacancies for ethnic chefs

- In terms of sectors (in the IrishJobs.ie vacancy data), languages appeared most frequently in customer services, sales and IT.

Figure 3.6 IrishJobs.ie/DSP Jobs Ireland vacancies where specific languages were stated, 2014
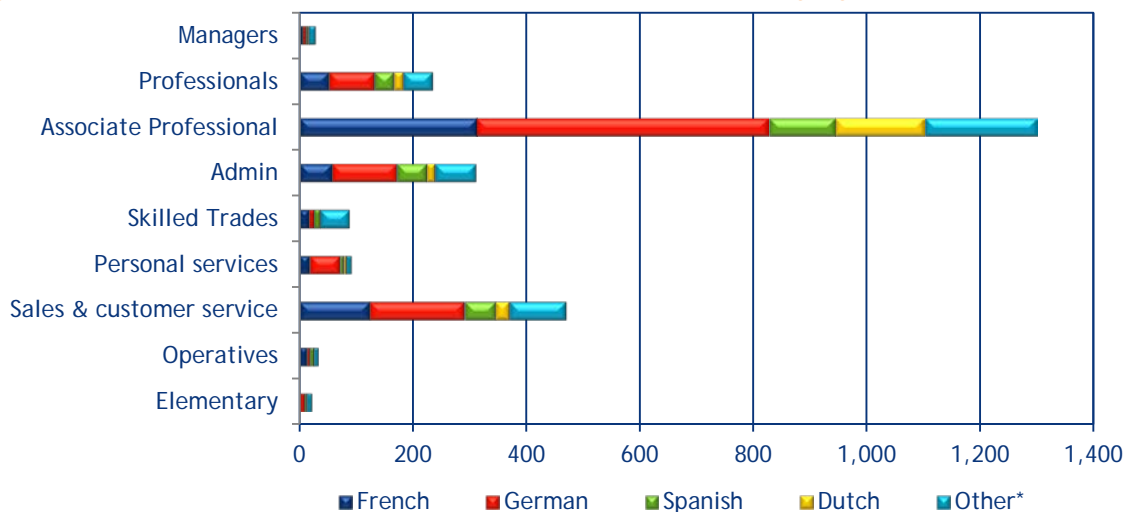
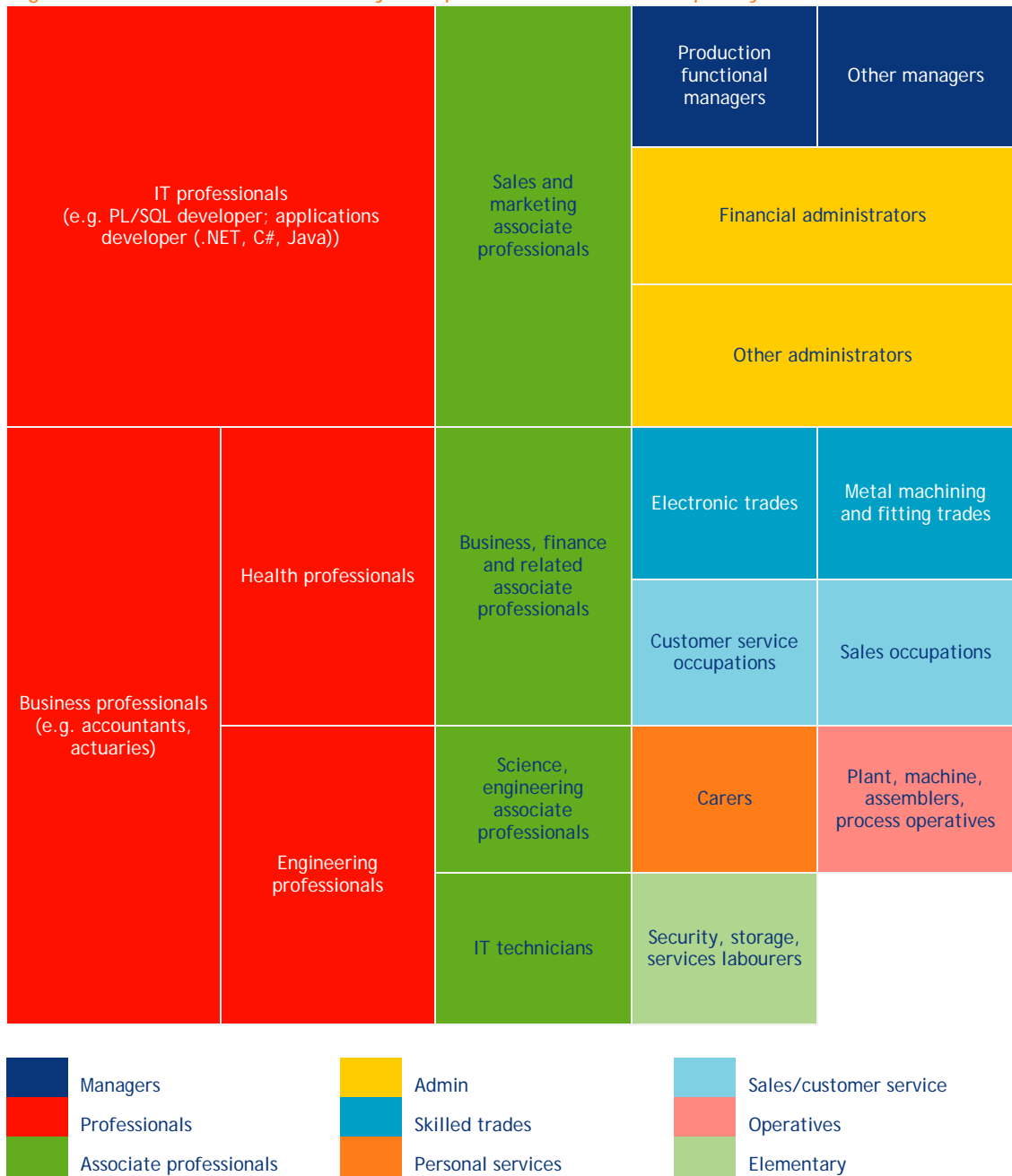* Other includes Italian, Portuguese, Russian, Arabic, Chinese and Japanese

Source: IrishJobs.ie/DSP Jobs Ireland
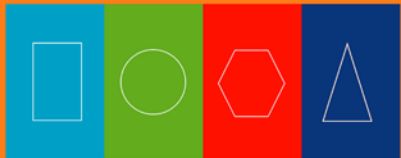
Occupations and job titles

Figures 3.7 and 3.8 summarises the vacancies which occurred most frequently in 2014 for both IrishJobs.ie and DSP Jobs Ireland vacancies by occupational group. Figure 3.7 shows that IT professional vacancies were the most frequently cited through IrishJobs.ie followed by business professionals (e.g. accountants, actuaries) whereas Figure 3.8 shows that care workers and sales and marketing associate professionals were the most cited vacancies through DSP Jobs Ireland.

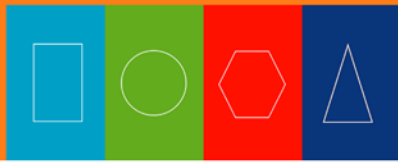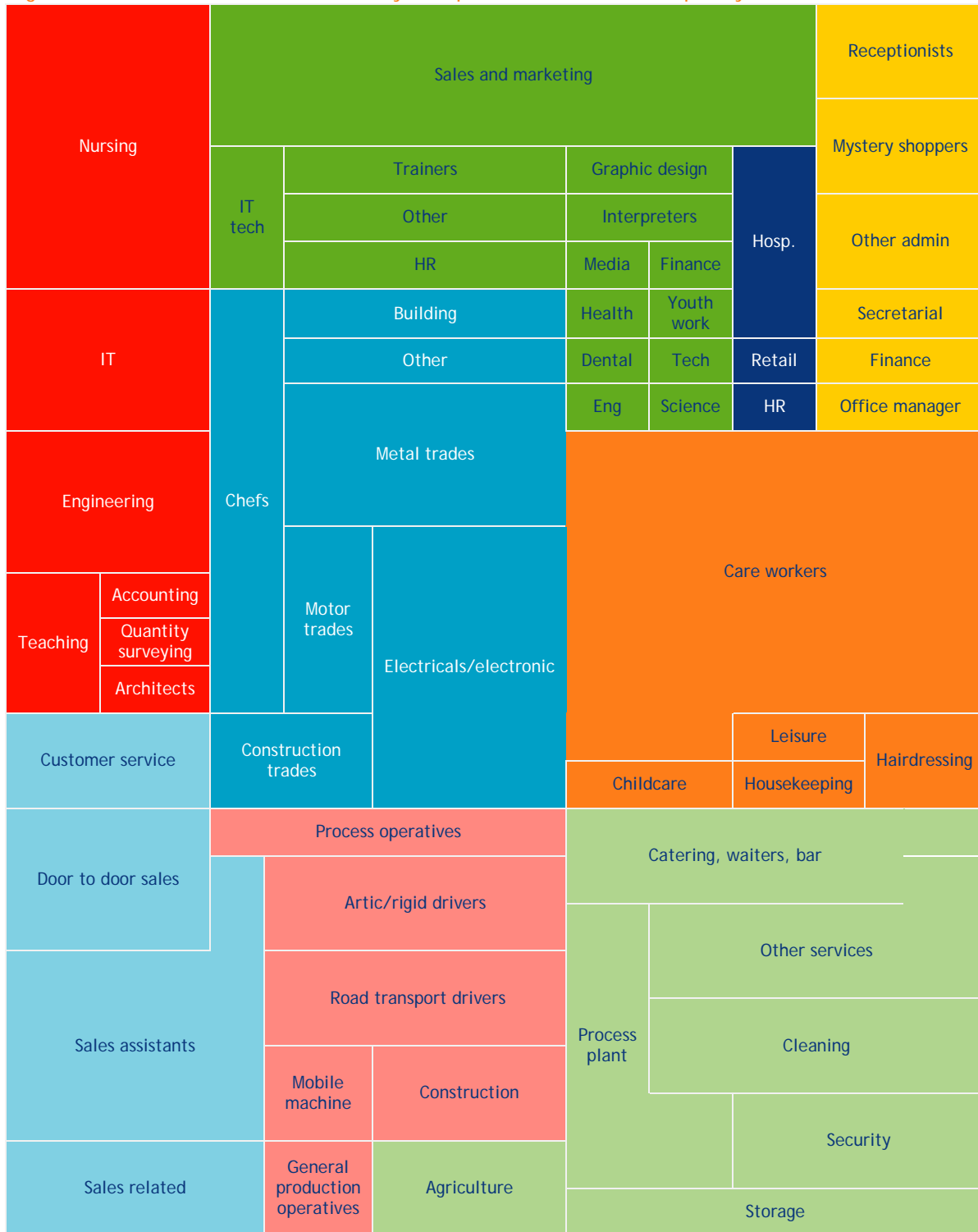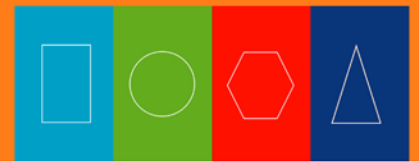### Figure 3.7 IrishJobs.ie vacancies by occupation and level of frequency, 2014

IT professionals (e.g. PL/SQL developer; applications developer (.NET, C#, Java))	Sales and marketing associate professionals	Production functional managers	Other managers
		Financial administrators	
		Other administrators	
Business professionals (e.g. accountants, actuaries)	Health professionals	Business, finance and related associate professionals	Electronic trades / Metal machining and fitting trades
			Customer service occupations / Sales occupations
	Engineering professionals	Science, engineering associate professionals	Carers / Plant, machine, assemblers, process operatives
		IT technicians	Security, storage, services labourers

Legend:
- Managers (dark blue)
- Professionals (red)
- Associate professionals (green)
- Admin (yellow)
- Skilled trades (teal)
- Personal services (orange)
- Sales/customer service (light blue)
- Operatives (pink)
- Elementary (light green)

Source: IrishJobs.ie

Figure 3.8 DSP Jobs Ireland vacancies by occupation and level of frequency, 2014

Nursing	Sales and marketing
	IT tech / Trainers / Graphic design / Other / Interpreters / HR / Media / Finance / Hosp.
IT	Building / Other / Health / Youth work / Dental / Tech / Eng / Science / Retail / HR
Engineering	Chefs / Metal trades / Motor trades / Electricals/electronic
Teaching / Accounting / Quantity surveying / Architects	
Customer service / Construction trades	Care workers
Door to door sales	Process operatives / Artic/rigid drivers
Sales assistants	Road transport drivers / Mobile machine / Construction
Sales related / General production operatives / Agriculture	Process plant / Catering, waiters, bar / Other services / Cleaning / Security / Storage

Legend:
- Managers
- Professionals
- Associate professionals
- Admin
- Skilled trades
- Personal services
- Sales/customer service
- Operatives
- Elementary

Source: DSP Jobs Ireland

Job Search Analysis

The transitions analysis indicates that over a quarter of all transitions into employment occur for those previously unemployed. For this reason, it is useful to examine the methods used by unemployed persons in seeking work and in particular to assess the usage of public and private employment agencies in the job search process. As such, an examination of the CSO's Quarterly National Household Survey (QNHS) was undertaken, as the survey asks persons classified as unemployed the methods utilised in the previous four weeks to find work. The survey includes thirteen questions relating to methods used, including whether they have been in contact with public employment offices and/or private employment agencies and if they contacted employers directly. Each question is stand alone and it is therefore possible to get a positive response to any number of job search questions. DSP Jobs Ireland is the only public employment agency in Ireland, while IrishJobs.ie is one of many private employment agencies.

On average, approximately one quarter of unemployed persons contact both a public and private employment agency when searching for a job; a further third contact only a public employment office and a tenth contact a private employment agency only; approximately a third did not answer or stated that they contacted neither.

Figure 3.9 shows that there was a significant increase in the numbers unemployed following the onset of the recession in 2009; at the same time, there was an increased number of unemployed persons using the services of both public and private employment agencies when seeking work, peaking in quarter 1 2012. Since then, the overall number of unemployed persons who were actively seeking employment declined, while a fall in those contacting a combination of public and private employment agencies and public employment offices only occurred. In contrast, those contacting only private employment agencies saw small increases over this time period. It is also of note that the numbers who contacted neither type of employment agency only declined marginally, indicating that a significant share of unemployed persons used other methods not captured in the QNHS, such as social media, when searching for work.

Figure 3.9 Job search for unemployed persons, 2005-2014
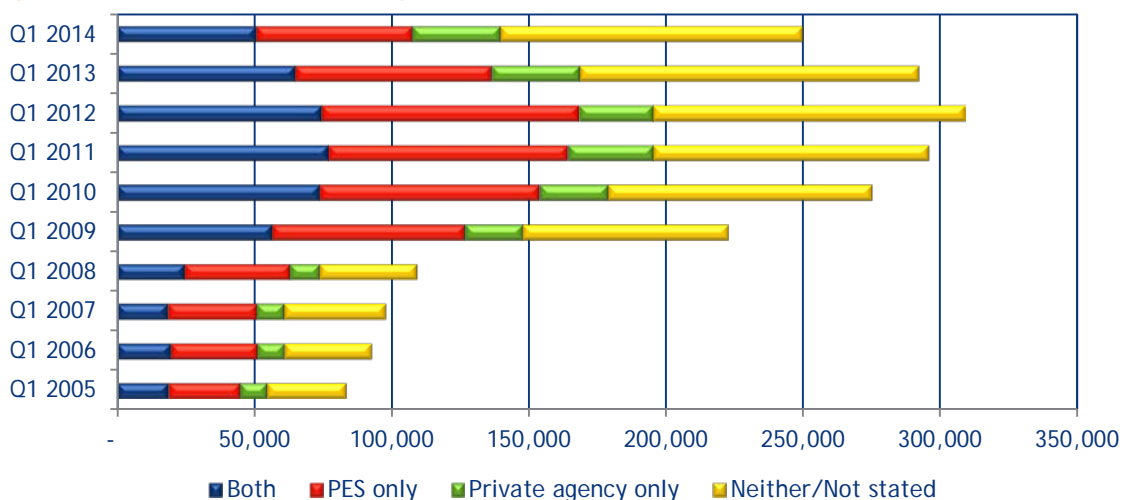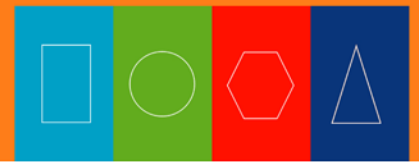

Source: SLMRU Analysis of CSO QNHS data

The methods used by unemployed persons to search for a job varied across occupations, sectors, age and duration unemployed. Appendix A provides an analysis of these factors with the key findings for those who contacted a **public/private employment agency** in quarter 1 2014 as follows:

- **Occupation**: those previously employed as professionals were most likely to contact only a private employment agency; those previously employed in caring and sales occupations were more likely to contact only a public employment office; associate professionals most likely to contact both

- **Sector**: those previously employed in financial, insurance & real estate activities were most likely to contact only a private employment agency; those previously employed in the transportation and storage sector were most likely to contact only a public employment office; those previously employed in the IT sector were most likely to engage with both agencies

- **Duration unemployed**: the likelihood of contacting either a public or private employment agency was at its highest for those unemployed for less than six months and between 18 and 47 months unemployed

- **Age**: unemployed persons aged 15-24 years were more likely to contact a public employment office than their older counterparts and less likely to utilise the services of private employment agencies.

4. Managerial Occupations

- Managerial occupations accounted for 2% of all notified vacancies to DSP Jobs Ireland and 7% of vacancies notified to IrishJobs.ie in 2014

- The number of notifications for managerial occupations for DSP Jobs Ireland and IrishJobs.ie combined increased by 6% on the previous year relating to increases in hospitality and financial managers

- Vacancies were most common in hospitality, retail and financial services sectors

- The Job Search analysis of the CSO's QNHS data indicates that despite a 34% fall in the number of unemployed managers in the year since quarter 1 2013, the number of unemployed managers contacting a public or private employment office when searching for a job declined only marginally in absolute terms.

Figure 4.1 Managerial vacancies as a share of total vacancies, 2014

- IrishJobs.ie Managers
- IrishJobs.ie Others
- DSP Jobs Ireland Managers
- DSP Jobs Ireland Others
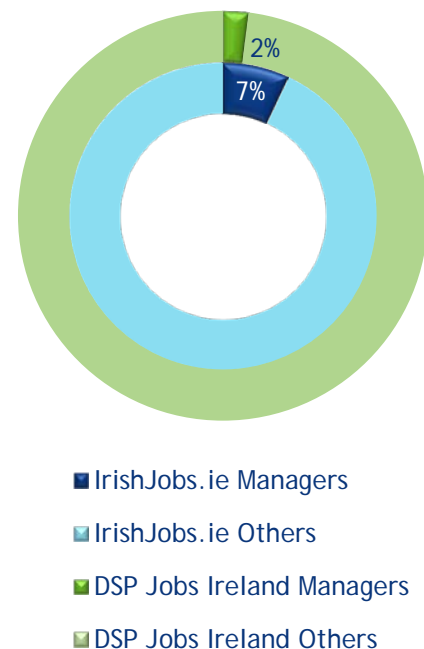
Source: DSP Jobs Ireland/IrishJobs.ie

Job Titles

Vacancies for managerial positions were most frequent for the following job titles:

- **Hospitality managers** in restaurants, bars, hotels and catering
- **Functional managers:**
  - **Financial managers**
  - **HR managers** across all sectors
  - **Logistics managers** (procurement, supply chain, purchasing, warehouse)
  - **Sales and marketing managers**
  - **IT managers** in areas such as infrastructure and development
- **Production managers** in manufacturing and construction (including site managers)
- **Operations managers** across all sectors
- **Services managers** in retail, banking and facilities.

Education

Of those who stated an education requirement[9], managerial occupations had a higher share of vacancies which required no minimum level of education than the overall vacancies, 26% compared to 15% (Figure 4.2). Vacancies that had no minimum experience required were primarily for roles in transport and retail. While this occupation had a lower requirement for third level qualifications (41% of posts required degrees compared to 51% overall), there was a higher share requiring part-professional or professional qualifications when compared to overall vacancies. As the number of vacancies which stated a level of education required was small, however, any assumptions based on the findings should be treated with caution.

Figure 4.2 Level of education required for managers and overall, 2014
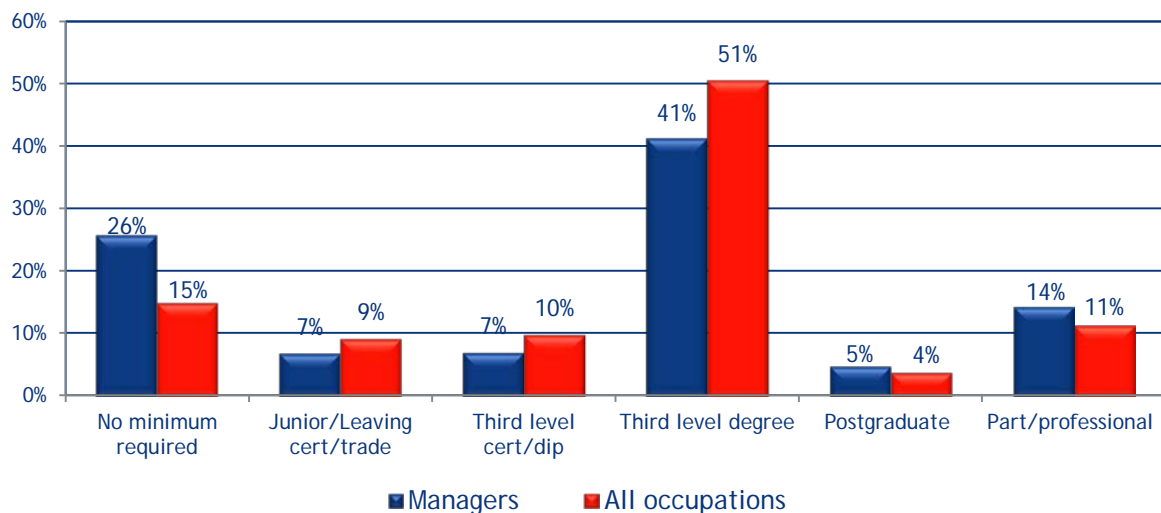
Source: IrishJobs.ie

Experience

Figure 4.3 shows that, of those who stated a level of experience required[10], a high level of experience was expected for managerial posts with a much lower share of posts requiring two years or less (9% compared to 22%) and a much higher share requiring six or more years (28% compared to 12%) when compared with overall vacancy numbers.

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[9] 48% of managerial vacancies stated a level of education required.
[10] 50% of managerial vacancies stated a level of experience required.
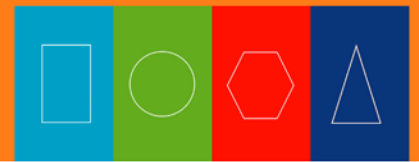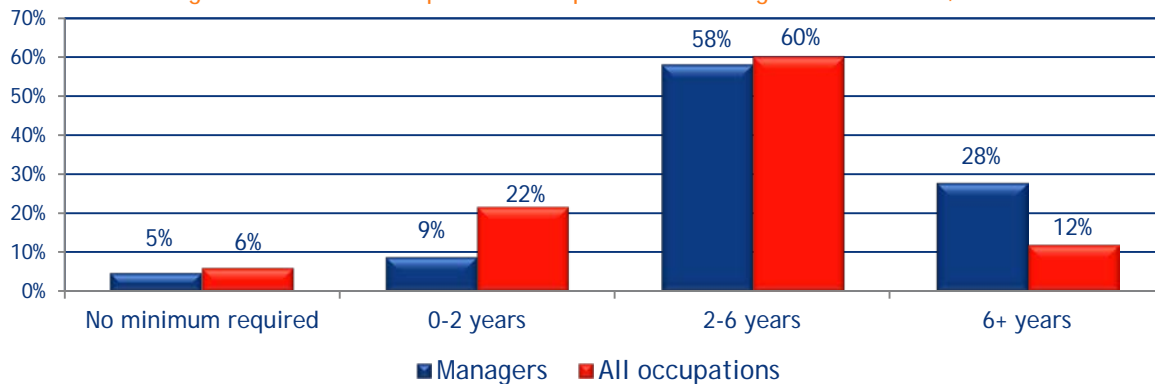
Figure 4.3 Level of experience required for managers and overall, 2014

Source: IrishJobs.ie

Difficult to Fill Vacancies

Of all difficult to fill vacancies reported in the Recruitment Agency Survey conducted in October 2014, **4%** were for managers in the following areas:

▪ Sales and marketing managers (digital marketing aimed at customer acquisition and engagement; sales managers with industry specific knowledge including supply chain management, as well as B2B sales)

▪ A small number of mentions in areas including project, production and technical managers, directors of quality and senior ICT managers

▪ Social care managers limited to niche areas (e.g. residential, day and domiciliary care mangers).

Vacancies filled with non-EEA workers (January-September 2014 only)

▪ **Overall**: new employment permits for managerial positions accounted for **5%** of all permits issued in 2014.

▪ **Type**: these were made up primarily of green cards (45%) and intra-company transfers (41%) (Figure 4.4); indeed, new employment permits for managerial vacancies accounted for 19% of all intra-company transfers for 2014 (Figure 4.5).

▪ **Sector**: managerial employment permits were primarily issued for positions in services, manufacturing, financial services and IT.

▪ **Nationality**: over half (55%) of all permits issued for managers were for those originating from the USA.

▪ **Occupations**: new employment permits were most frequently issued for:

   ▫ Operations managers

   ▫ Vice presidents

   ▫ CEOs/CFOs

   ▫ Directors of supply chain

   ▫ General managers in manufacturing.

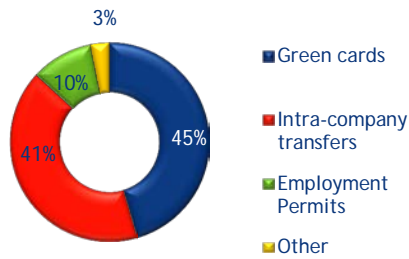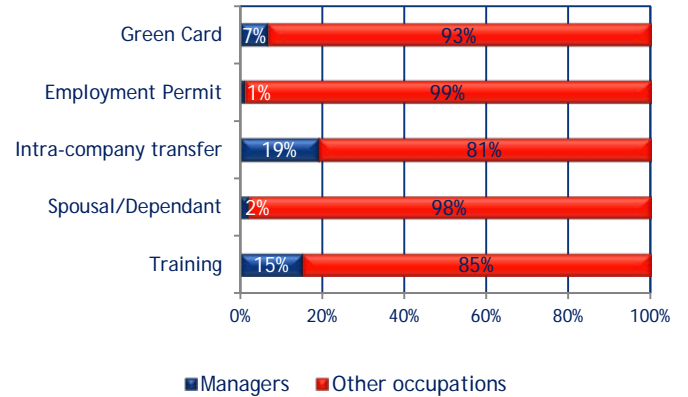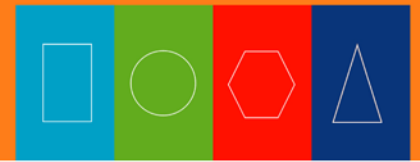Figure 4.4 Employment permits by type for managers, Jan-Sept 2014

- Green cards
- Intra-company transfers
- Employment Permits
- Other

3%
10%
41%
45%

Figure 4.5 New managerial employment permits issued as a share of total permits, Jan-Sept 2014

	Managers	Other occupations
Green Card	7%	93%
Employment Permit	1%	99%
Intra-company transfer	19%	81%
Spousal/Dependant	2%	98%
Training	15%	85%

Source: DJEI

Job announcements

While there were few job creation announcements in the media for managerial occupations in 2014, managerial roles are implicit in several of the larger scale announcements, such as those specific to construction work (albeit temporary) or the establishment of European headquarters in Ireland by several companies. It is probable that such job creation announcements may be expected to have roles for construction and site managers, marketing and sales directors, purchasing managers, and human resource directors. Nonetheless, such positions are likely to be comparatively small in number, and in the case of construction, temporary. Job creation for managerial roles is confirmed in the jobs announced by IDA client companies in 2014; the posts are relatively small in number and mostly for senior positions in the high-tech manufacturing and ICT sectors.

5. Professional Occupations

- Professional occupations accounted for 7% of all notified vacancies to DSP Jobs Ireland and 31% of vacancies notified to IrishJobs.ie in 2014

- There was an increase in the number of notifications for professional occupations for both DSP Jobs Ireland (relating to an increase in nursing vacancies) and IrishJobs.ie between 2013 and 2014

- IrishJobs.ie vacancies were primarily in the IT sector, with a 33% share, followed by engineering, science, health and business and financial services

- Unemployed persons previously employed in professional occupations were significantly more likely to contact a private employment agency than a public employment office (based on the analysis of the CSO's QNHS job search questions).

Figure 5.1 Professional vacancies as a share of total vacancies, 2014

- IrishJobs.ie Professionals
- IrishJobs.ie Others
- DSP Jobs Ireland Professionals
- DSP Jobs Ireland Others
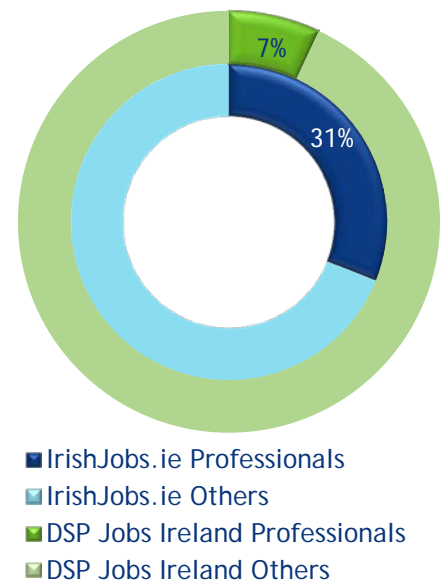
Source: DSP Jobs Ireland/IrishJobs.ie

Job Titles

IT professionals (almost a third of all professional vacancies)

- **Programmers and software developers** in application development (C#, .NET, C++, Java, PHP, iOS), database/enterprise development (Oracle, SQL Server, SAP) and operating systems

- **IT business analysts, architects and systems designers** in areas such as platform and user operations

- **Web designers/developers** (UI/UX, HTML, CSS, jQuery, Javascript, ASP.NET)

- **Network engineers and test engineers** with some testing jobs in localisation requiring language skills

- **IT project managers** (e.g. for desktop/helpdesk support, business systems, service delivery)

Business and finance professionals

- **Chartered accountants** (primarily financial accountants but also in business banking, both qualified and part-qualified)

- **Management consultants and business analysts** (e.g. funds industry, banking, with expertise in SAP)

- **Other business professionals** (risk analysts, project managers, actuaries and quantity surveyors)

Engineers and scientists

- **Process engineers** in scientific, medical and manufacturing sectors

- **Product development and design engineers** (electrical, mechanical, R&D)

- **Project managers** (in construction, pharmaceuticals, manufacturing); civil/structural engineers

- **Technologists** (food, process, product development, R&D, technical solutions)

- **Scientists**: chemical scientists (e.g. analytical, organic); biological scientists (e.g. microbiology); R&D scientists

Health professionals: (accounted for 6% of all professional vacancies advertised on IrishJobs.ie and 46% of DSP Jobs Ireland professional vacancies due to a high number of recruitment agency notifications for nurses)

- **Nurses** (e.g. general and staff nurses along with clinical nurse managers in oncology, anaesthetics and orthopaedics)

- **Doctors**, **clinical psychologists**, **pharmacists (mainly retail)**, **radiographers**

- **Therapists** (occupational, speech and language, physiotherapist)

- **Other healthcare professionals** (e.g. dietician).

Education

Of those vacancies that stated an education requirement[11], almost two thirds stated a minimum of a third level degree qualification, the highest share for any of the occupational groups and above the overall share (Figure 5.2). At 7%, this occupation had the highest share of vacancies requiring postgraduate qualifications and the lowest share of vacancies which had no minimum level of education required (also at 7%).

Figure 5.2 Level of education required for professionals and overall, 2014
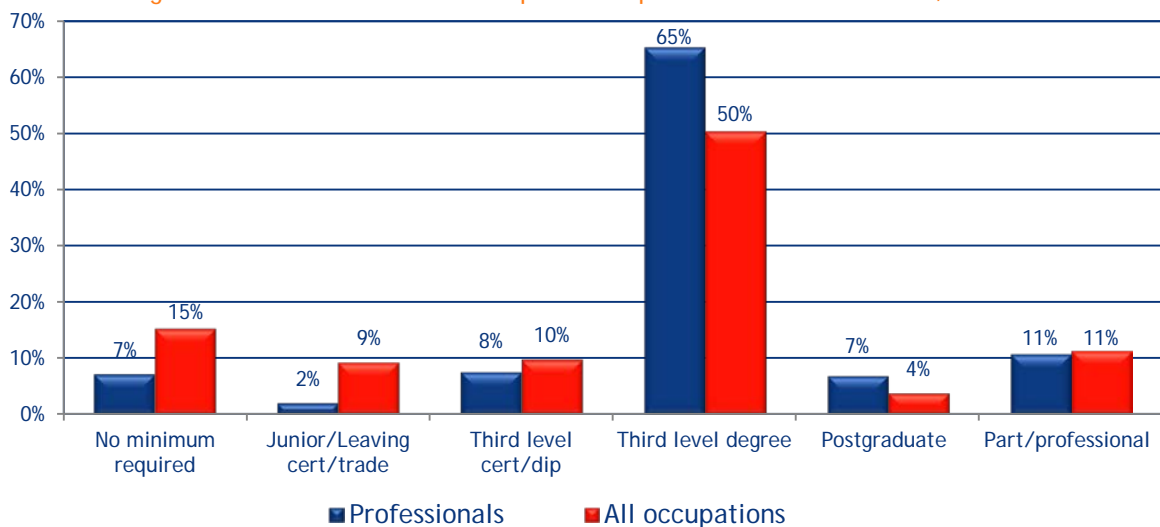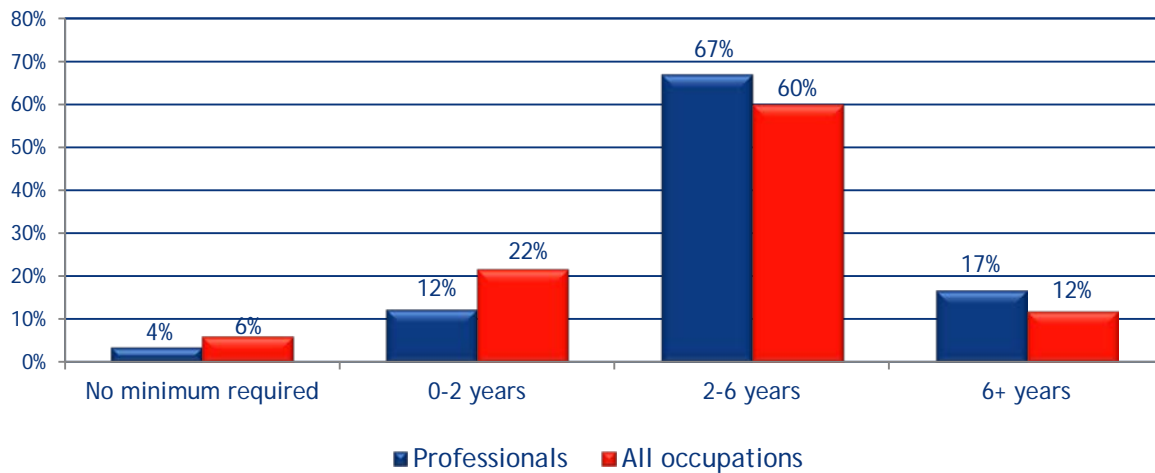
Source: IrishJobs.ie

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[11] 53% of vacancies for professional occupations stated a level of education required.

Experience

A high level of experience was required for the majority of vacancies for professional occupations (Figure 5.3); of those which stated an experience requirement[12], 67% required two to six years' experience with a further 17% requiring six or more years' experience (primarily in engineering and IT-related roles) with both above the overall share.

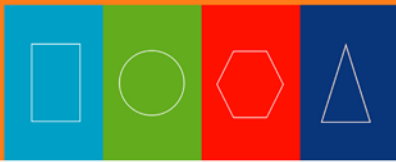Figure 5.3 Level of experience required for professionals and overall, 2014

Source: IrishJobs.ie

Difficult to Fill Vacancies

Professional occupations accounted for over two thirds of all difficult to fill (DTF) mentions in the October 2014 Recruitment Agency Survey. Within this occupational grouping, the following occupations were identified as difficult to source:

- **IT professionals**: accounted for a third of all DTF mentions; demand was particularly strong for designers and developers with specific skill sets, namely:
  - **Programmers/developers**: primarily with skills in Java, J2EE, C++, Summit, .net, C#, JSP, JQuery, AJAX & JavaScript; in web development (PHP,CSS, HTML, Python) and mobile applications development (for iOS and Android)
  - **IT business analysts, architects and systems designers**: (with expertise in Oracle, SQL, MySQL, Hadoop and noSQL) in occupations including software engineers, big data analysts, data warehousing and business intelligence specialists, and SEO (Search Engine Optimisation) specialists
  - **Cloud computing**: with skills in Software as a Service (SaaS) and virtualisation technologies
  - **Web designers**: particularly in web related applications which focus on enhancing users' online experience (UX) and supporting user interaction (UI)
  - **Network engineers**: confined to IP networking and specialist roles such as software quality assurance engineers

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[12] 56% of vacancies for professional occupations stated a level of experience required.

- **Engineers and scientists:**

  - **Production and process engineers** - process automation and system control, product design, production planning, supply chain integration engineers (e.g. medical devices, biotech and pharmaceutical industry); commissioning engineers (overseeing the installation of systems, plant and/or equipment)

  - **Quality assurance and validation engineers**, including standards and regulatory compliance, process safety engineers

  - **Electronic engineers** (in niche areas)

  - **Chemical engineers** (e.g. specialised roles in the biotech/pharmaceutical industry)

  - **Scientists:** chemists (e.g. product formulation, analytical development), biological scientists, biochemists and in R&D and pharmacovigilance

- **Business and financial professionals**

  - **Accountants** (e.g. chartered and certified accountants with expertise in taxation, regulation and compliance); management and financial accountant with relevant industry expertise

  - **Analysts:** financial and risk analysts with knowledge of IT systems (e.g. Oracle, SAP); supply chain analysts; statisticians/data analysts with SAS, STATA, SPSS; business analysts (e.g. enterprise resource planners (ERP) and customer relationship management (CRM))

- **Healthcare professionals:**

  - **Medical practitioners**: doctors/registrars (in areas including emergency medicine, anaesthetists, paediatrics, general medicine, and psychiatry), GPs

  - **Nurses:** advanced nursing practitioners (ANP), clinical nurse managers and specific nursing roles (e.g. in intensive care units, operating theatre, cardiac care, oncology, and psychiatric); difficult to fill mentions also included general nurses and nursing managers for roles in elderly people care settings

  - **Radiographers**

- **Construction professionals**: limited to positions in niche areas (experienced quantity surveyors and project managers).

Vacancies filled with non-EEA workers (January-September 2014 only)

- **Overall:** new employment permits for professionals accounted for 69% of total permits issued in 2014

- **Type:** permits were primarily green cards (44%) and employment permits (48%) (Figure 5.4); indeed, permits for professionals accounted for the majority of green cards and employment permits issued at 82% and 70% respectively (Figure 5.5)

- **Sector:** permits were mainly issued for positions in IT (48%) and healthcare (34%)

- **Nationality:** persons from India, Pakistan and the US accounted for 60% of all new permits issued for professionals

- **Occupations:** new employment permits were most frequently issued for:
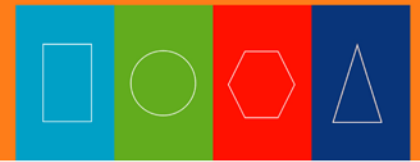
- IT: multilingual account strategists/managers; analysts (systems, test, data), software developers (with Oracle, Javascript, PHP, etc), systems architects/engineers
- Healthcare: medical doctors (registrars (primarily general but also in specialities including anaesthetics, cardiology, oncology, psychiatric, paediatric, ophthalmology and emergency medicine), senior house officers), nurses
- Manufacturing: engineers (project, process, electronics, field service)
- Business: business analysts, auditors

Figure 5.4 Employment permits for professionals, Jan-Sept 2014
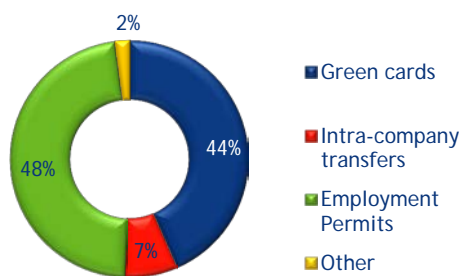
Figure 5.5 New employment permits for professionals and all others, Jan-Sept 2014

Source: DJEI
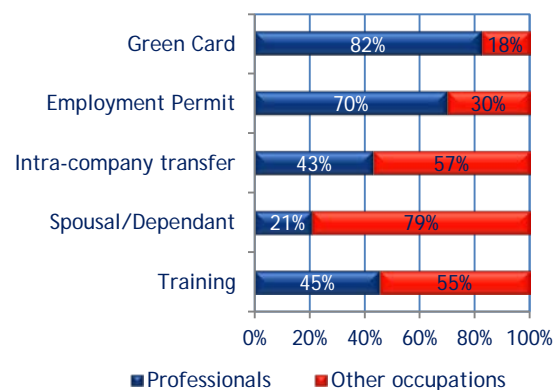
Job Announcements

Professional occupations accounted for the most frequently mentioned titles in job creation media announcements in 2014. A significant share of the jobs was in the ICT sector, with financial/business services and high-tech manufacturing also featuring prominently. In addition, a number of roles were cross-disciplinary, requiring skills that span two or more sectors (e.g. IT software development skills for the financial sector, financial skills for positions in high-tech manufacturing, or a financial background for the ICT sector). Job creation for professionals was also confirmed in jobs announced by IDA client companies, particularly for roles in high-tech sectors (e.g. pharmaceuticals, ICT).

As illustrated in Figure 5.6, the demand for professionals, was particularly strong for

- **Finance professionals,** including audit and tax experts, senior accountants, financial control professionals, compliance experts (including AIFMD[13]), and risk professionals; while most positions were in the financial services sector (e.g. insurance), financial professionals were also sought for the ICT sector and, to a lesser extent, high-tech manufacturing (medical devices, pharmaceuticals)

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[13] The **Alternative Investment Fund Managers Directive (AIFMD) is a European Union directive which came into force in July 2013.**
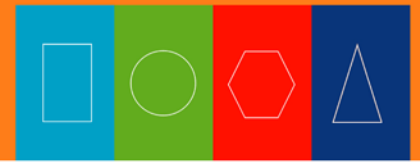
- **IT professionals**, including software developers and engineers, IT project managers, software testers, and data analysts/data scientists; most of the positions were specific to segments of the ICT sector (e.g. games development, telecoms, cloud-based services, information security, and online sales); however, a number of roles were also announced for IT occupations in sectors such as financial services, energy, transport, and manufacturing

- **Chemical and pharmaceutical engineers** (pharma sector)

- **Process engineers** (high-tech manufacturing)

- **Design and product development engineers** (IT and food manufacturing sectors)

- **Mechanical engineers**

- **Quality assurance and quality control engineers and professionals**, predominantly for high-tech manufacturing (e.g. bio-pharmaceuticals, pharmaceuticals, medical devices) and, to a lesser degree, the IT software sector

- **Research and development (R&D)** engineers, scientists and computer scientists (including positions in IT), high-tech manufacturing, and medical research (e.g. clinical diagnostics, life sciences)

- **Business and legal professionals**, including management consultants, business analysts, and legal experts.

While some roles specified a need for experienced candidates, a number of announcements sought to recruit third level graduates.

Figure 5.6 Job creation announcements: most frequently mentioned job titles for professional roles, 2014

6. Associate Professional & Technical Occupations

- Associate professional/technical occupations accounted for 11% of all notified vacancies to DSP Jobs Ireland and 31% of vacancies notified to IrishJobs.ie in 2014

- There was a drop in the number of associate professional/technical vacancies notified to DSP Jobs Ireland in 2014, mainly due to a reclassification of some occupations, although notifications increased for IrishJobs.ie

- Vacancies were primarily in IT, sales, financial services, and accounting

- The Job Search analysis of the CSO's QNHS data indicates that in the first quarter of 2014, unemployed associate professionals were more likely to contact a private than a public employment agency when searching for a job.

Figure 6.1 Associate professional vacancies as a share of total vacancies, 2014

- IrishJobs.ie Associate Professionals
- IrishJobs.ie Others
- DSP Jobs Ireland Associate Professionals
- DSP Jobs Ireland Others
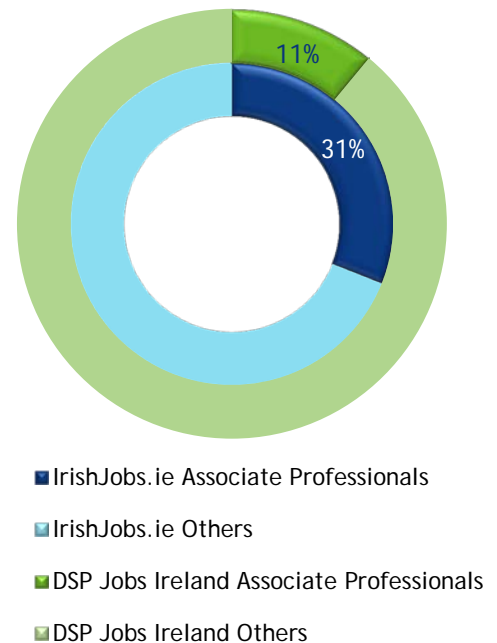
Source: DSP Jobs Ireland/IrishJobs.ie

Job Titles

Vacancies for associate professionals were most frequent for

- **Business associate professionals** (accounted for the largest number of vacancies)
  - Sales and marketing (inside sales specialists with languages, sales representatives, field sales executives, account executives with languages, marketing executives, business developers, fundraisers, mystery shoppers, procurement agents/buyers)
  - Financial: financial advisers/analysts, audit managers, account managers, multilingual claims officers
  - Compliance officers

- **Science, engineering and technology technicians:**
  - IT technicians: technical support agents (with languages including German, French, Dutch and Nordic), customer services executives with languages, data analytics managers, helpdesk technicians, systems administrators
  - laboratory technicians (medical, quality control, food, microbiology, chemistry)
  - engineering technicians (manufacturing, commissioning/qualification, mechanical, electrical/electronic, process)
  - CAD technicians

- **Other associate professionals:**
  - Interpreters
  - Vocational trainers/instructors (e.g. in the areas of retail sales, childcare, customer service), recruitment consultants
  - Designers (UI/UX, graphic, fashion, visual), technical writers.

There were also a number of vacancies for performing artists (extras) associated with activity in the domestic and foreign film industry in Ireland, which were excluded from the data as they were once off short-term engagements.

Language Skills

Language skill requirements were predominant in vacancies for associate professionals. Foreign language skills, particularly German, French, Dutch, Spanish and Italian, were required for roles in IT technical support, fraud analysis, risk management, claims and collections.

Education

Of those who stated an education requirement[14], 50% stated a minimum of a third level degree qualification with a further 3% requiring a postgraduate qualification (Figure 6.2). Requirements for professional or part-professional qualifications were primarily for finance and accounting roles. The level of education required for associate professional positions was broadly in line with the overall level of education required for all IrishJobs.ie vacancies.

Figure 6.2 Level of education required for associate professionals and overall, 2014
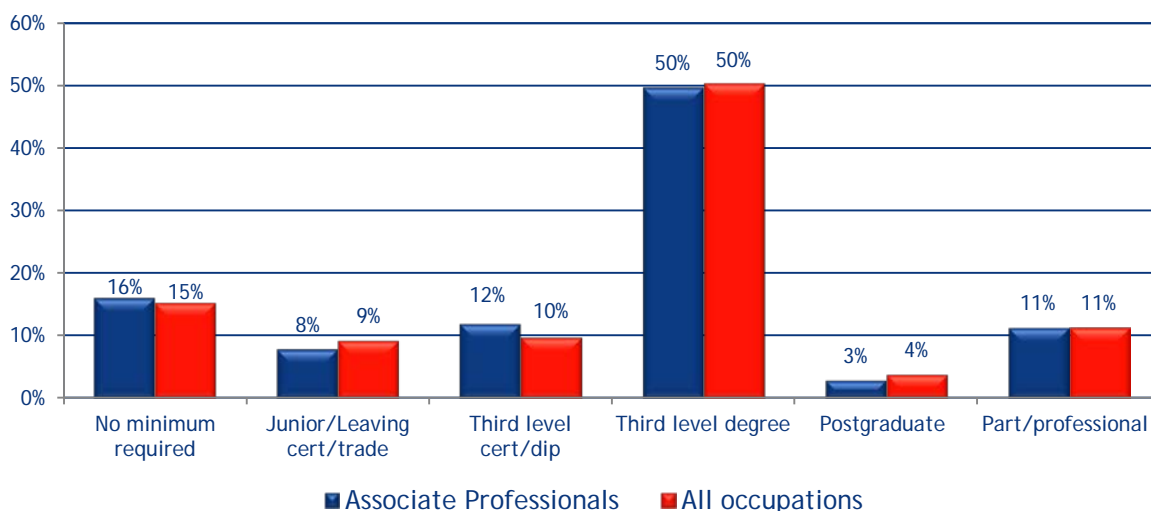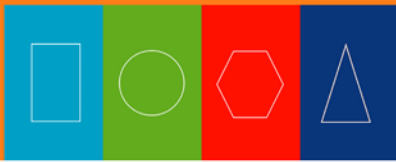

Source: IrishJobs.ie

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[14] 54% of associate professional vacancies stated a level of education required.
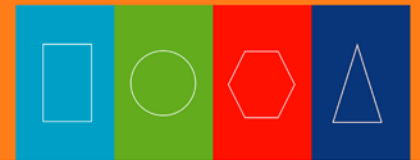
Experience

Over a half (52%) of all associate professional occupations stated a level of experience required. Almost two thirds of these vacancies stipulated a requirement of two to six years' experience (Figure 6.3). In terms of sectors, sales related positions had the lowest level of experience required. Experience requirements for associate professional positions were broadly in line with the overall level of experience required for all IrishJobs.ie vacancies.

Figure 6.3 Level of experience required for associate professionals and overall, 2014
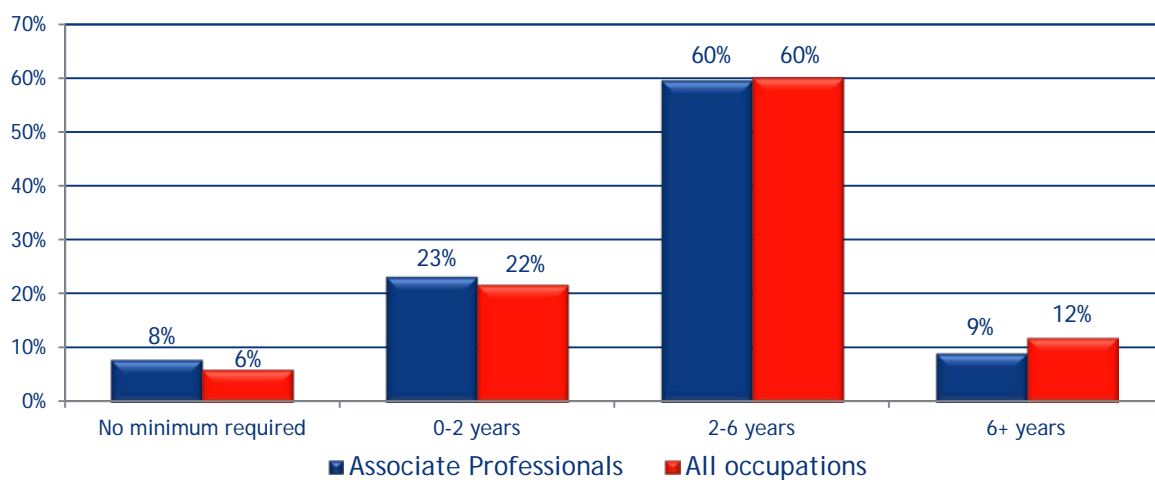
Source: IrishJobs.ie

Difficult to Fill Vacancies

Approximately 15% of all difficult to fill mentions noted in the October 2014 Recruitment Agency Survey were at associate professional level, primarily in the areas of:

- Technicians
  - IT technicians (QA testers and troubleshooters); IT user support with foreign language skills
  - Electronic technicians in generic roles and Surface Mount Technology (SMT)/PTH Rework operators (electronic printed circuit board assembly (PCBA))
  - Cardiac technicians (healthcare)
- Sales and marketing and related
  - Technical sales/sales representatives particularly in medical devices, healthcare and pharmaceuticals
  - Sales/telesales often with German, Dutch and Nordic languages
 - Supply chain analysts (in demand planning and forecasting).

Vacancies filled with non-EEA workers (January-September 2014 only)

- **Overall:** new employment permits for associate professionals accounted for **15%** of total permits issued in 2014

- **Type:** over half (51%) of all associate professional permits issued were for employment permits with most of the remainder equally divided between intra-company transfers and employment permits (Figure 6.4); in fact, intra-company transfers for this occupational group account for almost a third (29%) of all intra-company transfers issued (Figure 6.5)

- **Sector:** permits were primarily issued for the IT sector (51%), services (18%), financial services (10%) and manufacturing (9%)

- **Nationality:** those from the US, India and Israel combined accounted for a half of all permits issued for this group

- **Occupations:**

  - Business and financial: account strategists/managers (with languages) including online sales, business development, inside sales representatives, marketing executives, analysts (financial and risk)

  - IT: systems analysts, testers, IT support, localisation, database administrators

  - Science/engineering: manufacturing technicians, customer/commissioning engineers, mechanical, quality assurance.

Figure 6.4 Associate professional employment permits by type, Jan-Sept 2014
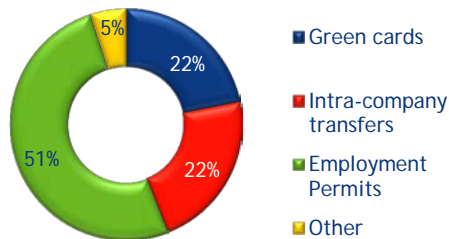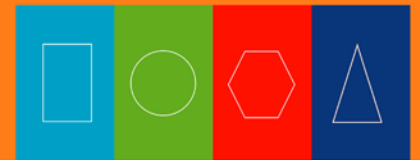

Source: DJEI

Figure 6.5 New employment permits for associate professionals and all others, Jan-Sept 2014
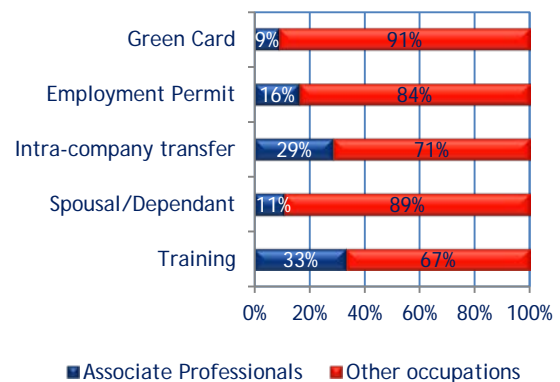
Job Announcements

After professional and sales occupations, associate professional occupations were amongst the most frequently mentioned titles in the job creation media announcements in 2014. Several of the created jobs were announced as part of companies' establishment of EMEA headquarters in Ireland, with many of the roles being based in contact centres. Job creation for associate professionals is also confirmed in the jobs announced by IDA client companies in 2014, although the majority were in ICT and, to a lesser extent, in high-tech manufacturing.

As illustrated in Figure 6.6, the demand for associate professionals, was particularly strong for
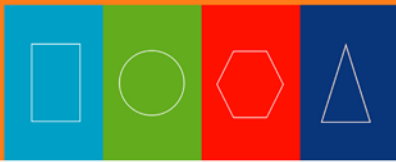
Business associate professionals, in marketing and HR, and for sales and account managers, (in particular for online businesses), business and product developers, risk, fund and asset managers

- **Engineering and science technicians**, particularly for the medical devices (e.g. moulding, extrusion, maintenance and quality) and IT sectors (test automation, data centre operations); there was a smaller number of mentions for lab technicians and analysts for the pharma sector

- **Technical support technicians**, often with foreign language skills

- **Protective service occupations**, for Gardaí and army personnel.

Demand was for both entry level (including third level graduates) and experienced candidates. While the majority of announcements were for fewer than 100 jobs, there were several companies that announced the creation of between 200 and 400 jobs. More than half of the positions were for the Dublin area.

Figure 6.6 Job creation announcements: most frequently mentioned job titles for associate professional roles, 2014
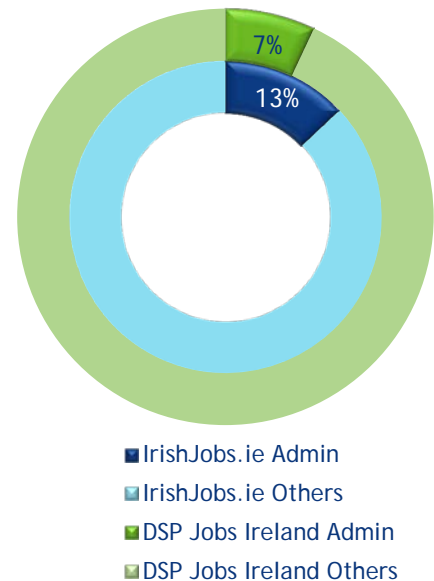
7. Administrative and Secretarial Occupations

- Administrative/secretarial occupations accounted for 7% of all notified vacancies to DSP Jobs Ireland and 13% of vacancies notified to IrishJobs.ie in 2014

- Vacancies advertised through both DSP Jobs Ireland and IrishJobs.ie for administrative/ secretarial occupations showed increases between 2013 and 2014

- Vacancies were primarily in accountancy and finance, banking, and secretarial/admin sectors

- The CSO's QNHS Job Search data indicates that in the first quarter of 2014, unemployed admin workers were more likely to contact a public than a private employment agency when seeking work; while the shares contacting either fell since the first quarter of 2013, it was most evident for private agencies (falling from a 49% share to 33%).

Figure 7.1 Admin vacancies as a share of total vacancies 2014

- IrishJobs.ie Admin
- IrishJobs.ie Others
- DSP Jobs Ireland Admin
- DSP Jobs Ireland Others

Source: DSP Jobs Ireland/IrishJobs.ie

Job Titles

Administrative and secretarial vacancies were most frequent for

- Administrative positions in finance
  - primarily fund accountants but also cost, treasury, management, corporate and commercial
  - accounts payable/receivable clerks with language skills
  - payroll coordinators/administrators
  - credit controllers, some with language skills (e.g. German and Spanish)
  - multilingual financial/banking administrators
- HR, pensions and claims administrators
- Administrative positions in logistics and distribution
  - freight clerks (air, ship and road freight forwarding)
  - purchasing administrators, inventory analysts, stock controllers
  - logistics co-ordinators
- Receptionists, company secretaries, personal assistants, legal secretaries, sales support administrators, mystery shoppers[15] .

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[15] Previously included in the associate professional category; this change in classification is partly responsible for the rise in the share of DSP admin job vacancies and conversely in the fall in the share of DSP associate professional vacancies.

Education

Of vacancies which stated an education requirement[16], 32% stated a minimum of a third level degree qualification (as compared to 65% for professional vacancies and 50% overall) (Figure 7.2). This occupational group had the highest share of vacancies requiring a part/professional qualification, at 21% (primarily for accounting related positions).

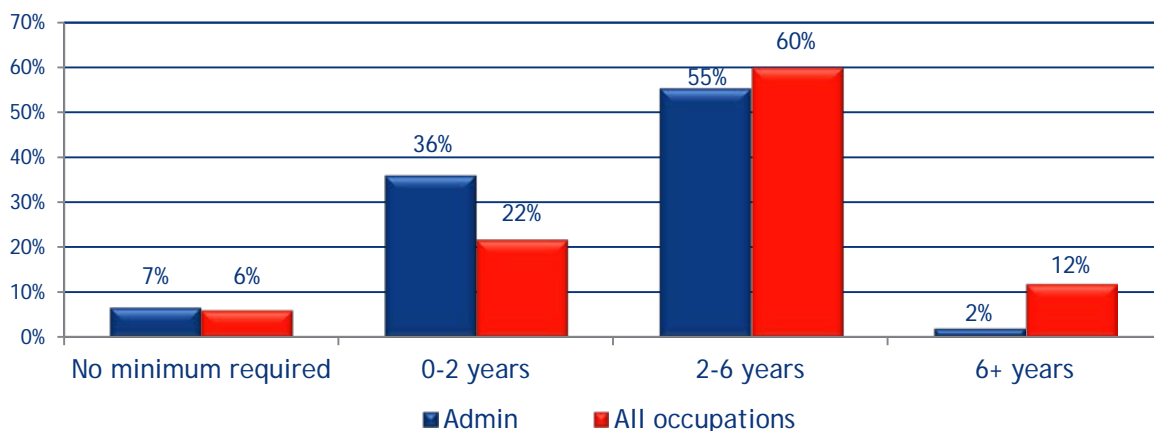Figure 7.2 Level of education required for administrators and overall, 2014
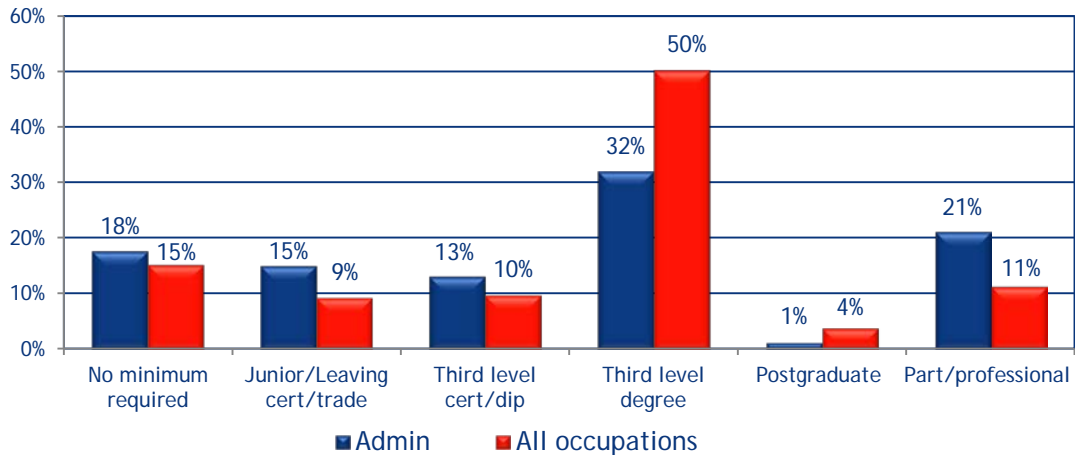
Source: IrishJobs.ie

Experience

Of vacancies which stated a minimum level of experience required[17], over half (55%) required two to six years' experience (Figure 7.3). Over a third of vacancies required up to two years' experience (compared to 22% overall), with only a small share of vacancies requiring six or more years' experience.

Figure 7.3 Level of experience required for administrators and overall, 2014

Source: IrishJobs.ie

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[16] 49% of vacancies for administrative occupations stated a level of education required.
[17] 51% of vacancies for administrative occupations stated a level of experience required.
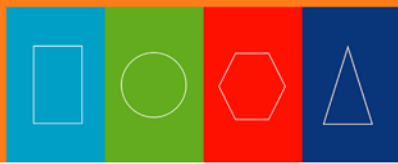
Difficult to Fill Vacancies

Administrative occupations that were reported as being difficult to fill in the Recruitment Agency Survey in October 2014 were limited to the following job titles:

- Supply chain/logistics operations clerks, most often with foreign languages
- Accounts/financial clerks (e.g. fund accountants)
- General office administration with languages and legal secretaries.

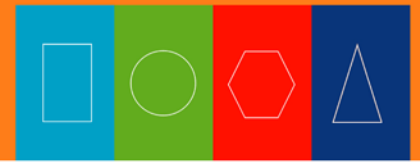## Vacancies filled with non-EEA workers (January-September 2014 only)

- **Overall**: with 40 permits, administrative positions accounted for **1%** of total new permits issued in 2014
- **Type:** almost two thirds of permits were for employment permits
- **Sector:** permits were primarily for the services and IT sectors
- **Occupations:** fund accounting, multilingual associate account strategists.

Job Announcements

There was a limited number of mentions of administrative and secretarial jobs in the media and IDA job creation announcements in 2014. Job creation announcements in the media for this occupational group were confined to the following areas:

- **Distribution administration staff**, especially in supply chain operations, logistics and warehousing
- **Financial administration staff**, mostly in the financial services sector, but also in high-tech manufacturing and IT
- **Public sector clerical officers**
- **Office managers.**

It should also be noted that there were a number of job losses announced in the media which affected administrative staff, particularly in the financial services sector. The job losses tended to be in areas which did not feature in the job creation announcements, such as in retail banking.

8. Skilled Trades Occupations

- Skilled trades accounted for 16% of all notified vacancies to DSP Jobs Ireland and 5% of vacancies notified to IrishJobs.ie in 2014

- The total number of vacancies for skilled tradespersons increased between 2013 and 2014 related primarily to increased notifications to the DSP Jobs Ireland

- Vacancies most often occurred in the following sectors: hotel and catering, manufacture of food and beverage and construction

- The CSO's QNHS Job Search data shows that between the first quarters of 2013 and 2014, the share (and numbers) of unemployed skilled tradespersons contacting a public employment office when searching for a job fell (from 48% to 43%), whereas the share contacting a private employment agency increased by one percentage point (to 31%).

Figure 8.1 Skilled trades vacancies as a share of total vacancies, 2014

Source: DSP Jobs Ireland/IrishJobs.ie

Job Titles

Vacancies for skilled trades were most frequent for:

- **Food preparation trades**
  - chefs accounted for a third of all vacancies in this group; where the type of chef was detailed, chef de partie was the most frequently cited, followed by commis and sous chefs, and to a lesser extent, pastry chefs; many of the vacancies were notified through recruitment agencies; there was a 14% increase in the number of vacancies for chefs since 2013
  - butchers/boners/slaughterline operatives and to a lesser extent, bakers

- **Electricians**: included both qualified and apprentice electricians in areas including industrial and commercial activities and for field service engineering; there was a 60% increase in vacancy notifications since 2013

- **Construction trades**: plumbers and carpenters accounted for both the largest share of vacancy notifications and the largest increase in notifications since 2013; there was also increased activity for painters, bricklayers and roofers

- **Welders:** (TIG/MIG[18], arc, fabricator (steel, metal), pipe fitter, orbital, coded, electric and butt fusion)
- **Vehicle trades:** mechanic, HGV mechanic, panel beater, NCT vehicle tester
- **Fitters:** maintenance, mechanical, plant and pipe fitters and toolmakers
- **Other trades:** including landscape gardeners, tailors/seamstress/dressmakers and cabinet makers.

Experience

As DSP Jobs Ireland accounted for approximately 85% of the vacancies for skilled trades, the level of experience required is based on the data available from this source. With 60% of vacancies requiring fully experienced candidates, this occupational group had the highest share of DSP Jobs Ireland vacancies with a requirement for fully experienced staff (Figure 8.2).

Figure 8.2 Level of experience required for skilled trades and overall, 2014
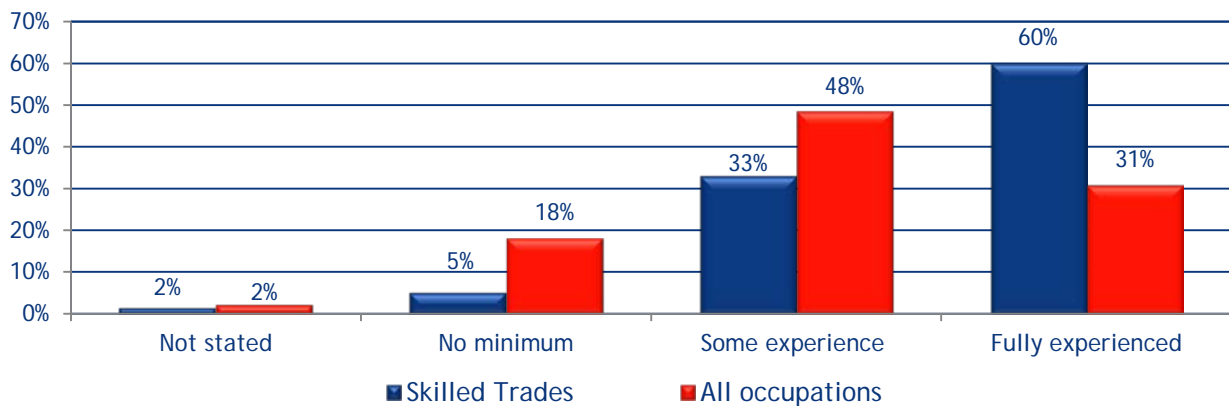
Source: DSP Jobs Ireland

Difficult to fill vacancies

The Recruitment Agency Survey in October 2014 reported limited difficulties in sourcing skilled tradespersons for:

- TIG & MIG welders
- Tool makers
- Steel erectors/fixers and pipe layers
- Chefs.

Vacancies filled with non EEA workers (January-September 2014 only)

- **Overall:** new employment permits issued for those in skilled trades accounted for **6%** of total permits issued in 2014

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[18] TIG=Tungsten Inert Gas welding; MIG=Metal Inert Gas

- **Type**: over two thirds of permits were for employment permits (Figure 8.3); 15% of permits were for intra-company transfers, accounting for 8% of all intra-company transfer permits issued (Figure 8.4)

- **Sector**: over half of the permits were issued for the catering sector

- **Occupations**: permits were most frequently issued for:

  - Chefs: the majority (57%) of new employment permits issued in this group were for chefs, many in ethnic cuisine

  - Electrical and electronic trades: field service engineer, telecoms test engineer, customer engineer

  - Butchers, boners, slaughter house operatives.

Figure 8.3 Skilled trades employment permits by type, Jan-Sept 2014
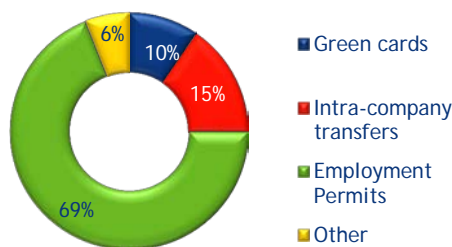
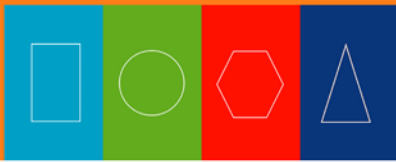Figure 8.4 Employment permits for skilled trades and all others, Jan-Sept 2014
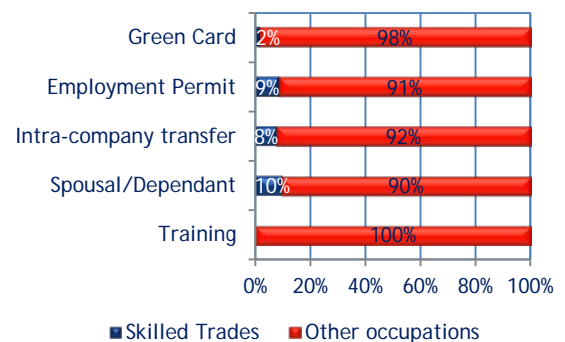
Source: DJEI

Job Announcements

There were few job creation announcements for skilled trades persons in the media in 2014. However, construction skilled trades occupations were implicit in the temporary construction jobs announced in connection with the establishment or expansion of facilities across a range of sectors such as high-tech manufacturing (e.g. pharma, biopharma, etc.), food and beverage manufacturing, ICT, and retail. Most of these temporary construction-related job creation announcements were for at least 100 positions.

Other announcements for skilled trade occupations were confined to installers of various types of equipment such as security alarms as well as a small number of chefs for the accommodation/food sector.

9. Caring, Leisure and Other Services Occupations

- Vacancies for caring, leisure and other services occupations were more likely to be notified through DSP Jobs Ireland, accounting for 17% of all DSP Jobs Ireland vacancies, compared to 2% of IrishJobs.ie vacancies

- There was an increase in the overall number of caring vacancies notified between 2013 and 2014

- In terms of sectors, vacancies most often occurred in the healthcare sector

- The Job Search analysis of the CSO's QNHS data indicates that between the first quarters of 2013 and 2014 there was no change in the number of unemployed care personnel seeking employment and also no change in the overall share, with public employment offices remaining the most likely route used for this occupational group to search for a job.

Figure 9.1 Personal services vacancies as a share of total vacancies, 2014

- IrishJobs.ie Personal Services
- IrishJobs.ie Others
- DSP Jobs Ireland Personal Services
- DSP Jobs Ireland Others
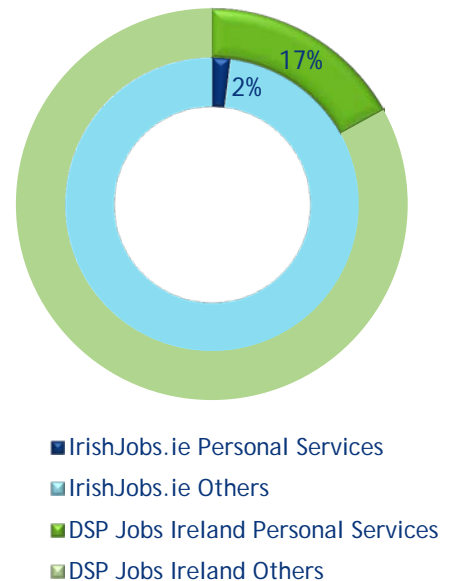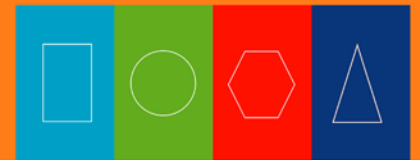
Source: DSP Jobs Ireland/IrishJobs.ie

Job Titles

Vacancies for caring, leisure and other service occupations were most frequent for:

- Care workers and home carers (accounting for over two thirds of DSP Jobs Ireland vacancies for this occupational group); these vacancies were primarily notified by agencies working in the healthcare sector and it is unclear the extent to which these vacancies represent opportunities; over a half of these vacancies were for part-time positions

- Childcare workers

- Barbers/hairdressers

- Beauty/massage therapists/nail technicians

- Other service occupations including housekeepers, caretakers, cleaning supervisors/managers, dog groomers, dental nurses, leisure centre attendants and sports instructors.

Experience

DSP Jobs Ireland accounted for 95% of all vacancies examined in this report in caring, leisure and other services and is therefore used as the source to examine the level of experience required. Almost two thirds of vacancies advertised by DSP Jobs Ireland for caring occupations required some experience, higher than the overall share of 48% (Figure 9.2). While the share of vacancies requiring candidates to be fully experienced was lower than that of overall vacancies, this varied

across job titles: only 10% of care workers were required to be fully experienced compared to positions for beauticians and hairdressers/barbers where at least 60% of vacancies required candidates to be fully experienced.

Figure 9.2 Level of experience required for personal services occupations and overall, 2014
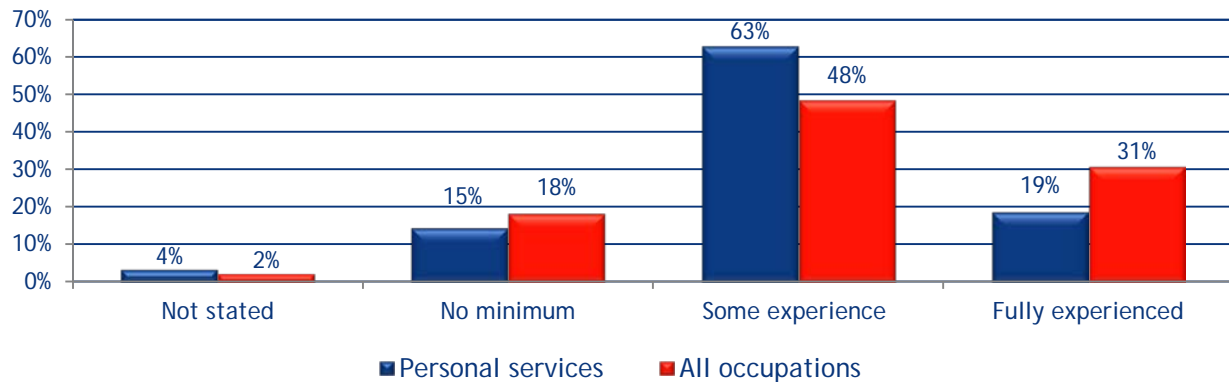
Source: DSP Jobs Ireland

Difficult to Fill Vacancies

Difficult to fill mentions in the Recruitment Agency Survey in October 2014 were limited to caring positions primarily for home carers due to the positions not being sufficiently attractive.

Vacancies filled with non EEA workers (January-September 2014 only)

- **Overall**: new employment permits issued for those in caring occupations accounted for **2%** of total permits issued in 2014

- **Type**: almost two thirds (63%) of permits issued for this occupational group were for spousal/dependant permits, accounting for a third of the overall spousal/dependant permits issued

- **Occupations**: permits were most frequently issued for care assistants, and to a lesser extent, for barbers and childcare workers.

Job Announcements

There were few job creation announcements in the media for personal and services occupations in 2014. Specific occupations included

- Care workers and home carers

- Special needs assistants

- Personal and leisure services staff, especially those associated with the hospitality and tourism sector (e.g. spa and fitness centre staff, visitor centre staff and tour guides).

The job announcements tended to refer to a comparatively small number of jobs (<60).

10. Sales and Customer Services Occupations

- Notified sales and customer service vacancies accounted for 11% of all DSP Jobs Ireland vacancies and 6% of IrishJobs.ie vacancies

- While the number of vacancies notified to DSP Jobs Ireland remained static, the number of notifications to IrishJobs.ie increased by a fifth

- In terms of sectors, vacancies most often occurred in customer services/contact centres, retail, sales and banking

- The decline in the number of unemployed sales persons between the first quarters of 2013 and 2014 was distributed equally across the public and private employment agencies, with unemployed sales and customer service persons remaining more likely to contact a public employment office (44%) than a private employment agency (29%) when searching for a job.

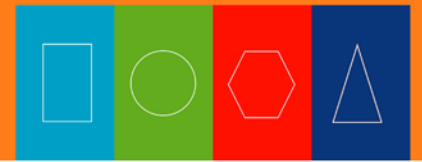Figure 10.1 Sales/customer services vacancies as a share of total vacancies, 2014

- IrishJobs.ie Sales/Customer Services
- IrishJobs.ie Others
- DSP Jobs Ireland Sales/Customer Services
- DSP Jobs Ireland Others
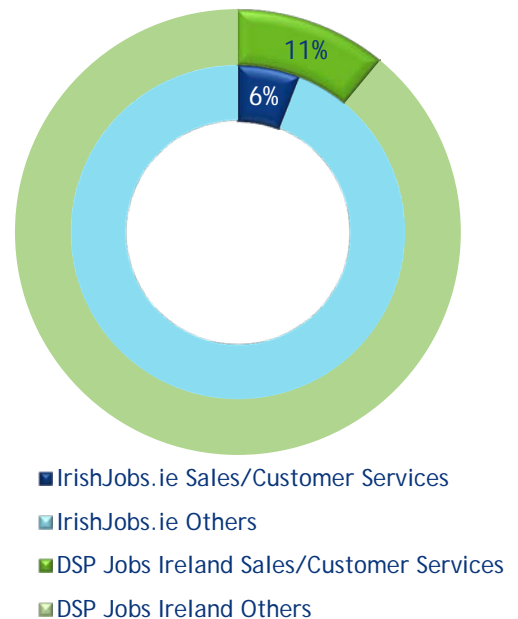
Source: DSP Jobs Ireland/IrishJobs.ie

Job Titles

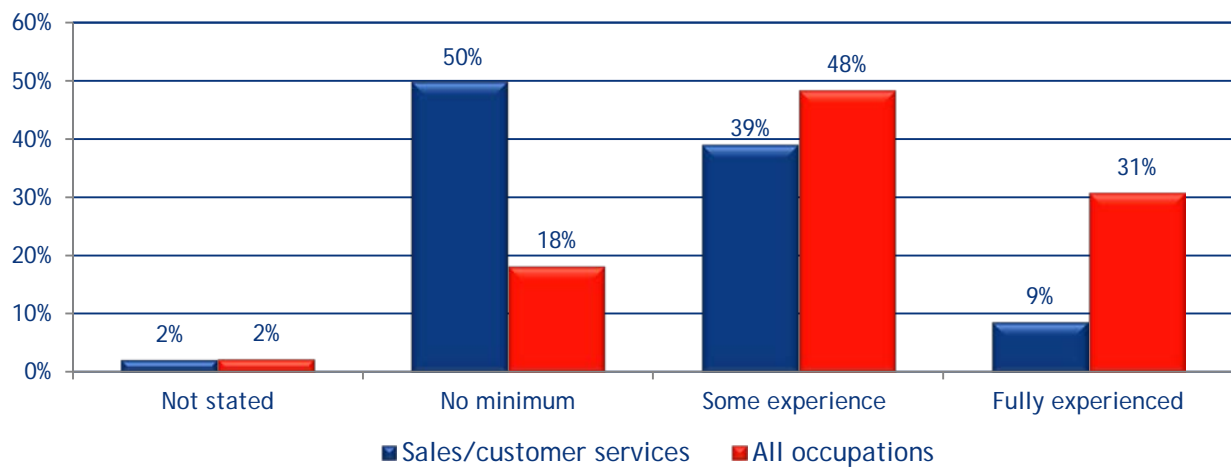Vacancies for sales and customer service occupations were most frequent for

- Door-to-door representatives in the area of sales and fundraising for charities

- Sales/retail assistants and customer advisors; these vacancies accounted for two thirds of all the part-time positions advertised in this occupational group

- Field sales agents

- Lead generators in telemarketing

- Customer services occupations (primarily multilingual (French, German, Spanish, Italian) contact centre agents)

- Other sales/customer services (beauty advisors, telesales, merchandisers, collection agents, pharmacy assistants).

Experience

DSP Jobs Ireland had the highest share of vacancies for sales positions. At 9%, this occupational group had the lowest share of vacancies notified through DSP Jobs Ireland which required candidates to be fully experienced (Figure 10.2). Conversely, it had the highest share of vacancies which required no minimum level of experience (primarily for positions as door-to-door salespersons, field sales representatives and sales assistants).

Figure 10.2 Level of experience required for sales/customer service occupations and overall, 2014

Source: DSP Jobs Ireland

Difficult to Fill Vacancies

Sales and customer services positions accounted for approximately 5% of difficult to fill mentions in the Recruitment Agency Survey in October 2014. All difficult to fill vacancies stated a requirement for languages and were most frequent in the areas of
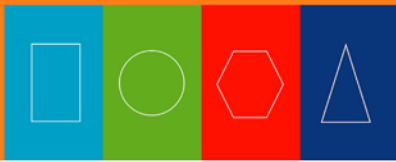
- Contact centre and customer support roles requiring a mixture of foreign languages and IT skills
- Telesales with languages skills (e.g. German, Dutch, Nordic languages).

Vacancies filled with non EEA workers (January-September 2014 only)

- Overall: new employment permits issued for those in sales related occupations accounted for **1%** of total permits issued in 2014 in areas such as customer care, service representatives and sales assistants.

Job Announcements

Sales and customer service occupations were the second most frequently mentioned job titles in job creation media announcements in 2014, second only to professional occupations. Job creation for these roles was also confirmed in the jobs announced by IDA client companies. Several of the announcements were made in relation to the establishment of new or the expansion of existing
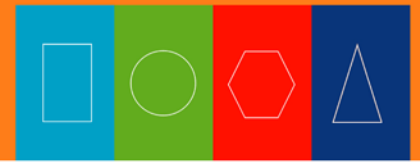
European headquarters in Ireland. The most frequently mentioned titles, as detailed in Figure 10.3, included

- **Retail assistants**, primarily in the grocery retail sector, but also in clothing and car sales
- **Contact centre occupations**, namely customer service and sales staff, especially for online sales and customer support (e.g. security alarms, ICT products (software, mobile phones etc.)) financial services (e.g. insurance); or business services (e.g. marketing, telemarketing); many announcements specified European language skills such as French and German
- **Other sales occupations**, including technical sales and customer care for high-tech manufacturing companies (e.g. medical devices).

Over a half of sales and customer service job announcements were for positions based outside of Dublin. Approximately one half of all job creation announcements for retail assistants were for 40 positions or more.

Figure 10.3 Job creation announcements: most frequently mentioned job titles for sales and customer service roles, 2014

11. Process, Plant and Machine Operative Occupations

- Notifications for operative positions accounted for 10% of all notified vacancies to DSP Jobs Ireland and 4% of vacancies notified to IrishJobs.ie in 2014

- The overall number of vacancies notified for operative jobs increased by a third since 2013, related to increases in the number of DSP vacancies notified

- In terms of sectors, vacancies most often occurred in the IT, science and engineering sectors

- The CSO's QNHS Job Search data shows that between the first quarters of 2013 and 2014, the share of unemployed operatives contacting a public or private employment office fell (by twenty and thirteen percentage points respectively) although public employment office remained the more likely choice when searching for a job.

Figure 11.1 Operative vacancies as a share of total vacancies, 2014

- IrishJobs.ie Operatives
- IrishJobs.ie Others
- DSP Jobs Ireland Operatives
- DSP Jobs Ireland Others

Source: DSP Jobs Ireland/IrishJobs.ie

Job Titles

Vacancies for operatives were most frequent for:

- Articulated and rigid truck drivers accounted for a significant share of the increase in vacancy notifications since 2013; there were also notifications for other drivers including those related to HGV, deliveries, bus and coach

- Process operatives (e.g. in the food industry, quality control): there was a noticeable increase in the number of vacancies for general and production operatives although many of these vacancies were notified through recruitment agencies where the extent to which they represent real jobs is unclear

- Mobile machine drivers: fork-lift truck drivers (e.g. for Reach, Counterbalance), crane, teleporter, excavator

- Construction operatives (e.g. scaffolders (growth in vacancy notifications evident since 2013), groundworkers, pipe layer/fitter)

- Plant and machine operatives (e.g. CNC machine operators/machinists/programmers).

Experience

Experience was required for the majority of vacancies advertised through DSP Jobs Ireland for positions as operatives with 44% requiring some experience (compared to 48% overall) and a further 39% requiring candidates to be fully experienced (Figure 11.2). Fifteen percent of vacancies stated no minimum level of experience was required; most of these vacancies were for general operative positions and team drivers/fundraisers.

Figure 11.2 Level of experience required for operatives and overall, 2014
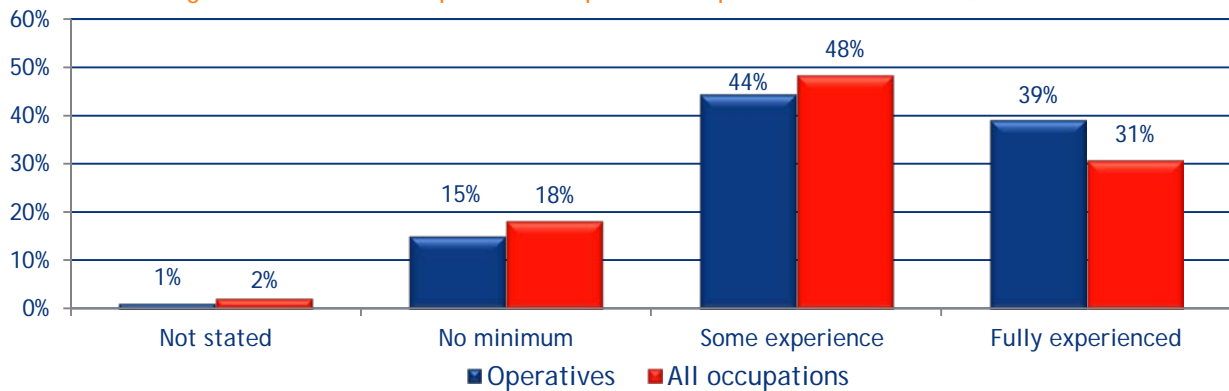
Source: DSP Jobs Ireland

Difficult to Fill Vacancies

Difficult to fill mentions for operatives in the Recruitment Agency Survey in October 2014 were limited to the following:

- Road transport drivers, (HGV drivers (E+, C1 licence))
- Forklift drivers
- CNC technicians/operators
- Process operatives in high tech manufacturing (pharmaceuticals and medical devices).
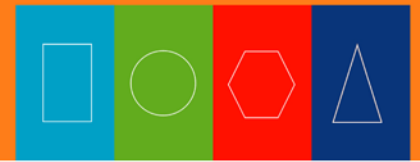
Vacancies filled with non-EEA workers (January-September 2014 only)

- Overall: at 8 permits issued, new employment permits for operatives accounted for **0.2%** of total permits issued in 2014.

Job announcements

There were few job creation announcements made in the media for operative occupations in 2014. Those made were primarily confined to roles as

- **Food process operatives**, mostly in the meat/dairy processing manufacturing industries
- **Chemical process operatives**
- **Packaging and warehouse operatives**, especially in the food manufacturing and high-tech industries
- **Bus and van or truck drivers**.

12. Elementary Occupations

- Vacancies for elementary occupations were almost entirely notified through DSP Jobs Ireland accounting for a fifth of their total notified vacancies

- The number of overall vacancies for elementary occupations decreased slightly (by 1%) between 2013 and 2014

- The Job Search analysis of the CSO's QNHS data indicates that in the first quarter of 2014, persons previously employed in elementary occupations were more likely to contact a public employment office (45%) than a private employment agency (30%) when searching for a job.

Figure 12.1 Elementary vacancies as a share of total vacancies, 2014

- IrishJobs.ie Elementary
- IrishJobs.ie Others
- DSP Jobs Ireland Elementary
- DSP Jobs Ireland Others
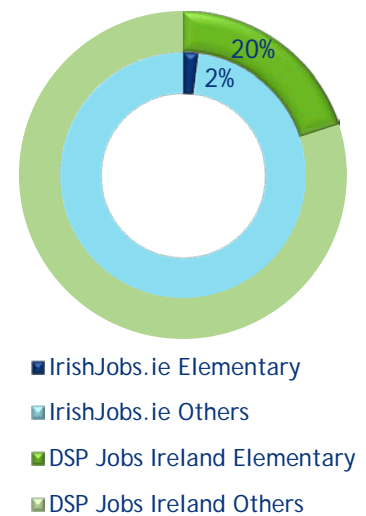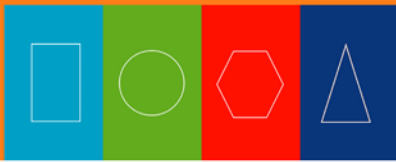
Source: DSP Jobs Ireland/IrishJobs.ie

Job Titles

Many of the elementary vacancies advertised through DSP Jobs Ireland were through recruitment agencies (in areas such as construction, security, cleaning and catering) so the level to which they represent real jobs is not discernible.

Vacancies for elementary occupations were most frequent for:

- Kitchen and catering assistants; almost half of these vacancies were for part time positions

- Cleaners (almost three quarters of these vacancies were for part time positions)

- Security guards (Loss Prevention Officers, store detectives, retail/door security)

- Elementary operatives (sign lighting and guarding operatives/flag persons (roadworks), ground workers/block layers in construction)

- Baristas, waiters/waitresses and bar staff

- Elementary storage (warehouse assistant, banksperson, retail stock scanning).

Skills

A Private Security Authority (PSA) licence was required for the majority of positions for security guards and store detectives. A valid Safe Pass card was required for some elementary positions. Driving licences were required for a number of positions for cleaners, security guards and to a lesser extent, operatives.

Experience

DSP Jobs Ireland had by far the highest share of vacancies for elementary positions in 2014. Of these vacancies, 17% required no minimum experience, while 53% required candidates with some experience (Figure 12.2). The high share of candidates required to be fully experienced (29%) relates primarily to vacancies for security guards, elementary process and construction occupations.

Figure 12.2 Level of experience required for elementary occupations and overall, 2014
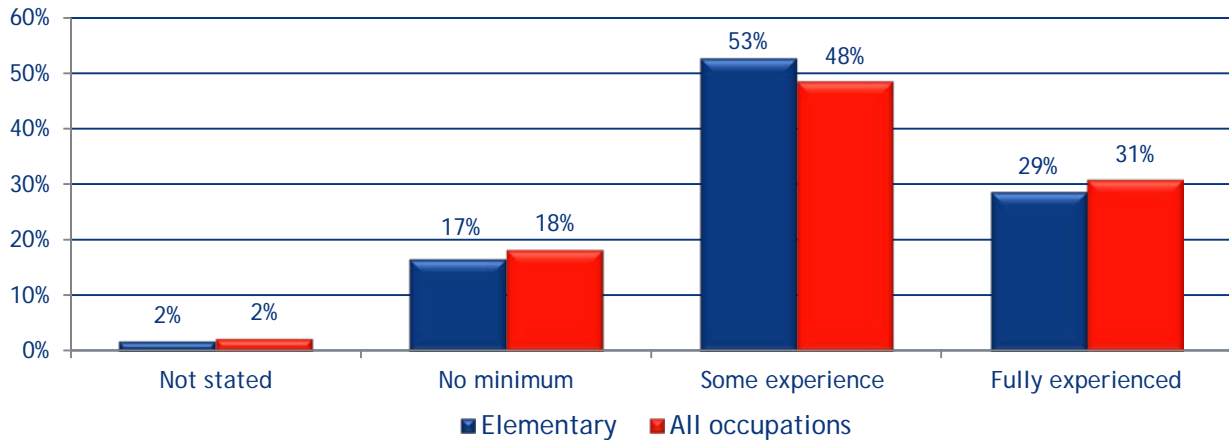
Source: DSP Jobs Ireland

Difficult to Fill Vacancies

Warehouse/logistical operators were the only elementary positions which appeared as difficult to fill in the October 2014 Recruitment Agency Survey.

Vacancies filled with non EEA workers (January-September 2014 only)

Overall: at 22 permits issued, new employment permits for elementary occupations accounted for **1%** of total permits issued in 2014.

Job Announcements

There were few job creation announcements made in the media for elementary occupations in 2014. Those made were confined to the hospitality sector (e.g. waiting and bar staff, catering assistants (e.g. fast food establishments, cafés) and accommodation staff).

13. Policy Implications

The following are the policy implications which have been derived from this report:
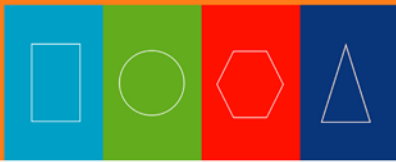
Education and training

▪ The findings from this report provide evidence-based information which can be used to inform the business planning process for those involved in the provision of education and training programmes at all levels in order to align programmes to the needs of the labour market (e.g. as stipulated in the Further Education and Training Strategy)

▪ The findings from this report provide evidence which can be used to inform the decision making in relation to the provision of education and training programmes at all levels in order to align programmes to the needs of the Irish labour market (e.g. as stipulated in the Further Education and Training Strategy[19] and introduced by SOLAS through the new ETB planning process)

▪ Language skills are a prerequisite for a significant number of vacancies, particularly for associate professionals and sales occupations, pointing to the importance of foreign languages, in particular German and French, as an integral part of the skills portfolio of candidates; these findings will be brought to the attention of the Department of Education and Skills in their development of the *Foreign Languages in Education Strategy for Ireland*

▪ The findings from this report continue to show that incorporating work experience of a significant duration into the education and training process should assist in improving employment prospects for new graduates from further/higher education and first time entrants to the labour market; the importance of this measure is highlighted in the Further Education and Training Strategy which would hope to provide a renewed impetus to ensure a wider availability of work experience in further/higher education programmes

Labour market interventions

▪ Both the vacancy data and the labour market transitions analysis point to a high level of turnover occurring in the lower skilled jobs such as carers, cleaners and some sales roles; issues such as pay, working hours[20], rural locations, seasonality of employment and working conditions have been identified as contributing to this high level of turnover

▪ The analysis of the vacancy data highlights areas where employment opportunities exist, which can be utilised for career guidance purposes to assist in education and training choices of students and the unemployed

▪ Labour market activation measures should continue to focus on areas which are proving to be difficult to fill or where there are signs of expansion demand

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[19] Further Education and Training Strategy, 2014-2019, SOLAS, 2014

[20] The Department of Job, Enterprise and Innovation (DJEI), through the Action Plan for Jobs 2015 (Action 31) are undertaking a study in 2015 on the prevalence of zero and low hour contracts among Irish employers and their impact on employees

Immigration

▪ A shortage of high level skills persisted in the Irish labour market, particularly in IT, with employment permits required to meet the demand for these skills not currently met from within the EEA. The ICT Skills Action Plan 2014[21] introduced measures for up to 2,000 permits to be issued per annum for ICT occupations in demand and for a reduction in the complexity of the application process. 2014 saw a 25% increase in employment permits issued for ICT occupations over the previous year. In 2015, it is expected that a 'Trusted Partner' scheme will be introduced, streamlining the application process for frequent users of the system and contributing to the attractiveness of Ireland as a destination where skilled professionals can develop their careers.

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[21] ICT Skills Action Plan 2014-2018; Department of Education and Skills/Department of Jobs, Enterprise and Innovation, March 2014

14. An Exercise in Data Mining

This detailed examination was carried out to evaluate the feasibility of data mining techniques in vacancy and skills analysis. It focused on job titles and descriptions and aimed to extract meaningful information from the textual data that could complement the traditional occupational perspective. It is acknowledged that information technology is a fast growing sector supporting the development of all sectors; therefore, it was of particular interest for more detailed analysis. Consequently, a sample of 4,846 IT vacancies advertised through IrishJobs.ie in 2014 was used for closer investigation.

In the data mining approach, job titles were transformed into key words to identify the most common occupations within the given collection (Table 14.1). The initial analysis, based on word occurrences, revealed a high degree of heterogeneity in IT vacancies. Several job titles can be clearly identified such as *Developer*, *Engineer*, *Lead/Manager*, *Support*, *Analyst*, *Administrator*, *Specialist*, *Tester*, *Consultant* and *Designer*.

Table 14.1 Term occurrences analysis for job titles

Key words	Total occurrences
Developer	1,026
Engineer	1,022
Senior	823
Manager	685
Support	660
Software	599
Analyst	494
Technical	356
Project	299
Systems	270
Lead	259
Java	244
Administrator	222
Business	198
Application	195
Web	183
Architect	167
Test	164
Specialist	163
Consultant	159
Dublin	159
Oracle	153
Development	137
Operations	129
Net	128
Contract	126
Service	112
Team	111
Mobile	105
and	105
NET	101
Designer	98

Source: IrishJobs.ie

Furthermore, a similar analysis of job descriptions highlighted the terms that were frequently referenced in the job advertisements (Table 14.2). Practical knowledge (*experience*, *ability*), communication skills (*team*, *customer*) and business awareness (*development*, *business*) are characteristics highly valued by prospective employers.

Table 14.2 Term occurrences analysis for job descriptions

Key words	Total occurrences
experience	19,439
team	11,828
development	11,103
business	10,692
work	10,619
support	9,700
management	9,522
skills	9,497
technical	7,740
project	7,535
ability	7,296
knowledge	7,206
software	1,001
working	6,798
strong	6,375
services	6,253
design	5,816
systems	5,686
role	5,628
solutions	5,510
customer	5,437
technology	5,271
environment	5,214
data	4,882
application	4,875
years	4,684
service	4,553
applications	4,178
company	4,157
excellent	4,157
test	4,034
projects	3,962

Source: IrishJobs.ie

In order to get a better overview of skills and requirements, each job title (see Table 14.1) was analysed independently. An algorithmic model was constructed to split the data into uniform clusters, which revealed occupational variation in the given collection. In 2014, IT vacancies were

most frequent for *developers* as well as *lead*ers, *engineers* and *support* staff. *Designer* positions, in this case targeting graphic and multimedia professionals, were the smallest group registered for that period (Figure 14.1).

Figure 14.1 Occupational groups within the analysed IT vacancies, 2014
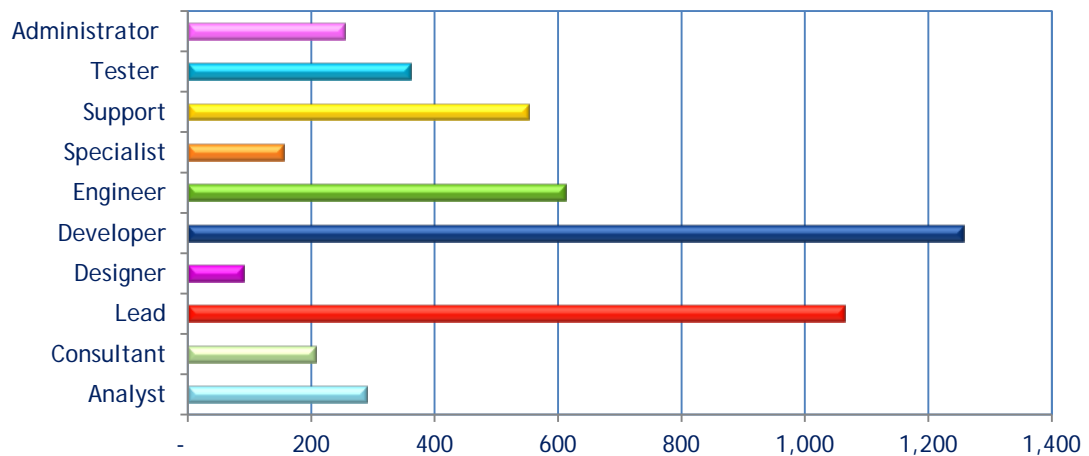
Source: IrishJobs.ie

With the use of several well established data mining algorithms and similarity measures, some characteristics of the occupational groups were observed. For example, based on the content of job descriptions, *developer* and *tester* were the most uniformly and clearly defined occupations. Vacancies belonging to these groups were described by specific sets of required skills and technical competences. On the other hand, *specialist* was the most diversified job title, showing much diversity among job descriptions and revealing strong similarities between its vacancies and those belonging to other occupational clusters. The use of less ambiguous job titles by employers would most likely lead to easier retrieval of vacancies by job seekers on web based repositories such as IrishJobs.ie

Data mining techniques allowed for a measurement of similarities between job descriptions in great detail. Within the collection of analysed IT vacancies, the two most similar positions were *NET Application Support* and *Application Support Engineer with SQL*. As illustrated in Figure 14.2, terms appearing in their job descriptions are very similar, almost identical.

Figure 14.2 Job descriptions for the two most similar vacancies in the analysis

Key competencies for single vacancies or clusters of vacancies can be derived from graphical representation of the textual data. For example, job descriptions visualised in the form of word clouds can be very useful in assessing skillsets required for occupations. Naturally, this perspective does not adhere to any formal occupational framework; rather, it reflects the collective viewpoint on what constitutes a particular occupation within the given collection based on the relationship between job titles and job descriptions. As an illustration, in 2014, vacancy advertisements directed towards *Developer*s called for strong technical acumen, particularly Java and SQL programming proficiency (Figure 14.3). However, the predominant requirements for *Lead*ers were related to organisational and project management skills (Figure 14.4).

Figure 14.3 Visualisation of job descriptions for Developer
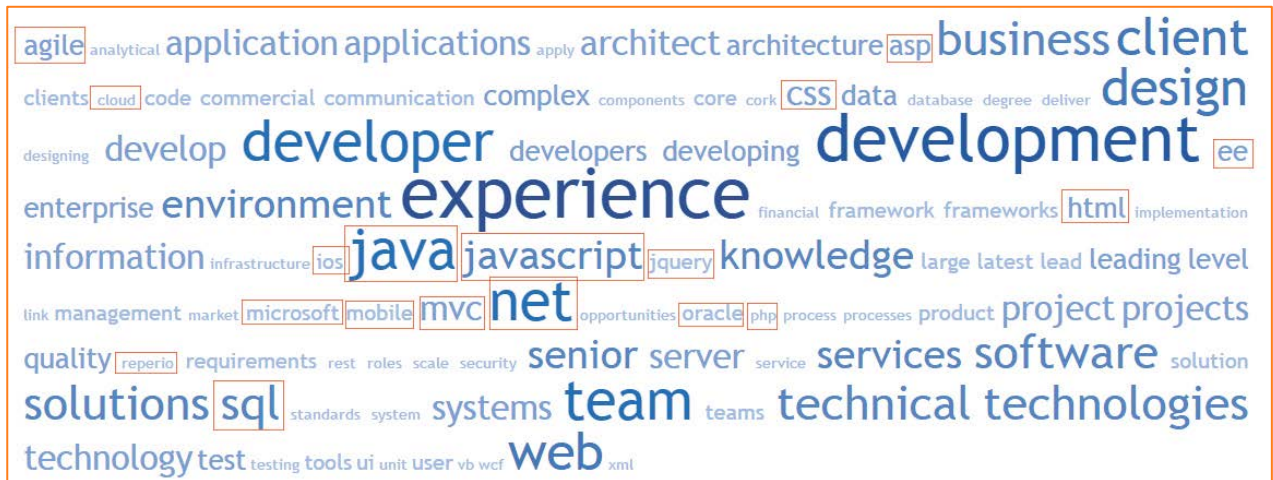
Figure 14.4 Visualisation of job descriptions for Leader

This analysis concurs with previous research by the Expert Group on Future Skills Needs in this area which highlights the demand for soft skills such as business awareness and customer focus in combination with technical skills for IT-related occupations.

Appendix A. Job Search Analysis

The job search analysis from the CSO's QNHS provides an indication of the methods used by unemployed persons when searching for a job and the characteristics of those persons. This analysis focuses on those who reported having made contact with either a public or a private employment agency when seeking work.

Occupations

In terms of occupations, at 74%, those previously employed as professionals were most likely to utilise the services of a combination of public and private employment agencies when searching for a job (Figure A1), with operatives the least likely at 48%. Those previously employed as professionals were also most likely to contact only a private employment agency whereas those previously employed in caring and sales occupations were more likely to contact only a public employment office.

Figure A1 Job search by broad occupation of previous employment, q1 2014
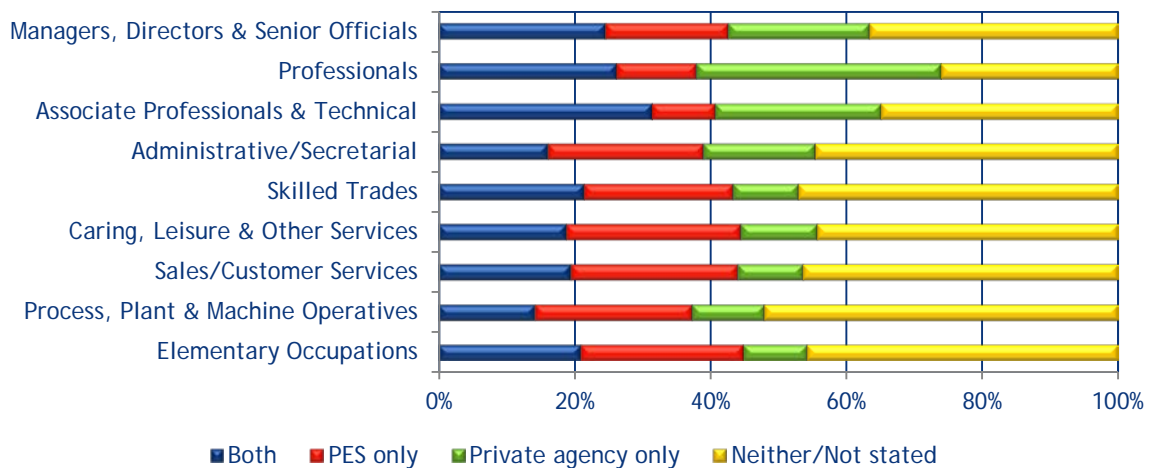
Source: SLMRU Analysis of CSO QNHS data

Sectors

Those previously employed in the transport and storage sector were the most likely to contact only public employment offices when in search of work whereas previous employees of financial and professional activities had the highest share of persons who only contacted a private employment agency (Figure A2). At 74%, those previously employed in the IT sector had the highest share using either source when searching for a job whereas a half of those previously employed in agriculture and construction utilised other methods in their job search in the first quarter of 2014.
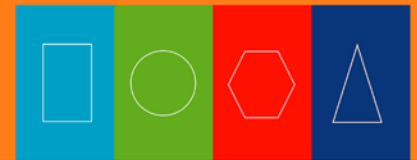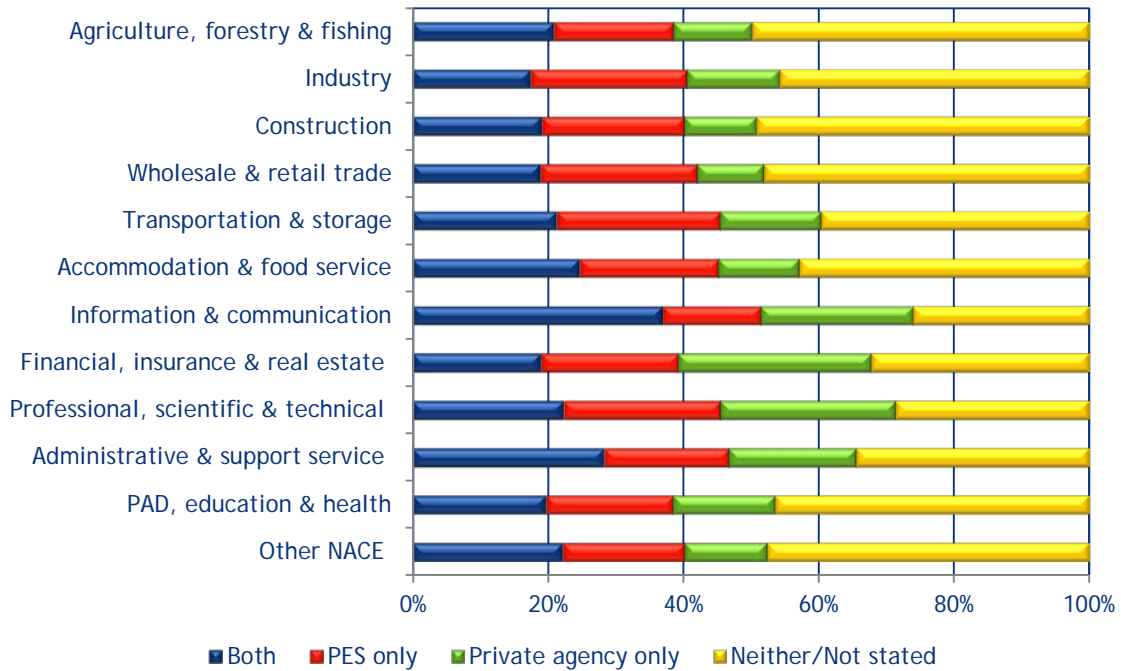
Figure A2 Job search by broad sector of previous employment, Q1 2014

**Legend:** ■ Both ■ PES only ■ Private agency only ■ Neither/Not stated

Source: SLMRU Analysis of CSO QNHS data

Duration unemployed

The likelihood of contacting either a public or private employment agency was at its highest for those unemployed for less than six months and between 18 and 47 months unemployed (Figure A3). Unemployed persons were most likely to contact a private agency only when unemployed for less than six months whereas there were higher numbers contacting a public employment agency when unemployed for eighteen months or longer.

Figure A3 Job search by duration of unemployment, q1 2014

Legend: ■ Both ■ PES only ■ Private agency only ■ Neither/Not stated
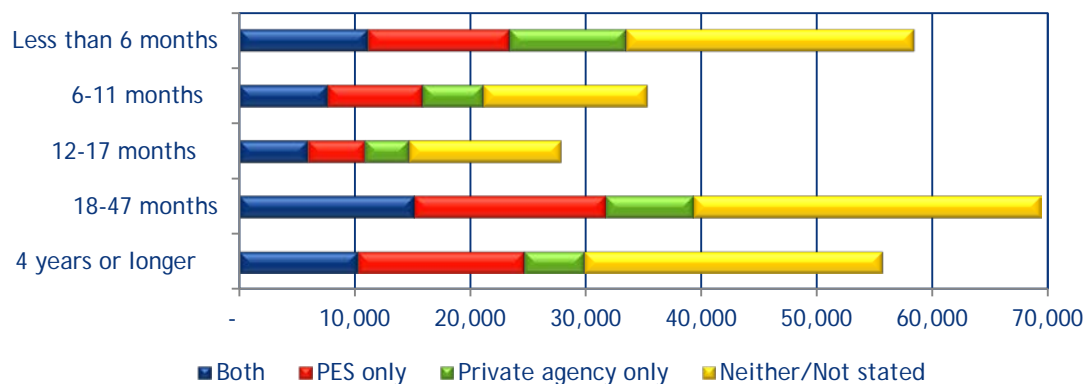
Source: SLMRU Analysis of CSO QNHS data

Age

In the first quarter of 2014, unemployed persons aged 15-24 years were more likely to contact a public employment office than their older counterparts and less likely to utilise the services of private employment agencies (Figure A4). Those aged 45 and above were the least likely to contact either a public or private employment agency with a 50% share contacting neither.
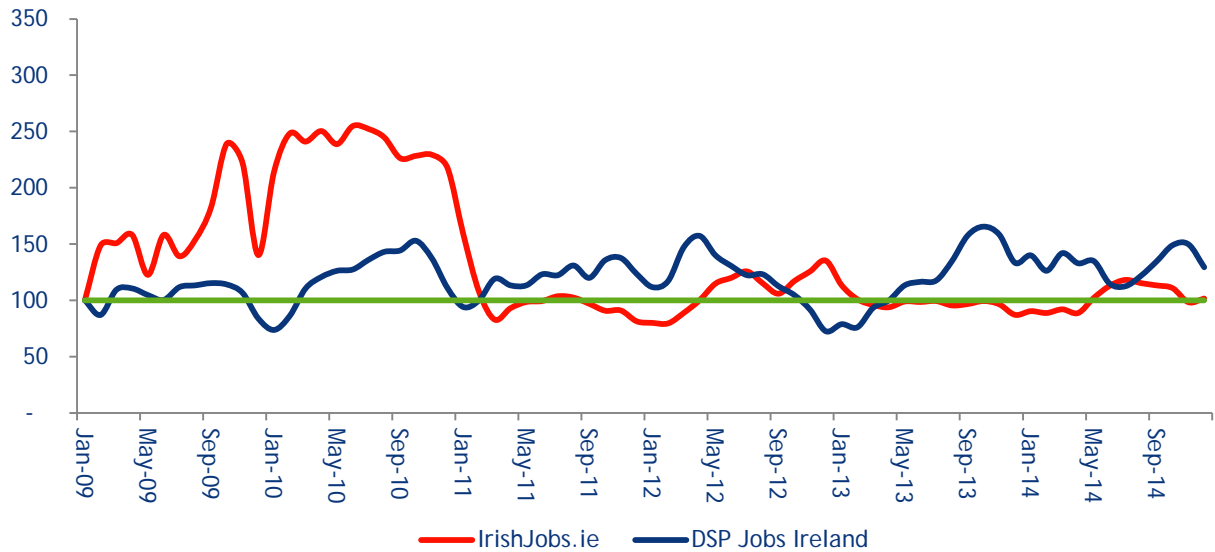
Figure A4 Job search by age, q1 2014
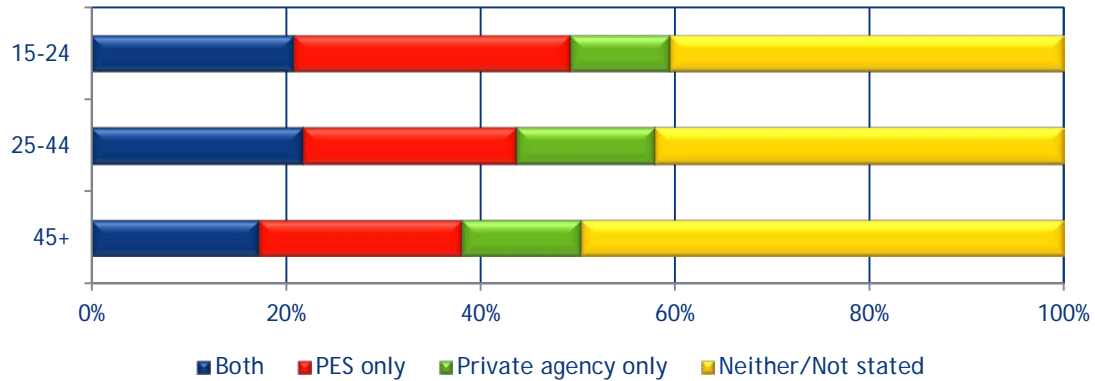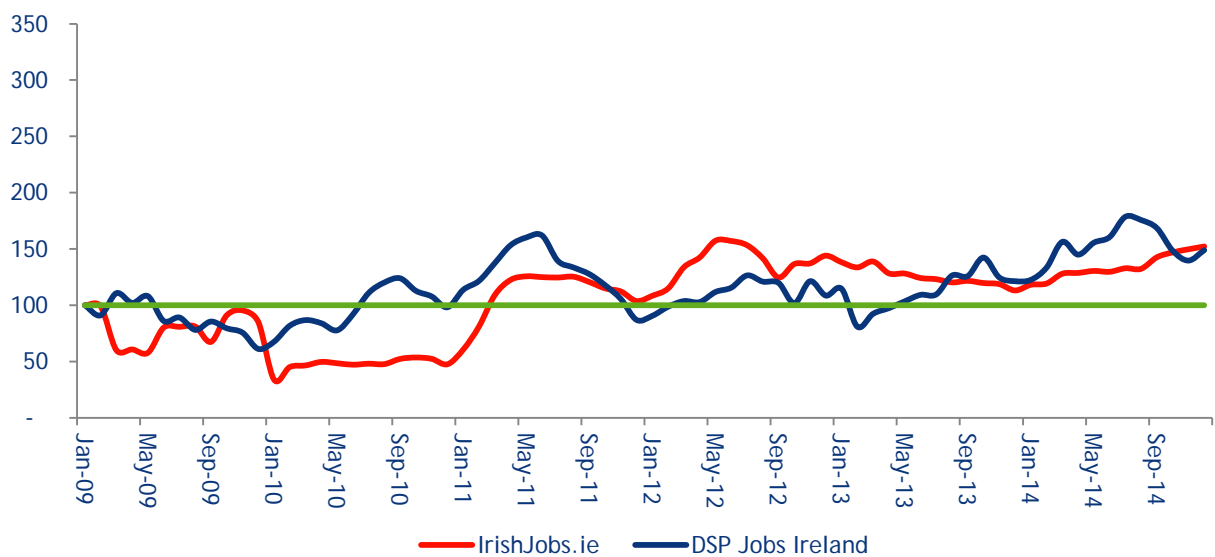

Source: SLMRU Analysis of CSO QNHS data

Appendix B. Vacancy Trends by Occupation

Figure B1 New notified job vacancies index for managers, (Base: January 2009=100), 2009-2014

Source: IrishJobs.ie and DSP Jobs Ireland (3 Month moving average)

Figure B2 New notified job vacancies index for professionals, (Base: January 2009=100), 2009-2014

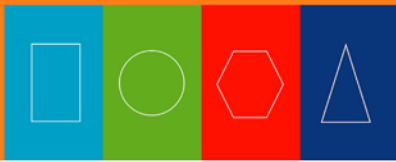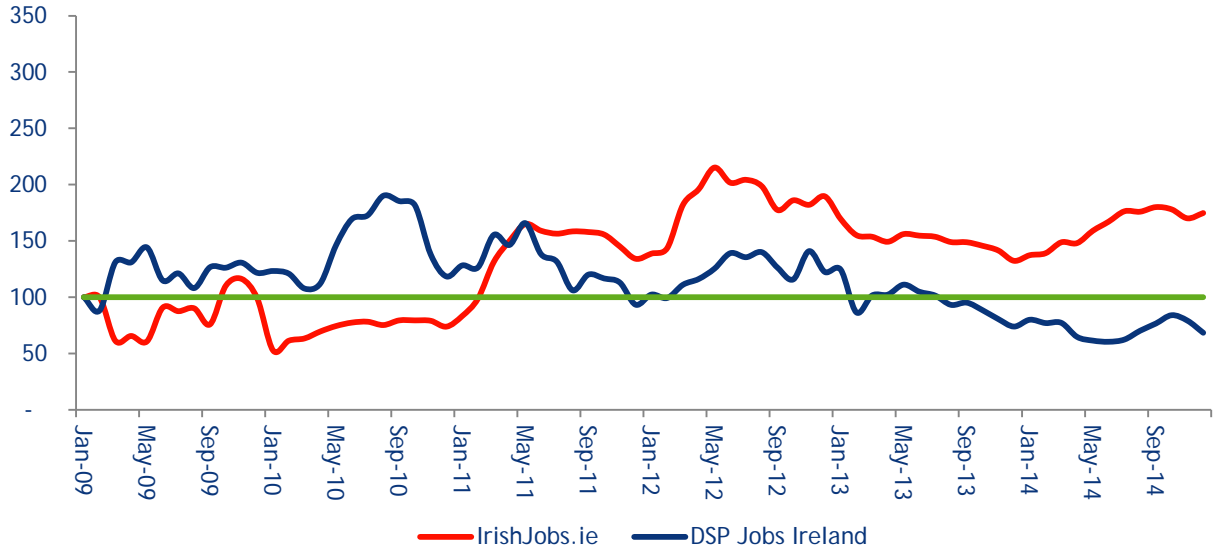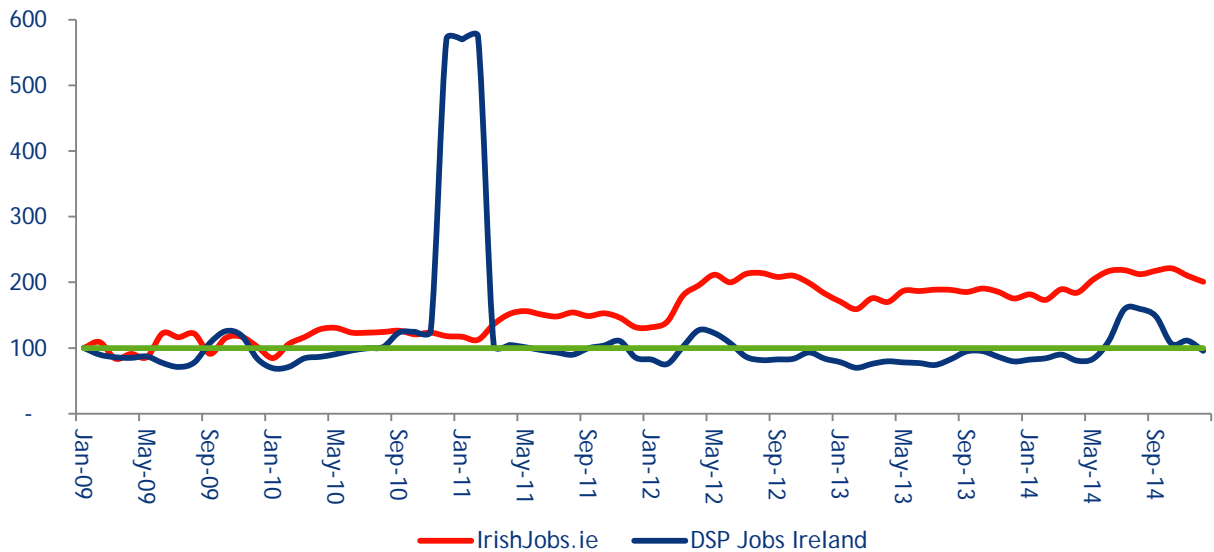Source: IrishJobs.ie and DSP Jobs Ireland (3 Month moving average)

Figure B3 New notified job vacancies index for associate professionals, (Base: January 2009=100), 2009-2014

Note: The decline in DSP Jobs Ireland notifications in this occupational group in 2014 primarily relates to a change in the classification of mystery shoppers from associate professionals to the administrative occupational group.

Source: IrishJobs.ie and DSP Jobs Ireland (3 Month moving average)

Figure B4 New notified job vacancies index for administrative occupations, (Base: January 2009=100), 2009-2014
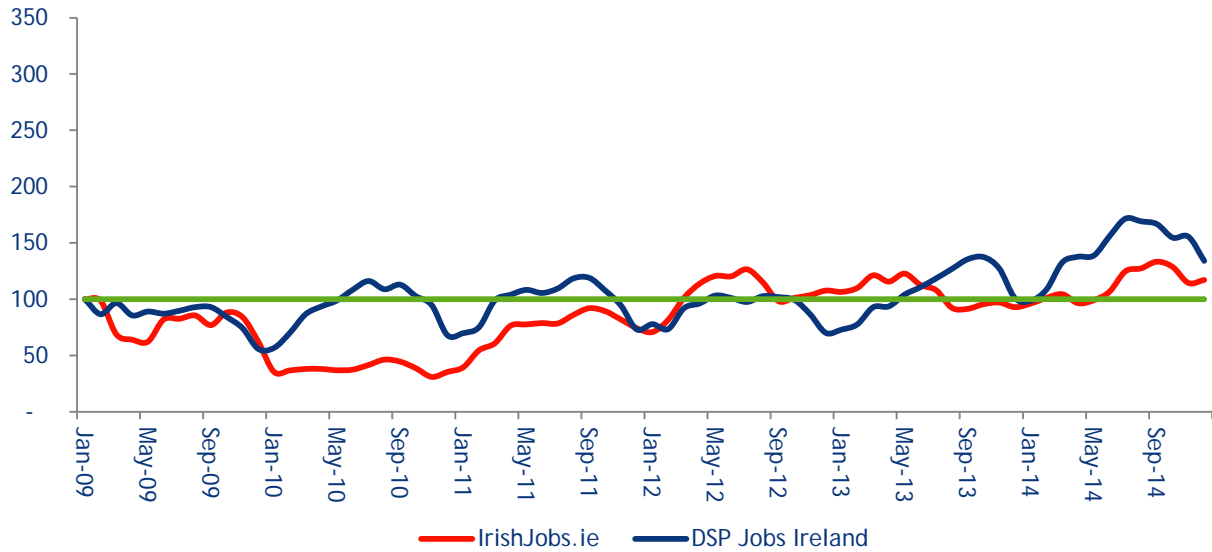

Note: The spike that occurred in December 2010 refers to the recruitment of Census enumerators

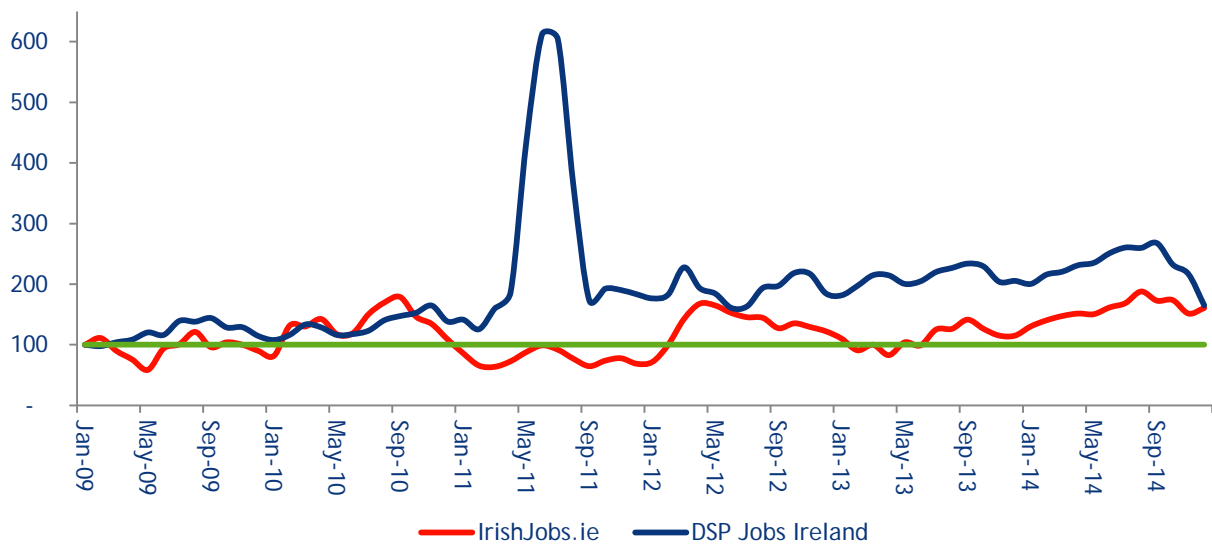Source: IrishJobs.ie and DSP Jobs Ireland (3 Month moving average)

Figure B5 New notified job vacancies index for skilled tradespersons, (Base: January 2009=100), 2009-2014

Source: IrishJobs.ie and DSP Jobs Ireland (3 Month moving average)

Figure B6 New notified job vacancies index for personal services occupations, (Base: January 2009=100), 2009-2014
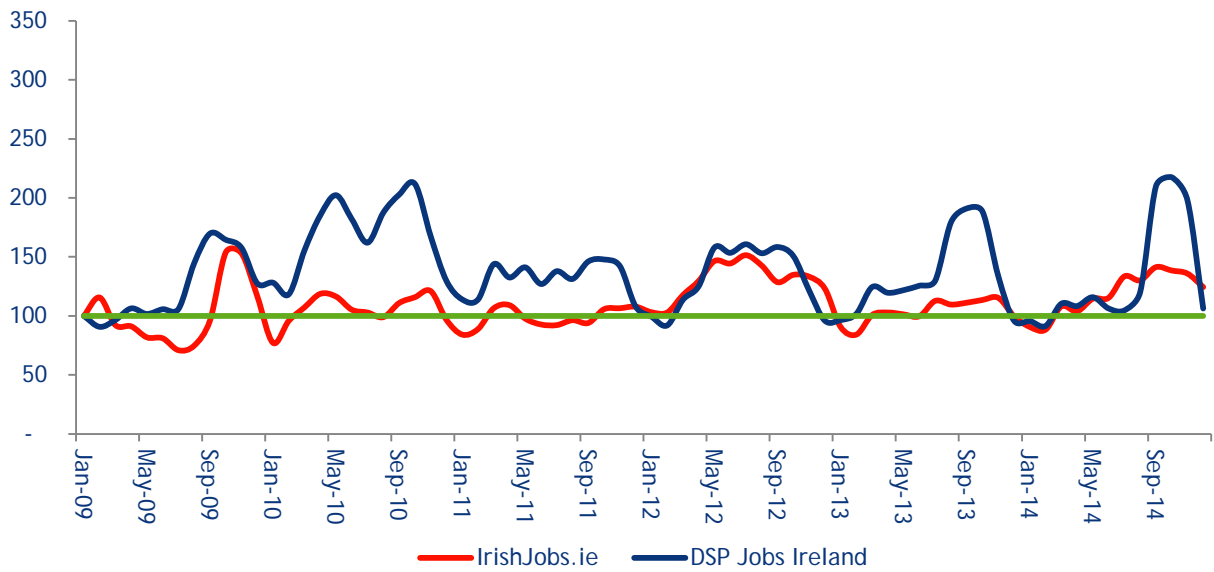

Note: The spike that occurred in Spring/Summer 2011 is related to vacancies advertised for carers following the move by the HSE to outsource some of their caring activities

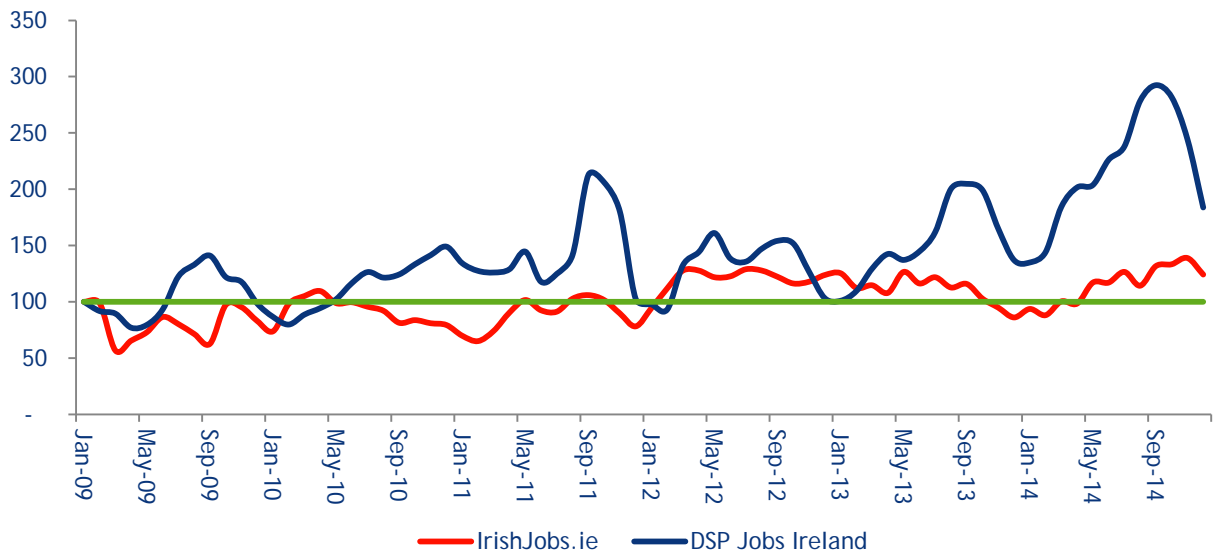Source: IrishJobs.ie and DSP Jobs Ireland (3 Month moving average)

Figure B7 New notified job vacancies index for salespersons, (Base: January 2009=100), 2009-2014

Source: IrishJobs.ie and DSP Jobs Ireland (3 Month moving average)

Figure B8 New notified job vacancies index for operatives, (Base: January 2009=100), 2009-2014

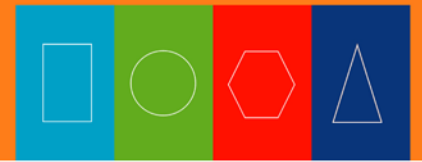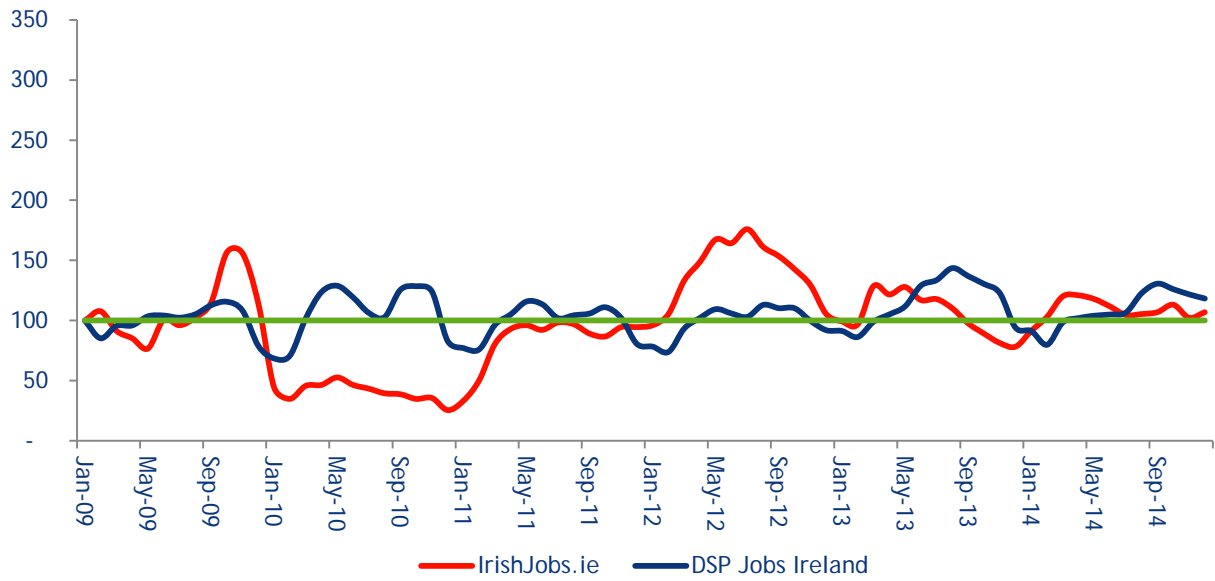Source: IrishJobs.ie and DSP Jobs Ireland (3 Month moving average)

Figure B9 New notified job vacancies index for elementary occupations, (Base: January 2009=100), 2009-2014

Source: IrishJobs.ie and DSP Jobs Ireland (3 Month moving average)

Appendix C. Members of the Expert Group on Future Skills Needs

Name	Organisation
Una Halligan	Chairperson
Marie Bourke	Head of Secretariat and Department Manager, Department of Jobs, Enterprise and Innovation
Inez Bailey	Director, National Adult Literacy Agency
Peter Baldwin	Assistant Secretary, Department of Education and Skills
Ray Bowe	IDA Ireland
John Burke	Department of Public Expenditure and Reform
Liz Carroll	Training and Development Manager, ISME
Ned Costello	Chief Executive, Irish Universities Association
Margaret Cox	Managing Director, I.C.E. Group
Bill Doherty	Executive Vice President, EMEA, Cook Medical
Tony Donohoe	Head of Education, Social and Innovation Policy, IBEC
Bryan Fields	Director, Curriculum Development / Programme Innovation, SOLAS
Joe Hogan	Founder, Chief Technology Officer & VP Openet Labs & IP Management
Deirdre McDonnell	Principal Officer, Department of Education and Skills
Jerry Moloney	Director of Skills, Enterprise Ireland
Frank Mulvihill	Former President of the Institute of Guidance Counsellors
Brendan Murphy	President, Cork Institute of Technology
Dermot Nolan	Principal Officer, Department of Public Expenditure and Reform
Alan Nuzum	CEO, Skillnets
Peter Rigney	Industrial Officer, ICTU
Declan Hughes	Assistant Secretary, Department of Jobs, Enterprise and Innovation
Mary-Liz Trant	Higher Education Authority

Appendix D. Recent Publications by the Expert Group on Future Skills Needs 2012 - 2015

Report	Date of Publication
Addressing the Demand for Skills in the Freight Transport, Distribution and Logistics Sector in Ireland 2015 – 2020	February 2015
Guidance for Higher Education Providers on Current and Future Skills Needs of Enterprise: Springboard 2015	January 2015
Regional Labour Markets Bulletin 2014	September 2014
Monitoring Ireland's Skills Supply: Trends in Education and Training Outputs 2014	August 2014
National Skills Bulletin 2014	July 2014
Vacancy Overview 2013	May 2014
Assessing the Demand for Big Data and Analytics Skills, 2013 - 2020	May 2014
The Expert Group on Future Skills Needs Statement of Activity 2013	March 2014
Regional Labour Markets Bulletin 2013	March 2014
Guidance for Higher Education Providers on Current and Future Skills Needs of Enterprise: Springboard 2014	February 2014
Addressing Future Demand for High-Level ICT Skills	November 2013
Monitoring Ireland's Skills Supply: Trends in Education and Training Outputs 2013	July 2013
National Skills Bulletin 2013	July 2013
Future Skills Requirements of the Manufacturing Sector to 2020	April 2013
The Expert Group on Future Skills Needs Statement of Activity 2012	April 2013
Guidance for Higher Education Providers on Current and Future Skills Needs of Enterprise: Springboard 2013	February 2013
Vacancy Overview 2012	February 2013
Regional Labour Markets Bulletin 2012	January 2013
Monitoring Ireland's Skills Supply: Trends in Education and Training Outputs 2012	July 2012
National Skills Bulletin 2012	July 2012
Key Skills for Enterprise to Trade Internationally	June 2012
EGFSN Statement of Activity 2011	April 2012
Vacancy Overview 2011	February 2012
Guidance for Higher Education Providers on Current and Future Skills Needs of Enterprise (Forfás report based on EGFSN identified future skills needs)	February 2012
Addressing High-Level ICT Skills Recruitment Needs: Research Findings	January 2012
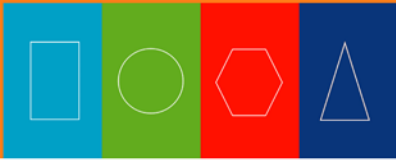
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