European Commission

European Vacancy and Recruitment Report 2012

Social Europe

European Commission
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EUROPEAN VACANCY AND RECRUITMENT REPORT 2012

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Abbreviations

ALMP	Active Labour Market Policy
EC	European Commission
EEO	European Employment Observatory
EMP	Employment
EJMB	European Job Mobility Bulletin
EVM	European Vacancy Monitor
EVRR	European Vacancy and Recruitment Report
EU	European Union
EWCO	European Working Conditions Survey
ISCO	International Standard Classification of Occupations
ISCED	International Standard Classification of Education
GDP	Gross domestic product
ILO	International Labour Organisation
ICT	Information and communication technologies
HR	Human resources
JVS	Job Vacancy Statistics (source - EUROSTAT)
LFS	Labour Force Survey (source - EUROSTAT)
NACE	Classification of Economic Activities in the European Community
NSO	National Statistical Organisation/Office
OECD	Organisation of Economic Co-operation and Development
ORS	Online recruitment services
PES	Public Employment Services
PRES	Private Employment Services
STW	Short-time working
TAW	Temporary Agency Work(er)
TWA	Temporary Work Agency
Q1, Q2	First quarter of the year, second quarter etc.
UNEMP	Unemployment

Executive Summary

Policy context and objectives

As part of its Europe 2020 flagship initiative 'An Agenda for New Skills and Jobs', in 2010 the European Commission (EC) launched the 'Monitoring Labour Market Developments in Europe' project. The objective of this project is to increase labour market transparency for all stakeholders who need information about recent developments on the demand side of the labour market, such as decision-makers in the fields of education and employment, public and private employment services including EURES advisers, education and training providers, career guidance services, and policy and labour market analysts.

The European Vacancy and Recruitment Report (EVRR) is a key component of the European Commission's endeavour to develop a systematic labour market monitoring system focusing on changes in the demand for skills, including contractual arrangements, sector demand, occupation demand, growing occupations, difficult to fill vacancies (bottleneck occupations) and skills requirements. Monitoring the activities of different recruitment agencies is important because they are at the interface of labour demand and supply - matching vacancies with suitable jobseekers in particular segments of the labour market.

This first edition of the report makes a significant contribution to our understanding of how the European labour market functions. Other elements within this project include two quarterly bulletins, the European Vacancy Monitor[1] and the European Job Mobility Bulletin[1]. Together with other relevant studies, labour market data and analyses these will form part of the European Commission's "Skills Panorama" to be launched in December 2012.

It is noteworthy that the results from the analysis of labour (recruitment) demand are not necessarily identical with those from the analysis of employment. The changing demand for labour may impact on employment trends in a variety of ways. An increase in vacancies will be reflected in an increase in employment where new job creation outstrips job losses (i.e. expansion demand). However, many job openings arise because of the need to replace workers who have left the labour force because of retirement, emigration or for other reasons. At the same time, the single biggest generator of vacancies is workers changing their jobs, either voluntarily or because their employment contract has come to an end.

Scope of the study and limitations

The report brings together information from a range of European and national sources using Eurostat data (Job Vacancy Statistics and Labour Force Survey), data from Public Employment Services, temporary work agencies and online services. While there are many benefits to be derived from enhancing the level of transparency in the European labour market, the project had to cope with a number of challenges: above all, the limited availability of comparable vacancy data for the whole of Europe and a change in the main classification used for a breakdown by occupation the International Standard Classification of Occupations (ISCO) in 2011 causing a disruption for time series. Overall, it is to be considered a work in progress, building up more comprehensive information and a longer-term perspective over time.

While the Eurostat Job Vacancy Statistics (JVS) is the only European source to provide vacancy information (including breakdown by economic sector) for most of the European countries, the European Labour Force Survey (LFS) is indeed a unique source providing timely, comprehensive and comparable data for all EU27 countries including by sector, occupation and education. For this reason, this source is utilised extensively in the report, often in highly original and innovative ways. For example, the 'job-finder' data is used as an approximation for 'filled vacancies' and the ratio of 'job-finders to unemployed' is used to identify indications for potential bottleneck occupations. While being an indirect measure for labour demand, job-finder data has a further advantage: they include virtually all vacancies even so-called 'hidden' vacancies, filled informally without any notification of the vacancy to the public.

Building upon the analyses from the quarterly bulletin 'European Vacancy Monitor', this report is the first European report to present trend information for different types of recruitment agencies. The fact that most of these sources for a variety of reasons, only provide partial coverage of the EU and are not fully comparable, does not preclude their usefulness as important contributors to the analyses – quite the contrary. The vacancy and recruitment data from the Public Employment Services, temporary work agencies and online recruitment services add valuable information to the general picture developed on the basis of European sources. They help to specify the trend and the profile of labour demand for important institutions, covering different segments of the labour market. Finally, quantitative and qualitative findings from a number of national studies and other research are used to augment the empirical evidence and also to enrich the interpretation of the data particularly in respect of the identification of 'bottleneck' occupations' and employment opportunities.

1 http://ec.europa.eu/social/main.jsp?catId=955&langId=en

This first edition of the European Vacancy and Recruitment Report presents short-term trends in labour demand, spanning the time period from 2007 or 2008 to 2011. The trend data is presented in the form of indices because it provides a good illustration of the scale of change over time including volatility due to seasonal factors.

Key Findings

Development of vacancies and recruitment patterns

- While the number of vacancies and job-finders has recovered from its low 2009 levels, **labour demand in the third quarter of 2011 is still below the pre-crisis levels** of 2007 and 2008. This pattern is evident from all sources and recruitment channels analysed in this report (JVS, PES, temporary work agencies and online recruitment services)

  Labour market dynamics slowed down during the crisis, this was evident in the stock of vacancies which declined by 40% in 2009 compared to the first quarter of 2008. Also PES job vacancy inflows and the number of job-finders both registered a decline of between 10 and 30% in 2009. This decline may reflect a **cautious recruitment approach** being taken by employers to recruitment.

- Nevertheless, **labour markets continue to be dynamic**: there were about 12 million hirings in Europe during the third quarter of 2011 compared to 13.5 million in the corresponding period in 2007 and 12.8 million in the same quarter in 2008. Considerable movement on the labour market was observed, especially in Sweden, Denmark, but also in Spain where there were high numbers of job-finders compared to employment, while jobseekers in Greece, Slovakia and Romania fared less well.

- At the same time the analysis of contractual arrangements signalled an increase of labour turnover, as the **share of temporary job-finders rose** (from 56 to 60 per cent comparing the first quarters of 2007 and 2011). Also the **share of part-time job-finders went up** (from 27 to 32 per cent). This may aggravate the segmentation of the labour market and should be monitored in the future.

- In general, there **is no clear relationship between changes in total employment and changes in temporary employment, neither between temporary and part-time work**. When comparing a general increase in employment and an increase in temporary job-finders between countries, no obvious correlation was found. In the same vein, no obvious relationship was found between the share of temporary and part-time recruitment. It is more likely that the **use of temporary contracts depends on legislation**, with more temporary contracts in countries with strong overall employment protection (Spain - 90 per cent) and fewer temporary contracts in countries with less overall employment protection (the UK, Denmark - around 30 per cent). The use of part-time contracts may reflect differences in welfare levels and the affordability of part-time work, but also cultural history, as the contrast between Bulgaria and Romania (where there is virtually no registered part-time recruitment) and the Netherlands (70 per cent part-time recruitment) suggest.

- **The development of recruitment differs between countries**: Whereas Germany was relatively unaffected during the crisis, Romania continued to suffer from the impact in 2011. The number of temporary job-finders increased strongly in Estonia and Latvia while remaining flat in Bulgaria and Spain. The number of part-time job-finders increased strongly in Slovakia and Sweden, while the demand for part-time work slightly weakened in Ireland and UK starting from a relatively high level.

- **Private sector recruitment responded faster and stronger to the business cycle** than the comparatively small public sector, confirming the stronger cyclicality of labour demand in the private sector. While opportunities to find a job in the broad public sector at the beginning of the period of review were less adversely affected than in the private sector, there is evidence of a convergence in the trends later on. This may reflect the impact of austerity measures in many countries.

Structure and development of sectoral, occupational and skills demand

The main findings on the structure and development of **sectoral demand** are:

- Reflecting employment structure, numerically the most important economic sectors for recruitment – measured in the numbers of job vacancies and job-finders – are **business services in the EU15** (those countries in the EU prior to 1 May 2004) **and manufacturing in the new Member States**. Recruitment in **trade and health was least affected** by the crisis. In fact the increasing number of vacancies against fairly stable numbers of job-finders in the health and social work sector could be interpreted as a first indicator of recruitment difficulties.

- **Construction, manufacturing and industry were most affected** by the crisis. For manufacturing this is a continuation of a longer-term decline since 2000, but for construction this shows a sharp break with the pre-crisis trend of increasing sectoral employment. The fact that manufacturing is the largest employer in the new Member States implies that job opportunities and recruitment in the new Member States were generally hit harder by the crisis than the EU15. It is noteworthy, that in addition to these sectors, data for recent recruits (job-finders) also show roughly 15% per cent less job-finders in the third quarter of 2011 compared to the same quarter of 2008 for ICT and finance.

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The main findings on structure and development of **occupational demand** are:

- **'Top demanded' occupations** (according to the number of job-finders, i.e. filled vacancies in the third quarter of 2011) include **various low to intermediate skilled services workers**, such as *'shop salespersons'*, *'waiters and bartenders'* and *'personal care workers'*. The keen demand for shop salespersons is partially explained by the dominance of large retail companies at the expense of micro-businesses, with a subsequent increase in part-time and fixed-term jobs. Other top demanded occupations vary widely, but they are generally for **elementary occupations** and for **service and sales workers**.

- The high share of job-finders in these occupations suggests a **greater degree of labour turnover** in these sorts of jobs. This assumption was confirmed by a comparison of shares of these occupations in employment and in job-finder data – the difference was quite striking, with a greatest difference above all recorded for elementary occupations (an average of 18 per cent in job-finders compared to 11 per cent in employment, in 2010).

- The occupations associated with the most notified vacancies to the PES (according to **the PES** job vacancy inflow for the third quarter of 2011) presented an ambiguous picture: PES rather **reflects the structure of job openings on the labour market as a whole**. Most job openings are for services and sales workers and for a number of elementary occupations. However, the modest recovery in the area of skilled manual work is reflected in an **increase in the inflow of vacancies to the PES for** a number of occupations for **crafts workers and operators**. Most notably, "top" vacancy inflow also includes **a few high skilled occupations** such as *'finance and sales associate professionals'*, *'physical and engineering science technicians'*, *'architects, engineers and related professionals'* and *'administrative associate professionals'*. As employers have been experiencing recruitment difficulties they may be more inclined to seek the assistance of PES to fill these vacancies.

- **The top-growth occupations within each of the major occupational groups**, that is those with the largest increase in the number of job-finders between 2007 and 2010, generally reflect sectoral developments. Top-growth occupations include three in the health and social work sector; ***'health professionals'*** such as *'biologists, pharmacologists and pathologists'*, in particular in Germany and France, *'psychologists'* in various countries as well as one in the category of skilled-non-manual occupations: ***'personal care and related workers'***. They also include three in the education sector, for example in the category *'various teaching associate professionals'*; (e.g. in particular in France). Since the total number of hirings declined in the education sector, this suggests increasing recruitment of teaching staff in specific fields although the data do not allow to identify exactly in which fields. Demand also increased for the group of ***'business professionals'*** such as *'financial analysts and marketing professionals'*, and, at the other end of the scale, for some elementary occupations, such as *'sweepers and related labourers'*.

- Although a number of **skilled manual occupations** showed **growing demand for labour**, in particular ***'food and related products machine operators'***, these were very much the exception. The skilled manual occupations, in general, were most **strongly advers ely affected by the crisis** reflecting the decline in the manufacturing and construction sectors.

- **Further monitoring is needed** to assess to what extent a contraction in the demand for an occupation reflects a temporary setback or a more structural change. For example, 'clerks' were almost universally in less demand between 2007 and 2010. Further diffusion of advanced information technologies in the economy and the austerity measures introduced by many EU governments in recent years suggest that this trend may reflect structural changes and consequently may continue into the future.

The main findings on **skills requirements** as indicated by **educational level and field** are:

- Changes over time are small but steady, and despite large variations between countries indicate an **educational upgrading to the detriment of the low educated in particular**. One out of two job-finders continues to have a medium educational level corresponding to a similar and stable level of employment. Most of the vacancies which are being filled by these job-finders are in the skilled non-manual categories. These jobs have been expanding in contrast to the skilled manual categories – many of which have experienced a decline in employment.

- Moreover, there is evidence for **rising skills requirements across all occupational groups** reaching from elementary to high-skilled jobs (with the exception of skilled agricultural and fishery workers). Some of this can be attributed to grade drift – employers recruiting highly or medium educated workers as they are available at times of high unemployment. Grade drift can result in the crowding out of less educated workers. Further monitoring in the future is needed to assess to establish the extent to which structural changes are responsible for this development.

- Recruitment preferences regarding the **educational field** (upper secondary level and higher) vary according to the specifics of each national education and training system.

Vacancies which may be associated with tertiary education in Member States (which do not have an extensive formal vocational training system) may be filled by qualified craft-workers in countries such as Germany and Austria, where there is a highly regarded and extensive dual apprenticeship system.

- In general, however, irrespective of the education or training route, job-finders with **technical and business qualifications continue to secure a high proportion** of the employment opportunities on offer.

The relationship between supply and demand: indicators for 'bottlenecks'

- The **risk of recruitment difficulties was significantly lower in Europe in general** when comparing 2011 with 2008. This can be seen in two ways, firstly, in the ratios of the unemployed to the stock of job vacancies, and, secondly, in the ratio of unemployed to job-finders. Both increased by more than half between comparable quarters in 2008 and 2011 (for example from 3.3 to 5.6 unemployed per vacancy). Exceptions are Austria and Germany with rather tight labour markets and, to a lesser extent, Sweden, Denmark, Finland and the Netherlands. In eleven countries, for example in Greece, Ireland, Portugal, Romania, Slovakia and Spain, a high labour surplus continued in 2011. In those countries, the burden of unemployment is high with relatively few job opportunities – reflecting again the relatively low labour market developments in those countries identified earlier. These general developments are also reflected in the PES data, again with the notable exception of Germany.

- Bottleneck occupations were identified by combining information from several sources, each having their advantages and drawbacks: ratios of job-finders to unemployment, national sources and the 2012 Manpower Talent Shortage Survey. **True bottlenecks tend to persist over time**. Most of the bottleneck occupations identified in 2010 were already showing a high ratio of labour demand to labour supply in 2007.

- **Top bottleneck occupations in Europe are concentrated** in a number of professional occupations:
  - **Health**: medical doctors, pharmacologists, pathologists and related professionals, nurses and nurse assistants
  - **ICT**: IT consultants, IT support staff, software programmers, data processing technicians, IT project leaders;
  - **Engineering**: different specialist engineers in various countries;
  - **Sales**: sales representatives and telemarketers;
  - **Finance**: accountants, accountant assistants, and finance staff such as credit and risk managers.

  Additionally, there are some indications for potential bottlenecks in the future for teachers and also in the area of skilled trades (e.g. carpenters). While the first reflects the overall growing demand in the education sector, the latter appears to be paradoxical given the decline in construction, but it is confined to a small number of member States.

- **Bottlenecks can be limited to specific specialisations** within occupations. This is particularly evident for engineers. Austria has bottlenecks for *'agricultural equipment engineers'* and graduate engineers in *'mechanical engineering'*. In contrast, Germany has bottlenecks in metalwork, automotive engineering, mechatronics, energy and electronic engineers. Ireland has a bottleneck for various processing industry engineers and Denmark for various construction engineers.

- **PES more often involved when employers experience recruitment difficulties**. For almost all bottleneck occupations, the PES job vacancy inflow to unemployment ratio is also above average, with the exception of high-skilled sales professionals. While in general employers notify vacancies for low to intermediate skilled jobs more frequently than the average, the results indicate that employers involve the PES more when they experience recruitment difficulties. The greater involvement of employers with the PES may also reflect the fact that in recent years, probably as a result of the recession, more qualified jobseekers are registered with PES.

- **Recruitment difficulties can have many causes.** According to the 2012 Manpower Talent Shortage Survey, employers cite a "lack of technical competencies (hard skills) among applicants" as a main reason for their recruitment difficulties; other reasons include poor working conditions, a lack of mobility or of labour market transparency. Strategies to cope with a lack of technical competencies include **providing additional training to current staff** (21 per cent of employers having difficulty filling vacancies say this), and adjusting their recruitment criteria which could be in favour of young job entrants (in particular **recruiting staff with potential rather than proven skills**). Also strategic partnerships are formed with schools and universities to recruit the best students. Another strategy to cope with recruitment difficulties is to **geographically widen the search for relevant staff including international mobility**.

Recruitment channels: market shares of PES and TWA

The main findings on **PES market shares** are:

- The average **PES market share**, i.e. the combination of the usage rate and success rate in filling the vacancies, was **8 per cent** during the period 2007-2010, but it varied widely across the Member States ranging from 3 per cent in the Netherlands to 15 per cent in Slovenia.
- PES have **the highest market shares** mainly in blue-collar jobs. The list of the 'top ten' also includes a number of more highly skilled occupations, such as '*archivists, librarians*

and related information professionals' and '*social work associate professionals*'. PES had the highest market share for the following jobs: '*handicraft workers in wood, textile, leather and related materials*' and '*printing-, binding- and paper-products machine operators*'.

The main findings on temporary work agencies **(TWA) market shares** are:

- **TWA market shares declined in 2009 as reaction to the crisis, but showed signs of recovery in 2010**. The TWA is a good indication of the relative job stability in the labour market. As employers use TWAs in response to changes in demand, these tend to be highly sensitive to peaks and troughs in economic activity.

- **The TWA market share was 10 per cent** on average in 2007-2010. This cannot be directly compared with PES market shares because PES and TWA co-operate to fill vacancies in quite a number of countries. TWAs have the **highest market shares** in the **manufacturing sector** and various **operator occupations** which tend to react sensitively to economic cycles. An observation that holds true for PES and TWA alike is that the TWA market shares differ little by educational level and are slightly higher for low and medium educated job-finders. This reflects the importance of TWAs for a number of lower-skilled "blue-collar" occupations where relatively quick recruitment is necessary for maintaining the production process.

The main finding on **online recruitment services** is:

- Contrary to PES and TWA, online recruitment services have by far the highest market shares among the high educated job-finders. However, the **market share of online recruitment services could increase in the near future** for lower and medium educated job-finders, as internet use becomes more widespread. With increasing digitalisation all employment services will, to an increasing extent, offer placement and recruitment services increasingly online.

Conclusions and directions for policy response

Need for further research and more comprehensive monitoring

This issue of the European Vacancy and Recruitment Report is a first attempt to systematically analyse the development of vacancy and recruitment patterns. While this report makes a significant contribution to our understanding of the European labour market, the findings are limited in certain respects because key labour market data is not available at European level. This data is essential to the development of an effective monitoring and short-term anticipation mechanism.
Therefore action needs to be taken at European and at national level including the following:

Job Vacancy Statistics (Eurostat JVS)

- The regular participation of all countries across Europe in providing the data for the European Job Vacancy Statistics.
- Considerations could be given to increase the sample size of the surveys to generate more reliable results.
- It could be useful if the data distinguish between vacancies for permanent and temporary positions.
- Consideration could also be given to including an analysis for the major occupational groups in addition to the existing sectoral analysis.

Labour Market intelligence in the Member States

- All Member States should establish a skills needs anticipation system. Currently the situation is quite diverse with only a few countries possessing a comprehensive and effective skills needs anticipation system.
- It would be important to enhance the coordination of administrative and measurement procedures regarding PES data (e.g. closure of PES vacancies, measurement of vacancy duration).

Systematic dissemination of labour market intelligence is a precondition for informed decision-making

Systematic dissemination of labour market intelligence is needed to inform stakeholders at European and national level of the skills needs of the economies of the Member States. For successful dissemination a partnership approach is required and in particular cooperation between the stakeholders in the fields of education and employment.

- With regards to international mobility EURES and other services for international placement and recruitment have to be aware of trends in labour demand including bottlenecks in one or several countries.

- In order to enable their clients to make informed decisions regarding educational and vocational decisions, career guidance services have to balance individual interests, talents and skills of the individual with the requirements of the labour market.

- Education ministries and decision-makers in VET institutions and universities need information about shrinking and growing occupations in order to make the appropriate adjustments to course curricula.

- For PES and training providers monitoring trends in labour demand and changing demand in general and the changing demand for specialisations within an occupation is essential for maintaining the effectiveness of ALMP measures.

Moreover, systematic dissemination of this report together with other elements of the planned "Skills Panorama" can contribute significantly to the improvement of existing tools for monitoring and short-term anticipation of labour demand.

Current trends of labour demand require a combined focus of education and training on medium and high skills levels

The findings of this report indicate that the highest volumes of job openings are currently concentrated in low and medium skills levels. However, a longer-term analysis of educational requirements has provided evidence for educational upgrading in general and also within occupations. This can partly be explained by structural and technological changes, for example the requirement for more complex IT skills in crafts. However, it may also reflect the fact that in the current recession, employers in general can recruit from more highly qualified jobseekers.

The analyses in the report indicate that there continues to be a strong demand for intermediate level VET skills. However, there is considerable variation across European countries in the type of intermediate skills which are most in demand, with some of the newer Member States showing a continuing high demand for intermediate manual skills levels, while in others skilled service occupations are most in demand. The occupations identified in the report as difficult to recruit (i.e. bottleneck occupations) are in general associated with professional qualifications (e.g. health, ICT, engineering, sales and finance).

It should not be assumed that imbalances in the labour market can only be addressed by increasing provision in formal tertiary education. This would not necessarily be the most effective means of delivering skills at technician level. Rather, what is required is **a combined policy approach strengthening VET and tertiary education** at the same time while reducing the number of early school leavers as intended by the EU2020 strategy.

While a key challenge for tertiary education continues to be to increase the number of students studying the STEM disciplines (Science, Technology, Engineering, and Mathematics), health and finance, the challenge for VET is more complex. It involves as a core principle actively seeking a successful match between the interests and competences of the jobseekers with the requirements of the employer. Another challenge for both VET and career guidance is to improve the image associated with a wide range of skilled manual occupations.

Increasing flexibility of the labour force calls for policies to compensate for insecurities

The report confirms findings that most of the jobs created in recent years are based upon temporary contracts and other forms of non-standard forms of employment. The analysis showed that demand in terms of numbers of hirings is highest for lower skilled services in occupations with a high turnover, such as shop salespersons, cleaners and helpers, waiters and bartenders. Temporary agency work has the highest market share in sectors that are sensitive to economic cycles and structural change. Temporary or part-time contractual arrangements tend to increase the risk of 'between jobs' and in-work poverty and to make career development more fragile. These trends can result in increased labour segmentation, the further expansion of poverty traps and the diminution of workers' rights. Policies need to be implemented to counteract these tendencies including access to lifelong learning and adequate social protection.[2]

A differentiated skills strategy to cope with talent shortages in certain occupations

According to the analysis in this report the top bottleneck occupations in Europe (professionals in health, ICT, engineering, sales and finance) appear to be more persistent and spread across several European countries. However, for a number of other occupations there are indications of emerging or potential bottlenecks in a limited number of countries.

- A **well structured mobility policy can help to improve the matching of skills demand with skills supply** in Europe. Good labour market intelligence combined with active cooperation between the relevant employment services can ensure that skills which are in surplus in one economy can be utilised to fill vacancies elsewhere in the community. The further development of the EURES portal, database and services can make a valuable contribution to the process of a transnational matching of skills supply and demand.

- It is important that labour market policies in Europe focus in particular on expanding occupations and those which are in short supply (i.e. bottleneck occupations). In many cases, these occupations are composed of a combination of traditional competences and competences which have been imported from other disciplines (e.g. mechatronics), or as in the case of many 'green' occupations, entirely new additional competences (e.g. wind engineering). These developments pose a challenge to the **education and training systems** in Europe. The structure must be flexible enough to facilitate the employed and jobseekers **to add on the required new competences to their existing qualifications**.

- This has also implications for the development of labour market transparency and the way competencies are formally classified. The existing system ISCO has made a very valuable contribution to effective labour market analysis and management. However, although task-based it is not sufficiently refined to fully reflect either the range or the dynamic nature of the evolving skills and competences requirements of the modern labour market. The challenge is to **build a system at European level, such as ESCO**, a taxonomy of European Skills, Competences and

2 See European Commission Communication: Towards a job-rich recovery (COM (2012) 173 final, page 9-10, and the references to the relevant European Directives on part time work (97/81/EC), on fixed term work (99/70/EC) and on temporary agency work (2008/104 EC)

Occupations[3], **which more fully incorporates the skills and competences**. A key challenge is to devise a system which is flexible enough to keep abreast of the constant changes which are occurring to the skills and competences profiles of occupations.

- However, there is **not one skills strategy that fits all.** There are different policy answers which are appropriate depending on the situation and the reasons identified for the skills mismatches on the labour market. In the case where there is an insufficient supply of appropriate skills and competences the most effective response is for the education and training system to develop relevant education and training courses. In addition, up-skilling existing employees can also be an effective strategy. In the short-term, policies which enhance inter-regional and international mobility can help to alleviating imbalances on the labour market.

Some mismatches in the labour market, however, are not caused by a lack of skills, but by other reasons, such as working conditions or a poor image of an occupation. In these cases the challenge for the relevant stakeholders is to make the jobs sufficiently attractive to avoid skills and labour shortages.

Whatever the situation, the formulation of the appropriate strategy is contingent on the availability of **comprehensive, in-depth and timely labour market intelligence.** The publication of this report is an important contribution to the further development of this intelligence at both a European and at a national level.

3 The European Commission is developing the taxonomy ESCO, which will describe the most relevant skills, competences and qualifications needed for several thousand occupations.

1 Introduction

1.1 Monitoring labour demand in Europe

As part of its Europe 2020 flagship initiative 'An Agenda for New Skills and Jobs', in 2010 the European Commission (EC) launched the 'Monitoring Labour Market Developments in Europe' project. The objective of this project is to increase labour market transparency for all stakeholders who need information about recent developments on the demand side of the labour market, such as decision-makers in the fields of education and employment, public and private employment services including EURES advisers, education and training providers, career guidance services, and policy and labour market analysts.

The European Vacancy and Recruitment Report (EVRR) is a key component of the European Commission's endeavour to develop a systematic labour market monitoring system focusing on changes in the demand for skills, including contractual arrangements, sector demand, occupation demand, growing occupations, difficult to fill vacancies (bottleneck occupations) and skills requirements. Monitoring the activities of different recruitment agencies is important because they are at the interface of labour demand and supply, matching vacancies with suitable jobseekers in particular segments of the labour market.

This first edition of the report makes a significant contribution to our understanding of how the European labour market functions. Other elements within this project include two quarterly bulletins, the European Vacancy Monitor[1] and the European Job Mobility Bulletin.[1] Together with other relevant studies, labour market data and analyses these will form part of the European Commission's "Skills Panorama" to be launched in December 2012.

It is noteworthy that the results from analysis of labour demand are not necessarily identical with those from the analysis of employment. The changing demand for labour may impact on employment trends in a variety of ways. Generally, an increase in vacancies will be reflected in an increase in employment where new job creation outstrips job losses (i.e. expansion demand). However, many job openings arise because of the need to replace workers who have left the labour force because of retirement, emigration or for other reasons. Moreover, the single biggest generator of vacancies is workers changing their jobs, either voluntarily or because their employment contract has come to an end.

While there are many benefits to be derived from enhancing the level of transparency in the European Labour market, the project had to cope with a number of challenges, above all the limited availability of comparable vacancy data for the whole of Europe and a change in the main classification used for a breakdown by occupation, the International Standard Classification of Occupations (ISCO) in 2011. This caused a disruption in the time series. Overall, the project can be considered as a work in progress, building up more comprehensive information and a longer-term perspective over time.

1.2 Sources of information used

The report brings together information from a range of European and national sources using Eurostat data (Job Vacancy Statistics and Labour Force Survey), data from Public Employment Services, temporary work agencies and online services:

- Eurostat data on job vacancies from the Job Vacancy Statistics (JVS) including sectoral analysis (NACE)
- Eurostat data on job-finders and unemployed from the Labour Force Survey (LFS), including type of contract, sectoral analysis (NACE), occupational analysis (ISCO), education level and field (ISCED), unemployed by previous occupation, recruitment channels of job-finders (public employment services, temporary work agencies)
- Job vacancy registration and unemployment data from national public employment services (PES) including occupational analysis of vacancies and registered unemployed (ISCO)
- Information from temporary work agencies (TWA) including number of agency workers and job vacancies
- Data from other private employment services including online job vacancies (Monsterboard) and talent shortage survey (Manpower)
- Results from national studies including information about top demanded and bottleneck occupations

Where appropriate, results of other international and national studies are referred to in order to provide additional support to the analysis and interpretation of the data.

1 http://ec.europa.eu/social/main.jsp?catId=955&langId=en

1.3 Country coverage, time period, and measurement

Country coverage

While LFS data are available for the whole EU27, the JVS and the PES data are confined to a limited number of countries. For the period under review, reliable JVS data is currently only available for 15 countries, while the PES data covers between 9 and 12 countries depending on the type of analysis. One of the reasons is the recent change in the ISCO-classification. For example, in 2011 the PES of some countries switched to the new ISCO-08 categories, while the majority of national PES continued to use the old classification ISCO-88. Results from a number of national studies are taken into account to complement the information on the most demanded and bottleneck occupations derived from sources such as the LFS and PES.

Time period and measurement of trends

To allow for comparability of the data from a variety of sources, the analyses covers a limited period of time beginning with the first quarter of 2007 for LFS data and the first quarter of 2008 for JVS and PES data, ending with the third quarter of 2011. Occasionally data are analysed for a longer period, for example CIETT data on temporary workers from 1996 (in Chapter 2) and LFS data on employment by educational level from 2000 (in Chapter 3). While the analysis covers a relatively short period of time, it nevertheless provides an insight into how recruitment patterns have changed during this period. Some of these changes reflect the fact that this period covers the time immediately prior to the emergence of the economic crisis up to autumn 2011.

In this report the trend data is presented in the form of indices because it provides good illustration of the scale of change over time including volatility due to seasonal factors. It also has the advantage of facilitating the comparison of trends between countries where labour force size differs greatly. To complement the information, absolute values are included at the bottom of most of the charts.

Key indicators

The key indicators used in the subsequent chapters are briefly described below, with additional information given in the relevant chapters:

Job vacancy[2] and stock of job vacancies

A job vacancy is defined as a paid post that is newly created, unoccupied, or about to become vacant:
for which the employer is taking active steps and is prepared to take further steps to find a suitable candidate from outside the enterprise concerned; and
which the employer intends to fill either immediately or within a specified period of time.
A vacant post that is only open to internal candidates is not treated as a 'job vacancy'. The stock of job vacancies is the number of job vacancies measured at a certain point in time.

Job-finders and job-finders rate

Job-finders are employees at the time of the survey who had been employed in their job for a maximum of three months. Job-finders exclude the self-employed since a job vacancy is defined as a vacant post for an employee (see definition above). The number of job-finders is used as a reliable proxy indicator of the number of hirings and has the following strengths:
job-finder data covers all who found a job over a three-month period, while the Eurostat job vacancy data (JVS) only covers the number of vacancies available at a certain point of time. Therefore the number of job-finders data tend to be significantly higher than the number of job vacancies.

The term 'job-finders rate' usually refers to the proportion of jobseekers who find employment in a particular period. In this report the term 'job-finders rate' expresses the number of job-finders as a percentage of all employees to give a useful indicator of the dynamics of recruitment in the labour market.

Inflow of PES vacancies

The inflow of PES vacancies is the number of newly registered job vacancies in a certain period of time. The inflow of registered job vacancies depends not only on the demand for labour, but also on the extent to which employers involve the PES in filling job vacancies. Regarding international comparisons, it is not possible to use stocks figures due to the differences in national policies on closing registered vacancies. For example, the stock will be higher if vacancies are closed after six months compared to one month.

2 Eurostat definition,
http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/job_vacancies

To identify **bottleneck occupations**, defined as occupations for which there is evidence of recruitment difficulties, a number of direct and indirect indicators are used (see Chapter 4). The direct indicators (e.g. employer-based surveys, duration of vacancy filling) would offer a more precise measure of bottlenecks. However, these measures are not available for every country. In contrast, the data on indirect measures (LFS data) are available for every country and while less precise, these data nevertheless offer useful indications of potential bottlenecks in the labour market. Both measures are used in combination and complemented by results from country studies and a Manpower talent shortage survey to form a composite indicator in order to identify the currently most severe bottleneck occupations in Europe.

Ratio unemployment (LFS) to vacancies (JVS)

This relationship is used to provide an indication of the degree of the 'tightness' of the total labour market. It combines data from the LFS (unemployment) and JVS (vacancies). A relatively low ratio is considered to indicate a degree of difficulty in finding workers as there are relatively fewer unemployed people available to fill the vacancies on offer.

Unemployed (with a previous occupation) to job-finders (LFS)

The relationship between the total number of unemployed and the total number of job- finders is also used as an indicator of the degree of 'tightness' of the labour market. In this case the number of job-finders is used as a proxy for the number of filled vacancies. The advantage of using the job finder data is that it is available for all countries and also for all occupations.

To identify potential bottlenecks in specific occupations, the number of job-finders in these occupations is compared to the number of unemployed people who previously worked in this occupation.

The ratio by occupation has to be interpreted carefully in order to identify potential bottlenecks. The following caveats have to be taken into account:

- In the case of a number of occupations (e.g. waiters, cleaners) a combination of factors have an undue influence on both the demand and the supply to the occupation. Regarding the supply side, many vacancies are filled by jobseekers with no previous experience of working in the occupation (e.g. from other low-skilled occupations, students); regarding the demand side, relatively high turnover rates in these occupations may have a disproportional impact on the job finder figures.
- In the case of other occupations (e.g. teachers, public administration professionals) many vacancies are filled by first-time jobseekers which are not included in the measure of unemployed.

PES vacancy inflow to the registered unemployed

The ratio used for PES is similar to the ratio described above. However, as the vacancies notified to the public employment services in general cover only a relatively small proportion of total vacancies the subsequent identification of potential bottlenecks is valid only for the PES segment of the labour market. While the PES may experience difficulties in filling vacancies where the ratio is relatively high, it should not be assumed that employers in general experience difficulties in filling these posts. The exceptions are those occupations where the vast majority of the total vacancies are notified to the public employment services. In such cases, the ratio of the PES segment would be expected to be broadly similar to the ratio of the labour market as a whole.

Exploring the comparative position of different recruitment channels, one commonly used measure is their '**market share**'. This is the share of total job vacancies at any one time that is filled through a particular recruitment channel. The market share is determined by two factors, the usage rate and the success rate. The usage rate is the rate at which employers notify vacancies to a particular recruitment channel while the success rate measures how often a notified vacancy is filled by a jobseeker via that channel. In most cases, an employer will use more than one recruitment channel simultaneously so usage rates typically add up to more than 100 per cent. This is contrary to market shares that always add up to 100 per cent.

Job-finders via PES or a temporary work agency

The LFS contains two relevant questions to further analyse the market share taking into account the success rate:

- Has the PES contributed to the finding of your current job?
- Is your current job a temporary agency work job?

As PES and TWA (temporary work agencies) cooperate in many countries with PES including vacancies from temporary work agencies in their own database for jobseekers, the results presented below can be used to identify the market share for each of these channels, but do not allow a direct comparison.

1.4 Structure of the report

Chapter 2 presents an analysis of the development of the total job vacancy market and recruitment (stocks and flows) in general as well as for PES, TWA and Online Recruitment Services. Chapter 2 further presents a number of broad comparisons, for example between the public and private sectors. Chapter 2 also presents a comparison of job-finders in temporary and permanent contracts, and in full-time and part-time jobs.

In **Chapter 3** the focus is on examining key characteristics of job vacancies and hired persons (recruitment), such as by economic sector, occupation, educational level and field. It analyses how recruitment demand responded to the economic crisis starting in 2008 and to what extent it has recovered since then, focusing on the segments with high demand and those with growing demand.

Chapter 4 aims to identify bottleneck occupations in the labour market from the demand side perspective. To do so, the analysis builds up step-by-step using a variety of available sources and innovative indicators to identify where the relationship between demand and supply has been tightening and where employers experience recruitment difficulties in Europe.

Chapter 5 examines the relative importance of the various recruitment channels in general terms and also their importance for different types of jobs, focusing on the PES and TWA.

The data on individual countries is presented in the Annex, which includes detailed tables with absolute numbers for the whole EU, as well as country by country information about occupations that are most in demand.

2 Trends in vacancies and recruitment

2.1 Introduction

In this chapter the focus is on the main trends in job vacancies and recruitment, set against a background of developments in the economy and total employment. The main objective is to review the vacancy and recruitment market during the recent recession up to autumn 2011. In addition to the general trends, the chapter explores the impact of the recent crisis on the structure of vacancies by comparing recruitment between the public and the private sector and also in terms of contractual arrangements (temporary, or permanent and full-time, or part-time). A sub-section is dedicated to vacancy trends in Public Employment Services (PES), temporary work agencies and online recruitment services (ORS).

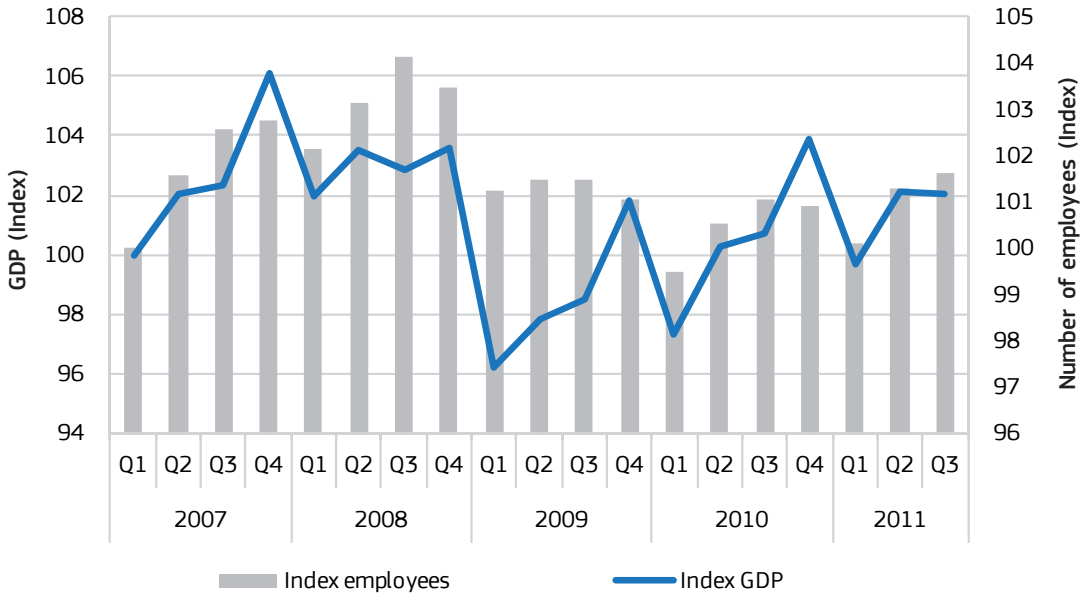
2.2 Background

The recession has taken its toll on the European economies and labour markets and according to the European Commission recovery has been 'timid'. This triggered a loss of more than 6 million jobs between mid-2008 and the last quarter of 2010 in the EU. By mid-2011, employment had made a modest recovery adding roughly a quarter of this figure to the numbers at work. This net loss of jobs was reflected in rising unemployment, though this is very unevenly spread across the Member States, ranging (in 2011) from 4.1 per cent in Austria to 22.8 per cent in Spain.[1]

1 European Commission (2012) Employment and Social Developments in Europe 2011 (Luxembourg), pg. 152.
Available at: http://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=6176

Chart 2.1 Development of GDP and number of employees, EU27

Index, 2007Q1 - 2011Q3, 2007Q1 = 100



Source: Eurostat, Labour Force Survey, National Accounts.
GDP: chainlinked volumes, reference year 2005, at 2005 exchange rates, not seasonally adjusted.
27 Countries included: All EU27 countries.
Absolute values 2011Q3: employees, 180.3 million; GDP, 2.9 trillion.

Economic recovery, but employment growth has been slow ...

The effects of the financial crisis and recession on the labour market are evident: GDP in the EU27 continued to rise over 2007, before stabilising at a somewhat lower level in 2008. However, in the beginning of 2009 there was a sharp drop in GDP levels as the full impact of the recession took effect (see Chart 2.1). GDP data reveals that the recovery was intermittent, resulting in a value that in each of the first three quarters of 2011 was roughly equivalent to the corresponding quarters in 2007.

During the period the number of employees[2] fluctuated (Chart 2.1). However, while GDP (at 2005 constant prices) remained at roughly the same level during 2008, employment nevertheless increased. This suggests that employment is not immediately responsive to lower economic outputs. There is evidence of some employers using a variety of job retention strategies supported by the government, such as 'short-time working' (STW) schemes[3] offering financial compensation for employees working on reduced hours or making use of internal flexibility (e.g. working time accounts).[4] After a decline in the first quarter of 2010, employment has recovered to reach at the end of the period a level slightly below the corresponding quarter in 2007.

Increase in part-time employment ...

The total number of employees increased by 3.8 million between the first quarters of 2007 and 2008 while the number of part-time employees increased by only 700,000[5]. This means that net employee growth before the recession consisted largely of full-time jobs. However, between the first quarters of 2008 and 2011 the total number of employees declined by 3.6 million and the number of full-time employees decreased by even more at 5.1 million (according to the LFS)[6].

During the same period, the number of employees working part-time increased by 1.5 million. Self-employment figures followed a similar pattern, with an increase of 700,000 between the first and third quarters of 2007 and a decrease of the same magnitude between the third quarters of 2007 and 2011.[7]

Positive developments in GDP and employment in Poland

National variations in GDP growth and employment are illustrated in Charts 2.2 and 2.3 for selected countries. Poland, Slovakia and Cyprus displayed the strongest growth from the first quarters of 2007 to 2011 with indices of 115, 113 and 107 respectively (Chart 2.2). In Poland and Slovakia, the figures remained consistently above the base (i.e. first quarter of 2007). Though there were significant and regular fluctuations, both countries ended the reference period with a relatively high level of GDP growth and employment.

Estonia, Greece and Latvia had the lowest rate of GDP growth over the period, with GDP in the first quarter of 2011 around 10 per cent or more below the corresponding quarter in 2007. However GDP did recover in the second and third quarters of 2011. In Estonia and Latvia, GDP declined sharply until the first quarter of 2010. In Greece the GDP peaked each year in the tourist season (a strong seasonal effect in the third quarter), but since 2009 the peak has been lower than in the previous year. Another country with an unfavourable development was Ireland. The GDP was also 10 per cent lower in the first quarter of 2011 compared to the corresponding quarter of 2007 (see Annex, Table A2.1 with country information).

A number of countries show a similar pattern for both GDP and employment. In Poland the growth in GDP was accompanied by robust growth in the number of employees (Chart 2.3). This increased by 1.3 million persons - from 11.2 million in the first quarter of 2007 to 12.5 million in the third quarter of 2011. Employment also developed favourably in Luxembourg and Malta, though these two smaller countries have a relatively modest effect on the overall EU labour market. In Ireland and Latvia the strong decline in GDP was accompanied by the strongest decline in the number of employees within the EU. In Bulgaria, the number of employees also declined strongly but was less pronounced than in Ireland and Latvia. The same holds true for Estonia, Greece, Lithuania and Spain (see Annex, Table A2.2 for additional country information).

2 Since this report is about the recruitment of workers, changes in the number of employees are the main focus rather than the working population, which would also include the self-employed.

3 The OECD (2010) Economic Outlook suggests that where such short-time working schemes have been used, they are likely to have dampened the decline in the employment of permanent workers by between 0.3 and 1.3 per cent. Hijzen, A. and D. Venn (2011), The Role of Short-Time work Schemes during the 2008-09 Recession, OECD Social, Employment and Migration Working Papers, no. 115, OECD Publishing, show that 18 out of the 21 European OECD countries have applied STW measures: only Greece, Sweden and UK did not respond with STW measures.

4 For example in Germany many collective agreements include a provision for a flexible use of "working time accounts" to reduce working time without wage compensation for a limited period of time. This reduced working time by 7 hours in spring 2009, in addition to the 13 hours reduced by STW (http://doku.iab.de/kurzber/2010/kb2210.pdf).

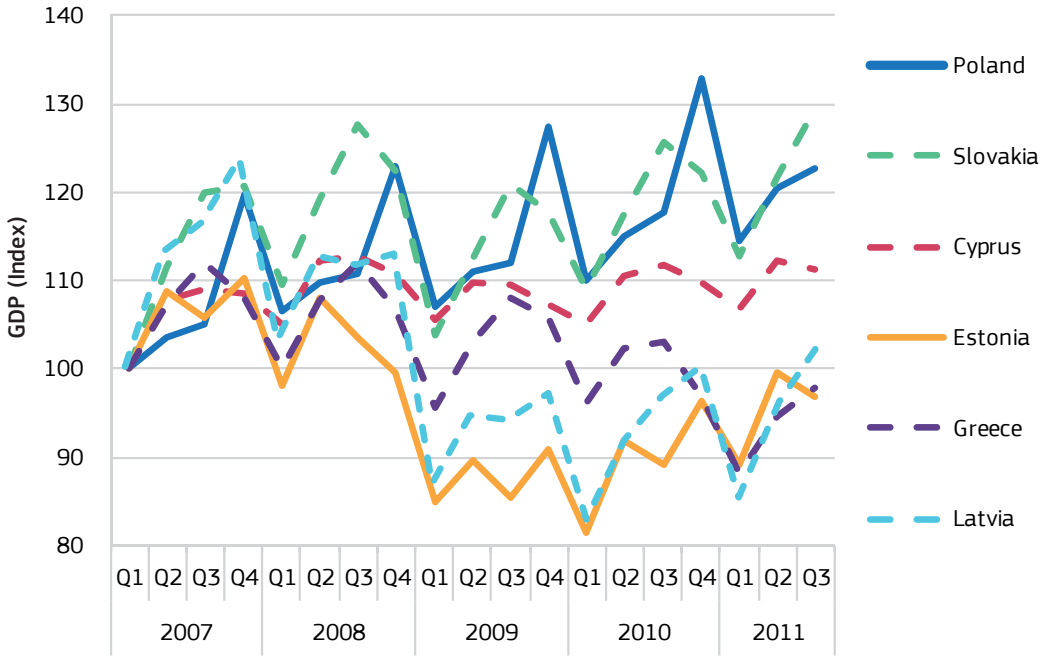
5 According to figures from the online Eurostat database

6 According to the EU Employment and Social Situation Quarterly Review (June 2012) part-time work and short-term contracts remain the drivers of any employment growth – where employment is growing at all. Data is available at: http://ec.europa.eu/social/main.jsp?langId=en&catId=113&newsId=1389&furtherNews=yes

7 According to the European Employment Observatory, in the EU27 around 32.5 million people are self- employed, accounting for almost 15 per cent of the employed labour force. 'Self- employment in Europe 2010' (EEO Review). Available at: http://bookshop.europa.eu/en/european-employment-observatory-review-pbKEAN10001/;pgid=y8dIS7GUWMdSR0EAlMEUUsWb00003HSHXCE2;sid=FZSIPRhjEaeIJFeWptIWmnpGEkeO7lUAC-Y=?CatalogCategoryID=PbYKABstTO8AAAEjtZAY4e5L

Chart 2.2 **Development of GDP in selected countries**

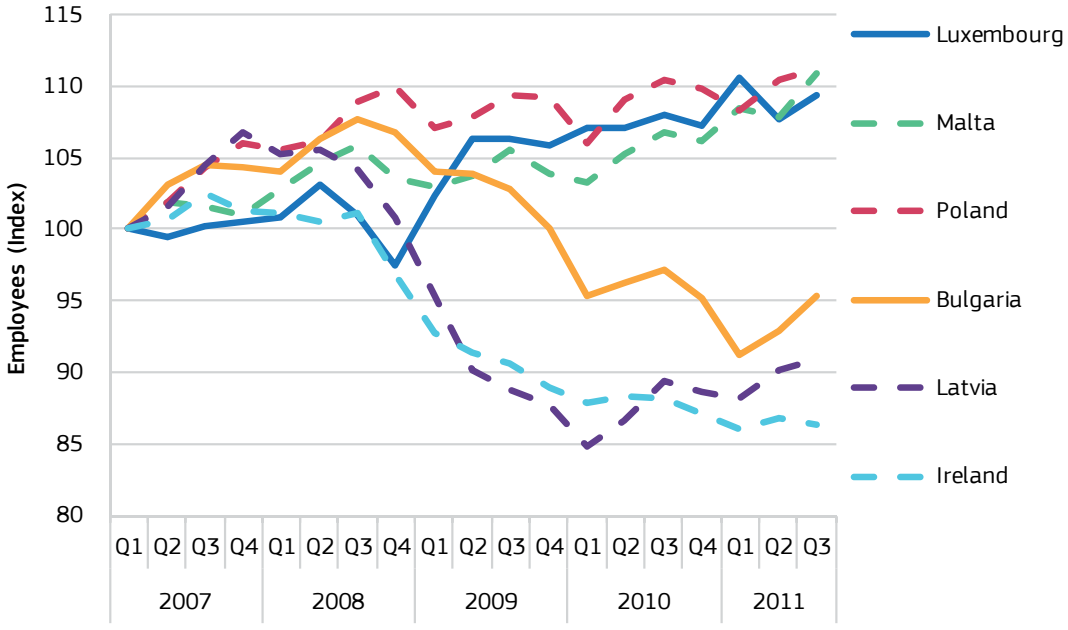
Countries with highest and lowest GDP growth 2007Q1-2011Q1,
Index 2007Q1-2011Q3, 2007Q1 = 100



Source: Eurostat, National accounts.
GDP: chain-linked volumes, reference year 2005, at 2005 exchange rates, at market prices, not seasonally adjusted.
Value 2011Q3 (billion euros): Poland: 79; Slovakia: 13; Cyprus: 4; Estonia: 3; Greece: 48; Latvia: 4.

Chart 2.3 **Development of number of employees in selected countries**

Countries with highest and lowest employee growth 2007Q1-2011Q1,
Index 2007Q1-2011Q3, 2007Q1 = 100



Source: Eurostat, Labour Force Survey
Value 2011 Q3 (thousands): Luxembourg: 205; Malta: 147; Poland: 12,498; Bulgaria: 2,614; Latvia: 850; Ireland: 1,487.

2.3 Development of vacancies and recruitment

The development of job vacancies closely reflects economic and labour market developments and is shown along with the total number of employees (see Chart 2.4).

The Job Vacancy Statistics are compiled by the National Statistical Offices of the Member States. For a variety of reasons for the period under review they are only available for 15 countries. The number of employees in these 15 countries was 93 million in the third quarter of 2011, more than half of the total number of 180 million employees in the EU27. Germany and the UK account for a substantial proportion of the total vacancies in the group of 15 countries shown, skewing the results somewhat. Leaving out the UK would not change the picture as developments there are similar to the average of the 15 countries. However, if Germany was to be omitted, the vacancy trend would be more negative.

Job vacancies slow to pick up as employers use under-utilised workers first

Overall, the stock of job vacancies has been consistently below the base period of the first quarter of 2008 right through to the third quarter of 2011. The stock fell sharply from around the second quarter of 2008 and reached a low point in the first quarter of 2010 (with an index of 58 for the 15 countries analysed). The stock of vacancies recovered somewhat during 2010, but then fell back slightly during the first quarter of 2011. This reflects the overall demand for labour during the recession when growth had been muted. Over the same time scale the employment index reveals considerably less change than the vacancy index and ends the period at a level slightly below the corresponding level in the third quarter of 2007.

A number of factors contributed to this difference in the development of vacancies and employees. Firstly, the vacancy index is more sensitive to changes, because it is significantly smaller in number (1.7 million vacancies compared to 93 million employees). Secondly, the difference is influenced by the fact that in difficult labour market conditions, employees will be more reluctant to leave their jobs voluntarily (for example to move to another employer or another area). This means that there will be lower job turnover and therefore a reduced need to fill vacancies caused by employees leaving their jobs. Thirdly, as already mentioned, the use of job retention strategies has the effect of maintaining employment levels while reducing the number of vacancies.

Public sector job vacancies hold up, despite the effects of austerity measures ...

The majority of job vacancies in the economy at any one time are private sector vacancies. In the third quarter of 2011 they made up 1.3 million of the 1.7 million vacancies in the 15 countries where data is available, or 79 per cent of the total. Therefore job vacancy developments in the private sector will mirror those in total vacancies. The share of the private sector in all vacancies is larger than the share in employment (68 per cent of employees in the third quarter 2011) which reflects the higher turnover of staff compared to the public sector.[8]

The number of public sector job vacancies has not fallen as much as those in the private sector and only began to decline sharply around the second quarter of 2009 – almost a full year after the private sector. This lagged effect is typically attributed to government budgets being fixed for a 12 month period. However, public sector job vacancies in Europe never fell to the same levels as those in the private sector, although by the first quarter of 2010 there were signs of a levelling off between the public sector and private sector. This can be largely attributed to the impact of austerity measures in most European countries beginning to have an effect.[9]

Job vacancies recover in most countries, but no change in the Czech Republic, Latvia and Romania ...

There is considerable variation among EU states in the development of vacancies (see Chart 2.5). The highest growth between the first quarters of 2008 and 2011 was in Sweden, Germany and Luxembourg. However, even in these three countries there were significant falls in job vacancies around the second quarter of 2008. This persisted until the third quarter of 2009 before a fairly consistent recovery set in. Both Sweden and Germany exceeded the base year with increases in job vacancies of 17.9 per cent and 8.6 per cent respectively in the first quarter of 2011 compared to the same quarter in 2008.

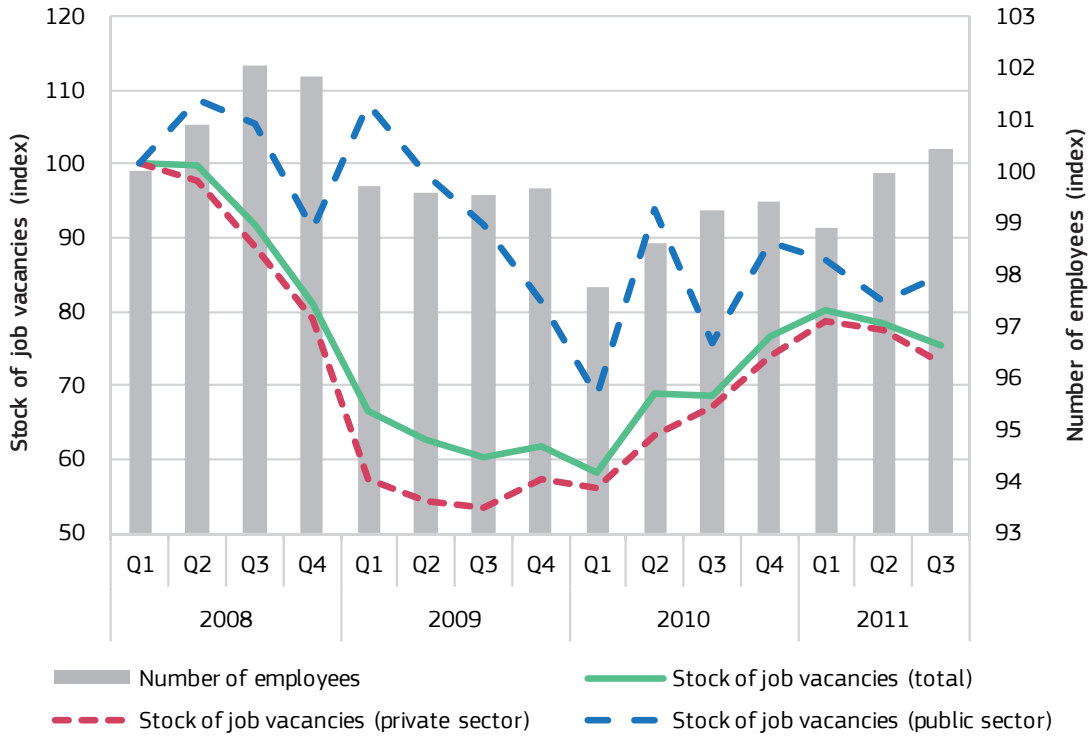
The three countries (of the 15) with the lowest levels of job vacancy growth, namely Romania, the Czech Republic and Latvia, ended the reference period with low indices (27, 23 and 19 respectively). In all three cases the developments were similar, with a steep falling off in job vacancies from the first quarter of 2008 right up to the fourth quarter of 2009, when there was some recovery. These developments are rooted firstly in the relatively poor economic performance in these countries (see Annex, Table A2.1) which typically affects private sector employment in the short term and secondly in the impact of austerity measures on public sector employment after some delay (see also Chart 2.4).

8 There is the added problem for jobseekers in difficult economic times since those in work tend to be less willing to voluntarily quit their jobs, thus causing employment periods to lengthen, leading to fewer jobs becoming available through replacement demand. For a fuller discussion on the relationship between unemployment duration and business performance see: Layard R, Nickell S and Jackman R (2005) Unemployment: Macroeconomic performance and the labour market (Oxford University Press – Oxford Scholarship Online).

9 Employment in Europe 2010", 2010 -197 p.; http://ec.europa.eu/social/main.jsp?catId=119&langId=en

Chart 2.4 Development of number of employees (right axis) and of number of job vacancies (left axis, total, private and public sector)

Index, 2008Q1 - 2011Q3, 2008Q1 = 100



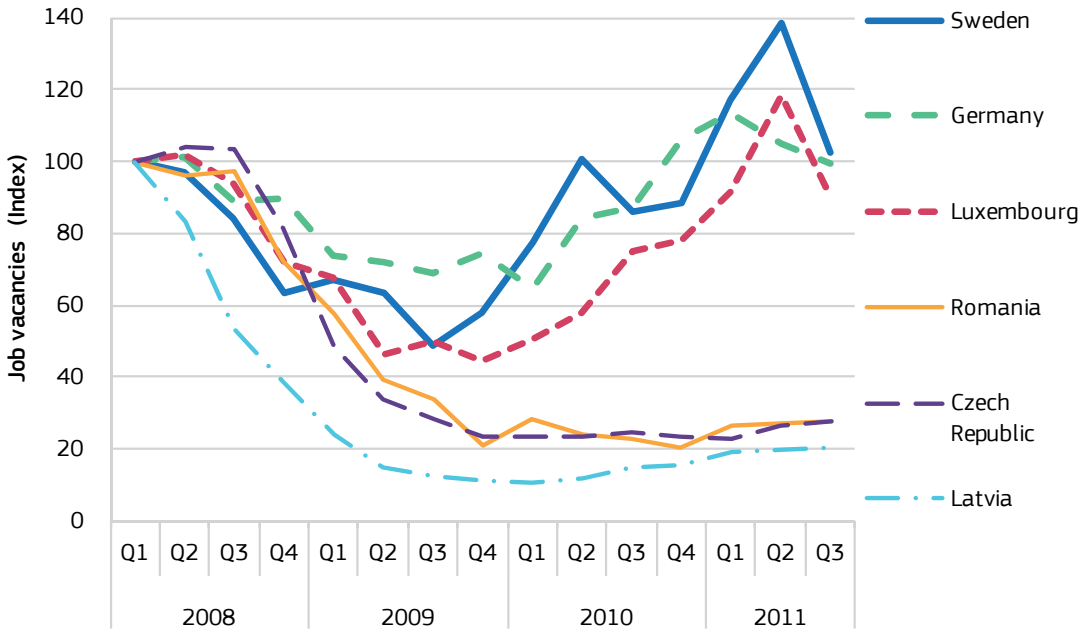
Source: Eurostat, Job Vacancy Statistics, Labour Force Survey.
The stock of job vacancies is the number of job vacancies measured at a certain moment in time. A job vacancy is defined as a paid post that is newly created, unoccupied, or about to become vacant. The stock of job vacancies here excludes agriculture, but the figures for number of employees include agriculture. Public Administration job vacancies in Portugal are not included.

15 Countries including: Bulgaria, Cyprus, Czech Republic, Germany, Estonia, Latvia, Lithuania, Luxembourg, the Netherlands, Portugal, Romania, Slovenia, Slovakia, Sweden, UK.
Absolute values 2011Q3: Stock of job vacancies (total), 1.7 million; of which private sector, 1.4 million and public sector, 0.4 million; number of employees, 93 million.

Chart 2.5 **Development of number of job vacancies in selected countries**

Countries with highest and lowest vacancy growth 2008Q1-2011Q1

Index, 2008Q1 - 2011Q3, 2008Q1 = 100

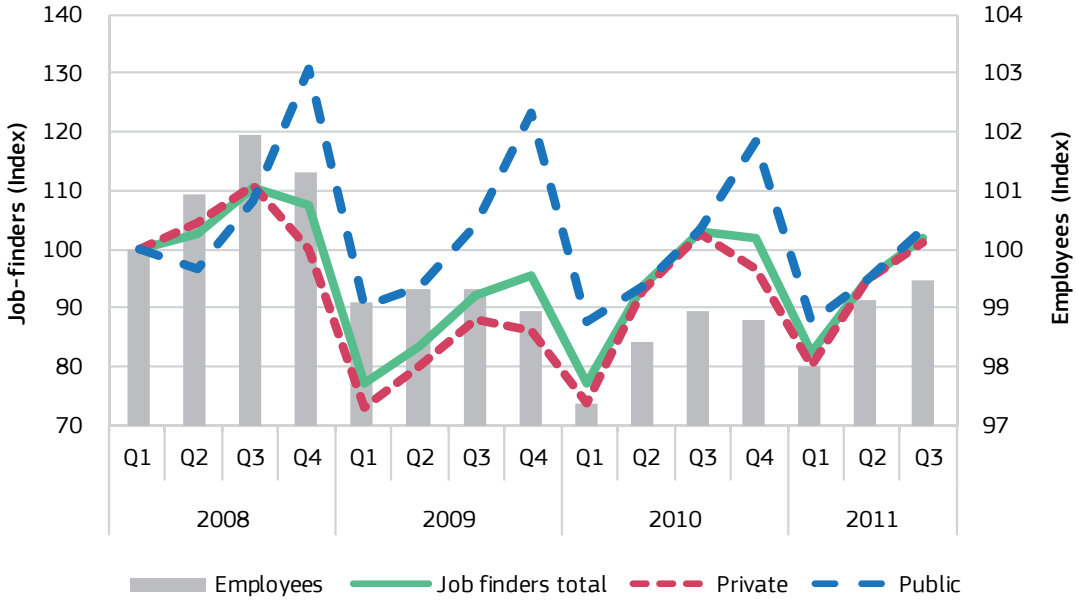


Source: Eurostat, Job Vacancy Statistics.

Absolute value 2011Q3: Sweden: 57,800; Germany: 911,800; Luxembourg: 2,700; Romania: 27,200; Czech Republic: 38,600; Latvia: 3,100.

Chart 2.6 **Development of number of employees (right axis) and of job-finders (left axis, total, private and public sector), EU27**

Index, 2008Q1 - 2011Q3, 2008Q1 = 100



Source: Eurostat, Labour Force Survey, all EU27 countries.

Job-finders were employees at the moment of the survey employed for at most three months.

27 Countries included: All EU27 countries.

Absolute value 2011Q3: Job-finders, 11.8 million; employees, 180.3 million.

Numbers hired recovered only partially, but still 12 million find a job in one quarter

While broadly following the development of the job vacancy market, the number of hirings reached its lowest value since 2008 in the first quarter of 2009 (Chart 2.6) contrary to the number of vacancies which continued to decline until the first quarter of 2010 (Chart 2.4). The number of job-finders also shows a clear seasonal pattern, peaking in the third quarter (private sector) or fourth quarter (public sector) and dropping in the first quarter for both. The third quarter is typically a quarter with seasonal work peaking in the agriculture and tourism sectors. The total number of job-finders was 9.5 million in the first quarter of 2011, which was still well below the baseline of 11.6 million in the first quarter of 2008. In the third quarter of 2011 the number of job-finders reached 11.8 million which is partly due to seasonal effects. These developments closely mirror the movements in the number of employees over the period, suggesting that employers have been recruiting throughout the crisis, but in response to economic conditions.

In the third quarter of 2011 there were 8.7 million job-finders in the private sector, making up 74 per cent of the total number of job-finders. While steadily getting weaker over time the index for public sector job-finders remained higher for almost all of the period as the public sector was more protected against the recession (see also Chapter 3).

Recruitment was most affected by the recession in Romania and Ireland

There was considerable variation between countries (Chart 2.7). Signs of a recovery are evident in Luxembourg, Malta and Portugal with indices in the first quarter of 2011 of 143, 140 and 116 respectively.[10] In Luxembourg and Malta the recovery of recruitment is associated with growing employment (Chart 2.3). This is not the case in Portugal, where the decline in employment from 2009 (see Annex, Table A2.2) combined with an increase in number of job-finders suggests an increasing job turnover.

The three countries with the lowest growth in job-finders were Lithuania, Ireland and Romania, with indices of 64, 46 and 34 respectively comparing the first quarters of 2007 and 2011. Of the three, recruitment has fallen most in Romania[11]. The number of job-finders declined from 228,000 to 136,000. Ireland experienced a similar fall from 160,000 job-finders to 73,000. The development in job-finders in Lithuania was more volatile.

Overall there is a considerable degree of variation in recruitment trends in the EU27 when comparing the first quarters of 2007 and 2011:[12]

- Increase (index 110 or higher): Luxembourg, Malta and Portugal
- More or less stable (index 90-110): Austria, Belgium, Czech Republic, Estonia, Finland, France, Hungary, Italy and Sweden
- Decline (index less than 90): Bulgaria, Cyprus, Denmark, Ireland, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia, Spain and the United Kingdom

Despite recession the proportion of new recruits in the workforce remains relatively stable

Another factor reflecting the functioning of the labour market is the relationship between recruitment and overall employment trends. The job-finders rate, i.e. the number of job-finders expressed as a percentage of all employees can provide a useful indicator to measure how dynamic a labour market is (Chart 2.8). Despite the recession, the number of job-finders per employee remained relatively stable fluctuating between 6.5 per cent in the first quarter of 2007 and 5.0 in the first quarter of 2009, recovering to 5.5 per cent in the first quarter of 2011. There is evidence to suggest that the relative stability of this ratio is due to an increase in the turnover rate, which in turn partly reflects a growth in the incidence of temporary contracts.

Variations in selected national trends reflect institutional and cultural traditions rather than fluctuations in the business cycle

Despite the impact of the recession, diverse country patterns are strongly influenced by institutional and cultural traditions. In countries with a liberal employment protection policy (Denmark) or a high share of recruitment on the basis of temporary contracts (Spain and Sweden) the job-finder rates remained at a relatively high level over the whole period (Chart 2.9). In Spain and Sweden high proportions of temporary contracts (90 per cent of job-finders in Spain, 78 per cent of job-finders in Sweden according to LFS data) pushed up the rate. In Denmark, despite the fact that the share of temporary contracts is comparatively low (31 per cent compared to the 64 per cent EU average), the Danish approach to flexicurity allowed employers to adjust their workforce size with comparative ease.

Contrariwise, in Slovakia, Greece and Romania where recruitment activities were already low before the crisis made an impact. In each of the three countries the share of temporary contracts was well below the EU-average.

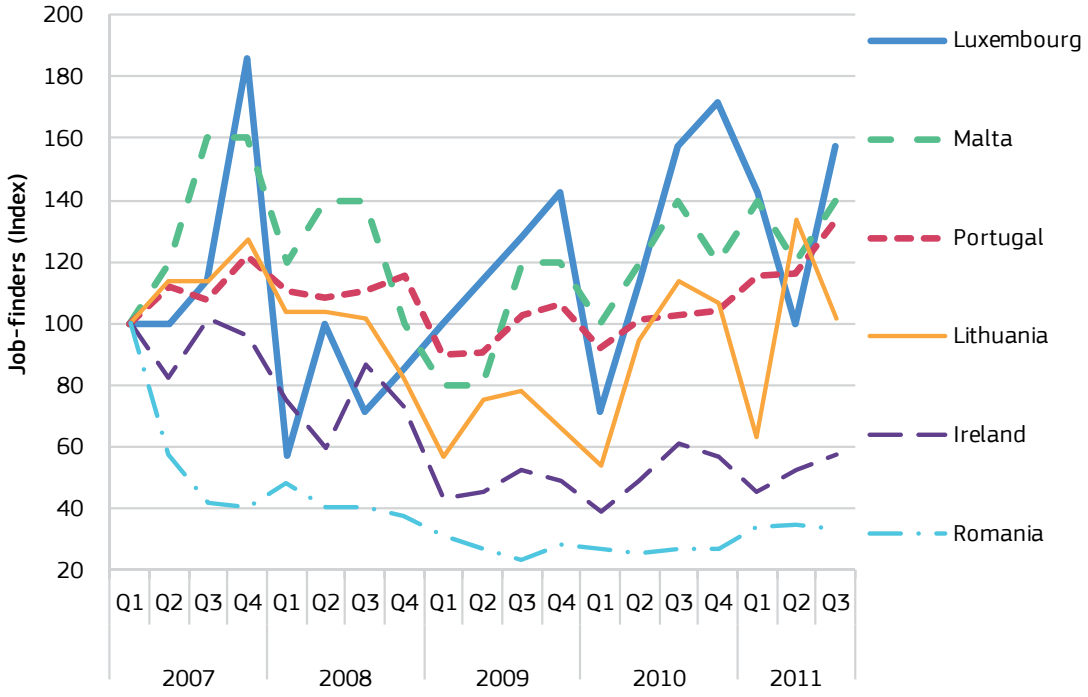
10 It should be noted that in the case of smaller countries the results of the LFS are more prone to sampling error.

11 In Romania the negative change is partly caused by an extremely high value incurred in the first quarter of 2007. However, starting from the second quarter of 2007, Romania also experienced the largest decline, together with Ireland.

12 Germany and the Netherlands have been excluded from the analysis of individual countries because of a relatively large number of missing values.

Chart 2.7 **Development of number of job-finders in selected countries**

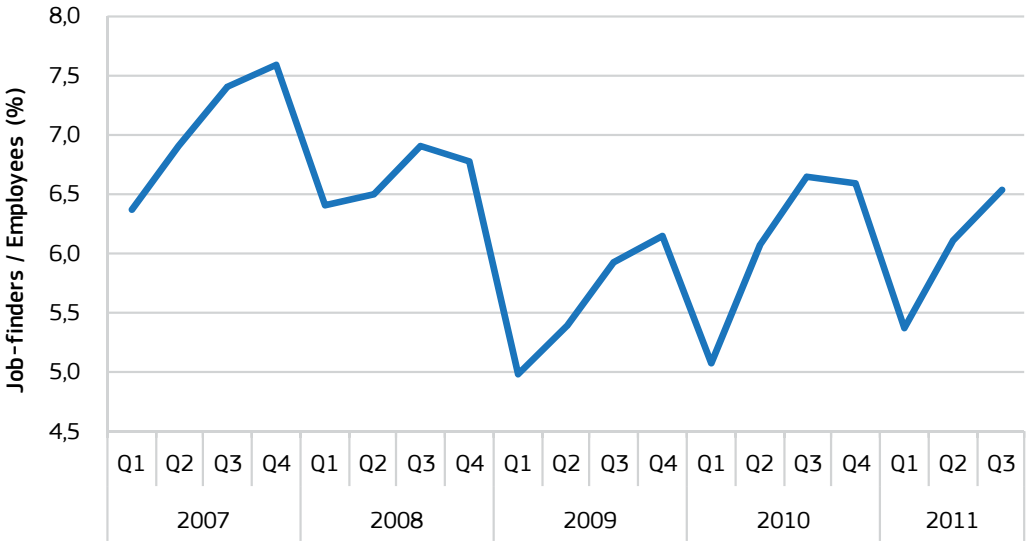
Countries with highest lowest job-finder growth 2007Q1 - 2011Q1,
Index 2007Q1-2011Q3, 2007Q1 = 100



Source: Eurostat, Labour Force Survey.
Absolute value 2011Q3 (in thousands): Luxembourg: 11; Malta: 7; Portugal: 261; Lithuania: 75; Ireland: 92; Romania: 132

Chart 2.8 **Job-finders rate, EU27**

Percentage, 2007Q1 - 2011Q3

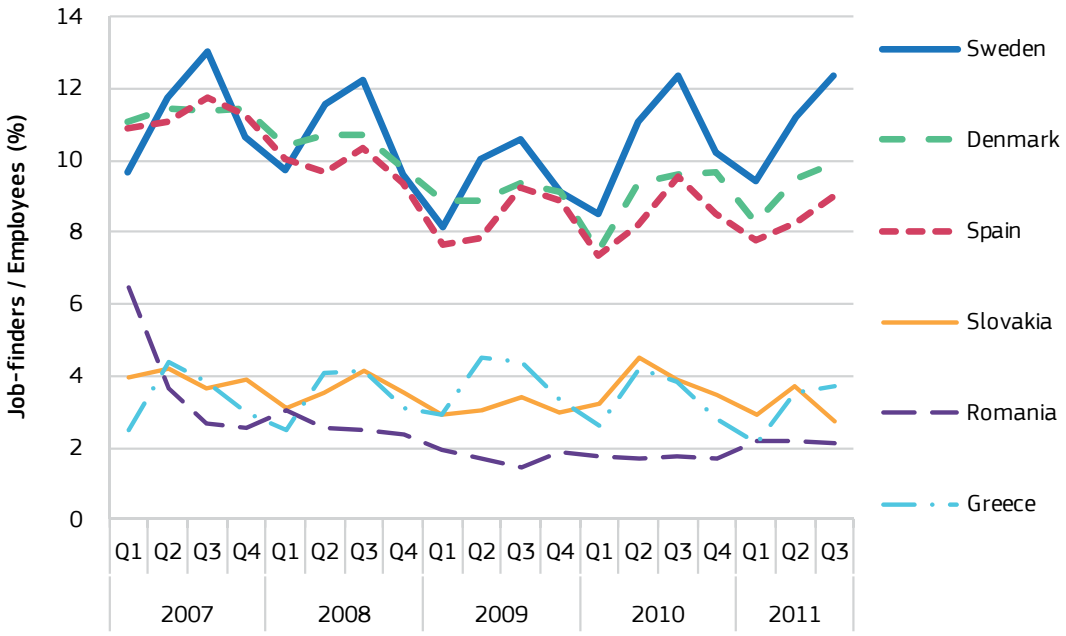


Source: Eurostat, Labour Force Survey - own calculations, all EU27 countries.
Absolute values 2011Q3: job-finders, 11.8 million.

Chart 2.9 Development of job-finders rate in selected countries

Counries with highest and lowest job-finders rates 2011Q3

Percentage, 2007Q1-2011Q3



Source: Eurostat, Labour Force Survey.

Rates 2011Q3: Sweden: 12,4; Denmark: 9.9; Spain: 9.0; Slovakia: 2.7; Romania: 2.1; Greece: 3.7

2.4 Development of recruitment and contractual arrangements

Increasing share of temporary recruitment...

Volumes of labour demand are influenced by contractual arrangements. Ceteris paribus, temporary contracts result in an increase in recruitment without a concomitant increase in employment. Similarly, part-time contracts will result in higher levels of recruitments if the corresponding full-time employment equivalent is maintained. A large share of temporary contracts may be an indication of a desire from employers for a flexible workforce where employment protection legislation makes permanent contracts less attractive. Fluctuations in demand due to seasonal factors are typically associated with an increase in temporary contracts.

As the analysis shows the proportion of temporary recruitment increased steadily from 56 per cent to 60 per cent between the first quarter of 2007 and the corresponding quarter in 2011. The general rise in the proportion of job-finders on temporary contracts may be due to employers taking a more cautious approach to recruitment in uncertain economic times. In line with an overall decrease in recruitment, the absolute number of job-finders on temporary contracts fell from 6.3 to 5.7 million over the same period.

Overall these changes have had a limited impact on the share of employees with a temporary contract, for two reasons: firstly, a high proportion of new recruits are concentrated in a limited number of sectors which are characterised by a high labour turnover rate; secondly, in view of the significant numerical difference between the number of job-finders and the number of employees, it will take a considerable period of time before the increase in temporary contracts among new recruits has a significant impact on the structure of employment.[13] These trends are mirrored by a separate analysis comparing recruitment on temporary contracts with recruitment on a permanent basis. Despite a decline for both forms of contract, recruitment on the basis of a temporary does not only show a higher volatility due to seasonal effects, but also a stronger recovery compared to recruitment on a permanent basis. In the third quarter of 2011, 7.6 million jobseekers had recently found a temporary job, while only 4.2 million had been offered a permanent contract in the same period.

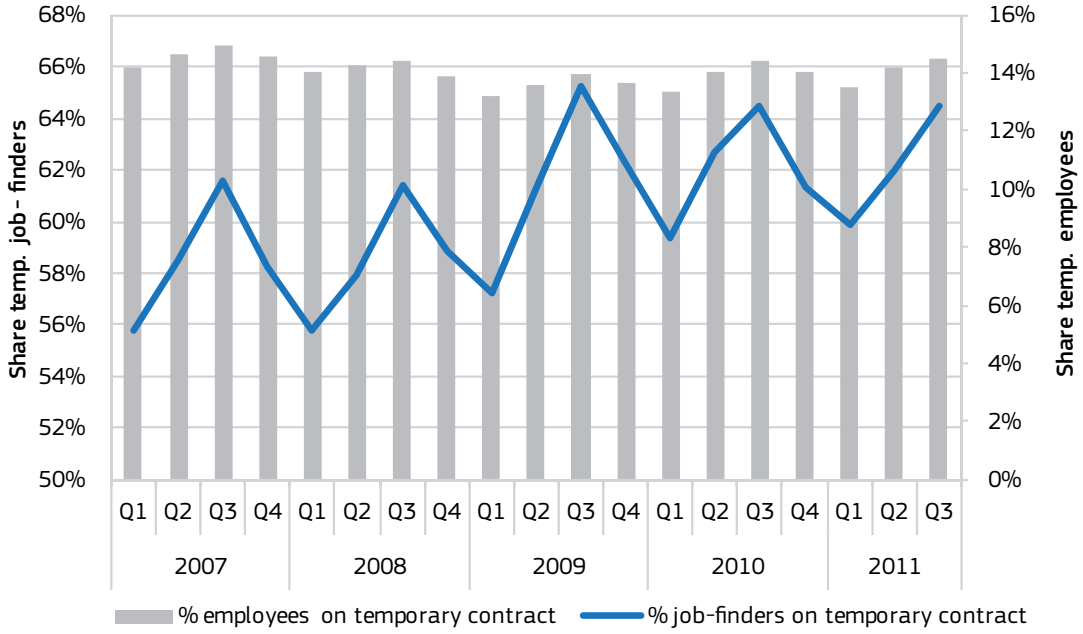
Temporary contracts were used extensively for seasonal work, especially in countries of Southern Europe such as Spain, Portugal, Italy and Greece particularly due to their large summer tourism industries. However, similar seasonal patterns existed in the Nordic countries, especially in Sweden and Finland, possibly also due to strong seasonal demand in tourism and agriculture.[14]

13 Eurofound (2011), 5th European Working Conditions Survey, http://www.eurofound.europa.eu/pubdocs/2011/82/en/1/EF1182EN.pdf

14 European Job Mobility Bulletin, issue 5 / January 2012, ec.europa.eu/social/main.jsp?catId=955&langId=en

Chart 2.10 **Share of employees and of job-finders with temporary contract, EU27**

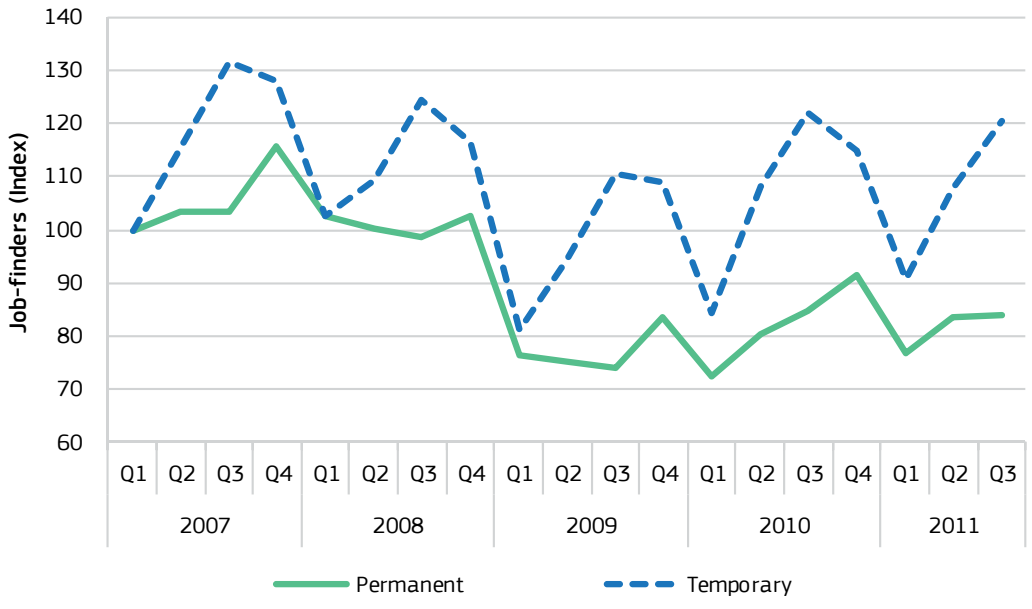
As a percentage of all job-finders and employees, 2007Q1 - 2011Q3



Source: Eurostat, Labour Force Survey, all EU27 countries.
Job-finders is the number of employees at the moment of the survey which had been employed for at most three months.
Absolute values 2011Q3: number of job-finders with temporary contract: 7.5 million (64% of total job-finders); number of employees with temporary contract: 26.3 million (14% of total employees).

Chart 2.11 **Development of number of job-finders with permanent and with temporary contract, EU27**

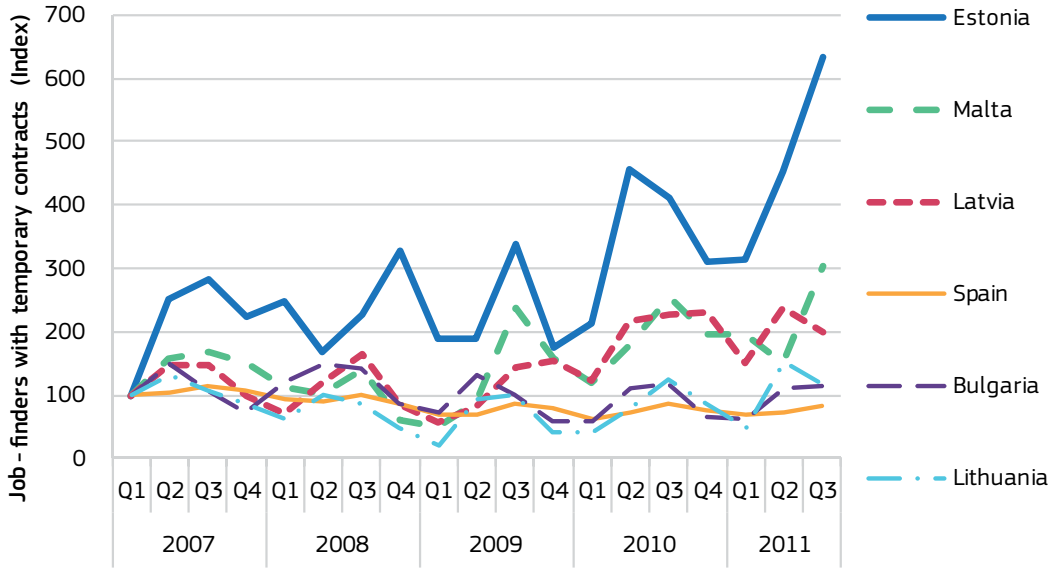
Index, 2007Q1 - 2011Q3, 2007Q1 = 100



Source: Eurostat, Labour Force Survey, all EU27 countries.
Absolute values 2011Q3: Permanent, 4.2 million; Temporary, 7.6 million.

Chart 2.12 **Development of number of job-finders with temporary contract in selected countries**

Countries with highest and lowest growth 2007Q1-2011Q1,
Index 2007Q1-2011Q3, 2007Q1 = 100



Source: Eurostat, Labour Force Survey.
Share of job-finders with temporary contract 2011Q3: Estonia: 40%; Malta: 34%; Latvia: 42%; Spain: 90%; Bulgaria: 46%; Lithuania: 30%

High increase of temporary recruitment in Estonia, Malta and Latvia

Looking at the pattern in individual countries, over the period from the first quarter of 2007 to the same quarter in 2011, Estonia, Malta and Latvia experienced an increase in the number of temporary contracts for the newly recruited (or job-finders). In particular, Estonia saw significant growth in this type of contract from the first quarter of 2007, reaching a comparatively high level in the second quarter of 2010 and again in 2011 (Chart 2.12). This development is likely to be related to a new law adopted in 2009 making dismissal of workers easier as part of a new approach to flexicurity.[15] This contrasts with the experience of Malta and Latvia where the growth in this type of employment fluctuates along a less steep though steadily rising trend. Continuity or a decline in temporary contracts was, however, evident in Spain, Bulgaria and Lithuania. Spain in particular traditionally has a high proportion of temporary contracts (90 per cent of the job-finders). Therefore the decline in Spain was likely to be due to the low levels of economic activity generally dampening demand on the labour market. For Bulgaria and Lithuania the same might apply, but the proportion of temporary contracts was far lower.

15 European Employment Observatory Review (2011), Adapting unemployment benefit systems to the economic cycle, ISSN 1831-9750.

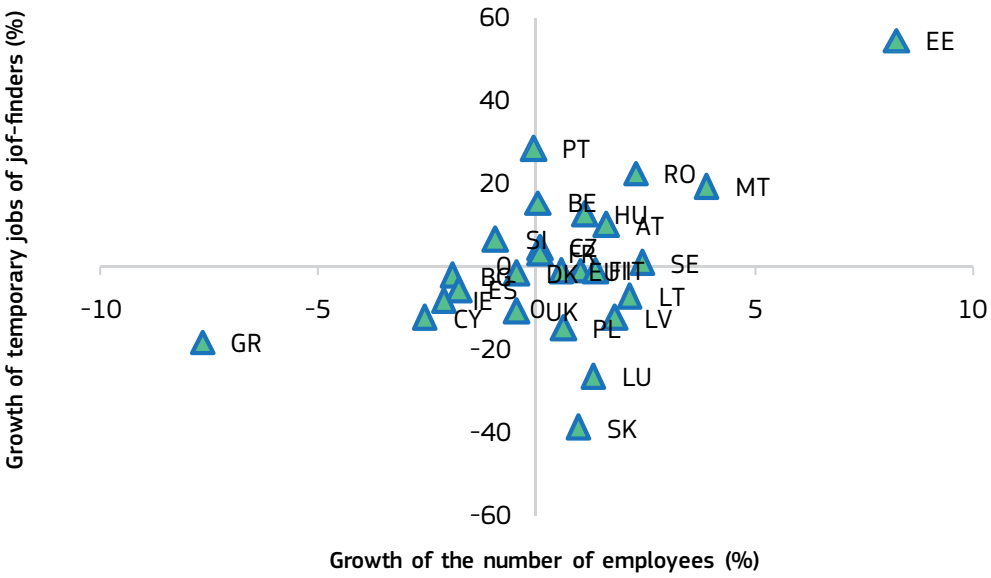
No clear relationship between growth in employees and job-finders on temporary contracts in the EU

In the following the impact of the increase in new recruits (i.e. job-finders in the reference period) with temporary employment contracts on employment trends is explored. The analyses in the chart shows that the relationship is not consistent; the number of EU member states located in the lower right-side quartile and in the higher left-side quartile – where the relationship is inverse – is roughly equivalent to the number of countries in the other two quartiles , where the trends move in a similar direction (see Chart 2.13).

The relation between employment trends and employment contracts is complex. Many of the temporary contracts issued to new recruits in recent years may be in respect of vacancies which have arisen because their former incumbents have left the labour force (i.e. replacement demand). If the post had been a permanent position, the statistics would register an increase in the volume of temporary contracts but there would be no change in the employment figures. Equally, if employment is expanding in sectors which are dominated by permanent contracts, employment trends may be positive although the number of recruits on temporary contracts may decline. It would require very detailed and comprehensive analyses of both employment trends and recruitment patterns in each Member State to fully understand the patterns evident in Chart 2.13 and this is beyond the scope of this report.

Chart 2.13 Growth rate of number of employees versus growth rate of number of job-finders with temporary contract

Percentage, 2011Q3 compared to 2010Q3



Source: Eurostat, Labour Force Survey.
25 countries including: Austria (AT), Bulgaria (BG), Cyprus (CY), the Czech Republic (CZ), Denmark (DK), Estonia (EE), Spain (ES), Finaland (FI), Ireland (IE), France (FR), Greece (GR), Hungary (HU), Italy (IT), Lithuania (LT), Luxembourg (LU), Latvia (LV), Malta (MT), Poland (PL), Portugal (PT), Romania (RO), Sweden (SE), Slovakia (SK), Slovenia (SI) and the United Kingdom (UK). Germany and the Netherlands are excluded.

The growth of temporary contracts, however, may pose challenges in terms of maintaining the quality of employment. For example, a study in the UK using an analysis of data from the British Household Panel Survey found that on average, temporary workers received less work-related training, lower wages and had less job satisfaction than their permanent colleagues. While such contracts facilitate labour market entry, if people remain trapped in them – which is more likely in times of labour surplus – this may aggravate labour market segmentation.[16]

Share of part-time job-finders shows slight increase

Across the EU27 the number of employees on part-time contracts taken as a percentage of all employees has changed only slightly over the period from the first quarter of 2007 to the third quarter of 2011. There was a slight increase of one per cent, though the proportion remained below 20 per cent throughout the reference period (Chart 2.14).

Over the same period, the proportion of all job-finders on part-time contracts fluctuated with a distinct seasonal pattern and this reflects the concentration of part-time working in sectors such as retail, hospitality and tourism. The trends in job-finders for both full-time and part-time contracts in the EU27 show that the peaks and troughs are fairly consistent between the two (Chart 2.15).

Fewer full-time job-finders as an effect of the crisis

The index of job-finders gaining part-time contracts has generally held up better than those gaining full-time contracts from around the fourth quarter of 2007 onwards (Chart 2.15). This is similar to the corresponding trend for temporary versus permanent contracts. The number of full-time job-finders was below 2007 values in 2009 and 2010. In each of the first three quarters of 2011, the number of part-time job-finders was nearly equal to the number in the same quarter of 2007, while the number of full-time job-finders was still considerably below the 2007 values. As a result, the number of part-time employees increased in recent years, from an average of 33 million in 2007 to an average of 35 million in 2011.

While offering flexible employment opportunities the risks resemble those connected with temporary work. The OECD

16 European Commission (2011), Employment and Social Developments in Europe, pg. 28-29, http://ec.europa.eu/social/main.jsp?catId=113&langId=en&pubId=6176&type=2&furtherPubs=yes; Booth A L, Francesconi M & Frank J (2000) 'Temporary jobs: Who gets them, what are they worth and do they lead anywhere?' (ISER Working Paper Series). Available at: https://www.iser.essex.ac.uk/publications/working-papers/iser/2000-13.pdf

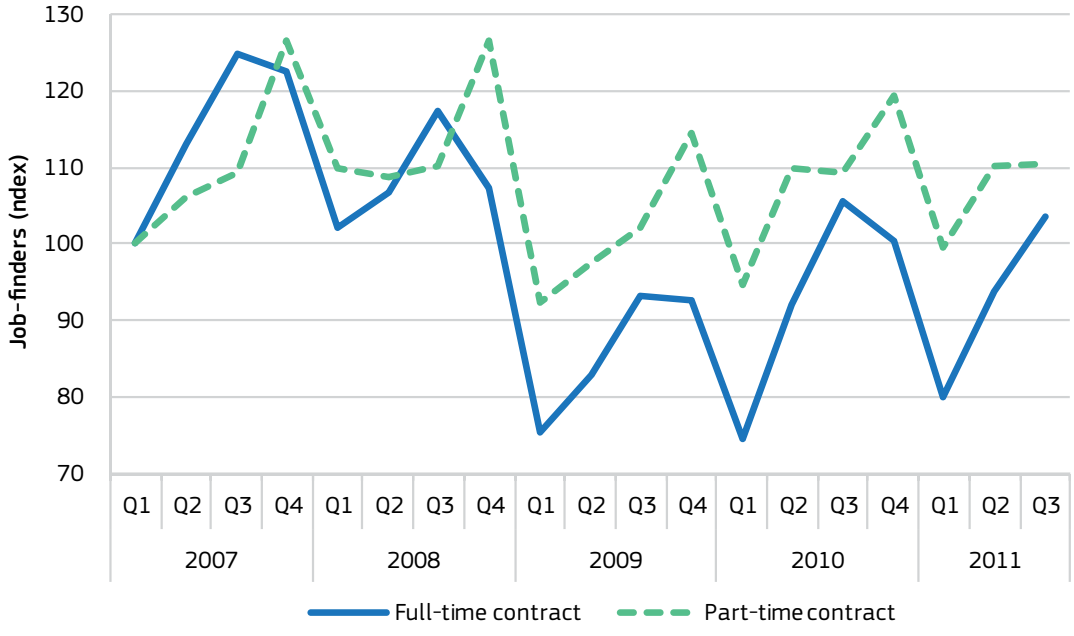
Chart 2.14 **Share of employees and of job-finders with part-time contract, EU27**

As a percentage of all job-finders and employees, 2007Q1 - 2011Q3

Source: Eurostat, Labour Force Survey, all EU27 countries.
Job-finders is the number of employees at the moment of the survey which had been employed for at most three months.
Absolute values 2011Q3: Number of part-time job-finders: 3.4 million (29% of all job-finders); number of part-time employees: 35.1 million (19% of all employees).

Chart 2.15 **Development of number of job-finders with full-time and with part-time contract, EU27**

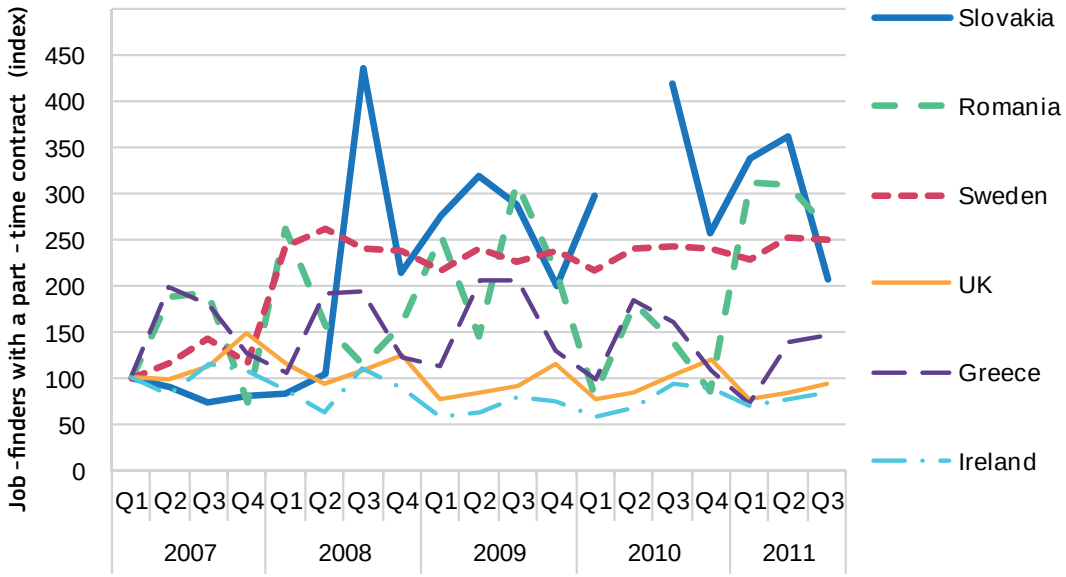
Index, 2007Q1 - 2011Q3, 2007Q1 = 100



Source: Eurostat, Labour Force Survey, all EU27 countries.
Absolute values 2011Q3: Full-time job, 8,4 million; Part-time job, 3.4 million.

Chart 2.16 Development of number of job-finders with part-time contract in selected countries

Countries with highest and lowest growth 2007Q1-2011Q1,
Index, 2007Q1-2011Q3, 2007Q1 = 100



Source: Eurostat, Labour Force Survey.
Slovakia 2010Q2 has an extremely high value (index: 659) and is left out for presentational reasons.
Share of job-finders with part-time contract in 2011Q3: Slovakia: 15%; Romania: 3%; Sweden: 40%; UK: 36%; Greece: 14%; Ireland: 38%

reported that part-time workers receive less training, as well as lower wages, less career development opportunities and less job security than their full-time counterparts.[17] The increasing number of part-time job-finders therefore does not necessarily imply that employees have a growing preference for part-time working. Employees might accept part-time jobs when labour market conditions are difficult. If this is the case, a good deal of job switching can be expected when the EU economies fully recover from the current recession.

Significant increase of part time recruitment in Slovakia, Romania and Sweden

The growth of job-finders on part-time contracts in selected countries shows the wide differences in developments over the first quarter of 2007 to the same quarter in 2011 (Chart 2.16). For example, Slovakia, Romania and Sweden ended the reference period with indices of 336, 310 and 228 respectively, the base level being very low in Romania and Slovakia and higher in Sweden. In Romania part-time work is still a marginal activity, with the number of part-time job-finders increasing from around 1,500 in the first quarter of 2007 to nearly 5,000 in the same quarter in 2011, still accounting for just 4 per cent of the job-finders. In Sweden, the number of part-time job-finders took off in the fourth quarter of 2007, more than doubling compared to the base quarter and then more or less remained at this level until the first quarter of 2011 (ending with an index of 228). A recent Eurofound survey[18] indicates that a large share of workers in Sweden wish to work fewer hours, and the increasing number of part-time workers may well reflect this desire.

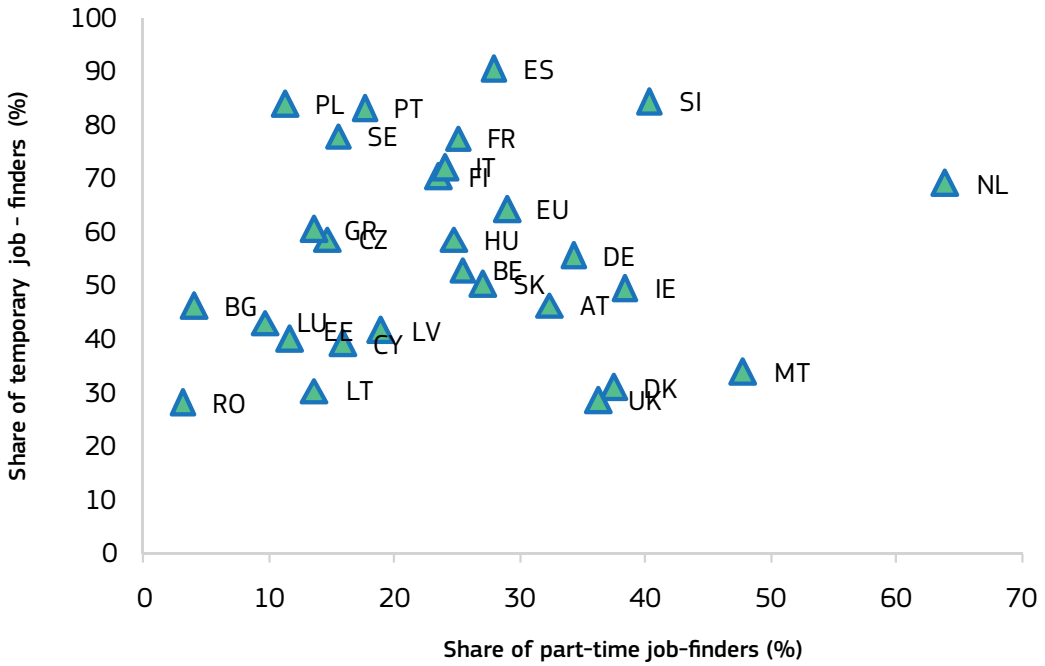
In three other countries the figures provide a contrast, though overall with relatively low or no growth in job-finders on part-time contracts. For example, the UK at 36 per cent had one of the highest shares of part-time job-finders in the EU (36 per cent) but there was only a small fluctuation around the base quarter right through the reference period, ending in the first quarter of 2011 at around 78. There is a similar pattern for Ireland (38 per cent) where part-time contracts are also an established and substantial part of the labour market. Most of the small peaks in both countries tended to occur around the fourth quarter in each year and this may be explained by the seasonal demand (in the lead up to Christmas and the New Year celebrations) for workers in the retail sector and to a lesser extent the hospitality sector. In contrast, the share of part-time work in Greece (14 per cent) was well below EU-average (29 per cent), with some of this no doubt due to the effects of the recession, but also reflecting historically low levels of part-time working.

17 'Does part-time work pay?' (OECD Observer, No 280, July 2010).

18 The 5th Eurofound Working Conditions Survey

Chart 2.17 **Share of job-finders with part-time contract versus share of job-finders with temporary contract, EU27**

Share of total job-finders, 2011Q3



Source: Eurostat, Labour Force Survey

Austria (AT), Bulgaria (BG), Cyprus (CY), the Czech Republic (CZ), Germany (DE), Denmark (DK), Estonia (EE), Spain (ES), Finland (FI), Ireland (IE), France (FR), Greece (GR), Hungary (HU), Italy (IT), Lithuania (LT), Luxembourg (LU), Latvia (LV), Malta (MT), the Netherlands (NL), Poland (PL), Portugal (PT), Romania (RO), Sweden (SE), Slovakia (SK), Slovenia (SI) and the United Kingdom (UK).

No clear relationship between hiring on a temporary and a part-time basis in the EU

As already noted, the expansion of temporary and part-time employment can result in deterioration in the quality of employment. For example, the incidence of employee up-skilling is likely to be less in the case of both temporary and part-time work than it is for permanent full-time employment. It is important, therefore, to explore whether the developments of temporary and part-time job finding are moving in tandem and whether concomitance is concentrated in some Member States as opposed to others (see Chart 2.17).

The analysis does not only show a strong variation across countries, but also that in most countries recruitment for a part-time job is not related to recruitment for a temporary job. These variations reflect how widely different labour markets function throughout Europe, with predominantly full-time, permanent jobs in Romania, a medium share of part-time and temporary jobs in Austria and a rather high share of both in the Netherlands. While for these countries a certain relationship might be assumed, many countries show an inverse picture for both dimensions. For example, in Poland the share of job-finders with a temporary contract is high, co-existing with a low share of recruitment for a part-time job, while the opposite holds true for Malta, UK and Denmark.

The flexibility of work varies not only between countries, but is also different between economic sectors. A recent report on job quality[19] distinguishes six types of flexibility:

- High and worker oriented (e.g. with parental leave, flexible work hours) as found in financial services sector
- High and company oriented (evening work, night work, shifts) as found in health and transport sectors
- Intermediate and life-course oriented (part-time work and parental leave) as found in the education sector
- Intermediate and day-to-day oriented (part-time work, flexible and atypical work) as found in the hospitality sector
- Intermediate and overtime oriented as found in the manufacturing sector
- Low as found in the construction sector

This means that even if recruitment is increasing for part-time and for temporary jobs in the EU between 2008 and 2011, the impact can be very different for individual countries and sectors.

19 Holman, D. and C. McClelland (2011), Job Quality in Growing and Declining Economic Sectors of the EU, (Walqing Working Paper 2011.3). Available at: http://www.walqing.eu/fileadmin/download/external_website/Newsletters___policy_briefs/WALQING_244597_WPaper2011.3_Del4.pdf

2.5 Developments in public employment services, temporary work agencies and online recruitment services

There are many different ways or 'channels' used to recruit workers such as advertisements in newspapers and journals, informal ways such as word of mouth and more formal methods including public employment services (PES), temporary work agencies (TWA), and online recruitment services (ORS). This report focuses on the analysis of different types of the more formal recruitment channels (the different types of recruitment agencies), which are at the interface of labour demand and labour supply each covering a specific segment of the labour market (see Chapter 5).

PES inflow of vacancies shows a gradual recovery after falling sharply...

PES were strongly affected by the recession. The sharp drop in the inflow of registered vacancies in the fourth quarter of 2008 was followed by a recovery. However, the vacancy inflow did not recover to the top pre-recession levels and the European PES were confronted with the difficult task of finding employment for an increasing number of registered jobseekers in a smaller pool of vacancies. (Chart 2.18).

While broadly in line with the trends identified for the European labour market in general, the fall in the twelve PES analysed was less steep and of shorter duration.[20] The PES index fell to a low point of 70 in the first quarter of 2009 and began to rise again from the second quarter of 2009 up to a high point of 97 in the third quarter of 2011, while the stock of vacancies of the total labour market in Europe reached a low point of just below 60 in the first quarter of 2010 showing a recovery to 80 in the first quarter of 2011 before declining again.

This finding suggests employers cut back on the use of other recruitment channels rather than cutting back on using the PES. The fact that registration of vacancies is free with PES may account for some of this apparent reaction, combined with the view that as unemployment increases, so employers' perception of the quality of the pool of job-finders using PES tends to rise.

Inflow of PES vacancies recovers strongly in Estonia, Germany, and Lithuania

The highest growth in PES job vacancies in the 12 countries was in Estonia, Germany and Lithuania, all ending the reference period with indices above the base quarter (Chart 2.19). In Estonia in particular the trend was quite volatile, with the number of registered job vacancies more than tripling from approximately 3,000 to 10,000 between the fourth quarter of 2009 and the second quarter of 2010. Similar to Estonia, in Lithuania the inflow of PES job vacancies also increased sharply in 2010.

In Germany, the PES inflow rose over the period. This could suggest that the PES in Germany was able to increase its market share during the crisis due to developing and implementing specialised services for employers (including offering human resources advice where certain skills were difficult to find) and working with them to help with the use of STW arrangements.[21]

In Denmark, the Czech Republic and Latvia, PES were strongly affected by the crisis. The inflows show a decline until around the first quarter of 2009, before bottoming out and remaining well below the base quarter throughout the rest of the period, with the relevant indices in the first quarter of 2011 at 38, 32 and 30 for Denmark, the Czech Republic and Latvia respectively. The inflow of PES vacancies in these three countries is most likely to reflect the overall strong decline in the stock of vacancies (see Annex, Table A2.14).

Demand in temporary agency work closely follows economic fortunes...

The use of agency workers more or less followed the development in GDP (Chart 2.20) over the period from 1996 to 2011.[22] The severity of the recent recession and the slow recovery are clearly evident in the more substantial dip in the agency worker index starting in 2008 and worsening in 2009. The fall in the number of agency workers by approximately 20 per cent in 2009 is in line with the percentage drop in all "temporary job-finders" in that year (see Chart 2.8). In 2010 the number of temporary contracts rose again, by 7 per cent. This percentage increase of agency workers is in line with the percentage increase in all job-finders (8 per cent) or job-finders with temporary job contracts (9 per cent).

20 The 12 countries represented in Chart 2.18 are numerically dominated by Germany and the UK, which together accounted for around 72 per cent of the average quarterly total of registered job vacancies for all 12 countries (see Part II). The decline of PES inflow in 2009 was average in the UK but less than average in Germany. Leaving out Germany and the UK, the inflow of the other 10 countries was only half the first quarter of 2008 reference value from the fourth quarter of 2008 to the fourth quarter of 2009.

21 European Commission, PES to PES Dialogue Programme, Peer Review, PES and effective services for employers, January 2012, Paris, (http://ec.europa.eu/social/main.jsp?langId=en&catId=105&newsId=1164&furtherNews=yes)

22 The number of temporary agency workers is influenced by a combination of factors including national custom and practice, with some countries (such as France, Germany and the UK) more disposed to using such workers as a flexible resource.

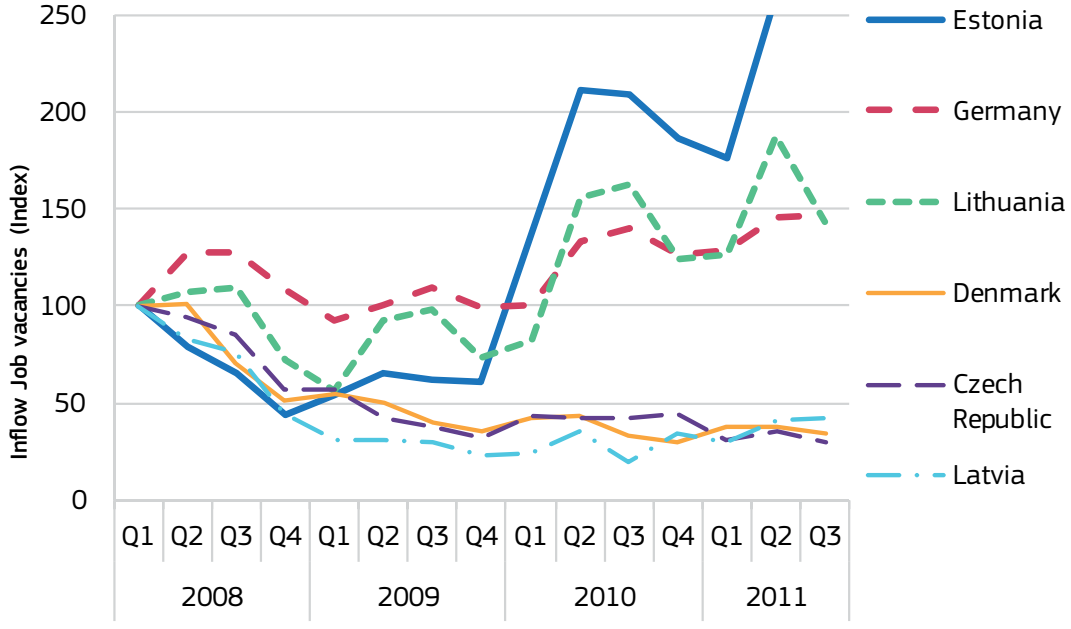
Chart 2.18 **Development of number of employees (right axis) and of PES job vacancy index (left axis)**

Index, 2008Q1 - 2011Q3, 2008Q1 = 100

Source: Public Employment Services; Eurostat, Labour Force Survey.
12 countries including: Austria, Czech Republic, Denmark, Estonia, Finland, Germany, Ireland, Latvia, Lithuania, Portugal, Sweden, United Kingdom.
Inflow is estimated for Lithuania and the Czech Republic for 2010Q4 and for the United Kingdom for 2010Q3. Absolute values 2011Q3: PES inflow registered job vacancies, 2.2 million; Employees, 83.6 million.

Chart 2.19 **Development of PES inflow of job vacancies in selected countries**

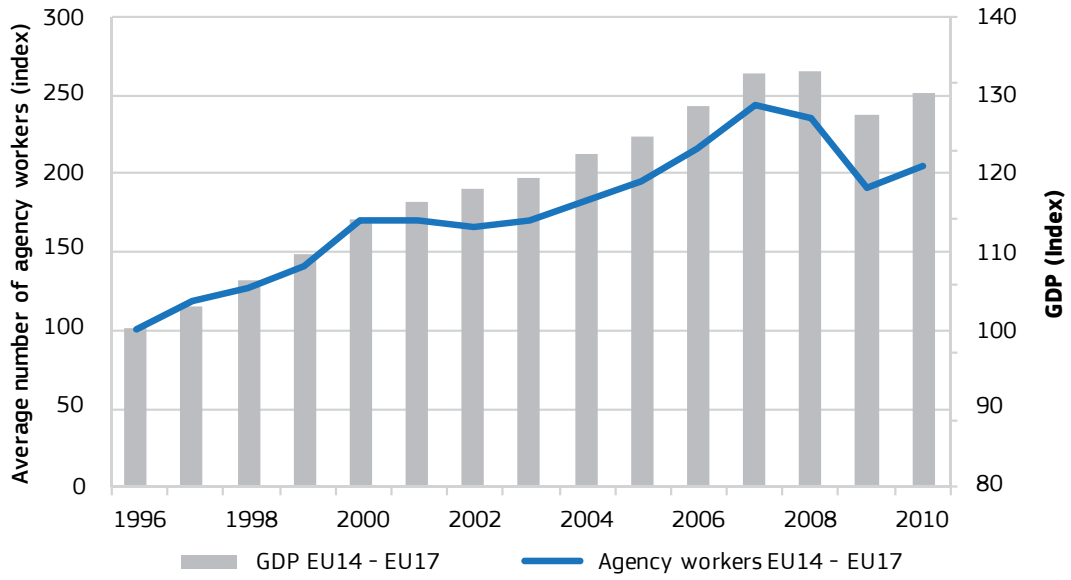
Countries with highest and lowest PES inflow growth 2008Q1-2011Q1
Index 2008Q1-2011Q3, 2008Q1 = 100



Source: Public Employment Services (from 12 countries with data available, see Chart 2.18).
Index values for Estonia not on chart: 2011Q1, 260; 2011Q3, 268.
Absolute value 2011Q3 (in thousands): Estonia: 13; Germany: 592; Lithuania: 41; Denmark: 27; Czech Republic: 40; Latvia: 8.

Chart 2.20 Development of GDP (right axis) and of number of agency workers (left axis)

Index, 1996-2010, 1996 = 100; 2003 = 169 (TWA); 2003 = 122 (GDP)



Source: Eurociett - own calculations; Eurostat, National Accounts.
14 countries including (1996-2003): Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Luxembourg, the Netherlands, Norway, Spain, Sweden, Switzerland, the United Kingdom
17 Countries including (2004-2010): 14 mentioned above and Hungary, Italy, Poland
The average daily number of agency workers or Full Time Equivalent (FTE) is the total number of hours worked by all agency workers in one year divided by the average number of hours worked in one year by a worker with a fulltime job with an open-ended contract.
Absolute values 2010: Average number of agency workers: 3.2 million; GDP: 11,401 billion.

However, the growth in the number of agency workers in 2010 varied strongly between countries, with particularly strong increases in:

- Germany (from 625,000 agency workers in 2009 to 793,000 in 2010 or +27 per cent)
- France (from 447,000 to 520,000 or +16 per cent)
- Poland (from 72,000 to 114,000 or +58 per cent)

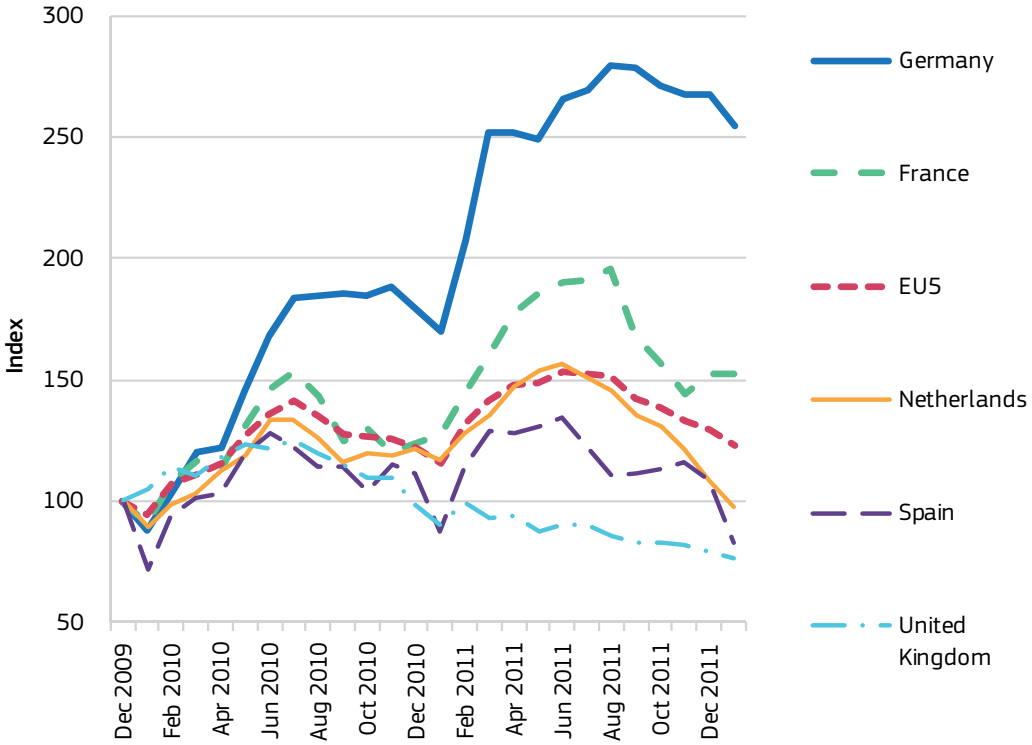
In contrast, the number of agency workers decreased strongly in the UK, from 1,068,000 agency workers in 2009 to 880,000 in 2010 (-18 per cent).

Figures on the inflow of vacancies from the temporary work agency Randstad cover the five countries (France, Germany, Netherlands, Spain and the UK) that are more disposed to using such workers as a flexible resource. These figures show that Germany experienced the most change between December 2009 and the same month in 2011 (Chart 2.21). The number of job vacancies for temporary workers started to increase from around the beginning of 2010, and continued to around mid 2011, before falling back slightly. For the other countries, the development was far less volatile. All countries except the UK showed peaks in demand in early to mid 2011 that were consistent with a seasonal demand for staff. In the UK the demand for temporary workers started to decline in around mid 2010 and never recovered, which is consistent with the modest economic performance in that country.

However, it is important to remember that the figures represent the trend in the business of just one major agency and so they may not be typical for the whole market for temporary workers. Nevertheless it adds value as an indicator because it shows the month-by-month changes in the demand for temporary workers as an alternative to the annual index analysed above.

Chart 2.21 **Development in the number of open job vacancies reported by one international temporary work agency**

Index, Dec 2009 - Jan 2012, Dec 2009 = 100



Source: Randstad (5 countries).

Numbers are based on the number of open job vacancies published by the subsidiaries of the Randstad Group on the internet. Randstad only publishes job vacancies that cannot be filled directly from the available pool of candidates. The figures are based on daily measurements of the number of open job vacancies.

Absolute value Jan 2012 (average per day): France, 7,011; Germany, 9,297; the Netherlands, 5,464; Spain, 1,013; the United Kingdom, 6,919; total of 5 countries, 29,704.

Online recruitment services – index not yet back to 2008 levels

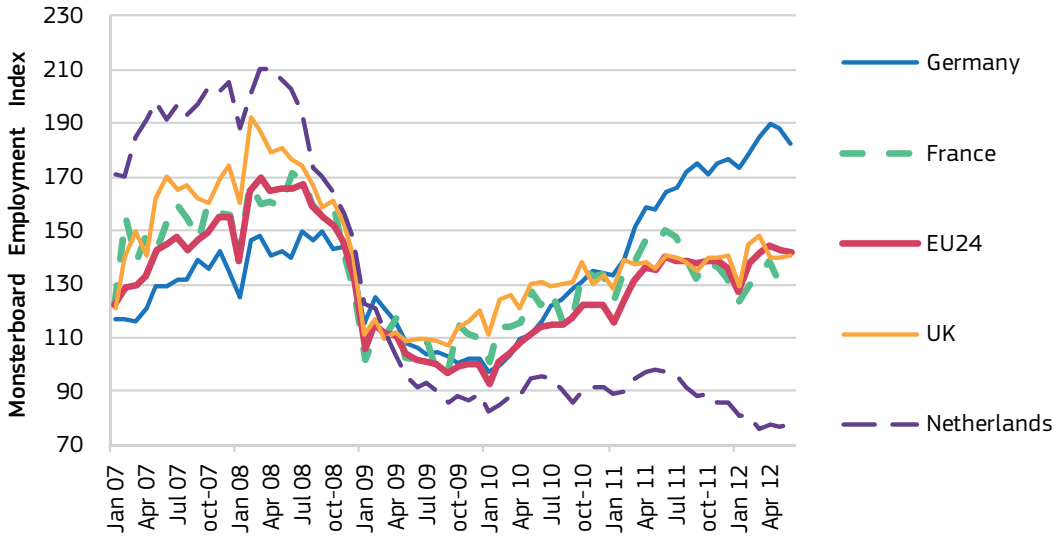
A major provider of online recruitment services is the private sector company Monsterboard. The Monsterboard Employment Index (MEI) represents online job vacancies in 24 European countries on the Monsterboard website (Chart 2.22).[23] In aggregate, these countries showed a decline in the employment index from the end of 2008 which continued until the end of 2009 before a modest increase set in. This is consistent with the effects of the recession and the muted recovery in most countries represented in the index.

However, some individual countries show different trends. For example, by March 2011 the index for Germany had regained the same position (150) as it had in September 2008 before the index dropped. France and the UK also showed signs of recovery after the downturn, but stabilised with indices of around 140, close to the figures for early 2007. The Netherlands saw a larger fall in 2008 and 2009 and has not recovered since then. This is partly consistent with the Dutch PES report on vacancies in the Netherlands which shows that the total inflow of vacancies dropped by 11 per cent in 2011. Similarly the market share held by specialist recruitment websites dropped from 23 per cent in 2010 to 19 per cent in 2011.

23 Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Greece, Luxembourg, Netherlands, Norway, Poland, Russian Federation, Slovakia, Spain, Sweden, Switzerland, Turkey and the UK

Chart 2.22 Monsterboard Employment Index

Index, Jan 2007 - June 2012



Source: Monsterboard

The Monsterboard Employment Index is a representation of job opportunities on a selection of career websites and job listing websites in Europe.

Absolute values: not available.

2.6 Conclusion

The recession continues to exert its effect on the dynamics of the recruitment market. The analysis here shows that, overall, the number of job vacancies in Europe recovered from the fall in 2009, but the pre-crisis levels of 2007 had not been reached by 2011. Nevertheless, the number of hirings in the third quarter of 2011 was still 12 million.

Further effects of the hesitant economic recovery can be found in the increasing shares of job-finders with temporary and part-time contracts. The increasing use of these types of contracts can enhance flexibility in the labour market and encourage employers to recruit even in times of economic uncertainty. The data analysed in this chapter is certainly consistent with such a response.

However, there is the potential for an expansion of temporary and part-time contracts to have an adverse impact on the quality of employment.[24] For example, various studies have shown that part-time and temporary workers tend to receive less training and this in turn has potential implications for skills development in the labour market and social inclusion in the longer term.

The slow economic recovery is the main cause of the slow growth in the number of employees, but employers using under-utilised labour they retained during the recession may have played a role in fewer new posts being created. This being the case, once any spare capacity has been exhausted, prospects for new recruitment should increase, assuming favourable economic conditions.

The stock of job vacancies in the EU27 has been consistently below the pre-recession base period, reflecting the low overall demand for labour during the recession.

The development in recruitment closely followed that of the number of employees, indicating that employers have to some extent been recruiting as economic fortunes improve. The use of temporary contracts varied greatly between countries. Their use is likely to be more common where levels of employment protection legislation are relatively high. Job-finders on part-time contracts tended to be less affected by fluctuations, suggesting that employers were more cautious in committing to full-time workers.

24 The EU provides a basic framework for working time through its directives on working time (Directive 2003/88/EC), part-time work (Directive 97/81/EC) and temporary agency work (Directive 2008/104/EC)

The development of recruitment differs between countries, while Germany is relatively little affected Romania is still strongly affected, whether one looks at the stock of job vacancies or the number of job-finders. The number of temporary job-finders increased strongly in Estonia and Latvia, while the number of part-time job-finders increased strongly in Slovakia and Sweden. In general there is no clear relationship between developments in total employment and that of temporary and part-time work.

However, the low degree of temporary recruitment in the UK and Denmark (less than 30 per cent) compared to a high degree of temporary recruitment in Spain (90 per cent) suggests a relationship with employment protection to the extent that employers in countries with lower overall employment protection more often recruit new members of staff on permanent contracts.

Part-time recruitment is almost absent in Romania and Bulgaria, while it amounts to 70 per cent of recruitment in the Netherlands. This may reflect a difference in welfare level and affordability of part-time work, but also cultural history.

For all recruitment channels (vacancies, job-finders, public employment service, temporary work agencies, online services) analysed in this chapter, recruitment closely followed economic fortunes, with a sharp drop in 2009 and only partial recovery afterwards.

3 Development of sectoral and occupational demand

3.1 Introduction

This chapter discusses the development of vacancies and recruitment in specific economic sectors and occupations including by educational level and field. The main objective is to identify top demanded and top growth occupations in Europe, including information on whether PES data show a specific profile compared to the overall labour market. The results from a number of national studies have been taken into account to complement the information about the most demanded occupations derived from purely statistical sources. The chapter concludes with some analyses of the incidence of over- and under-qualification in main occupational groups.

In this report, the **top-demanded occupations** are defined as the occupations with most job-finders in the third quarter of 2011 (LFS data) taking into account the impact of seasonal factors (for data sources and indicators see Chapter 1).

The **top-growth occupations** are defined as those occupations which experienced the largest increase in the volume of job-finders in recent years. Unfortunately, due to the change in ISCO in 2011 it was not possible to present a time series beyond 2010. The analysis identifies top growth occupations within each of the nine main occupational groups as defined by ISCO. This has the merit of providing information on trends across a much wider range of occupations than would be the case if the analyses did not cover each of the main occupation groups. Furthermore, if each occupation group was not included, the top growth occupations would consist solely of relatively low skilled occupations which had high turnover rates. For job-finders the top-growth occupations are identified by the difference between the annual values of 2010 and 2007, which are the first and last available full years on this indicator.

When interpreting the findings it should be borne in mind that there is no direct relationship between job-finder trends and employment trends. The term 'job-finders' in the LFS refers to the total number of people who have been hired during a reference period. The vacancies these hirings fill are made up of expansion demand, replacement demand (i.e. for those leaving the labour force) and turnover (i.e. those leaving a job but remaining in the labour force). For example, the volume of job-finders could expand while employment is contracting. This would occur if the rate of turnover increases due to a rise in the share of temporary or part-time work. Alternatively, it is possible that employment remains stable (or even increases) while the number of job-finders is decreasing. This typically occurs in periods of recession, because the employed are more reluctant to change their job. Job retention schemes (e.g. short-time working arrangements, employment protection schemes) lead to reduced turnover which in turn is reflected in lower volumes of vacancies.

The International Standard Classification for Occupations (ISCO) defines ten main 'one-digit' occupational groups which contain increasingly detailed subgroups up to four-digit level. For this report the approach of the CEDEFOP skills forecasts is used grouping the main occupational groups together in four levels of skills:[1]

Skills level	Main occupational groups (ISCO 1-digit)
Highly skilled	Legislators, managers, professionals and technicians
Skilled non-manual	Clerks and services/sales workers
Skilled manual	Agricultural, craft and trade workers, machine operators
Elementary	Labourers, elementary service/sales workers

In order to analyse educational requirements six levels of the International Classification of Education (ISCED) are categorised as high, medium and low qualification levels:

Qualification level	Education levels (ISCED)
High	First and second stage of tertiary education (levels 5 and 6)
Medium	Upper secondary and post-secondary non-tertiary (levels 3 and 4)
Low	Primary and lower secondary education (levels 1 and 2)

1 Cedefop (2010), Skills Supply and Demand in Europe, Medium-Term Forecast up to 2020, page 68, http://www.cedefop.europa.eu/EN/publications/15540.aspx

3.2 Development of recruitment by sector

Job vacancies for 15 countries – strong decline in public administration, industry, construction and transportation

The business services sector (including finance and ICT) accounted for the largest number of job vacancies. This sector alone had 611,000 job vacancies in the third quarter of 2011 across the fifteen countries for which data is available (since 2008, equivalent to a share of 35 per cent, see Chart 3.1). However, in the nine new Member States, manufacturing accounted for most vacancies, amounting to 34,000 in the third quarter of 2011 (a 24 per cent share). The skills needed in old and new Member States may differ less than the differences in the sector structure suggests, as in new Member States more service activities take place within the manufacturing sector, and these are typically outsourced in old Member States.[2]

Both, the public and private sector were affected by the crisis (see Chart 2.4 in Chapter 2). There were some differences, however, in the extent to which different sub-sectors within the broad public service were affected as shown below, comparing the average of the first three quarters of 2011 with those of 2008:

- Moderate decline:
  health and social work (-49,000; -16 per cent)[3]
- Strong decline:
  public administration (-65,000; -54 per cent)

The analysis of vacancies in the private sector also reveals significant differences generally between sectors demanding non-manual and manual skilled workers:

- Moderate decline:
  trade, repair (-9,000; -3 per cent); accommodation and food services (-7,000; -5 per cent)
- Strong decline:
  industry (-97,000; -34 per cent); construction (-44,000; -33 per cent) and transportation and storage (-49,000; -41 per cent)

The strong decline in vacancies in industry, construction, transportation and storage was mirrored by a shrinking share of these sectors in the overall job vacancies. For example, the share of labour demand in industry decreased from 13 per cent in the first quarter of 2008 to 7 per cent in the first quarter of 2010, recovering in 2011 when the share climbed up again to a value of 11 per cent. This development was even more pronounced in the nine new Member States, where recovery in industry was more partial, falling from 30 per cent to 17 per cent and then recovering to 24 per cent.

The relatively small sectors of public administration, arts and other services, lost shares more abruptly, falling from 5 to 3 per cent in the second quarter of 2010 and from 10 to 6 per cent in the first quarter of 2010 respectively, while remaining flat in 2011. The share of public administration developed differently even between countries in the same region of Europe. For example, the share increased the most in Latvia between the third quarters of 2008 and 2011 (from 25 to 44 per cent) but the second biggest fall was in Lithuania (from 19 to 10 per cent - slightly less weak than in Romania).

Job-finder data for EU27 confirm the decline in construction, industry and public administration and show a decline in ICT and finances

The overall composition of labour demand – as measured by job-finder data - showed more continuity than change over the reference period compared to vacancy data. To some extent, this may reflect the fact that the volumes of job-finders are much greater than the corresponding volumes of vacancies and, consequently, relatively minor contractions in demand are not so apparent (see Chapter 1, Introduction). All the same, most of the decline in hirings occurred in the same sectors thus confirming the results from the vacancy analysis for all EU27 countries. Moreover the job-finder data also show that the recession had a negative impact on demand in the ICT and financial services sectors.

The trends in the volume of job-finders by sector can be divided into three categories; declining in trends; stable and increasing trends. These are summarised below, comparing the third quarters of 2008 and 2011:

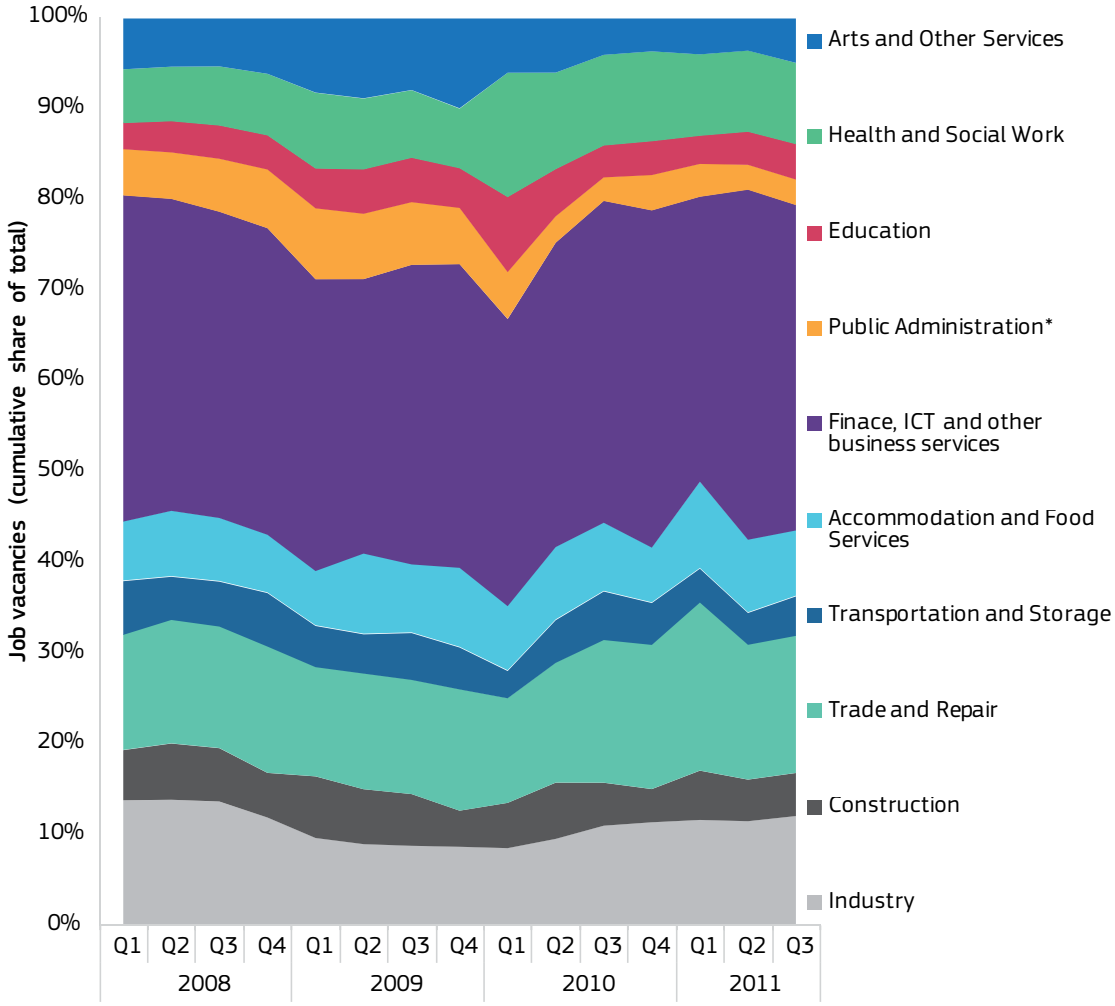
- decline in
  - construction (from 1.3 to 1.1 million; -16 per cent)
  - industry (from 2.1 to 1.8 million; -14 per cent)
  - ICT (from 0.3 to 0.2 million; -14 per cent)
  - finance (from 0.4 to 0.3 million; -14 per cent)
  - public administration (from 0.6 to 0.5 million; -13 per cent)
  - trade & repair (from 1.95 to 1.76 million; -10 per cent)
  - transportation & storage (from 0.61 to 0.56 miliion; -10 per cent)
- rather stable (decline < 10 per cent)
  - agriculture (0.4 million ; +0 per cent)
  - arts/other services (0.8 million ; +0 per cent)
  - education (between 0.5 and 0.6 million; -6 per cent)
  - human health and social work (around 1.1 million, - 4 per cent); and
  - other business services (around 1.3 million; -4 per cent)
- increase
  - accommodation and food services (from 1.21 to 1.25 million; +4 per cent)

2 Hanzl-Weiss, D. and R. Stehrer (2010), The role of services in the new Member States: A Comparative Analysis Based on Input-Output Tables, wiiw Research Reports no. 36, The Vienna Institute for International Economic Studies, wiiw

3 See Annex, Table A2.4 average data from the first three quarters in 2008 and 2011. The data in the Annex show an increase of 21,000 job vacancies in health and social work vacancies (+10 per cent), but of this change is inflated by approximately 70,000 job vacancies due to a change of definition in Germany.

Chart 3.1 **Composition of job vacancies by economic sector**

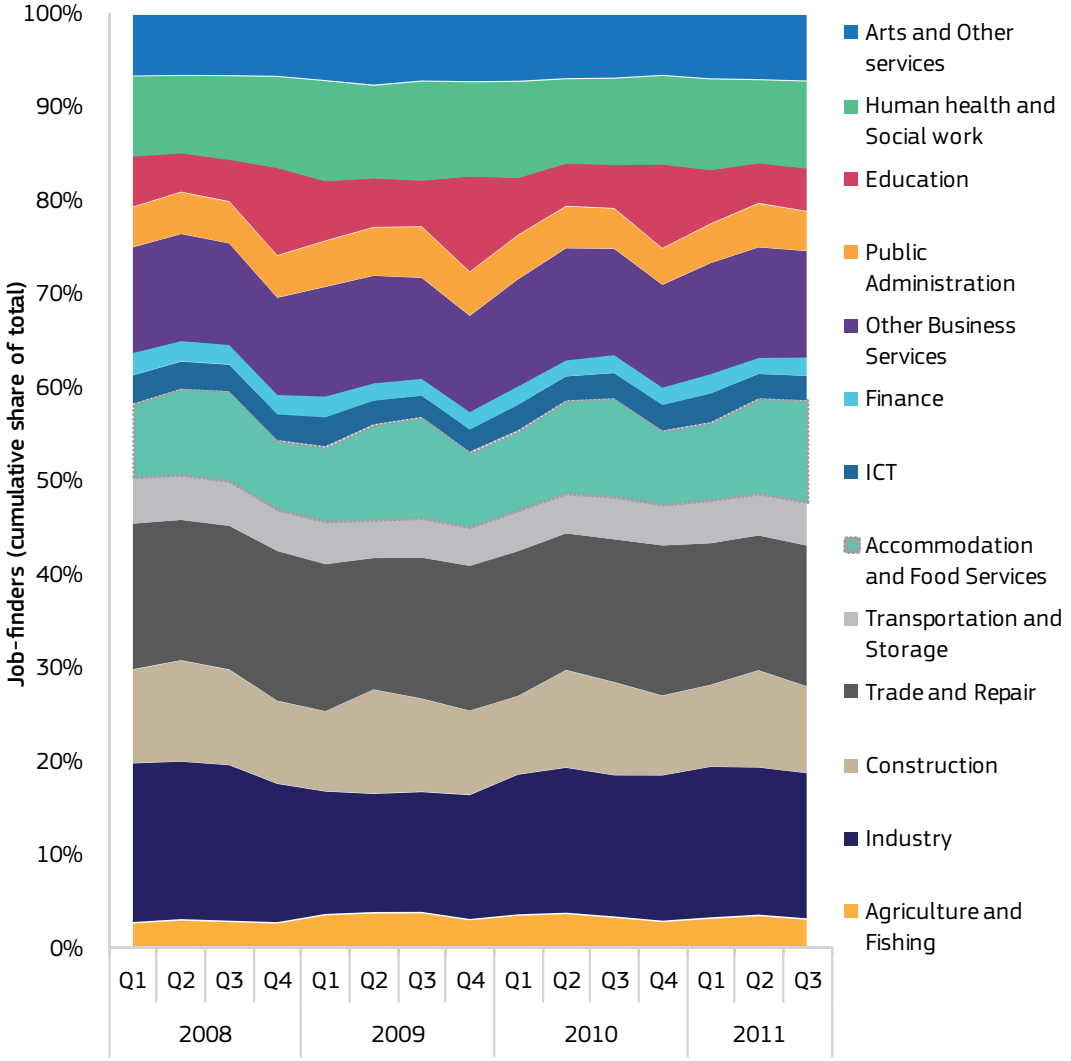
Share, 2008Q1 - 2011Q3



Source: Eurostat, Job Vacancy Statistics,
Economic sectors: NACE Rev 2, 2-digit
15 countries including: Bulgaria, Cyprus, Czech Republic, Germany, Estonia, Latvia, Lithuania, Luxembourg, Netherlands, Portugal, Romania, Sweden, Slovenia, Slovakia, United Kingdom
Absolute value 2011Q3 (in thousands): Industry, 205.7; Construction, 80.7; Trade and repair, 258.1; Transportation and storage, 74.3; Accomodation and food serives, 123.9; Finance, ICT and other business activities, 610.7; Public administration, 48.9; Education, 67.3; Human health and social work, 152.5; Arts and other servies, 85.3.
* Excludes Portugal.

Chart 3.2 **Composition of job-finders by economic sector**

Share, 2008Q1 - 2011Q3



Source: Eurostat, Labour Force Survey, all EU27 countries.
Economic Sectors: NACE Rev 2, 2-digit
Values for Slovakia 2011Q2 are estimated.
Absolute value 2011Q3 (in million): Industry 1.8; Construction 1.1; Trade and Repair 1.8; Transportation and Storage 0.6; Accommodation and food services 1.3; Finance, ICT and other business services 1.9; Public administration 0.5; Education 0.5; Health and Social Work 1.1; Arts and other Services 0.9.

Although continuity prevails, in the shorter term some changes are to be noted in the overall structure of recruitment: Again, industry and construction were most sensitive to the crisis, the share of job-finders in industry was falling from 17 per cent in the third quarter of 2008 to 13 per cent in the same quarter of 2009, before recovering to 15 per cent in 2010 and 2011. The only other sector with a declining share was construction, from 10 per cent in the third quarter of 2008 to 9 per cent in the same quarter in 2011. The accommodation and food services sector is the only sector that showed an increase in recruitment, from 9 per cent in the third quarter of 2008 to 11 per cent in the same quarter of 2011.

The observation that the number of job vacancies responded strongly to the crisis in sectors such as industry and construction, while the number of job-finders (i.e. proxy for filled vacancies) declined only slightly, implies that average vacancy durations declined. This, in turn, suggests that employers in those sectors recruit workers faster in times of crisis. In trade and repair however, the decline in the number of job-finders (-10 per cent) between the third quarters of 2008 and 2011 is larger than the decline in job vacancies (-3 per cent). This could be a first indicator of the possibility of increasing recruitment difficulties in the trade sector (see further Chapter 4), but could also show that the sector postpones hirings in times of uncertainty.

Fast adjustment in employment levels but nevertheless continued recruitment in manufacturing and construction - signs of greater job retention in services

The sector developments in recruitment are broadly in line with employment trends. For example, employment weakened in construction and there was an overall decline in manufacturing (despite intermittent recoveries).[4] In terms of numbers of employees and job-finders, the percentage changes between the third quarters of 2008 and 2011 were generally comparable in the industry sector (-9 per cent employees and -14 per cent job-finders respectively) and construction sector (-17 per cent employees and -16 per cent job-finders). This means that employers in these sectors adjusted their staffing numbers to business activity relatively quickly.

In other sectors, the crisis impacted more on recruitment than on employment. For example in ICT, finance and public administration, the number of job-finders decreased sharply (between -13 and -15 per cent) between the third quarters of 2008 and 2011 while employment in those sectors declined by only -2 to -3 per cent. Many of the jobs in these sectors are relatively well paid and it would not be surprising if the crisis had the effect of increasing job-retention significantly.

In the education and human health sectors, the numbers of job-finders and employment developed in opposite directions over the same period, with a declining number of job-finders (with -6 and -4 per cent respectively) and increasing employment (with +3 and +7 per cent respectively). Again, this indicates a greater level of job retention, but the decline in the number of hirings is moderated by the need to recruit an expanding number of staff. Employment in these sectors is mainly funded by the State and demand is driven mainly by demographic factors. Thus, to some extent, these sectors are insulated from the vagaries of the business cycle. However, even in sectors with declining recruitment, demand for specific occupations can still increase, as will be shown in the next section.

3.3 The development of demand by occupation: the most sought after occupations

In the following sub-sections the development of occupational demand is considered from three perspectives. Firstly, information on job-finders is used to identify the occupations which have experienced the strongest growth over the reference period. Secondly, the volume of vacancies notified to the PES is used to identify the strongest growing occupations in that segment of the market and, finally, the results from national studies are used to augment the results from the LFS and PES data sources.

Development of demand – job-finders

Mirroring sectoral demand – recruitment in skilled manual jobs declined most

Although recruitment demand by broad skills levels fluctuated significantly over time (Chart 3.3), this was mainly due to seasonal effects. Overall, recruitment was lowest for all broad skills levels in 2009 or the first quarter of 2010 and recovered to the end of the period (third quarter of 2011) in varying degrees.

Box 1: Methodological note – skills level and main occupational groups

As noted in the introduction to this chapter, a simple table summarises the relationship between skills levels and main occupational groups – see also the footnotes to Chart 3.4.

Skills level	Main occupational groups (ISCO 1-digit)
Highly skilled	Legislators, managers, professionals and technicians
Skilled non-manual	Clerks and service/sales workers
Skilled manual	Agricultural, craft and related trade workers, machine operators
Elementary	Labourers, elementary service/sales workers

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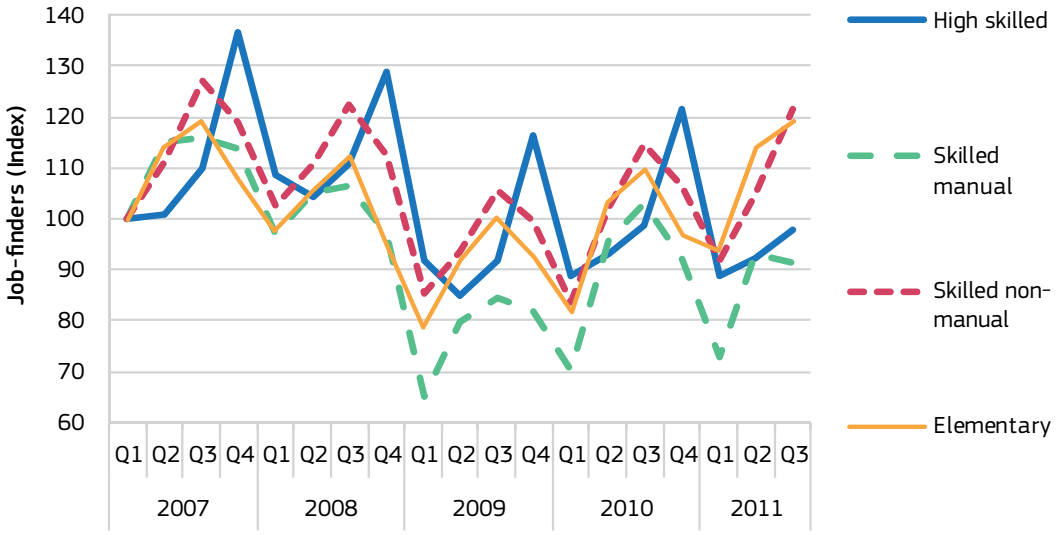
Chart 3.3 **Development of number of job-finders by aggregates of main occupational groups**

Index, 2007Q1 - 2011Q3, 2007Q1 = 100



Source: Eurostat, Labour Force Survey, all EU27 countries.
Aggregated groups based on ISCO 1-digit, ISCO-88 (2007Q1-2010Q4) and ISCO-08 recoded at 4-digit level into ISCO-88 (2011Q1-2011Q3) and then aggregated to ISCO 1-digit level
Groups (absolute values of 2011Q3 in million):
High skilled: managers, professionals, associate professionals and technicians (2.2)
Skilled manual: skilled agricultural, fishery and craft workers and machine operators (2.4)
Skilled non-manual: clerks and services and sales workers (3.5)
Elementary: elementary sales and services occupations, labourers (2.1)

Corresponding to the development in sectoral demand, skilled manual jobs were more affected by the crisis than the other broad skills groups. Thus, comparing the index values of the first quarter of 2011 with the same quarter of 2007, the index value for skilled manual jobs was below 80 while the values for the other broad skills levels were all between 90 and 100.

The overall development of the demand for the main occupational groups shows a similar pattern – high volatility (seasonal effects) between quarters and more continuity than change between years (Chart 3.4). The high degree of continuity is not surprising since significant structural changes only develop over a longer period of time. Variations in the shares of job-finders display mostly a seasonal pattern, with a seasonal peak for *'agricultural and fishery workers'* in the second and third quarters of each year and for *'service and sales workers'* a peak in the third quarter in preparation for the Christmas and New Year sales spike.

Shrinking recruitment of craft workers, operators and technicians during the crisis

Nevertheless, a number of interesting changes regarding volumes can be observed when the first quarters of 2011 and 2007 are compared (see Annex, Table A3.3):

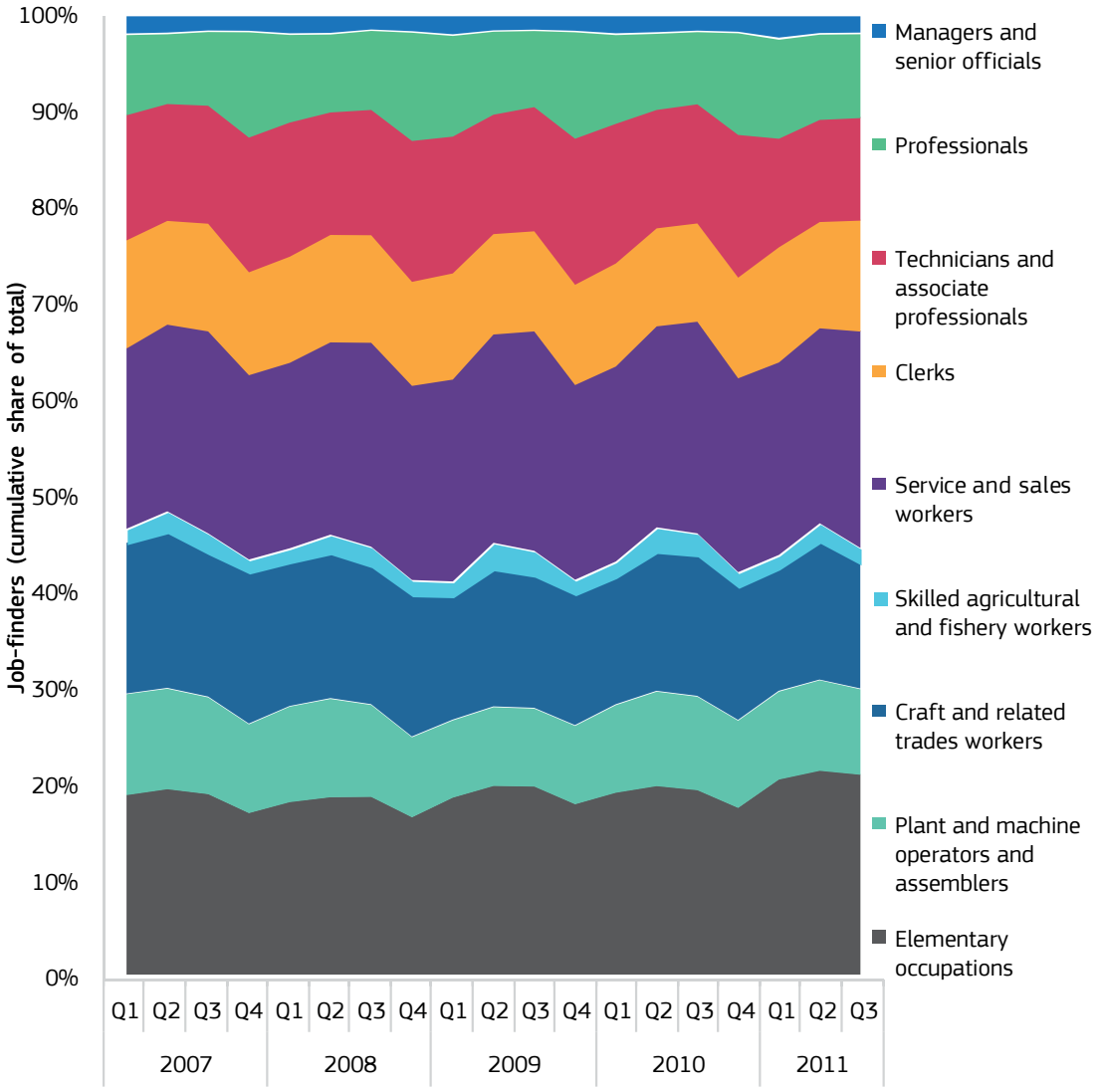
- increase (in number of job-finders)
  - managers (+13,000; +7 per cent)
  - professionals (+52,000; +6 per cent)

- strong decline
  - high-skilled technicians (-319,000; between - 20 and - 30 per cent),
  - all skilled manual occupational groups: craft and related trade workers (- 449,000), plant and machine operators (-252,000) and skilled agricultural workers (-29,000); with a decline between - 20 and - 30 per cent

- moderate decline
  - both skilled non-manual occupational groups: clerks (-91,000; - 8 per cent) and sales and services workers (-145,000, - 8 per cent)
  - elementary occupations (-115,000; - 6 per cent)

Chart 3.4 **Composition of job-finders by main occupational group**

Share, 2007Q1 - 2011Q3



Source: Eurostat, Labour Force Survey.
Main occupational group: ISCO 1-digit (see footnote Chart 3.3).
25 countries included: EU27 exclusive of Ireland and the UK (no data by ISCO in 2011).
Values for Slovakia 2011Q2 are estimated.
Absolute values 2011Q3 (in million): Managers and senior officials, 0.2; Professionals, 0.9; Technicians and associate professionals, 1.1; Clerks, 1.2; Service and sales workers, 2.3 Skilled agricultural and fishery workers, 0.2; Craft and related trades workers, 1.4; Plant and machine operators and assemblers, 0.9; Elementary occupations, 2.3.

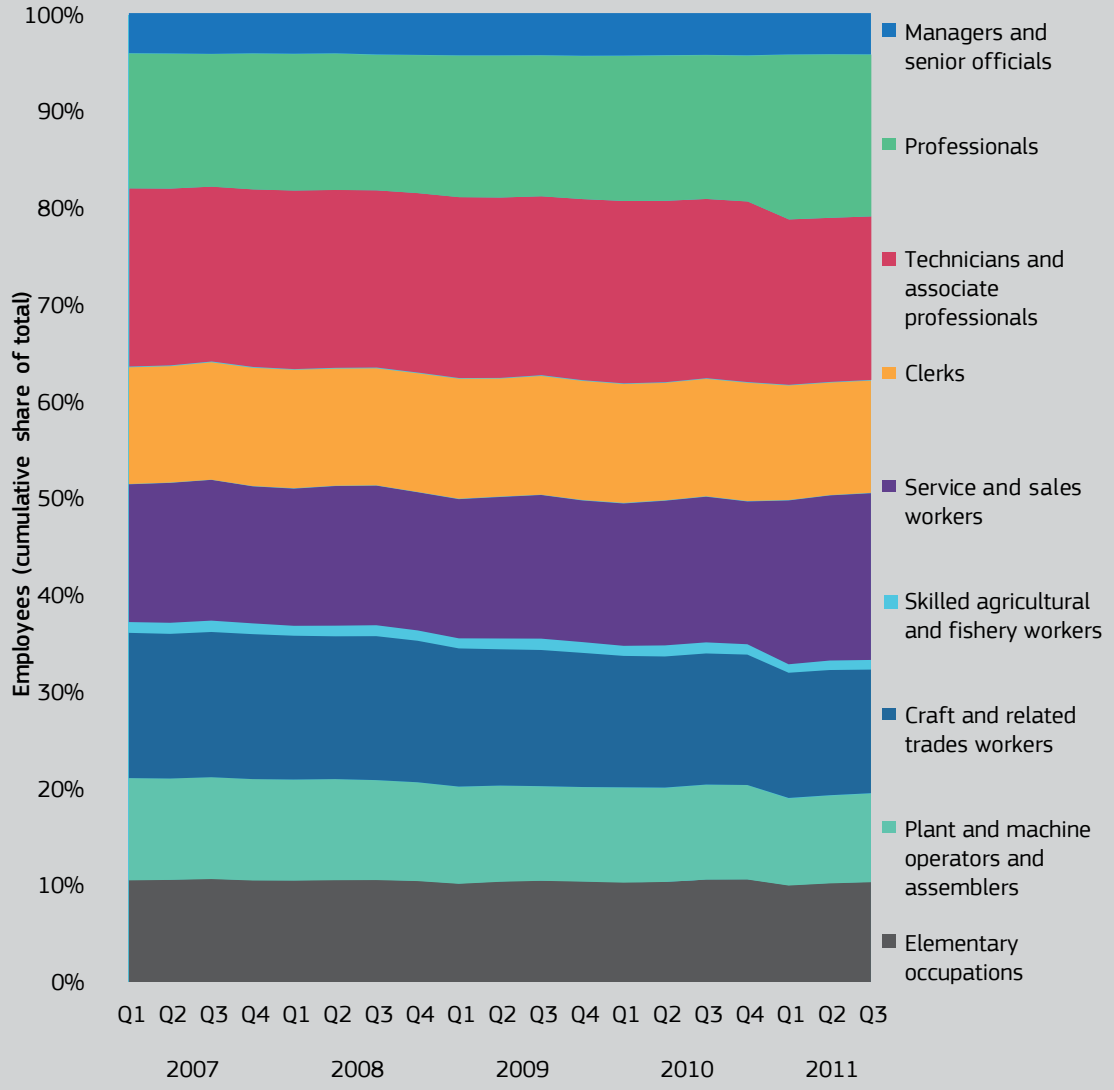
Box 2: Background information: Composition of employment by major occupational groups

The distribution of the number of employees by broad occupational groups (Chart 3.5) over the period from the first quarter of 2007 to the third quarter of 2011 shows the following short-term trends in employment broadly reflecting recruitment trends:

- shares increased for 'service and sales workers' and 'professionals', both from 14 per cent in the first quarter of 2008 to 17 per cent in the third quarter of 2011
- shares for 'clerks', 'elementary occupations', 'managers and senior officials' and 'skilled agicultural and fishery workers' remained constant at 12, 11, 4 and 1 per cent respectively
- shares for 'technicians and associate professionals' marginally decreased from 18 to 17 per cent
- shares declined for traditional intermediate skilled jobs in 'plant and machine operators and assemblers' and 'craft and related trades workers', from 10 to 9 per cent and from 15 to 13 per cent respectively

Chart 3.5 **Composition of employees by main occupational group**

Share, 2007Q1 - 2011Q3



Source: Eurostat, Labour Force Survey

Main occupational group: ISCO 1-digit (see footnote Chart 3.3)

25 countries included: EU exclusive Ireland and the UK (no data by ISCO in 2011).

Values for Slovakia 2011Q2 are estimated.

Absolute values 2011Q3 (in million): Managers and senior officials, 6.6; Professionals, 25.6; Technicians and associate professionals, 25.8; Clerks, 17.9; Service and sales workers, 26.3; Skilled agricultural and fishery workers, 1.5; Craft and related trades workers, 19.8; Plant and machine operators and assemblers, 13.8; Elementary occupations, 16.5.

To be noted: the break in the time series between the fourth quarter of 2010 and the first quarter of 2011 is due to a change in ISCO.

Specific country features:
- *'Skilled agricultural workers'* are mainly employed in Romania, Spain and Poland (between 5 per cent and 10 per cent of all employees) but are a small minority in other EU countries (Eurofound (2012), 5th Working Conditions Survey, Publications Office of the European Union, page 19, Randstad (2012), Into the Gap, table 6.)
- *'Professionals'* and *'associate professionals'* are more intensively employed in the northwest of Europe (UK, Ireland, Belgium, the Netherlands, Denmark, Sweden, Finland and, especially, Luxembourg).
- *'Craft and related trades workers'* are relatively more important in the east and the south of Europe (Hungary, Slovakia, Italy, and Portugal), and the same applies to work in *'elementary occupations'* (Spain, Cyprus, Latvia, and Bulgaria).
- In central Europe, the composition of the work force by occupational groups is more balanced (Germany, France, and Austria).

While at the highest skills levels recruitment was resilient and indeed displayed an increase for *'managers and professionals'*, the decline in industry, construction and manufacturing resulted in a strong decrease in the recruitment of skilled manual labour, while not sparing higher skilled technicians.[5]

... Increasing share of professionals among job-finders

The volume changes described above have had implications for the composition of labour demand: The share of professionals in the number of job-finders increased the most (from 8 per cent in the first quarter of 2007 to 10 per cent in the first quarter of 2011) while decreases were most pronounced for craft workers (from 16 per cent to 13 per cent) and technicians (from 13 per cent to 11 per cent).

When seasonal effects are controlled for, the largest main occupational groups had stable shares: *'service and sales workers'* (21 per cent in 2010 compared to 20 per cent in 2007) and *'elementary occupations'* (18 per cent in 2010 and 2007).

Regarding the relationship of job-finders to employment, the shares of these groups among job-finders are higher than among employees (15 per cent and 11 per cent in 2010 respectively), mirroring relatively high job turnover.

Recent top 25 most demanded occupations: Most job-finders in low to medium skilled services occupations

Overall, the 25 occupations with the most numerous hirings are concentrated in low to intermediate skills levels. High volumes of job-finders are particularly prevalent among low-skilled service occupations. This is not surprising, because labour turnover rates are high in these occupations and temporary contracts have increased particularly in relatively low-skilled employment.[6]

For the third quarter of 2011 the highest numbers of job-finders were in
- shop salespersons (709,000)
- cleaners (607,000)
- waiters and bartenders (497,000)

Other relevant occupations are:
- personal care workers in health services and child care (ranked 4th and 24th)
- certain categories of construction worker (5th and 15th)
- certain categories of labourer (6th, 7th, 8th and 9th)
- cooks and food preparation assistants (10th and 19th)
- certain categories of clerk (11th, 12th, 16th, 18th and 21st)
- drivers and mobile operators (13th, 22nd, 23rd)

Only *'engineering technicians'* (ranked 14th) and *'sales and purchasing agents and brokers'* (ranked 20th) require high skills.

Seasonality in the demand for workers in the tourism and construction sectors is evident from the change of ranking of occupations in the third quarter compared to the first quarter of 2011. For example, *'building frame and related trades workers'* (ranked 5th) and *'cooks'* (ranked 10th) had higher rankings in the summer compared to the winter. Seasonality does not appear to be a factor in the change of ranking for two other occupations in the top ten, *'transport and storage labourers'* (ranked 7th) and *'heavy truck and bus drivers'* (ranked 13th). In fact it suggests that recruitment in the transport sector picked up during 2011 (see also section 3.2).

Increasing labour turnover is another reason which helps to explain the high number of job-finders in the group for 'shop salespersons' (ranked 1st). According to a recent study the considerable expansion of the retail sector over the past 20 years is associated with a transformation in its competitive

5 An analysis of employment has found a similar development over the period 2008-2010: Employment growth was confined to the quintile with highest education, see: European Commission (2012): Employment and Social Development Report 2011.

6 European Commission (2012): Employment and Social Development Report 2011, Chapter 1.

structure. Large companies now dominate at the expense of the numerous small and micro-businesses that once characterised the sector in most countries. One result is a significant decline in the number of self-employed workers and a substantial increase in the number of part-time jobs (many done by women) and non-permanent contracts with implications for career patterns.[7]

However, the situation in European countries varies according to the national structure of the labour market. Taking the occupational information for job-finders as an indicator for job opportunities and looking at country data, many and increasing opportunities for *'shop salespersons'* became evident in the Czech Republic and Latvia, whereas for *'cleaners'* high and increasing opportunities existed in Denmark and Portugal.[8] Many job-finders were *'waiters and bartenders'* in countries with large tourism sectors such as Spain and Italy, but also in Malta, Austria and Slovenia. The same applies to *'cooks'* in Greece and also in Romania. *'Personal care workers'* were in demand in Belgium and Sweden. *'Building frame workers'* were in demand in Estonia and Finland. A high and increasing number of job-finders among '*transport and storage labourers*' is evident in Romania, which may be explained by the increasing numbers of workers from Eastern Europe employed in intra-EU road transport.[9]

Strong growth in recruitment of professionals and 'teaching associate' professionals

Of more relevance for decision-makers in the fields of education and employment is information about the structural development of labour demand over a longer time period and for a broader range of occupational groups.

Although, the total number of job-finders decreased over the years 2007 to 2010 by eight million, there were occupations that had large positive changes within each main occupational group.

The largest positive change in recent recruits was found for *'sweepers and related labourers'* (+ 54,700 job-finders) within the group of elementary occupations (above all in a number of East European Countries). Other occupations with increasing numbers of job-finders included *'teaching associate professionals'* (58,100 more job-finders for all three groups of *'teaching associate professionals'* combined). The occupation with by far the largest number of job-finders in 2010 was *'personal care and related workers'* with almost 1.5 million. However, there was very little change over the period with the index moving up by just one per cent between 2007 and 2010.

Box 3: Methodological note – Identification of growth occupations

The occupations with highest growth of job-finders are identified by the difference between the annual values of 2010 and 2007. These are the first and last full years where there is data on job-finders. Occupations are ranked by absolute change rather than percentage change to avoid the numerically smallest occupations always ending on top. In the following a top 3 of growth occupations is presented for each main occupational group as a ranking system based solely on numerical values will be biased towards elementary and medium-skilled occupations.

In addition, when interpreting index values, it should be understood that those occupations with the highest growth are sometimes those occupations with relatively small absolute numbers of job-finders (e.g. *'supply and distribution managers'*).

7 Eurofound (2012): Working conditions in the retail sector. EWCO – European Working Conditions Survey, August 2012

8 See also European Vacancy Monitor 6, April 2012, Annex VIII. http://ec.europa.eu/social/main.jsp?catId=955&langId=en

9 Peeters, C., T. Bouman and F. Hendrix (2009), Wegvervoer en logistiek: visie 2015 (Road Transport and Logistics: Vision 2015), Policy Research Corporation, www.tln.nl/media/1_tln/pers/wegvervoerenlogistiek_definitief.pdf

Chart 3.6 **Top 25 occupations with most job-finders in 2011Q3 / comparison with their ranking in 2011Q1**

Ranking 2011Q3	Occupations (ISCO-08 3-digit level)	Broad skills level	Comparison with rank in 2011Q1	Number of job-finders 2011 Q3
1	Shop salespersons*	Skilled NM	=	708,500
2	Domestic, hotel and office cleaners and helpers	Elementary	=	606,700
3	Waiters and bartenders	Skilled NM	=	497,100
4	Personal care workers in health services	Skilled NM	=	358,200
5	Building frame and related trades workers	Skilled M	↑	341,700
6	Manufacturing labourers	Elementary	↓	310,900
7	Transport and storage labourers	Elementary	↑	288,900
8	Agricultural, forestry and fishery labourers	Elementary	↓	276,400
9	Mining and construction labourers	Elementary	=	245,100
10	Cooks	Skilled NM	↑↑	197,300
11	General office clerks	Skilled NM	↓	197,100
12	Material-recording and transport clerks	Skilled NM	↑↑	193,600
13	Heavy truck and bus drivers	Skilled M	↑	189,100
14	Physical and engineering science technicians	High	↑	180,600
15	Building finishers and related trades workers	Skilled M	↑↑	175,000
16	Client information workers	Skilled NM	↓↓	171,500
17	Protective services workers	Skilled NM	↑↑	168,600
18	Other clerical support workers	Skilled NM	↓	167,800
19	Food preparation assistants	Elementary	↑	165,300
20	Sales and purchasing agents and brokers	High	↓↓	160,200
21	Cashiers and ticket clerks	Skilled NM	=	153,200
22	Car, van and motorcycle drivers	Skilled M	↓↓	146,700
23	Mobile plant operators	Skilled M	↑	143,700
24	Child care workers and teachers' aides	Skilled NM	↓↓	133,800
25	Market gardeners and crop growers	Skilled M	↑↑	130,500
	Total top 25			6,307,500
	Total			10,422,000

Source: LFS.

The change of a position in a ranking comparing 2011Q3 with 2011Q1 is showed by symbols:

" =" the same, ↑↑ went up by at least 5 positions, ↓↓ dropped by at least 5 positions.

M – manual, NM –non-manual

Method: For over 400 occupations (ISCO-08, 3-digit level) the top-25 of job-finders in 2011Q3 was calculated.

** Shop salespersons (708,500 job-finders in 2011Q3) ranked 1 in 2011Q3 and the position was the same in 2011Q1.*

Chart 3.7 Top-3 growth occupations in 2007-2010 by main occupational group

Absolute growth of job-finders and index 2007-2010

Main occupational group	Occupations (ISCO-88 , 4 digits)	2007-2010 change in absolute numbers	2007 index	2008 index	2009 index	2010 index	2010 number of job-finders
Managers and senior officials	Managers of small enterprises in restaurants and hotels	+4,200	100	110	151	145	13,700
	Supply, distribution managers	+4,000	100	221	240	215	7,400
	Corporate managers [a)]	+3,900	100	119	91	111	37,800
Professionals	Business professionals n.e.c.	+28,100	100	99	92	123	147,800
	Health professionals (except nursing)	+14,300	100	115	121	108	191,000
	Psychologists	+13,100	100	204	185	208	25,300
Technicians and associate professionals	Other teaching associate professionals	+29,300	100	112	101	117	201,700
	Special education teaching associate professionals	+14,700	100	112	119	121	86,300
	Pre-primary education teaching associate professionals	+14,100	100	109	111	107	211,200
Clerks	Debt-collectors, related workers	+	--	--	--	--	4,400
	Stenographers and typists	+	--	--	--	--	9,300
	Scribes and related workers	+	--	--	--	--	--
Service and sales workers	Personal care and related workers workers [b)]	+9,100	100	104	99	101	1,439,000
	Home-based personal care workers	+6,600	100	124	101	103	243,600
	Travel guides	+3,100	100	105	112	126	14,800
Skilled Agricultural, fishery workers	Gardeners, horticultural and nursery growers	+11,600	100	104	110	111	120,500
	Forestry workers and loggers	+6,200	100	102	77	130	26,800
	Field crop, vegetable growers	+4,700	100	87	101	126	23,100
Craft, related trades workers	Insulation workers	+7,300	100	134	124	113	15,800
	Miners and quarry workers	+6,600	100	134	110	136	13,200
	Glaziers	+3,800	100	109	75	152	19,600
Plant, machine operators, assemblers	Food and related products machine operators [b)]	+9,700	100	101	93	104	270,700
	Electronic-equipment assemblers	+5,000	100	100	89	112	46,700
	Chemical-still and reactor operators (except petroleum and natural gas)	+2,900	100	143	120	148	8,900
Elementary occupations	Sweepers, related labourers	+54,700	100	103	124	158	148,800
	Street (food) vendors	+11,900	100	76	84	164	30,400
	Vehicle, windows and related cleaners	+7,200	100	113	99	140	19,900
Total top 27		+308,500	100	107	102	110	3,446,800
Total		-7,558,000	100	95	79	85	43,492,000

Source: LFS.

"---" means that numbers are below the significance levels for publication;

M = Manual, NM = Non-manual

n.e.c. means "not elsewhere classified"

a) Corporate managers are a 2-digit occupational group used in Germany

b) Personal care and related workers, and food and related products machine operators are 3-digit occupational groups both used in 13 countries.

Method: For over 400 occupations (ISCO- 88, 4 -digit level) the number of job-finders in a year was calculated. Then the change in absolute numbers of job-finders between 2007 and 2010 was calculated. The 'Top 3' growth occupations are presented for each of the nine broad occupational groups (ISCO 88, 1-digit). For each 'Top 3' growth occupation, indexes with 2007=100 as the base value are presented for the intermediate years. The total number of job-finders in 2010 is also presented.

* In the occupational group of 'managers and senior officials', the number of job-finders increased most between 2007 and 2010 for managers of small enterprises in construction. The increase was 4,200 persons resulting in 13,700 job-finders in 2010. This is an increase of 45 per cent compared to 2007 (index 145), slightly lower than the peak in 2009 (index 151).

Taking ***'managers and senior officials'*** first, the three occupations shown were close in terms of absolute change with *'managers in small enterprises in restaurants and hotels'* just topping the three (Chart 3.7). In addition, the number of jobs found by *'supply and distribution managers'* did in fact double, but this is a smaller group. However managers are partly recruited from within the company and for this reason are underrepresented in job-finder figures.

A predominance of small businesses may account for some of the growth occupations in the category of ***'professionals'***. Growth in *'business professionals not elsewhere classified'* (which includes for example financial and management analysts and advertising, marketing and public relations professionals) , was significantly above the other two groups, and the positive changes among *'health professionals (except nursing) not elsewhere classified'* (this occupation includes mainly medical doctors) - in particular in Germany and France - and *'psychologists'* underline the strong demand for professionals in the health and social work sector where employment was expanding. Of the top three in this group, psychologists have an index of 208 in 2010, indicating a more than double the number of job-finders compared to 2007, although the absolute number of psychologists among job-finders is modest.

Among ***'technicians and associate professionals'***, the top recruitment change occupation was *'other teaching and associate professionals'* (including for example fitness and driving instructors) with 29,300 more job-finders in 2010 compared to 2007. In 2010, employers in France recruited as many as 86,800 employees in this occupation, which was 23,100 more than in 2007. In contrast fewer teaching and associate professionals were recruited in the UK (all categorised in the group 'other' in this case). The increase in this occupation was around twice as much as the next two occupations *'special education teaching associate professionals'* and *'pre-primary education teaching associate professionals'*, which were also education related, but are mainly employed in the public sector. While employment data show an overall increase for the education sector even in times of recession, the growth in these two occupations may reflect policy priorities focusing on child care and the prevention of early school leaving.

Changes in the ***'service and sales workers'*** occupational group have been comparatively modest, with the top two (*'personal care and related workers'* and *'home-based personal care workers'*) showing little change over the four years. These represent only relatively small numerical increases in what is an occupational area with significant employment. Of the top three, 'travel guides' have the highest growth rate, though it represents a comparatively numerically small group. However, while the increase of the index for personal care and related jobs index has been less dramatic over the period, it represents a numerically large group. Such so-called 'white jobs'[10] have been projected to grow in demand. According to the latest information from Cedefop's skills supply and demand forecast for the EU[11], *'personal and protective services workers'* form one of the top five occupations most likely to be in demand to 2020. This reflects the needs of ageing populations and increased longevity in Europe, as well as other changes in demand.

In the occupational group ***'skilled agricultural and fishery workers'***, the top three show that *'gardeners, horticulture and nursery growers'* had the largest numerical increase over the four years, though in terms of the trend, *'forestry workers and loggers'* showed the biggest increase in countries like Austria and Lithuania.

Among ***'craft and related trades workers'***, the top occupation in terms of job-finders was *'insulation workers'* followed by *'miners and quarry workers'* and *'glaziers'*. Insulation workers and glaziers are mostly related to the construction sector. This may come as a surprise since construction has shown a strong decline since 2007 (as demonstrated in the previous section). However, the work of insulation workers and glaziers is done in the final stages of a building project, and the demand for these workers in 2010 may reflect the need to finish building projects contracted earlier and to repair and maintain work of existing buildings. The increase of job-finders among miners and quarry workers can largely be attributed to the demand in Poland.

Among ***'plant and machine operators and assemblers'***, the top occupation for job-finders in terms of absolute growth was *'food and related products machine operators'*, though change over the period was small (the index in 2010 reaching 104). *'Electronic-equipment assemblers'* recorded a bigger percentage increase with an end of period index of 112, but the most rapid growth was in *'chemical-still and reactor operators (except petroleum and natural gas)'* which saw its index go up to 148.

For ***'elementary occupations'***, all the top three (i.e. *'sweepers and related labourers'*, *'street (food) vendors'* and *'vehicle, windows and related cleaners'*) showed significant increases in the index over the reference period, ending with approximately 50 per cent more job-finders in 2010 compared to 2007. However, a general feature of elementary occupations is their comparatively high job turnover. Such factors as low skills levels and the use of precarious forms of employment contract tend to lead to more movement in and out of these sorts of jobs.

10 The term white jobs can be used to refer to those who work in the health and social services sector, see e.g.: http://ec.europa.eu/social/main.jsp?catId=370&langId=en&featuresId=112&furtherFeatures=yes

11 CEDEFOP (2012) 'Europe's Skill Challenge' (Briefing Note). Available at: http://www.cedefop.europa.eu/EN/publications/19651.aspx

To identify the **most relevant occupations, with high and increasing recruitment demand** in Europe, two criteria were combined. Firstly, occupations with substantial volumes of at least 50,000 job-finders in 2010 were selected and, secondly, with growth of at least 5 per cent more job-finders in 2010 compared to 2007. This led to 14 occupations meeting both criteria, which are presented by main occupational group below (with the 2010 absolute values and index values in brackets). As the analysis shows the most relevant growth occupations are exclusively in four out of the nine main occupational groups:

- **Professionals:**
  - business professionals such as financial/management analysts, marketing/advertising/public relationships professionals (148,000; 123)
  - health professionals (191,000; 108)
  - public service administrative professionals (118,000; 106)
  - school inspectors (58,000; 111)

- **Technicians and associate professionals:**
  - special education teaching associate professionals (86,000; 121)
  - teaching associate professionals like fitness and driving instructors (202,000; 117)
  - pre-primary education associate professionals (211,000; 107)
  - athletes, sports persons and related associate professionals (72,000; 120)
  - nursing associate professionals (152,000; 107)

- **Skilled agricultural workers:**
  - gardeners, horticultural and nursery growers (121,000; 111)

- **Elementary occupations:**
  - sweepers (149,000; 158)
  - building caretakers (92,000; 107)
  - garbage collectors (54,000; 110)
  - domestic helpers and cleaners (57,000; 106)

There was substantial growth by volume (as defined above) amongst *'professionals'* and *'technicians and associate professionals'* and also in a limited number of *'elementary occupations'*, while only one medium-skilled occupation is included. This could be seen as a first indication of polarisation of skills[12]. Many of the high skilled occupations with large and increasing recruitment volumes are associated with the broad public sector.

Development in demand by occupation in the Public Employment Services

PES vacancies reflect the general recruitment pattern – domination of intermediate to low-skilled occupations

The following analyses use information from the database of PES on newly registered job vacancies (inflow) by occupation, representing only a part of the total recruitment demand. The distribution of job vacancies newly posted through PES (inflow) by main occupational group shows that in between 2008 and 2011 the notifications were also dominated by intermediate to low-skilled occupations (Chart 3.8). The UK and Germany account for a high proportion of the total PES vacancy inflow among the 12 countries in Chart 3.8, with shares of 48 per cent and 27 per cent respectively. However the dominance of intermediate to low skilled occupations in the PES inflow is not a feature simply of these two large countries, but also in the other ten smaller countries.

The domination of intermediate to low skilled occupations in the PES inflow broadly reflects the types of jobs that employers tend to notify to the PES which, in most countries, are skewed towards low and intermediate skills[13]. However, many intermediate to low skilled occupations also constitute a substantial proportion of job vacancies in the labour market in general (see Chart 3.6).

The occupation with a higher share in PES inflow compared to job-finders was the group of *'technicians'*. In the first quarter of 2011, this group had a share of 15 per cent in PES inflow and 11 per cent in job-finders[14]. The share of *'service and sales workers'* is also relatively high in PES inflow compared to the share among job-finders. On the other hand, *'professionals'* and *'clerks'* have a relatively low share in PES inflow compared to job-finders.

Comparing PES inflow between the first quarters of 2008 and 2011 gives the following results for the 12 countries with available data (see also Annex, Table A3.5):

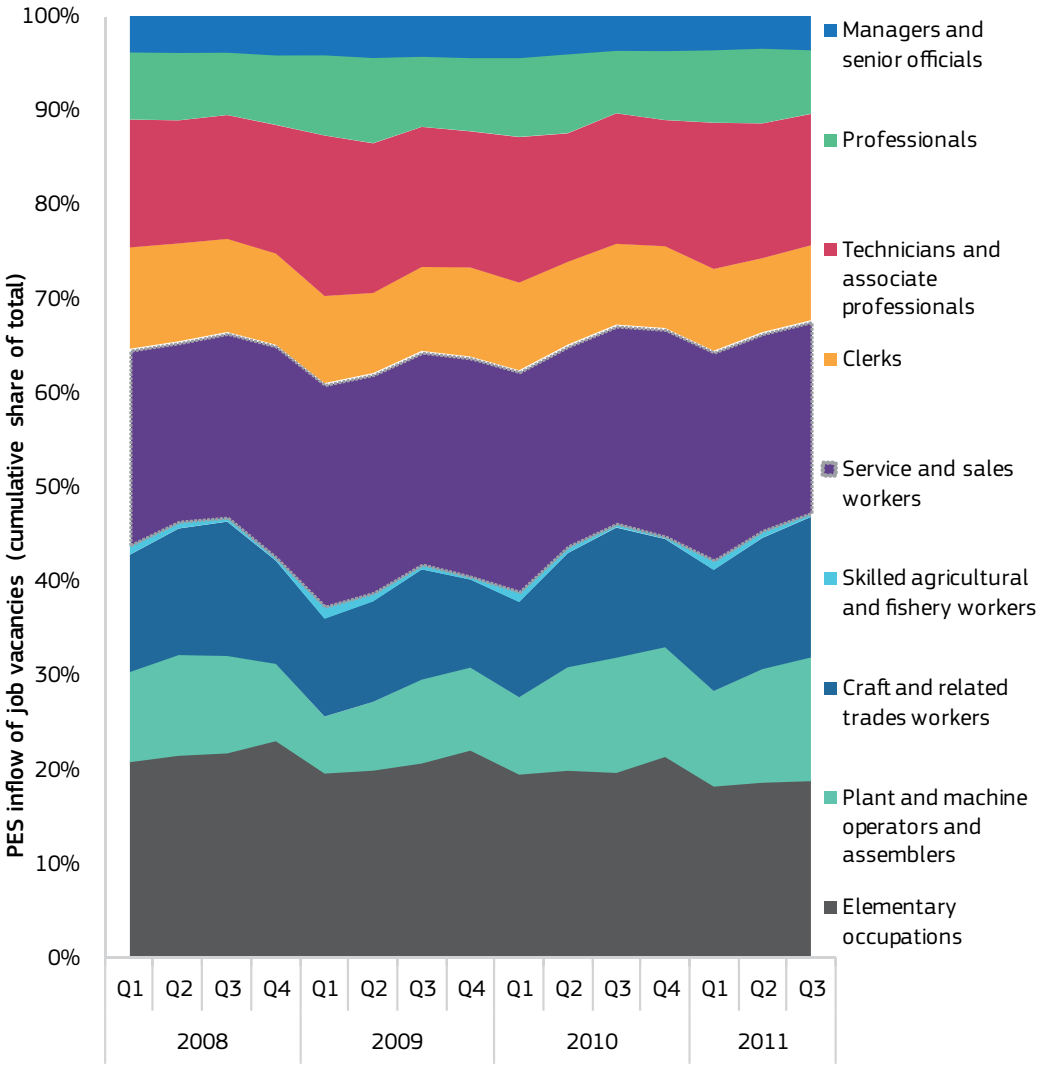
- an increasing PES inflow for *'technicians'* (+5,300 or plus 2 per cent)
- the strongest declines were 17 per cent to 28 per cent among *'elementary occupations'* (-101,000), *'clerks'* (-68,000), *'managers'* (-14,000), and *'skilled agricultural workers'* (-5,000)
- moderate declines for *professionals* (-7,000 or -4 per cent), *services and sales workers* (-22,000 or -5 per cent), *craft workers* (-22,000 or -8 per cent) and *operators* (-13,000 or -6 per cent)

12 European Commission (2012): Employment and Social Development Report 2011, Chapter 1;
Cedefop (2010), Skills Supply and Demand in Europe, Medium Term Forecast up to 2020, page 68,
http://www.cedefop.europa.eu/EN/publications/15540.aspx

13 Kettner, A. and M. Stops (2009), Europäische Betriebsbefragungen über offene Stellen - ist das Gleiche wirklich gleich? Österreichische Zeitschrift für Soziologie, Sonderheft 09), S. 353-372

14 This result was not affected by Germany and without the UK, the share of technicians and service and sales workers in PES inflow would be even higher (18 per cent).

Chart 3.8 **Composition of PES inflow of job vacancies by main occupational group,**
Share 2008Q1 - 2011Q3



Source: National Public Employment Services .
Main occupational group: ISCO-88 1-digit.
12 countries including: Austria, Chech Republic, Denmark , Germany, Estonia, Finland, Ireland, Latvia, Lithuania, Portugal, Sweden, the United Kingdom.
Values for UK 2010Q3 and Czech Republic and Latvia 2010Q4 are estimated.
Absolute values 2011Q3 (in thousands): Managers and senior officials, 77.6; Professionals, 149.8; Technicians and associates, 303.9; Clerks, 173.6; Service and sales workers, 441.6; Skilled agricultural and fishery workers, 14.0;

Chart 3.9 Top 25 occupations with highest PES inflow of job vacancies

Absolute numbers, 2011Q3, comparison with the ranking in 2011Q1

Ranking 2011Q3	Occupations (ISCO-88 3-digit level)	Broad skills level a)	Comparison with ranking 2011Q1	2011Q3 PES inflow
1	Finance and sales associate professionals*	High	=	98.672
2	Shop, stall, market salespersons and demonstrators	Skilled NM	↑	82.567
3	Housekeeping and restaurant services workers	Skilled NM	=	82.306
4	Manufacturing labourers	Elementary	↑	73.714
5	Personal care and related workers	Skilled NM	↑	56.657
6	Domestic and related helpers, cleaners, launderers	Elementary	=	51.050
7	Sales and services elementary occupations n.e.c. [a)]	Elementary	=	50.252
8	Material-recording and transport clerks	Skilled NM	↑	45.373
9	Machinery mechanics and fitters	Skilled M	↓	43.849
10	Motor vehicle drivers	Skilled M	↓	43.616
11	Building finishers and related trades workers	Skilled M	↑	38.379
12	Other office clerks	Skilled NM	↓	35.006
13	Physical and engineering science technicians	High	=	32.216
14	Electrical, electronic equipment mechanics, fitters	Skilled M	=	30.962
15	Metal moulders, welders, sheet-metal workers, structural-metal preparers, related trades workers	Skilled M	=	30.335
16	Building frame and related trades workers	Skilled M	↑	28.707
17	Architects, engineers and related professionals	High	↑	24.456
18	Painters, building structure cleaners, related workers	Skilled M	↑↑	23.414
19	Secretaries and keyboard-operating clerks	Skilled NM	↓	22.735
20	Agricultural and other mobile plant operators	Skilled M	↑	22.499
21	Other personal services workers	Skilled NM	↑	20.265
22	Administrative associate professionals	High	↓	19.374
23	Transport labourers and freight handlers	Elementary	=	18.973
24	Other machine operators n.e.c.	Skilled M	↑	18.817
25	Mining and construction labourers	Elementary	↑↑	17.106
	Total top 25			1.011.299
	Total			1.439.633

Source: PES of 13 countries (Austria, Belgium, Cyprus, Denmark, Finland, Germany, Hungary, Lithuania, Luxembourg, Netherlands, Portugal, Slovakia and Sweden).

M = Manual, NM = Non-manual

n.e.c. = not elsewhere classified

a) This is not an ISCO group, but a category of elementary jobs that some PES could not classify as either sales or services.

The change of a position in a ranking comparing 2011Q3 with 2011Q1 is showed by symbols:

" =" the same, ↑ went up, ↑↑ went up by at least 5 positions, ↓ dropped, ↓↓ dropped by at least 5 positions.

Method: for 150 occupations (ISCO-88, 3-digit) the top-25 of inflow of PES vacancies in 2011Q3 was calculated.

* The occupation of '*finance and sales associate professionals*' (98,672 new vacancies registered with the PES in 2011Q3) ranked 1 in 2011Q3, and the position was the same in 2011Q1.

Comparing the proportions between the first quarters of 2008 and 2011, there were three occupational groups that showed distinctly higher proportions of the total inflow:

- *'technicians and associate professionals'*, (from 14 to 15 per cent)
- *'plant and machine operators and assemblers'* occupations (from 9 to 11 per cent)
- *'craft and related trades workers'* (from 12 to 13 per cent)

These increases in the share of the PES vacancy inflow is consistent with the resurgence in demand for manual skills in the labour market in general (see Chart 3.3).

In contrast, the groups of *'elementary occupations'* and *'clerks'* have shown the most contraction in the proportion of the inflow to the PES they represent.

Recent 'Top 25' most demanded occupations from the PES data

The analysis of occupations with the highest PES vacancy inflow shows a predominance of intermediate to low skilled occupations (Chart 3.9). Many of these occupations were also those with the highest job-finder volumes in the total labour market (see Chart 3.6). For example, shop salespersons were ranked 2nd for PES jobs inflow and ranked 1st for the number of job-finders.

Finance and sales associate professionals was the most notified occupation

However, it is noteworthy that the top 25 occupations within PES vacancies also include a number of occupations for the highly qualified which do not appear in the top-25 of recruitment occupations in the total labour market (Chart 3.6). Of particular interest are occupations in the field of engineering including *'physical and engineering science technicians'* (ranked 13th in Chart 3.9), *'architects, engineers and related professionals'* (ranked 17th), and also *'finance and sales associate professionals'* (ranked 1st) mentioned above. This occupation is ranked in the top 10 of PES inflow in 10 out of the 13 countries for which data is available, and ranks 1st or 2nd in Finland, Luxembourg, Sweden and Germany. Employers might be more willing to notify these vacancies to PES than other high qualified occupations because they experience recruitment difficulties: finance and sales professionals are among the top bottleneck occupations in Europe and there are indications of bottlenecks for engineering professionals (see Chart 4.12).

The next occupations with the most significant inflows of PES vacancies are relatively low-skilled non-manual occupations, such as *'shop, stall and market salespersons and demonstrators'*, *'housekeeping and restaurant service workers'*, and *'personal care and related workers'*. Another occupation often notified to the PES is *'manufacturing labourers'* along with a number of other elementary occupations. Each of these occupations was in the top ten of PES inflow in roughly half of the 13 countries for which data is available. Most of these occupations are also in the top 25 most demanded occupations in the total labour market (Chart 3.6). They represent occupations with comparatively high levels of part-time working and temporary contracts (see Section 2.5). In addition there is high seasonal demand, for example in the case of shop salespersons and workers in construction such as *'painters, building structure cleaners and related workers'* and *'mining and construction labourers'*.

PES vacancy growth in the main occupational groups was highest for 'machinery mechanics and fitters' and 'manufacturing labourers'

The total PES inflow increased by 157,000 job vacancies between the first quarters of 2010 and 2011. This growth was largely achieved by the top three growth occupations for each main occupational group, totalling 213,000. This means that for the other occupations, the increase of PES inflow for some occupations cancelled out the decrease in PES inflow for others.

Based on the change between the first quarters of 2010 and 2011, the five most relevant PES growth occupations are:

- machinery mechanics and fitters (+18,000)
- manufacturing labourers (+17,000)
- motor vehicle drivers (+14,000)
- finance and sales professionals (+13,000)
- domestic and related helpers, cleaners and launderers (+13,000).

In terms of *'managers and senior officials'*, new PES job vacancies in *'other department managers'* and *'production and operations managers'* increased the most numerically between the first quarters of 2010 and 2011, with an absolute change of over 3,000 in each category. In the professionals group, all top three occupations grew modestly over the reference period, though inflow for *'architects, engineers and related professionals'* increased the most numerically (over 8,000) and in percentage terms (47 percent in the first quarter of 2011 as indicated by the index value).

Increasing use of PES for finance and technical staff

In the group *'technicians and associate professionals'*, the top two occupations (*'Finance, sales associate professionals'* and *'physical and engineering science technicians'*) were well ahead of the third *'administrative associate professionals'* in numerical terms. There is also an increasing use of PES for administrative workers in the *'clerks'* occupational group. This contrasts with the decreasing numbers of job-finders among clerks in the total labour market (Chart 3.7). Among clerks the top growth occupation was *'material-recording and transport clerks'* which was well ahead of the next two occupations and also increased the most, reaching an index of 194 by the third quarter of 2011.

Chart 3.10 Top-3 PES growth occupations per main occupational group

Absolute growth and index of PES vacancy inflow 2010Q1

Main groups (ISCO1-digit)	Occupational groups (ISCO-88, 3-digit)	2010				2011			Change 2010Q1-2011Q3
		Q1	Q2	Q3	Q4	Q1	2Q2	Q3	
Managers and senior officials	Other department managers	100	95	102	115	132	133	119	+3.407
	Production, operations managers	100	112	115	111	136	135	124	+3.274
	Directors and chief executives	100	113	86	108	144	154	113	+415
Professionals	Archtects, engineers and related professionals	100	109	111	120	147	152	137	+8.387
	Computing professionals	100	95	97	118	138	142	128	+4.493
	Business professionals	100	105	92	103	129	127	125	+3.723
Technicians and associate professionals	Finance, sales associate professionals	100	97	100	100	115	111	113	+12.906
	Physical and engineering technicians	100	114	110	116	140	150	136	+9.316
	Administrative associate professionals	100	96	85	90	117	111	97	+3.419
Clerks	Material-recording, transport clerks	100	140	163	158	150	171	194	+11.760
	Other office clerks	100	106	102	104	123	120	124	+6.548
	Secretaries, key-board operating clerks	100	92	89	87	119	107	99	+4.255
Service and sales workers	Shop salespersons [a]	100	105	102	90	117	121	119	+11.431
	Housekeeping and restaurant workers	100	108	104	88	109	109	102	+7.459
	Personal care, related workers	100	66	65	66	106	74	67	+4.873
Skilled agricultural workers *	Market gardeners and crop growers	100	76	48	33	111	83	45	+1.913
	---[b]	---	---	---	---	---	---	---	---
	---[b]	---	---	---	---	---	---	---	---
Craft, related trades workers	Machinery mechanics and fitters	100	136	155	136	175	183	179	+18.341
	Metal workers [c]	100	143	173	133	170	200	188	+11.280
	Electrical and electronic equipment mechanics and fitters	100	127	144	125	141	144	151	+8.366
Plant, machine operators, assemblers	Motor vehicle drivers	100	143	135	121	147	174	151	+13.550
	Agricultural, other mobile plant operators	100	168	173	123	166	209	188	+7.866
	Metal- and mineral-products machine operators	100	177	214	163	236	254	219	+4.660
Elementary occupations	Manufacturing labourers	100	151	165	135	136	171	159	+16.768
	Domestic and related helpers, cleaners and launderers	100	113	114	97	123	128	116	+12.923
	Garbage collectors, related labourers	100	66	49	109	193	222	194	+10.167
Total top 27		100	108	110	102	127	129	122	+157.059
Total		100	111	109	98	123	127	118	+213.793

Source: PES for 11 countries (Austria, Belgium, Germany, Denmark, Finland, Hungary, Lithuania, Netherlands, Portugal, Slovakia and Sweden).

a) Full name: shop, stall and market salespersons and demonstrators

b) There is no other occupational group apart from market gardeners and crop growers showing a positive change of the PES inflow of job vacancies between 2010Q1 and 2011Q3.

c) Full name: Metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers

There is no other occupational group apart from market gardeners and crop growers showing a positive change of the PES inflow of job vacancies between 2010Q1 and 2011Q3.

Method: for 150 occupations (ISCO 88, 3-digit) the number of newly registered job vacancies of PES (inflow) was calculated. Then the changes in absolute numbers of PES inflow between 2010Q1 and 2011Q1 was calculated. The top-3 growth occupations is presented for each of the nine broad occupational groups (ISCO 88, 1-digit). For each top-3 growth occupation, indices with 2010Q1=100 as the base value are presented for the intermediate quarters.

* In the group of *'skilled agricultural workers'*, the PES inflow increased most between 2010Q1 and 2011Q1 for market gardeners and crop growers. The increase was +1,913 persons, an increase of 11 per cent, compared to 2010Q1 (index 111). The 2011Q1 index peak value indicates a seasonal peak in PES inflow in the first quarter

In ***'service and sales'*** workers, the top occupation of *'shop, stall and market salespersons and demonstrators'* increased numerically well ahead of the other two occupations (*'housekeeping and restaurant workers'* and *'personal care, related workers'*) but all three showed only modest growth over the reference period. In contrast, the situation in the group of skilled agricultural and fishery workers was more mixed. For the main group of ***'skilled workers in agriculture'***, the PES inflow actually increased only for *'market gardeners and crop growers'* which was up to 111 by the first quarter of 2011. For all other occupations in this group PES inflow declined and, as would be expected, the decline was least in *'non-market agricultural and fishery workers'*, an occupation with an insignificant number of workers.

Demand still strong for skilled trades in PES job vacancies

'Craft and related trades workers' formed a numerically significant contribution to the inflow data, and all top three occupations showed large increases in their indices over the period. In the case of *'machinery mechanics and fitters'* the index was 175 by the first quarter of 2011, for *'metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers'* it was 170, while for *'electrical and electronic equipment mechanics and fitters'* it was the lowest but still comparatively high at 141.

Similarly in ***'plant and machine operators and assemblers'***, the indices for all the top three grew significantly, though the first two were well ahead of the third in numbers. By the third quarter of 2011, the index for *'motor vehicle drivers'* was 147. The increase in PES demand for this occupation and also for transport clerks discussed above reflects the late and hesitant recovery of the transport sector from the start of 2011 (as shown in Chart 3.1). This suggests that in 2011, employers started to recruit more from the pool of unemployed. Also for *'agricultural and other mobile plant operators'* and *'metal- and mineral-products machine operators'* the PES inflow grew strongly with index values of 166 and 236 in the first quarter of 2011 respectively.

For ***'elementary occupations'***, the numbers underline the importance of this category of jobs on the labour market. Top of the list was *'manufacturing labourers'* with the index reaching 159 by the end of the period, though this was below the peak of 171 that was reached in the second quarter of 2011. The index for *'garbage collectors and related labourers'* increased by even more, to 194 by the third quarter of 2011, though its quarterly changes were much more volatile, with a significant dip to 49 in the third quarter of 2010 before gradually recovering. For *'domestic and related helpers, cleaners and launderers'* the PES was relatively stable with an index of 123 in the first quarter of 2011.

Results from national studies

The list of top demanded occupations resulting from national studies (Chart 3.11) is based on a range of national data sources. These complement the information derived from European sources and standardised PES information.

In some countries the PES and occasionally other labour market intermediaries publish those occupations for which most job vacancies are available. The studies available mostly relate only to PES vacancies and so will reflect the type of vacancies notified to PES. There are just two exceptions: a 2007 publication from Slovakia was based on an employer survey; and an annual publication from Ireland combines vacancies registered with the Irish PES and the recruitment website Irishjobs.ie together with the results from recruitment agency surveys and job announcements.

The following broad conclusions can be made from the perspectives provided by these national studies:

- Certain types of skilled manual workers were in high demand in Germany and Slovakia, namely electro-technicians and metal workers;
- Workers in craft and related trades and workers in elementary occupations are the most in demand in the Czech Republic and Slovenia;
- Shop salespersons are the most or second most demanded occupation in three countries: Ireland, Lithuania and Spain.

Chart 3.11 Top demanded occupations – results from national studies [a)]

Country, Top jobs (in descending order)	Information source
CZECH REPUBLIC	
1. Elementary occupations 2. Technicians and associate professionals 3. Craft and related tradesworkers 4. Machine and equipment operators and assemblers 5. Professionals 6. Clerks 7. Managers and senior officials 8. Skilled agricultural and forestry workers	The structure of the available jobs ranked by main occupational group (ISCO1) Source: Ministry of Labour and Social Affairs. The monitoring report on the developments in the selected indicators concerning the labour market in the Czech Republic - February 2010
GERMANY	
1. Mechatronics, energy and electrical trades 2. Metal fabrication, machining and construction 3. Mechanical and Automotive Engineering 4. Transport, logistics (except vehicle control) 5. Medical health professionals 6. Sales 7. Tourism, hotel and catering trades 8. Non-medical health professionals, personal care, medical technicians 9. Management and administration 10. Drivers for transport and machinery	Top 10 occupations based on the job vacancies posted on the website of the German Public Employment Service, May 2012. Source: http://statistik.arbeitsagentur.de/Statischer-Content/Arbeitsmarktberichte/Berichte-Broschueren/Stellenangebot/TOP-TEN/Generische-Publikationen/TOP-TEN-2012-05.pdf
IRELAND	
Sales and related occupations 1. Business associate professionals (e.g. sales accounts and business development managers 2. Business sales executives, marketing associate professionals) 3. Sales occupations (e.g. retail sales assistants) 4. Customer service occupations **Science and engineering professionals** 1. IT professionals (e.g. programmers and software developers, IT business analysts, web designers, IT specialist managers) 2. Design and development engineers 3. Process engineers 4. Business professionals **Business professionals** 1. Financial project management professionals 2. Chartered accountants 3. Management consultants and business analysts 4. Regulatory professionals 5. Quality control professionals **Administrative occupations** 1. Book-keepers 2. Payroll clerks 3. Financial clerks **Science and engineering associate professionals** 1. IT associate professionals (e.g. IT operation technicians, IT user support technicians) 2. Engineering technicians 3. Laboratory technicians **Corporate managers and directors** 1. Production managers in manufacturing, 2. Managers in warehousing, 3. HR managers, financial managers, 4. Retail managers, 5. Purchasing managers	"Vacancy Overview", February 2012 List of occupations most frequently advertised at FÁS (Irish PES) or Irishjobs.ie, during the full year 2011. The list is produced by FÁS SLMRU on behalf of the Expert Group on Future Skills Needs (EGFSN). Source: http://www.forfas.ie/publication/search.jsp?ft=/publications/2012/Title,8936,en.php

Country, Top jobs (in descending order)	Information source
LITHUANIA	
For specialists: 1. Sales managers 2. Administrators 3. Business services managers 4. Technical and commercial sales representatives 5. Statistical and finance clerks 6. Accountants 7. Other department managers 8. Stock clerks 9. Accounting and bookkeeping clerks 10. Engineers **For service sector workers and skilled workers:** 1. Salesmen and product demonstrators 2. Painters and related workers 3. Cooks 4. Trucks and freight transport drivers 5. Passenger cars, vans and taxi drivers 6. Carpenters and joiners 7. Sewers, embroiderers and related workers 8. Builders, traditional materials 9. Welders and flame cutters 10. Waiters and bartenders **For unskilled workers:** 1. Unskilled manufacturing industry workers 2. Unskilled workers and transport trans shippers 3. Housework and other helpers, cleaners and laundress 4. Couriers, messengers, baggage porters and related workers 5. Agricultural, fishery and related labourers 6. Garbage collectors, yard-keepers and related workers 7. Mining and construction labourers 8. Building caretakes, window and related cleaners 9. Street vendors and related workers	Professions most on demand according to the Lithuanian Labour Exchange platform in April 2012. Based on the annual employers' survey. Source: http://www.ldb.lt/EN/information/labourmarket/Pages/situation_review.aspx
SLOVAKIA	
1. Metal Engineering 2. Electrotechnics 3. Construction 4. Chemistry 5. Retail and services	Number of VET school graduates employers plan to employ in 2007-2011 Source: Juraj Vantuch, with support of Anna Jurkovičová, Petr Špičan, Dagmar Jelínková (2007), Knowledge Management System, Theme 7. Skills and Competences Development and Innovative Pedagogy http://www.siov.sk/refernet/public/studie/theme7_final_draft.pdf
SLOVENIA	
1. Craft and related tradesworkers 2. Elementary occupations 3. Service workers and shop and market sales workers	Source: Statistical Office of the Republic of Slovenia. Rapid Reports No 11/2010 Major occupational groups with the highest average stock of job vacancies in 2009 registered with the PES
SPAIN	
1. Sales jobs 2. Administrative positions 3. Professionals in computer technologies	Source: Nielsen Online. Job Measurement System Dynamix, 8/10/2009. Most frequently online posted job vacancies in Spai in the first six months of 2009. http://www.ioncomunicacion.es/noticia.php?id=5753_

a) National studies may relate to one recruitment channel and are therefore not necessarily representative for the whole country.

3.4 Education and skills requirements for recruitment

Levels and type of education among job-finders

Though the analysis of PES vacancies and characteristics of job-finders enabled the identification of the most important occupations in Europe (based on absolute numbers), this only gives a weak indication of the type of skills demanded in the labour market. For example, it is obvious that administrative skills are demanded of clerks and that technical skills are demanded of craft and related trades workers. However, what the analysis of occupations so far cannot provide is whether the demand for education and skills changes within occupations or occupational groups.

Therefore, in this section the education and skills level of job-finders is discussed, and is then followed by analyses on how the educational level of job-finders changes within main occupational groups.

Small changes: half of the employees and of the job-finders continue to have a medium level of education

The educational composition of job-finders gives a first indication of skills needed in the labour market and the figures for Europe in the third quarter of 2011 (Chart 3.13) provide the following perspective:

- The largest group of job-finders were those with medium levels of educational attainment (51 per cent in the third quarter of 2011). Of these:
  - 46 per cent had *'upper secondary education'*
  - 2 per cent had *'upper secondary education'* shorter than two years which leads directly to the labour market
  - 3 per cent had *'post secondary, non-tertiary education'*
- The second largest group were those with tertiary education (23 per cent)
- Those with low levels of educational attainment numbered 26 per cent. Of these:
  - 21 per cent had '*lower secondary or second stage of basic education*'
  - 5 per cent had '*primary education or first stage of basic education or lower*'

Educational and broad skills level similar

In general terms, the educational composition of job-finders is more or less in line with the skills levels demanded for recently found jobs (see Chart 3.4). Taking together skilled manual and skilled non-manual jobs as medium skilled jobs, Chart 3.4 indicates that in the third quarter of 2011, 58 per cent of the jobs were found in medium skilled occupations, and 21 per cent in both high skilled and low-skilled (elementary) occupations.

Number of job-finders with higher education is going up, of low educated going down

Between the third quarters of 2007 and 2011, the educational composition of job-finders overall changed as follows:

- High educated: from 20 to 23 per cent
- Medium level of education: stable at 51 per cent
- Low educated: from 29 to 26 per cent

This shows that changes in the educational composition of job-finders are similar to those of employees (see box 4).

The relatively high and to a less extent declining share of job-finders with low levels of education compared to employees (27 per cent among job-finders versus 20 per cent among employees) underlines the precarious position of low educated workers during and after the crisis. The number of job losses exceeded the number of jobs found for this category of workers, although labour turnover tends to be rather high due to a considerable share of temporary contracts among this group.[15]

Information on employment by educational level, as well as on the development of job-finders by educational level, both show the general trend of employers taking on relatively more qualified staff, whereas the demand for the unskilled is decreasing in relative terms. So far, as presented in previous sections, there are still many job opportunities in Europe for unskilled job seekers and for young people entering the labour market without a degree or higher education qualifications. However, the overall trend for a relatively higher demand for (higher) qualifications and skills is clearly observable and this means that fewer job opportunities exist for the unskilled in the medium-term.

One of the main challenges that results from this trend, and that many European countries now face, is ensuring school leavers have gained the necessary qualifications that allow them to pursue educational or training opportunities to meet future labour market needs.

15 Randstad, Into the gap, page 161: 16 per cent of the lower educated workers in the EU27 have a temporary contract in 2010, compared to 10 per cent for the high educated workers.

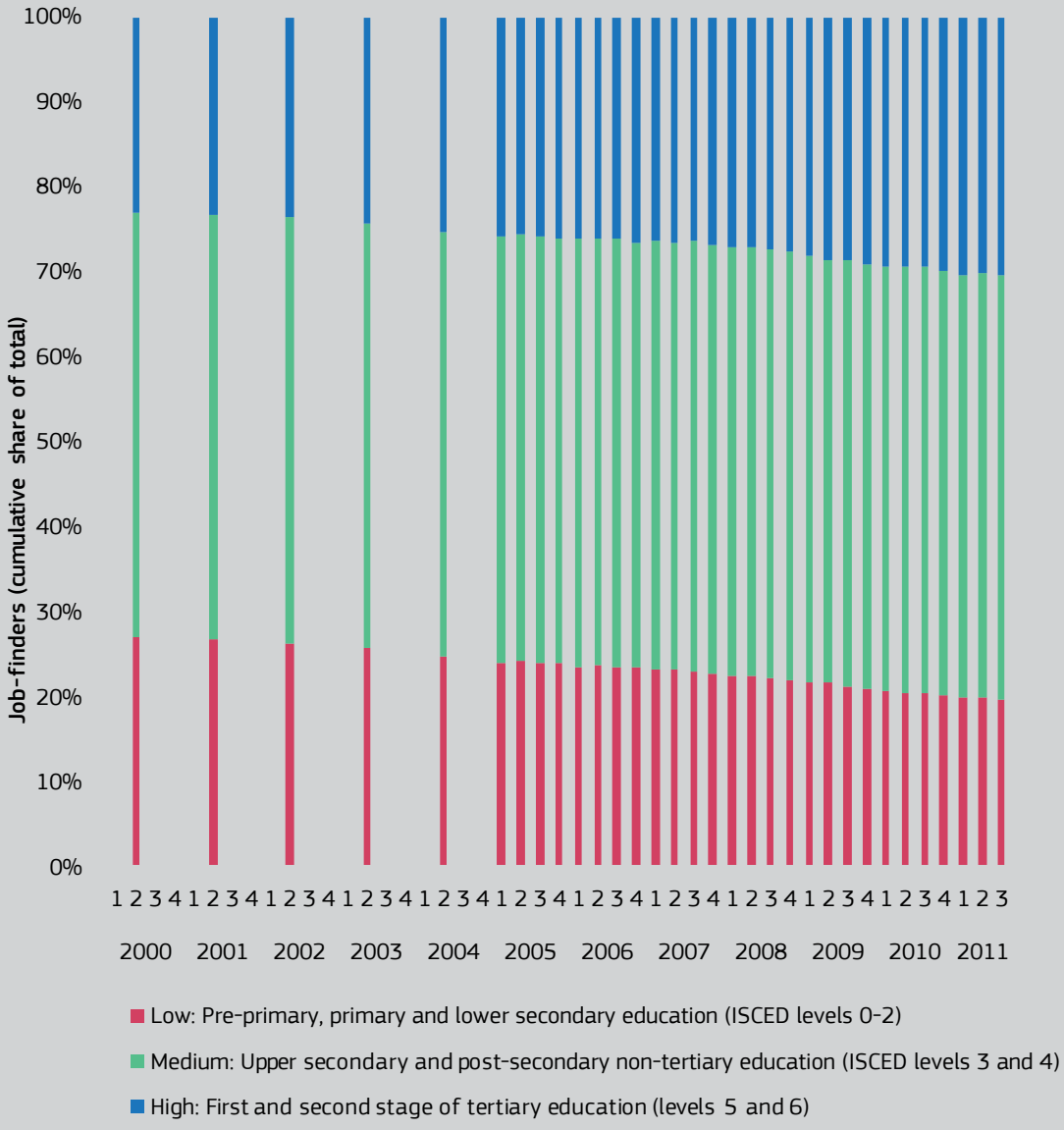
Box 4: Background information – development of education of employees

An analysis of LFS data (Chart 3.12) shows for the second quarters of 2000 to 2011:

- an increasing share of high educated employees from 23 per cent in 2000 to 30 per cent in 2011
- a decreasing share of low educated employees from 27 per cent in 2000 to 20 per cent in 2011
- a stable share of employees with medium levels of educational attainment at 51 per cent throughout the period.

Chart 3.12 Composition of employees by educational level

Percentage, 2000Q2 - 2011Q3

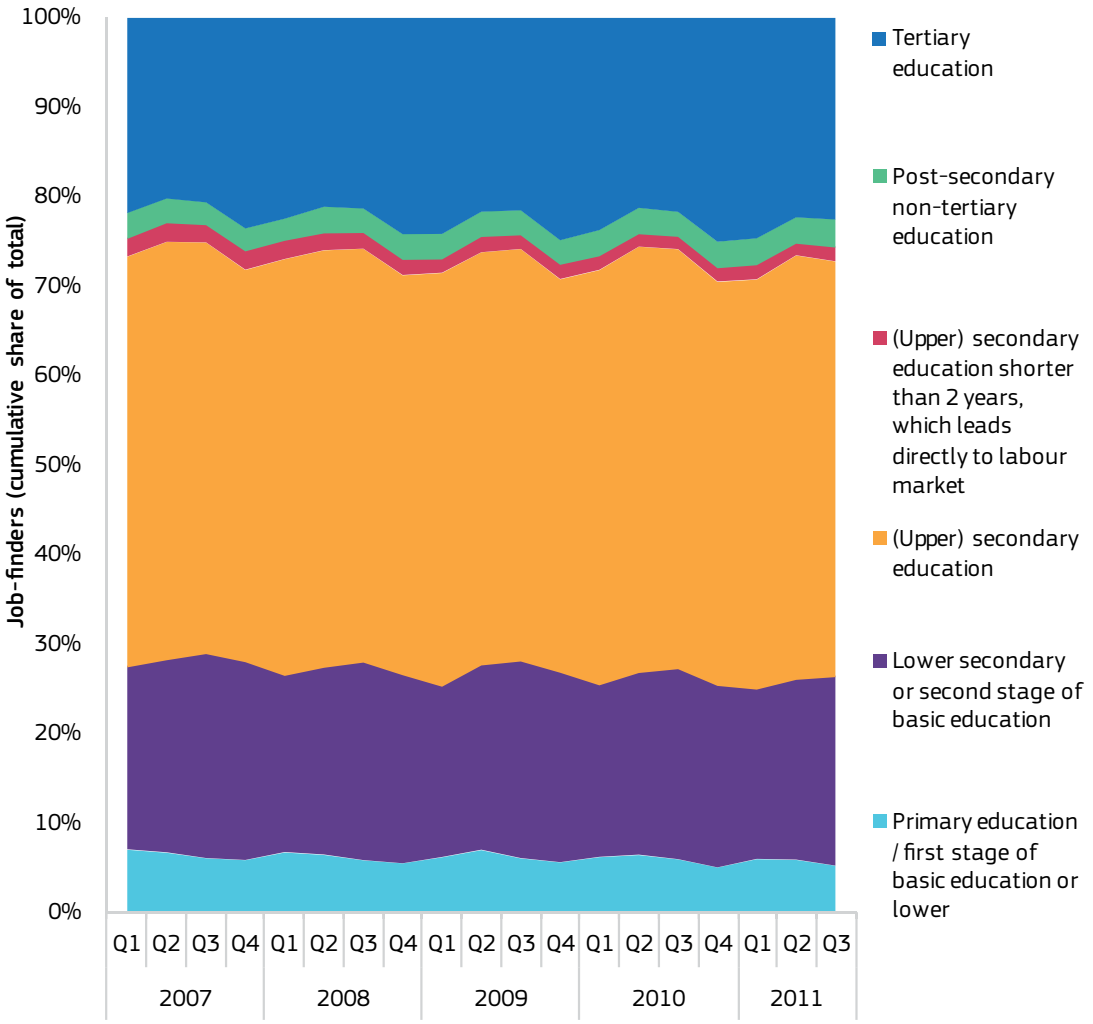


Source: Eurostat, Labour Force Survey.
Countries included: all EU27 countries

This result seems to contradict a commonly held view that workers with intermediate skills levels are in decline (polarisation of employment). For example, a 2006 study from the US argued that mechanisation and outsourcing tended to squeeze out workers with intermediate skills levels. Furthermore, Cedefop and Randstad skills forecasts up to 2020 predict a decline in employment for workers with low levels of educational attainment and an increase in employment for workers with high levels of educational attainment. For workers with medium levels of educational attainment both sources predict a small decrease in manual jobs that is offset by a small increase in non-manual jobs.

Chart 3.13 **Composition of job-finders by educational level**

Share, 2007Q1 - 2011Q3



Source: Eurostat, Labour Force Survey, all EU27 countries.
Educational level: ISCED.
Values for Slovakia 2011Q2 are estimated.
Absolute value 2011Q3 (in millions): Primary education / first stage of basic education or lower, 0.6; Lower secondary or second stage of basic education, 2.5; (Upper) secondary education, 5.4; (Upper) secondary education shorter than 2 years, which leads directly to labour market, 0.2; Post-secondary non-tertiary education, 0.4; Tertiary education, 2.6.

Large variations in recruitment requirements between countries

Taking the latest available quarter (third quarter of 2011, see Annex, Table A3.7), it is possible to look at job-finders by educational level in individual countries in the EU27. The first thing to note is the sometimes wide variation in the importance of the different educational levels.

For example, for job-finders at the level of *'primary education or lower'* the EU27 average is 5.2 per cent. However, among individual countries the range extends from a lowest proportion of zero per cent in the Czech Republic, Lithuania and Slovakia to highs of 32.3 per cent in Greece, 25.6 per cent in Portugal, and 13.7 per cent in Spain. For the largest EU countries the picture varies with the UK at 0.1 per cent, Germany at 3.8 per cent, France at 5.0 per cent, and Italy at 5.3 per cent.

Taking the largest category, *'upper secondary education'*, here the EU27 average for job-finders is 46.3 per cent and the range extends from lows of 27.9 per cent in Greece and Spain, and 32.6 per cent in Ireland to highs of 72.5 per cent in the Czech Republic, 66.8 per cent in Slovakia, and 66.2 per cent in Bulgaria. In the case of the largest countries, their proportions were closer together, with the UK at 49.7 per cent, France with 49.5 per cent, Germany with 48.3 per cent and Italy slightly lower than these three with 42.8 per cent.

Greece and Spain have the lowest shares of job-finders with 'upper secondary education' and the highest shares of those with *'primary of lower education'* in Europe. In contrast, the Czech Republic and Slovakia have the highest shares of recent recruits with *'upper secondary education'* and the lowest shares of those with *'primary or lower education'* in Europe. These differences are an indication of general differences in educational systems and recruitment traditions across the EU.

These differences also apply to interpreting the other ISCED categories. At the *'tertiary education'* level, the EU27 average for job-finders was 22.5 per cent in the third quarter of 2011 and for individual countries the range included the lowest three showing Austria at 10.8 per cent, Hungary at 13.3 per cent, and Portugal at 14.1 per cent. The countries with the highest proportion of job-finders in this ISCED category were Ireland at 37.8 per cent, the UK at 33.0 per cent and Cyprus at 31.3 per cent. Again some of this will be accounted for by the national characteristics such as the availability of vocational training, entry levels into tertiary education and other related factors. Aside from the UK, of the biggest four EU countries, France had 24.1 per cent, Germany 17.5 per cent and Italy 14.7 per cent. Here the effect of a strong vocational training system is evident in the German (and Austrian) figures, and, to a lesser extent, France.

In Section 3.3, it was commented that the occupational profile does not differ substantially between countries, at least not at the aggregate level for the main occupational groups. The strong difference between educational levels of job-finders suggests that countries have different education profiles for the same occupation, a notion that will be further investigated in Section 3.5.

Technical studies and business studies dominant in demand for labour

Data on the distribution of job-finders by major field of the study covers upper secondary and higher educational levels (Chart 3.14). There was little change in the relative shares over the period 2007-2010, with *'engineering, manufacturing and construction'*, along with *'social science, business and law'* forming by far the biggest shares of 28 and 24 per cent respectively throughout the whole period. For *'humanities, languages and arts'* and for *'science, mathematics and computing'* the share among job-finders was 7 per cent each throughout the whole period.

A comparison of the number of job-finders in economic sectors (Chart 3.2) with the educational field of job-finders (Chart 3.14) provides an indication of the possibilities that existed in 2010 of finding a job in certain sectors without a related educational background:

- 7.7 million job-finders were in the educational field of *'engineering, manufacturing and construction'*. This represented 73 per cent of the 10.6 million job-finders in the manufacturing and construction sectors in total.
- 2.4 million job-finders were in the educational field of *'health and welfare'*, which represented 59 per cent of the 4.1 million job-finders in the health and social work sector.
- 1.1 million job-finders were in the educational field of *'teaching'*, which represented 42 per cent of the 2.6 million job-finders in the educational sector.

This suggests that a relevant upper secondary or higher technical education and the related hard skills is considered an important recruitment requirement in the manufacturing and construction sectors. Specific educational fields are also important in the health and education sectors.

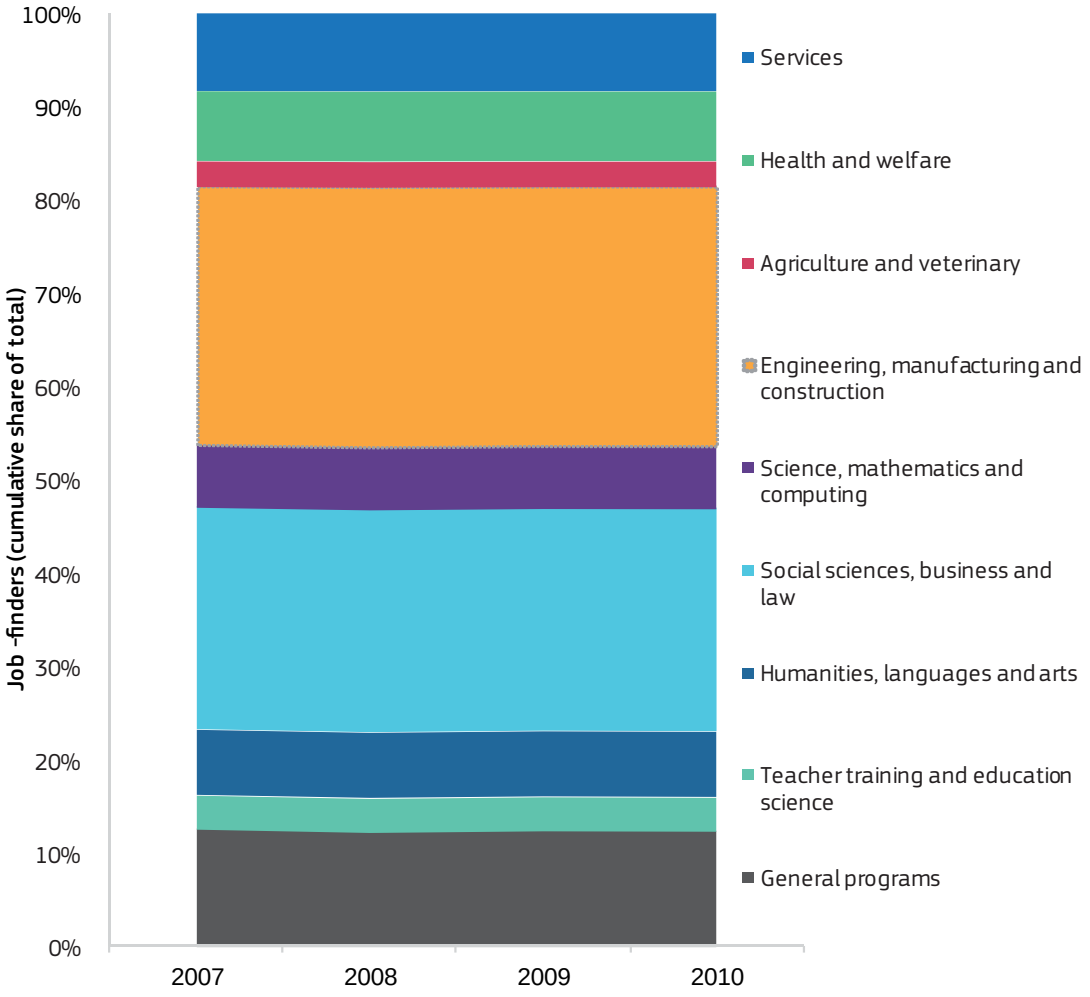
Fields of education vary according to national specifics

Again there is much variation in fields of education between countries. For example in Greece, Ireland and the UK, relatively high proportions of workers have completed education in *'general programmes'*, with percentage figures of 51, 36 and 38 respectively according to a Randstad study, the data for which are derived from the LFS[16]. These differences to a great extent reflect the national systems for education and training and how this affects what employers look for in their search for recruits. For example, in the UK there is a clear distinction between general and vocational education, with the latter mostly undertaken after the period of compulsory schooling has been completed. Vocational training is focused on a comprehensive set of National Vocational Qualifications

16 Randstad (2012), Into the Gap, figure 7.

Chart 3.14 **Composition of job-finders by educational field**

Share, 2007 - 2010, upper secondary or higher education



Source: Eurostat, Labour Force Survey.
Educational field: ISCED.
26 countries included: EU27 exclusive of Ireland (no 2007 data available)
Absolute value 2010 (in millions): General programs, 3.8; Teacher training and education science, 1.1; Humanities, languages and arts, 2.1; Social sciences, business and law, 7.4; Science, mathematics and computing, 2.1; Engineering, manufacturing and construction, 8.6; Agriculture and veterinary, 0.8; Health and welfare, 2.3; Services, 2.6; Unknown: 18.2.

(NVQ) that also, in part, embraces the apprenticeship system. In contrast, in Germany, the school system embraces a form of vocational training for some, backed up by the widely acclaimed 'dual system' of vocational training that combines on and off-the-job activities normally over a three-year period. This ensures a high level of competence is gained by trainees. In Germany, these formal qualifications are highly regarded and form an important part of the recruitment process, whereas in the UK, while NVQs do have some currency in the labour market, they are taken into account alongside work experience and soft skills[17].

According to the same Randstad study, countries with comparatively high proportions of workers with a study background classified as *'humanities'*, such as Cyprus (53 per cent), Portugal (53 per cent), Luxembourg (51 per cent), tend to have only a small proportion of workers with an educational background classified as *'general'*. However, in the countries of Eastern Europe many workers have an engineering or science background. (Romania for example has 58 per cent with a science background), Slovakia 58 per cent, the Czech Republic 57 per cent, Poland 52 per cent, Bulgaria 48 per cent and Hungary 47 per cent. Further variations are found in the north of Europe where many workers have a background in health studies such as in Finland (25 per cent), the Netherlands (25 per cent), Denmark (21 per cent) and Sweden (20 per cent).

The combination of high numbers with an engineering background and medium level education, which is found particularly in the East European countries, suggests that most engineering educational programmes are completed at the medium rather than high educational levels. This corresponds well with the finding that the industry sector is far more important as a source for job-finders in East European countries than in the EU15. The share of the industry sector in all open vacancies in East European countries was 24 per cent in the third quarter of 2011, compared to 10 per cent in the EU15. This suggests that the attainment of a medium level of technical education is likely to remain important in the new Member States even though the number of vacancies in the industry sector has dropped sharply.

17 For a fuller discussion of different intermediate level skills see: UK Commission for Employment and Skills (2012) 'International approaches to the development of intermediate level skills and apprenticeships' (Evidence Report No 42, Vol 1). Available at: http://www.ukces.org.uk/assets/ukces/docs/publications/evidence-report-42-international-approaches-synthesis-report.pdf

Development of education requirements in main occupational groups

Educational upgrading in almost all main occupational groups

Job opportunities for higher qualified job seekers were on the rise. For almost all main occupational groups, the educational level of job-finders increased between 2007 and 2010 (Charts 3.15a to 3.15i). For the high-skilled occupational groups the upgrade was from low and intermediate educational levels to high educational levels. For the medium and low-skilled occupations the upgrade was from low to intermediate educational level. Only in the case of skilled agricultural and fishery workers, was there a slight increase in the share of low educated workers hired between 2007 and 2010.

Comparing annual averages of the four quarters to minimise distortions due to seasonal fluctuations, among *'managers and senior officials'* (Chart 3.15a), the share of high educated job-finders increased from 51 per cent on average in 2007 to 52 per cent on average in 2010. Managers include not only corporate managers, but also intermediate managers and shop managers, for whom a high educational level is usually not necessary.

Among *'professionals'* (Chart 3.15b), the share of high educated job-finders is large and increasing, from 79 per cent on average in 2009, to 81 per cent on average in 2010. A high educational level appears to be a minimum requirement for most *'professionals'*. Only in Germany and Finland did fewer than 75 per cent of the job-finders in professional occupations have a tertiary education, having upper secondary education instead.

In addition, among *'technicians and associate professionals'* (Chart 3.15c), the share of high educated job-finders is comparatively large and increasing, from 40 per cent on average in 2007 to 42 per cent on average in 2010. This percentage was over 50 per cent in Spain, France and the UK, and lowest in Germany (23 per cent).

For *'clerks'* (Chart 3.15d), the share of high educated job-finders also increased, from 26 per cent on average in 2007 to 28 per cent on average in 2010. However, this must be seen against a background of a sharp decrease in the numbers of people finding a job as a clerk. Rather, the demand for low and middle educated clerks fell more sharply than for high educated clerks. Among clerks, the share of job-finders with tertiary education ranged from 8 per cent (Germany) to 47 per cent (Spain).

Among *'service and sales workers'* (Chart 3.15e), the share of low-educated job-finders was declining significantly, from 29 per cent on average in 2007 to 26 per cent in 2010. This may be an effect of the crisis, with more middle educated workers willing to work in this field that typically would not require their qualifications. For this main occupational group

at least, this seems to indicate increasing over-qualification and consequent underemployment. In Spain and Greece, service and sales workers are recruited from all educational levels and the share of middle educated job-finders is lowest (around 40 per cent). In contrast, in East European countries the share of middle educated job-finders among service and sales workers is highest, ranging from 70 to 90 per cent.

Overall, *'skilled agricultural and fishery workers'* (Chart 3.15f) are the only main occupational group with a (marginally) increasing share of low educated job-finders, from 35 per cent on average in 2007 to 36 per cent on average in 2010. However, changes are too small to give new figures for individual countries.

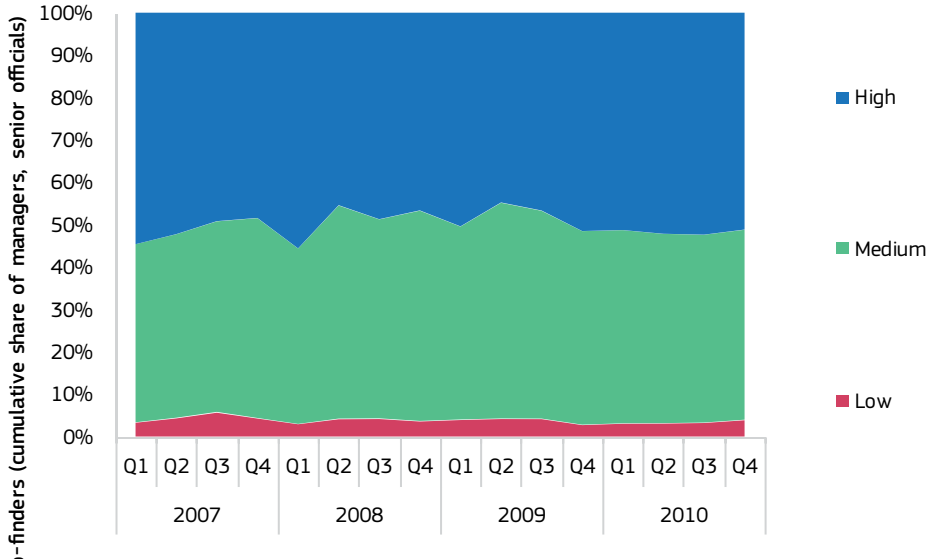
Among *'craft and related trades workers'* (Chart 3.15g), the share of middle educated job-finders increased significantly, from 54 per cent on average in 2007 to 57 per cent in 2010. Among craft and related trades workers, job-finders are most likely to have an upper secondary education in East European countries, with shares varying from 60 to 100 per cent. However, in both Ireland and the UK, around 80 per cent of the persons finding a job as craftsmen had upper secondary or higher educational level.

Among *'plant and machine operators and assemblers'* (Chart 3.15h), the share of middle educated job-finders increased significantly, from 58 per cent on average in 2007 to 61 per cent in 2010. Around 60 per cent or more of the job-finders among this occupational group had upper secondary education. This was true for most countries except Greece, Italy, Portugal and Spain where 50 per cent or less had upper secondary education for this occupational group.

Even among *'elementary occupations'* (Chart 3.15i), the share of middle educated workers was high and increasing, from 43 per cent in 2007 to 46 per cent in 2010, except in the Mediterranean countries (e.g., Greece, Italy and Spain) where between 10 and 30 per cent of the job-finders in elementary occupations had an upper secondary education. This could be "a clear example of over-qualification" as the Randstad report (see footnote referred to earlier) claims, although it cannot be ruled out that some of the job-finders were students doing weekend or holiday jobs.

Chart 3.15a **Composition of job-finders in the group of 'managers and senior officials' by educational level**

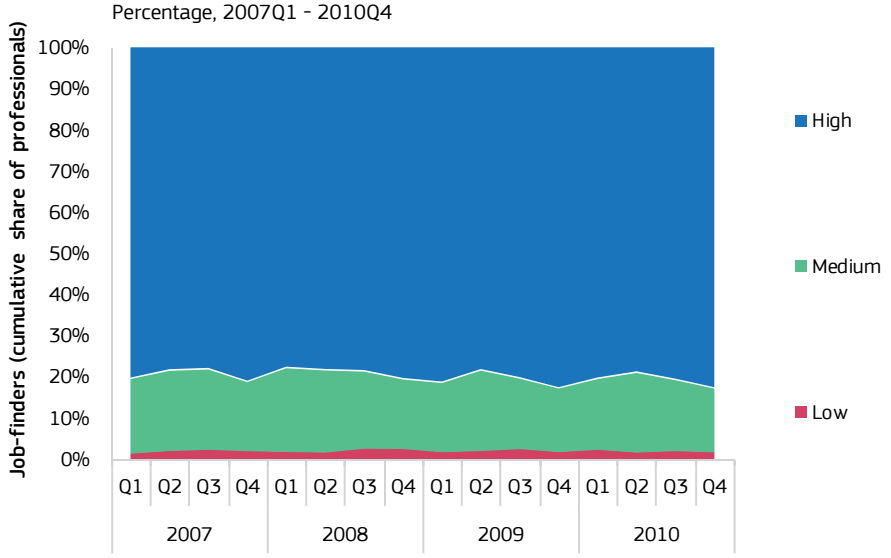
Percentage, 2007Q1 - 2010Q4



Source: Eurostat, Labour Force Survey, all EU27 countries.
Number of job-finders 'managers and senior officials' 2010Q4 (in thousands): 353
High: First and second stage of tertiary education (ISCED 5-6): 180
Medium: Upper secondary and post-secondary non-tertiary (ISCED 3-4): 159
Low: Pre-primary, primary and lower secondary (ISCED 0-2): 14

Chart 3.15b **Composition of job-finders in the group of 'professionals' by educational level**

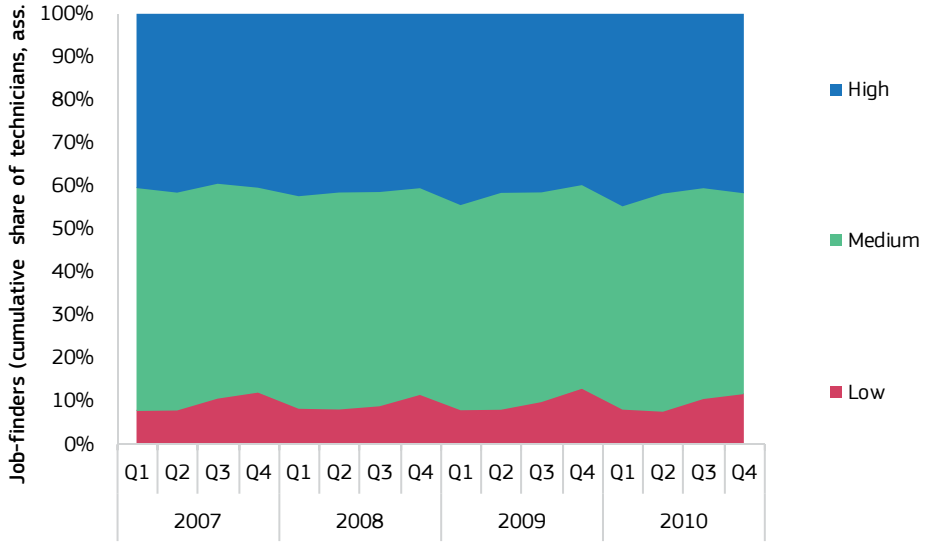
Percentage, 2007Q1 - 2010Q4



Source: Eurostat, Labour Force Survey, all EU27 countries.
Number of job-finders 'professionals' 2010Q4 (in thousands): 1,306
High: First and second stage of tertiary education (ISCED 5-6): 1,079
Medium: Upper secondary and post-secondary non-tertiary (ISCED 3-4): 205
Low: Pre-primary, primary and lower secondary (ISCED 0-2): 22

Chart 3.15c **Composition of job-finders in the group of 'technicians and associate professionals' by educational level**

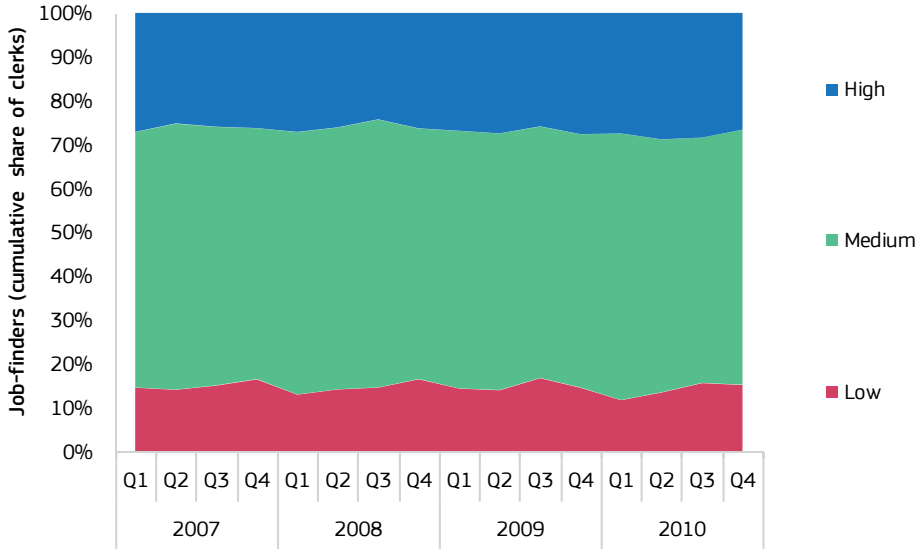
Percentage, 2007Q1 - 2010Q4



Source: Eurostat, Labour Force Survey, all EU27 countries.
Number of job-finders 'technicians' 2010Q4 (in thousands): 1,650
High: First and second stage of tertiary education (ISCED 5-6): 687
Medium: Upper secondary and post-secondary non-tertiary (ISCED 3-4): 769
Low: Pre-primary, primary and lower secondary (ISCED 0-2): 194

Chart 3.15d **Composition of job-finders in the group of 'clerks' by educational level**

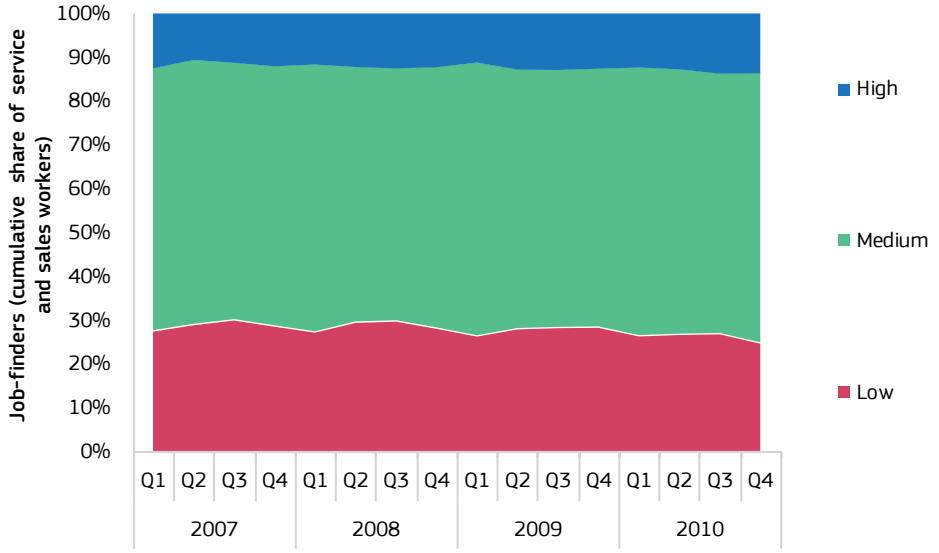
Percentage, 2007Q1 - 2010Q4



Source: Eurostat, Labour Force Survey, all EU27 countries.
Number of job-finders 'clerks' 2010Q4 (in thousands): 1,237
High: First and second stage of tertiary education (ISCED 5-6): 326
Medium: Upper secondary and post-secondary non-tertiary (ISCED 3-4): 722
Low: Pre-primary, primary and lower secondary (ISCED 0-2): 190

Chart 3.15e **Composition of job-finders in the group of 'service and sales workers' by educational level**

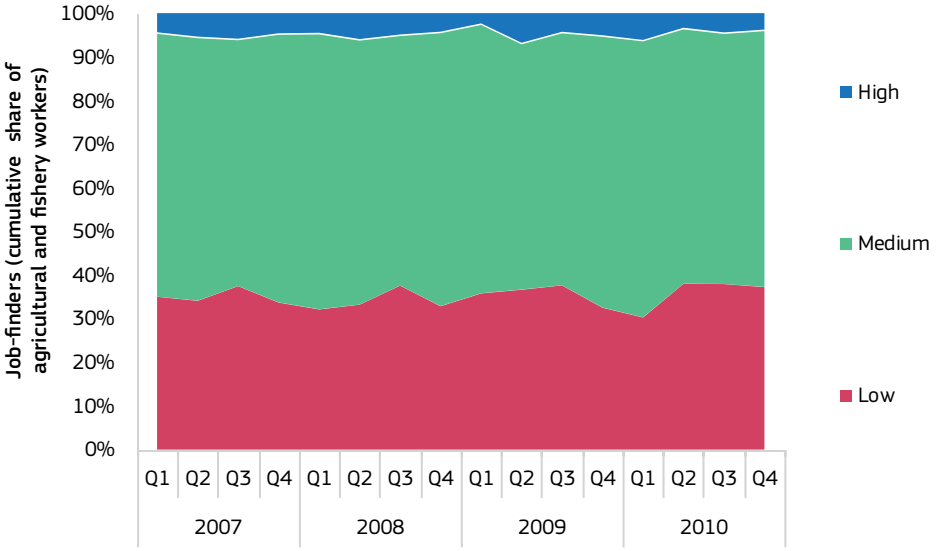
Percentage, 2007Q1 - 2010Q4



Source: Eurostat, Labour Force Survey, all EU27 countries.
Number of job-finders 'service and sales workers' 2010Q4 (in thousands): 2,467
High: First and second stage of tertiary education (ISCED 5-6): 335
Medium: Upper secondary and post-secondary non-tertiary (ISCED 3-4): 1,522
Low: Pre-primary, primary and lower secondary (ISCED 0-2): 610

Chart 3.15f **Composition of job-finders in the group of 'agricultural and fishery workers' by educational level**

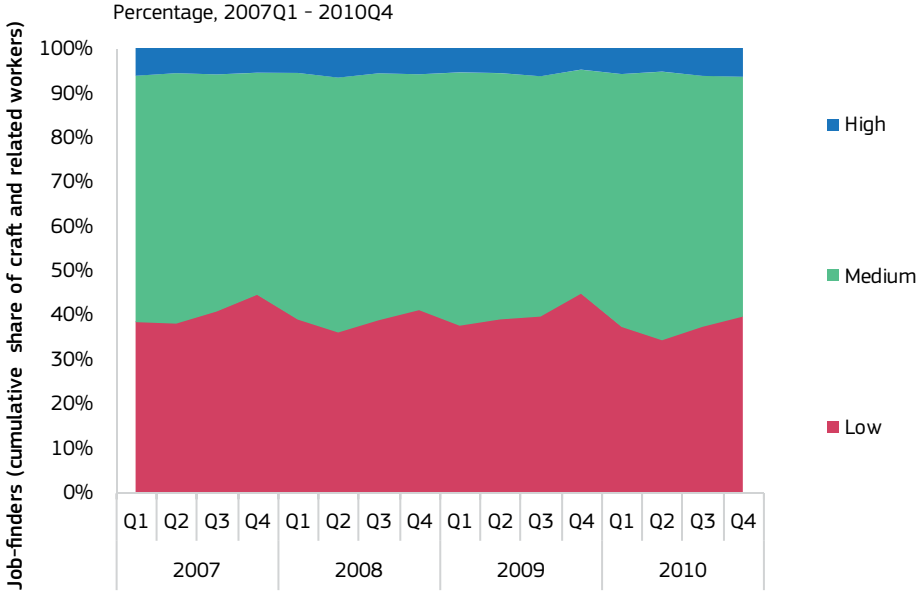
Percentage, 2007Q1 - 2010Q4



Source: Eurostat, Labour Force Survey, all EU27 countries.
Number of job-finders 'skilled agricultural workers' 2010Q4 (in thousands): 208
High: First and second stage of tertiary education (ISCED 5-6): 8
Medium: Upper secondary and post-secondary non-tertiary (ISCED 3-4): 122
Low: Pre-primary, primary and lower secondary (ISCED 0-2): 78

Chart 3.15g **Composition of job-finders in the group of 'craft and related trades workers' by educational level**

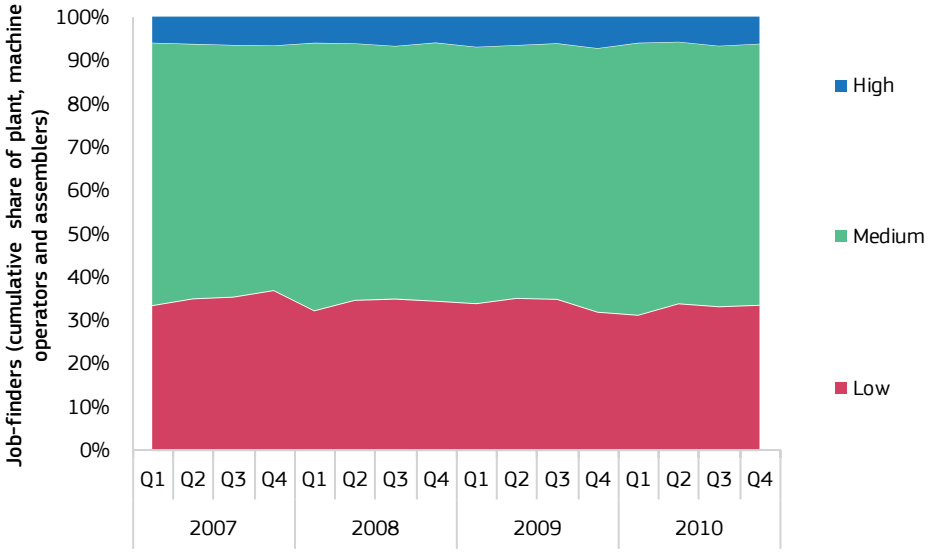
Percentage, 2007Q1 - 2010Q4



Source: Eurostat, Labour Force Survey, all EU27 countries.
Number of job-finders 'craft and related workers' 2010Q4 (in thousands): 1,459
High: First and second stage of tertiary education (ISCED 5-6): 90
Medium: Upper secondary and post-secondary non-tertiary (ISCED 3-4): 787
Low: Pre-primary, primary and lower secondary (ISCED 0-2): 581

Chart 3.15h **Composition of job-finders in the group of 'plant and machine operators and assemblers' by educational level**

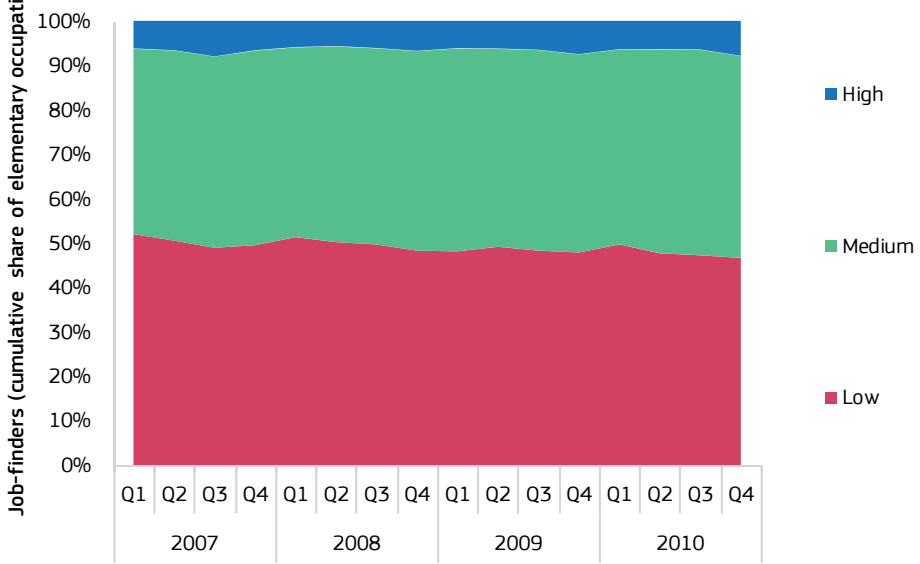
Percentage, 2007Q1 - 2010Q4



Source: Eurostat, Labour Force Survey, all EU27 countries.
Number of job-finders 'operators and assemblers' 2010Q4 (in thousands): 986
High: First and second stage of tertiary education (ISCED 5-6): 60
Medium: Upper secondary and post-secondary non-tertiary (ISCED 3-4): 594
Low: Pre-primary, primary and lower secondary (ISCED 0-2): 332

Chart 3.15i **Composition of job-finders in the group of 'elementary occupations' by educational level**

Percentage, 2007Q1 - 2010Q4



Source: Eurostat, Labour Force Survey, all EU27 countries.
Number of job-finders 'elementary occupations' 2010Q4 (in thousands): 1,950
High: First and second stage of tertiary education (ISCED 5-6): 148
Medium: Upper secondary and post-secondary non-tertiary (ISCED 3-4): 889
Low: Pre-primary, primary and lower secondary (ISCED 0-2): 913

Increasing skills requirements or over-qualification?

The fact that job-finders had increasingly higher educational levels in almost all occupational groups may point to two possible developments:

- General trend for increasing skills requirements
- Increasing over-qualification of workers - meaning that workers are recruited with higher educational levels than is usually required for the occupation

However, measuring over-qualification is not straightforward, since it cannot be assumed that comparing the skill level for a certain occupation with the educational level of newly hired job-finders will produce a reliable result. Such an assumption ignores the possibility of increasing skills requirements. If there are increasing skills requirements for a particular job, this will be evident from increasing demand for higher educational levels (or grades or certificates) in job vacancies. How valid analysing skills demanded in vacancies is to assess the skills requirements depends on the extent that employers fail to demand overqualified workers.

A comparison of educational levels within the same occupation across countries could give some indication of the extent of over-qualification in countries with comparatively high numbers of high educated job-finders in the same occupation as other countries. The preceding analyses (based on Charts 3.15a-3.15i) indicate that in East European countries, job-finders in low-skilled occupational groups have far higher shares of middle levels of educational attainment than in the EU-15, but this is likely to reflect differences in the educational systems as discussed in Section 3.4. In the Mediterranean countries, job-finders are higher qualified compared to other countries in non-manual jobs, but lower qualified in manual jobs. In Ireland and the UK, job-finders also have higher qualifications in some occupational groups than is found in other countries.

There are several studies indicating over-qualification, at least partially. For example, the Eurofound 5th Working Conditions Survey indicates that *"32 per cent say they have the skills to cope with more demanding duties"*[18]. What is remarkable is that this percentage varies little between economic sectors, from 28 per cent of the workers in the EU in health and education to 34 per cent in agriculture and other services. The OECD analysed the 2005 Working Conditions Survey and concluded that larger differences in this percentage exist between countries, from 22 per cent in Finland and the Czech Republic to 45 per cent in France, followed closely by Ireland and the UK[19]. However, this can be a subjective measure from a worker's own viewpoint and so employers might have a different view. Furthermore, this view is likely to be affected by the available supply and during an economic downturn, the quality of supply tends to be higher as more able workers are displaced, thereby creating more opportunity for employers to over-recruit.

In the same Eurofound Survey, the share of workers who said they needed further training to cope with their duties at work varied more between sectors, from less than 10 per cent in agriculture, transport and trade, to 15-20 per cent in financial services, health, education and public administration. Between countries, the need for further training from the perspective of the employees is low in countries where a large share of employers provide employer-paid training such as in the UK (around 40 per cent) and Ireland (around 35 per cent) according to the 5th Working Conditions Survey. The frequent provision of training by employers may be related to the dominance of general education in those two countries. Workers in Austria (27 per cent) and Germany (21 per cent) most often indicated a further need for training.

The country analysis and the Eurofound Survey results suggests that discernible levels of over-qualification exist in Ireland and the UK particularly for craft workers, technicians and associate professionals - most likely because of the increased availability of higher quality job seekers during the crisis.

Too early to conclude that *"the middle of the labour market might get squeezed out"*

There is no evidence at the moment that *"the middle of the labour market might get squeezed out in the future"*. The number of jobs is only declining for skilled manual jobs. However this is not reflected in the share of middle educated workers among job-finders. Therefore, the decline in the number of employees in manual skilled occupations is more likely to reflect an increasing number of older medium educated workers in manufacturing leaving the labour market, while employment as a whole shifts more to services (in particular health). Therefore, the evidence to date from an analyses of the job-finder data does not appear to support the conclusion that intermediate skilled occupations are being 'squeezed out' but rather a shift from skilled manual to skilled non-manual jobs.

The conclusion of a recent study[20] is based on a predicted increase in elementary occupations in public and private services sectors. It is true that elementary occupations in those sectors have increased significantly over the past few years and this is consistent with a longer term trend identified by Cedefop[21]. It reported that the number of workers in elementary occupations in Europe increased by 3.9 million between 2000 and 2008, and they now account for around one-in-ten workers. The growth was mainly attributed to

18 Eurofound (2012), 5th Working Conditions Survey, page 9.

19 OECD (2012), The OECD Skills Strategy, http://www.oecd.org/dataoecd/58/28/47769132.pdf

20 Randstad (2012), Into the Gap

21 Cedefop (2011) 'Labour market polarisation and elementary occupations in Europe: Blip or long-term trend? (Research Report No 9). Available at: http://www.cedefop.europa.eu/EN/Files/5509_en.pdf

structural change at the inter-sectoral level rather than due to technological factors or changes in work content.

However, without analysing the underlying developments it cannot be assumed that this trend will continue in the future. For example, there are indications of shortages in the health care sector (Section 3.1 and Chapter 4) and in response, employers may choose to 'de-skill' the role by splitting tasks currently carried out by middle skilled workers into tasks carried out by workers with a range of skills.

In summary, there are increasing shares of high educated persons finding a job, but this is increasing for all sorts of occupations, not only in the high skilled ones. This may reflect that employers exert a natural preference for higher educated workers, even if this leads to employing over-qualified workers. This is also fuelled by increasing numbers of higher qualified people emerging from higher education in many countries. A recent report for the UK[22], for example, confirms that recent graduates are more likely to work in a low skilled job than a decade ago, with the implication that this is not by choice.

3.5 Conclusion

In the context of no more than a partial economic recovery, with fewer job vacancies and job-finders than before the crisis, what sectors were more or less affected during the crisis? What were the most sought after and growth occupations in this context? What implications does this have for the skills needs?

The trade and health care sectors offer good employment perspectives for job-seekers since:

- The number of job vacancies has been less affected by the recession.
- The stock of job vacancies in the health care sector was increasing while the number of job-finders remained fairly stable.

Manufacturing and construction can be identified as offering less promising employment opportunities for jobseekers since:

- The number of vacancies in the manufacturing and construction sectors has dropped most strongly in response to the crisis.
- A longer trend of declining employment in manufacturing has been evident already since 2000 at the EU level.
- In construction in particular, the drop in vacancies signifies a break with the upward trend in employment between 2000 and 2007.

Top demanded occupations include a number of medium skilled services workers, such as:

- shop salespersons (709,000 in third quarter of 2011)
- waiters and bartenders (497,000)
- personal care workers (358,000)

Other top demanded occupations range widely, but are generally for *'elementary occupations'* and for *'service and sales workers'*. These jobs are generally considered as requiring less specific skills and the high share of job-finders in these occupations also reflects a greater degree of job turnover. This is reflected again in the most notified occupations in the PES data. However, from this source, a number of high skilled occupations have a high ranking including the following:

- finance and sales associate professionals
- physical and engineering science technicians
- architects, engineers and related professionals
- administrative associate professionals

The finding that these occupations rank high in the PES list but (apart from the engineering technicians) not in the list of top of job-finders, could suggest firstly that employers experience difficulty recruiting workers in these occupations, and, secondly, that in response to the difficulties, these vacancies are more often notified to the PES (this will be further investigated in the Chapter 4).

With regard to top growth occupations:

- The largest increase of job-finders was among teaching associate professionals (combined +58,000 between 2007 and 2010), elementary occupations in agriculture (+55,000) and shop salespersons (+31,000), indicating a growing demand for these occupations.
- Strongly increasing numbers of job-finders indicating promising employment opportunities for specific professional occupations including business professionals (+28,000), health professionals (+14,000) and psychologists (+13,000).
- Clerks were almost universally in less demand in 2010 than they were in 2007.
- A large and increasing PES inflow of notified job vacancies for craft workers and operators indicates both a growing demand for these workers since 2010 and the relatively important role of the PES for handling job placement for these occupations.

For the broad group of skilled manual occupations, recruitment has not recovered well, although it should be noted that demand might be particularly sensitive to the business cycle for these occupations. However, the time series on job-finders at EU-level is too short to confirm this. Other reports[23] have noted a "polarisation" of skills in longer-term employment trends: increasing employment in high skilled and low skilled jobs, and decreasing employment in medium skilled jobs. These reports indicate that polarisation is particularly evident in manual jobs. However, data on job-finders in the past few

22 Office for National Statistics (2012) 'Graduates in the labour market 2012. Available at: http://www.ons.gov.uk/ons/dcp171776_259049.pdf

23 See sub-section 3.3.1, footnote 13

years indicate that polarisation has not been halted by new developments in recruitment up to 2011.

The composition of job-finders by educational level compared to that by broad skills level (taking together skilled manual and skilled non-manual as constituting medium skills), shows relatively small differences. The share of medium educated job-finders (58 per cent) is slightly larger than the share of medium skilled jobs found (51 per cent). Conversely, the share of low educated job-finders is slightly lower than the share of low skilled jobs found. This suggests that a number of low educated job-finders acquire the necessary skills on-the-job, but the difference is only a few percent.

Furthermore, the analysis in this chapter has shown that the educational level of hired persons increases steadily, with the following:

- a declining share of low educated workers
- a large and stable share of middle educated workers and
- an increasing share of high educated workers.

In fact, a higher educational level becomes increasingly important for almost all main occupational groups (with the exception of skilled agricultural and fishery workers) though some of this can be attributed to grade drift, where employers are tending to recruit people who are significantly over-qualified for the jobs they fill. The possibility of such over-qualified recruitment in all occupations makes it difficult to assess the real need for highly educated or trained workers, and also makes it hard to assess the effect of training programmes.

4 The relationship between labour demand and supply: indications for employment "bottlenecks"

4.1 Introduction

In Chapter 3, occupations were identified where there is a high demand which is increasing, based on the number of job-finders and the inflow of job vacancies to PES. This high and increasing demand does not necessarily mean that employers will have difficulty in filling these vacancies, and similarly employers might have difficulties in recruiting workers for specific occupations even if few workers are needed. It all depends on the available supply in terms of such factors as skills, experience and location.

The main objective in this chapter is to identify certain mismatches between labour demand and supply. The focus is on **bottleneck occupations**, defined as occupations for which there is evidence of recruitment difficulties. A number of direct and indirect indicators are used: The direct indicators (e.g. employer-based surveys, duration of vacancy filling) offer a more precise measure of bottlenecks. However, these measures are not available for every country. In contrast, the data on indirect measures (LFS data, ratio of unemployed to job-finders) is available for every country and while less precise, it nevertheless offers useful indications of potential bottlenecks in the labour market. Both measures are used in combination to form a composite indicator in order to identify the most severe bottleneck occupations in Europe.

For an adequate policy response, the reasons behind the identified mismatches also need to be understood. The reasons can be varied and include the following:

- *Lack of labour* - where there is an insufficient numerical supply of job seekers for the available job vacancies.
- *Qualitative discrepancies* - where demand and supply fail to match for the following sorts of reasons:
  - *Lack of skilled labour* where the skills of the jobseekers may not match the skills required by the employers. This includes both formal and informal skills. This discrepancy is sometimes called '*shortage of skilled labour*' to distinguish it from a straightforward 'numerical' lack of labour supply.[1]
  - There may be a geographical mismatch between the available jobs and the jobseekers.
  - Job seekers are able and willing to work but are not sufficiently attracted by the terms and conditions on offer (perhaps the wages are low, the hours of work anti-social, or the conditions considered dirty or too hazardous).
- *Lack of transparency* – leading to poor knowledge about job opportunities and available jobseekers which can arise from poor recruitment channels (for example not providing job information in different regions), misinformation (for example where a particular job has a negative but inaccurate image), and other factors.

Different indicators are analysed in this chapter to measure mismatches and bottlenecks and each have their own merits and disadvantages. The main sources used are derived from Eurostat data. In this chapter, job vacancies from the JVS (Eurostat's Job Vacancy Statistics) and the number of job-finders from the LFS (Eurostat's Labour Force Survey) are compared with the number of unemployed (also from the LFS) to show general developments in the total labour market (Section 4.2).

In Section 4.3, the LFS is used again to provide first indications of 'bottleneck' occupations in the total labour market. The LFS has the advantage of presenting detailed occupational data comparable across all EU27 countries. The LFS data however also has a number of drawbacks that were also indicated in Chapter 1. Firstly, job-finders refer to filled vacancies only. Secondly, the 'occupation' of the unemployed in the LFS is given as the job they did previous to their unemployment. The data does not include either first-time labour market entrants, nor workers who wish to change their job.

This chapter also analyses the ratio of PES inflow of job vacancies to unemployed in Section 4.4. This indicator is used rather than other statistics of job vacancies notified by the PES such as PES vacancy duration and withdrawals of vacancies notified by employers, because the latter statistics are partly influenced by different national policies towards closing registered vacancies, as discussed in Chapter 1. However PES data provide indications of potential bottlenecks limited to a segment of the labour market as not all job vacancies are notified to the PES.

National studies that seek to analyse bottleneck occupations in the total labour market - although not directly comparable - complement the picture by adding more specific occupational information. Direct measures of mismatches and bottlenecks *could* be obtained from an employer survey in which employers are asked whether they have recruitment difficulties and

1 A. Kettner (2012), Frachkräftemängel und Fachkräfteengpässe in Deutschland: Befunde, Ursachen und Handlungsbedarf, Phd dissertation, Technical University of Berlin.

if yes for which occupations. The 2012 Manpower Talent Shortage Survey (discussed in Section 4.6) presents valuable information and serves as a starting point for a detailed occupational coverage. However, a comprehensive European employer survey would need to be larger, with more than the 38,000 employers interviewed worldwide for the Manpower survey.

Although none of the above indicators is decisive in itself in identifying bottlenecks they can be used in combination to build up a composite indicator. As such they become a reliable means of identifying the top bottleneck occupations in Europe (for a more detailed description of the indicators – see Chapter 1 – Introduction).

4.2 Development of vacancies and recruitment relative to unemployment

More unemployed per vacancy than before the recession

At the beginning of the reference period in the first quarter of 2008, the ratio between the number of unemployed and the number of job vacancies (U-V-ratio) was 3.3. The development over time shows the impact of the crisis (Chart 4.1). As unemployment rates increased and numbers of vacancies fell, the U-V ratio started a steep upward climb from around the second quarter of 2008 and reached its highest point of 7.7 in the first quarter of 2010. At this point in time there were nearly eight unemployed for every job vacancy, more than twice as many as in 2008. After the first quarter of 2010 the U-V ratio fell back a little and levelled off from around the first quarter of 2011 at 5.6 unemployed people for every job vacancy, almost twice the ratio at the start of the reference period. This reflects that the relationship between the available supply of unemployed and the demand of employers, i.e. the tightness of the labour market eased. Overall, the risks of recruitment difficulties decreased. However, a high surplus of labour supply at the European level does not necessarily exclude the possibility of difficulties in recruitment for specific occupations in specific countries or regions (as discussed in Section 4.3).

Eased U-V-ratios in most countries, but not in all of them...

The experience of individual countries varied (see Chart 4.2). In three of the six countries presented (Bulgaria, Portugal and the UK), the U-V ratio more than doubled between identical quarters of 2008 and 2011. However, in the UK there were 6 unemployed per vacancy only in the third quarter 2011, while there were 22 unemployed per vacancy in Bulgaria and 56 in Portugal.[2]

The continued high U-V ratios of Portugal and Bulgaria contrast with the developments in Sweden, Luxembourg and Germany. The Swedish U-V ratio almost tripled between the third quarters of 2008 and 2009: the U-V ratio fell back to a ratio of 6 in the third quarter of 2011, just above the level in the base quarter. Germany shows the least signs of the effects of the financial crisis and recession ending the period well below the base quarter with an absolute ratio of 2.7 unemployed per vacancy. According to Burda and Hunt (2011)[3], to some extent the resilience of the German labour market to the recession was accounted for by a combination of job retention strategies. These included financial incentives for employers, the use of collective employment agreements and of internal flexibility (e.g. working time accounts).

Unemployment to job-fnder ratio underlines slow recovery

The trend in the ratio of unemployed to job-finders between 2007 and 2011 for EU27 confirms the findings from the vacancy data for 16 countries: the European labour market has only recovered modestly since 2009 (Chart 4.3). The real impact of the crisis started to be felt in the first quarter of 2009 when the ratio rose sharply and has not as yet returned to the 2007 and 2008 values. The EU27 average in the third quarter of 2011 was almost two unemployed per one job finder compared to 1.2 in the corresponding quarter of 2007.

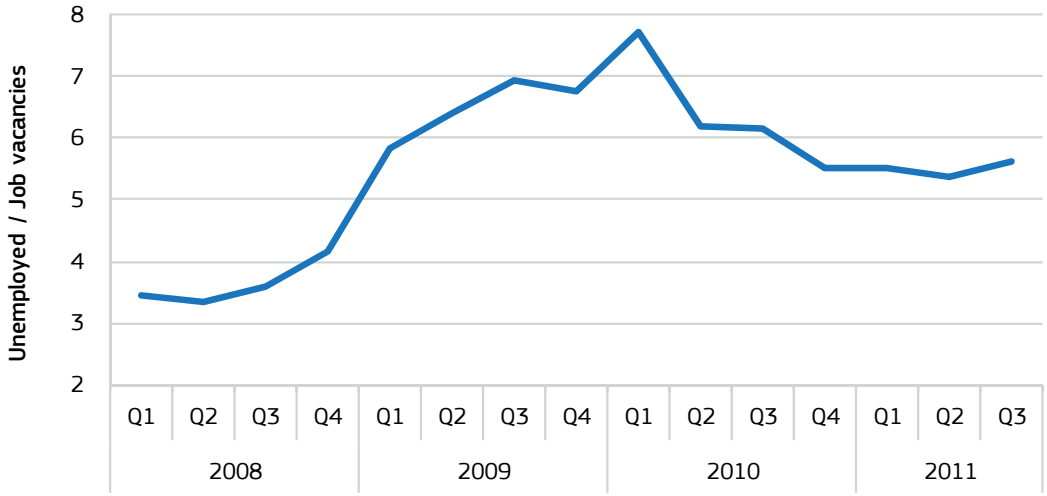
While the trends in both, the ratio of unemployed to vacancies and the ratio of unemployed to job-finders are broadly similar, the values of the ratios are different. Specifically the ratio of unemployed to job-finders is considerably smaller. This is because the volume of job-finders at any specific moment is much higher than the number of vacancies as the measure of job-finders is cumulative including all those who found a job over a three-months period. In contrast, the vacancy figure refers to the number of vacancies open at a point of time and it is based upon a more restrictive definition of vacancies (see Chapter 1 – Introduction).

2 Part of these variations could be attributable to methodological differences in how data on job vacancies are collected in those two countries.

3 Burda M C and Hunt J (2011) 'What explains the German Labor Market Miracle in the Great Recession?' (National Bureau of Economic Research, Working Paper No 17187). Available at: http://www.nber.org/papers/w17187

Chart 4.1 **Unemployed to job vacancy ratio**

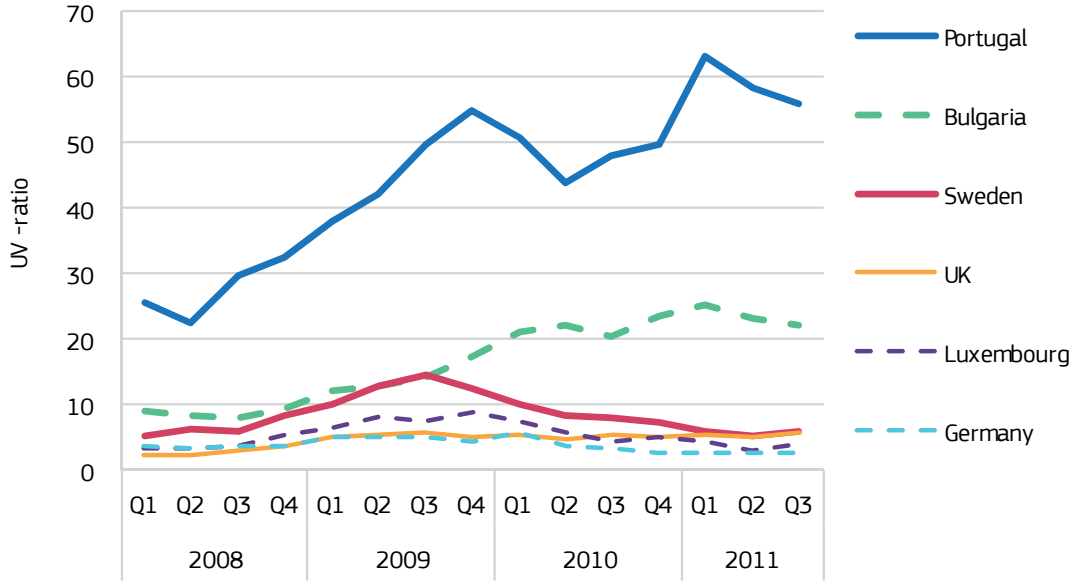
Ratio, 2008Q1 - 2011Q3



Source: Eurostat, Labour Force Survey, Job Vacancy Statistics - own calculations.
16 Countries included: Bulgaria, Cyprus, Czech Republic, Estonia, Germany, Greece, Latvia, Lithuania, Luxembourg, Netherlands, Portugal, Romania, Slovenia, Slovakia, Sweden, UK.
The stock of job vacancies in Greece for 2011Q1 and 2011Q2 were not available and estimates are used.
Absolute values 2011Q3: Stock of job vacancies, 1.7 million; number of unemployed, 9.8 million

Chart 4.2 **Development of unemployed to job vacancy ratio in selected countries**

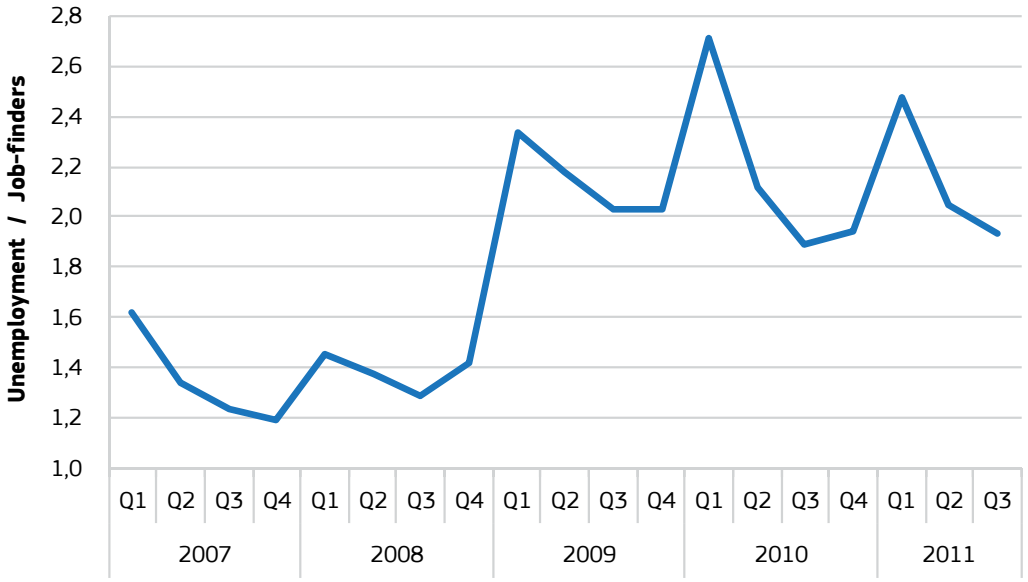
2008Q1-2011Q3



Source: Eurostat, abour Force Survey and Job Vacancy Statistics.
Job vacancies figures given for Portugal exclude public administration.
2011Q3 U-V-ratios: Portugal: 55.8; Bulgaria: 22.1; Sweden: 6.0; UK: 5.6; Luxembourg: 4.2; Germany: 2.7

Chart 4.3 **Unemployed to job-finder ratio**

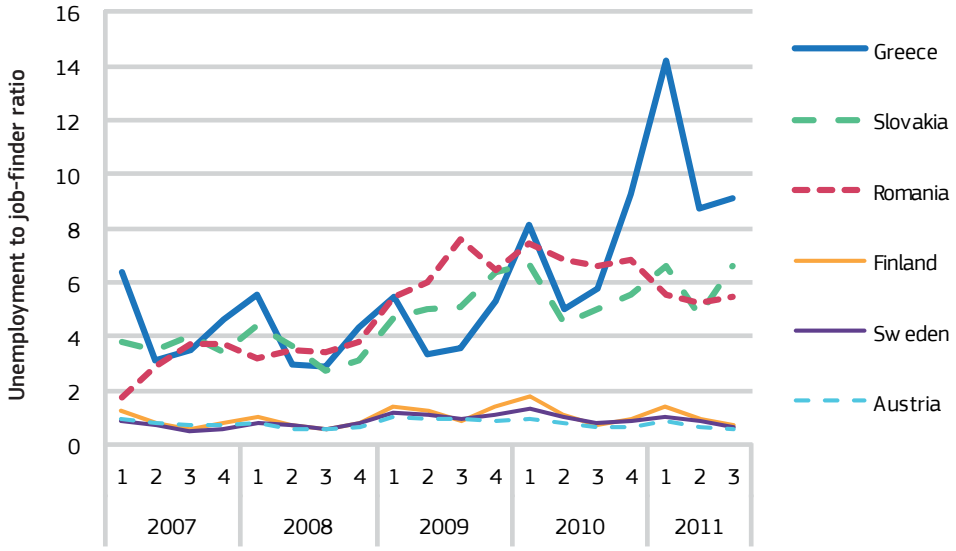
Percentage, 2007Q1 - 2011Q2



Source: Eurostat, Labour Force Survey, all EU27 countries.
Absolute values 2011Q3: Unemployment, 22.8 million; Job-finders 11.8 million.

Chart 4.4 **Unemployed to job-finder ratio in selected countries**

Countries with highest and lowest U/JF ratio in the third quarter of 2011
2007Q1-2011Q3



Source: Eurostat, Labour Force Survey.
2011Q3 U/JF-ratios: Greece: 9.1; Slovakia: 6.6; Romania: 5.4; Finland and Sweden: 0.7; Austria: 0.6

High ratio of unemployed to job finders in Greece and Slovakia, low ratio in Austria and Sweden

Compared to the number of job-finders, unemployment was highest in the third quarter of 2011 in Greece among all EU countries, followed by Slovakia and Romania (Chart 4.4 and also the Annex). This suggests relatively weak labour market conditions in these three countries. In Greece the ratio was already comparatively high before the recession (6.4 in the first quarter of 2007) and it increased by approximately 50 per cent to 9.1 by the end of the period with seasonal peaks in the first quarter of each year.

In contrast, the countries with the lowest ratios of unemployed to job-finders were Austria, Sweden and Finland (Chart 4.4). According to further data for countries (see Annex Table A4.2) these are closely followed by the Netherlands, Denmark, Luxembourg and Germany. For the Netherlands both the unemployed to job-finder ratio and the U-V ratio was among the three lowest in the EU.[4]

In other countries, the increase of the ratio indicated a dramatic turn from severe tightness of the labour market with indications of labour shortages to a high surplus of jobseekers within little more than two years, for example in Ireland and Lithuania. In Ireland, the ratio increased from 0.6 in the third quarter of 2007 to a peak of 4.4 in the first quarter of 2010. Only in Lithuania did the ratio of supply and demand change more than in Ireland, from 0.7 in the fourth quarter of 2008 to 7.3 in the first quarter of 2010. In Lithuania, however, the labour market recovered to a limited extent, with the ratio falling back to 2.6 in the second quarter of 2011 (see Annex).

The countries with tight labour markets and those with high surpluses of supply can be identified as follows based on the ratios in the first quarter of 2011 (see Annex):

- Relatively tight labour market (ratio < 1,5):
  Austria, Denmark, Finland, Luxembourg, the Netherlands, Sweden
- Medium ratios (1.5 ≤ ratio < 3):
  Belgium, Cyprus, Czech Republic, Germany, Estonia, France, Italy, Malta, Slovenia, and the United Kingdom
- High surplus of labour supply (ratio ≥ 3):
  Bulgaria, Greece, Hungary, Ireland, Latvia, Lithuania, Poland, Portugal, Romania, Slovakia and Spain

4 Denmark and Austria are not included into the JVS (Chart 4.1).

4.3 First indications of bottlenecks: Comparing job-finders to unemployed by occupation

As a first step to identifying bottleneck occupations, this section examines the ratio of job-finders to unemployed by occupation. This ratio provides a useful initial indicator of bottleneck occupations where there is a clearly identifiable source of supply as represented by the 'unemployed by previous occupation' measure. However, the ratio is not capable of performing this function in respect of occupations where the supply side is indeterminant. Consequently, the list of occupations derived from the application of the ratio will include both: occupations which may qualify as bottleneck occupations and occupations for which employers do not experience any recruitment difficulties. Further analysis is required to distinguish between those qualifying as potential bottleneck occupations and those which do not.[5]

The analysis shows that the ratio for the total of all occupations in the EU was 5.4 job-finders per one unemployed in 2010, only half the level compared to 2007. In general terms, this implies that recruitment conditions eased over the period. While for most occupations the ratios between 2007 and 2010 declined, for a number of occupations the ratios were relatively stable or even increasing, notably in one health occupation, '*nursing and midwifery associate professionals*' (ranked 2nd).

Examining the list of the 25 occupations with the highest ratios in the EU in 2010 (Chart 4.5), the ratios range from 31 job-finders per unemployed for '*college, university and higher education teachers*'[6], to 6.8 job-finders per unemployed for '*business professionals*'. The latter group of business professionals mainly includes financial professionals such as accountants, financial and management analysts, but also human resource managers and yet other business professionals related to sales such as advertising, marketing and public relations professionals. The average ratio of 9.5 among the top 25 is nearly twice as high as the average of 5 for all occupations.

5 Occupations with less than 5,000 unemployed who previously held a job in that occupation are excluded from the analysis. For these occupations the sampling error is considered too high for a reliable calculation of the ratio. For individual countries, above all smaller ones, almost all occupations with the highest job-finder to unemployed ratio have less than 5,000 unemployed. For this reason in part II presents no country specific tables of potential bottleneck occupations.

6 College teachers are typically working in the USA; the new ISCO code does not include college teachers in the description.

Chart 4.5 Top 25 occupations with highest ratios of job-finders to unemployed

Occupations		Ratio of job-finders to unemployed				Number of job-finders 2010
(ISCO-88 3 digits)		2010	2009	2008	2007	
1	College, university and higher education teachers	31,0	36,7	49,6	68,2	443,500
2	Nursing and midwifery associate professionals	28,0	35,6	35,6	26,5	399,600
3	Life science professionals	28,0	38,1	31,8	29,3	222,600
4	Public service administrative professionals	19,1	25,5	34,7	31,8	118,100
5	Health professionals (except nursing)	15,9	16,8	25,3	20,5	208,400
6	Customs, tax and related government associate professionals	14,8	15,0	17,9	14,2	106,000
7	Chemical-processing-plant operators	13,9	6,8	22,9	21,8	132,000
8	Computing professionals	12,3	9,0	28,9	27,5	491,700
9	Life science technicians and related associate professionals	11,9	9,8	14,5	13,8	92,200
10	Pre-primary education teaching associate professionals	11,6	16,4	15,1	11,9	211,200
11	Other associate teaching professionals	11,3	12,1	17,1	13,0	201,700
12	Health associate professionals (except nursing)	10,7	13,0	15,1	16,6	304,000
13	Social work associate professionals	10,2	9,7	13,0	13,5	463,100
14	Legal professionals	9,9	8,9	20,4	16,4	132,000
15	Social science and related professionals	9,5	9,0	14,8	13,3	301,700
16	Primary education teaching associate professionals	8,6	9,6	12,1	12,4	45,500
17	Personal care and related workers [a)]	8,5	9,3	13,1	12,6	2,142,600
18	Mixed crop and animal producers	8,2	3,9	7,6	10,7	85,700
19	Production and operations managers	7,8	6,4	14,2	16,9	423,800
20	Computer associate professionals	7,4	6,0	13,2	14,0	271,400
21	Cashiers, tellers and related clerks	7,2	6,5	11,0	12,8	637,600
22	Food and related products machine operators [a)]	7,0	6,3	8,9	8,5	310,600
23	Assemblers	6,9	2,8	8,6	13,4	555,200
24	Physical and engineering science technicians	6,9	5,2	16,0	15,5	659,300
25	Business professionals *	6,8	6,8	13,1	17,1	497,300
Sum of top-25 occupations with high		9,5	8,5	14,8	15,1	8,997,400
Total		5,4	4,6	8,4	10,1	42,949,100

Source: Own calculations based on LFS.

a) Personal care and related workers, and food and related products machine operators are 3-digit occupational groups both used in 13 countries.

Method: the ratio of job-finders to those unemployed with a previous job is calculated for each year and for each of 150 occupations (ISCO-88, 3-digit). The occupations are ranked in descending order of the ratio for 2010. * For business professionals (ranked 25th) seven persons found a job in 2010 for every one unemployed who worked in that profession in the previous job. The ratio for 2010 was twice as low as in 2007 when fewer business professionals were unemployed, but still sufficiently high to make it to the top 25. However, it remains that there might be many first-time job-seekers among business professionals and these are not included in the unemployed because of a lack of a previous job history.

From the list presented above, a number of occupations have to be excluded because the '*unemployed by previous occupation*' is not the major source of supply. This is particularly the case for several intermediate or lower-skilled occupations in production and services. In these cases the vacancies can generally be filled by jobseekers with a wide range of previous low to intermediate-skilled working experience. The intermediate or lower-skilled occupations in Chart 4.5 are '*chemical plant machine operators*', ranked 7th; '*food and related products machine operators*', ranked 22nd, '*assemblers*', ranked 23rd,, '*cashiers, tellers and related clerks*', ranked 21st and '*personal care and related workers*', ranked 17th.

Another family of occupations to be reconsidered are teaching professions like '*university and higher education teachers*' (ranking 1st), '*pre-primary education teaching associate professionals*' (ranked 10th), '*other associate teaching professionals*' (ranked 11th) and '*primary education teaching professionals*' (ranked 15th). Many of the vacancies in these occupations are filled by applicants who are either first-time jobseekers or have experience in other professions.

A further two occupations, i.e. '*public service administrative professionals*' (ranked 4th) and '*customs, tax and related government associate professionals*' (ranked 6th) include only those who have found jobs in the public sector or who are unemployed, but have previous experience in the public sector. Jobseekers with relevant experience in the private sector also fill vacancies in these occupations.

A similar assumption holds true for '*production and operation managers*' (ranked 19th); most recruitment is done internally within companies promoting experienced specialist staff. Therefore the real supply for the position of manager is not confined to the unemployed.

First indications for bottleneck occupations in health, social work, technical occupations and business

To conclude, for the reasons outlined above, only the twelve occupations listed below qualify as potential bottlenecks and are therefore the subject of further analysis in this chapter. Most of these occupations are confined to just a few sectors, namely in health, social work, engineering and business:

1. '*Nursing and midwifery associate professionals*' (ranked 2nd)
2. '*Life science professionals*' (ranked 3rd), such as e.g. biologists, pharmacologists, pathologists
3. '*Health professionals, except nursing*' (ranked 5th), mainly medical doctors
4. '*Computing professionals*' (ranked 8th)
5. '*Life science technicians and related associate professionals*' (ranked 9th), such as medical and pharmaceutical laboratory technicians
6. '*Health associate professionals, except nursing*' (ranked 12th)
7. '*Social work associate professionals*' (ranked 13th)
8. '*Legal professionals*' (ranked 14th)
9. '*Social science and related professionals*' (ranked 15th)
10. '*Computer associate professionals*' (ranked 22nd)
11. '*Physical and engineering science technicians*' (24th)
12. '*Business professionals (mainly finance but also sales)*' (ranked 25th).

Not much evidence for the emergence of bottlenecks in other skills areas

To establish the extent to which bottlenecks may emerge in other skill areas of the economy the 'top three' occupations with the highest ratios of job-finders to unemployed in each of the main occupational groups are analysed over a period lasting from 2007 to 2010 (see Chart 4.6). The results of this exercise show a considerable degree of overlap with the list of occupations outlined above confirming indications for bottlenecks above all in health. For other groups of occupations, such as '*clerks*', '*service and sales workers*' (except '*personal care and related workers*') and '*elementary occupations*' there is, however, no evidence for shortages of labour supply as the ratio does not exceed the average ratio of job-finders to unemployed for the total labour market or if so, only to a small extent.

A limited number of skilled manual occupations warrant further monitoring as they display a ratio above average which at the same time remained relatively stable during the recession, namely '*market gardeners and crop growers*', '*precision workers in metal and related materials*' and '*food and related products machine operators*'.

Chart 4.6 Top 3 occupations per main occupational group with highest job-finder to unemployed ratios in 2010

Main Group	Occupation	Job-finder to unemployed ratio				Number of job-finders 2010
		2010	2009	2008	2007	
Managers and senior officials	Production and operations managers	7,8	6,4	14,2	16,9	423,800
	Other department managers	3,5	3,3	7,1	7,6	272,900
	Managers of small enterprises	1,1	1,1	1,8	2,1	113,200
Professionals	College, university and higher education teachers	31,0	36,7	49,6	68,2	443,500
	Life science professionals	28,0	38,1	31,8	29,3	222,600
	Public service administrative professionals	19,1	25,5	34,7	31,8	118,100
Technicians and associate professionals	Nursing and midwifery associate professionals	28,0	35,6	35,6	26,5	399,600
	Customs, tax, related government associate professionals	14,8	15,0	17,9	14,2	106,000
	Life science technicians and related associate professionals	11,9	9,8	14,5	13,8	92,200
Clerks	Cashiers, tellers and related clerks	7,2	6,5	11,0	12,8	637,600
	Other office clerks	6,4	5,9	9,4	11,0	1313,000
	Library, mail and related clerks	6,0	5,6	8,2	8,3	280,100
Service and sales workers	Personal care and related workers [a)]	8,5	9,3	13,1	12,6	2,142,600
	Shop, stall and market salespersons and demonstrators	5,8	5,5	8,9	9,8	3,393,500
	Other personal services workers	5,5	6,6	8,3	10,1	412,700
Skilled Agricultural, fishery workers	Mixed crop and animal producers	8,2	3,9	7,6	10,7	85,700
	Market gardeners and crop growers	6,0	5,6	7,1	7,8	530,500
	Animal producers and related workers	5,1	6,0	7,9	8,9	78,000
Craft, related trades workers	Precision workers in metal and related materials	6,3	3,2	7,6	6,5	52,800
	Electrical and electronic equipment mechanics and fitters	5,7	4,0	11,1	12,4	389,400
	Machinery mechanics and fitters	5,1	3,5	8,7	11,8	596,100
Plant, machine operators, assemblers	Chemical-processing-plant operators *	13,9	6,8	22,9	21,8	132,000
	Food and related products machine operators [a)]	7,0	6,3	8,9	8,5	310,600
	Assemblers	6,9	2,8	8,6	13,4	555,200
Elementary occupations	Domestic and related helpers, cleaners and launderers	5,9	5,9	8,3	9,2	2,736,700
	Transport labourers and freight handlers	5,4	3,9	7,8	10,5	1,282,800
	Messengers, porters, doorkeepers and related workers	5,3	5,1	8,1	9,1	2,733,400
Total of top 25 occupations with high ratios (cf. Chart 4.5)		9,5	8,5	14,8	15,1	8,997,400
Total		5,4	4,6	8,4	10,1	42,949,100

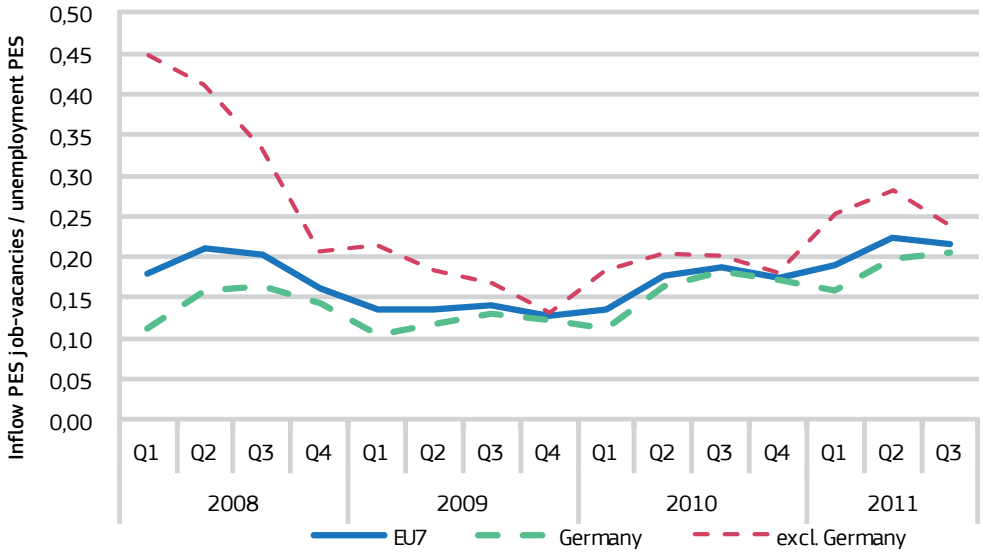
Source: Own calculation based on LFS

a) Personal care and related workers, and food and related products machine operators are 3-digit occupational groups both used in 13 countries.

Method: the ratio of job-finders to those unemployed with a previous job is calculated for each year and for each of 150 occupations (ISCO 88, 3-digit). By main occupational group (ISCO 88, 1-digit), the occupations are ranked in descending order of the ratio for the year 2010. Of the top occupations per main occupational group, only those with more than 5,000 unemployed who worked in the same occupation previously are selected due to unreliability of small numbers (and publication restrictions).

* Within the group of operators, chemical-processing-plant operators have the highest job-finder to unemployed ratio of 13.9. The ratio was lower than in 2007 and 2008 indicating that difficulties in recruiting sales managers have reduced over time.

Chart 4.7 **PES inflow of job vacancies to registered unemployed ratio (Germany, total of 6 other countries and all 7 countries)**
Percentage, 2008Q1 - 2011Q3



Source: Public Employment Services - own calculations.
7 Countries included: Austria, Estonia, Germany, Latvia, Lithuania, Portugal, Sweden.
Inflow PES job vacancies is estimated for Latvia for 2010Q4
Absolute values 2011Q3 (7 countries): PES unemployment, 4.3 million; PES inflow vacancies, 0.9 million

4.4 Developments in public employment services

Representing a segment of the total labour market the PES can mediate between the registered unemployed and those job vacancies that employers have notified to them. The ratio between the inflow of notified job vacancies and the number of registered unemployed (described here as "PES vacancy inflow to unemployed ratio") indicates the pool of candidates PES can select from to fill a vacancy. From the perspective of the unemployed, a higher ratio means higher chances for getting a new job, whereas a low ratio means only few potential job opportunities exist via the PES. As discussed in the introduction to this chapter, factors affecting the success of the matching process include the types of skills on offer and those required by employers, location mismatches and an appropriate level of transparency on the jobs market.

The analysis of the PES data from the second quarter of 2008 to the third quarter of 2011 outlined below (Chart 4.7) is presented in two different formats. The first analysis excluding Germany shows that the recession had a major adverse impact on the chances of registered unemployed finding a new job. While in the first quarter of 2008 roughly two unemployed competed for one vacancy (ratio of 0.45 vacancies per unemployed) in the corresponding quarter of 2011 employers notified only one vacancy for every four registered unemployed (ratio of 0.25 vacancies per unemployed). However, when Germany is included, the trend is quite stable.[7]

Because employers notify only around one in four job vacancies to the PES (see Chapter 5), a ratio of 0.5, or one vacancy per two unemployed people can be considered high, indicating potential difficulties for a PES in filling the notified vacancies since the choice of recruits for the employer is limited. On average, for all occupations the ratio between PES vacancy inflows and registered unemployed was 0.2 in the

7 A number of reasons could explain that the German PES vacancy inflow to unemployed ratio is lower than average for the seven countries with available data. One of the reasons is that the German PES vacancy statistics do not include vacancies for subsidised jobs or for temporary jobs of less than 7 days (see: http://statistik.arbeitsagentur.de/Statischer-Content/Grundlagen/Qualitaetsberichte/Generische-Publikationen/Qualitaets-bericht-Statistik-gemeldete-Arbeitsstellen.pdf). Another reason is that in Germany all unemployed jobseekers are registered with the PES, irrespective of the fact whether they receive unemployment benefits or social assistance. For some other coutries only half of the unemployed jobseekers are registered with the PES.

third quarter of 2011 (Chart 4.8). This means that there were five unemployed for every newly registered job vacancy and little indications of recruitment difficulties for PES.

The ratio was highest, for '*shop, stall and market salespersons and demonstrators*' with a value of five vacancies per unemployed. However, this ratio may not indicate a potential 'PES bottleneck', because some of the vacancies may be filled with registered jobseekers without any specific qualification in this field. Nevertheless, recruitment difficulties may arise periodically, reflecting seasonal variations in demand (e.g. sales, Christmas, fairs). A flexible supply from the pool of low-skilled unemployed registered with PES is even more probable for two elementary occupations presented in the list: '*street vendors and related workers*' (ranked 3rd) and '*garbage collectors and related labourers*' (ranked 18th).

PES may experience difficulties in filling vacancies for specific skilled manual and some highly-qualified occupations

The list reveals specific features for PES showing a relatively high ratio of vacancy inflow to unemployed for a mix of skilled manual and some high-skilled jobs. While vacancies in skilled manual jobs are a traditional feature of PES activity, the fact that a number of highly-skilled professional jobs are registering a high score is more surprising and may reflect a trend of a part of employers to notify vacancies which they find difficult to fill to the local PES (see Chapter 3).[8]

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Looking at those occupations with high ratios of PES vacancy inflow to registered unemployed highly qualified occupations are concentrated in the **health sector** reflecting the situation of the whole labour market:

- '*nursing and midwifery associate professionals*' (ranked 4th; ratio 0.5 or higher in Austria, Belgium, Germany, Sweden)
- '*health professionals (except nursing)*' (ranked 9th; Austria, Germany, Sweden, Slovakia), this category includes mainly medical doctors.
- '*nursing and midwifery professionals*' (ranked 14th; Belgium)
- '*health associate professionals*' (ranked 24th; Belgium, Cyprus, Germany, Sweden)

Another group of occupations with high skill levels belongs to the field of **technical and business occupations**:

- '*computing professionals*' (ranked 17th; Belgium, Cyprus, Sweden)
- '*architects, engineers and related professionals*' (ranked 19th; Belgium, Germany, Sweden)
- '*physical and engineering science technicians*' (ranked 21st; Austria, Belgium, Sweden)
- '*ship and aircraft controllers and technicians*' (ranked 23rd; Germany, Hungary, Sweden)
- '*finance and sales associate professionals*' (ranked 25th; Austria, Belgium, Sweden)

The list includes also one **teaching occupation** in the expanding area of pre-school child care:

- '*pre-primary education teaching associate professionals*' (ranked 5th; Lithuania, Sweden)

Except from '*police inspectors and detectives*', '*ship and aircraft controllers and technicians*' all other occupations made also part of the list for the total labour market based upon LFS data (ratio of job-finders to 'unemployed by previous occupation'). PES country data show high PES vacancy inflow to unemployed ratios are in general experienced by several countries, although there is no single occupation for which all ten countries experience a high ratios (see Annex).

Trend information by main occupational groups shows indications for hard-to-fill PES vacancies in skilled-manual labour

While the previous analysis presented a "snapshot" taken at the third quarter of 2011, the following analysis provides to give a more in-depth insight into the main occupational groups over the period from 2010 to 2011).[9] As consequence many occupations presented above appear also in the list below (Chart 4.9).

With regards to trend information the list shows high volatility for a number of occupations including '*special education teaching professionals*', '*pre-primary education teaching associate professionals*', '*police inspectors and detectives*' or '*forestry and related workers*'. This volatility can be explained by seasonal peaks in recruitment: for example, teachers are often recruited in summer in preparation of the next school year while forest workers show peaks of demand in the first and second quarters of each year.

An increasing ratio is also to be noted for two elementary occupations ('*Street vendors and related workers*' - high ratios in Austria, Belgium, Cyprus, '*garbage collectors and related labourers*' – high ratios in Cyprus, Germany, Hungary). However, as described above, for these occupations the supply side is less clearly defined as unemployed from other elementary occupations may be recruited for these jobs.

Two findings warrant further research: Firstly, despite a decline in employment in the construction and the manufacturing sectors the analysis in this chapter has identified in the PES segment a number of skilled manual occupations as potential bottlenecks. A second issue relates to the extent to which employers use the facilities of PES for recruiting (associate) professionals when they experience recruitment difficulties using other channels.

8 see Chart 3.9 Top 25 of occupations with highest PES vacancy inflow, chart 5.7 PES market share by occupation, table 4.12 Top bottleneck occupations

9 Among the nine PES for which data were available, the majority had not converted to the ISCO-08 classification of occupations, so the data are provided for those countries that still used the ISCO-88 classification in 2011.

Chart 4.8 **Occupations with the highest ratios of PES vacancy inflow to registered unemployed**
Ratio, 2011Q3

Ranking	Occupations (ISCO 88 - 3 digits)	Skill level	Ratio 2011Q3
1	Shop, stall and market salespersons and demonstrators*	Skilled NM	5.1
2	Special education teaching professionals	High	1.1
3	Street vendors and related workers	Elementary	0.9
4	Nursing and midwifery associate professionals	High	0.9
5	Pre-primary education teaching associate professionals	High	0.8
6	Rubber- and plastic-products machine operators	Skilled M	0.8
7	Electrical and electronic equipment mechanics and fitters	Skilled M	0.7
8	Machinery mechanics and fitters	Skilled M	0.6
9	Health professionals (except nursing)	High	0.6
10	Blacksmiths, tool-makers and related trades workers	Skilled M	0.6
11	Industrial robot operators	Skilled M	0.6
12	Police inspectors and detectives	High	0.5
13	Building finishers and related trades workers	Skilled M	0.5
14	Nursing and midwifery professionals	High	0.5
15	Metal and mineral products machine operators	Skilled M	0.5
16	Locomotive engine drivers and related workers	Skilled M	0.5
17	Computing professionals	High	0.5
18	Garbage collectors and related labourers	Elementary	0.5
19	Architects, engineers and related professionals	High	0.4
20	Metal moulders, welders, sheet-metal workers, structural-metal prepa-rers, related workers	Skilled M	0.4
21	Physical and engineering science technicians	High	0.4
22	Wood treaters, cabinet-makers and related trades workers	Skilled M	0.4
23	Ship and aircraft controllers and technicians	High	0.4
24	Health associate professionals (except nursing)	High	0.4
25	Finance and sales associate professionals	High	0.4
Total of top 25- occupations with high PES vacancy inflow to unemployed ratio			0.5
Total			0.2

Source: PES of 10 countries (Austria, Belgium, Cyprus, Germany, Hungary, Lithuania, Netherlands, Portugal, Slovakia and Sweden).

M = Manual, NM = Non-manual

Method: of 150 occupations (ISCO 88, 3-digit) the number of registered job vacancies of PES (inflow) was calculated as a ratio to the number of unemployed registered by PES. The top 25 occupations with the highest ratios have been selected.

* This occupation ranks 1 in the third quarter of 2011 with the highest ratio of inflow of vacancies notified to the PES compared to unemployed workers seeking a job in that occupation. This indicates the greatest area of difficulty for employers to recruit via the PES.

Chart 4.9 **Top-3 occupations per main occupational group with the highest PES inflow of job vacancies to unemployed**

Ratio, 2010Q1 - 2011Q3

	Bottleneck occupations (ISCO 88 – 3 digits)	2010				2011		
		Q1	Q2	Q3	Q4	Q1	Q2	Q3
Managers and senior officials	Directors and chief executives *	0,3	0,4	0,3	0,4	0,4	0,6	0,4
	Other specialist managers	0,2	0,2	0,2	0,2	0,3	0,3	0,3
	Production and operations managers	0,1	0,2	0,2	0,2	0,2	0,3	0,2
Professionals	Special education teaching professionals	0,7	1,5	1,0	1,0	0,6	1,6	1,1
	Health professionals (except nursing)	0,8	0,8	0,6	0,7	0,8	0,8	0,6
	Nursing and midwifery professionals	0,6	0,6	0,5	0,6	0,5	0,7	0,5
Technicians and associate professionals	Pre-primary education teaching associate professionals	0,6	1,1	0,6	1,1	0,9	1,6	0,8
	Police inspectors and detectives	0,3	0,3	0,3	0,4	0,4	0,5	0,4
	Physical and engineering science technicians	0,3	0,3	0,4	0,2	0,2	0,3	0,4
Clerks	Client information clerks	0,2	0,2	0,2	0,2	0,2	0,3	0,2
	Secretaries and keyboard-operating clerks	0,2	0,2	0,2	0,2	0,3	0,3	0,2
	Material-recording and transport clerks	0,1	0,2	0,2	0,2	0,2	0,2	0,2
Service and sales workers	Shop, stall and market salespersons and demonstrators	6,0	5,7	5,5	4,6	5,4	4,2	4,7
	Housekeeping and restaurant services workers	0,3	0,3	0,3	0,3	0,3	0,3	0,3
	Personal care and related workers	0,3	0,2	0,2	0,2	0,4	0,3	0,2
Skilled Agricultural, fishery workers	Forestry and related workers	0,6	0,4	0,2	0,1	0,5	0,6	0,3
	Mixed crop and animal producers	0,1	0,2	0,1	0,1	0,1	0,2	0,2
	Market gardeners and crop growers	0,1	0,2	0,2	0,1	0,2	0,3	0,2
Craft, related trades workers	Electrical and electronic equipment mechanics and fitters	0,3	0,5	0,6	0,5	0,6	0,7	0,7
	Machinery mechanics and repairers	0,2	0,4	0,5	0,4	0,5	0,6	0,6
	Blacksmiths, toolmakers and related trades workers	0,1	0,3	0,4	0,3	0,5	0,6	0,6
Plant, machine Operators assemblers	Rubber- and plastic-products machine operators	0,3	0,4	0,7	0,6	0,6	0,7	0,8
	Industrial robot operators	0,3	0,7	0,6	0,6	0,5	0,6	0,6
	Metal- and mineral-products machine operators	0,1	0,3	0,4	0,3	0,4	0,5	0,5
Elementary occupations	Street vendors and related workers	1,6	1,6	1,4	1,0	1,0	0,9	0,9
	Garbage collectors and related labourers	0,2	0,1	0,1	0,2	0,4	0,5	0,5
	Sales and services elementary workers, not classified	0,3	0,4	0,2	0,1	0,3	0,6	0,4
Total of top 27 occupations with highest ratios		0,2	0,3	0,3	0,3	0,3	0,4	0,3
Total		0,1	0,2	0,2	0,2	0,2	0,2	**0,2**

Source: PES for 9 countries (Austria, Belgium, Germany, Hungary, Lithuania, Netherlands, Portugal, Slovakia and Sweden).

Method: Of 150 occupations (ISCO-88, 3-digit) the number of registered job vacancies at PES (inflow) was calculated as a ratio to the number of unemployed registered by PES. For each main occupational group, the three occupations with the highest ratio in the third quarter of 2011 are presented.

* Among directors and chief executives, the occupation of managing directors and chief executives have the highest ratio in the third quarter of 2011.

4.5 Results from national studies

National studies provide valuable insights into skills shortages in the Member States which augment the information gained from European statistical sources such as the LFS. Some countries in Europe have developed sophisticated systems for skills needs identification and short-term anticipation. The PES are important stakeholders in the creation of such systems as they have comprehensive information about the demand and the supply side of the labour market[10]. The country studies used for this report include those combining information from PES and other sources to identify potential bottleneck occupations. The studies use information from employers' surveys as well as a variety of indicators from PES data, such as 'job vacancy duration' (e.g. in Belgium[11], Germany[12], Austria[13]) or the comparison of stocks of vacancies with the number of registered unemployed (e.g. Belgium[14], Finland[15], Lithuania[16], the Netherlands[17] and Romania[18]). In a number of countries (e.g. Austria, Germany and Ireland) the occupational classifications used are more detailed than ISCO-four-digit level, providing additional information about the specific features of occupations for which vacancies are hard to fill.

National studies confirm predominance of recruitment difficulties for professional occupations in IT, engineering, finance and health:

Indications of potential shortages of computing professionals, engineers, and medical professionals identified for the whole EU on the basis of LFS data (see Section 4.3 above) are confirmed by a number of country studies. Recruitment difficulties are identified for the following groups of professionals (Chart 4.10):

- **ICT-professionals**, e.g. in:
  - Brussels region (IT project leaders, functional analysts, integration and implementation IT engineer, IT consultants, developers, programmers, database administrators)
  - Denmark (IT consultant)
  - Norway (communication)
  - Sweden (various professions)
  - Austria (data processing)
  - Germany (computer science, IT application support, programming)
  - Ireland (mainly software developers)

- **Engineers**, e.g. in:
  - the UK, Brussels regions and Norway
  - Austria (a number of professions including agricultural equipment)
  - Germany (many professions including metalwork, machine and automotive engineering)
  - Ireland (many professions including chemical and product formulation engineers, food and high-tech quality control engineers)

- **Finances: Accounting staff**, e.g. in:
  - Brussels region, Denmark and Finland (accountants and accountant assistants, managers finance)
  - Ireland (financial compliance experts, corporate financial accountants)

- **Medical professionals**, e.g. in:
  - Austria and Brussels region (nurses)
  - Ireland (specialist nurses, radiographers)
  - Germany (medical professionals except dentists, qualified health and medical care associate professionals, qualified elderly care nursing associate professionals)
  - Sweden (health and medical care professionals)
  - Finland (nurses, dentists, psychologists, physiotherapists, speech therapists, veterinarians)
  - Norway (nurses, dentists)

10 European Commission (2010): Role of PESs in anticipating skill needs and up-skilling http://ec.europa.eu/social/main.jsp?catId=105&langId=en

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14 Brussels Observatorium voor de Werkgelegenheid, Analyse van knelpuntberoepen in het Brussels Hoofdstedelijk Gewest in 2009, Brussels, 2010, http://www.actiris.be/Home/HomeMarcheDeLEmploi/ObservatoirebruxelloisdelEmploi/ Publicationset%C3%A9tudes/DescriptionThematique/tabid/243/mctl/5/idTheme/3/language/nl-BE/Default.aspx

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Chart 4.10 Differences in approaches for identification of the top bottleneck occupations (nine countries or regions are shown)

Country, top occupations (in descending order)	Information source
1 AUSTRIA	
1. Milling machinists 2. Metal turners 3. Roofers 4. Technicians with a higher level of training (engineer) for mechanical engineering 5. Welders, cutting torch operators 6. Construction joiners 7. Technicians with a higher level of training (engineer) for furnace gas technology 8. Construction tinsmiths 9. Electrical installers, electrical fitters 10. Agricultural equipment engineers 11. Graduate engineers in mechanical engineering 12. Carpenters 13. Fitters 14. Tinsmiths 15. Technicians for mechanical engineering 16. Technicians with a higher level of training (engineer) for heavy-current engineering 17. Pipe installers, pipe fitters 18. Construction and furniture joiners 19. Floor layers 20. Paving fitters, tile fitters 21. Technicians with a higher level of training (engineer) for data processing 22. Wood processing machinery operators 23. Special technicians with a higher level of training (engineer) 24. Die makers, cutter makers and punch makers 25. Graduate engineers (university degree) 26. Graduate nurse	Ministry of Labour, Fachkräfteverordnung 2012 In Austria work permits for workers from non-EU countries are issued for shortage occupations determined by the Federal Minister of Labour in a regulation (Fachkräfteverordnung). Which occupations are defined as shortage occupations depends on the development of the Austrian labour market.
2 BRUSSELS REGION, BELGIUM	
1. Reception, communication, administration clerks 2. ICT experts 3. Primary education teachers 4. Sales representatives 5. Physics technicians 6. Secretaries 7. Nurses and nursing assistants 8. Engineers 9. Secondary education teachers 10. Accountants and accountant assistants 11. Financial and insurance transaction clerks 12. Cooks 13. Drivers 14. Plumbers 15. Sales managers 16. Managers administration, communication, finance 17. Carpenters 18. Barbers 19. Waiters 20. Hotel receptionists 21. Architects	Actiris (2011), Analyse van de knelpuntberoepen in het Brussels Hoofdstedelijk Gewest in 2010 (Analysis of bottleneck occupations in the Brussels region in 2010). Bottleneck occupations are first identified by analysing the filling quotas and vacancy duration of vacancies notified to Actiris (Brussels PES). In a second stage, PES consultants add or remove bottleneck occupations based on their experience and their contacts with employers.

Country, top occupations (in descending order)	Information source
22. HR managers 23. Policemen 24. Personal care workers 25. Electro mechanics 26. Purchase, inventory and logistics managers 27. Butchers 28. Instructors 29. Mechanics repairers 30. Electrics repairers	
3 DENMARK	
1. Sales Consultant (Sales, purchasing and marketing sector) 2. Shop Assistant (Sales, purchasing and marketing sector) 3. Masonry (Construction) 4. Serving Employee (Hotel, restaurant, kitchen, canteen) 5. Cook/Chef (Hotel, restaurant, kitchen, canteen) 6. Cleaning Assistant (in Cleaning, property maintenance and renovation sector) 7. Construction Painter (Construction) 8. Agriculture Assistant (Agriculture, forestry, horticulture, fisheries and animal care sector) 9. IT Consultant (IT and telecommunications technology) 10. Scaffolding Engineer (Construction) 11. Carpentry (Construction) 12. Accountant and Accounts Assistant (Office Administration, Accounting and Finance)	Top 12 list of the major bottleneck occupations in Denmark is based on the results of a bi-annual survey on the recruitment situation as experienced by the companies. The survey receives input from approximately 15,000 companies representing around 50 per cent of employment in Denmark. The companies respond to the question: „Has the company within the past two months unsuccessfully tried to recruit new employees?" If the answer is positive, they are requested to specify how many and the kind of vacancies (ISCO-code) Source: Arbejdsmarkedsstyrelsen (National Labour Market Authority) April 2012
4 FINLAND	
Shortage (in alphabetical order) 1. Accounting staff 2. Chefs, cooks, restaurant cooks in charge of cold food 3. Class teachers 4. Cleaners 5. Crane operators 6. Dental hygienist 7. Dentists 8. Earth moving plant operators 9. Entrepreneurs 10. Head waiters, waiters 11. Hospital nurses* 12. House managers, stock clerks 13. Nursery school teachers 14. Pharmacists 15. Physicians* 16. Physiotherapists 17. Practical nurses, orderlies, institution based personal care workers 18. Psychologists 19. Sales representatives and telemarketers 20. Security guards 21. Senior social workers, personal assistants, home based personal care workers 22. Social workers* 23. Special education teachers 24. Speech therapy 25. Veterinarians	Occupation Barometer of Finland, III/2011 The Occupation Barometer is based on the view of the employment and development offices on the development of the labour market situation over the coming six months. The situation concerning some occupations and professions may change at short notice. This estimate dates from September 2011 providing a perspective for the following six months. Source: Centre for Economic Development, Transport and Environment

Country, top occupations (in descending order)	Information source
1 NORWAY	
Labour shortages: 1. Construction 2. Agriculture, Forestry and fishing 3. Real estate, renting and business activities 4. Hotels and restaurants 5. Transport 6. Communication	Labour shortages in 2010 based on a survey conducted by the Norwegian Public Employment Service (PES) NAV using the national Register of Business Enterprises. Source: http://www.nav.no/Om+NAV/Tall+og+analyse/Analyser/Arbeid+og+velferd
Employment forecast tertiary level (lower degree): 1. Economics and administration. 2. Teachers 3. Health, social services, nursing and 4. care giving 5. Skilled labour specializing in science (excluding engineering) 6. Humanities and the arts **Employment forecast tertiary level (higher degree):** 1. Other fields of science 2. Graduate engineers 3. Economics and administration 4. Teachers 5. Dentists	Projections on demand and supply of labour by education towards 2030 produced by Statistics Norway. Source: Statistics Norway, Oslo–Kongsvinger / Roger Bjørnstad, Marit L. Gjelsvik, Anna Godøy, Inger Holm and Nils Martin Stølen. Demand and supply of labour by education towards 2030. Linking demographic and macroeconomic models for Norway. http://www.ssb.no/english/subjects/06/01/rapp_201039_en/rapp_201039_en.pdf
6 SWEDEN	
1. Professions within technology and computing 2. Certain professions within the construction industry 3. Certain qualified professions within the manufacturing industry 4. University professions within health and medical care 5. Certain teaching professions 6. Certain jobs within transport, sales and consultancy	Labour Market Outlook Autumn 2011, Swedish Public Employment Service Fields in which the most serious recruitment problems are anticipated in 2012, according to the Labour Market Outlook Autumn 2011. The cause of a continued shortage in the labour force is the generation shift and that the education level is constantly too low within several fields of education, so that even if the economy is weak, shortages remain within some professions to a limited extent. Source: http://www.arbetsformedlingen.se/download/18.6a167f531341a04783880004716/ura2011-8-eng.pdf
7 UNITED KINGDOM	
Skill gaps and shortages 1. Associate Professional and Technical occupations 2. Skilled Trades 3. Personal Service Occupations 4. Sales and Customer Service Occupations 5. Elementary occupations 6. Science, Engineering and Manufacturing Technologies 7. Hospitality, Passenger transport, Travel and Tourism 8. Creative and Cultural occupations 9. Justice	UK Commission on Employment and skills. Problems which persist over time reflect lack of market adjustment or the perception that these are jobs in areas of declining employment, with relatively poor long-term prospects. Sources: The UK Employment and Skills Almanac 2010, Evidence Report 26, March 2010 http://www.ukces.org.uk/assets/ukces/docs/publications/evidence-report-26-almanac-2010.pdf The National Strategic Skills Audit for England 2010. Skills for Jobs: Today and Tomorrow, Volume 1: Key Findings http://www.ukces.org.uk/assets/ukces/docs/publications/national-strategic-skills-audit-for-england-2010-volume-1-key-findings.pdf

Country, top occupations (in descending order)	Information source
8 IRELAND	
1. Chemical and product formulation engineers, analysts 2. Production, process and process safety engineers 3. Quality control engineers (food and high-tech) 4. Regulation engineers 5. Industrial hygiene engineers 6. Validation engineers (telecom sector) 7. Mechanical engineers 8. Electrical engineers for power generation, and distribution 9. Industrial instrumentation and control technicians 10. Database architects 11. Java developers 12. Open source developers 13. Online developers 14. Mobile app developers 15. Cloud computing developers 16. Linux/Unix game developers 17. IT security experts 18. IT technical user support staff 19. Professionals in credit and risk management 20. Financial compliance experts (for Basel II and III) 21. Corporate finance accountants 22. Insurance specialists (underwriting, claim handling) 23. Non-consultant hospital doctors and radiologists 24. Specialist nurses 25. Radiographers 26. Multilingual product support workers 27. Online marketing and sales professionals 28. Senior technical sales representatives	The annual National Skills Bulletin. The identification of shortage occupations is based on a composite index which is composed of the results of 6 monthly surveys of recruitment agencies, the unemployment rate, the vacancy rates, the nationality profile, the employment growth rate, the future supply of skills from education and training, emigration permits and the percentages of workers aged over 55 and of female workers
9 GERMANY	
1. Engineers metalwork and welding technology 2. Engineers machine and automotive engineering 3. Engineers mechatronics, energy and electronics 4. Engineers technical research and development 5. Engineers technical drawing, model making and construction 6. Engineers of supply and disposal 7. Computer science professionals 8. Experts in IT application support 9. Experts in software development and programming 10. Medical professionals (except dentists) 11. Qualified health and medical care associate professionals 12. Qualified elderly care nursing associate professionals	Bundesagentur (June 2012), Fachkräfteengpässe in Deutschland (Skilled labour shortages in Germany). The identification of shortage occupations is based on a number of criteria including vacancy duration and vacancy-to-unemployed ratio in a first step, and validated with an analysis of age composition of workers (to assess replacement demand), numbers of school leavers and entrants, the existence of similar occupations and the share of self-employed and of seasonal work.

Evidence for recruitment difficulties in certain teaching, but also in some skilled manual and non-manual occupations

Interestingly the country studies indicate a number of national bottleneck occupations that were not corroborated by the statistical analysis for the whole of Europe, for example:

- **Teachers**, e.g. in:
  - Brussels region (Primary and secondary education teachers)
  - Finland (Class teachers, special education teachers)
  - Norway (Teachers)
  - Sweden (certain teaching professions)

Another group of occupations which figure prominently in the national studies, but which do not rank among the 'Top 25 occupations with the highest ratios of job-finders to unemployed' according to the statistical analysis include sales specialists:

- **Sales specialists**, e.g. in:
  - Sweden (sales and consultancy)
  - Brussels region (sales representatives, sales managers)
  - Denmark (sales consultants)
  - Finland (sales representatives and telemarketers)
  - Ireland (online marketing and sales professionals, senior technical sales representatives
  - UK (sales and customer service occupations)

A third group for which country studies provide evidence of shortages are **a number of intermediate skilled manual and non-manual occupations** although not ranking among those with the most severe labour shortages in Europe. This finding warrants further monitoring. The demand for some of the skilled non-manual occupations is partly influenced by seasonal factors, while working conditions may also be a factor for jobs in services.

- **Skilled manual occupations: Craft and related trades occupations**
  - UK (skilled trades in general)
  - Austria (e.g. carpenters, tinsmiths, roofers, electrical installers)
  - Brussels regions (e.g. carpenters, plumbers, butchers, mechanic, electric repairers)
  - Denmark (e.g. masonry and carpentry – construction, painters)

- **Skilled non-manual occupations: Services and sales occupations**
  - UK (hospitality in general)
  - Brussels region, Denmark and Finland, (cooks, chefs),
  - Brussels region, Denmark, Finland (waiters),
  - Brussels region (hotel workers).

The information from the country studies facilitates a further refinement of the list of occupations which on the basis of statistical analysis were identified as potential bottlenecks (see Chart 4.5). Specifically the country studies do not provide any evidence for the retention in the list of either '*Legal professionals*' or '*Social Science and related professionals*'. Only the UK indicated recruitment difficulties in respect of '*Legal professionals*' while only Norway referred to '*Social Science and related professionals*'. Similarly there was no evidence offered to suggest that there are recruitment difficulties in '*Mixed crop and animal producers*' and '*Agriculture, Forestry and Fishing*'. There was limited evidence offered in support of a number of other occupations, most notably for '*social workers*' which are ranked among the 'top 25 occupations with highest ratios of job-finders to unemployed' (Chart 4.5). Only one country currently experiences labour shortages (Finland), while Norway indicates recruitment difficulties for social services in general. With regard to a number of skilled manual occupations, the country information confirms that there are no major shortages for operators. Recruitment difficulties were only indicated by two countries (Austria and Finland).

Bottlenecks for highly skilled occupations tend to be limited to certain specialisations

Finally, national studies indicate that bottleneck occupations do not necessarily affect an occupation as a whole, but rather certain specialisations within that occupation. Furthermore, the demand for these specialisations varies between countries. For example. For example, Austria indicates hard to fill vacancies for engineers in the field of energy (furnace gas technology, heavy current engineering) and agriculture (agricultural equipment engineering), while Germany identifies shortages also in metalwork and welding technology, machine and automotive engineering. Paradoxically, unemployment and shortages may coexist within one broad occupation (e.g. engineering in Germany). Another example is Ireland experiencing shortages for IT specialists in the area of cloud computing open source and computer game development and also of IT security and user support.

4.6 Results from the Manpower Talent Shortage Survey

The next step in building up a composite indicator is based on the analysis of an employers' survey covering most of the EU27 countries. Despite a rather small sample (38.000 employers for the worldwide survey) the Manpower Talent Shortage Survey is the skills shortage survey covering 19 European countries including Norway.[19]

A first key result is that employers in all European countries experience recruitment difficulties even in labour markets where unemployment is relatively high:

- Recruitment difficulties indicated by > 30 per cent of employers: Bulgaria (51), Romania (45), Germany (42), Austria (40), Poland (37), Sweden (36), Hungary (34)

- Recruitment difficulties indicated by < 30 per cent of employers: France (29), Belgium (27), Slovenia (26), Greece (24), Slovakia (17), Czech Republic (14), Italy (14), UK (11), Spain (9), the Netherlands (7), Ireland (2)

Looking at the countries where more than 30 per cent of employers indicated recruitment difficulties shows that these include "high performers" like Germany and Austria, but also countries characterised by a difficult labour market situation like Romania or Bulgaria. Even in Greece one out of four employers expressed recruitment difficulties.

A second key result from the analysis of the 2012 Manpower Survey for is that many of the "top hard to fill vacancies" appear to be prevalent in many countries (Chart 4.11).

Four of the top shortage occupations of the Manpower Shortage Survey support the previous findings from the LFS analysis and from the national studies:

1. *Engineering* (and technicians)
2. *IT staff*
3. *Finance/accounting professionals*
4. *Health professionals*

There is further evidence confirming the analyses of the country studies for four groups of occupations not ranking among the 'TOP 25 occupations with highest ratios of job-finders to unemployed. While the evidence is strongest for sales representatives, the other occupations have to be monitored further to find out whether these are emerging bottlenecks for the whole of Europe:

1. *Sales representatives* (17 countries in Manpower survey, 6 out of 9 country studies – AT, BE-Brussels, DE, DK, NO, SE)
2. *Skilled trades* (17 countries in Manpower survey, 4 out of 9 country studies - UK, AT, BE – Brussels, DK)
3. *Chefs/cooks* (9 countries in Manpower survey, 3 out of 9 country studies – BE-Brussels, DK, FI)
4. *Restaurant and hotel staff* (8 countries in Manpower survey, 4 out of 9 country studies, BE-Brussels, DK, FI, UK)

The Manpower survey also identifies shortages for teachers in line with the findings from country studies. The indications, however, are weaker than for the other occupations named above as the number of countries suffering from a shortage is relatively small.

According to the Manpower survey there are also significant recruitment difficulties in respect of a number of low to intermediate skilled non-manual and manual occupations. These shortages were less evident in the sources analysed to date. These include for example '*secretaries, PA offices*', and above all lower skilled manual jobs, such as '*drivers*', '*mechanics*', '*labourers*', '*machinists, operators*'. This finding may reflect a bias in the survey population towards companies which traditionally use temporary work agencies (see Chapter 5, market shares).

Skills mismatch is the most common reason for recruitment difficulties

The Manpower survey furthermore provides information on the main reasons employers mention as the cause of the shortage of skills. The most commonly mentioned reasons are:

- "Lack of technical competencies (hard skills) among applicants" (34 per cent of employers)
- "Overall lack of applicants" (30 per cent overall, 67 per cent in Austria)
- "Absence of 'experienced' candidates" (24 per cent overall, 43 per cent in Hungary).

While the first two reasons given do not come as a surprise, the continuing focus on "experience" shows that young job entrants are confronted with a serious challenge. Many find themselves in the classic 'catch 22' situation; in order to get a job they require experience, however they cannot get the experience without getting a job. Although the economic reasoning is understandable from an employers' point of view, as it takes time and investment for a new job entrant to achieve full productivity, such an attitude may be contra-productive in the longer term given the aging and shrinking of the work force in many countries.

19 Manpower Group (2012), The 2012 Talent Shortage Survey – Research Results. http://www.manpowergroup.us/campaigns/talent-shortage-2012/pdf/2012_Talent_Shortage_Survey_Results_US_FINALFINAL.pdf

Chart 4.11 **Top occupations where employers are having difficulty filling vacancies**

Number of countries, rank among 'top ten' hard to fill vacancies

Occupation		N	AT	BE	BG	CZ	FR	DE	EL	HU	IE	IT	NL	PL	RO	SK	SI	ES	SE	UK
1.	Skilled trades	17	1	1	2	1	1	1	3	1		1	1	2	2	1	1	3	2	5
2.	Sales representatives	17	3	10	5	2	6	3	1	4	6	8		5	3	9	8	9	1	3
3.	Engineers	14	9	3	1			2	8	3	5			1	1	5	2	1	5	1
4.	Drivers	14	2	7	7	7	3	7		6	6	4		4	8	2	4	6	7	
5.	Technicians	13	5	2			3	5	2			3	2	3	6	4		2	3	4
6.	IT staff	12	7		6	4	10	4	9	6	1		4	6	5					6
7.	Accounting, finance staff	11			4		9	6	10	7		7	10	10	7				8	8
8.	Secretaries, PAs, Office	11	6	5			5	10	6	9		2			10		9	7		7
9.	Chefs / cooks	9				5	4				7		7	7		8	7		6	2
10.	Restaurant, hotel, staff	8			8		8			5	9	6			9		5	8		
11.	Management executives	7	4		3			8	4				6						4	9
12.	Mechanics	7	8			10					10	10					10	5	9	
13.	Labourers	6		4		8						9	3			6	3			
14.	Nurses	5		8			7				2					10				10
15.	Sales Manager	5			9				7		3		6			3				
16.	Doctors / Health profs	4		6		6		9									6			
17.	Machinists / Operators	3		9						2				9						
18.	Production operators	4			10							5	5		4					
19.	Teachers	2														7			10	
20.	Customer service	2	10															10		

Source: 2012 Manpower Survey, compiled from country lists available for 18 EU countries

The occupational breakdown is broader than in the analysis of LFS data (Chart 4.5) or the national country studies (Chart 4.10). For example, the Manpower survey distinguishes craft workers as one group, whereas 16 different types of craft workers are distinguished at the 3-digit ISCO-88 level (Chart 4.5) and the national studies identify even more detailed potential bottlenecks occupations.

Employers most likely to respond by retraining staff

The strategies pursued by employers to avoid skills shortages include the following:

- Providing additional training and development to existing staff (21 per cent)
- Broadening search outside of the local region (9 per cent)
- Appointing people without job skills currently, but who do have potential to learn/grow (9 per cent)
- Focusing more on staff retention in jobs where recruitment is difficult (7 per cent)
- Enhancing benefits packages, including a "signing-on bonus" (6 per cent)
- Partnering with educational institutions to create curriculum aligned to talent needs (6 per cent)
- Increasing starting salaries (5 per cent)
- Broadening search outside of the home country (4 per cent)

Overall, employers facing severe labour shortages are likely to use a combination of these and other measures to enable them to meet their needs. Broadening their search beyond their region is a potential solution for individual employers whatever the underlying reason for their difficulty in filling a vacancy. Partnering with educational institutions is another potential response to skills mismatches. Increasing starting salaries indicates that less favourable working conditions are also a cause of skills shortages.

4.7 Identification of top bottleneck occupations in Europe

This section brings together the results from the analysis of the LFS data, the nine country studies and the Manpower survey. While the PES analysis provides valuable complementary information for a specific segment of the labour market, the data cannot be used to identify recruitment difficulties for the labour market as a whole. As result the number of occupations which have been identified as bottleneck occupations are confined to just five sectors (see Chart 4.12). With the exception of '*Sales and finance associate professionals*' all the occupations were included in the list of the 'Top 25 occupations with highest ratios of job-finders to unemployed' (LFS data for EU27).

Top bottlenecks were in health, ICT, engineering, sales, finance

Reviewing all the evidence, mismatches in the labour market are clearly visible for various professionals in the health sector, notably **medical doctors, nurses and other health professionals**. These occupations emerged as potential bottleneck occupations EU-wide according to the LFS data (Chart 4.5). Also health occupations emerged as potential bottlenecks in six of the nine national studies. From the Manpower survey, difficult-to-fill jobs in healthcare were also apparent, although less strongly, with only specialist nurses in Ireland in the top ten of difficult to fill vacancies, including clinical nursing managers and advanced nursing practitioners in intensive care.

Bottlenecks were clearly indicated EU-wide for **ICT professionals** according to all three sources, from Greece to the UK and Ireland, and also from France to Sweden. The bottlenecks were indicated for a wide range of highly skilled IT professionals, such as developers, database management and IT application support.

In the field of engineering, bottlenecks for **engineering professionals** were particularly evident in the northwest of Europe according to all three sources, and according to the Manpower survey in broad areas of Europe including Greece, Bulgaria, Romania, Slovenia, Hungary, Slovakia, Poland and Spain. According to the national studies, specialised engineers were needed, such as mechatronics engineers in Germany, production processing and process safety engineers in Ireland, agricultural equipment engineers in Austria, scaffolding engineers in Denmark, and various industrial engineers in Belgium.

Sales professionals. Occupations in the field of sales do not emerge as potential bottleneck occupations based on LFS data (Chart 4.5) but are included because shortages are indicated by the Manpower survey and some national studies. According to the Manpower survey sales professionals were difficult to recruit throughout Europe, and according to national studies, potential bottlenecks existed for sales representatives and online marketing professionals.

In the field of **finance and accounting**, the category of '*business professionals*' signals a high job-finder to unemployed ratio as is the case for sales professionals discussed above. This category namely also includes accountants, financial and management analysts. However, there was strong evidence from the other two sources for recruitment difficulties regarding this group of occupations. Employers throughout Europe considered vacancies for accounting and finance staff as difficult-to-fill according to the Manpower survey, and accounting and financing staff were potential bottlenecks in four out of the nine national studies.

A further key result from the composite analysis is: beyond the group of current top bottleneck occupations there exists a limited number of occupations having **the potential to become bottleneck occupations in Europe in the future**. A few countries are already suffering from recruitment difficulties. However, the evidence is not conclusive when all three sources are taken into account. Nevertheless, the labour market position of these occupations should continue to be monitored:

1. Teachers
2. Skilled trades

Recruitment difficulties for teachers were indicated in national studies of the Brussels region, Finland, Sweden and Norway. Teachers are not frequently mentioned as difficult-to-fill jobs in the Manpower survey (2 countries only). However, for a number of teaching occupations there is further evidence for existing and potential recruitment difficulties: A recent report of EACEA[20] based upon results from the PISA study (2009) finds "that on average in the participating European countries, around 15 per cent of all 15-year-old students were taught in schools where the school head reported that teaching is, at least to some extent, hindered by a lack of qualified science and mathematics teachers. The EU average is lower for the language of instruction, with 7.7 per cent of students being taught in schools experiencing a shortage of teachers in this subject." It further reports that teacher shortages were highest in Germany, Luxembourg, Belgium, the Netherlands and the UK. According to sector information (see Chapter 3) education is one of the two economic sectors with growing employment but not increasing numbers of job-finders (the other being the health care and social work sector). However, it is noteworthy, that, if teacher shortages are indicated, the concrete occupational profile (e.g., primary, secondary school, pre-primary education) may differ between countries and variety may also occur regarding the specialisation for certain subjects such as science and math teachers versus language and human sciences teachers.

20 Education, Audiovisual and Culture Executive Agency - ACEA, P9 Eurydice (2012), Key Data on Education in Europe 2012, ISBN 978-92-9201-242-
http://eacea.ec.europa.eu/education/eurydice/documents/key_data_series/134EN.pdf;
The PISA data referred to here include all EU27 countries except France.

Chart 4.12 Top bottleneck occupations in Europe

Combined information from LFS, Manpower Survey, Country studies

Field	ISCO-88 occupation (3 digit)	LFS	Manpower (country + rank)	National studies
Health	Biologists, pharmacologists, pathologists and related professionals	Rank 3 Chart 4.5	a)	IE – doctors (who are not consultants), radiologists
	Medical doctors and related professionals	Rank 5 Chart 4.5	Medical doctors – BE6, CZ6, SI6, DE9	SE – university professions within health, DE – medical professionals
	Nursing and midwifery associate professionals	Rank 2 Chart 4.5	Nurses - BE8, FR7, IE2, SK10, UK10	FI – practice nurses, orderlies, senior care workers, IE – specialist nurses, AT – graduate nurses, BE – nurses
ICT	Computing professionals	Rank 8 Chart 4.5	IT staff – AT7, BG6, CZ4, FR10, DE4, EL9, HU6, IE1, NL4, PL6, RO5, UK6	AT – technicians for data processing, DE - Computed science professionals, IT application support, experts in software developing and programming, DK - IT Consultant (IT and telecommunications technology), SE – various professions IE - IT security experts, online support and technical user support, IT testing and troubleshooting, diverse IT-specialists, BE - IT project leaders, functional analysts, integration and implementation IT engineers, IT consultants, developers, programmers, database administrators
Engineering	Engineering professionals	Data underlying Chart 4.5 – AT, DE, NL, SE	Engineers - AT9, BE3, BG1, DE2, EL8, HU3,IE5,PL1, RO1,SK5,SI2,ES1,SE5,UK1	AT – agricultural equipment engineers, graduate engineers in mechanical engineering, DE - diverse specialised engineers (e.g. metalwork, automotive engineering, mechatronics, energy, electronics), IE– diverse specialised engineers (e.g. chemical, production, process and safety, quality control for the food and high-tech industries, regulation, mechanical), DK – scaffolding engineers (construction), SE – technology, UK – Science, engineering and manufacturing technologies, BE – various engineers
Sales	Sales and finance associate professionals (e.g. sales representatives)	Indication not from LFS but from other sources	Sales representatives - AT3, BE10, BG5, CZ2, FR6, DE3, EL1, HU1, IE6, IT8, PL5, RO3, SK9, SI8, ES9, SE1, UK3	DK – sales consultant FI – sales representatives and telemarketeers, UK – skilled trades, sales and customer service occupations, IE – online marketing and sales roles, senior technical and specialised sales representatives, BE – sales representatives
Finance	Business professionals b) (e.g. accountants)	Rank 25 Chart 4.5	Accounting, finance staff - BG4, FR9, DE6, EL10, HU7, IT7, NL10, PL10, RO7, SE8, UK8	DK and BE – accountants and accountant assistants, FI – accounting staff, IE - professionals in credit and risk management, compliance experts (e.g. financial services regulation), accountants with experience in corporate solvency and financial restructuring

Sources: EU LFS, 2012 Manpower Survey, nine national studies.

Notes:

The rank in the column under LFS refers to the ranking in the Chart on potential bottlenecks (Chart 4.5) except for sales where reference is made to a top-growth occupation (Chart 3.7).

The countries listed under the Manpower column are the countries from that survey where the occupation is in the top ten for which employers have difficulty filling the job

The occupations of the nine national studies are not comparable with each other, and so listed as they are in the source data.

a) The absence of pharmacologists and pathologists in the Manpower survey may be due to a smaller level of detail in the survey sample rather than absence of recruitment difficulties

b) Business professionals include '*accountants*', '*human resource managers*' and '*business professionals not elsewhere classified*'. The latter occupation includes financial and management analysts and advertising, marketing and public relations professionals.

Even if the ranking of the "top 25 occupations with highest ratios of job-finders to unemployed" (Chart 4.5) did not include any occupation in the area of '*skilled trades*', there are indications from some countries that labour shortages exist, mainly in construction for carpenters, electrical installers and plumbers. However, these occupations are typically those required in the final stages of building projects, and might be the last to suffer from a lack of new building projects.

Strategies for addressing skills shortages include a variety of approaches

As indicated in the previous section, employers most often indicate skills mismatches as the reason for difficulties in filling vacancies focusing on 'hard skills'. Given the high skill levels required for the bottleneck occupations identified, adjustment capacities of education and training seem the key to solving these bottlenecks in the medium to longer terms. For health professionals, the educational process can take up to 12 years (from study through on-the-job training to specialisation). For other professionals, even though the duration of the university programmes may be 3 to 4 years further specialisation is required before workers are fully proficient. The long lead times in increasing the supply to the labour market underlines the need for an early identification of structural skills mismatches. In the short-term employers will tend to develop their own coping strategies, as outlined in the Manpower survey, such as the training of current staff, followed by recruiting applicants with potential rather than proven skills.

Labour shortages arising from insufficient or from poor quality information can be another reason for bottlenecks. The geographical targeting of recruitment to areas where there are known to be a ready supply of appropriate skills is one possible solution, though adequate resources and services are needed to assist workers to move from one area to another.

In addition, employers could extend their use of different recruitment channels to reach those parts of the labour market that they have not traditionally tapped. For example, the targeting of recruitment advertising to specific journals, websites or social media may attract a new supply of recruits, while giving more information about the jobs on offer may help overcome any initial prejudice that jobseekers may have about particular occupations.

Short-term solutions to cope with bottlenecks in highly skilled occupations include also a change in attitudes towards recruiting new job entrants and a number of HRM approaches for existing staff, such as increased overtime working, the retention of older workers and recruitment of early retirees or foreign workers. In the medium term, de-skilling some of the work by, for example, stripping out routine work from the tasks of high skilled workers and passing this more routine work to less skilled workers might offer a solution.

4.8 Conclusion

The ratios of both indicators, the unemployed to the stock of vacancies and to the number of job-finders increased by more than half between the start of 2008 and the third quarter of 2011, indicating in general an increasing surplus on the demand side of the labour market (jobseekers). Exceptions are Austria and Germany and to a lesser extent Sweden, Denmark, Finland, the Netherlands which continue to experience a rather tight labour market.

A composite indicator has been developed to identify the top bottleneck occupations in Europe, combining analyses of LFS data, national studies and the Manpower Talent Shortage employer survey. The analyses showed that recruitment difficulties are most severe all over Europe for a number of professional occupations:

- Health professionals
- IT staff
- Engineers
- Sales representatives
- Accounting and finance staff

Regarding the PES segment, the picture is more mixed. The 'ratio of vacancy inflow to registered unemployed by occupation' is highest for a number of skilled manual occupations. It is also high for a number of highly skilled occupations (e.g. health, IT staff) which may reflect a need on the part of employers to seek the assistance of the PES assistance when they experience recruitment difficulties.

Employers' strategies to cope with labour shortages in the short term are focused on up-skilling the competences of their staff and adjusting their recruitment criteria (shift from experience to potential). There is also a tendency to broaden the geographical scope of recruitment. There is considerable potential to further develop strategies to facilitate international labour mobility as currently a very small percentage of the European workforce is living in another Member State.[21]

However, in the medium to long term the only sustainable solution to address skills shortages is to increase the supply of suitably qualified jobseekers by offering appropriate education and training programmes. However, the extent to which the education and training system can respond effectively is critically dependent on the availability of comprehensive and timely information on the skills requirements of the labour market.

21 The European Commission estimates that in 2010, nationals from the EU-12 living in other Member States amounted to just over one per cent of the total EU27 population and that these flows had reduced because of the economic crisis. Furthermore, the study suggested that there was no evidence of a 'brain drain' affecting those countries where these workers moved from (European Commission (2012) Employment and Social Developments in Europe 201.
Available at: http://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=6176)

5 Recruitment channels: the market share of PES and TWAs

5.1 Introduction

The objective of this chapter is to provide evidence-based knowledge about the role of different recruitment channels, in particular PES and TWAs in filling different types of vacancies categorised by their salient features including sector, occupation and level of education.

Exploring the comparative position of different recruitment channels further, one commonly used measure is their 'market share'. This is the share of total job vacancies at any one time that is filled through a particular recruitment channel. The market share is determined by two factors:

- the usage rate
- the success rate

The usage rate is the rate at which employers notify vacancies to a particular recruitment channel while the success rate measures how often a notified vacancy is filled by a jobseeker via that channel. In most cases, an employer will use more than one recruitment channel simultaneously, so usage rates typically add up to more than 100 per cent (Chart 5.1).

A recruitment channel with a relatively high success rate will, over time, attract greater numbers of jobseekers. The attraction is likely to persist until the success rate is more closely aligned to the norm for recruitment channels in general. For this reason, the expectation is that success rates over time will be broadly similar between recruitment channels. Only recruitment via personal contacts (friends, family, business contacts, etc) and via self initiatives (such as speculative applications) have far higher success rates (82 per cent and 74 per cent respectively in the Netherlands example) without an increase in the usage rates (17 per cent and 16 per cent respectively in the Netherlands).

When the usage rate of a filled vacancy is multiplied by the success rate, this gives the market share of a recruitment channel. For example, in 2006, the market share was 9 per cent for both the PES and for TWA in the Netherlands (Chart 5.2 below), although the usage and success rates were quite different. This chapter further discusses the market shares of PES and TWA in various segments of the recruitment market, based on data for job-finders.

Approximation of PES and TWA market shares (LFS, job-finder data)

The LFS contains two questions which are relevant to calculating the market share of PES and TWA:

- Has the PES contributed to the finding of your current job?
- Is your current job a temporary agency work job?

As Private Employment Services (PRES, including temporary work agencies (TWA)) cooperate in many countries with Public Employment Services (PES) including in some cases the sharing of data by the TWAs the results presented below, while they may be used to identify the market share for each of these channels, are not directly comparable.

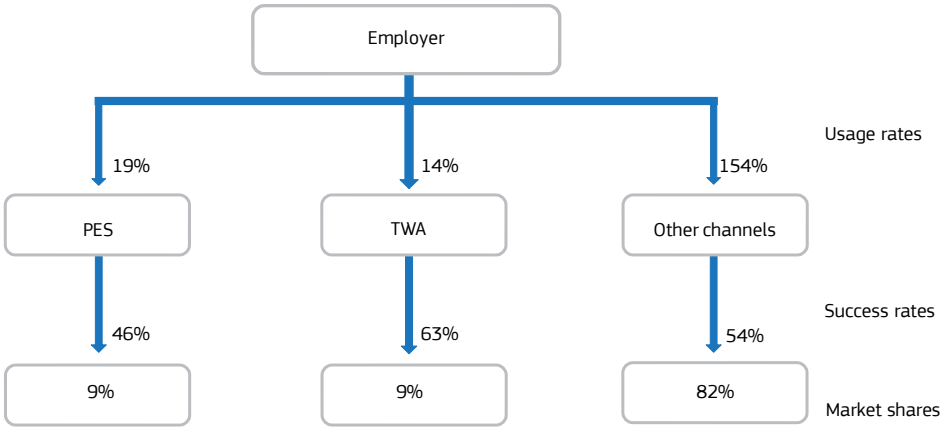
5.2 General trends of PES and TWA markets shares

For job search self-initiative and informal contacts are crucial

A recent study by the European Commission revealed that 'self-initiative' together with informal contacts and networking dominate job-searching methods. The most popular (used by 85 per cent of jobseekers) is 'self-initiative' (activities such as looking for advertisements in newspapers or online and sending off speculative applications - see Chart 5.2), followed by personal contacts of one sort or another (66 per cent). This finding may be useful in designing active labour market measures because it demonstrates that supporting and encouraging a more self-reliant and proactive approach to job-searching can be relatively successful. However, the fact that jobseekers often use one channel does not in itself imply that this channel is successful.

Nevertheless, one out of two jobseekers use PES to find a (new) job, although at least some of this usage of the service may be motivated primarily by a desire to retain entitlements to unemployment payments. It is notable in this regard that the usage of PES by jobseekers is roughly twice that of private employment services (25 per cent).

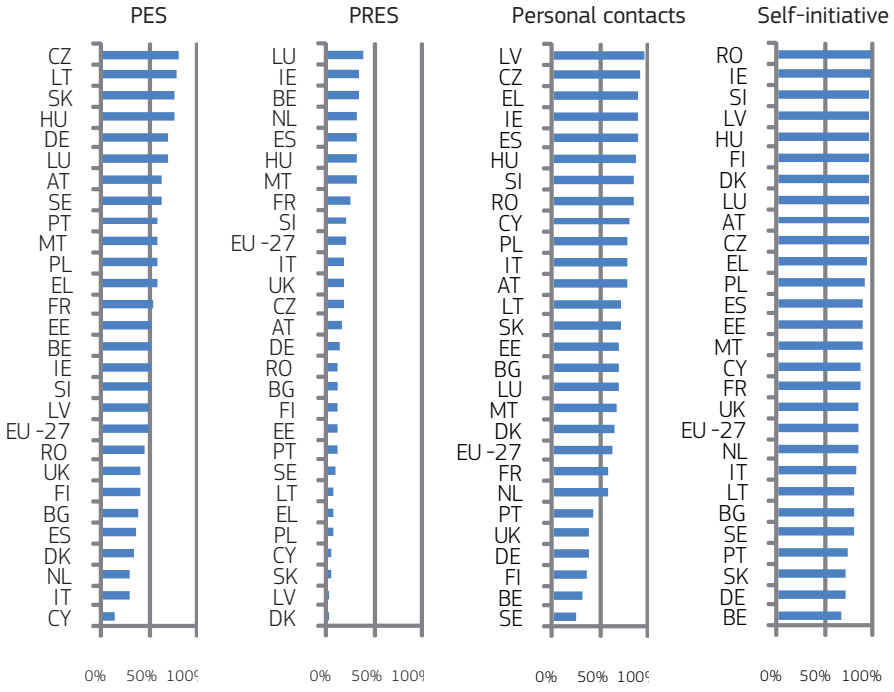
Chart 5.1 Recruitment channel usage - vacancy filling and market share from different recruitment channels (filled vacancies in the Netherlands, 2006)



Source: Dutch PES (2006), "Vacatures in Nederland 2006" (Vacancies in the Netherlands 2006), based on an employer survey. Other recruitment channels include 15 others from "own network" to "recruitment agency".

Chart 5.2 Proportion of jobseekers using different methods of job-search within the last 4 weeks

Percentage, 2010



Source: European Commission: Mobility in Europe 2011, Part II: Connecting people to work: Job-search (methods, recruitment channels and the role of PES.)
http://www.mobilitypartnership.eu/WebApp/Events.aspx?EventID=11.
PRES include private placement and temporary work agencies. Self-initiative includes activities such as looking for advertisements in newspapers or online and sending speculative applications.

Country patterns vary significantly and there is hardly any evidence that the channels are being used to complement each other, except perhaps in Spain and the Netherlands where a low use of PES goes along with a relatively high use of PRES:

- Countries with high share using PES (> 60 per cent):
  - Czech Republic, Lithuania, Slovakia, Hungary, Germany, Luxembourg, Austria
- Countries with low use of PES (< 40 per cent):
  - Bulgaria, Spain, Finland, the Netherlands, Italy and Cyprus
- Countries with high use of PRES (> 35 per cent)
  - Luxembourg, Ireland, Belgium, the Netherlands, Spain, Hungary and Malta
- Countries with low use of PRES (< 10 per cent)
  - Sweden, Lithuania, Greece, Poland, Cyprus, Slovakia, Latvia and Denmark

The finding that more jobseekers use PES to find a job, does, however, not necessarily mean that more vacancies are filled through PES.

In the EU as a whole, the market share of TWA over the period 2007-2010 was on average 8.3 per cent, which was slightly higher than the corresponding market share of the PES at 7.7 per cent (Chart 5.3).

Development of TWA market shares sensitive to business cycle, while PES market share is more resilient

Although changes are small the development in TWA contrasts with that for PES. TWA market shares reflect a higher sensitivity to fluctuations in the business cycle. During the recession, less people found a job via TWA compared to other channels. In 2009, the TWA market share fell, before rising again reflecting more positive developments in those sectors which traditionally use the services of TWAs, such as manufacturing (see Charts 5.6, 5.8).

According to CIETT (2002), workforce flexibility was indeed the main motive for employers to hire temporary agency workers in Europe. However, according to this study employers also use workers on agency contracts as a recruitment channel, because temporary work agencies facilitate the process of recruitment by selecting a suitable candidate for the vacancy to be filled and partly allowing an assessment to be made of the worker without a commitment to a contract. A more recent CIETT report shows that the volume of temporary agency work and GDP tends to be strongly correlated in countries where this type of work is well developed, such as France, Belgium and the Netherlands.

The development of the PES market share is quite striking as it was rising through 2008 while the market share of other recruitment channels, most notably TWA's was contracting. It may be that the sectors which recruit strongly from the PES were less adversely affected at the beginning of the recession; chart 5.3 shows that the PES market share began a steep decline from 2009, in contrast to the performance of temporary work agencies. It would appear that as the recession became embedded in the economies of the Member States, temporary contracts began to feature more widely in the recruitment activities of employers.

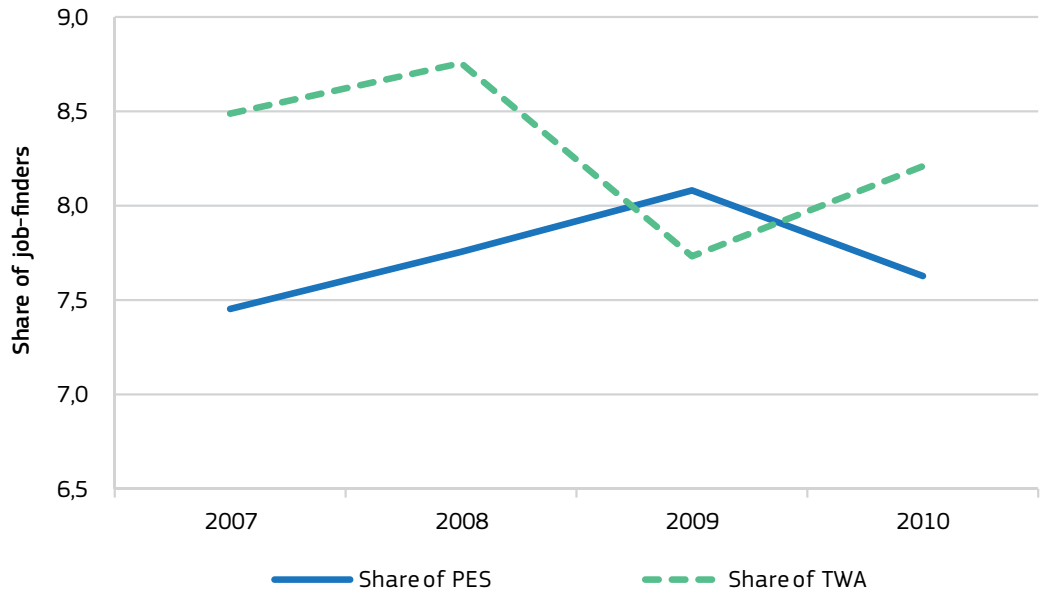
Another possible explanation is that as the unemployment rate increases and the number of registrations with the PES also rises, the success rate of the PES improves since it has a greater supply from which to choose suitable candidates for the job vacancies on offer. This will be especially true in economic downturns, when even relatively well qualified workers are made redundant. This means that not only the supply of unemployed will be larger, but also the quality of the pool of unemployed will tend to be higher, resulting in a higher success rate and a corresponding higher PES market share during a crisis. The observation that the TWA market share increased again in 2010 would thus reflect that employers were not convinced that recovery will be permanent and were reluctant to invest in permanent staff, relying rather on temporary agency work. Both interpretations are supported by analyses in previous chapters of this report.

Varying national market positions of PES in Europe

While the average for the EU ranges at 7-8 per cent, the PES market share shows strong country differences (Chart 5.4) ranging from 3 per cent in the Netherlands through 9-12 per cent in Germany to a higher share of 15 per cent in Slovenia and correspondingly similar differences in the usage rates. In the Netherlands, the market share of the PES fell from an estimate of 9 per cent in 2006 to 3 per cent in 2010, as both the usage rate and the success rate declined, reflecting a combination of economic recession and the fundamental reorganisation of the Dutch PES. Germany and Malta show the highest success rates in filling vacancies. However, even in the case of the highest rate of filled vacancies (up to 41 per cent in Germany), the PES filled less than half of the vacancies notified. This is surprising in view of the relatively high unemployment rates in most of the Member States and warrants further research.

Chart 5.3 Share of job-finders PES and TWA

Percentage, 2007 - 2010



Source: Eurostat Labour Force Survey, all EU27 contries.
Absolute value 2010: 3,104,900 through PES, 4,168,300 through TWA

Chart 5.4 Market position of PES according to national studies

Country (year of publication)	Usage rate	Success rate	Market share
Germany (2010)	25-29%	37-41%	9-12%
Finland (2004 & 2007)	29-50%	-	-
Romania (2008)	18%	-	-
Slovakia (no date)	50%	-	-
Slovenia (2011)	37-42%	33%	15%
UK (2011)	39%	-	-
Netherlands (2010)	10-14%	23-33%	3%
Malta (2004-2009)	-	37%	-
Cyprus (1993-2009)	-	23%	-
For comparison: LFS 2007-2010			7-8%

Sources: Germany: German Job Vacancy Survey, Institut für Arbeitsmarkt- und Berufsforschung (IAB), Nuremberg, 2010

Finland: H. Räisänen, What kind of job-broker is the public employment service? Evidence from Finnish job vacancy micro-data in 2002-2003, VATT Government Institute for Economic Research, Helsinki, 2004)

P. Keinänen, Job vacancy statistics - Finland, Statistics Finland, June 2007

Romania: M. Anghel, Description of national job vacancy statistics, National Institute of Statistics Romania, 2008. Report provided by a national correspondent.

Slovakia: Porovnanie VPM SU – UPSAR. Report provided by a national correspondent

Slovenia: N. Brnot, Job vacancy survey by using administrative sources, Statistical Office of the Republic of Slovenia, 2011. Report provided by a national correspondent

UK:UKCES (2011), UK Employer Perspectives Survey 2010, www.ukces.org.uk/publications/er25-employer-perspectives-survey

Netherlands: UWV WERKbedrijf (2010), Vacatures in Nederland 2009, www.rwi.nl/CmsData/Signaal%202009/VacaturesNederland2009.pdf

Malta: PES Malta. Report provided by a national correspondent

Cyprus: PES Cyprus Report provided by a national correspondent

5.3 Market shares of PES and TWA by sector

PES have high market shares in the broad public sector, TWAs in manufacturing

A sectoral breakdown of the involvement of PES in finding a job shows that PES has the highest market shares in various parts of the public sector including three of the 'Top Ten' presented below (Chart 5.5):

- '*Administration of state, economic and social policy of the community*' (ranking 3rd), including general public service activities, health care, education, cultural and other social services,
- '*Compulsory social security activities*' (ranking 5th), including funding and administration of government-provided social security programmes, such as unemployment insurance, pensions,
- '*Activities of other membership organisations*' (ranking 6th), including interest groups, NGOs except social partners.

The PES also have a high market share in sectors related to waste collection and materials recovery, which could be broad public or private sectors depending on the country:

- '*Waste collection*' (ranking 4th),
- '*Materials recovery*' (ranking 7th), including dismantling of wrecks and recovery of sorted material,
- '*Waste collection including treatment and disposal, materials recovery*' (9th).

Regarding the private sector the PES has the highest market share in '*Forestry and logging*', with an average rate of 43 per cent over the years 2008-2010. The market share in this sector increased from 32 per cent in 2008 to 45 per cent in 2010, with a peak in 2009. A high PES market share can be further seen in two manufacturing industries. '*Transport equipment*' and '*paints, varnishes, similar coatings, printing inks, mastics*' are ranked 2nd and 8th with market shares of 38 per cent and 20 per cent respectively. In contrast, the lowest share of the ten is for '*other reservation service and related activities*' in the travel business (ranked 10th with a market share of 19 per cent).

Chart 5.5 **PES Top Ten economic sectors with the highest market share, 2008-2010**

	Economic sector	Average share 2008-2010	Trend
1.	Forestry and logging	43%	↑
2.	Manufacture of transport equipment	38%	↓
3.	Administration of state, economic and social policy of the community	26%	↓
4.	Waste collection	25%	↓
5.	Compulsory social security activities	22%	=
6.	Activities of other membership organisations	21%	=
7.	Materials recovery	21%	↑
8.	Manufacture of paints, varnishes, similar coatings, printing ink, mastics	20%	↑
9.	Waste collection including treatment and disposal; materials recovery	19%	=
10.	Other reservation service and related activities	19%	↓
Total		8%	=

Source: EU LFS.

Guide to the reader: 'Top Ten' economic sectors (NACE rev2, 3D) with highest market share of the PES, EU27, 2008-2010. Increasing/decreasing: share in 2010 is at least 2 percentage points higher/lower than in 2008. Only economic sectors with at least 5,000 job-finders through PES in 2008+2009+2010 (?2008-2010? or 2008,2009 and 2010) are selected.

Chart 5.6 TWA Top Ten economic sectors by market share, 2008-2010

Economic sector		Average share 2008-2010	Trend
1.	Other human resources provision	60%	=
2.	Manufacture of soap and detergents and similar products	47%	↑
3.	Manufacture of dairy products	46%	↓
4.	Manufacture of railway locomotives and rolling stock	42%	↑
5.	Manufacture of rubber products	40%	↓
6.	Programming and broadcasting activities	40%	↓
7.	Warehousing and storage	39%	↑
8.	Manufacture of general-purpose machinery	35%	↓
9.	Manufacture of abrasive products and non-metallic mineral products	35%	↑
10.	Manufacture of plastic products	34%	↑
Total		10%	=

Source: EU LFS.

Guide to the reader: top-10 ("Top Ten"?) economic sectors (NACE rev2, 3D) with highest market share of TWAs,) EU27, 2008-2010. Increasing and decreasing: share in 2010 is at least 2 percentage points higher/lower than in 2008. Only economic sectors with at least 5,000 job-finders through TWA in 2008+2009+2010 are selected.

Chart 5.7 PES Top Ten occupations with the highest market share, 2007-2010

Occupation		Average share 2007-2010	Trend
1.	Handicraft workers in wood, textile, leather and related materials	35%	↑
2.	Printing-, binding- and paper-products machine operators	19%	↑
3.	Building caretakers, window and related cleaners	18%	=
4.	Forestry and related workers	16%	↑
5.	Wood treaters, cabinet-makers and related trades workers	16%	=
6.	Archivists, librarians and related information professionals	16%	↑
7.	Social work associate professionals	14%	↑
8.	Market gardeners and crop growers	13%	=
9.	Building frame and related trades workers	13%	↓
10.	Other office clerks	12%	↓
Total		8%	=

Source: EU LFS.

Guide to the reader: 'Top Ten' occupations (ISCO-88, 3D) with highest market share of the PES, EU27, 2007-2010. Increasing/decreasing: share in 2010 is at least 2% point higher/lower than in 2007. Only occupations with at least 5,000 job-finders through PES in 2007+2008+2009+2010 are selected.

The sectoral distribution of TWA tends to be skewed towards specific sectors. To judge from the list below in a number of sectors labour is recruited to a large extent on the basis of temporary agency work. The TWA market share ranks more than 60 per cent for the sector ranking first, '*Other human resource provision*', to a still relatively high share of 34 per cent for '*Manufacturing of plastic products*' ranking 10th (Chart 5.6). Most of the sectors recruiting with help of TWA are concentrated in manufacturing industries which in general have been strongly affected by structural shifts of employment and the recession (see also Chapter 3).

The sector '*Other human resource provision*' (which includes secondment agencies) recruits mostly through TWA. In addition, TWA have a high market share in the '*programming and broadcasting*' sector (ranked 6th) and in the '*warehousing and storage sector*' (ranked 7th). In both these sectors the high usage of TWA is likely to be mainly caused by employers seeking help to meet peaks in demand. In the case of warehousing and storage, for example, shipping work can peak when a ship arrives and the goods need to be off-loaded and stored for further distribution. In the case of the broadcasting and programming sector, the demand for staff is likely to be related to seasonal need (e.g. coverage of a sporting event) and other peaks such as single productions for film or television.

5.4 Market share of PES and TWA – occupational and educational patterns

PES and TWA market shares skewed towards for blue collar workers

Looking at the profile of occupations it becomes apparent that PES and TWA have a broadly similar pool of clients. In both cases, the market share is highest among blue collar workers.

PES - prevalence of blue collar a few highly skilled occupations

Reflecting the profile of vacancies notified to PES the market share is highest for a number of occupations at low to intermediate skills levels. For some of these the market share is even higher than for the sector as a whole as one sector contains a range of occupations while PES are used only to fill a number of specific jobs within the sector. For example, the PES market share in jobs found by '*garbage collectors and related labourers*' (42 per cent) is significantly higher than the PES market share of 25 per cent in jobs found in the waste collection sector (ranked 4th in Chart 5.5). This is mainly caused by the high market shares of sweepers within this category in countries such as Hungary, Poland and Slovakia. Contrasting with this, the PES market share can also be higher for the sector as a whole than for a specific occupation, because workers can find a job in other sectors without PES involvement. For example, the PES market share of 43 per cent in jobs found in the forestry and logging sector (ranked 1st in Chart 5.5) is far higher than the 16 per cent PES market share among '*forestry and related workers*'. Since there are far more forestry and related workers that find a job (on average 69,000 per year in 2007-2010) than job-finders in the forestry and logging sector (33,000 per year), the most likely explanation is that these workers find their jobs in other sectors (perhaps horticulture). This suggests that the possibility of workers being employed in different sectors might be greater than would be expected, at least for the middle to low skilled workers where the PES have a high market share (see Chapter 3).

The list also contains a number of more highly skilled occupations belonging to the broader public sector, e.g. '*Archivists, librarians and related information professionals*' (ranked 6th) and '*social work associate professionals*' (ranked 7th). This provides further evidence that employers seek the assistance of PES in case a vacancy is difficult to fill.

TWA have particularly high market share for machine operators

In line with the dominance of TWAs in the recruitment of certain manufacturing industries, employers recruit to a large extent temporary agency workers for certain jobs within this sector, in particular for various types of machine operators (Chart 5.8). Almost two out of three '*chemical-processing-plant operators*' have found their job through a temporary work agency. The 'Top Ten' occupations with a high TWA market share include nine types of machine operators, with market shares ranging from 62 to 26 per cent.

The high TWA market share for '*transport labourers and freight handlers*' at 34 per cent (ranked 5th in Chart 5.8) completes the top-ten and mirrors the the high TWA share in the sector of '*warehousing and storage*' (39 per cent, Chart 5.6).

PES and TWA market shares vary little by educational levels

Reflecting the occupational profile the PES and TWA's, the market shares are highest for jobs at low to medium educational levels (Chart 5.9) showing slightly higher values for TWA. However, in line with the overall market share, these tend to be relatively small across all education levels.

PES and TWA market share by field of education reflects the market shares in sectors

PES and TWA's market shares by field of education (for job-finders with upper secondary or higher educational levels) partly correspond to the economic sectors in which these recruitment channels dominate. In line with a relatively high PES market share in parts of the broader public sector, their share is highest among medium and highly educated job-finders with a services related field of education (10 per cent, Chart 5.10). Corresponding to the high TWA market

Chart 5.8 TWA Top Ten occupations with the highest market share, 2007-2010

Occupation		Average share 2007-2010	Trend
1.	Chemical-processing-plant operators	62%	↑
2.	Glass, ceramics and related plant operators	42%	↓
3.	Food and related products machine operators	37%	↑
4.	Metal- and mineral-products machine operators	37%	↑
5.	Transport labourers and freight handlers	34%	=
6.	Other machine operators not elsewhere classified	31%	↑
7.	Agricultural and other mobile plant operators	31%	=
8.	Industrial robot operators	29%	↑
9.	Wood-processing- and papermaking-plant operators	27%	↓
10.	Metal-processing plant operators	26%	↑
Total		10%	=

Source: EU LFS.

Guide to the reader: 'Top Ten' occupations (ISCO-88, 3-digit) with highest market share of TWAs, EU27, 2007-2010. Increasing/decreasing: share in 2010 is at least 2% point higher/lower than in 2007. Only occupations with at least 5,000 job-finders through TWA in 2007,2008,2009 and 2010 are selected. Data for NACE rev2 are only available from 2008.

Chart 5.9 PES and TWA market share by educational level, 2007-2010

Level of education	Average PES share 2007-2010	Average TWA share 2007-2010	Trend
Low	8%	10%	=
Medium	8%	11%	=
High	6%	7%	=
Total	8%	10%	=

Source: EU LFS

Low: Pre-primary, primary and lower secondary (ISCED 0-2);

Medium: Upper secondary and post-secondary non-tertiary (ISCED 3-4);

High: First and second stage of tertiary education (ISCED 5-6).

Guide to the reader: market share of the PES and TWA by level of education (ISCED) of the job-finders, EU27, 2007-2010.

Increasing/decreasing: share in 2010 is at least 2% point higher/lower than in 2007.

share in manufacturing, their market is highest in the field of engineering (13 per cent, Chart 5.9). The lowest PES and TWA market shares by educational field are found in certain 'white-collar' fields such as '*teacher training and education science*', '*health and welfare*' and '*science, mathematics and computing*' (Chart 5.10).

Results from national studies – online recruitment services have a high market share for highly educated jobseekers

Information from different country studies for other recruitment channels complements the information on PES and TWA.

An Austrian study[1] showed that in 2009 the PES was mainly used for job vacancies that are generally associated with lower levels of education (around 50 per cent of users only have primary education), while advertisements in newspapers for job vacancies focus on applicants with lower vocational education (around 56 per cent of the total users). The same study showed that online recruitment services were especially

1 GfK Austria, Der Stellenmarkt in Osterreich: Analyse der Personalnachfrage in Medienin-seraten. Jahresbericht 2009, AMS Österreich, Vienna, March 2010. http://www.gfk.at/imperia/md/content/gfkaustria/data/events/2011/stellenmarkt.pdf

Chart 5.10 PES and TWA market share by educational background (medium and high educational levels), 2007-2010

Field of education	Average share PES 2007-2010	Trend	Average share TWA 2007-2010	Trend
Services	10%	↓	8%	=
Agriculture and veterinary	10%	↑	9%	=
Engineering; manufacturing and construction	9%	↑	13%	=
Social sciences; business and law	9%	=	10%	=
Humanities; languages and arts	7%	=	9%	=
Teacher training and education science	6%	↑	4%	↓
Health and welfare	6%	=	6%	=
General programmes	5%	=	10%	↓
Science, mathematics and computing	3%	=	8%	↑
Total	8%	=	10%	=

Source: EU LFS

Field of application is only known for job-finders with medium or high education.

Guide to the reader: market share of the PES and TWA by educational field (ISCED) of the job-finders, EU-27, 2007-2010. Increasing and decreasing: share in 2010 is at least 2% point higher/lower than in 2007.

targeting those with higher education (around 53 per cent of all users).

A UK study[2] of 2011 on usage rates by economic sector found that the PES registered significantly above average numbers of job vacancies from large employers, the health sector and social work, but significantly below average numbers of vacancies in agriculture and financial occupations. Job vacancies in online recruitment services are under-represented in construction, but over-represented for large employers and business services. In addition, national newspapers published significantly more job vacancies in the education sector than other recruitment channels.

A Belgian employer survey conducted in 2006[3] indicated that job vacancy advertisements in printed media was the most popular means of recruitment (76 per cent of all companies using them), and the use of the various recruitment channels differs for each sector, size of employer (in employment terms) and functional level. The PES job vacancy databank is used more often for "executive positions" (29 per cent of users) than job vacancy websites (13 per cent of users) or employer websites (17 per cent of users). The term "executive positions" refers to production workers as opposed to their managers or support staff.

A detailed analysis of the relative positions of recruitment channels by a study of the Dutch PES indicates that in 2006[4], personnel advertisements had the highest market share overall and this was also true of most segments of the labour market. This was largely due to both high usage rates and high success rates. The relatively high market shares for the PES at low and medium levels are confirmed in this national study. In the Netherlands, the PES market share in the broader public sector was low, with 6 per cent in the government and 7 per cent in the services sectors. Online recruitment services have a high market share among the high educated job-finders in business services and in government. Later editions of this annual report do not include detailed tables on market shares but instead provide a breakdown by education. The share of persons with low and intermediate skills hired in 2011 was 89 per cent (PES) and 86 per cent (TWA). The share of persons with higher education varied from 42 per cent for specialist websites to 84 per cent for social media sites such as LinkedIn, Twitter and Facebook. The high market share of TWA for production workers and in manufacturing is confirmed in this study. Employers in manufacturing tend not to use TWA more than other recruitment channels, but TWA achieves the highest success rates of all (formal) recruitment channels in this segment.

2 UKCES, UK Employer Perspectives Survey 2010, January 2011. http://www.ukces.org.uk/publications/er25-employer-perspectives-survey

3 A. Gevers and A. Peeters, Wervingsbeleid en werknemersstromen in beeld, IDEA Consult, Brussels, 2006. http://www.flexnieuws.nl/2006/02/10/02-2006-wervingsbeleid-en-werknemersstromen-in-beeld/

4 UWV Werkbedrijf, Vacatures in Nederland 2006, Amsterdam, 2006. http://www.flexnieuws.nl/2006/12/06/12-2006-vacatures-in-nederland-2006/

5.5 Conclusion

The market share of recruitment channels is determined by two factors: the rate at which employers use the channel for recruitment (usage rate) and the rate at which the use of the channel leads to the filling of the vacancy (success rate). While the overall market share of PES and TWA is rather small, although strongly varying per country, each responds differently to the business cycle with the TWA being more sensitive to it due to the profile of vacancies they match with temporary agency workers. PES market share, in contrast, shows more resilience due to a higher involvement in the recruitment in the broader public sector.

With some variability, both TWA's and PES have high market shares among certain types of middle to low educated blue collar workers. For example, the PES have a higher market share in parts of the broadly defined public sector while TWA have a higher market share in manufacturing. The PES have a higher market share in certain skilled trades, whereas TWA tend to specialise in machine operators. The market shares for medium and higher educated job-finders partly reflect the sectoral recruitment patterns via PES and TWA's showing a prevalence of the education fields of '*engineering, manufacturing and construction*' for TWA and a broader range of fields for PES including 'services' and 'agriculture and veterinary'. To conclude, PES and TWA operate in broadly similar market segments, which offer opportunities for cooperation.

According to the national sources available, PES and TWA have slightly below average market shares among high educated workers, while online recruitment services have by far the highest market share among this group.

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CONVENTIONS (meaning)

An.m = table is presented in the Annex and related to the core text in chapter “n”
AC = table is presented in the Annex, in section Country-specific data
“*” = limited reliability
“a” = number is below publication limit or negative
n.e.c. = not elsewhere classified
“:” = not available

Main Indicators

A2.1 Index GDP by country, 2007Q1-2011Q3

Country	Index																			Average	
	2007				2008				2009				2010				2011			Quarterly	Yearly
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	(x mln)	(x mln)
Austria	100	104	106	108	103	106	108	107	97	100	104	107	98	102	107	110	103	106	100	65938	262822
Belgium	100	104	100	108	103	106	102	105	97	102	99	106	99	105	101	108	102	107	102	80149	320073
Bulgaria	100	113	130	135	107	121	139	140	102	116	132	129	97	117	132	133	99	120	135	6678	26835
Czech Republic	100	106	108	113	103	112	114	113	99	105	107	110	100	109	110	113	103	111	111	29810	119079
Cyprus	100	108	109	109	105	112	113	111	106	110	110	107	105	111	112	110	107	112	111	3804	15181
Denmark	100	103	102	107	101	104	101	103	96	96	95	99	94	97	98	101	96	99	98	52543	210877
Germany	100	101	104	103	102	104	105	101	95	96	100	99	98	101	104	103	103	104	107	593212	2360825
Greece	100	107	112	108	100	108	112	107	96	103	108	106	96	102	103	97	88	95	98	50292	15181
Estonia	100	109	106	110	98	108	104	100	85	90	85	91	81	92	89	96	89	100	97	2999	12022
Finland	100	106	106	112	103	109	107	109	94	98	98	102	95	103	102	108	99	105	104	42149	168689
France	100	101	99	104	101	102	99	102	97	98	97	101	98	100	98	103	101	102	100	445816	1781478
Hungary	100	109	113	117	102	112	115	115	95	103	106	110	95	104	108	112	97	105	109	22410	90056
Ireland	100	99	97	102	99	97	97	93	91	90	90	88	90	90	90	88	90	92	90	42439	170710
Italy	100	104	103	104	100	103	102	101	93	97	97	98	95	99	99	99	95	99	99	360924	1447852
Latvia	100	115	119	128	104	115	114	115	85	93	93	96	80	90	96	100	83	95	103	3451	14002
Lithuania	100	112	123	120	107	119	125	117	92	100	107	99	92	101	108	104	97	107	115	5874	23546
Luxembourg	100	103	100	104	104	106	101	100	98	97	96	98	98	101	98	102	101	102	99	8354	33401
Malta	100	103	109	109	104	109	115	112	100	105	111	113	104	108	113	116	106	110	116	1328	5292
Netherlands	100	103	99	107	104	106	101	106	99	101	98	104	100	103	99	106	103	105	101	137952	551474
Poland	100	104	105	120	107	110	111	123	107	111	112	127	110	115	118	133	115	120	123	73910	293180
Portugal	100	106	103	107	101	106	103	105	97	102	101	103	98	104	102	104	98	103	100	39451	158403
Romania	100	121	151	169	109	132	165	174	102	121	153	163	100	120	150	162	101	122	157	22921	92787
Slovenia	100	107	109	109	106	114	113	108	97	103	103	102	96	105	105	104	99	106	104	8008	32135
Slovakia	100	112	120	121	110	119	128	122	104	113	121	118	109	118	126	122	113	122	129	11932	47407
Spain	100	104	99	107	102	106	100	106	98	101	96	103	97	101	96	103	98	102	96	240986	967171
Sweden	100	103	94	108	100	105	94	102	94	98	88	101	96	102	94	109	102	107	99	79426	315995
UK	100	98	101	105	103	97	100	100	96	92	96	99	97	94	98	101	98	96	99	473904	1898669
EU27	100	102	102	106	102	103	103	104	96	98	98	102	97	100	101	104	100	102	102	2907468	11627902

GDP: chainlinked volumes, reference year 2005, at 2005 exchange rates, not seasonally adjusted.
Source: Eurostat, National Accounts
http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction

A2.2 Index number of employees by country 2007Q1-2011Q3

Country	Index																			Average
	2007				2008				2009				2010				2011			Quarterly
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	(x 1000)
Austria	100	102	104	103	102	105	106	105	103	104	105	105	103	104	106	105	103	105	107	3500
Belgium	100	100	99	103	103	102	103	103	101	102	102	102	103	103	104	104	103	105	104	3789
Bulgaria	100	103	104	104	104	106	108	107	104	104	103	100	95	96	97	95	91	93	95	2758
Czech Republic	100	101	101	102	102	103	103	103	101	101	100	100	98	98	99	99	98	99	99	4052
Cyprus	100	103	103	105	103	105	104	105	103	104	104	104	104	107	107	108	105	106	104	304
Denmark	100	101	100	101	101	103	103	102	100	99	99	97	97	98	97	96	95	96	97	2489
Germany	100	102	103	103	102	103	105	106	103	103	103	105	103	104	105	106	105	107	108	33765
Greece	100	102	104	103	102	105	105	103	101	103	103	101	99	101	100	97	94	93	92	2836
Estonia	100	101	103	101	102	104	104	102	96	94	93	90	86	88	91	92	91	94	98	547
Finland	100	105	106	104	103	107	107	103	100	103	102	98	98	103	102	100	99	103	103	2142
France	100	102	103	102	103	104	104	103	102	103	103	101	101	102	102	101	101	102	102	22777
Hungary	100	101	101	100	99	99	101	100	96	97	97	97	95	97	98	98	96	98	99	3345
Ireland	100	101	103	101	101	100	101	97	93	91	91	89	88	88	88	87	86	87	86	1611
Italy	100	102	103	103	101	104	105	104	102	103	103	103	101	101	101	103	101	102	103	17168
Latvia	100	102	105	107	105	106	104	101	95	90	89	88	85	87	89	89	88	90	91	890
Lithuania	100	102	103	103	104	104	104	103	98	96	96	94	91	91	93	94	92	95	95	1247
Luxembourg	100	99	100	101	101	103	101	97	102	106	106	106	107	107	108	107	111	108	109	196
Malta	100	102	102	101	103	105	106	104	103	104	106	104	103	105	107	106	108	108	111	139
Netherlands	100	102	103	102	102	103	104	104	103	103	103	102	97	98	99	99	98	98	98	7240
Poland	100	102	104	106	105	106	109	110	107	108	109	109	106	109	110	110	108	110	111	12080
Portugal	100	100	101	101	101	103	102	102	100	100	99	99	99	100	99	99	98	99	99	3845
Romania	100	102	102	101	102	103	105	104	102	102	103	100	99	100	99	100	101	101	101	6183
Slovenia	100	103	105	104	104	106	110	107	103	102	103	102	100	100	98	99	96	97	98	816
Slovakia	100	100	101	103	102	102	105	105	100	99	98	97	94	96	97	97	97	98	98	2006
Spain	100	102	102	102	102	102	101	99	96	95	95	94	92	93	93	93	91	93	92	15907
Sweden	100	102	105	103	102	104	106	103	100	102	102	100	99	102	104	102	102	105	106	4024
UK	100	101	101	102	101	102	102	102	100	99	100	99	98	99	100	100	99	100	99	24585
EU27	100	102	103	103	102	103	104	103	101	101	101	101	99	101	101	101	100	101	102	180242

Source: Eurostat, Labour Force Survey
http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_unemployment_lfs/introduction

A2.3 Stock of job vacancies by country, 2008Q1-2011Q3

Country	2008				2009				2010				2011		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Austria	:	:	:	:	57.870	50.782	54.227	47.996	57.983	63.005	76.321	78.916	83.315	75.720	70.830
Belgium	:	:	:	:	:	:	:	:	39.061	39.061	32.452	34.650	34.650	41.273	45.711
Bulgaria	25.040	24.404	22.773	18.722	18.122	17.194	16.693	15.771	16.080	15.520	15.903	16.322	15.740	15.967	15.487
Cyprus	12.414	13.393	14.257	8.557	7.676	8.118	8.213	5.260	4.986	5.953	5.239	3.188	4.603	4.353	2.643
Czech Republic	138.903	144.796	143.415	113.205	66.906	47.193	39.574	32.695	32.293	32.422	34.032	32.366	31.927	36.309	38.626
Denmark	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Estonia	16.573	15.340	15.695	10.021	5.594	4.007	4.779	3.649	4.574	5.191	5.756	4.703	5.839	6.273	7.797
Finland	:	:	:	:	44.503	37.582	30.802	21.835	48.247	47.770	36.521	31.412	57.723	49.083	39.676
France	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Germany	959.335	934.101	829.271	890.904	659.237	659.741	627.696	745.188	830.877	776.089	800.829	976.278	1.041.477	963.425	911.784
Greece	58.067	29.837	31.426	17.436	51.613	45.886	35.501	27.169	43.242	24.700	20.638	12.561	:	:	15.043
Hungary	:	:	:	:	:	:	:	:	28.886	27.411	25.449	24.892	31.198	27.520	27.455
Ireland	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Italy	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Latvia	15.204	12.621	8.059	5.846	3.647	2.220	1.844	1.714	1.640	1.773	2.244	2.313	2.903	3.023	3.051
Lithuania	25.712	23.022	25.853	12.768	7.408	5.918	5.624	4.104	6.136	6.032	8.208	6.110	9.945	9.459	12.293
Luxembourg	2.969	3.031	2.782	2.132	2.008	1.372	1.484	1.311	1.509	1.721	2.232	2.308	2.707	3.507	2.678
Malta	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Netherlands	244.500	250.000	233.100	185.200	152.300	134.800	122.600	117.900	115.000	123.500	122.200	123.300	134.300	142.100	129.300
Poland	:	:	:	:	84.190	84.190	72.091	60.015	84.190	72.091	72.091	60.015	84.190	72.091	60.015
Portugal	16.621	18.180	14.589	13.490	13.079	12.007	10.984	10.256	11.661	13.408	12.672	12.417	10.908	11.555	12.361
Romania	99.049	95.187	96.622	71.245	56.873	38.963	33.543	20.616	28.183	23.571	22.726	19.960	26.447	27.039	27.173
Slovakia	28.325	23.981	24.791	21.331	20.793	17.631	16.249	14.022	13.116	12.549	13.821	13.809	14.626	14.305	14.104
Slovenia	8.766	8.308	8.707	5.307	5.600	5.236	5.071	3.850	4.081	5.092	5.000	5.386	5.389	6.023	7.055
Spain	:	:	:	:	:	:	:	:	186.413	193.297	154.890	143.400	149.123	145.997	131.103
Sweden	56.319	54.677	47.419	35.798	37.722	35.811	27.505	32.475	43.600	56.829	48.283	49.952	65.908	77.961	57.797
United Kingdom	674.000	663.000	625.000	526.000	444.000	439.000	450.000	464.000	453.000	495.000	470.000	485.000	459.000	468.000	478.000
Norway	:	:	:	:	:	:	:	:	60.246	:	63.629	55.600	68.300	77.900	67.200
EU-22									2.054.758	2.041.985	1.987.506	2.139.258	2.271.919	2.200.983	2.109.982

Source: Eurostat, Job Vacancy Statistics
Additional data for Germany 2008Q1 – 2010Q2 provided by IAB (Institut für Arbeitsmarkt- und Berufsforschung)
http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/job_vacancies

A2.4 Stock of job vacancies by economic sector, 2008Q1 - 2011Q3, 15 EU countries

Economic sector	2008				2009				2010				2011		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
03 Manufacturing	297.182	292.300	264.938	208.151	125.655	111.923	104.100	112.407	115.844	130.074	155.077	179.782	190.910	185.975	186.275
06 Construction	128.391	141.116	123.938	94.140	101.698	86.459	77.959	58.500	78.156	97.408	74.340	64.027	99.338	81.796	80.746
07 Trade and Repair	295.115	311.170	283.442	267.247	180.709	182.019	172.339	196.567	180.300	207.775	247.252	278.571	339.177	265.928	258.052
08 Transportation and Storage	137.627	108.715	104.685	113.201	68.046	61.842	70.791	67.853	47.130	74.151	84.032	80.854	68.291	62.939	74.275
09 Accommodation and Food Services	152.280	165.213	147.810	123.233	90.976	127.196	103.793	129.387	112.321	126.797	118.919	106.991	175.075	144.327	123.884
10-14 Other business services	833.153	782.982	711.374	646.779	481.122	430.927	451.140	491.111	494.204	526.684	556.015	649.905	573.289	688.801	610.723
15 Public Administration	119.185	117.928	124.326	125.159	118.103	103.649	95.429	92.065	81.928	46.659	41.628	69.259	67.103	50.030	48.879
16 Education	67.978	79.397	78.244	73.013	66.433	70.555	67.637	65.011	130.074	82.412	56.014	66.075	57.754	65.947	67.264
17-19 Health and Social Work	137.357	136.959	137.520	129.840	125.141	111.296	101.807	96.445	214.084	167.049	156.725	173.315	163.877	159.756	152.521
20-21 Arts and Other Services	132.587	123.626	113.696	118.984	124.132	127.403	109.601	147.421	95.291	95.632	64.570	65.260	74.206	65.261	85.279
Total (15 countries)	2.300.855	2.259.406	2.089.973	1.899.747	1.482.015	1.413.269	1.354.596	1.456.767	1.549.332	1.554.641	1.554.572	1.734.039	1.809.020	1.770.760	1.687.898

Source: Eurostat, Job Vacancy Statistics
Additional data for Germany 2008Q1 – 2010Q2 provided by IAB (Institut für Arbeitsmarkt- und Berufsforschung)
http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/job_vacancies

A2.5 Index stock of job vacancies (JVS) by country

Country	Index															Average
	2008				2009				2010				2011			Quarterly
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	(x 1000)
Austria	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Belgium	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Bulgaria	100	97	91	75	72	69	67	63	64	62	64	65	63	64	62	18
Czech Republic	100	104	103	81	48	34	28	24	23	23	25	23	23	26	28	64
Cyprus	100	108	115	69	62	65	66	42	40	48	42	26	37	35	21	7
Denmark	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Germany	100	101	89	90	74	72	69	74	65	84	87	106	113	105	99	814
Greece	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Estonia	100	93	95	60	34	24	29	22	28	31	35	28	35	38	47	8
Finland	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
France	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Hungary	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Ireland	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Italy	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Latvia	100	83	53	38	24	15	12	11	11	12	15	15	19	20	20	5
Lithuania	100	90	101	50	29	23	22	16	24	23	32	24	39	37	48	11
Luxembourg	100	102	94	72	68	46	50	44	51	58	75	78	91	118	90	2
Malta	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Netherlands	100	102	95	76	62	55	50	48	47	51	50	50	55	58	53	155
Poland	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Portugal	100	109	88	81	79	72	66	62	70	81	76	75	66	70	74	13
Romania	100	96	98	72	57	39	34	21	28	24	23	20	27	27	27	46
Slovenia	100	95	99	61	64	60	58	44	47	58	57	61	61	69	80	6
Slovakia	100	85	88	75	73	62	57	50	46	44	49	49	52	51	50	18
Spain	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Sweden	100	97	84	64	67	64	49	58	77	101	86	89	117	138	103	49
UK	100	98	93	78	66	65	67	69	67	73	70	72	68	69	71	506
EU15	100	100	92	81	66	63	60	62	58	69	69	77	80	78	75	1722

Source: Eurostat, Job Vacancy Statistics
Additional data for Germany 2008Q1 – 2010Q2 provided by IAB (Institut für Arbeitsmarkt- und Berufsforschung)
http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/job_vacancies

A2.6 Number of job-finders by country, 2007Q1 - 2011Q3

Country	2007				2008				2009				2010				2011		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Austria	196	234	261	236	213	236	261	250	188	210	235	228	203	240	277	262	212	256	285
Belgium	201	196	228	266	229	201	233	249	165	175	187	212	159	180	204	241	203	213	221
Bulgaria	143	198	139	128	155	160	173	122	110	134	116	93	79	122	122	103	96	128	125
Cyprus	17	24	21	29	17	24	24	24	17	20	21	22	16	21	21	24	14	23	20
Czech Rep.	164	165	160	181	164	160	164	175	143	154	162	179	143	178	177	182	166	179	185
Germany	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Denmark	278	289	286	289	263	277	277	253	222	222	234	221	181	230	235	233	198	230	241
Estonia	35	40	39	39	29	33	37	51	33	26	33	30	27	37	47	46	36	44	55
Spain	1.792	1.853	1.972	1.896	1.679	1.625	1.721	1.524	1.209	1.225	1.442	1.368	1.117	1.254	1.464	1.296	1.167	1.262	1.364
Finland	159	265	274	207	171	271	268	189	144	207	222	154	134	239	264	199	158	253	263
France	1.635	1.756	1.979	2.067	1.730	1.736	1.920	1.921	1.363	1.471	1.716	1.744	1.409	1.626	1.903	1.858	1.495	1.687	1.953
Greece	70	126	112	86	73	120	123	90	84	131	129	96	72	119	108	77	56	93	96
Hungary	117	149	145	161	147	164	163	154	114	156	151	149	134	184	169	160	127	196	185
Ireland	160	132	163	153	121	96	139	117	69	73	84	78	63	79	98	91	73	84	92
Italy	861	968	1.001	1.032	975	990	961	917	704	769	763	834	739	796	813	874	807	817	772
Lithuania	74	84	84	94	77	77	75	61	42	56	58	49	40	70	84	79	47	99	75
Luxembourg	7	7	8	13	4	7	5	6	7	8	9	10	5	8	11	12	10	7	11
Latvia	79	85	85	84	68	76	84	58	38	44	53	58	56	82	99	89	63	83	78
Malta	5.000	6.000	8.000	8.000	6.000	7.000	7.000	5.000	4.000	4.000	6.000	6.000	5.000	6.000	7.000	6.000	7.000	6.000	7
Netherlands	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Poland	731	854	959	937	825	846	856	805	613	706	667	699	655	816	849	721	567	754	734
Portugal	196	219	211	239	217	212	216	227	176	177	202	208	181	199	202	204	227	228	261
Romania	394	228	166	160	191	160	160	149	122	105	92	113	106	102	106	105	133	136	132
Sweden	380	472	535	429	388	473	509	386	320	400	424	356	330	443	503	411	378	460	516
Slovenia	50	55	62	56	51	52	72	58	38	34	47	46	39	38	43	41	41	44	47
Slovakia	80	85	75	81	64	73	88	75	59	60	67	59	61	87	77	68	57	74	54
UK	1.378	1.534	1.739	1.966	1.557	1.353	1.550	1.637	1.033	1.045	1.224	1.430	954	1.099	1.359	1.484	1.051	1.110	1.271
EU-27	11.308	12.459	13.460	13.823	11.595	11.892	12.772	12.443	8.941	9.687	10.661	11.039	8.941	10.828	11.917	11.805	9.535	10.978	11.786

Source: Eurostat, Labour Force Survey (LFS), data extracts provided by Eurostat

A2.7. Index number of job finders (LFS)

Country	Index																			Average	
	2007				2008				2009				2010				2011			Quarterly	Yearly
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	(x 1000)	(x 1000)
Austria	100	119	133	120	109	120	133	128	96	107	120	116	104	122	141	134	108	131	145	236	803
Belgium	100	98	113	132	114	100	116	124	82	87	93	105	79	90	101	120	101	106	110	209	736
Bulgaria	100	138	97	90	108	112	121	85	77	94	81	65	55	85	85	72	67	90	87	129	463
Czech Republic	100	101	98	110	100	98	100	107	87	94	99	109	87	109	108	111	101	109	113	167	574
Cyprus	100	141	124	171	100	141	141	141	100	118	124	129	94	124	124	141	82	135	118	21	75
Denmark	100	104	103	104	95	100	100	91	80	80	84	79	65	83	85	84	71	83	87	245	881
Germany	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Greece	100	180	160	123	104	171	176	129	120	187	184	137	103	170	154	110	80	133	137	98	347
Estonia	100	114	111	111	83	94	106	146	94	74	94	86	77	106	134	131	103	126	157	38	125
Finland	100	167	172	130	108	170	169	119	91	130	140	97	84	150	166	125	99	159	165	213	716
France	100	107	121	126	106	106	117	117	83	90	105	107	86	99	116	114	91	103	119	1735	6076
Hungary	100	127	124	138	126	140	139	132	97	133	129	127	115	157	144	137	109	168	158	154	516
Ireland	100	83	102	96	76	60	87	73	43	46	53	49	39	49	61	57	46	53	58	103	385
Italy	100	112	116	120	113	115	112	107	82	89	89	97	86	92	94	102	94	95	90	863	3097
Latvia	100	108	108	106	86	96	106	73	48	56	67	73	71	104	125	113	80	105	99	72	239
Lithuania	100	114	114	127	104	104	101	82	57	76	78	66	54	95	114	107	64	134	101	70	238
Luxembourg	100	100	114	186	57	100	71	86	100	114	129	143	71	114	157	171	143	100	157	8	27
Malta	100	120	160	160	120	140	140	100	80	80	120	120	100	120	140	120	140	120	140	6	21
Netherlands	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Poland	100	117	131	128	113	116	117	110	84	97	91	96	90	112	116	99	78	103	100	768	2719
Portugal	100	112	108	122	111	108	110	116	90	90	103	106	92	102	103	104	116	116	133	211	721
Romania	100	58	42	41	48	41	41	38	31	27	23	29	27	26	27	27	34	35	34	151	563
Slovenia	100	110	124	112	102	104	144	116	76	68	94	92	78	76	86	82	82	88	94	48	175
Slovakia	100	106	94	101	80	91	110	94	74	75	84	74	76	109	96	85	71	93	68	71	249
Spain	100	103	110	106	94	91	96	85	67	68	80	76	62	70	82	72	65	70	76	1486	5430
Sweden	100	124	141	113	102	124	134	102	84	105	112	94	87	117	132	108	99	121	136	427	1453
UK	100	111	126	143	113	98	112	119	75	76	89	104	69	80	99	108	76	81	92	1357	4971
EU27	100	110	119	122	103	105	113	110	79	86	94	98	79	96	105	104	84	97	104	11362	40207

Source: Eurostat, Labour Force Survey (LFS), data extracts provided by Eurostat

A2.8 Job-finders rate per country

Country	Ratio																			Average
	2007				2008				2009				2010				2011			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q$	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Austria	5,8	6,8	7,5	6,8	6,2	6,7	7,4	7,1	5,4	6,0	6,6	6,5	5,9	6,9	7,8	7,4	6,1	7,2	7,9	6,7
Belgium	5,4	5,3	6,2	7,0	6,0	5,3	6,1	6,5	4,4	4,6	5,0	5,6	4,2	4,7	5,3	6,2	5,3	5,5	5,8	5,5
Bulgaria	5,2	7,0	4,9	4,5	5,4	5,5	5,9	4,2	3,9	4,7	4,1	3,4	3,0	4,6	4,6	3,9	3,8	5,0	4,8	4,7
Czech Republic	4,1	4,0	3,9	4,4	4,0	3,8	3,9	4,2	3,5	3,8	4,0	4,4	3,6	4,5	4,4	4,6	4,2	4,5	4,6	4,1
Cyprus	5,9	7,9	7,2	9,5	5,5	7,9	7,9	7,7	5,7	6,5	6,8	7,1	5,2	6,9	6,6	7,7	4,7	7,4	6,6	6,9
Denmark	11,1	11,4	11,4	11,4	10,4	10,7	10,7	9,8	8,9	8,9	9,4	9,1	7,4	9,3	9,6	9,7	8,3	9,5	9,9	9,8
Germany	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Greece	2,5	4,4	3,8	3,0	2,5	4,1	4,2	3,1	2,9	4,5	4,4	3,3	2,6	4,2	3,8	2,8	2,1	3,5	3,7	3,5
Estonia	6,1	6,9	6,8	6,9	5,0	5,5	6,3	8,9	6,1	4,8	6,2	6,0	5,5	7,4	9,0	8,9	7,0	8,2	9,9	6,9
Finland	7,6	12,1	12,4	9,6	8,0	12,1	12,0	8,7	6,8	9,7	10,4	7,5	6,5	11,1	12,3	9,6	7,7	11,7	12,2	9,9
France	7,3	7,7	8,6	9,0	7,5	7,5	8,3	8,3	6,0	6,4	7,5	7,7	6,3	7,1	8,3	8,2	6,6	7,4	8,6	7,6
Hungary	3,5	4,3	4,2	4,7	4,4	4,9	4,8	4,5	3,5	4,7	4,6	4,5	4,1	5,6	5,1	4,8	3,9	5,9	5,5	4,6
Ireland	9,3	7,6	9,2	8,8	7,0	5,5	8,0	7,0	4,3	4,7	5,4	5,1	4,2	5,2	6,5	6,1	4,9	5,6	6,2	6,4
Italy	5,1	5,7	5,8	6,0	5,7	5,7	5,5	5,2	4,1	4,5	4,4	4,8	4,4	4,7	4,8	5,1	4,8	4,8	4,5	5,0
Latvia	8,5	9,0	8,7	8,4	6,9	7,7	8,6	6,1	4,2	5,3	6,4	7,0	7,0	10,1	11,8	10,7	7,6	9,8	9,2	8,0
Lithuania	5,8	6,4	6,3	7,2	5,8	5,9	5,6	4,7	3,4	4,6	4,7	4,1	3,4	6,0	7,1	6,5	4,0	8,1	6,2	5,6
Luxembourg	5,8	6,4	6,3	7,2	5,8	5,9	5,6	4,7	3,4	4,6	4,7	4,1	3,4	6,0	7,1	6,5	4,0	8,1	6,2	4,2
Malta	4,0	4,5	5,7	5,8	4,5	5,0	4,8	3,7	3,2	3,0	4,6	4,3	4,0	4,3	4,7	4,5	4,6	4,0	5,0	4,4
Netherlands	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Poland	6,5	7,5	8,2	7,9	7,0	7,1	7,0	6,5	5,1	5,8	5,4	5,7	5,5	6,7	6,8	5,8	4,7	6,1	5,9	6,4
Portugal	5,1	5,7	5,4	6,2	5,6	5,4	5,5	5,8	4,6	4,6	5,3	5,5	4,8	5,2	5,3	5,4	6,0	6,0	6,9	5,5
Romania	6,5	3,7	2,7	2,6	3,1	2,5	2,5	2,4	2,0	1,7	1,5	1,9	1,8	1,7	1,8	1,7	2,2	2,2	2,1	2,4
Slovenia	6,2	6,6	7,4	6,7	6,1	6,1	8,2	6,7	4,5	4,2	5,7	5,6	4,9	4,7	5,5	5,2	5,3	5,7	6,0	5,9
Slovakia	3,9	4,2	3,7	3,9	3,1	3,5	4,1	3,5	2,9	3,0	3,4	3,0	3,2	4,5	3,9	3,5	2,9	3,7	2,7	3,5
Spain	10,9	11,1	11,7	11,3	10,0	9,7	10,3	9,4	7,7	7,8	9,3	8,9	7,4	8,2	9,5	8,5	7,8	8,3	9,0	9,3
Sweden	9,7	11,8	13,0	10,6	9,7	11,6	12,3	9,6	8,1	10,0	10,6	9,1	8,5	11,1	12,4	10,2	9,4	11,2	12,4	10,6
UK	5,6	6,2	7,0	7,9	6,3	5,4	6,2	6,6	4,2	4,3	5,0	5,9	4,0	4,5	5,6	6,1	4,3	4,5	5,2	5,5
EU27	6,4	6,9	7,4	7,6	6,4	6,5	6,9	6,8	5,0	5,4	5,9	6,2	5,1	6,1	6,6	6,6	5,4	6,1	6,5	6,3

Source: Eurostat, Labour Force Survey (LFS), data extracts provided by Eurostat

A2.9 Number of job-finders by type of contract, 2007Q1 - 2011Q3, EU27

Type of contract	2007				2008				2009				2010				2011		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Permanent	4.972	5.135	5.143	5.747	5.104	4.986	4.912	5.098	3.805	3.741	3.686	4.154	3.609	4.006	4.218	4.550	3.816	4.160	4.170
Temporary	6.284	7.252	8.265	8.030	6.456	6.874	7.825	7.307	5.114	5.920	6.941	6.855	5.301	6.786	7.661	7.221	5.688	6.767	7.575
No answer	52	72	51	46	35	33	35	38	22	26	34	29	30	37	37	34	31	50	40
Total	11.308	12.459	13.460	13.823	11.595	11.892	12.772	12.443	8.941	9.687	10.661	11.039	8.941	10.828	11.917	11.805	9.535	10.978	11.786

Source: Eurostat, Labour Force Survey (LFS), data extracts provided by Eurostat

A2.10 Index of job-finders with temporary contracts

Country	Index																			Average	
	2007				2008				2009				2010				2011			Quarterly	Yearly
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q$	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	(x 1000)	(x 1000)
Austria	100	110	189	137	124	111	185	148	107	91	177	148	109	112	205	163	113	113	225	83	326
Belgium	100	100	133	137	111	84	126	130	74	90	116	121	83	84	115	129	101	107	132	97	384
Bulgaria	100	150	106	74	122	150	142	85	71	133	101	60	60	111	117	65	60	112	114	52	209
Czech Republic	100	105	98	101	88	90	95	87	79	89	106	111	90	122	120	114	110	122	126	89	343
Cyprus	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Denmark	100	118	123	104	91	106	102	83	94	105	108	94	81	104	108	95	90	114	106	71	282
Germany	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Greece	100	214	205	129	112	223	236	150	123	244	247	163	122	235	218	112	82	178	178	56	231
Estonia	100	252	282	223	247	167	227	327	190	189	339	175	214	457	410	309	312	453	634	10	36
Finland	100	204	223	128	107	221	217	120	94	176	184	114	94	209	221	139	109	204	219	137	540
France	100	109	134	129	105	108	129	123	84	96	120	112	88	109	127	122	97	111	132	1295	5173
Hungary	100	147	129	128	110	155	150	132	94	176	169	148	125	205	184	156	127	227	207	79	302
Ireland	100	119	235	143	119	90	203	137	80	96	135	112	84	114	168	133	101	129	155	38	153
Italy	100	125	131	131	122	132	131	120	89	103	111	114	93	113	119	123	108	117	118	548	2197
Latvia	100	148	146	97	72	118	166	83	56	83	143	156	123	216	226	229	151	239	198	24	88
Lithuania	100	132	107	86	61	99	86	46	20	94	101	41	41	79	126	88	49	151	117	17	64
Luxembourg	100	121	132	173	82	132	51	102	60	84	168	145	48	77	196	143	113	86	144	4	16
Malta	100	157	168	150	114	103	142	59	50	90	237	158	119	180	253	196	197	151	302	1	5
Netherlands	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Poland	100	118	128	123	105	114	114	106	82	97	94	97	87	113	117	100	77	104	100	642	2617
Portugal	100	113	112	125	113	110	111	117	88	94	104	109	89	99	108	108	116	118	138	171	665
Romania	100	118	113	109	94	85	96	75	72	93	77	72	73	100	118	76	140	175	144	26	95
Slovenia	100	115	139	115	107	103	156	118	73	74	113	102	88	86	101	91	82	87	108	38	154
Slovakia	100	108	72	71	60	84	125	89	76	85	99	74	86	147	131	97	84	105	80	32	128
Spain	100	104	113	106	94	90	100	88	68	70	85	78	64	71	86	75	67	74	82	1284	5258
Sweden	100	128	146	106	98	124	139	95	85	111	122	95	88	122	139	104	98	124	140	327	1294
UK	100	102	132	143	100	86	115	120	78	90	106	127	77	97	121	122	86	99	108	357	1448
EU27	100	115	132	128	103	109	125	116	81	94	110	109	84	108	122	115	91	108	121	6849	27523

Source: Eurostat, Labour Force Survey (LFS), data extracts provided by Eurostat

A2.11 Number of job-finders by type of job, 2007Q1 - 2011Q3, EU27

Type of job	2007				2008				2009				2010				2011		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Fulltime	8.076	9.140	10.090	9.901	8.259	8.628	9.489	8.668	6.082	6.686	7.523	7.489	6.013	7.429	8.536	8.109	6.461	7.567	8.369
Parttime	3.090	3.278	3.376	3.909	3.396	3.365	3.407	3.909	2.852	3.019	3.153	3.544	2.927	3.396	3.379	3.695	3.073	3.410	3.413
No answer	142	148	130	137	1	2	3	1	1	2	5	3	1	3	2	1	1	1	3
Total	11.308	12.459	13.460	13.823	11.595	11.892	12.772	12.443	8.941	9.687	10.661	11.039	8.941	10.828	11.917	11.805	9.535	10.978	11.786

Source: Eurostat, Labour Force Survey (LFS), data extracts provided by Eurostat

A2.12 Index of job-finders with part-time contracts by country, 2007Q1 - 2011Q3

Country	Index																			Average	
	2007				2008				2009				2010				2011			Quarterly	Yearly
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q$	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	(x 1000)	(x 1000)
Austria	100	114	104	132	110	122	106	132	114	107	109	120	116	117	126	142	126	130	144	77	300
Belgium	100	97	104	143	121	98	128	123	101	103	93	119	92	100	95	149	117	115	108	58	229
Bulgaria	100	164	104	76	164	197	115	91	103	126	99	76	131	117	131	167	163	169	99	6	25
Czech Republic	100	92	68	91	96	87	92	114	98	91	104	127	112	115	99	117	108	113	106	26	103
Cyprus	100	69	71	146	85	73	109	212	133	88	96	161	100	97	109	228	138	93	151	3	10
Denmark	100	109	105	124	101	116	112	122	94	91	105	106	91	94	110	102	85	96	98	95	389
Germany	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Greece	100	199	180	126	105	191	194	122	112	205	204	129	98	183	161	108	71	138	146	83	344
Estonia	100	131	94	107	67	73	147	161	121	96	178	41	102	130	84	217	114	106	159	5	19
Finland	100	140	137	154	110	134	132	137	95	111	126	114	88	128	140	140	96	139	138	56	222
France	100	102	103	130	98	90	90	118	81	89	94	118	86	97	98	109	88	98	99	491	1979
Hungary	100	139	125	130	141	145	189	178	125	214	209	147	144	206	178	204	180	448	409	21	72
Ireland	100	82	115	108	85	63	110	89	57	64	79	76	57	67	94	88	70	77	85	34	139
Italy	100	111	117	128	119	126	111	128	97	97	104	109	111	104	116	127	107	110	93	221	896
Latvia	100	188	79	88	73	119	92	82	82	74	129	47	100	140	134	146	137	81	104	8	30
Lithuania	100	163	206	206	212	192	184	149	101	173	185	181	95	125	127	217	115	262	248	7	27
Luxembourg	100	131	56	110	58	28	55	65	122	109	151	182	100	108	120	165	154	128	151	2	6
Malta	100	198	262	128	98	215	254	70	64	110	215	144	108	152	173	140	179	157	386	2	6
Netherlands	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Poland	100	108	103	138	112	111	108	142	102	97	102	115	115	103	117	122	86	101	99	92	375
Portugal	100	62	84	125	118	95	126	141	143	113	83	140	107	84	121	133	184	143	186	30	109
Romania	100	187	193	73	261	157	113	156	253	144	311	214	81	180	140	86	310	308	261	3	10
Slovenia	100	136	124	123	122	106	130	139	94	97	118	123	108	111	103	102	80	83	121	12	48
Slovakia	100	89	73	81	83	104	435	214	275	319	288	200	297	659	419	257	336	361	206	10	40
Spain	100	92	97	112	92	85	95	105	78	78	86	101	71	82	97	99	90	96	97	362	1441
Sweden	100	117	142	116	241	261	238	238	215	239	225	237	217	241	242	241	228	251	250	177	688
UK	100	98	111	147	116	94	107	124	76	83	92	116	76	85	102	119	78	84	94	491	2020
EU27	100	106	109	126	110	109	110	126	92	98	102	115	95	110	109	120	99	110	110	3347	13424

Source: Eurostat, Labour Force Survey (LFS), data extracts provided by Eurostat

A2.13 Inflow of vacancies registered by the PES by country, 2008Q1 - 2011Q3, 12 countries

Country	2008				2009				2010				2011		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Austria	113.315	104.288	100.598	75.240	89.355	87.922	96.518	80.363	102.563	103.546	111.746	86.878	118.079	107.997	107.413
Czech Republic	130.747	123.346	111.793	74.748	74.712	55.617	49.762	41.753	56.115	55.597	54.783	58.251	41.201	46.155	39.572
Denmark	76.911	77.752	54.280	39.572	41.778	38.841	30.542	27.700	32.259	33.021	25.245	22.589	29.124	29.001	26.523
Estonia	4.968	3.912	3.248	2.210	2.695	3.263	3.058	3.029	6.838	10.499	10.415	9.279	8.779	12.926	13.334
Finland	161.511	111.173	105.506	82.545	120.412	79.366	72.675	70.505	122.809	89.165	93.741	88.864	154.528	118.242	109.133
Germany	403.697	516.189	516.674	435.889	371.969	404.148	442.231	399.904	403.697	537.227	566.642	509.650	521.780	588.743	591.920
Ireland	30.432	26.066	24.711	15.443	13.671	13.401	16.027	12.407	14.081	17.387	19.192	18.720	16.466	22.935	16.969
Latvia	18.420	15.228	13.950	8.284	5.728	5.645	5.421	4.207	4.531	6.570	3.630	6.246	5.561	7.511	7.824
Lithuania	28.686	30.717	31.373	20.687	16.315	26.579	28.166	20.929	23.522	44.682	46.804	35.552	36.160	53.752	41.093
Portugal	28.212	28.561	34.277	30.016	24.572	30.985	35.819	27.559	28.284	36.650	35.805	24.112	25.394	27.758	26.906
Sweden	220.690	171.299	119.194	98.458	145.143	96.247	79.640	88.060	159.362	137.912	116.366	137.019	209.239	184.967	144.966
UK	1.015.788	1.103.007	1.075.075	983.703	662.778	765.398	900.402	984.862	804.734	1.009.740	1.052.787	1.095.833	820.641	920.611	1.055.766
EU12	2.233.377	2.311.538	2.190.679	1.866.795	1.569.128	1.607.412	1.760.261	1.761.278	1.758.795	2.081.996	2.137.156	2.092.992	1.986.952	2.120.598	2.181.419

Source: Public Employment Services (PES) of 12 countries; the data of Denmark are obtained via the EURES database.
The PES of other countries did not deliver data on the inflow of vacancies from 2008.
For the Czech Republic and Lithuania the number of 2010Q4 is missing and estimated as the average of 2008Q4 and 2009Q4.
For the UK the number of 2010Q3 is missing and estimated as the average of 2010Q2 and 2010Q4.

A2.14 Index inflow job vacancies registered by PES

Country	Index															Average	
	2008				2009				2010				2011			Quarterly	Yearly
	Q1	Q2	Q3	Q$	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	(x 1000)	(x 1000)
Austria	100	92	89	66	79	78	85	71	91	91	99	77	104	95	95	99	372
Belgium	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Bulgaria	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Czech Republic	100	94	86	57	57	43	38	32	43	43	42	45	32	35	30	68	381
Cyprus	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Denmark	100	101	71	51	54	51	40	36	42	43	33	29	38	38	34	39	212
Germany	100	128	128	108	92	100	110	99	100	133	140	126	129	146	147	481	1814
Greece	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Estonia	100	79	65	44	54	66	62	61	138	211	210	187	177	260	268	7	13
Finland	100	69	65	51	75	49	45	44	76	55	58	55	96	73	68	105	423
France	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Hungary	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Ireland	100	86	81	51	45	44	53	41	46	57	63	62	54	75	56	19	81
Italy	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Latvia	100	83	76	45	31	31	29	23	25	36	20	34	30	41	42	8	44
Lithuania	100	107	109	72	57	93	98	73	82	156	163	124	126	187	143	32	102
Luxembourg	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Malta	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Netherlands	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Poland	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Portugal	100	101	121	106	87	110	127	98	100	130	127	85	90	98	95	30	119
Romania	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Slovenia	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Slovakia	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Spain	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Sweden	100	78	54	45	66	44	36	40	72	62	53	62	95	84	66	141	534
UK	100	109	106	97	65	75	89	97	79	99	104	108	81	91	104	950	3830
EU12	100	103	98	84	70	72	79	79	79	93	96	94	89	95	98	1978	7925

Source: Public Employment Services (PES) of 12 countries; the data of Denmark are obtained via the EURES database.
The PES of other countries did not deliver data on the inflow of vacancies from 2008.
For the Czech Republic and Lithuania the number of 2010Q4 is missing and estimated as the average of 2008Q4 and 2009Q4.
For the UK the number of 2010Q3 is missing and estimated as the average of 2010Q2 and 2010Q4.

A3.1 Number of job-finders by economic sector (NACE Rev.2, 2 digit), 2008Q1 - 2011Q3, EU27

Economic sector	2008				2009				2010				2011		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Agriculture and Fishing	316	361	367	338	321	367	406	337	317	402	396	339	306	385	368
Industry	1.959	1.993	2.116	1.834	1.164	1.215	1.357	1.454	1.327	1.663	1.788	1.824	1.523	1.716	1.817
Construction	1.158	1.280	1.297	1.098	761	1.071	1.055	988	745	1.119	1.178	1.000	828	1.132	1.084
Trade and Repair	1.796	1.772	1.951	1.984	1.398	1.350	1.595	1.698	1.374	1.565	1.807	1.883	1.430	1.570	1.762
Transportation and Storage	582	582	617	561	417	406	461	469	402	470	549	526	447	499	557
Accommodation and Food Services	892	1.073	1.207	898	696	962	1.124	860	738	1.049	1.230	910	771	1.094	1.254
ICT	349	342	359	351	283	247	243	272	247	276	319	324	292	284	306
Finance	285	268	278	262	200	183	199	208	181	192	238	226	203	196	240
Other Business Services	1.298	1.346	1.373	1.280	1.037	1.100	1.138	1.124	1.010	1.279	1.338	1.284	1.116	1.282	1.324
Public Administration	488	522	558	550	431	490	570	507	413	473	502	448	389	504	488
Education	621	487	566	1.153	561	500	516	1.110	538	487	548	1.047	540	464	531
Human health and Social work	995	991	1.145	1.217	959	959	1.131	1.116	920	976	1.102	1.122	926	979	1.099
Arts and Other services	765	775	837	827	634	733	759	795	640	742	812	770	656	765	839
No answer	89	102	101	92	78	103	108	103	88	137	109	102	108	109	116
Total	**11.595**	**11.892**	**12.772**	**12.443**	**8.941**	**9.687**	**10.661**	**11.039**	**8.941**	**10.828**	**11.917**	**11.805**	**9.535**	**10.978**	**11.786**

Source: Eurostat, Labour Force Survey (LFS), data extracts provided by Eurostat

A3.2 Job-finders by NACE rev.2, by country, 2011Q3

Country	NACE2D sector (%)													
	Agriculture and Fishing	Industry	Construction	Trade and Repair	Transportation and Storage	Accommodation and Food Services	ICT	Finance	Other Business Services	Public Administration	Education	Human health and Social work	Arts and Other services	Total
Austria	1,5	15,5	11,9	16,5	3,2	14,9	3,1	2,7	12,0	3,6	4,0	6,0	5,2	100,0
Belgium	1,1	15,6	10,5	17,0	6,2	5,9	2,5	4,0	9,5	3,4	5,4	10,9	8,1	100,0
Bulgaria	10,9	18,9	12,8	14,7	3,9	15,5	1,8	2,8	7,0	4,8	1,7	2,3	2,9	100,0
Czech Republic	3,0	29,2	8,3	16,9	6,3	6,8	1,5	2,1	7,6	4,7	4,9	6,2	2,5	100,0
Cyprus	2,5	4,2	13,4	18,3	5,3	23,9	2,8	2,7	6,7	3,3	4,4	2,4	10,1	100,0
Denmark	1,5	12,0	9,1	16,5	4,3	7,5	3,4	1,9	9,8	2,6	6,9	19,1	5,3	100,0
Germany	1,1	19,8	6,9	13,9	5,3	7,5	3,5	1,3	13,9	3,2	6,0	12,3	5,4	100,0
Greece	5,8	14,8	8,2	9,6	4,0	30,6	1,2	2,8	6,0	3,3	3,2	3,2	7,4	100,0
Estonia	4,2	19,3	27,5	11,7	4,5	6,4	0,6	2,3	8,4	2,4	5,0	4,9	2,8	100,0
Finland	2,9	11,9	11,0	13,2	5,2	6,4	2,4	1,9	11,1	2,5	6,3	15,7	9,5	100,0
France	2,5	16,9	9,7	14,6	5,4	8,4	2,5	2,3	12,6	4,9	2,3	8,6	9,2	100,0
Hungary	5,4	22,7	9,5	11,5	4,1	6,1	1,5	0,7	5,8	22,2	4,3	4,1	2,1	100,0
Ireland	1,6	12,9	8,7	15,5	3,5	14,0	4,1	2,4	12,0	2,2	5,6	10,5	6,8	100,0
Italy	6,7	15,5	10,5	14,0	3,5	17,5	1,3	1,2	7,9	2,4	3,6	4,4	11,6	100,0
Latvia	6,5	15,8	13,7	15,8	5,7	3,0	3,3	3,7	19,7	2,3	4,6	1,0	4,7	100,0
Lithuania	8,9	20,4	18,6	17,8	5,3	7,8	0,5	1,8	8,4	1,1	2,8	2,4	4,1	100,0
Luxembourg	0,0	5,0	5,1	15,9	2,0	7,9	3,3	12,3	20,4	6,4	4,9	10,1	6,7	100,0
Malta	1,5	14,2	0,0	8,6	5,6	20,4	2,8	2,3	12,9	6,5	12,3	7,9	5,0	100,0
Netherlands	2,4	10,6	3,9	21,5	5,4	12,6	3,5	1,6	11,5	2,4	4,2	16,5	3,9	100,0
Poland	4,0	21,9	18,2	16,2	5,4	5,2	1,8	3,2	9,3	5,0	3,5	2,5	3,8	100,0
Portugal	4,7	13,4	12,6	13,5	4,0	14,5	1,4	1,0	10,2	5,6	3,8	6,6	8,7	100,0
Romania	9,6	21,9	12,2	16,0	2,9	13,4	3,1	2,2	7,6	3,5	3,6	2,4	1,7	100,0
Slovenia	1,9	24,0	6,2	14,2	4,0	17,9	3,3	3,0	6,2	2,9	5,3	7,6	3,3	100,0
Slovakia	2,3	22,2	14,9	16,2	2,8	7,2	1,8	3,4	8,4	9,3	4,4	2,6	4,5	100,0
Spain	6,3	9,2	10,2	14,9	3,4	16,6	2,6	1,1	8,0	6,5	2,6	7,6	11,0	100,0
Sweden	1,4	9,6	5,7	14,3	5,8	8,2	2,8	1,3	15,0	3,1	7,1	20,1	5,8	100,0
UK	1,0	10,5	5,4	16,8	4,7	13,2	2,9	4,1	13,5	2,3	7,7	10,6	7,2	100,0
EU27	3,2	15,6	9,3	15,1	4,8	10,7	2,6	2,1	11,3	4,2	4,6	9,4	7,2	100,0

Source: Eurostat, Labour Force Survey (LFS), data extracts provided by Eurostat

A3.3 Number of job-finders by major occupational group (ISCO-08, 1-digit), 2007Q1 - 2011Q3, EU25 (x1000)

Occupational group	2007				2008				2009				2010				2011		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
0 Armed forces	35	23	20	35	25	26	28	34	29	25	25	23	21	18	27	20	19	19	13
1 Managers and senior officials	196	207	196	201	198	203	175	188	164	142	148	163	158	180	177	186	209	193	201
2 Professionals	809	779	882	1.272	898	840	904	1.191	812	732	734	1.045	724	757	779	1.069	861	863	906
3 Technicians and associate professionals	1.261	1.303	1.413	1.620	1.370	1.318	1.433	1.542	1.100	1.051	1.195	1.429	1.135	1.176	1.285	1.496	942	1.034	1.110
4 Clerks	1.088	1.155	1.285	1.239	1.084	1.154	1.229	1.141	854	883	963	981	837	971	1.058	1.056	997	1.074	1.195
5 Service and sales workers	1.817	2.078	2.413	2.223	1.899	2.067	2.330	2.132	1.628	1.833	2.108	1.910	1.587	1.993	2.276	2.039	1.672	1.969	2.334
6 Skilled agricultural and fishery workers	147	235	239	158	144	202	223	168	119	233	239	142	127	246	239	153	118	191	170
7 Craft and related trades workers	1.514	1.731	1.714	1.823	1.471	1.559	1.580	1.554	997	1.210	1.274	1.286	1.039	1.378	1.514	1.403	1.065	1.392	1.350
8 Plant and machine operators and assemblers	1.013	1.117	1.153	1.066	973	1.054	1.048	877	621	691	747	766.	711	934	1.004	913	761	912	921
9 Elementary occupations	1.800	2.054	2.146	1.938	1.756	1.898	2.022	1.718	1.419	1.653	1.801	1.662	1.473	1.861	1.976	1.743	1.685	2.051	2.147
No answer	89	110	99	128	99	122	113	145	95	116	119	126	111	138	125	154	82	86	75
Total (25 countries)	9.770	10.793	11.558	11.704	9.917	10.444	11.083	10.690	7.839	8.568	9.353	9.531	7.924	9.650	10.459	10.230	8.411	9.783	10.422

Source: Eurostat, Labour Force Survey (LFS), data extracts provided by Eurostat

A3.4 Job-finders by ISCO-08 (1-digit), by country, 2011Q3

Country	ISCO-08 1-digit (%)									
	Managers and senior officials	Professionals	Technicians and associate professionals	Clerks	Service and sales workers	Skilled agricultural and fishery workers	Crafts and related trades workers	Plant and machine operators and assemblers	Elementary Occupations	Total
Austria	*	6,7	16,3	13,7	23,9	*	14,2	6,1	15,5	100,0
Belgium	*	10,8	9,7	18,6	15,8	*	11,2	11,0	17,2	100,0
Bulgaria	*	7,2	4,5	6,8	26,9	*	13,4	9,7	25,9	100,0
Czech Republic	*	8,9	7,9	16,6	23,8	*	12,3	4,8	23,2	100,0
Cyprus	*	6,6	13,2	12,6	20,1	*	11,5	16,8	16,9	100,0
Denmark	*	16,3	9,8	9,9	25,0	*	10,3	5,7	20,4	100,0
Germany	*	11,5	12,3	14,1	20,0	*	14,4	7,8	16,4	100,0
Greece	*	6,8	*	12,0	29,0	*	14,2	6,4	26,1	100,0
Estonia	*	10,4	6,6	7,6	17,5	*	30,7	9,8	13,2	100,0
Finland	*	11,5	11,1	8,7	24,2	*	13,6	9,2	16,7	100,0
France	*	5,5	13,7	12,5	18,6	*	9,5	11,5	24,3	100,0
Hungary	*	*	11,0	7,2	13,5	*	15,5	12,0	32,6	100,0
Ireland	:	:	:	:	:	:	:	:	:	:
Italy	*	5,5	7,7	11,9	28,9	*	15,3	8,4	20,5	100,0
Latvia	*	9,0	7,2	*	14,6	*	16,2	6,1	36,9	100,0
Lithuania	*	*	9,9	5,5	15,6	*	22,3	14,4	24,8	100,0
Luxembourg	*	21,0	16,0	23,4	15,0	*	10,4	*	*	100,0
Malta	*	14,5	15,2	16,0	23,5	*	6,2	8,1	11,9	100,0
Netherlands	*	11,8	12,7	13,6	24,9	*	7,3	*	20,3	100,0
Poland	*	8,6	9,3	9,7	18,2	*	20,1	11,4	19,9	100,0
Portugal	*	11,4	5,8	10,1	22,5	*	15,2	8,7	21,1	100,0
Romania	5,2	10,0	6,2	7,8	21,6	*	16,1	8,2	20,2	100,0
Slovenia	*	8,2	13,8	11,1	25,2	*	11,6	10,4	17,4	100,0
Slovakia	*	9,8	15,2	6,5	16,4	*	13,0	14,7	22,1	100,0
Spain	*	7,8	6,5	9,4	28,6	*	12,9	6,3	26,4	100,0
Sweden	*	11,7	12,6	7,8	33,1	*	8,6	9,5	13,2	100,0
UK	-	-	-	-	-	-	-	-	-	-
EU25	**1,9**	**8,8**	**10,7**	**11,6**	**22,6**	**1,6**	**13,1**	**8,9**	**20,8**	**100,0**

Source: Eurostat, Labour Force Survey (LFS), data extracts provided by Eurostat

A3.5 Inflow job vacancies registered by PES by ISCO-08 (1-digit), 2011Q3

Country	ISCO-08 1-digit (%)									
	Managers and senior officials	Professionals	Technicians and associate professionals	Clerks	Service and sales workers	Skilled agricultural and fishery workers	Crafts and related trades workers	Plant and machine operators and assemblers	Elementary Occupations	Total
Austria	1,1	2,2	10,7	7,0	32,4	0,6	20,1	6,1	19,9	100,0
Belgium	:	:	:	:	:	:	:	:	:	:
Bulgaria	:	:	:	:	:	:	:	:	:	:
Czech Republic	1,5	6,9	17,2	6,3	13,0	0,6	20,9	15,4	18,2	100,0
Cyprus	:	:	:	:	:	:	:	:	:	:
Denmark	3,3	18,3	21,2	4,7	20,4	0,4	8,9	3,6	19,2	100,0
Germany	1,2	5,2	14,4	12,7	16,0	0,7	21,9	12,6	15,2	100,0
Greece	:	:	:	:	:	:	:	:	:	:
Estonia	3,9	2,4	9,2	7,3	17,4	2,3	26,7	17,2	13,6	100,0
Finland	2,9	13,1	31,6	6,3	20,6	0,7	14,1	3,3	7,3	100,0
France	:	:	:	:	:	:	:	:	:	:
Hungary	:	:	:	:	:	:	:	:	:	:
Ireland	4,1	7,9	11,6	9,6	38,0	0,5	7,7	12,2	8,4	100,0
Italy	:	:	:	:	:	:	:	:	:	:
Latvia	2,4	3,2	2,4	7,3	2,2	17,3	4,4	10,5	50,4	100,0
Lithuania	1,6	7,8	5,5	2,3	14,4	1,3	27,6	12,8	26,7	100,0
Luxembourg	:	:	:	:	:	:	:	:	:	:
Malta	:	:	:	:	:	:	:	:	:	:
Netherlands	:	:	:	:	:	:	:	:	:	:
Poland	:	:	:	:	:	:	:	:	:	:
Portugal	0,2	4,1	5,9	7,4	25,9	4,5	21,5	7,3	23,2	100,0
Romania	:	:	:	:	:	:	:	:	:	:
Slovenia	:	:	:	:	:	:	:	:	:	:
Slovakia	:	:	:	:	:	:	:	:	:	:
Spain	:	:	:	:	:	:	:	:	:	:
Sweden	2,1	17,6	25,4	5,9	29,7	0,4	6,3	6,6	6,0	100,0
UK	5,6	6,0	11,0	6,2	20,3	0,2	10,9	16,0	23,7	100,0
EU12	3,5	6,9	13,9	7,9	20,3	0,5	15,0	13,0	18,9	100,0

Source: Public Employment Services (PES) of 12 countries; the data of Denmark are obtained via the EURES database.
The PES of other countries did not deliver data on the inflow of vacancies from 2008.
For the Czech Republic and Lithuania the number of 2010Q4 is missing and estimated as the average of 2008Q4 and 2009Q4.
For the UK the number of 2010Q3 is missing and estimated as the average of 2010Q2 and 2010Q4.

A3.6 Number of job-finders by educational level (ISCED), 2007Q1 - 2011Q3, EU27

Educational level	2007				2008				2009				2010				2011		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Primary education / first stage of basic education or lower	794	832	813	806	779	765	742	680	552	675	643	616	553	694	706	591	567	644	614
Lower secondary or second stage of basic education	2.296	2.669	3.057	3.050	2.280	2.480	2.811	2.609	1.699	1.990	2.337	2.333	1.711	2.194	2.525	2.391	1.800	2.200	2.477
(Upper) secondary education	5.163	5.791	6.149	6.028	5.375	5.520	5.867	5.527	4.115	4.444	4.883	4.828	4.128	5.126	5.562	5.305	4.344	5.176	5.444
(Upper) secondary education shorter than 2 years, which leads directly to labour market	236	273	273	301	249	237	238	227	144	176	174	189	147	161	178	191	162	156	196
Post-secondary non-tertiary education	330	348	347	358	291	358	352	360	258	276	300	306	265	323	336	353	290	326	372
First stage of tertiary education	2.403	2.448	2.712	3.184	2.547	2.445	2.652	2.929	2.084	2.044	2.230	2.684	2.068	2.240	2.521	2.875	2.274	2.387	2.583
Second stage of tertiary education	51	53	45	54	43	53	52	62	65	42	50	46	42	45	49	66	62	46	60
NoAnswer	35	45	62	39	32	35	59	50	23	40	44	36	27	44	41	34	37	44	40
Total	11.308	12.459	13.460	13.823	11.595	11.892	12.772	12.443	8.941	9.687	10.661	11.039	8.941	10.828	11.917	11.805	9.535	10.978	11.786

Source: Eurostat, Labour Force Survey (LFS), data extracts provided by Eurostat
Numbers of Slovakia in 2011Q2 are estimated as averages of 2008Q2, 2009Q2 and 2010Q2.

A3.7 Job-finders by educational level, by country, 2011Q3

Country	ISCED (%)							
	Primary Education / first stage of basic education or lower	Lower secondary or second stage of basic education	(Upper) secondary education	(Upper) secondary education shorter than 2 years, which leads directly to labour market	Post-secondary non-tertiary education	First stage of tertiary education	Second stage of tertiary education	Total
Austria	0,8	28,6	46,8	*	12,0	9,9	*	100,0
Belgium	8,8	15,5	40,5	*	5,1	29,8	*	100,0
Bulgaria	3,4	15,6	66,2	*	0,5	14,3	*	100,0
Czech Republic	0,0	10,7	72,5	*	1,3	15,2	*	100,0
Cyprus	10,6	12,6	43,3	*	1,7	31,3	*	100,0
Denmark	2,7	27,3	45,3	*	0,1	23,6	*	100,0
Germany	3,8	22,6	48,3	*	7,8	16,6	*	100,0
Greece	21,3	16,3	27,9	*	10,6	19,8	*	100,0
Estonia	1,0	18,8	47,1	*	9,7	23,4	*	100,0
Finland	3,2	22,7	54,5	*	0,4	18,9	*	100,0
France	5,0	21,3	49,5	*	0,1	23,8	*	100,0
Hungary	1,7	25,3	57,0	*	2,7	13,3	*	100,0
Ireland	3,1	12,2	32,6	*	13,8	37,5	*	100,0
Italy	5,3	36,2	42,8	*	0,8	14,7	*	100,0
Latvia	1,2	18,5	54,1	*	5,2	21,1	*	100,0
Lithuania	0,0	9,8	53,1	*	21,1	15,9	*	100,0
Luxembourg	7,9	9,5	35,7	*	3,4	28,1	*	100,0
Malta	0,7	47,0	30,3	*	2,5	18,8	*	100,0
Netherlands	7,7	29,6	38,7	*	1,3	22,3	*	100,0
Poland	1,1	10,5	63,3	*	2,5	22,4	*	100,0
Portugal	25,6	28,2	26,7	*	1,0	14,1	*	100,0
Romania	3,6	12,7	61,2	*	1,9	20,4	*	100,0
Slovenia	0,2	19,3	65,6	*	0,0	12,3	*	100,0
Slovakia	0,0	9,0	66,8	*	0,0	23,5	*	100,0
Spain	13,7	31,2	27,9	*	0,0	26,6	*	100,0
Sweden	2,6	12,7	41,6	*	9,7	24,8	*	100,0
UK	0,1	5,5	49,7	*	0,2	33,0	*	100,0
EU27	5,2	21,1	46,3	1,7	3,2	22,0	0,5	100,0

Source: Eurostat, Labour Force Survey (LFS), data extracts provided by Eurostat

A3.8 Number of job-finders by educational field (ISCED), 2007 - 2010, EU26 (x1000)

Educational field	2007	2008	2009	2010
General programs	3.981	4.469	3.476	3.899
Teacher training and education science	1.229	1.205	1.005	1.085
Humanities, languages and arts	2.237	2.069	1.821	1.831
Social sciences, business and law	7.809	7.429	6.619	7.036
Science, mathematics and computing	513	395	322	313
Life science (including biology and environmental science)	262	310	281	261
Physical science (including physics, chemistry and earth science)	355	257	273	231
Mathematics and statistics	177	168	139	92
Computer science	669	615	480	567
Computer use	128	107	95	107
Engineering, manufacturing and construction	8.818	8.180	6.692	7.690
Agriculture and veterinary	862	845	697	786
Health and welfare	2.512	2.610	2.351	2.414
Services	2.717	2.621	2.206	2.453
Not applicable, unknown, no answer	18.173	16.952	13.564	14.390
Total (26 countries)	50.442	48.230	40.023	43.160

Source: Eurostat, Labour Force Survey (LFS), data extracts provided by Eurostat

A3.9 Job-finders by educational field, by country, 2010

Country	HATFIELD (%)															
	General Programs	Teacher Training and Education science	Humanities, languages and arts	Social sciences, business and law	Science, mathematics and computing	Life science (including biology and environmental science)	Physical science (including physics, chemistry and earth science)	Mathematics and statistics	Computer science	Computer use	Engineering, manufacturing and construction	Agriculture and veterinary	Health and welfare	Services	Not applicable	Total
Austria	9,2	3,0	2,7	16,7	*	*	*	*	*	*	23,6	1,9	4,0	12,1	25,6	100,0
Belgium	11,9	4,1	5,0	18,2	*	*	*	*	*	*	14,9	1,0	10,0	6,5	24,8	100,0
Bulgaria	22,2	0,9	1,6	8,6	*	*	*	*	*	*	27,2	2,8	1,1	5,1	29,8	100,0
Czech Republic	5,5	2,6	2,8	17,8	*	*	*	*	*	*	40,5	3,9	4,4	11,4	8,8	100,0
Cyprus	11,1	3,3	9,1	22,5	*	*	*	*	*	*	14,2	1,0	2,3	6,5	24,6	100,0
Denmark	9,2	2,0	5,6	15,8	*	*	*	*	*	*	14,6	1,6	10,5	2,7	34,6	100,0
Germany	8,9	4,2	2,7	18,2	*	*	*	*	*	*	21,5	2,1	7,7	6,2	26,1	100,0
Greece	24,3	1,0	5,3	6,8	*	*	*	*	*	*	10,1	1,4	5,1	4,5	37,8	100,0
Estonia	29,0	1,6	2,5	14,3	*	*	*	*	*	*	23,1	3,1	1,6	7,8	14,0	100,0
Finland	22,1	1,6	5,1	10,6	*	*	*	*	*	*	17,5	1,9	7,4	7,8	24,1	100,0
France	0,6	0,2	6,3	24,7	*	*	*	*	*	*	21,7	2,5	5,7	4,6	27,3	100,0
Hungary	9,7	2,7	1,1	12,8	*	*	*	*	*	*	34,4	3,3	2,6	6,7	24,6	100,0
Ireland	31,1	3,2	4,2	13,7	*	*	*	*	*	*	10,4	1,1	6,7	4,2	22,4	100,0
Italy	9,6	1,1	4,2	16,0	*	*	*	*	*	*	11,4	1,5	1,9	5,9	45,9	100,0
Latvia	28,6	2,5	2,6	11,9	*	*	*	*	*	*	22,2	3,1	2,2	6,2	19,6	100,0
Lithuania	21,3	2,7	2,1	13,3	*	*	*	*	*	*	34,6	2,8	2,7	10,2	7,4	100,0
Luxembourg	3,4	2,4	10,0	23,8	*	*	*	*	*	*	12,3	1,4	5,4	5,4	31,2	100,0
Malta	13,7	3,6	2,8	8,6	*	*	*	*	*	*	5,0	0,9	3,6	2,8	51,4	100,0
Netherlands	4,6	4,8	3,6	23,5	*	*	*	*	*	*	8,6	1,4	12,6	6,9	30,9	100,0
Poland	14,2	2,5	2,7	16,5	*	*	*	*	*	*	35,7	3,5	2,2	7,2	11,5	100,0
Portugal	2,4	3,3	6,4	11,8	*	*	*	*	*	*	4,0	0,5	2,4	2,8	59,6	100,0
Romania	17,0	1,3	4,1	10,6	*	*	*	*	*	*	36,6	4,0	0,5	5,2	15,2	100,0
Slovenia	15,1	2,3	2,2	22,4	*	*	*	*	*	*	24,6	1,9	4,1	9,0	16,8	100,0
Slovakia	3,9	4,1	1,8	14,9	*	*	*	*	*	*	41,8	4,8	3,4	10,0	13,0	100,0
Spain	15,6	2,3	2,6	10,6	*	*	*	*	*	*	7,6	0,4	4,2	3,6	50,3	100,0
Sweden	14,2	4,5	7,3	12,4	*	*	*	*	*	*	16,7	1,8	10,1	5,2	25,4	100,0
UK	0,2	3,0	6,5	12,4	*	*	*	*	*	*	5,9	0,5	6,4	4,8	54,5	100,0
EU27	8,9	2,6	4,2	16,5	0,7	0,6	0,6	0,2	1,3	0,3	17,9	1,8	5,7	5,7	33,1	100,0

Source: Eurostat, Labour Force Survey (LFS), data extracts provided by Eurostat

A4.1 UV ratio per country, 2008Q1-2011Q3

Country	Ratio															Average
	2008				2009				2010				2011			Quarterly
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Austria	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Belgium	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Bulgaria	9	8	8	9	12	13	14	17	21	22	21	23	25	23	22	16
Czech Republic	2	2	2	2	5	7	10	12	13	12	11	11	12	10	9	5
Cyprus	1	1	1	2	2	3	3	5	6	4	5	7	7	7	12	3
Denmark	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Germany	4	3	4	4	5	5	5	4	6	4	3	3	3	3	3	4
Greece	7	12	11	23	9	10	13	19	14	24	30	57	:	:	58	19
Estonia	2	2	3	5	14	23	21	29	30	25	18	20	17	15	10	11
Finland	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
France	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Hungary	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Ireland	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Italy	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Latvia	5	6	11	20	46	90	117	134	144	127	94	84	65	62	54	38
Lithuania	3	3	4	10	26	38	41	62	48	49	36	46	28	27	20	19
Luxembourg	3	3	4	6	6	8	7	9	7	6	4	5	4	3	4	5
Malta	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Netherlands	1	1	1	1	2	2	3	3	4	3	3	3	3	3	3	2
Poland	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Portugal	26	23	30	32	38	42	50	55	51	44	48	50	63	58	56	43
Romania	6	6	6	8	12	16	21	35	28	30	31	36	28	26	26	15
Slovenia	6	5	5	8	10	11	13	17	18	15	15	15	16	13	11	11
Slovakia	10	11	10	11	13	17	21	27	31	31	28	27	26	25	25	19
Spain	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Sweden	5	6	6	8	10	13	15	12	10	8	8	7	6	5	6	8
UK	2	2	3	4	5	5	6	5	5	5	5	5	5	5	6	4
EU27	3	3	4	4	6	6	7	7	8	6	6	6	5	5	6	5

Source: Stock of job vacancies: Eurostat, Job Vacancy Statistics
http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/job_vacancies
Unemployed: Eurostat, Labour Force Survey
http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_unemployment_lfs/introduction

A4.2 Ratio of number of unemployed to number of job-finders by country, 2007Q1 - 2011Q3

Country	Ratio																			Average
	2007				2008				2009				2010				2011			Quarterly
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Austria	1,0	0,8	0,8	0,7	0,8	0,6	0,6	0,7	1,0	0,9	0,9	0,9	1,0	0,8	0,7	0,7	0,9	0,7	0,6	0,8
Belgium	1,9	1,8	1,5	1,3	1,5	1,5	1,6	1,3	2,3	2,0	2,1	1,8	2,6	2,2	2,1	1,6	1,7	1,5	1,7	1,7
Bulgaria	1,9	1,2	1,7	1,7	1,5	1,3	1,1	1,5	2,0	1,7	2,0	2,9	4,3	2,8	2,7	3,7	4,1	2,9	2,7	2,1
Czech Republic	1,9	1,7	1,7	1,4	1,5	1,4	1,4	1,3	2,1	2,2	2,4	2,2	3,0	2,1	2,1	2,0	2,3	2,0	1,9	1,9
Cyprus	1,1	0,5	0,8	0,5	1,1	0,5	0,6	0,5	1,1	1,1	1,0	1,1	1,9	1,2	1,1	0,9	2,1	1,3	1,6	1,0
Denmark	0,5	0,4	0,4	0,3	0,4	0,3	0,4	0,4	0,7	0,8	0,8	0,9	1,3	0,9	0,9	0,9	1,2	0,9	0,9	0,7
Germany	2,2	1,8	1,5	1,4	1,9	1,6	1,3	1,2	2,1	1,9	1,7	1,4	2,0	1,5	1,2	1,1	1,6	1,2	1,1	1,5
Greece	6,4	3,2	3,5	4,6	5,6	3,0	2,9	4,4	5,5	3,4	3,6	5,4	8,2	5,0	5,8	9,2	14,2	8,7	9,1	5,4
Estonia	1,0	0,9	0,7	0,7	1,0	0,8	1,2	1,1	2,4	3,5	3,1	3,6	5,1	3,5	2,3	2,0	2,8	2,1	1,4	1,9
Finland	1,2	0,8	0,6	0,8	1,0	0,7	0,6	0,8	1,4	1,3	0,9	1,4	1,8	1,1	0,7	1,0	1,4	1,0	0,7	1,0
France	1,6	1,3	1,2	1,1	1,3	1,2	1,1	1,2	2,0	1,8	1,6	1,7	2,1	1,7	1,5	1,6	1,9	1,6	1,4	1,5
Hungary	2,7	2,0	2,1	2,0	2,3	1,9	2,0	2,2	3,5	2,6	2,9	3,0	3,7	2,6	2,8	2,9	3,9	2,4	2,5	2,6
Ireland	0,6	0,8	0,6	0,7	0,9	1,3	1,1	1,5	3,2	3,6	3,3	3,4	4,4	3,7	3,1	3,3	4,1	3,6	3,4	2,1
Italy	1,8	1,5	1,4	1,6	1,8	1,7	1,6	1,9	2,8	2,4	2,4	2,6	3,1	2,6	2,3	2,5	2,7	2,4	2,5	2,1
Latvia	1,0	0,8	0,8	0,8	1,2	1,0	1,0	2,1	4,4	4,5	4,1	3,9	4,2	2,7	2,1	2,2	3,0	2,3	2,1	2,1
Lithuania	1,1	0,8	0,8	0,7	1,0	0,9	1,3	2,1	4,6	4,0	3,9	5,2	7,3	4,2	3,5	3,6	5,9	2,6	3,2	2,6
Luxembourg	1,4	1,1	1,0	0,7	2,5	1,4	2,0	2,0	1,9	1,4	1,2	1,2	2,2	1,3	0,9	0,9	1,2	1,6	1,0	1,3
Malta	2,4	1,8	1,4	1,3	1,7	1,4	1,4	2,2	2,8	3,0	2,0	2,2	2,6	2,0	1,7	2,0	1,7	2,0	1,6	1,9
Netherlands	1,0	0,7	0,6	0,6	0,7	0,6	0,5	0,6	0,9	0,9	0,9	1,1	1,2	0,6	1,0	0,9	1,0	0,8	0,8	0,8
Poland	2,6	1,9	1,6	1,5	1,6	1,4	1,3	1,4	2,3	1,9	2,1	2,1	2,8	2,1	1,9	2,3	3,1	2,2	2,3	2,0
Portugal	2,7	2,1	2,3	2,0	2,1	2,1	2,2	2,1	3,1	3,1	3,0	3,0	3,6	3,3	3,2	3,3	3,0	3,0	2,6	2,7
Romania	1,8	2,9	3,7	3,8	3,2	3,5	3,4	3,8	5,5	6,0	7,6	6,5	7,4	6,8	6,6	6,8	5,6	5,2	5,4	4,4
Slovenia	1,1	0,9	0,7	0,9	1,0	0,8	0,6	0,8	1,4	1,7	1,4	1,5	1,9	1,9	1,7	2,0	2,1	1,8	1,7	1,3
Slovakia	3,8	3,5	4,0	3,4	4,4	3,7	2,8	3,1	4,7	5,0	5,1	6,4	6,7	4,5	5,0	5,5	6,6	4,8	6,6	4,6
Spain	1,0	0,9	0,9	1,0	1,3	1,5	1,5	2,1	3,3	3,4	2,9	3,2	4,1	3,7	3,1	3,6	4,2	3,8	3,6	2,4
Sweden	0,9	0,7	0,5	0,6	0,8	0,7	0,6	0,8	1,2	1,1	0,9	1,1	1,4	1,1	0,8	0,9	1,1	0,9	0,7	0,8
UK	1,2	1,0	1,0	0,8	1,0	1,2	1,2	1,2	2,1	2,3	2,1	1,7	2,6	2,2	1,8	1,6	2,3	2,2	2,1	1,6
EU26	1,6	1,3	1,2	1,2	1,5	1,4	1,3	1,4	2,3	2,2	2,0	2,0	2,7	2,1	1,9	1,9	2,5	2,1	1,9	1,8

Source: Eurostat, Labour Force Survey

A4.3 Ratio of registered unemployed to inflow of registered job vacancies (PES)

Country																Average
	2008				2009				2010				2011			Quarterly
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Austria	1,9	1,7	1,8	3,8	3,0	2,6	2,4	3,9	2,6	2,1	1,9	3,5	2,1	1,9	2,0	2,4
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	8,9	6,3	6,1	6,9	9,5	8,6	7,7	8,1	8,9	6,1	5,5	5,8	6,3	5,1	4,9	6,8
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Estonia	2,7	3,5	5,0	11,6	17,3	17,4	20,9	24,3	11,6	6,4	5,5	5,9	6,2	3,4	3,0	7,2
Finland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ireland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	2,9	3,6	4,1	9,2	20,4	22,9	27,3	42,6	42,9	26,9	33,9	15,6	20,2	13,8	12,7	14,5
Lithuania	2,5	2,0	2,0	4,4	7,1	5,5	6,3	11,1	12,0	7,0	6,5	8,4	7,8	4,1	4,9	5,9
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	13,4	13,0	11,2	13,4	19,0	15,3	13,8	18,3	19,5	14,5	14,9	21,6	20,8	17,8	19,7	16,1
Romania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	0,9	1,1	1,7	2,6	2,1	3,4	4,6	4,5	2,5	2,7	3,2	2,7	1,7	1,8	2,4	2,3
UK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EU26	5,5	4,8	5,0	6,2	7,4	7,4	7,1	7,9	7,4	5,6	5,3	5,7	5,3	4,5	4,6	5,8

A5.1 Number of job-finders finding a temporary work agency job, 2007 - 2010, EU27

Current job is a temporary work agency job	2007	2008	2009	2010
Yes	4.334	4.268	3.119	3.572
No	46.716	44.435	37.209	39.920
Total	51.050	48.702	40.328	43.491

Source: Eurostat, Labour Force Survey (LFS), data extracts provided by Eurostat

A5.2 Number of job-finders finding a job through Public Employment Services, 2007 - 2010, EU27

Current job found through Public Employment Services	2007	2008	2009	2010
Yes	3.803	3.777	3.261	3.317
No	47.232	44.926	37.057	40.145
No answer	15	1	9	29
Total	51.050	48.702	40.328	43.491

Source: Eurostat, Labour Force Survey (LFS), data extracts provided by Eurostat

Country-specific data

CONVENTIONS (meaning)

An.m	= table is presented in the Annex and related to the core text in chapter “n”
AC	= table is presented in the Annex, in section Country-specific data
“*”	= limited reliability
“a”	= number is below publication limit or negative
n.e.c.	= not elsewhere classified
“:”	= not available

AC.1Top 25 occupations (ISCO-08 4-digit) of job-finders (LFS) by country, 2011Q3

Table 1 Austria: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Waiters	21,050	2
2	Shop sales assistants	19,420	1
3	General office clerks	15,710	4
4	Cleaners and helpers in offices, hotels and other establishments	15,440	3
5	Cooks	5,610*	5
6	Secretaries (general)	5,200*	11
7	Kitchen helpers	4,970*	6
8	Administrative and executive secretaries	4,830*	7
9	Nursing associate professionals	4,610*	16
10	Manufacturing labourers not elsewhere classified	4,300*	14
11	Building and related electricians	4,030*	27
12	Bricklayers and related workers	a	22
13	Building construction labourers	a	41
14	Freight handlers	a	9
15	Metal working machine tool setters and operators	a	18
16	Heavy truck and lorry drivers	a	29
17	Cashiers and ticket clerks	a	8
18	Social work associate professionals	a	55
19	Commercial sales representatives	a	40
20	Physical and engineering science technicians not elsewhere classified	a	26
21	Stock clerks	a	84
22	Carpenters and joiners	a	15
23	Hairdressers	a	17
24	Gardeners, horticultural and nursery growers	a	52
25	Receptionists (general)	a	25
	Total top-25	149,880	
	Total	285,020	

Table 2 Belgium: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Domestic, hotel and office cleaners and helpers	16,750	2
2	Shop salespersons	12,200	1
3	General office clerks	10,970	18
4	Building frame and related trades workers	7,740	5
5	Heavy truck and bus drivers	7,560	14
6	Material-recording and transport clerks	7,020	4
7	Client information workers	6,200	9
8	Child care workers and teachers' aides	6,000	21
9	Personal care workers in health services	5,870	39
10	Food preparation assistants	5,650	13
11	Physical and engineering science technicians	5,430	20
12	Other clerical support workers	5,400	3
13	Transport and storage labourers	5,120	59
14	Building finishers and related trades workers	4,240*	6
15	Cashiers and ticket clerks	3,970*	52
16	Sales and purchasing agents and brokers	3,770*	85
17	Other elementary workers	3,450*	25
18	Waiters and bartenders	3,450*	8
19	Secondary education teachers	3,150*	11
20	Manufacturing labourers	2,960*	23
21	Business services and administration managers	2,940*	80
22	Numerical clerks	2,900*	36
23	Electrical equipment installers and repairers	2,780*	24
24	Mobile plant operators	2,750*	12
25	Food and related products machine operators	2,630*	45
	Total top-25	140,900	
	Total	221,180	

Source: Eurostat Labour Force Survey

* means: limited reliability, a means: below publication limit; rank 100 means: 100 or farther down.

Table 3 Bulgaria: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Shop salespersons	7,770*	1
2	Agricultural, forestry and fishery labourers	7,060*	8
3	Waiters and bartenders	6,730*	13
4	Mining and construction labourers	6,240*	6
5	Other elementary workers	6,200*	4
6	Market gardeners and crop growers	5,320*	12
7	Protective services workers	a	17
8	Cooks	a	15
9	Other personal services workers	a	59
10	Building frame and related trades workers	a	7
11	Domestic, hotel and office cleaners and helpers	a	2
12	Manufacturing labourers	a	18
13	Heavy truck and bus drivers	a	9
14	Cashiers and ticket clerks	a	11
15	Mobile plant operators	a	41
16	Textile, fur and leather products machine operators	a	24
17	Building finishers and related trades workers	a	44
18	Refuse workers	a	5
19	Garment and related trades workers	a	14
20	Machinery mechanics and repairers	a	28
21	Car, van and motorcycle drivers	a	10
22	Food preparation assistants	a	43
23	Blacksmiths, toolmakers and related trades workers	a	19
24	Food processing and related trades workers	a	23
25	Personal care workers in health services	a	3
	Total top-25	89,120	
	Total	124,810	

Table 4 Cyprus: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Domestic, hotel and office cleaners and helpers	2,740	1
2	Waiters and bartenders	1,660	3
3	Shop salespersons	1,530	2
4	Building frame and related trades workers	950*	4
5	Cooks	730*	47
6	Mining and construction labourers	720*	7
7	General office clerks	610*	15
8	Cashiers and ticket clerks	570*	39
9	Car, van and motorcycle drivers	560*	20
10	Client information workers	530*	16
11	Building finishers and related trades workers	530*	34
12	Sales and purchasing agents and brokers	a	5
13	Protective services workers	a	100
14	Finance professionals	a	18
15	Numerical clerks	a	8
16	Other elementary workers	a	48
17	Tellers, money collectors and related clerks	a	50
18	Secretaries (general)	a	13
19	Financial and mathematical associate professionals	a	14
20	Sports and fitness workers	a	11
21	Engineering professionals (excluding electro-technology)	a	100
22	Secondary education teachers	a	10
23	Travel attendants, conductors and guides	a	100
24	Other clerical support workers	a	28
25	Heavy truck and bus drivers	a	19
	Total top-25	15,436	
	Total	19,940	

Source: Eurostat Labour Force Survey

* means: limited reliability, a means: below publication limit; rank 100 means: 100 or farther down.

Table 5 Czech Republic: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Shop sales assistants	15,200	1
2	Cleaners and helpers in offices, hotels and other establishments	6,530	2
3	Manufacturing labourers not elsewhere classified	6,120	3
4	Heavy truck and lorry drivers	6,080	4
5	Waiters	5,090	5
6	Lifting truck operators	5,020	12
7	Cashiers and ticket clerks	3,940*	44
8	Stock clerks	3,810*	40
9	Bricklayers and related workers	3,650*	66
10	Cooks	3,530*	15
11	Assemblers not elsewhere classified	3,420*	7
12	Security guards	3,250*	10
13	General office clerks	2,880*	8
14	Commercial sales representatives	2,650*	25
15	Sweepers and related labourers	2,470*	13
16	Building construction labourers	2,380*	100
17	Electrical and electronic equipment assemblers	2,310*	9
18	Toolmakers and related workers	2,250*	18
19	Accounting and bookkeeping clerks	2,190*	6
20	Freight handlers	2,170*	42
21	Metal working machine tool setters and operators	2,080*	14
22	Mechanical machinery assemblers	2,080*	11
23	Welders and flame-cutters	1,930*	30
24	Insurance representatives	1,880*	94
25	Health care assistants	1,580*	54
	Total top-25	94,490	
	Total	184,840	

Table 6 Germany: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Shop salespersons	157,570	1
2	Manufacturing labourers	113,140	2
3	Domestic, hotel and office cleaners and helpers	87,250	3
4	General office clerks	86,740	4
5	Material-recording and transport clerks	72,360	9
6	Waiters and bartenders	68,970	7
7	Nursing and midwifery associate professionals	60,290	6
8	Personal care workers in health services	58,030	13
9	Car, van and motorcycle drivers	57,530	8
10	Legal, social and religious associate professionals	57,170	14
11	Transport and storage labourers	52,110	10
12	Machinery mechanics and repairers	47,040	12
13	Blacksmiths, toolmakers and related trades workers	46,380	16
14	Other clerical support workers	43,740	11
15	Building finishers and related trades workers	42,610	20
16	Building and housekeeping supervisors	40,340	15
17	Physical and engineering science technicians	39,680	17
18	Building frame and related trades workers	37,400	27
19	Food preparation assistants	36,000	22
20	Electrical equipment installers and repairers	33,900	21
21	Market gardeners and crop growers	30,100	46
22	Software and applications developers and analysts	29,740	19
23	Other health associate professionals	28,760	25
24	Painters, building structure cleaners and related trades workers	28,500	36
25	Cooks	28,170	18
	Total top-25	1383,520	
	Total	2270,220	

Source: Eurostat Labour Force Survey

* means: limited reliability, a means: below publication limit; rank 100 means: 100 or farther down.

Table 7 Denmark: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Personal care workers in health services	15,620	3
2	Shop salespersons	14,100	1
3	Domestic, hotel and office cleaners and helpers	10,350	8
4	Transport and storage labourers	9,890	4
5	Child care workers and teachers' aides	9,670	2
6	Building frame and related trades workers	8,310	9
7	Food preparation assistants	7,380	10
8	Other elementary workers	6,920*	14
9	Cashiers and ticket clerks	6,790*	7
10	Primary school and early childhood teachers	6,410*	11
11	Sales and purchasing agents and brokers	6,150*	5
12	Other sales workers	5,920*	13
13	Waiters and bartenders	5,340*	19
14	Manufacturing labourers	5,100*	66
15	General office clerks	4,720*	6
16	Heavy truck and bus drivers	4,380*	20
17	Building finishers and related trades workers	4,110*	18
18	Physical and engineering science technicians	4,000*	26
19	Mining and construction labourers	a	35
20	Medical doctors	a	15
21	Painters, building structure cleaners and related trades workers	a	42
22	Engineering professionals (excluding electro-technology)	a	32
23	Software and applications developers and analysts	a	17
24	Blacksmiths, toolmakers and related trades workers	a	33
25	Sports and fitness workers	a	56
	Total top-25	156,570	
	Total	240,560	

Table 8 Estonia: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	House builders	a	8
2	Painters and related workers	a	100
3	Shop sales assistants	a	1
4	Electrical and electronic equipment assemblers	a	30
5	Cleaners and helpers in offices, hotels and other establishments	a	11
6	Waiters	a	100
7	Welders and flame-cutters	a	100
8	Commercial sales representatives	a	2
9	Heavy truck and lorry drivers	a	14
10	Data entry clerks	a	100
11	Sweepers and related labourers	a	9
12	Bricklayers and related workers	a	100
13	Stock clerks	a	37
14	Plumbers and pipe fitters	a	22
15	Mechanical engineers	a	76
16	Security guards	a	23
17	Structural-metal preparers and erectors	a	38
18	Health care assistants	a	7
19	Building construction labourers	a	100
20	Concrete placers, concrete finishers and related workers	a	32
21	Agricultural and industrial machinery mechanics and repairers	a	100
22	Manufacturing labourers not elsewhere classified	a	43
23	Early childhood educators	a	100
24	Insulation workers	a	100
25	Training and staff development professionals	a	100
	Total top-25	33,280	
	Total	55,350	

Source: Eurostat Labour Force Survey

* means: limited reliability, a means: below publication limit; rank 100 means: 100 or farther down.

Table 9 Spain: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Domestic, hotel and office cleaners and helpers	133,750	2
2	Waiters and bartenders	120,490	3
3	Shop salespersons	86,700	5
4	Agricultural, forestry and fishery labourers	78,590	1
5	Building frame and related trades workers	67,040	4
6	Personal care workers in health services	56,400	7
7	Transport and storage labourers	49,770	15
8	Client information workers	47,020	8
9	Cooks	38,270	10
10	Mining and construction labourers	34,370	6
11	Protective services workers	34,200	25
12	Sales and purchasing agents and brokers	25,890	9
13	Building finishers and related trades workers	24,870	11
14	Cashiers and ticket clerks	20,070	21
15	Heavy truck and bus drivers	18,960	20
16	General and keyboard clerks	18,730	12
17	Car, van and motorcycle drivers	17,710	14
18	Sports and fitness workers	17,240	35
19	Mobile plant operators	16,770	32
20	Food processing and related trades workers	16,410	16
21	Manufacturing labourers	16,070	17
22	Food preparation assistants	15,990	19
23	Child care workers and teachers' aides	15,600	13
24	Painters, building structure cleaners and related trades workers	15,400	24
25	Market gardeners and crop growers	14,620	18
	Total top-25	1,000,930	
	Total	1,364,020	

Table 10 Finland: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Health care assistants	12,650	2
2	Shop sales assistants	12,440	3
3	Cleaners and helpers in offices, hotels and other establishments	9,600	1
4	House builders	7,660	18
5	Freight handlers	7,300	8
6	Child care workers	6,700	5
7	Carpenters and joiners	5,580	7
8	Gardeners, horticultural and nursery growers	5,360	89
9	Heavy truck and lorry drivers	4,770	9
10	Building caretakers	4,540	12
11	Nursing associate professionals	4,420	4
12	Cooks	4,050	22
13	Kitchen helpers	3,940*	23
14	Secretaries (general)	3,940*	15
15	Waiters	3,340*	49
16	Food service counter attendants	3,320*	16
17	Home-based personal care workers	3,260*	10
18	Cashiers and ticket clerks	3,130*	19
19	Mail carriers and sorting clerks	3,080*	36
20	Security guards	3,000*	61
21	Teachers' aides	3,000*	31
22	Building construction labourers	2,970*	38
23	Contact centre salespersons	2,970*	21
24	Primary school teachers	2,660*	17
25	Social work associate professionals	2,530*	11
	Total top-25	126,210	
	Total	263,410	

Source: Eurostat Labour Force Survey

* means: limited reliability, a means: below publication limit; rank 100 means: 100 or farther down.

Table 11 France: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Shop sales assistants	104,570	1
2	Cleaners and helpers in offices, hotels and other establishments	82,650	7
3	Building construction labourers	77,270	5
4	Freight handlers	75,540	4
5	Waiters	62,510	10
6	Domestic cleaners and helpers	60,670	2
7	Clerical support workers not elsewhere classified	54,270	6
8	Hand packers	50,610	3
9	Commercial sales representatives	47,830	9
10	Food and related products machine operators	42,120	13
11	Stock clerks	36,740	22
12	Cooks	36,280	21
13	Personal care workers in health services not elsewhere classified	34,790	19
14	Child care workers	34,660	8
15	Heavy truck and lorry drivers	33,720	17
16	Fitness and recreation instructors and program leaders	32,350	30
17	Mixed crop and livestock farm labourers	32,130	26
18	Cashiers and ticket clerks	31,470	15
19	Lifting truck operators	31,020	20
20	Welders and flame-cutters	30,370	12
21	Car, taxi and van drivers	29,320	11
22	Accounting and bookkeeping clerks	27,900	28
23	Physical and engineering science technicians not elsewhere classified	27,350	16
24	Manufacturing labourers not elsewhere classified	27,250	14
25	Secretaries (general)	25,600	23
	Total top-25	1128,990	
	Total	1953,400	

Table 12 Greece: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Waiters and bartenders	11,180	4
2	Domestic, hotel and office cleaners and helpers	10,930	1
3	Shop salespersons	5,490	5
4	Cooks	4,230*	11
5	Building frame and related trades workers	4,120*	3
6	Agricultural, forestry and fishery labourers	3,870*	2
7	Client information workers	3,730*	7
8	General office clerks	3,100*	14
9	Protective services workers	2,630*	15
10	Building finishers and related trades workers	2,630*	6
11	Mining and construction labourers	a	9
12	Food processing and related trades workers	a	31
13	Manufacturing labourers	a	39
14	Refuse workers	a	43
15	Heavy truck and bus drivers	a	19
16	Food preparation assistants	a	26
17	Market gardeners and crop growers	a	16
18	Garment and related trades workers	a	37
19	Machinery mechanics and repairers	a	30
20	Food and related products machine operators	a	56
21	Transport and storage labourers	a	22
22	Car, van and motorcycle drivers	a	28
23	Sales and purchasing agents and brokers	a	55
24	Hairdressers, beauticians and related workers	a	100
25	Painters, building structure cleaners and related trades workers	a	8
	Total top-25	74,330	
	Total	96,220	

Source: Eurostat Labour Force Survey

* means: limited reliability, a means: below publication limit; rank 100 means: 100 or farther down.

Table 13 Hungary: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Sweepers and related labourers	16,030	2
2	Cleaners and helpers in offices, hotels and other establishments	9,240	4
3	Shop sales assistants	8,500	1
4	Garden and horticultural labourers	8,460	72
5	Building construction labourers	5,300	18
6	Bricklayers and related workers	4,420*	12
7	General office clerks	4,070*	9
8	Gardeners, horticultural and nursery growers	3,790*	17
9	Electrical and electronic equipment assemblers	3,790*	6
10	Toolmakers and related workers	3,530*	28
11	Freight handlers	3,440*	7
12	Heavy truck and lorry drivers	3,330*	5
13	Kitchen helpers	2,900*	10
14	Mechanical machinery assemblers	2,670*	11
15	Hand packers	2,650*	59
16	Security guards	a	3
17	Bartenders	a	22
18	Social work associate professionals	a	38
19	Painters and related workers	a	14
20	Waiters	a	8
21	Mixed crop and livestock farm labourers	a	21
22	Cashiers and ticket clerks	a	93
23	Accounting associate professionals	a	31
24	Sewing machine operators	a	46
25	Mail carriers and sorting clerks	a	100
	Total top-25	102,830	
	Total	184,820	

Table 14 Ireland: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	No answer	92,500	1
2	:	:	:
3	:	:	:
4	:	:	:
5	:	:	:
6	:	:	:
7	:	:	:
8	:	:	:
9	:	:	:
10	:	:	:
11	:	:	:
12	:	:	:
13	:	:	:
14	:	:	:
15	:	:	:
16	:	:	:
17	:	:	:
18	:	:	:
19	:	:	:
20	:	:	:
21	:	:	:
22	:	:	:
23	:	:	:
24	:	:	:
25	:	:	:
	Total top-25	:	
	Total	92,500	

Source: Eurostat Labour Force Survey

* means: limited reliability, a means: below publication limit; rank 100 means: 100 or farther down.

Table 15 Italy: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Waiters and bartenders	75,560	4
2	Shop salespersons	58,150	2
3	Agricultural, forestry and fishery labourers	45,670	3
4	Domestic, hotel and office cleaners and helpers	45,490	1
5	Building frame and related trades workers	37,040	6
6	Cooks	28,260	10
7	Personal care workers in health services	18,590	5
8	Protective services workers	17,370	29
9	Other elementary workers	15,870	9
10	Secretaries (general)	15,660	7
11	Physical and engineering science technicians	14,820	18
12	Sheet and structural metal workers, moulders, welders, related workers	14,770	22
13	Client information workers	14,110	8
14	Material-recording and transport clerks	14,000	13
15	Heavy truck and bus drivers	13,620	19
16	Mining and construction labourers	12,780	12
17	Cashiers and ticket clerks	12,590	40
18	General office clerks	12,490	17
19	Food preparation assistants	12,410	45
20	Hairdressers, beauticians and related workers	11,650	28
21	Secondary education teachers	11,070	24
22	Electrical equipment installers and repairers	10,290	14
23	Blacksmiths, toolmakers and related trades workers	10,050	31
24	Transport and storage labourers	9,730	11
25	Building finishers and related trades workers	9,610	30
	Total top-25	541,650	
	Total	772,410	

Table 16 Lithuania: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Shop sales assistants	5,050*	3
2	Civil engineering labourers	a	75
3	Cleaners and helpers in offices, hotels and other establishments	a	7
4	Heavy truck and lorry drivers	a	1
5	House builders	a	15
6	Sweepers and related labourers	a	2
7	Hand packers	a	80
8	Accounting and bookkeeping clerks	a	21
9	Security guards	a	6
10	Mobile farm and forestry plant operators	a	68
11	Cooks	a	34
12	Freight handlers	a	8
13	Car, taxi and van drivers	a	23
14	Information and communications technology installers and servicers	a	88
15	Crop farm labourers	a	100
16	Motor vehicle mechanics and repairers	a	24
17	Insurance representatives	a	100
18	Mixed crop and livestock farm labourers	a	100
19	Manufacturing managers	a	100
20	Welders and flame-cutters	a	20
21	Painters and related workers	a	27
22	Toolmakers and related workers	a	37
23	Carpenters and joiners	a	16
24	Bakers, pastry-cooks and confectionery makers	a	17
25	Mechanical engineering technicians	a	9
	Total top-25	46,370	
	Total	75,200	

Source: Eurostat Labour Force Survey

* means: limited reliability, a means: below publication limit; rank 100 means: 100 or farther down.

Table 17 Luxembourg: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	General office clerks	1,130*	1
2	Management and organisation analysts	a	11
3	Shop sales assistants	a	3
4	Waiters	a	12
5	Administrative and executive secretaries	a	50
6	Financial and investment advisers	a	18
7	Cooks	a	100
8	Motor vehicle mechanics and repairers	a	100
9	Translators, interpreters and other linguists	a	100
10	Cashiers and ticket clerks	a	31
11	Rubber products machine operators	a	100
12	Gardeners, horticultural and nursery growers	a	52
13	Secretaries (general)	a	19
14	Policy administration professionals	a	10
15	Underwater divers	a	100
16	Plasterers	a	34
17	Accountants	a	4
18	Social work and counselling professionals	a	73
19	Stock clerks	a	15
20	Accounting and bookkeeping clerks	a	26
21	Building structure cleaners	a	100
22	Legal secretaries	a	100
23	Advertising and public relations managers	a	100
24	Mail carriers and sorting clerks	a	100
25	Enquiry clerks	a	100
	Total top-25	7,930	
	Total	11,420	

Table 18 Latvia: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Manufacturing labourers	9,150	1
2	Agricultural, forestry and fishery labourers	6,620*	5
3	Shop salespersons	6,550*	2
4	Mining and construction labourers	a	8
5	Financial and mathematical associate professionals	a	58
6	Other elementary workers	a	13
7	Building frame and related trades workers	a	7
8	Mobile plant operators	a	34
9	Refuse workers	a	3
10	Transport and storage labourers	a	4
11	Building finishers and related trades workers	a	100
12	Administration professionals	a	42
13	Wood treaters, cabinet-makers and related trades workers	a	12
14	Heavy truck and bus drivers	a	6
15	Domestic, hotel and office cleaners and helpers	a	11
16	Hairdressers, beauticians and related workers	a	15
17	Sheet and structural metal workers, moulders, welders, related workers	a	24
18	Material-recording and transport clerks	a	32
19	Blacksmiths, toolmakers and related trades workers	a	48
20	Food processing and related trades workers	a	33
21	Electrical equipment installers and repairers	a	64
22	Primary school and early childhood teachers	a	45
23	Skilled agricultural, forestry and fishery workers	a	31
24	Numerical clerks	a	43
25	Travel attendants, conductors and guides	a	55
	Total top-25	59,710	
	Total	77,930	

Source: Eurostat Labour Force Survey

* means: limited reliability, a means: below publication limit; rank 100 means: 100 or farther down.

Table 17 Luxembourg: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	General office clerks	1,130*	1
2	Management and organisation analysts	a	11
3	Shop sales assistants	a	3
4	Waiters	a	12
5	Administrative and executive secretaries	a	50
6	Financial and investment advisers	a	18
7	Cooks	a	100
8	Motor vehicle mechanics and repairers	a	100
9	Translators, interpreters and other linguists	a	100
10	Cashiers and ticket clerks	a	31
11	Rubber products machine operators	a	100
12	Gardeners, horticultural and nursery growers	a	52
13	Secretaries (general)	a	19
14	Policy administration professionals	a	10
15	Underwater divers	a	100
16	Plasterers	a	34
17	Accountants	a	4
18	Social work and counselling professionals	a	73
19	Stock clerks	a	15
20	Accounting and bookkeeping clerks	a	26
21	Building structure cleaners	a	100
22	Legal secretaries	a	100
23	Advertising and public relations managers	a	100
24	Mail carriers and sorting clerks	a	100
25	Enquiry clerks	a	100
	Total top-25	7,930	
	Total	11,420	

Table 18 Latvia: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Manufacturing labourers	9,150	1
2	Agricultural, forestry and fishery labourers	6,620*	5
3	Shop salespersons	6,550*	2
4	Mining and construction labourers	a	8
5	Financial and mathematical associate professionals	a	58
6	Other elementary workers	a	13
7	Building frame and related trades workers	a	7
8	Mobile plant operators	a	34
9	Refuse workers	a	3
10	Transport and storage labourers	a	4
11	Building finishers and related trades workers	a	100
12	Administration professionals	a	42
13	Wood treaters, cabinet-makers and related trades workers	a	12
14	Heavy truck and bus drivers	a	6
15	Domestic, hotel and office cleaners and helpers	a	11
16	Hairdressers, beauticians and related workers	a	15
17	Sheet and structural metal workers, moulders, welders, related workers	a	24
18	Material-recording and transport clerks	a	32
19	Blacksmiths, toolmakers and related trades workers	a	48
20	Food processing and related trades workers	a	33
21	Electrical equipment installers and repairers	a	64
22	Primary school and early childhood teachers	a	45
23	Skilled agricultural, forestry and fishery workers	a	31
24	Numerical clerks	a	43
25	Travel attendants, conductors and guides	a	55
	Total top-25	59,710	
	Total	77,930	

Source: Eurostat Labour Force Survey

* means: limited reliability, a means: below publication limit; rank 100 means: 100 or farther down.

Table 19 Malta: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Waiters	a	2
2	General office clerks	a	5
3	Accounting and bookkeeping clerks	a	100
4	Teaching professionals not elsewhere classified	a	38
5	Shop sales assistants	a	100
6	Bus and tram drivers	a	100
7	Chefs	a	7
8	Health care assistants	a	6
9	Cleaners and helpers in offices, hotels and other establishments	a	35
10	Cashiers and ticket clerks	a	29
11	Armed forces occupations, other ranks	a	16
12	Accountants	a	100
13	Hand packers	a	43
14	Domestic cleaners and helpers	a	13
15	Assemblers not elsewhere classified	a	9
16	Rubber products machine operators	a	100
17	Secondary education teachers	a	100
18	Athletes and sports players	a	100
19	Child care workers	a	56
20	Building construction labourers	a	37
21	Professional services managers not elsewhere classified	a	100
22	Building architects	a	15
23	Elementary workers not elsewhere classified	a	100
24	Gardeners, horticultural and nursery growers	a	100
25	Broadcasting and audio-visual technicians	a	100
	Total top-25	4,870	
	Total	7,340	

Table 20 Netherlands: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Shop sales assistants	39,560	1
2	Waiters and bartenders	33,530	2
3	Shelf fillers	18,750	3
4	Cashiers and ticket clerks	15,600	7
5	Domestic, hotel and office cleaners and helpers	15,270	6
6	Freight handlers	12,960	5
7	General office clerks	9,760*	4
8	Social work associate professionals	9,230*	18
9	Kitchen helpers	9,070*	21
10	Messengers, package deliverers and luggage porters	8,260*	10
11	Hand packers	8,070*	14
12	Personal care workers in health services	6,530*	32
13	Gardeners, horticultural and nursery growers	6,270*	29
14	Home-based personal care workers	6,020*	12
15	Telephone switchboard operators	6,000*	16
16	Nursing associate professionals	5,830*	31
17	Mail carriers and sorting clerks	5,820*	17
18	Material-recording and transport clerks	5,760*	23
19	Cooks	5,720*	22
20	Carpenters and joiners	5,590*	35
21	Client information workers	5,510*	15
22	Heavy truck and lorry drivers	5,400*	11
23	Business services agents not elsewhere classified	4,710*	8
24	Database and network professionals	4,540*	26
25	Child care workers	a	13
	Total top-25	258,160	
	Total	469,070	

Source: Eurostat Labour Force Survey

* means: limited reliability, a means: below publication limit; rank 100 means: 100 or farther down.

Table 21 Poland: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Shop sales assistants	62,690	1
2	Building construction labourers	26,250	4
3	Heavy truck and lorry drivers	22,700	3
4	Bricklayers and related workers	22,170	12
5	Cleaners and helpers in offices, hotels and other establishments	21,360	5
6	General office clerks	16,950*	2
7	Stock clerks	15,570*	8
8	Hand packers	14,780*	13
9	Security guards	13,270*	6
10	Car, taxi and van drivers	12,870*	45
11	Manufacturing labourers not elsewhere classified	12,550*	7
12	Welders and flame-cutters	12,330*	20
13	Garden and horticultural labourers	10,700*	17
14	Waiters	9,790*	11
15	Painters and related workers	9,460*	33
16	House builders	9,370*	14
17	Crop farm labourers	8,370*	88
18	Commercial sales representatives	8,120*	9
19	Cashiers and ticket clerks	7,700*	10
20	Sweepers and related labourers	7,620*	59
21	Plasterers	7,380*	50
22	Cooks	7,290*	36
23	Toolmakers and related workers	7,200*	28
24	Kitchen helpers	6,400*	39
25	Floor layers and tile setters	6,340*	46
	Total top-25	359,230	
	Total	734,490	

Table 22 Portugal: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Domestic, hotel and office cleaners and helpers	24,460	1
2	Waiters and bartenders	12,320	4
3	Shop salespersons	11,090	3
4	Other sales workers	9,900	31
5	Building frame and related trades workers	9,100	2
6	Protective services workers	8,020	8
7	Building finishers and related trades workers	7,940	28
8	Personal care workers in health services	a	26
9	Client information workers	a	5
10	Cashiers and ticket clerks	a	11
11	Food preparation assistants	a	12
12	Market gardeners and crop growers	a	17
13	Mining and construction labourers	a	14
14	Heavy truck and bus drivers	a	13
15	Transport and storage labourers	a	71
16	Other elementary workers	a	7
17	Cooks	a	37
18	General office clerks	a	9
19	Garment and related trades workers	a	21
20	Architects, planners, surveyors and designers	a	38
21	Other clerical support workers	a	91
22	Agricultural, forestry and fishery labourers	a	23
23	Primary school and early childhood teachers	a	16
24	Mobile plant operators	a	24
25	Sheet and structural metal workers, moulders, welders, related workers	a	22
	Total top-25	168,880	
	Total	260,600	

Source: Eurostat Labour Force Survey

* means: limited reliability, a means: below publication limit; rank 100 means: 100 or farther down.

Table 23 Romania: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Building construction labourers	a	3
2	Cooks	a	46
3	Shop keepers	a	4
4	Food service counter attendants	a	95
5	Waiters	a	44
6	Field crop and vegetable growers	a	6
7	Cleaners and helpers in offices, hotels and other establishments	a	5
8	Elementary workers not elsewhere classified	a	31
9	Bricklayers and related workers	a	9
10	Bakers, pastry-cooks and confectionery makers	a	28
11	Freight handlers	a	8
12	Crop farm labourers	a	100
13	Companions and valets	a	100
14	Mechanical engineers	a	18
15	General office clerks	a	48
16	Bartenders	a	35
17	Mixed crop and animal producers	a	97
18	Economists	a	10
19	Civil engineering labourers	a	100
20	Shop sales assistants	a	34
21	Security guards	a	7
22	Heavy truck and lorry drivers	a	38
23	Garden and horticultural labourers	a	66
24	Hotel receptionists	a	60
25	Protective services workers not elsewhere classified	a	22
	Total top-25	73,190	
	Total	132,340	

Table 24 Sweden: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Home-based personal care workers	55,290	1
2	Shop sales assistants	35,300	2
3	Health care assistants	23,200	3
4	Cleaners and helpers in offices, hotels and other establishments	15,720	4
5	Kitchen helpers	14,810	6
6	Waiters	11,180	11
7	Heavy truck and lorry drivers	9,650	8
8	Child care workers	8,970	5
9	Commercial sales representatives	8,780	9
10	House builders	7,830	18
11	Cashiers and ticket clerks	7,780	10
12	Hand packers	7,750	21
13	Building caretakers	7,500	27
14	Gardeners, horticultural and nursery growers	7,450	100
15	Early childhood educators	6,530	7
16	Cooks	6,470	14
17	Nursing professionals	6,410	15
18	Lifting truck operators	6,270	16
19	Freight handlers	5,740	29
20	Primary school teachers	4,960*	12
21	Car, taxi and van drivers	4,320*	17
22	Receptionists (general)	4,220*	28
23	Systems analysts	4,150*	31
24	Metal working machine tool setters and operators	4,110*	44
25	Administrative and executive secretaries	3,920*	13
	Total top-25	278,310	
	Total	516,360	

Source: Eurostat Labour Force Survey

* means: limited reliability, a means: below publication limit; rank 100 means: 100 or farther down.

Table 25 Slovenia: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Waiters	4,330*	2
2	Shop sales assistants	2,440*	1
3	Secretaries (general)	2,340*	3
4	Manufacturing labourers not elsewhere classified	1,700*	12
5	Cooks	1,530*	38
6	Kitchen helpers	1,480*	19
7	Electrical and electronic equipment assemblers	1,140*	18
8	Early childhood educators	1,030*	28
9	Nursing associate professionals	a	13
10	Health care assistants	a	70
11	Heavy truck and lorry drivers	a	11
12	Cleaners and helpers in offices, hotels and other establishments	a	5
13	Metal working machine tool setters and operators	a	7
14	Cashiers and ticket clerks	a	46
15	Commercial sales representatives	a	8
16	Stock clerks	a	21
17	Freight handlers	a	24
18	Applications programmers	a	49
19	Survey and market research interviewers	a	54
20	Shop supervisors	a	100
21	Hand packers	a	100
22	Draughtspersons	a	100
23	Butchers, fishmongers and related food preparers	a	100
24	Bricklayers and related workers	a	47
25	Policy administration professionals	a	100
	Total top-25	26,170	
	Total	46,800	

Table 26 Slovakia: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	Sweepers and related labourers	4,370*	1
2	Shop sales assistants	3,560*	2
3	Waiters	a	4
4	Building construction labourers	a	9
5	Heavy truck and lorry drivers	a	7
6	Primary school teachers	a	40
7	Electrical and electronic equipment assemblers	a	11
8	Freight handlers	a	53
9	Economists	a	100
10	Stock clerks	a	13
11	Commercial sales representatives	a	16
12	Bricklayers and related workers	a	26
13	Motor vehicle mechanics and repairers	a	100
14	Business services agents not elsewhere classified	a	69
15	Manufacturing labourers not elsewhere classified	a	12
16	Food and related products machine operators	a	100
17	Crane, hoist and related plant operators	a	38
18	Process control technicians not elsewhere classified	a	81
19	Cleaners and helpers in offices, hotels and other establishments	a	5
20	Car, taxi and van drivers	a	17
21	Civil engineering labourers	a	75
22	Carpenters and joiners	a	27
23	Cabinet-makers and related workers	a	100
24	Librarians and related information professionals	a	100
25	Administrative and executive secretaries	a	6
	Total top-25	28,970	
	Total	54,290	

Source: Eurostat Labour Force Survey

* means: limited reliability, a means: below publication limit; rank 100 means: 100 or farther down.

Table 27 United Kingdom: Top 25 occupations with most job-finders in 2011Q3, with ranking in 2011Q1

		2011Q3	2011Q1
Ranking	Occupation (ISCO-08 4-digit)	Number of job-finders	Ranking
1	No answer	1,271,450	1
2	:	:	:
3	:	:	:
4	:	:	:
5	:	:	:
6	:	:	:
7	:	:	:
8	:	:	:
9	:	:	:
10	:	:	:
11	:	:	:
12	:	:	:
13	:	:	:
14	:	:	:
15	:	:	:
16	:	:	:
17	:	:	:
18	:	:	:
19	:	:	:
20	:	:	:
21	:	:	:
22	:	:	:
23	:	:	:
24	:	:	:
25	:	:	:
	Total top-25	:	
	Total	1,271,450	

Source: Eurostat Labour Force Survey

* means: limited reliability, a means: below publication limit; rank 100 means: 100 or farther down.

AC.2 Top 3 growth occupations (ISCO-88 4-digit) per major occupational group, job-finders (LFS), 2007-2010

Table 1 Austria: 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Production and operations managers in construction	a	100	a	a	a	a
	Sales and marketing managers	a	100	a	a	a	a
	Managers of small enterprises not elsewhere classified	a	100	94*	91*	112*	7,200*
Professionals	College, university, higher education teaching professionals	a	100	a	a	276*	4,600*
	Other teaching professionals not elsewhere classified	a	100	130*	220*	184*	6,400*
	Business professionals not elsewhere classified	a	100	a	165*	174*	5,100*
Technicians and associate professionals	Finance and sales associate professionals n.e.c.	10,500	100	118	88	141	36,500
	Computer assistants	a	100	166	130*	167	8,400
	Legal and related business associate professionals	a	100	a	a	a	a
Clerks	Secretaries	a	100	87*	83*	121*	7,800*
	Library and filing clerks	a	100	a	a	a	a
	Mail carriers and sorting clerks	a	100	a	a	a	a
Service and sales workers	Institution-based personal care workers	6,200*	100	151	166	141	21,300
	Child-care workers	5,400*	100	103*	184	181	12,200
	Waiters, waitresses and bartenders	a	100	105	99	107	56,300
Skilled Agricultural, fishery workers	Gardeners, horticultural and nursery growers	4,800*	100	115*	133	175	11,300
	Crop and animal producers	a	100	a	a	a	a
	Dairy and livestock producers	a	100	a	a	a	a
Craft, related trades workers	Painters and related workers	a	100	109	90*	136	11,800
	Cabinetmakers and related workers	a	100	115	98	136	11,300
	Agricultural- or industrial-machinery mechanics, fitters	a	100	103	84	114	22,100
Plant, machine Operators, assemblers	Lifting-truck operators	a	100	167*	a	177*	4,900*
	Assemblers	a	100	a	a	a	a
	Electrical-equipment assemblers	a	100	a	a	a	a
Elementary occupations	Helpers, cleaners in offices, hotels, other establishments	12,600	100	124	128	124	65,800
	Building caretakers	a	100	130*	145*	169*	7,100*
	Doorkeepers, watchpersons and related workers	a	100	a	271*	a	a
	Total top 9x3	**84,600**	**100**	**119**	**117**	**135**	**324,200**
	Total	**54,600**	**100**	**103**	**93**	**106**	**982,800**

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, “a” means: number is below publication limit or negative.

Table 2 Belgium: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Other specialist managers	3,300*	100	87	74	114	26,200
	Managers of small enterprises	a	100	a	213*	182*	3,500*
	Senior officials of special-interest organisations	a	100	a	a	a	a
Professionals	Nursing and midwifery professionals	6,600	100	118	136	143	22,100
	Other teaching professionals	2,500*	100	a	575*	577*	3,100*
	Legal professionals	a	100	128*	a	172*	4,400*
Technicians and associate professionals	Nursing and midwifery associate professionals	2,800*	100	a	161*	262*	4,500*
	Other teaching associate professionals	a	100	a	a	a	a
	Computer associate professionals	a	100	a	a	a	a
Clerks	Cashiers, tellers and related clerks	a	100	107	97	119	8,600
	Other office clerks	a	100	123	91	101	67,800
	Customer services clerks	a	100	92	97	80	4,600
Service and sales workers	Personal care and related workers	6,100	100	112	112	126	29,400
	Shop, stall and market salespersons and demonstrators	5,900	100	104	102	109	71,700
	Housekeeping and restaurant services workers	3,400*	100	130	113	109	41,900
Skilled Agricultural, fishery workers	Forestry and related workers	a	100	a	a	a	a
	Animal producers and related workers	a	100	a	a	a	a
	Fishery workers, hunters and trappers	a	100	a	a	a	a
Craft, related trades workers	Painters, building structure cleaners, related workers	3,500*	100	430	a	330	5,000
	Metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers	a	100	109	84	105	13,300
	Craft printing and related trades workers	a	100	a	a	a	a
Plant, machine Operators, assemblers	Assemblers	3,600*	100	87	50	114	29,600
	Metal- and mineral-products machine operators	a	100	333*	a	294*	3,600*
	Other machine operators not elsewhere classified	a	100	95	77	118	13,300
Elementary occupations	Street vendors and related workers	a	100	a	a	a	a
	Garbage collectors and related labourers	a	100	101*	a	a	a
	Messengers, porters, doorkeepers and related workers	a	100	93	a	77	5,100
	Total top 9x3	**49,200**	**100**	**113**	**96**	**115**	**368,200**
	Total	**-107,600**	**100**	**102**	**83**	**88**	**783,370**

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, “a” means: number is below publication limit or negative.

Table 3 Bulgaria: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Managers of small enterprises	a	100	a	a	a	a
	Directors and chief executives	a	100	a	a	a	a
	Legislators and senior government officials	a	100	a	a	a	a
Professionals	Health professionals (except nursing)	a	100	a	a	a	a
	Public service administrative professionals	a	100	a	a	a	a
	Mathematicians, statisticians and related professionals	a	100	a	a	a	a
Technicians and associate professionals	Physical and engineering science technicians	a	100	187*	117*	133*	5,900*
	Life science technicians, related associate professional	a	100	a	a	a	a
	Pre-primary education teaching associate professionals	a	100	a	a	a	a
Clerks	Secretaries and keyboard-operating clerks	a	100	139*	a	107*	6,200*
	Numerical clerks	a	100	166*	a	a	a
	Other office clerks	a	100	112*	a	105*	5,200*
Service and sales workers	Other personal services workers	a	100	92*	130	136	16,000
	Fashion and other models	a	100	a	a	a	a
	Travel attendants and related workers	a	100	a	a	a	a
Skilled Agricultural, fishery workers	Field crop and vegetable growers	a	100	104	106	108	14,800
	Forestry and related workers	a	100	a	a	a	a
	Fishery workers, hunters and trappers	a	100	a	a	a	a
Craft, related trades workers	Other craft and related trades workers	a	100	a	a	a	a
	Painters, building structure cleaners and related workers	a	100	a	a	a	a
	Craft printing and related trades workers	a	100	a	a	a	a
Plant, machine Operators, assemblers	Industrial robot operators	a	100	a	a	a	a
	Metal-processing plant operators	a	100	a	a	a	a
	Chemical-products machine operators	a	100	a	a	a	a
Elementary occupations	Shoe cleaning and other street services elementary occupations	a	100	a	a	a	a
	Transport labourers and freight handlers	a	100	86*	81*	94*	7,400*
	Building caretakers, window and related cleaners	a	100	a	a	a	a
	Total top 9x3	**10,200**	**100**	**112**	**104**	**115**	**78,700**
	Total	**-183,400**	**100**	**100**	**74**	**70**	**425,360**

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, “a” means: number is below publication limit or negative.

Table 4 Cyprus: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Production and operations managers	a	100	a	350*	a	a
	Other specialist managers	a	100	a	a	120*	500*
	Directors and chief executives	a	100	a	a	a	a
Professionals	Special education teaching professionals	a	100	a	a	a	a
	Architects, engineers and related professionals	a	100	123*	112*	121*	1,200*
	Legal professionals	a	100	a	a	127*	900*
Technicians and associate professionals	Customs,tax,related government associate professionals	a	100	a	a	a	a
	Health associate professionals (except nursing)	a	100	688*	a	a	a
	Safety and quality inspectors	a	100	a	a	a	a
Clerks	Cashiers, tellers and related clerks	1,000*	100	143	81*	156	2,700
	Customer services clerks	a	100	83	99	119	2,200
	Secretaries and keyboard-operating clerks	a	100	188*	a	203*	700*
Service and sales workers	Housekeeping and restaurant services workers	2,200	100	166	130	144	7,200
	Personal care and related workers	600*	100	100	66*	136	2,100
	Fashion and other models	a	100	a	a	a	a
Skilled Agricultural, fishery workers	Fishery workers, hunters and trappers	a	100	a	a	a	a
	Field crop and vegetable growers	a	100	a	a	a	a
	:	:	:	:	:	:	:
Craft, related trades workers	Painters, building structure cleaners and related workers	a	100	a	a	165*	700*
	Textile, garment and related trades workers	a	100	a	a	a	a
	Electrical, electronic equipment mechanics and fitters	a	100	a	147*	a	a
Plant, machine Operators, assemblers	Motor vehicle drivers	a	100	96	115	114	2,700
	Textile-, fur- and leather-products machine operators	a	100	a	a	a	a
	Food and related products machine operators	a	100	a	a	a	a
Elementary occupations	Domestic and related helpers, cleaners and launderers	2,600	100	105	124	130	11,400
	Messengers, porters, doorkeepers and related workers	a	100	86*	137	128	2,000
	Mining and construction labourers	a	100	115	94	112	3,500
	Total top 9x3	**6,400**	**100**	**116**	**115**	**133**	**81,000**
	Total	**-9,200**	**100**	**97**	**87**	**90**	**81,760**

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
“:” means: no data

Table 5 Czech Republic: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Computing services managers	a	100	a	a	a	a
	Production and operations managers not elsewhere classified	a	100	a	a	293*	900*
	Managers of small enterprises not elsewhere classified	a	100	446*	212*	192*	1,000*
Professionals	Business professionals not elsewhere classified	2,400*	100	162*	118*	291*	3,700*
	Secondary education teaching professionals	1,000*	100	100*	90*	127	4,700
	Social work professionals	900*	100	605*	386*	486*	1,100*
Technicians and associate professionals	Mechanical engineering technicians	2,600*	100	102*	83*	184	5,800
	Technical and commercial sales representatives	1,700*	100	92	104	119	10,400
	Trade brokers	1,600*	100	143*	110*	154	4,500
Clerks	Tellers and other counter clerks	3,100*	100	120*	152*	343*	4,300*
	Telephone switchboard operators	2,800*	100	126*	135*	272*	4,400*
	Secretaries	1,600*	100	99	91*	135	6,300
Service and sales workers	Shop, stall and market salespersons and demonstrators	5,100	100	116	98	111	51,600
	Protective services workers not elsewhere classified	4,200*	100	167	251	253	7,000
	Hairdressers, barbers, beauticians and related workers	1,900*	100	a	400*	406*	2,500*
Skilled Agricultural, fishery workers	Inland and coastal waters fishery workers	a	100	a	a	a	a
	Hunters and trappers	a	100	a	a	a	a
	Gardeners, horticultural and nursery growers	a	100	176*	62*	106*	2,100*
Craft, related trades workers	Bricklayers and stonemasons	4,900	100	80	144	145	15,900
	Welders and flame cutters	2,800*	100	106*	66*	167	7,000
	Machine-tool setters and setter-operators	2,400*	100	105*	57*	187	5,200
Plant, machine Operators, assemblers	Industrial robot operators	6,500	100	107	83	190	13,700
	Motorised farm and forestry plant operators	2,700*	100	122*	117*	280*	4,100*
	Electronic-equipment assemblers	2,100*	100	139*	115*	172	5,100
Elementary occupations	Sweepers and related labourers	5,400	100	92	137	183	12,000
	Doorkeepers, watchpersons and related workers	2,900*	100	129	175	157	8,000
	Garbage collectors	1,300*	100	286*	147*	212*	2,500*
	Total top 9x3	**62,000**	**100**	**116**	**112**	**151**	**184,600**
	Total	**11,700**	**100**	**99**	**95**	**102**	**681,090**

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.

Table 6 Germany: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Directors and chief executives	a	100	113	96	119	29,400
	Corporate managers	a	100	119	91	111	37,800
	Managers of small enterprises	a	100	a	a	a	a
Professionals	Writers and creative or performing artists	a	100	148	146	152	40,900
	Public service administrative professionals	a	100	167	168	196	27,600
	Secondary education teaching professionals	a	100	114	98	110	95,200
Technicians and associate professionals	Social work associate professionals	35,400	100	104	108	124	182,600
	Pre-primary education teaching associate professionals	23,100	100	118	121	126	112,600
	Business services agents and trade brokers	a	100	94	95	126	72,600
Clerks	Library, mail and related clerks	a	100	103	109	114	55,000
	Material-recording and transport clerks	a	100	100	84	102	179,100
	Cashiers, tellers and related clerks	a	100	81	78	90	86,300
Service and sales workers	Housekeeping and restaurant services workers	22,800	100	102	101	105	527,200
	Personal care and related workers	a	100	103	102	105	313,100
	Shop, stall and market salespersons and demonstrators	a	100	100	94	101	499,800
Skilled Agricultural, fishery workers	Animal producers and related workers	a	100	125	a	116	20,500
	Market gardeners and crop growers	a	100	a	a	a	a
	Fishery workers, hunters and trappers	a	100	a	a	a	a
Craft, related trades workers	Electrical, electronic equipment mechanics and fitters	a	100	105	100	125	99,800
	Precision workers in metal and related materials	a	100	97	86	107	29,200
	Blacksmiths, tool-makers and related trades workers	a	100	100	49	102	72,600
Plant, machine Operators, assemblers	Rubber- and plastic-products machine operators	a	100	a	a	a	a
	Chemical-processing-plant operators	a	100	a	a	a	a
	Glass, ceramics and related plant operators	a	100	a	a	a	a
Elementary occupations	Manufacturing labourers	a	100	90	67	103	352,900
	Agricultural, fishery and related labourers	a	100	122	113	112	83,200
	Garbage collectors and related labourers	a	100	a	a	a	a
	Total top 9x3	**215,800**	**100**	**102**	**94**	**108**	**2,992,500**
	Total	**-119,300**	**100**	**99**	**88**	**99**	**8,432,010**

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.

Table 7 Denmark: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISC088, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Legislators and senior officials	a	100	a	a	a	a
	Senior officials of special-interest organisations	a	100	a	a	a	a
	Managers of small enterprises	a	100	a	a	a	a
Professionals	Social science and related professionals	a	100	164*	201*	152*	5,000*
	Secondary education teaching professionals	a	100	126*	195	129*	6,900*
	Health professionals (except nursing)	a	100	78	111	108	18,200
Technicians and associate professionals	Other teaching associate professionals	9,800	100	248	160	247	16,500
	Special education teaching associate professionals	a	100	144*	153*	136*	3,600*
	Ship and aircraft controllers and technicians	a	100	a	a	a	a
Clerks	Other office clerks	a	100	134	96	112	10,800
	Cashiers, tellers and related clerks	a	100	a	a	a	a
	Customer services clerks	a	100	97	99	84	10,200
Service and sales workers	Fashion and other models	a	100	a	a	a	a
	Service workers and shop and market sales workers	a	100	a	a	a	a
	Other personal services workers	a	100	101*	104*	102*	3,700*
Skilled Agricultural, fishery workers	Fishery workers, hunters and trappers	a	100	a	a	a	a
	Forestry and related workers	a	100	a	a	a	a
	Crop and animal producers	a	100	84	106	90	7,900
Craft, related trades workers	Painters, building structure cleaners and related workers	a	100	99*	137	115*	6,400*
	Building frame and related trades workers	a	100	79	96	103	26,200
	Metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers	a	100	a	a	a	a
Plant, machine Operators, assemblers	Printing-, binding-, paper-products machine operators	a	100	a	a	a	a
	Locomotive engine drivers and related workers	a	100	a	a	a	a
	Food and related products machine operators	a	100	a	105*	103*	5,000*
Elementary occupations	Elementary occupations	a	100	a	a	a	a
	Garbage collectors and related labourers	a	100	a	a	a	a
	Shoe cleaning and other street services elementary occupations	a	100	a	a	a	a
	Total top 9x3	18,400	100	103	113	116	136,600
	Total	-263,300	100	94	79	77	878,920

Source: Eurostat Labour Force Survey
Occupation: ISC088, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.

Table 8 Estonia: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Production and operations managers in construction	a	100	a	a	a	a
	Production, operations managers in restaurants, hotels	a	100	a	a	a	a
	Managers of small enterprises in transport, storage and communications	a	100	a	a	a	a
Professionals	College, university and higher education teaching professionals	a	100	a	a	a	a
	Architects, engineers and related professionals n.e.c.	a	100	a	a	a	a
	Secondary education teaching professionals	a	100	a	a	a	a
Technicians and associate professionals	Photographers and image and sound recording equipment operators	a	100	a	a	a	a
	Building and fire inspectors	a	100	a	a	a	a
	Buyers	a	100	a	a	a	a
Clerks	Receptionists and information clerks	a	100	a	a	a	a
	Data entry operators	a	100	a	a	a	a
	Cashiers and ticket clerks	a	100	a	a	a	a
Service and sales workers	Cooks	a	100	a	a	300*	5,900*
	Travel attendants and travel stewards	a	100	a	a	a	a
	Protective services workers not elsewhere classified	a	100	a	a	a	a
Skilled Agricultural, fishery workers	Animal producers and related workers n.e.c.	a	100	a	a	a	a
	Forestry workers and loggers	a	100	a	a	a	a
	Inland and coastal waters fishery workers	a	100	a	a	a	a
Craft, related trades workers	Agricultural- or industrial-machinery mechanics, fitters	a	100	a	a	a	a
	Electrical mechanics fitters and services	a	100	a	a	a	a
	Plasterers	a	100	a	a	a	a
Plant, machine Operators, assemblers	Heavy truck and lorry drivers	a	100	a	185*	a	a
	Other machine operators not elsewhere classified	a	100	a	a	a	a
	Locomotive engine drivers	a	100	a	a	a	a
Elementary occupations	Building construction labourers	a	100	a	a	a	a
	Forestry labourers	a	100	a	a	a	a
	Sweepers and related labourers	a	100	a	a	a	a
	Total top 9x3	35,600	100	102	141	298	53,500
	Total	3,500	100	98	80	102	156,780

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.

Table 9 Spain: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Senior officials of special-interest organisations	a	100	a	a	a	a
	Managers of small enterprises	a	100	77	67	71	5,400
	Directors and chief executives	a	100	50*	73*	59*	3,900*
Professionals	Health professionals (except nursing)	3,100*	100	132	115	112	28,200
	College, university and higher education teaching professionals	a	100	94	82*	117	7,100
	Religious professionals	a	100	a	a	a	a
Technicians and associate professionals	Teaching associate professionals	4,900*	100	148	129	151	14,500
	Social work associate professionals	4,300*	100	116	107	110	48,800
	Other teaching associate professionals	a	100	227*	158*	181*	3,000*
Clerks	Library, mail and related clerks	a	100	91	92	104	34,600
	Material-recording and transport clerks	a	100	67	53	53	23,500
	Numerical clerks	a	100	92	43	46	17,600
Service and sales workers	Personal care and related workers	45,600	100	118	122	119	288,600
	Fashion and other models	a	100	a	a	a	a
	Protective services workers	a	100	120	101	91	69,800
Skilled Agricultural, fishery workers	Crop and animal producers	4,100*	100	a	a	302	6,100
	Forestry and related workers	a	100	118	74	68*	5,000*
	Animal producers and related workers	a	100	86	86	64	5,200
Craft, related trades workers	Miners, shot-firers, stone cutters and carvers	a	100	89*	a	91*	4,800*
	Handicraft workers in wood, textile, leather and related materials	a	100	a	a	a	a
	Potters, glass-makers and related trades workers	a	100	91*	a	a	a
Plant, machine Operators, assemblers	Power-production and related plant operators	a	100	265*	a	155*	2,700*
	Ships deck crews and related workers	a	100	81*	73*	107*	4,300*
	Chemical-products machine operators	a	100	65	35*	99	9,100
Elementary occupations	Garbage collectors and related labourers	4,400*	100	96	126	110	49,300
	Agricultural, fishery and related labourers	3,400*	100	96	100	101	444,800
	Street vendors and related workers	a	100	93	66	69	11,200
	Total top 9x3	**8,600**	**100**	**103**	**101**	**101**	**1,092,000**
	Total	**-2,382,300**	**100**	**87**	**70**	**68**	**5,130,610**

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.

Table 10 Finland: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Senior officials of humanitarian and other special-interest organisations	a	100	a	a	a	a
	Research and development managers	a	100	a	a	a	a
	Directors and chief executives	a	100	a	a	138*	2,300*
Professionals	Secondary education teaching professionals	7,100	100	138	128	149	21,500
	Special education teaching professionals	2,500*	100	338*	a	436*	3,200*
	Primary education teaching professionals	a	100	121	140	139	6,800
Technicians and associate professionals	Athletes, sports persons, related associate professionals	a	100	111	101	132	8,000
	Business services agents and trade brokers n.e.c.	a	100	139*	96*	169*	3,600*
	Medical equipment operators	a	100	a	a	a	a
Clerks	Tellers and other counter clerks	2,700*	100	146	a	199	5,500
	Cashiers and ticket clerks	a	100	a	a	330*	2,100*
	Word-processor and related operators	a	100	a	a	a	a
Service and sales workers	Personal care and related workers n.e.c.	2,200*	100	a	207*	280*	3,400*
	Home-based personal care workers	a	100	110	115	108	16,100
	Child-care workers	a	100	90	79	104	31,300
Skilled Agricultural, fishery workers	Dairy and livestock producers	a	100	106	109	127	7,600
	Gardeners, horticultural and nursery growers	a	100	94	102	109	17,100
	Field crop and vegetable growers	a	100	a	a	a	a
Craft, related trades workers	Cabinetmakers and related workers	2,000*	100	150*	162*	234*	3,600*
	Roofers	a	100	a	a	a	a
	Building frame and related trades workers n.e.c.	a	100	a	a	a	a
Plant, machine Operators, assemblers	Motorised farm and forestry plant operators	a	100	169*	139*	182*	3,500*
	Ore and metal furnace operators	a	100	a	a	a	a
	Electrical-equipment assemblers	a	100	a	a	132*	2,400*
Elementary occupations	Building caretakers	a	100	98	92	105	12,600
	Farm-hands and labourers	a	100	a	a	a	a
	Street (food) vendors	a	100	100*	121*	114*	2,300*
	Total top 9x3	**39,600**	**100**	**111**	**106**	**131**	**166,000**
	Total	**-68,600**	**100**	**99**	**80**	**92**	**836,720**

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
n.e.c. means: not elsewhere classified

Table 11 France: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Managers of small enterprises	a	100	85*	90*	123*	12,600*
	Production and operations managers	a	100	95	68	99	94,200
	Legislators and senior government officials	a	100	a	a	a	a
Professionals	Computing professionals	9,600*	100	112	93	122	53,700
	Public service administrative professionals	7,200*	100	119	103	130	31,200
	Health professionals (except nursing)	a	100	140	117	118	38,200
Technicians and associate professionals	Other teaching associate professionals	23,100	100	119	115	136	86,800
	Administrative associate professionals	22,100	100	108	99	119	138,000
	Physical and engineering science technicians	21,100	100	114	86	112	201,100
Clerks	Library, mail and related clerks	a	100	133	124	126	22,900
	Customer services clerks	a	100	92	92	103	42,700
	Numerical clerks	a	100	a	a	a	a
Service and sales workers	Travel attendants and related workers	a	100	183*	150*	131*	10,400*
	Protective services workers	a	100	159*	a	124*	9,200*
	Personal care and related workers	a	100	104	91	100	350,400
Skilled Agricultural, fishery workers	Field crop and vegetable growers	7,600*	100	84	105	105	159,200
	Animal producers and related workers	a	100	117*	120*	132*	18,300*
	Fishery workers, hunters and trappers	a	100	214*	a	a	a
Craft, related trades workers	Electrical, electronic equipment mechanics and fitters	13,200*	100	157	98	120	80,600
	Craft and related trades workers	10,900*	100	87	117	128	50,000
	Metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers	a	100	122	95	108	61,900
Plant, machine Operators, assemblers	Food and related products machine operators	38,500	100	107	118	135	148,900
	Chemical-processing-plant operators	13,500*	100	103	61	117	92,800
	Metal-processing plant operators	a	100	129*	79*	132*	19,900*
Elementary occupations	Messengers, porters, doorkeepers and related workers	a	100	117	80	108	63,400
	Manufacturing labourers	a	100	99	71	103	150,100
	Sales and services elementary occupations	a	100	71*	75*	92*	12,700*
	Total top 9x3	195,700	100	108	92	111	1,954,600
	Total	-640,100	100	98	85	91	6,795,730

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
n.e.c. means: not elsewhere classified

Table 12 Greece: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Managers of small enterprises	a	100	a	a	a	a
	Directors and chief executives	a	100	a	a	a	a
	Legislators and senior government officials	a	100	a	a	a	a
Professionals	Primary, pre-primary education teaching professionals	a	100	66*	130	116	5,400
	Architects, engineers and related professionals	a	100	a	170*	a	a
	Mathematicians, statisticians and related professionals	a	100	a	a	a	a
Technicians and associate professionals	Special education teaching associate professionals	a	100	a	a	612*	2,600*
	Artistic, entertainment, sports associate professionals	a	100	157	116*	159	5,500
	Social work associate professionals	a	100	a	a	a	a
Clerks	Library, mail and related clerks	a	100	a	136*	112*	3,000*
	Material-recording and transport clerks	a	100	145	117*	103*	3,900*
	Numerical clerks	a	100	84*	96*	59*	2,600*
Service and sales workers	Housekeeping and restaurant services workers	a	100	115	115	105	51,400
	Protective services workers	a	100	144	161	144	7,400
	Personal care and related workers	a	100	74*	81*	108	6,100
Skilled Agricultural, fishery workers	Field crop and vegetable growers	3,400*	100	a	120*	195	6,900
	Crop and animal producers	a	100	a	a	a	a
	Animal producers and related workers	a	100	a	a	a	a
Craft, related trades workers	Building frame and related trades workers	a	100	109	128	112	22,700
	Painters, building structure cleaners and related workers	a	100	110	90	121	6,900
	Craft printing and related trades workers	a	100	a	a	a	a
Plant, machine Operators, assemblers	Chemical-products machine operators	a	100	a	a	a	a
	Other machine operators not elsewhere classified	a	100	a	a	a	a
	Power-production and related plant operators	a	100	a	a	a	a
Elementary occupations	Agricultural, fishery and related labourers	11,700	100	181	275	280	18,200
	Domestic and related helpers, cleaners and launderers	7,200	100	125	131	123	38,100
	Mining and construction labourers	5,100	100	105	167	187	11,000
	Total top 9x3	**42,300**	**100**	**116**	**130**	**127**	**199,300**
	Total	**-17,500**	**100**	**103**	**111**	**96**	**376,280**

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
n.e.c. means: not elsewhere classified

Table 13 Hungary: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Managers of small enterprises in wholesale, retail trade	a	100	a	a	a	a
	Other specialist managers not elsewhere classified	a	100	a	a	a	a
	Managers of small enterprises in manufacturing	a	100	a	a	a	a
Professionals	Business professionals not elsewhere classified	6,700	100	141	109*	259	10,900
	Librarians and related information professionals	a	100	a	a	a	a
	Computer systems designers, analysts, programmers	a	100	a	a	181*	3,000*
Technicians and associate professionals	Safety, health and quality inspectors	a	100	105*	84*	142	5,800
	Nursing associate professionals	a	100	249	193*	174*	3,600*
	Computer equipment operators	a	100	a	a	a	a
Clerks	Other office clerks	a	100	a	a	a	a
	Mail carriers and sorting clerks	a	100	a	252*	a	a
	Data entry operators	a	100	a	a	a	a
Service and sales workers	Shop, stall and market salespersons and demonstrators	6,100	100	108	87	113	51,300
	Protective services workers not elsewhere classified	4,400*	100	97	153	142	14,900
	Home-based personal care workers	a	100	101*	182	151	5,200
Skilled Agricultural, fishery workers	Gardeners, horticultural and nursery growers	a	100	103	148	122	8,700
	Forestry workers and loggers	a	100	a	a	a	a
	Animal producers and related workers n.e.c.	a	100	a	a	a	a
Craft, related trades workers	Agricultural- or industrial-machinery mechanics, fitters	7,000	100	462	377	530	8,600
	Tailors, dressmakers and hatters	a	100	a	a	187	4,900
	Motor vehicle mechanics and fitters	a	100	200	142*	170*	4,100*
Plant, machine Operators, assemblers	Machine-tool operators	a	100	173*	a	234*	3,500*
	Chemical-products machine operators n.e.c.	a	100	a	a	a	a
	Earth-moving and related plant operators	a	100	156*	a	180*	3,200*
Elementary occupations	Sweepers and related labourers	42,600	100	127	208	252	70,600
	Construction and maintenance labourers: roads, dams and similar constructions	4,100*	100	82	93	119	25,700
	Domestic helpers and cleaners	3,500*	100	125	119	113	30,100
	Total top 9x3	**100,900**	**100**	**120**	**128**	**159**	**272,900**
	Total	**75,000**	**100**	**110**	**100**	**113**	**647,530**

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
n.e.c. means: not elsewhere classified

Table 14 Ireland: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Directors and chief executives	a	100	a	a	a	a
	Senior officials of special-interest organisations	a	100	a	a	a	a
	Legislators and senior government officials	a	100	a	a	a	a
Professionals	Health professionals (except nursing)	2,600*	100	85*	136	170	6,400
	Primary, pre-primary education teaching professionals	a	100	127	86	116	6,800
	Physical, mathematical and engineering science professionals	a	100	a	a	a	a
Technicians and associate professionals	Police inspectors and detectives	a	100	a	a	a	a
	Nursing and midwifery associate professionals	a	100	a	a	a	a
	Optical and electronic equipment operators	a	100	a	a	a	a
Clerks	Library, mail and related clerks	a	100	61*	a	a	a
	Numerical clerks	a	100	70	44*	47*	4,200*
	Material-recording and transport clerks	a	100	57	28*	37*	3,400*
Service and sales workers	Travel attendants and related workers	a	100	a	a	a	a
	Other personal services workers	a	100	89	56*	67	4,600
	Protective services workers	a	100	85	68	54*	4,300*
Skilled Agricultural, fishery workers	Forestry and related workers	a	100	a	a	a	a
	Fishery workers, hunters and trappers	a	100	a	a	a	a
	Field crop and vegetable growers	a	100	100*	a	a	a
Craft, related trades workers	Miners, shot-firers, stone cutters and carvers	a	100	a	a	a	a
	Handicraft workers in wood, textile, leather and related materials	a	100	a	a	a	a
	Potters, glass-makers and related trades workers	a	100	a	a	a	a
Plant, machine Operators, assemblers	Ships deck crews and related workers	a	100	a	a	a	a
	Glass, ceramics and related plant operators	a	100	a	a	a	a
	Rubber- and plastic-products machine operators	a	100	a	a	a	a
Elementary occupations	Building caretakers, window and related cleaners	a	100	a	a	a	a
	Agricultural, fishery and related labourers	a	100	134*	98*	93*	2,800*
	Garbage collectors and related labourers	a	100	a	a	a	a
	Total top 9x3	-18,600	100	86	62	70	44,200
	Total	-275,600	100	78	50	55	331,980

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
n.e.c. means: not elsewhere classified

Table 15 Italy: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Managers of small enterprises	a	100	149	232	140	9,400
	Senior officials of special-interest organisations	a	100	a	a	a	a
	Directors and chief executives	a	100	a	319*	a	a
Professionals	Primary, pre-primary education teaching professionals	4,400*	100	218*	a	257*	7,200*
	Special education teaching professionals	3,900*	100	a	612*	491*	4,900*
	Nursing and midwifery professionals	a	100	a	a	a	a
Technicians and associate professionals	Other teaching associate professionals	a	100	140	75	128	15,400
	Special education teaching associate professionals	a	100	116	89	125	16,700
	Life science technicians, related associate professionals	a	100	a	a	113*	4,200*
Clerks	Other office clerks	33,900	100	150	132	170	82,300
	Customer services clerks	22,400	100	141	106	135	85,900
	Library, mail and related clerks	a	100	114	97	98	19,400
Service and sales workers	Protective services workers	10,800	100	99	112	129	47,500
	Travel attendants and related workers	a	100	129*	113*	117*	5,800*
	Fashion and other models	a	100	a	a	a	a
Skilled Agricultural, fishery workers	Animal producers and related workers	a	100	a	a	a	a
	Crop and animal producers	a	100	a	a	a	a
	Forestry and related workers	a	100	131*	129*	102*	4,300*
Craft, related trades workers	Electrical, electronic equipment mechanics and fitters	a	100	81	91	107	31,000
	Blacksmiths, tool-makers and related trades workers	a	100	85	100	109	21,800
	Potters, glass-makers and related trades workers	a	100	53*	a	105	10,400
Plant, machine Operators, assemblers	Food and related products machine operators	8,200	100	173	127	179	18,700
	Agricultural and other mobile plant operators	a	100	156	135	110	21,100
	Power-production and related plant operators	a	100	a	a	a	a
Elementary occupations	Domestic and related helpers, cleaners and launderers	75,400	100	124	128	147	234,400
	Building caretakers, window and related cleaners	12,800	100	100	94	116	93,300
	Garbage collectors and related labourers	a	100	154	73	116	17,600
	Total top 9x3	**197,100**	**100**	**122**	**113**	**135**	**762,400**
	Total	**-640,100**	**100**	**100**	**80**	**83**	**3221,400**

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
n.e.c. means: not elsewhere classified

Table 16 Lithuania: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Production and operations managers in manufacturing	a	100	a	a	a	a
	Senior officials of employers, workers and other economic-interest organisations	a	100	a	a	a	a
	Directors and chief executives	a	100	a	a	a	a
Professionals	College, university and higher education teaching professionals	a	100	a	a	a	a
	Medical doctors	a	100	a	a	a	a
	Secondary education teaching professionals	a	100	a	a	a	a
Technicians and associate professionals	Technical and commercial sales representatives	a	100	a	a	a	a
	Business services agents and trade brokers n.e.c.	a	100	a	a	a	a
	Medical assistants	a	100	a	a	a	a
Clerks	Stock clerks	a	100	a	a	a	a
	Scribes and related workers	a	100	a	a	a	a
	Secretaries	a	100	a	a	a	a
Service and sales workers	Home-based personal care workers	a	100	a	a	a	a
	Cooks	a	100	104*	a	113*	6,300*
	Fire-fighters	a	100	a	a	a	a
Skilled Agricultural, fishery workers	Forestry workers and loggers	a	100	a	a	a	a
	Field crop and vegetable growers	a	100	a	a	a	a
	Animal producers and related workers n.e.c.	a	100	a	a	a	a
Craft, related trades workers	Plumbers and pipe fitters	a	100	a	a	a	a
	Motor vehicle mechanics and fitters	a	100	a	a	132*	5,200*
	Stone splitters, cutters and carvers	a	100	a	a	a	a
Plant, machine Operators, assemblers	Car, taxi and van drivers	5,200*	100	164*	a	217*	9,600*
	Heavy truck and lorry drivers	a	100	a	76*	144*	13,400*
	Sewing-machine operators	a	100	a	a	a	a
Elementary occupations	Transport labourers and freight handlers	a	100	531	a	210*	7,600*
	Doorkeepers, watchpersons and related workers	a	100	a	a	a	a
	Forestry labourers	a	100	a	a	a	a
	Total top 9x3	49,400	100	161	124	216	92,100
	Total	-63,900	100	87	61	81	271,930

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
n.e.c. means: not elsewhere classified

Table 17 Luxembourg: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Managers of small enterprises of restaurants and hotels	a	100	a	a	a	a
	Production and operations managers n.e.c.	a	100	a	a	a	a
	Managers of small enterprises n.e.c.	a	100	a	a	a	a
Professionals	Legal professionals n.e.c.	a	100	a	a	a	a
	Secondary education teaching professionals	a	100	a	a	160*	1,200*
	Architects, town and traffic planners	a	100	a	a	a	a
Technicians and associate professionals	Nursing associate professionals	a	100	a	a	a	a
	Other teaching associate professionals	a	100	a	a	a	a
	Finance and sales associate professionals n.e.c.	a	100	a	a	a	a
Clerks	Other office clerks	a	100	a	160*	142*	1,800*
	Stock clerks	a	100	a	a	a	a
	Telephone switchboard operators	a	100	a	a	a	a
Service and sales workers	Waiters, waitresses and bartenders	1,400*	100	134*	145*	213*	2,600*
	Travel attendants and travel stewards	a	100	a	a	a	a
	Child-care workers	a	100	a	a	a	a
Skilled Agricultural, fishery workers	Gardeners, horticultural and nursery growers	a	100	a	a	a	a
	Forestry workers and loggers	a	100	a	a	a	a
	Crop and animal producers	a	100	a	a	a	a
Craft, related trades workers	Metal moulders and core-makers	a	100	a	a	a	a
	Sheet-metal workers	a	100	a	a	a	a
	Motor vehicle mechanics and fitters	a	100	a	a	a	a
Plant, machine Operators, assemblers	Other machine operators n.e.c.	a	100	a	a	a	a
	Railway brakers, signallers and shunters	a	100	a	a	a	a
	Ships deck crews and related workers	a	100	a	a	a	a
Elementary occupations	Transport labourers and freight handlers	a	100	a	a	a	a
	Construction and maintenance labourers: roads, dams and similar constructions	a	100	a	a	a	a
	Messengers, package, luggage porters and deliverers	a	100	a	a	a	a
	Total top 9x3	9,100	100	125	180	289	13,900
	Total	1,200	100	62	99	103	36,540

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
n.e.c. means: not elsewhere classified

Table 18 Latvia: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Production and operations managers	a	100	a	a	a	a
	Other specialist managers	a	100	a	a	a	a
	Legislators and senior government officials	a	100	a	a	a	a
Professionals	Business professionals	a	100	135	119*	177	9,500
	Public service administrative professionals	a	100	a	a	a	a
	Primary, pre-primary education teaching professionals	a	100	a	a	174*	4,300*
Technicians and associate professionals	Social work associate professionals	a	100	a	a	a	a
	Life science technicians, related associate professional	a	100	a	a	a	a
	Ship and aircraft controllers and technicians	a	100	a	a	a	a
Clerks	Material-recording and transport clerks	a	100	a	a	298*	4,800*
	Customer services clerks	a	100	a	a	a	a
	Other office clerks	a	100	a	a	a	a
Service and sales workers	Personal care and related workers	a	100	142*	a	139*	5,700*
	Travel attendants and related workers	a	100	a	a	a	a
	Shop, stall and market salespersons and demonstrators	a	100	95	54	102	20,700
Skilled Agricultural, fishery workers	Forestry and related workers	a	100	301*	a	a	a
	Fishery workers, hunters and trappers	a	100	a	a	a	a
	Field crop and vegetable growers	a	100	a	95*	98*	4,600*
Craft, related trades workers	Wood treaters, cabinet-makers and related workers	a	100	a	a	a	a
	Textile, garment and related trades workers	a	100	a	a	a	a
	Potters, glass-makers and related trades workers	a	100	a	a	a	a
Plant, machine Operators, assemblers	Power-production and related plant operators	a	100	a	a	186*	5,500*
	Wood-processing- and papermaking-plant operators	a	100	a	a	a	a
	Textile-, fur- and leather-products machine operators	a	100	a	a	a	a
Elementary occupations	Garbage collectors and related labourers	16,600	100	88*	234	364	22,900
	Manufacturing labourers	16,500	100	77	102	168	40,900
	Mining and construction labourers	4,300*	100	178	87*	155	12,000
	Total top 9x3	**71,700**	**100**	**109**	**103**	**177**	**164,900**
	Total	**-8,800**	**100**	**86**	**58**	**97**	**324,600**

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
n.e.c. means: not elsewhere classified

Table 19 Malta: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Directors and chief executives	a	100	a	a	a	a
	Other specialist managers n.e.c.	a	100	a	a	a	a
	Production and operations managers n.e.c.	a	100	a	a	a	a
Professionals	Secondary education teaching professionals	a	100	a	a	a	a
	College, university and higher education teaching professionals	a	100	a	a	a	a
	Medical doctors	a	100	a	a	a	a
Technicians and associate professionals	Statistical, mathematical, related associate professionals	a	100	a	a	a	a
	Nursing associate professionals	a	100	a	a	a	a
	Special education teaching associate professionals	a	100	a	a	a	a
Clerks	Stock clerks	a	100	a	a	a	a
	Cashiers and ticket clerks	a	100	a	a	a	a
	Library and filing clerks	a	100	a	a	a	a
Service and sales workers	Other personal services workers n.e.c.	a	100	a	a	a	a
	Police officers	a	100	a	a	a	a
	Travel attendants and travel stewards	a	100	a	a	a	a
Skilled Agricultural, fishery workers	Field crop and vegetable growers	a	100	a	a	a	a
	Gardeners, horticultural and nursery growers	a	100	a	a	a	a
	:	:	:	:	:	:	:
Craft, related trades workers	Aircraft engine mechanics and fitters	a	100	a	a	a	a
	Electronics mechanics and servicers	a	100	a	a	a	a
	Plumbers and pipe fitters	a	100	a	a	a	a
Plant, machine Operators, assemblers	Electronic-equipment assemblers	a	100	a	a	a	a
	Bus and tram drivers	a	100	a	a	a	a
	Plastic-products machine operators	a	100	a	a	a	a
Elementary occupations	Manufacturing labourers	a	100	a	a	a	a
	Messengers, package, luggage porters and deliverers	a	100	a	a	a	a
	Door-to-door and telephone salespersons	a	100	a	a	a	a
	Total top 9x3	4,400	100	138	170	288	13,400
	Total	-2,300	100	94	78	92	24,450

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
n.e.c. means: not elsewhere classified
“:” means: no data

Table 20 Netherlands: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Managers of small enterprises in wholesale, retail trade	a	100	a	a	168*	6,600*
	Managers of small enterprises of restaurants and hotels	a	100	a	a	a	a
	Supply and distribution managers	a	100	a	a	a	a
Professionals	Business professionals n.e.c.	12,500	100	168	163	291	19,000
	Public service administrative professionals	7,100*	100	153	168	196	14,500
	Secondary education teaching professionals	6,600*	100	112	98*	165	16,700
Technicians and associate professionals	Nursing associate professionals	11,800	100	150	133	186	25,600
	Business services agents and trade brokers n.e.c.	6,300*	100	145	69*	148	19,400
	Social work associate professionals	5,000*	100	134	138	156	13,800
Clerks	Cashiers and ticket clerks	15,400	100	85	84	221	28,100
	Mail carriers and sorting clerks	10,300	100	117*	121*	265	16,600
	Office clerks	9,900*	100	104	74	138	36,000
Service and sales workers	Waiters, waitresses and bartenders	43,200	100	120	102	253	71,400
	Shop, stall and market salespersons and demonstrators	37,700	100	96	89	171	90,400
	Institution-based personal care workers	9,200*	100	116*	136*	251	15,300
Skilled Agricultural, fishery workers	Gardeners, horticultural and nursery growers	a	100	87*	80*	125	12,600
	Field crop and vegetable growers	a	100	a	a	a	a
	Dairy and livestock producers	a	100	a	a	a	a
Craft, related trades workers	Welders and flame cutters	a	100	a	a	a	a
	Painters and related workers	a	100	a	a	a	a
	Building frame and related trades workers n.e.c.	a	100	a	a	135*	5,200*
Plant, machine Operators, assemblers	Chemical-still and reactor operators (except petroleum and natural gas)	a	100	a	a	277*	4,900*
	Car, taxi and van drivers	a	100	95*	a	157*	8,400*
	Mechanical-machinery assemblers	a	100	a	a	a	a
Elementary occupations	Helpers, cleaners in offices, hotels, other establishments	29,700	100	102	110	216	55,300
	Elementary occupations	29,100	100	101	57*	355	40,500
	Street (food) vendors	10,500	100	a	a	322	15,300
	Total top 9x3	**268,500**	**100**	**113**	**99**	**202**	**532,700**
	Total	**395,000**	**100**	**103**	**85**	**152**	**1150,540**

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
n.e.c. means: not elsewhere classified

Table 21 Poland: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Sales and marketing managers	a	100	957*	580*	522*	5,400*
	Production, operations managers in restaurants, hotels	a	100	a	a	a	a
	Production and operations managers n.e.c.	a	100	a	a	a	a
Professionals	Business professionals n.e.c.	13,500*	100	106	79	152	39,600
	Pre-primary education teaching professionals	12,100*	100	336*	304*	334*	17,300*
	Architects, engineers and related professionals n.e.c.	5,300*	100	a	a	247*	8,900*
Technicians and associate professionals	Technical and commercial sales representatives	21,800	100	122	106	146	69,000
	Other teaching associate professionals	a	100	146*	185*	182*	7,600*
	Athletes, sports persons, related associate professionals	a	100	a	a	a	a
Clerks	Library and filing clerks	8,000*	100	277*	a	323*	11,600*
	Debt-collectors and related workers	a	100	a	a	a	a
	Production clerks	a	100	a	a	a	a
Service and sales workers	Cooks	5,100*	100	111	104	114	42,900
	Waiters, waitresses and bartenders	a	100	87	71	110	54,800
	Hairdressers, barbers, beauticians and related workers	a	100	40*	100	109	25,600
Skilled Agricultural, fishery workers	Gardeners, horticultural and nursery growers	a	100	151*	96*	165*	12,200*
	Forestry workers and loggers	a	100	171*	a	154*	9,300*
	Dairy and livestock producers	a	100	a	a	a	a
Craft, related trades workers	Motor vehicle mechanics and fitters	5,700*	100	113	78	119	35,500
	Miners and quarry workers	a	100	155*	173*	217*	8,900*
	Insulation workers	a	100	172*	149*	216*	8,200*
Plant, machine Operators, assemblers	Electronic-equipment assemblers	a	100	110*	128*	134*	16,000*
	Metal-, rubber- and plastic-products assemblers	a	100	62*	90*	122*	15,300*
	Earth-moving and related plant operators	a	100	155*	83*	123*	13,400*
Elementary occupations	Vehicle, window and related cleaners	a	100	a	a	269*	6,000*
	Construction and maintenance labourers: roads, dams and similar constructions	a	100	87	87	112	31,700
	Domestic helpers and cleaners	a	100	220*	279*	181*	6,400*
	Total top 9x3	137,500	100	116	103	142	462,300
	Total	-439,000	100	96	77	87	3,041,490

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
n.e.c. means: not elsewhere classified

Table 22 Portugal: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Legislators and senior officials	a	100	a	a	a	a
	Legislators and senior government officials	a	100	a	a	a	a
	Production and operations managers	a	100	a	a	a	a
Professionals	Secondary education teaching professionals	a	100	129	135	147	14,800
	Legal professionals	a	100	a	a	a	a
	Social science and related professionals	a	100	a	a	132	8,400
Technicians and associate professionals	Finance and sales associate professionals	a	100	213	156	174	17,200
	Optical and electronic equipment operators	a	100	a	a	a	a
	Pre-primary education teaching associate professionals	a	100	a	a	a	a
Clerks	Other office clerks	a	100	a	a	a	a
	Cashiers, tellers and related clerks	a	100	82	58	93	12,600
	Library, mail and related clerks	a	100	a	a	a	a
Service and sales workers	Personal care and related workers	11,600	100	128	138	161	30,500
	Housekeeping and restaurant services workers	a	100	113	85	104	79,700
	Travel attendants and related workers	a	100	a	a	a	a
Skilled Agricultural, fishery workers	Fishery workers, hunters and trappers	a	100	a	a	a	a
	Crop and animal producers	a	100	a	a	a	a
	Skilled agricultural and fishery workers	a	100	a	a	a	a
Craft, related trades workers	Metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers	a	100	162	135	142	17,100
	Building finishers and related trades workers	a	100	80	78	113	20,200
	Potters, glass-makers and related trades workers	a	100	a	a	a	a
Plant, machine Operators, assemblers	Motor vehicle drivers	a	100	79	93	119	30,200
	Agricultural and other mobile plant operators	a	100	96	a	131	12,400
	Textile-, fur- and leather-products machine operators	a	100	225	a	a	a
Elementary occupations	Domestic and related helpers, cleaners and launderers	8,700	100	123	112	116	61,800
	Garbage collectors and related labourers	a	100	a	a	a	a
	Building caretakers, window and related cleaners	a	100	a	a	a	a
	Total top 9x3	**67,000**	**100**	**117**	**103**	**124**	**352,000**
	Total	**-78,500**	**100**	**101**	**88**	**91**	**785,670**

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
n.e.c. means: not elsewhere classified

Table 23 Romania: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Directors and chief executives	a	100	a	a	a	a
	Production and operations managers n.e.c.	a	100	a	a	a	a
	Production and operations managers in manufacturing	a	100	a	a	a	a
Professionals	Agronomists and related professionals	a	100	a	a	a	a
	Computer systems designers, analysts, programmers	a	100	a	a	a	a
	Composers, musicians and singers	a	100	a	a	a	a
Technicians and associate professionals	Pre-primary education teaching associate professionals	a	100	a	a	a	a
	Computer assistants	a	100	a	a	a	a
	Travel consultants and organisers	a	100	a	a	a	a
Clerks	Receptionists and information clerks	a	100	a	a	a	a
	Pawnbrokers and money-lenders	a	100	a	a	a	a
	Stenographers and typists	a	100	a	a	a	a
Service and sales workers	Housekeepers and related workers	a	100	a	a	a	a
	Cooks	a	100	a	a	114*	7,900*
	Fashion and other models	a	100	a	a	a	a
Skilled Agricultural, fishery workers	Field crop and vegetable growers	a	100	a	a	179*	7,000*
	Forestry workers and loggers	a	100	a	a	a	a
	Crop and animal producers	a	100	a	a	a	a
Craft, related trades workers	Tool-makers and related workers	a	100	a	a	a	a
	Building frame and related trades workers n.e.c.	a	100	a	a	a	a
	Bookbinders and related workers	a	100	a	a	a	a
Plant, machine Operators, assemblers	Composite products assemblers	a	100	a	a	a	a
	Other machine operators not elsewhere classified	a	100	a	a	a	a
	Railway brakers, signallers and shunters	a	100	a	a	a	a
Elementary occupations	Messengers, package, luggage porters and deliverers	a	100	a	a	a	a
	Vehicle, window and related cleaners	a	100	a	a	a	a
	Street (food) vendors	a	100	a	a	a	a
	Total top 9x3	30,100	100	110	92	202	59,400
	Total	-529,000	100	70	46	44	418,990

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
n.e.c. means: not elsewhere classified

Table 24 Sweden: Top 3 growth occupations per main occupational group, job finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Production and operations managers n.e.c.	a	100	77*	120	127	5,500
	Sales and marketing managers	a	100	a	a	141*	3,000*
	Managers of small enterprises n.e.c.	a	100	a	a	a	a
Professionals	Pharmacists	a	100	a	a	a	a
	Legal professionals n.e.c.	a	100	127*	a	151	5,100
	Philologists, translators and interpreters	a	100	a	a	a	a
Technicians and associate professionals	Social work associate professionals	6,000	100	113	108	135	23,000
	Administrative secretaries and related associate professionals	5,700	100	94	109	130	25,000
	Employment agents and labour contractors	4,400*	100	a	a	870*	5,000*
Clerks	Stenographers and typists	a	100	105	97*	115	5,600
	Debt-collectors and related workers	a	100	a	a	a	a
	Transport clerks	a	100	101*	a	113*	3,600*
Service and sales workers	Fashion and other models	a	100	a	a	a	a
	Fire-fighters	a	100	a	a	a	a
	Child-care workers	a	100	111	84	101	44,900
Skilled Agricultural, fishery workers	Gardeners, horticultural and nursery growers	5,500	100	113	154	135	21,100
	Crop and animal producers	a	100	a	a	a	a
	Field crop and vegetable growers	a	100	a	a	a	a
Craft, related trades workers	Motor vehicle mechanics and fitters	a	100	82	59	123	13,300
	Welders and flame cutters	a	100	115	118	133	7,200
	Sheet-metal workers	a	100	128	82*	121	5,600
Plant, machine Operators, assemblers	Bus and tram drivers	4,100*	100	117	138	143	13,700
	Other machine operators n.e.c.	3,400*	100	161	127*	196	7,000
	Heavy truck and lorry drivers	a	100	91	85	106	32,100
Elementary occupations	Building caretakers	4,900*	100	112	134	131	20,700
	Garbage collectors	3,700*	100	146*	99*	213	7,000
	Transport labourers and freight handlers	3,400*	100	103	99	136	12,600
	Total top 9x3	**62,100**	**100**	**107**	**104**	**129**	**274,500**
	Total	**-128,800**	**100**	**97**	**83**	**93**	**1,686,500**

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
n.e.c. means: not elsewhere classified

Table 25 Slovenia: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Sales and marketing managers	a	100	a	a	145*	1,400*
	Personnel and industrial relations managers	a	100	a	a	a	a
	Directors and chief executives	a	100	a	123*	122*	1,700*
Professionals	Legal professionals n.e.c.	1,300*	100	a	a	338*	1,800*
	Mechanical engineers	a	100	a	a	a	a
	Medical doctors	a	100	a	233*	209*	1,100*
Technicians and associate professionals	Business services agents and trade brokers n.e.c.	a	100	a	a	a	a
	Mechanical engineering technicians	a	100	504*	a	a	a
	Electronics, telecommunications engineering technicians	a	100	a	a	a	a
Clerks	Production clerks	a	100	a	a	a	a
	Transport clerks	a	100	a	a	a	a
	Other office clerks	a	100	a	a	a	a
Service and sales workers	Waiters, waitresses and bartenders	1,200*	100	117	94	110	13,100
	Child-care workers	a	100	a	a	764*	1,100*
	Housekeepers and related workers	a	100	a	a	a	a
Skilled Agricultural, fishery workers	Crop and animal producers	a	100	a	a	a	a
	Poultry producers	a	100	a	a	a	a
	Animal producers and related workers n.e.c.	a	100	a	a	a	a
Craft, related trades workers	Upholsterers and related workers	a	100	a	a	a	a
	Building frame and related trades workers n.e.c.	a	100	254*	a	a	a
	Painters and related workers	a	100	239*	237*	a	a
Plant, machine Operators, assemblers	Sewing-machine operators	1,200*	100	a	a	507*	1,500*
	Electronic-equipment assemblers	1,000*	100	360*	a	397*	1,400*
	Fur- and leather-preparing-machine operators	a	100	a	a	a	a
Elementary occupations	Manufacturing labourers	2,800*	100	209*	101*	187*	5,900*
	Building construction labourers	a	100	361*	383*	311*	1,100*
	Helpers, cleaners in offices, hotels, other establishments	a	100	161	137*	108*	7,900*
	Total top 9x3	**16,900**	**100**	**154**	**118**	**156**	**46,900**
	Total	**-61,300**	**100**	**104**	**74**	**73**	**161,740**

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
n.e.c. means: not elsewhere classified

Table 26 Slovakia: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Managers of small enterprises in transport, storage and communications	a	100	a	a	a	a
	Managers of small enterprises n.e.c.	a	100	a	a	a	a
	Managers of small enterprises in construction	a	100	a	a	a	a
Professionals	Computer systems designers, analysts, programmers	a	100	a	a	a	a
	Secondary education teaching professionals	a	100	a	a	183*	2,600*
	Special education teaching professionals	a	100	a	a	a	a
Technicians and associate professionals	Insurance representatives	a	100	a	a	a	a
	Primary education teaching associate professionals	a	100	a	a	a	a
	Bookkeepers	a	100	103*	115	130	5,500
Clerks	Accounting and book-keeping clerks	a	100	a	a	a	a
	Tellers and other counter clerks	a	100	a	a	a	a
	Travel agency and related clerks	a	100	a	a	a	a
Service and sales workers	Protective services workers n.e.c.	a	100	a	a	a	a
	Hairdressers, barbers, beauticians and related workers	a	100	a	a	a	a
	Prison guards	a	100	a	a	a	a
Skilled Agricultural, fishery workers	Field crop and vegetable growers	a	100	a	a	a	a
	Market gardeners and crop growers	a	100	a	a	a	a
	Poultry producers	a	100	a	a	a	a
Craft, related trades workers	Jewellery and precious-metal workers	a	100	a	a	290*	3,100*
	Painters and related workers	a	100	a	a	193*	3,500*
	Agricultural- or industrial-machinery mechanics, fitters	a	100	a	a	a	a
Plant, machine Operators, assemblers	Industrial robot operators	a	100	98*	a	154	6,000
	Car, taxi and van drivers	a	100	a	a	213*	2,900*
	Rubber-products machine operators	a	100	a	a	a	a
Elementary occupations	Sweepers and related labourers	19,400	100	660	645	805	20,900
	Garbage collectors	18,100	100	a	214*	904	18,100
	Farm-hands and labourers	a	100	186	224	166*	4,400*
	Total top 9x3	**63,100**	**100**	**181**	**196**	**336**	**87,100**
	Total	**-27,900**	**100**	**93**	**76**	**91**	**293,100**

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
n.e.c. means: not elsewhere classified

Table 27 UK: Top 3 growth occupations per main occupational group, job-finders 2007-2010

Main group (ISCO88, 1-digit)	Occupations (ISCO -88 , 4 digits)	2007-2010 growth	2007 index	2008 index	2009 index	2010 index	Job-finders 2010
Managers and senior officials	Production and operations managers in agriculture, hunting, forestry and fishing	a	100	a	a	a	a
	Production and operations managers in personal care, cleaning and related services	a	100	a	a	a	a
	Production and operations managers in business services enterprises	a	100	184	73	115	21,500
Professionals	Secondary education teaching professionals	a	100	100	95	109	78,900
	Legal professionals n.e.c.	a	100	a	a	a	a
	Primary, pre-primary education teaching professionals	a	100	119	102	107	59,100
Technicians and associate professionals	Athletes, sports persons, related associate professionals	a	100	139	110	127	32,800
	Physiotherapists and related associate professionals	a	100	87	103	131	18,600
	Artistic, entertainment, sports associate professionals	a	100	a	a	a	a
Clerks	Transport clerks	a	100	107	a	115	12,700
	Travel agency and related clerks	a	100	a	a	93	10,700
	Stock clerks	a	100	80	70	89	25,800
Service and sales workers	Travel guides	a	100	a	a	a	a
	Home-based personal care workers	a	100	126	95	102	181,000
	Travel attendants and related workers	a	100	a	a	a	a
Skilled Agricultural, fishery workers	Fishery workers, hunters and trappers	a	100	a	a	a	a
	Gardeners, horticultural and nursery growers	a	100	118	129	113	28,700
	Crop and animal producers	a	100	a	a	a	a
Craft, related trades workers	Bakers, pastry-cooks and confectionery makers	a	100	a	a	a	a
	Sheet-metal workers	a	100	a	a	a	a
	Glaziers	a	100	a	a	a	a
Plant, machine Operators, assemblers	Railway brakers, signallers and shunters	a	100	a	a	a	a
	Textile-, fur-, leather-products machine operators n.e.c.	a	100	a	a	a	a
	Mineral-ore and stone-processing-plant operators	a	100	a	a	a	a
Elementary occupations	Farm-hands and labourers	a	100	158	138	116	11,600
	Forestry labourers	a	100	a	a	a	a
	Vehicle, window and related cleaners	a	100	a	a	a	a
	Total top 9x3	**64,700**	**100**	**120**	**97**	**113**	**550,200**
	Total	**-1,720,800**	**100**	**92**	**72**	**74**	**4,896,450**

Source: Eurostat Labour Force Survey
Occupation: ISCO88, 4-digit
* means: limited reliability, „a“ means: number is below publication limit or negative.
n.e.c. means: not elsewhere classified

AC.3 Top 25 occupations (ISCO-88 3-digit)of inflow job vacancies registered by PES, 2011Q3

Table 1 Austria: Top 25 occupations with highest PES vacancy inflow 2011Q3, with ranking 2011Q1

2011Q3			2011Q1
PES vacancy inflow	Ranking	Occupations (ISCO-88 3-digit level)	Ranking
22,371	1	Housekeeping and restaurant services workers	1
8,606	2	Shop, stall and market salespersons and demonstrators	2
6,159	3	Manufacturing labourers	3
5,863	4	Transport labourers and freight handlers	4
5,072	5	Domestic and related helpers, cleaners and launderers	5
4,992	6	Machinery mechanics and fitters	6
3,457	7	Physical and engineering science technicians	8
3,386	8	Electrical and electronic equipment mechanics and fitters	10
3,235	9	Other office clerks	13
2,895	10	Finance and sales associate professionals	11
2,841	11	Building finishers and related trades workers	12
2,532	12	Other personal services workers	14
2,514	13	Motor vehicle drivers	15
2,468	14	Building frame and related trades workers	7
2,392	15	Cashiers, tellers and related clerks	17
2,127	16	Wood treaters, cabinet-makers and related trades workers	16
1,559	17	Metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers	18
1,490	18	Mining and construction labourers	23
1,482	19	Agricultural and other mobile plant operators	20
1,444	20	Painters, building structure cleaners and related trades workers	21
1,379	21	Blacksmiths, tool-makers and related trades workers	19
1,161	22	Messengers, porters, doorkeepers and related workers	22
847	23	Other teaching associate professionals	26
844	24	Administrative associate professionals	25
791	25	Agricultural, fishery and related labourers	9
69,536	Total top 25		%

Table 2 Belgium: Top 25 occupations with highest PES vacancy inflow 2011Q3, with ranking 2011Q1

2011Q3			2011Q1
PES vacancy inflow	Ranking	Occupations (ISCO-88 3-digit level)	Ranking
14,292	1	Shop, stall and market salespersons and demonstrators	1
10,893	2	Domestic and related helpers, cleaners and launderers	2
9,953	3	Physical and engineering science technicians	4
9,585	4	Secretaries and keyboard-operating clerks	3
9,397	5	Manufacturing labourers	5
7,200	6	Other specialist managers	6
6,251	7	Housekeeping and restaurant services workers	7
5,972	8	Finance and sales associate professionals	9
5,854	9	Building finishers and related trades workers	10
5,806	10	Client information clerks	13
5,479	11	Motor vehicle drivers	12
5,119	12	Material-recording and transport clerks	11
4,820	13	Machinery mechanics and fitters	8
4,683	14	Architects, engineers and related professionals	15
4,033	15	Other office clerks	16
3,894	16	Administrative associate professionals	14
3,502	17	Metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers	17
3,432	18	Personal care and related workers	23
3,093	19	Mining and construction labourers	22
2,855	20	Secondary education teaching professionals	21
2,744	21	Business services agents and trade brokers	20
2,644	22	Agricultural and other mobile plant operators	18
2,622	23	Numerical clerks	37
2,482	24	Business professionals	25
2,475	25	Nursing and midwifery associate professionals	43
139,080	Total top 25		%

Table 3 Cyprus: Top 25 occupations with highest PES vacancy inflow 2011Q3, with ranking 2011Q1

2011Q3			2011Q1
PES vacancy inflow	Ranking	Occupations (ISCO-88 3-digit level)	Ranking
800	1	Agricultural, fishery and related labourers	4
451	2	Domestic and related helpers, cleaners and launderers	2
406	3	Housekeeping and restaurant services workers	1
259	4	Other labourers n.e.c.	3
113	5	Finance and sales associate professionals	7
102	6	Shop, stall and market salespersons and demonstrators	5
99	7	Building frame and related trades workers	6
98	8	Other office clerks	8
87	9	Metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers	10
81	10	Food processing and related trades workers	15
73	11	Messengers, porters, doorkeepers and related workers	14
65	12	Transport labourers and freight handlers	29
60	13	Machinery mechanics and fitters	21
60	14	Architects, engineers and related professionals	13
59	15	Business professionals	19
55	16	Building caretakers, window and related cleaners	38
55	17	Secretaries and keyboard-operating clerks	18
52	18	Health associate professionals (except nursing)	37
51	19	Mining and construction labourers	9
49	20	Administrative associate professionals	12
47	21	Personal care and related workers	25
43	22	Other personal services workers	20
38	23	Client information clerks	16
35	24	Motor vehicle drivers	22
35	25	Garbage collectors and related labourers	44
3,272	Total top 25		%

Table 4 Germany: Top 25 occupations with highest PES vacancy inflow 2011Q3, with ranking 2011Q1

2011Q3			2011Q1
PES vacancy inflow	Ranking	Occupations (ISCO-88 3-digit level)	Ranking
47,270	1	Manufacturing labourers	1
38,533	2	Finance and sales associate professionals	2
31,630	3	Personal care and related workers	3
30,666	4	Material-recording and transport clerks	9
26,274	5	Machinery mechanics and fitters	6
25,036	6	Housekeeping and restaurant services workers	4
24,060	7	Other office clerks	5
21,359	8	Motor vehicle drivers	8
21,130	9	Electrical and electronic equipment mechanics and fitters	7
20,658	10	Shop, stall and market salespersons and demonstrators	10
20,407	11	Building finishers and related trades workers	11
16,720	12	Painters, building structure cleaners and related trades workers	13
14,360	13	Metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers	14
14,290	14	Domestic and related helpers, cleaners and launderers	12
13,433	15	Other machine operators not elsewhere classified	17
12,179	16	Agricultural and other mobile plant operators	18
12,025	17	Physical and engineering science technicians	15
11,708	18	Architects, engineers and related professionals	16
10,545	19	Other personal services workers	21
8,594	20	Blacksmiths, tool-makers and related trades workers	20
8,466	21	Building frame and related trades workers	19
8,425	22	Mining and construction labourers	30
7,704	23	Wood treaters, cabinet-makers and related trades workers	27
7,368	24	Numerical clerks	22
7,245	25	Transport labourers and freight handlers	23
460,085	Total top 25		%

Table 5 Denmark: Top 25 occupations with highest PES vacancy inflow 2011Q3, with ranking 2011Q1

2011Q3			2011Q1
PES vacancy inflow	Ranking	Occupations (ISCO-88 3-digit level)	Ranking
2284	1	Personal care and related workers	1
1768	2	Street vendors and related workers	4
1688	3	Domestic and related helpers, cleaners and launderers	2
1551	4	Housekeeping and restaurant services workers	3
1405	5	Shop, stall and market salespersons and demonstrators	5
1253	6	Pre-primary education teaching associate professionals	7
1089	7	Finance and sales associate professionals	6
792	8	Health professionals (except nursing)	8
773	9	Social science and related professionals	11
765	10	Building frame and related trades workers	28
655	11	Nursing and midwifery associate professionals	9
594	12	Business professionals	12
544	13	Social work associate professionals	14
497	14	College, university and higher education teaching professionals	15
487	15	Public service administrative professionals	13
486	16	Building finishers and related trades workers	20
483	17	Other specialist managers	17
481	18	Mining and construction labourers	27
423	19	Secretaries and keyboard-operating clerks	10
411	20	Primary and pre-primary education teaching professionals	26
398	21	Transport labourers and freight handlers	24
395	22	Motor vehicle drivers	23
386	23	Architects, engineers and related professionals	21
357	24	Health associate professionals (except nursing)	18
348	25	Manufacturing labourers	31
20313	Total top 25		%

Table 6 Finland: Top 25 occupations with highest PES vacancy inflow 2011Q3, with ranking 2011Q1

2011Q3			2011Q1
PES vacancy inflow	Ranking	Occupations (ISCO-88 3-digit level)	Ranking
26,398	1	Finance and sales associate professionals	1
8,413	2	Housekeeping and restaurant services workers	2
7,208	3	Shop, stall and market salespersons and demonstrators	3
6,228	4	Building caretakers, window and related cleaners	4
4,226	5	Personal care and related workers	6
3,345	6	Metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers	11
2,915	7	Building frame and related trades workers	26
2,825	8	Nursing and midwifery professionals	7
2,437	9	Nursing and midwifery associate professionals	8
2,410	10	Building finishers and related trades workers	28
2,346	11	Secretaries and keyboard-operating clerks	10
2,220	12	Machinery mechanics and fitters	19
2,161	13	Motor vehicle drivers	16
2,096	14	Architects, engineers and related professionals	12
2,055	15	Material-recording and transport clerks	18
2,042	16	Social science and related professionals	13
2,026	17	Electrical and electronic equipment mechanics and fitters	17
1,905	18	Health associate professionals (except nursing)	15
1,618	19	Computing professionals	21
1,319	20	Teaching professionals	14
1,184	21	Library, mail and related clerks	22
1,150	22	Primary and pre-primary education teaching professionals	25
1,038	23	Other personal services workers	30
1,029	24	Production and operations managers	27
963	25	Administrative associate professionals	31
91,557	Total top 25		%

Table 7 Hungary: Top 25 occupations with highest PES vacancy inflow 2011Q3, with ranking 2011Q1

2011Q3			2011Q1
PES vacancy inflow	Ranking	Occupations (ISCO-88 3-digit level)	Ranking
50,252	1	Labourers and helpers n.e.c. (e.g. odd-job persons)	1
12,355	2	Garbage collectors and related labourers	2
5,986	3	Domestic and related helpers, cleaners and launderers	3
4,364	4	Shop, stall and market salespersons and demonstrators	7
3,410	5	Industrial robot operators	4
3,062	6	Metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers	8
2,898	7	Messengers, porters, doorkeepers and related workers	5
2,664	8	Building frame and related trades workers	10
2,570	9	Secretaries and keyboard-operating clerks	6
2,546	10	Housekeeping and restaurant services workers	9
2,009	11	Shoe cleaning and other street services elementary occupations	15
1,923	12	Textile, garment and related trades workers	11
1,832	13	Agricultural, fishery and related labourers	16
1,821	14	Food processing and related trades workers	26
1,812	15	Other personal services workers	20
1,763	16	Personal care and related workers	13
1,753	17	Motor vehicle drivers	18
1,692	18	Administrative associate professionals	14
1,642	19	Market gardeners and crop growers	19
1,628	20	Machinery mechanics and fitters	17
1,623	21	Building finishers and related trades workers	22
1,565	22	Business professionals	25
1,409	23	Finance and sales associate professionals	21
1,209	24	Client information clerks	33
1,069	25	Agricultural and other mobile plant operators	24
114,857	Total top 25		%

Table 8 Lithuania: Top 25 occupations with highest PES vacancy inflow 2011Q3, with ranking 2011Q1

2011Q3			2011Q1
PES vacancy inflow	Ranking	Occupations (ISCO-88 3-digit level)	Ranking
4,867	1	Manufacturing labourers	1
3,078	2	Motor vehicle drivers	2
3,051	3	Building frame and related trades workers	5
2,913	4	Shop, stall and market salespersons and demonstrators	3
2,820	5	Transport labourers and freight handlers	4
2,129	6	Housekeeping and restaurant services workers	7
1,605	7	Domestic and related helpers, cleaners and launderers	6
1,496	8	Building finishers and related trades workers	10
1,487	9	Painters, building structure cleaners and related trades workers	12
1,355	10	Business professionals	8
1,210	11	Textile, garment and related trades workers	9
1,099	12	Food processing and related trades workers	15
988	13	Metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers	13
868	14	Machinery mechanics and fitters	14
867	15	Agricultural and other mobile plant operators	16
652	16	Protective services workers	21
606	17	Architects, engineers and related professionals	18
592	18	Administrative associate professionals	19
579	19	Agricultural, fishery and related labourers	33
528	20	Garbage collectors and related labourers	23
523	21	Blacksmiths, tool-makers and related trades workers	17
400	22	Forestry and related workers	26
394	23	Business services agents and trade brokers	24
322	24	Finance and sales associate professionals	20
281	25	Production and operations managers	29
34,710	Total top 25		%

Table 9 Luxembourg: Top 25 occupations with highest PES vacancy inflow 2011Q3, with ranking 2011Q1

2011Q3			2011Q1
PES vacancy inflow	Ranking	Occupations (ISCO-88 3-digit level)	Ranking
532	1	Housekeeping and restaurant services workers	1
357	2	Finance and sales associate professionals	2
334	3	Mining and construction labourers	3
301	4	Building frame and related trades workers	17
300	5	Secretaries and keyboard-operating clerks	6
266	6	Domestic and related helpers, cleaners and launderers	11
258	7	Computing professionals	5
226	8	Building finishers and related trades workers	15
224	9	Administrative associate professionals	8
162	10	Shop, stall and market salespersons and demonstrators	9
150	11	Physical and engineering science technicians	20
147	12	Motor vehicle drivers	14
142	13	Social science and related professionals	12
140	14	Other specialist managers	7
117	15	Social work associate professionals	16
115	16	Architects, engineers and related professionals	13
111	17	Numerical clerks	10
104	18	Manufacturing labourers	23
103	19	Material-recording and transport clerks	18
102	20	Other office clerks	19
98	21	Painters, building structure cleaners and related trades workers	30
80	22	Client information clerks	21
73	23	Legal professionals	22
71	24	Personal care and related workers	25
67	25	Other teaching associate professionals	25
4,580	Total top 25		%

Table 10 Netherlands: Top 25 occupations with highest PES vacancy inflow 2011Q3, with ranking 2011Q1

2011Q3			2011Q1
PES vacancy inflow	Ranking	Occupations (ISCO-88 3-digit level)	Ranking
3,503	1	Other machine operators not elsewhere classified	2
2,861	2	Domestic and related helpers, cleaners and launderers	3
2,546	3	Motor vehicle drivers	7
2,535	4	Housekeeping and restaurant services workers	1
2,360	5	Shop, stall and market salespersons and demonstrators	6
2,319	6	Finance and sales associate professionals	4
2,098	7	Material-recording and transport clerks	8
1,744	8	Personal care and related workers	5
1,660	9	Building frame and related trades workers	9
1,361	10	Building finishers and related trades workers	11
1,045	11	Administrative associate professionals	12
964	12	Protective services workers	18
954	13	Machinery mechanics and fitters	15
846	14	Electrical and electronic equipment mechanics and fitters	19
796	15	Physical and engineering science technicians	14
761	16	Market gardeners and crop growers	13
725	17	Metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers	16
715	18	Agricultural and other mobile plant operators	22
695	19	Painters, building structure cleaners and related trades workers	17
647	20	Nursing and midwifery associate professionals	20
646	21	Library, mail and related clerks	38
597	22	Transport labourers and freight handlers	24
472	23	Mining and construction labourers	21
451	24	Client information clerks	26
450	25	Manufacturing labourers	42
33,751	Total top 25		%

Table 11 Portugal: Top 25 occupations with highest PES vacancy inflow 2011Q3, with ranking 2011Q1

2011Q3			2011Q1
PES vacancy inflow	Ranking	Occupations (ISCO-88 3-digit level)	Ranking
3,934	1	Housekeeping and restaurant services workers	1
2,947	2	Manufacturing labourers	2
1,655	3	Domestic and related helpers, cleaners and launderers	5
1,413	4	Shop, stall and market salespersons and demonstrators	4
1,165	5	Building frame and related trades workers	6
1,075	6	Textile, garment and related trades workers	3
1,048	7	Personal care and related workers	9
951	8	Crop and animal producers	13
923	9	Material-recording and transport clerks	18
702	10	Finance and sales associate professionals	7
658	11	Metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers	11
620	12	Mining and construction labourers	12
589	13	Pelt, leather and shoemaking trades workers	10
581	14	Food processing and related trades workers	22
573	15	Numerical clerks	8
572	16	Motor vehicle drivers	14
494	17	Other personal services workers	19
421	18	Blacksmiths, tool-makers and related trades workers	20
402	19	Secondary education teaching professionals	58
386	20	Physical and engineering science technicians	16
370	21	Messengers, porters, doorkeepers and related workers	23
363	22	Building finishers and related trades workers	15
340	23	Agricultural and other mobile plant operators	25
324	24	Client information clerks	17
289	25	Assemblers	21
22,795	Total top 25		%

Table 12 Sweden: Top 25 occupations with highest PES vacancy inflow 2011Q3, with ranking 2011Q1

2011Q3			2011Q1
PES vacancy inflow	Ranking	Occupations (ISCO-88 3-digit level)	Ranking
19,084	1	Shop, stall and market salespersons and demonstrators	2
18,171	2	Finance and sales associate professionals	3
9,468	3	Personal care and related workers	1
6,430	4	Stall and market salespersons	6
5,924	5	Domestic and related helpers, cleaners and launderers	4
5,770	6	Housekeeping and restaurant services workers	5
4,678	7	Computing professionals	8
4,588	8	Business professionals	9
4,081	9	Pre-primary education teaching associate professionals	16
3,691	10	Primary and pre-primary education teaching professionals	24
3,219	11	Architects, engineers and related professionals	13
3,211	12	Motor vehicle drivers	10
3,169	13	Physical and engineering science technicians	12
3,031	14	Administrative associate professionals	11
2,784	15	Building frame and related trades workers	22
2,522	16	Material-recording and transport clerks	14
2,378	17	Secondary education teaching professionals	34
2,066	18	Health professionals (except nursing)	15
1,979	19	Agricultural and other mobile plant operators	30
1,945	20	Social science and related professionals	18
1,889	21	Assemblers	17
1,771	22	Computer associate professionals	20
1,687	23	Numerical clerks	19
1,604	24	Nursing and midwifery associate professionals	7
1,564	25	Client information clerks	21
116,704	Total top 25		%

Table 13 Slovakia: Top 25 occupations with highest PES vacancy inflow 2011Q3, with ranking 2011Q1

2011Q3			2011Q1
PES vacancy inflow	Ranking	Occupations (ISCO-88 3-digit level)	Ranking
832	1	Protective services workers	2
699	2	Textile, garment and related trades workers	23
621	3	Assemblers	7
503	4	Blacksmiths, tool-makers and related trades workers	19
494	5	Manufacturing labourers	6
459	6	Metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers	1
434	7	Numerical clerks	21
432	8	Industrial robot operators	51
413	9	Computer associate professionals	55
412	10	Mining and construction labourers	3
408	11	Finance and sales associate professionals	11
392	12	Building frame and related trades workers	8
371	13	Motor vehicle drivers	9
366	14	Optical and electronic equipment operators	4
329	15	Building finishers and related trades workers	17
251	16	Agricultural and other mobile plant operators	33
226	17	Physical and engineering science technicians	25
218	18	Transport labourers and freight handlers	24
208	19	Agricultural, fishery and related labourers	13
206	20	Textile-, fur- and leather-products machine operators	12
194	21	Domestic and related helpers, cleaners and launderers	31
190	22	Electrical and electronic equipment mechanics and fitters	14
189	23	Health associate professionals (except nursing)	32
157	24	Administrative associate professionals	48
151	25	Client information clerks	18
9,155	Total top 25		%

AC.4 Top-25 PES bottleneck occupations (ISCO'88 3-digit) with high inflow vacancy to unemployed ratio

Table 1 Austria: Top-25 occupations with the highest PES vacancy inflow to unemployed ratio 2011Q3, with ranking 2011Q1

Ranking	Occupations (ISCO 88 - 3 digits)	Ratio v/u 2011Q3	ranking 2011Q1
1	Locomotive engine drivers and related workers	2,4	1
2	Rubber- and plastic-products machine operators	2,4	5
3	Forestry and related workers	1,9	7
4	Blacksmiths, tool-makers and related trades workers	1,5	3
5	Metal moulders, welders, sheet-metal workers, structural-metal preparers	1,3	12
6	Wood treaters, cabinet-makers and related trades workers	1,3	11
7	Electrical and electronic equipment mechanics and fitters	1,2	10
8	Building finishers and related trades workers	1,2	21
9	Machinery mechanics and fitters	1,0	16
10	Housekeeping and restaurant services workers	1,0	17
11	Building frame and related trades workers	0,9	49
12	Nursing and midwifery associate professionals	0,9	4
13	Industrial robot operators	0,9	34
14	Mining and mineral-processing-plant operators	0,9	90
15	Numerical clerks	0,8	9
16	Painters, building structure cleaners and related trades workers	0,8	26
17	Assemblers	0,7	51
18	Cashiers, tellers and related clerks	0,7	23
19	Other machine operators not elsewhere classified	0,7	15
20	Physical and engineering science technicians	0,7	22
21	Metal-processing plant operators	0,6	53
22	Agricultural, fishery and related labourers	0,6	6
23	Shoe cleaning and other street services elementary occupations	0,6	30
24	Manufacturing labourers	0,6	20
25	Agricultural and other mobile plant operators	0,6	43
	Sum of top 25	0,9	
	Total	0,5	

Table 2 Belgium: Top-25 occupations with the highest PES vacancy inflow to unemployed ratio 2011Q3, with ranking 2011Q1

Ranking	Occupations (ISCO 88 - 3 digits)	Ratio v/u 2011Q3	ranking 2011Q1
1	Special education teaching professionals	14,3	24
2	Nursing and midwifery associate professionals	5,4	2
3	Police inspectors and detectives	4,2	12
4	Street vendors and related workers	3,1	1
5	Rubber- and plastic-products machine operators	2,4	5
6	Nursing and midwifery professionals	2,2	4
7	Business services agents and trade brokers	1,5	6
8	Assemblers	1,5	16
9	Safety and quality inspectors	1,4	7
10	Physical and engineering science technicians	1,4	11
11	Architects, engineers and related professionals	1,3	8
12	Blacksmiths, tool-makers and related trades workers	1,2	13
13	Power-production and related plant operators	1,0	9
14	Administrative associate professionals	0,9	14
15	Other specialist managers	0,9	18
16	Messengers, porters, doorkeepers and related workers	0,9	19
17	College, university and higher education teaching professionals	0,9	60
18	Production and operations managers	0,9	21
19	Finance and sales associate professionals	0,8	25
20	Material-recording and transport clerks	0,8	27
21	Machinery mechanics and fitters	0,7	22
22	Wood treaters, cabinet-makers and related trades workers	0,7	28
23	Metal- and mineral-products machine operators	0,7	41
24	Food and related products machine operators	0,7	38
25	Computing professionals	0,7	33
	Sum of top 25	1,0	
	Total	0,3	

Table 3 Cyprus: Top-25 occupations with the highest PES vacancy inflow to unemployed ratio 2011Q3, with ranking 2011Q1

Ranking	Occupations (ISCO 88 - 3 digits)	Ratio v/u 2011Q3	ranking 2011Q1
1	Animal producers and related workers	7,0	83
2	Agricultural, fishery and related labourers	5,3	6
3	Ships' deck crews and related workers	4,3	1
4	Power-production and related plant operators	4,0	84
5	Garbage collectors and related labourers	1,7	23
6	Street vendors and related workers	1,7	85
7	Miners, shotfirers, stone cutters and carvers	1,4	3
8	Health associate professionals (except nursing)	1,0	18
9	Glass, ceramics and related plant operators	1,0	2
10	Building caretakers, window and related cleaners	1,0	25
11	Food processing and related trades workers	0,7	8
12	Chemical-products machine operators	0,6	86
13	Potters, glass-makers and related trades workers	0,5	14
14	Mining and mineral-processing-plant operators	0,5	87
15	Computing professionals	0,5	9
16	Housekeeping and restaurant services workers	0,4	19
17	Metal moulders, welders, sheet-metal workers, structural-metal preparers	0,4	11
18	Health professionals (except nursing)	0,4	56
19	Legal professionals	0,3	20
20	Transport labourers and freight handlers	0,3	39
21	Personal care and related workers	0,3	27
22	Wood-processing- and papermaking-plant operators	0,3	24
23	Domestic and related helpers, cleaners and launderers	0,3	41
24	Secretaries and keyboard-operating clerks	0,3	21
25	Life science professionals	0,3	43
	Sum of top 25	0,6	
	Total	0,1	

Table 4 Germany: Top-25 occupations with the highest PES vacancy inflow to unemployed ratio 2011Q3, with ranking 2011Q1

Ranking	Occupations (ISCO 88 - 3 digits)	Ratio v/u 2011Q3	ranking 2011Q1
1	Legislators and senior government officials	3,5	6
2	Industrial robot operators	1,5	2
3	Rubber- and plastic-products machine operators	1,4	3
4	Electrical and electronic equipment mechanics and fitters	1,2	4
5	Blacksmiths, tool-makers and related trades workers	1,1	5
6	Nursing and midwifery associate professionals	1,0	1
7	Metal moulders, welders, sheet-metal workers, structural-metal preparers	1,0	12
8	Machinery mechanics and fitters	0,9	10
9	Locomotive engine drivers and related workers	0,9	7
10	Building finishers and related trades workers	0,8	18
11	Chemical-processing-plant operators	0,8	8
12	Metal- and mineral-products machine operators	0,7	13
13	Wood treaters, cabinet-makers and related trades workers	0,6	21
14	Health associate professionals (except nursing)	0,5	14
15	Wood-products machine operators	0,5	41
16	Administrative associate professionals	0,5	11
17	Ship and aircraft controllers and technicians	0,5	58
18	Architects, engineers and related professionals	0,5	20
19	Health professionals (except nursing)	0,5	15
20	Metal-processing plant operators	0,5	16
21	Precision workers in metal and related materials	0,5	25
22	Computing professionals	0,4	24
23	Garbage collectors and related labourers	0,4	22
24	Numerical clerks	0,4	17
25	Physical and engineering science technicians	0,4	23
	Sum of top 25	0,7	
	Total	0,2	

Table 5 Hungary: Top-25 occupations with the highest PES vacancy inflow to unemployed ratio 2011Q3, with ranking 2011Q1

Ranking	Occupations (ISCO 88 - 3 digits)	Ratio v/u 2011Q3	ranking 2011Q1
1	Ship and aircraft controllers and technicians	4,2	1
2	Mining and construction labourers	2,1	2
3	Garbage collectors and related labourers	1,3	3
4	Agricultural, fishery and related labourers	1,2	4
5	Primary education teaching associate professionals	1,1	5
6	Crop and animal producers	0,8	6
7	Building caretakers, window and related cleaners	0,7	7
8	Police inspectors and detectives	0,6	8
9	Glass, ceramics and related plant operators	0,5	9
10	Metal-processing plant operators	0,5	10
11	Client information clerks	0,5	11
12	Odd job workers	0,4	12
13	Social work associate professionals	0,4	13
14	Safety and quality inspectors	0,4	14
15	Manufacturing labourers	0,4	15
16	Transport labourers and freight handlers	0,4	16
17	Forestry and related workers	0,4	17
18	Market gardeners and crop growers	0,4	18
19	Food and related products machine operators	0,4	19
20	Pre-primary education teaching associate professionals	0,4	20
21	Business professionals	0,4	21
22	Shoe cleaning and other street services elementary occupations	0,4	22
23	Handicraft workers in wood, textile, leather and related materials	0,3	23
24	Mining and mineral-processing-plant operators	0,3	24
25	Personal care and related workers	0,3	25
	Sum of top 25	0,5	
	Total	0,3	

Table 6 Lithuania: Top-25 occupations with the highest PES vacancy inflow to unemployed ratio 2011Q3, with ranking 2011Q1

Ranking	Occupations (ISCO 88 - 3 digits)	Ratio v/u 2011Q3	ranking 2011Q1
1	Printing-, binding- and paper-products machine operators	1,3	13
2	Mathematicians, statisticians and related professionals	1,1	3
3	Assemblers	1,1	19
4	Senior officials of special-interest organisations	1,0	12
5	Special education teaching associate professionals	1,0	4
6	Rubber- and plastic-products machine operators	0,9	14
7	Textile-, fur- and leather-products machine operators	0,9	8
8	Other machine operators not elsewhere classified	0,8	9
9	Locomotive engine drivers and related workers	0,8	48
10	Pre-primary education teaching associate professionals	0,8	20
11	Forestry and related workers	0,7	25
12	Food processing and related trades workers	0,7	24
13	Glass, ceramics and related plant operators	0,7	5
14	Metal- and mineral-products machine operators	0,7	16
15	Textile, garment and related trades workers	0,6	15
16	Food and related products machine operators	0,6	21
17	Animal producers and related workers	0,6	11
18	Fishery workers, hunters and trappers	0,6	109
19	Wood-processing- and papermaking-plant operators	0,5	29
20	Library, mail and related clerks	0,5	17
21	Industrial robot operators	0,5	6
22	Craft printing and related trades workers	0,5	79
23	Building caretakers, window and related cleaners	0,5	27
24	Social work associate professionals	0,5	26
25	Cashiers, tellers and related clerks	0,5	33
	Sum of top 25	0,7	
	Total	0,2	

Table 7 Netherlands: Top-25 occupations with the highest PES vacancy inflow to unemployed ratio 2011Q3, with ranking 2011Q1

Ranking	Occupations (ISCO 88 - 3 digits)	Ratio v/u 2011Q3	ranking 2011Q1
1	Other office clerks	7,2	42
2	Ships' deck crews and related workers	1,7	2
3	Protective services workers	1,4	30
4	Social work associate professionals	1,3	75
5	Police inspectors and detectives	0,8	84
6	Housekeeping and restaurant services workers	0,8	19
7	Market gardeners and crop growers	0,8	20
8	Locomotive engine drivers and related workers	0,6	50
9	Mining and mineral-processing-plant operators	0,5	28
10	Wood-processing- and papermaking-plant operators	0,3	98
11	Machinery mechanics and fitters	0,3	13
12	Transport labourers and freight handlers	0,3	8
13	Assemblers	0,3	11
14	Ship and aircraft controllers and technicians	0,2	6
15	Building finishers and related trades workers	0,2	10
16	Building frame and related trades workers	0,2	29
17	Mining and construction labourers	0,2	9
18	Metal-processing plant operators	0,2	3
19	Finance and sales associate professionals	0,2	25
20	Electrical and electronic equipment mechanics and fitters	0,2	14
21	Painters, building structure cleaners and related trades workers	0,2	18
22	Nursing and midwifery professionals	0,2	24
23	Metal- and mineral-products machine operators	0,2	16
24	Motor vehicle drivers	0,2	33
25	Library, mail and related clerks	0,2	41
	Sum of top 25	0,3	
	Total	0,1	

Table 8 Portugal: Top-25 occupations with the highest PES vacancy inflow to unemployed ratio 2011Q3, with ranking 2011Q1

Ranking	Occupations (ISCO 88 - 3 digits)	Ratio v/u 2011Q3	ranking 2011Q1
1	Chemical-processing-plant operators	0,5	91
2	Food and related products machine operators	0,3	7
3	Industrial robot operators	0,3	12
4	Religious professionals	0,3	5
5	Agricultural, fishery and related labourers	0,2	33
6	Street vendors and related workers	0,2	4
7	Forestry and related workers	0,2	1
8	Crop and animal producers	0,1	16
9	Pelt, leather and shoemaking trades workers	0,1	2
10	Blacksmiths, tool-makers and related trades workers	0,1	8
11	Food processing and related trades workers	0,1	22
12	Protective services workers	0,1	18
13	Housekeeping and restaurant services workers	0,1	14
14	Other teaching professionals	0,1	64
15	Animal producers and related workers	0,1	28
16	Manufacturing labourers	0,1	21
17	Agricultural and other mobile plant operators	0,1	20
18	Fishery workers, hunters and trappers	0,1	3
19	Metal moulders, welders, sheet-metal workers, structural-metal preparers	0,1	11
20	Chemical-products machine operators	0,1	41
21	Other machine operators not elsewhere classified	0,1	56
22	Rubber- and plastic-products machine operators	0,1	10
23	Other office clerks	0,1	43
24	Material-recording and transport clerks	0,1	48
25	Textile, garment and related trades workers	0,1	6
	Sum of top 25	**0,1**	
	Total	**0,1**	

Table 9 Sweden: Top-25 occupations with the highest PES vacancy inflow to unemployed ratio 2011Q3, with ranking 2011Q1

Ranking	Occupations (ISCO 88 - 3 digits)	Ratio v/u 2011Q3	ranking 2011Q1
1	Stall and market salespersons	17,5	1
2	Special education teaching professionals	3,8	8
3	Legislators	2,9	4
4	Finance and sales associate professionals	2,8	6
5	Armed Forces	2,7	2
6	Pre-primary education teaching associate professionals	2,7	7
7	Nursing and midwifery associate professionals	2,2	3
8	Health professionals (except nursing)	2,1	5
9	Primary and pre-primary education teaching professionals	1,6	21
10	Architects, engineers and related professionals	1,5	12
11	Computing professionals	1,4	11
12	Legislators and senior government officials	1,3	22
13	College, university and higher education teaching professionals	1,1	9
14	Customs, tax and related government associate professionals	1,1	18
15	Other teaching associate professionals	1,0	15
16	Secondary education teaching professionals	1,0	36
17	Agricultural, fishery and related labourers	0,9	41
18	Business services agents and trade brokers	0,8	26
19	Physical and engineering science technicians	0,8	27
20	Social science and related professionals	0,8	23
21	Safety and quality inspectors	0,8	19
22	Health associate professionals (except nursing)	0,7	20
23	Protective services workers	0,7	13
24	Production and operations managers	0,7	29
25	Building frame and related trades workers	0,7	62
	Sum of top 25	**1,6**	
	Total	**0,4**	

Table 10 Slovakia: Top-25 occupations with the highest PES vacancy inflow to unemployed ratio 2011Q3, with ranking 2011Q1

Ranking	Occupations (ISCO 88 - 3 digits)	Ratio v/u 2011Q3	ranking 2011Q1
1	Optical and electronic equipment operators	1,5	1
2	Health professionals (except nursing)	0,5	3
3	Religious associate professionals	0,4	33
4	Metal- and mineral-products machine operators	0,4	7
5	Textile-, fur- and leather-products machine operators	0,4	8
6	Metal moulders, welders, sheet-metal workers, structural-metal preparers	0,3	25
7	Printing-, binding- and paper-products machine operators	0,3	91
8	Precision workers in metal and related materials	0,3	9
9	Computer associate professionals	0,3	4
10	Industrial robot operators	0,3	99
11	Mathematicians, statisticians and related professionals	0,2	104
12	Health associate professionals (except nursing)	0,2	12
13	Agricultural and other mobile plant operators	0,2	35
14	Rubber- and plastic-products machine operators	0,2	15
15	Building finishers and related trades workers	0,2	49
16	Client information clerks	0,2	11
17	Fashion and other models	0,2	85
18	Numerical clerks	0,2	68
19	Other teaching professionals	0,1	6
20	Life science technicians and related associate professional	0,1	47
21	Textile, garment and related trades workers	0,1	29
22	Other machine operators not elsewhere classified	0,1	55
23	Subsistence agricultural and fishery workers	0,1	105
24	Wood-products machine operators	0,1	80
25	Wood-processing- and papermaking-plant operators	0,1	67
	Sum of top 25	**0,2**	
	Total	**0,0**	

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