

ANALYTICAL HIGHLIGHT

FOCUS ON

Skills challenges in Europe

Key messages

- There are concerns that Europe has a skill mismatch problem: employers struggle to recruit people with the skills they need while unemployment levels remain relatively high following the economic crisis.
- Evidence from Eurofound's 2013 European Company Survey indicated that around 39 per cent of employers faced difficulties recruiting staff. But Cedefop notes that only a subset of employers reporting recruitment difficulties have offered a competitive job and are, thus, affected by a genuine shortage of skills – the remainder have difficulty locating existing skills due to inefficient HR practices, uncompetitive job offers or geographical barriers.
- The Cedefop European Skills and Jobs Survey indicates that a fifth of EU adult employees have lower skills than needed when starting their jobs, indicative of skill gaps at recruitment. However, over time most EU workers continually develop their skills, so 39% of them feel that their skills are not effectively utilised at work.
- If employees have access to skill development opportunities within their current jobs, they are more likely to be able to meet the future demands of those jobs. And if employers are able to make full use of the skills they have available, then this is also likely to reduce the degree of skill mismatch and potentially skill shortages.
- Solving the skill mismatch challenge lies in the hands of employers, individuals, education and training providers and the state: employers in providing training to increase their internal skills supply to avoid skills shortages, and individuals/training providers in continuing to invest in skills to avoid skills obsolescence. The state has a role too in ensuring that effective skills anticipation systems and matching instruments are in place, along with skills governance arrangements, so that skills supply is better matched to skill demand.

Skill Mismatches in Europe

The European economy – and that of all the Member States within it - is dependent upon possessing and using the skills that will allow it compete with the rest of the world. Evidence based on trends in the share of the EU's labour force by level of qualification, a proxy for the stock of skills, points towards the EU's labour supply becoming increasingly skilled with the passage of time. But there are concerns that there is a mismatch between the skills the labour market demands and those that the education and training system provides, given the rapid pace of innovation and new technologies as well as a lack of communication between the worlds of education and of work. In many respects this is the pre-eminent skills challenge facing the EU today.

The Cedefop publication *Skills, Qualifications and Jobs in the EU: the making of a perfect match* identifies the various dimensions to the concept of skill mismatches (over- and under-supply of skills by level and subject, skill obsolescence, etc.), and the inherent difficulty of measuring mismatches in practice and in a static way. Mismatches can be concisely defined as follows.

Employers unable to find the right talent, despite offering competitive wages, face skill shortages. Skill gaps arise where the skills required are unavailable in the workforce, for example, due to technological advance. Over or under-qualification is where individuals take jobs that do not match their qualifications. People are over or under -skilled where, whatever their qualification level, their skills do not match their job.

Source: Cedefop (2015)¹

Why do mismatches pose such a challenge? The main reason is that they impose costs on firms and individuals and, in aggregate, on Member States and the EU economy as a whole. Where firms cannot access the skills they require, for whatever reason, the evidence points to their organisational performance being adversely affected. And where individuals' skills are not well-matched to the jobs available they are likely to face a number of disadvantages, from not being able to find work to not being able to find satisfying or well-paid work that makes use of their abilities.²

Skill Shortages

There is a cyclical dimension to skill mismatches. Employers shed labour as the economy contracts, and then look to re-recruit skilled people as the economy recovers; but if there has been marked industrial restructuring in the economy during an extended period of economic downturn or people remain unemployed for a long period of time, rendering many of their skills obsolete, companies may struggle to find the right talent, which may act as a drag on the speed with which the economy recovers. It is notable that Manpower's 2015 Talent Shortage survey reports in relation to Europe that the proportion of employers reporting difficulties filling jobs was at its highest since the crisis of 2008.³

A rough and ready indication of the extent to which there is a 'structural rather than cyclical' mismatch between the supply of, and the demand for, labour is provided instead by a comparison of unemployment and vacancy rates. There has been concern that in some EU economies the ratio between the two rates has been widening over time, suggesting an increasing mismatch between the labour on offer and that required in the jobs available.⁴ This may not necessarily be a result of skill mismatches. It could just as easily be a result of locational imbalances: excess skill supply in one

¹ Cedefop (2015) *Skills, Qualifications and Jobs in the EU: the making of the perfect match*. Luxembourg: Publications of the European Union <http://www.cedefop.europa.eu/en/publications-and-resources/publications/3072>

² Wilson, R. and Hogarth, T. (2002) *Skills Matter: A synthesis of the evidence from the Extent Causes and Implications of Skill Deficiencies study*. Nottingham: Department of Education and Skills; Cedefop (2010) *The Skill Matching Challenge, Analysing Skill Mismatch and Policy Implications*, Luxembourg: Publications Office of the European Union.

³ Manpower (2015) *2015 Talent Shortages Survey*. http://www.manpowergroup.co.uk/wp-content/uploads/2015/06/2015_TalentShortageSurvey_FINAL_lores.pdf (Accessed January 2016)

⁴ Smith, C.J. (2012). *Unemployment and mismatch in the UK*. London: Bank of England C.http://www.bankofengland.co.uk/research/documents/ccbs/ccbs_cew2012/paper_smith.pdf (Accessed January 2016)

region and skill shortages in another, or lower recruiting intensity by employers.⁵ In the EU-28, unemployment rose from 7.0 per cent in 2008 to 10.2 per cent in 2014, but there were around two million vacancies in the EU in 2013.

So what are the types of labour and skill that employers struggle to recruit?

The European Vacancy and Recruitment Report 2014 outlined the top bottleneck occupations. These were mainly concentrated in high-skilled and professional areas: 18 out of the top 25 growth occupations require high-level skills, and 11 of the occupations are in the 'professionals' group.⁶ Bottlenecks are particularly strong in occupations related to:

- health, including personal care workers in health services;
- ICT, specifically in terms of software and applications developers and analysts, which is the top growth occupation across the EU;
- engineering, including: engineering professionals; mining, manufacturing and construction supervisors; and process control technicians;
- teaching, including: university and higher education teachers; other teaching professionals; and child care workers and teachers' aides.

Employer demand for people to work in these jobs is likely to be considerable. When one considers likely replacement demands in these growth occupations in the future – that is the additional number of jobs that will need to be filled as a consequence of growth in the total number of people employed, plus the need to replace those who leave these jobs for various reasons such as retirement – then total skill demand is likely to be substantial.

However, employers' difficulties in recruiting employees to certain occupations are not in itself proof of there being genuine skill shortages. The 2013 European Company Survey found that 39 per cent of employers experienced difficulties recruiting staff with the right skills. But upon closer inspection, analysis by Cedefop reveals that the causes of such recruitment bottlenecks can be multifaceted.⁷ Only a subset of the recruitment difficulties of employers can be genuinely explained by the fact that the skills they seek are not available (e.g. due to unresponsive education and training) even though they have posted a competitive vacancy. Genuine skill shortages reflecting education and training shortfalls are indeed likely to emerge in rapidly advancing and dynamic industries (e.g. ICT) - that is until new certification standards are established and skill requirements mature. However, there is also significant evidence that on many occasions, companies have difficulty attracting the right talent because of uncompetitive job offers relative to the industry standard, or because of inefficient human resource practices deployed. Sometimes skill shortages reflect geographical barriers, so in this case policies to foster job mobility may be required, rather than the revision or institution of new educational programmes.

Skills underutilisation

It is not just shortages that are of interest in relation to mismatches; there is also the issue of skills underutilisation to consider. In other words, the extent to which people's skills may not be effectively used as part of the tasks required in their current job (i.e. they are overskilled or overqualified). To some extent surpluses may be transitory in that people take a lower-level job in the expectation that

⁵ Faberman, J.R. (2014), *Recruiting intensity*, IZA World of Labor 21, <http://wol.iza.org/articles/recruiting-intensity/long>

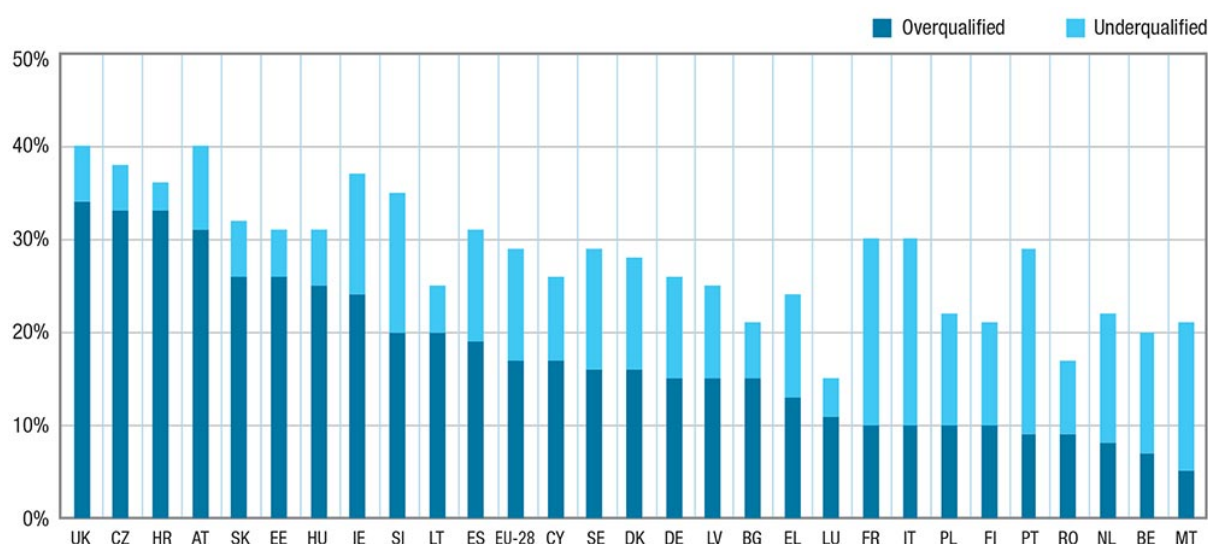
⁶ European Commission (2014) *European Vacancy and Recruitment Report 2014*. Luxembourg: Publications of the European Union

⁷ Cedefop (2015), *Skill shortages and skill gaps in European enterprises: Striking a balance between VET and the labour market*, Cedefop reference series No. 102, <http://www.cedefop.europa.eu/en/publications-and-resources/publications/3071>; also see <http://www.cedefop.europa.eu/en/publications-and-resources/statistics-and-indicators/statistics-and-graphs/esisurvey-insights-no1> (Accessed January 2016)

they will soon move in to employment commensurate with their skills. This can be particularly the case at times of economic recession, when a greater share of highly educated people compete for a limited pool of available jobs. But there is a growing concern that this may become a more widespread phenomenon in the long run, due to continued educational expansion that is coinciding with weak job creation in EU economies as well as a stagnant trend of job complexity.⁸

The Cedefop European Skills and Jobs Survey (EJS), conducted in 2014, provides timely information on the extent of skill mismatches in the EU. Figure 1 below shows the extent of mismatches measured at the level of qualification (i.e. the extent to which individuals regard their own qualification level to be higher or lower relative to the one needed, in their opinion, to carry out their current job). The data in Figure 1 shows that 17 per cent of the adult EU working population were over-qualified, 24% among those with a tertiary level degree, and 12 per cent were under-qualified. It also reveals that there are substantial differences between Member States with the UK, Czech Republic, Croatia, and Austria reporting relatively high levels of over-qualification, and France, Italy, and Portugal reporting relatively high levels of under-qualification. Younger female workers, adults returning back to the job market after unemployment as well as those in temporary jobs or lower-skilled jobs (e.g. plant and machine operators, sales and service workers, elementary occupations) are more likely to be overqualified. Older aged, experienced, workers are more likely to be underqualified, reflecting the evolution of qualification requirements in EU labour markets over time, though they typically possess the skills required to do their jobs.

Figure 1: Average incidence of qualification mismatch, adult employees, 2014, EU-28

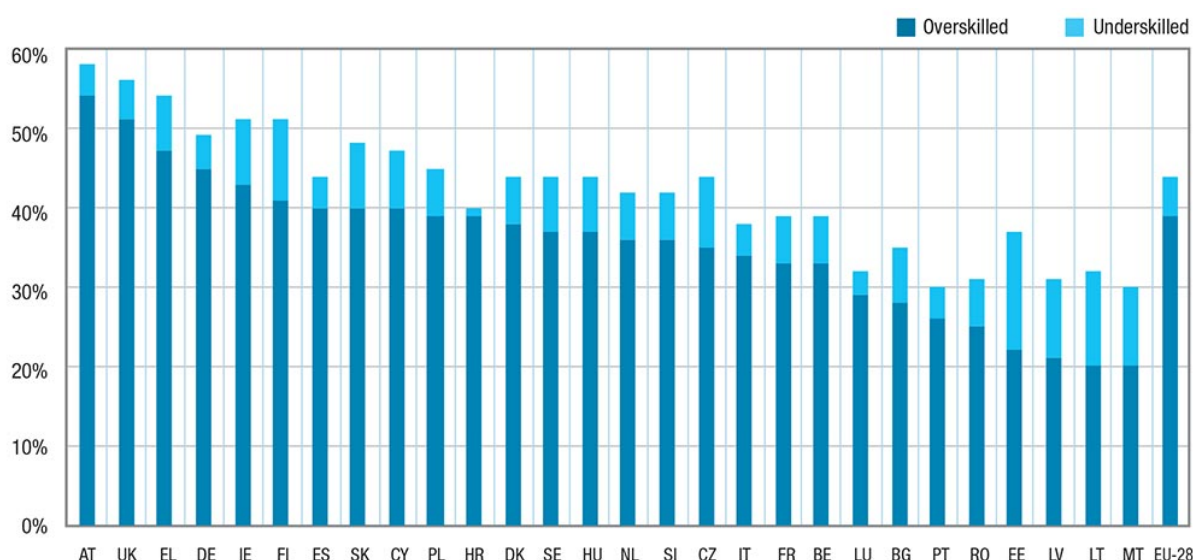


Source: European Skills and Jobs Survey / Cedefop (2015) *Skills, Qualifications and Jobs: the making of a perfect match?* – <http://www.cedefop.europa.eu/en/publications-and-resources/publications/3072>

There is significant variation in people's skills even if they possess the same qualification, similarly experienced workers may have the skills needed to perform their jobs even if, since the time they were recruited, their jobs may need a higher qualification level. Qualifications are thus a partial way of measuring skill mismatches, which is why the EJS survey also asked respondents about the extent to which the skills they possessed were higher or lower than those needed to do their jobs. Figure 2 provides the results. It shows that in the EU-28, 5 per cent of those in employment felt that they were under-skilled, and 39 per cent felt that they were over-skilled. Again there is variation by Member State: self-reported under-skilling was relatively high in the Baltic States, Czech Republic, Ireland, and Finland; and over-skilling was relatively high in Germany, Ireland, Greece, Austria, and the UK.

⁸ Pouliakas, K. and McGuinness (2015), *Deconstructing theories of overeducation in Europe: a wage decomposition approach*, IZA DP, No. 9698: http://www.iza.org/en/webcontent/publications/papers/viewAbstract?dp_id=9698

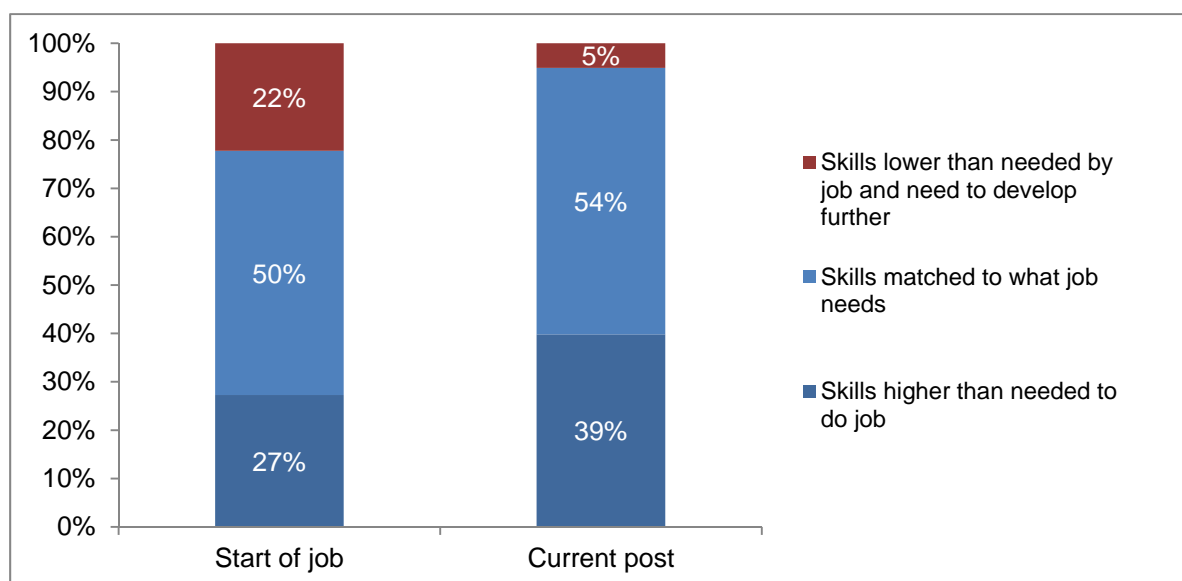
Figure 2: Incidence of skill mismatch, adult employees, 2014, EU-28



Source: European Skills and Jobs Survey / Cedefop (2015) *Skills, Qualifications and Jobs: the making of a perfect match?* – <http://www.cedefop.europa.eu/en/publications-and-resources/publications/3072>

What is critical to point out is that skill mismatch is not a static state and evolves since the time that people enter their jobs. For most workers their initial state of skill mismatch remains persistent over time. However it is also typical for the average employee, who may start his job with skill gaps, to continue to develop his/her skills within the job by engaging in both non-formal and informal learning. Cedefop's ESJ survey (Figure 3) shows that although a fifth (22%) of EU adult employees had lower skills than needed when starting their jobs, indicative of skill gaps at recruitment, over time 39% end up feeling that their skills are not effectively utilised at work. The trend towards greater levels of skill underutilisation arises because EU employees tend to feel that the complexity and skill intensity of their job tasks fails to keep up with their continual skill development.

Figure 3: Skill mismatch dynamics within jobs, adult employees, 2014, EU-28



Source: European Skills and Jobs Survey / Cedefop (2015) *Skills, Qualifications and Jobs: the making of a perfect match?* – <http://www.cedefop.europa.eu/en/publications-and-resources/publications/3072>

Tackling the Matching Challenge

As noted above, skill mismatches that do not prove to be transitory can be damaging to both employers (where they cannot find the skills to meet their business strategies) and individuals (who cannot find jobs that make good use of their skills). This all points to the importance of:

- **skills anticipation and matching systems and effective governance processes** that can indicate to job seekers – both younger and older people alike – the types of skills and associated qualifications for which there is both a current and expected future demand in the labour market. This relates to both job specific and generic / transversal skills. It also assumes that initial vocational education and training systems are sensitive to factors affecting the current and future demand for skills;
- **responsive initial vocational education and training** that can bridge the gap and coordination failures between the worlds of education and work. This requires strengthening and integrating work-based learning systems within upper secondary and continuing education and training systems and facilitating stakeholder collaboration in curricula design and implementation. Education and training systems must also respond to and reinforce the economic development potential of (local) economies.
- **the role of continuing vocational education and training** in ensuring that people's skills do not become obsolete and that employers have the skills they need to develop their businesses. Employers, individuals, and the state all have a role to play in this regard.
- **greater intra-EU migration and mobility**, which can bring about a better matching of the supply of skills to demand. Although mobility has been increasing across the EU in the past two decades its incidence remains markedly low and tends to be concentrated among young, well-educated males, who are often employed in jobs below their own level of qualification and skill⁹. Yet, in light of the anticipated pressure to the EU's working population as a result of demographic decline, greater mobility is likely to be a necessary ingredient for tackling skill shortages across regions and EU economies.

⁹ European Commission (2016), 'Mobility and migration in the EU: Opportunities and challenges', Ch. II.2, *Economic and Social Developments in Europe 2015*, Luxembourg, Publications Office of the European Union.