European Centre for the Development of Vocational Training

BRIEFING NOTE

Europe's skill challenge

Lagging skill demand increases risks of skill mismatch

The main findings of Cedefop's latest skill demand and supply forecast for the European Union ([1]) (EU) for 2010-20 (Box 1), indicate that although further economic troubles will affect the projected number of job opportunities, the major trends, including a shift to more skill-intensive jobs and more jobs in services, will continue.

Box 1: **Skill supply and demand forecast for 2020: main findings**

In the period up to 2020 the forecast indicates:

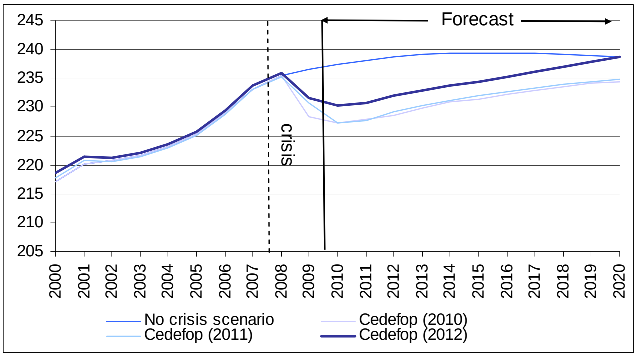
- around 83 million job opportunities due to a modest net increase in employment of around eight million new jobs (expansion demand) and around 75 million jobs that will need to be filled as people; retire or leave the workforce (replacement demand)
- job opportunities in all types of occupations, but most new jobs will be at the higher and lower end of the job spectrum, posing a risk of job polarisation
- most job opportunities will be in services;
- the trend towards more skill-intensive jobs at all levels will continue and many traditional manual or routine jobs will decline;
- a more highly-qualified workforce, with more than 80% of people having at least medium-level qualifications'
- that skill demand will lag behind skill supply and may lead to over-qualification in the short term.

The forecast takes account of global economic developments up to October 2011 and the latest Eurostat population projections. A modest economic recovery up to 2020 is forecast based on the European Commission's short-term macroeconomic projections and assumes continued fiscal consolidation in Member States, reestablished trust in the banking sector, higher consumer confidence and economic growth outside EU. The forecasting model has been updated since 2010 using new data and has been validated by national experts.

([1]) The forecast covers the 27 EU Member States plus Norway and Switzerland. In the figures it is referred to as EU-27+.

Between 2008 and 2010 Europe lost around 5.5 million jobs due to the economic slowdown (Figure 1).

Figure 1: **Past and future employment prospects (EU-27+)**



Although substantial, this is less than feared as EU Member States and social partners introduced policy measures (including support for short-time working arrangements) to avoid job losses. Cedefop's latest 2010-20 forecast assumes that problems in the Eurozone will not lead to another crisis and that a modest recovery will bring job growth in all Member States to varying degrees. The forecast is that there will be some eight million newly created jobs, but nearly 10 times more job opportunities, around 75 million, will arise due to the need to fill the jobs of people leaving the workforce.

The skill demand and supply forecast project is supported financially by Progress (European Community programme for employment and social solidarity (2007-13), managed by the Directorate General for Employment, Social Affairs and Inclusion of the European Commission

The forecast is produced every two years and will be a key building block of the forthcoming EU Skills Panorama

To access Cedefop's skill forecast data visit: www.cedefop.europa.eu

Skill demand: occupations and sectors

There will be job opportunities in all occupations (Figure 2), but distribution will be uneven. The figures indicate some job polarisation with job opportunities being concentrated in higher and lower skill level jobs, with slower growth in middle occupations. But most job opportunities will still be for jobs requiring medium-level qualifications (including many vocational qualifications) which will continue to employ around half of Europe's workforce.

Figure 2: **Total job opportunities (EU-27+)**

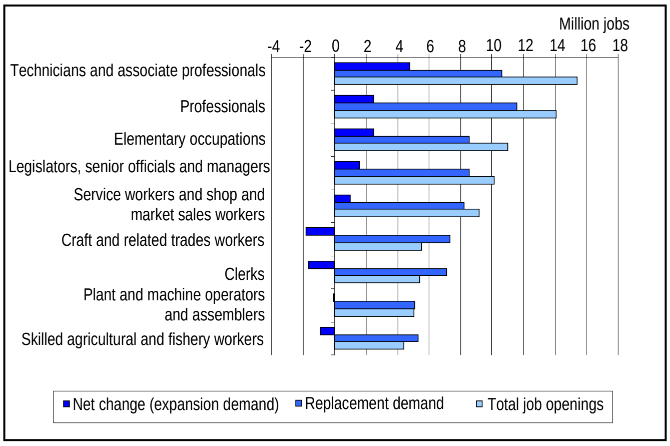


Table 1 shows the five occupational groups most in demand in the period up to 2020. These groups account for around 90% of the new jobs expected to be created and around 40% of the total job opportunities.

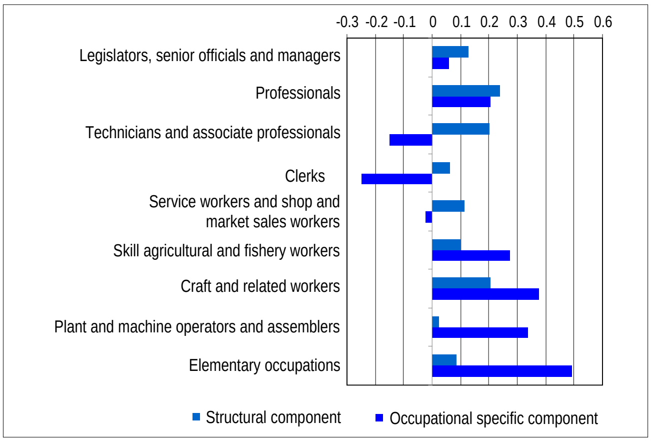
Table 1: **Top five occupations most in demand up to 2020 (millions)**

Occupation	Expansion demand	Replacement demand	Total job opportunities
Other associate professionals	2.9	5.8	**8.7**
Sales and services elementary occupations	1.0	6.2	**7.2**
Personal and protective services workers	0.5	5.6	**6.1**
Other professionals	2.0	4.0	**6.0**
Corporate managers	1.0	4.1	**5.1**
Totals	7.4	25.7	**33.1**

At all skill levels, jobs in demand will be characterised by non-routine tasks which are not easily replaced by technology or organisational change. The link between skill level and routine is not direct. Low-skill production line manufacturing jobs can be routine, but so too are many skilled jobs, including some craft and clerical ones. Some elementary occupations, such as personal care services, are non-routine and relatively unaffected by technological or organisational change.

The extent to which jobs are routine depends on their occupational specific and their structural specific components. Medium- to low- level skill jobs have a larger job specific component which is essentially the tasks in a job that can be altered by technological, organisational or even legislative changes. Figure 3 shows the relative contribution of each component to the growth rate of occupations. This implies a need to redesign upper- and post-secondary VET courses for occupations with a high job-specific component.

Figure 3: **Employment growth up to 2020: Structural and occupation specific components**



Trends identified by the quantitative forecast are supported by a qualitative analysis, which separates structural from cyclical economic trends. Table 2 shows the sectors predicted to grow most strongly or to decline in the years up to 2020. Sectors expected to expand irrespective of economic growth rates and demand levels are in the top half of the right-hand column. Sectors in the left-hand column are more sensitive to the business cycle and external factors, such as policy measures (e.g. environment legislation) or external shocks (e.g. a steep rise in oil prices). Much of the retail sector comprises supermarkets and retail stores with steady business, whereas the likelihood of reversing the long-term decline in agriculture is low. High growth in the car industry depends on a return to sustainable economic growth. The loss in jobs from manufacturing will slow down considerably.

Structural change is expected to be slower, compared to the last decade, but its extent and related skill demand varies both across and within Member States. Production has continued to move eastwards concentrating manufacturing in central and eastern European Member States. Economic recovery in some newer Member States is supported by specialisation in production and assembly activities, resulting in a relative concentration of medium-skilled jobs. Comparatively high levels of qualifications, efforts to keep down labour costs and better infrastructure have enabled some Member States to remain competitive in several manufacturing industries and job losses in this sector due to relocation outside the EU have been fewer than expected. Numbers of high-skilled jobs have increased across Member States. Services including tourism, health care and IT are still expected to provide most job growth in the years up to 2020, but at a slightly slower rate, partly due to austerity measures and cutbacks in public and private spending and investment.

Table 2: **Sectors*: growth and uncertainty**

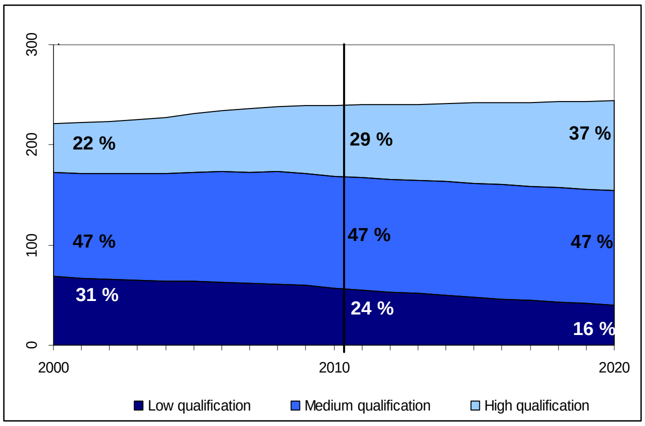
Growth rate: years up to 2020		Uncertainty: High	Uncertainty: Low
	High	• Pharmaceuticals • Mechanical engineering • Motor vehicles • Construction • Distribution • Hotels and catering • Land transport • Air transport • Insurance • Education • Health and social work	• Manufacturing (not classified elsewhere) • Water supply • Retailing • Water transport • Communications • Banking and finance • Computing services • Professional services • Other business services • Miscellaneous services
	Low	• Oil and gas • Food, drink and tobacco • Wood and paper • Printing and publishing • Chemicals (not classified elsewhere) • Rubber and plastics • Non-metallic mineral production • Basic metals • Electrical engineering and instruments • Electricity	• Agriculture, forestry and fisheries • Coal • Other mining • Textiles, clothing and leather • Manufactured fuels • Metal goods • Electronics • Other transport equipment • Gas supply • Public administration and defence

* Sectors are not listed in any order of priority.

Trends for skill supply

Types and levels of qualifications in the workforce vary between Member States and there are only limited signs of convergence. This reflects different national education and training traditions and skill demand. Overall in Europe, numbers of people with medium- and high-level qualifications will continue to rise (Figure 4) as, generally, young people will have higher qualifications than the older workers who retire.

Figure 4: **Labour force by qualification 2000-20 (millions)**



The share of people with high-level qualifications should rise to more than a third of the workforce. People with medium-level qualifications will continue to account for about half of the workforce. A higher proportion of women are obtaining higher education qualifications than men. At professional level, more and more women are working in several traditionally male-dominated sectors. Young people with low or no qualifications will find it increasingly difficult to get a good job and, owing to a lack of job, opportunities some young people have stayed in education and training.

Mobility within the EU, immigration into the EU from outside countries and people emigrating to live outside the EU influence the size and skill composition of the workforce in Member States and have important implications for skill demand and supply. Cedefop's analysis indicates that there is no significant negative impact (or 'brain drain') due to people leaving one Member State to work in another. However, most Europeans prefer not to move to find a job in another Member State or outside the EU, even though they may have the qualifications. Data indicate that immigration (including mobility within the EU) does not appear to increase skill imbalances or mismatch in host countries. It appears that immigration, generally, contributes to a small rise in the qualification level of the working population.

Matching skill demand and supply

Cedefop's forecast suggests that despite current high levels of unemployment, there are also some signs of skill shortages. The most significant shortages are in occupations where workers need highly specific qualifications such as life science and health-associate professionals and teaching-associate professionals. But there are also pointers to shortages in sales, services and some elementary occupations.

To gain insight into future skill imbalances, Cedefop developed an indicator of possible difficulties in recruiting for occupations by looking at the likelihood of a job being filled by someone with the appropriate qualification level. For the occupations forecast to be in most demand (Table 1), it appears that, in the near future, there is likely to be little difficulty in finding recruits with the appropriate qualification level to fill jobs for highly qualified workers. In contrast, sales, services and elementary occupations may face very high difficulties. This depends on the speed of economic recovery and other factors, such as the quality of working conditions (which may be poor and make these occupations unattractive) and numerically significant replacement demand.

According to the forecast, the slowdown has constrained economic growth and skill demand. As a result, initially, supply of higher qualifications will rise faster than demand for them. Weak employment demand is currently increasing competition for the jobs available. Consequently, people may be more willing to accept jobs for which they are overqualified and, occasionally, part-time work or other less favourable conditions, including lower wages. Under these conditions, highly qualified people sometimes displace lower-skilled people from jobs.

If temporary, over-education is not necessarily a problem. Better qualified people have a better chance of keeping a job and, once in employment, they may be more innovative and change the nature of the job they are doing. Highly skilled people may also find it easier to transfer skills gained in one sector to a job in another. Cedefop studies, however, show that over-education tends to persist. It may lower productivity as people become discouraged and frustrated in their job and as their skills, by being unused or undeveloped, become obsolete.

Skill mismatch is more than a discrepancy between labour market needs and particular skill levels as measured by qualifications. It is often about lack of the 'right' skills and the mismatch between the fields people study and those the labour market requires. Employers point to shortages linked to too few young people studying science, technology, engineering or mathematics and report on skill shortages in specific professions. About 40% of young people currently leave education with a university degree or equivalent, but it is difficult to plan for the specialisations and wider skills they will need. The search for the 'right' skills is, to some extent, reflected in the increasing numbers of students opting for upper-secondary, pre-tertiary- and tertiary-level vocational qualifications.

But the labour market is not static and the 'right' skills change over time and in different places. Macro-level skill forecasts have limits and more detailed sector, national or regional skill analyses are essential to improve the match between demand and supply. Partnerships of various stakeholders, including education and training providers, social partners and employment services are necessary to improve labour market intelligence and coordination. This can be costly, but so too is skill mismatch. Better vocational guidance and counselling services can help people make informed choices about their careers and the education and training they need. They can also help enterprises to plan and develop the skills they require.

A highly qualified and well trained labour force is one of, if not the, most important factor for European competitiveness. That the EU is well on track to reach its targets to raise the qualification levels of the workforce is good news and important for economic recovery. However, given the current economic situation, further efforts are needed to reduce mismatch and to ensure that Europe gets the best out of the most highly qualified and most talented workforce in its history.

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