Replacement demand: driving millions of job openings across the EU

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Key messages
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Introduction: understanding replacement demand

There will be 97 million job openings across Europe between 2015 and 2025 according to the 2016 Cedefop skills supply and demand forecasts. Almost 93% of these openings will arise because a worker leaves a job and must be replaced. This phenomenon is called replacement demand, which refers to those job openings arising from retirements, net migration, movement into other occupations and in-service mortality. In contrast, expansion demand arises from overall growth, i.e. from new jobs being created. Understanding the nature of replacement demand is therefore a crucial aspect of labour market analysis and policy, since it creates substantially more job openings than economic growth.

The demographic trends that give rise to replacement demand can present a challenge for labour markets - but also an opportunity for job seekers. Foremost amongst these trends is the effect of an ageing workforce. About half of replacement demand is due to persons retiring from the workforce; the other half is due to various other reasons, such as workers changing jobs or temporarily leaving the workforce. Migration can also play a role in determining replacement demand, but is not experienced equally across Europe. While emigration is an important driver for replacement demand in Eastern and parts of Southern Europe, immigration may help to fill vacancies in other countries.

Replacement demand can mean that the results of skills demand forecasts are sometimes counter-intuitive. Replacement demand creates a large number of job openings in some otherwise-shrinking occupational fields (such as agriculture) due to large numbers of retiring workers. Conversely, the comparatively low number of job openings in otherwise-growing occupations may surprise at first. As an example, consider technicians and associate professionals. This occupational group is growing, but the workforce is so young that few leave for retirement, thus few job openings emerge. Yet another counter-intuitive result is that there are high levels of replacement demand in some countries with high levels of (youth) unemployment, indicating a certain amount of qualification mismatch.

Replacement demand is not easy to project – prolonged retirement ages across Europe, changing labour market participation rates by women, and other trends all have an effect. It is therefore crucial for policy makers to analyse updated replacement demand projections regularly, especially when these are used to inform education and training policies.

Large differences across Europe

As Figure 1 shows, replacement demand in the 10-year period between 2015 and 2025 is projected to amount to up to 60% of the 2015 workforce in some countries. These large numbers are mainly due to age-related retirement, sometimes in combination with the emigration of younger workers. Countries with high replacement demand may face a particular need to address it through their education and training policy, but potentially also with appropriate migration policies aiming to tackle skills mismatches.

When it comes to the contribution of replacement demand to the total number of expected job openings (the overall requirement), there are also significant differences between countries. Notably, in some
countries (such as Bulgaria, Romania, Estonia, Latvia and Germany) replacement demand exceeds overall requirement. This indicates a situation in which due to a projected decline in the overall number of jobs, not all workers leaving a current job will be replaced.

However, a declining overall employment level does not mean that there are no shortages in the labour market, as the replacement demand can still exceed the supply of new labour. At the same time, a high level of replacement demand does not necessarily translate into job opportunities for the unemployed if their qualifications do not match the required skills or if they do not possess the necessary experience, as is discussed below.

Figure 1: Replacement Demand and Overall Requirement 2015-2025 (EU-28)
Source: 2016 Cedefop skills demand and supply forecasts

Occupational differences in replacement demand
Replacement demand differs substantially between occupations across Europe, depending in part on the age structures of those in employment, but also due to the country’s experience of the other trends that drive demand (such as persons temporary leaving the workforce, official retirement ages, migration flows etc.). Figure 2 gives an overview of the 10 major occupational groups in the Cedefop skills demand and supply forecasts and indicates which parts of the current workforce are projected to experience high overall demand in the next 10 years.

**Figure 2: Replacement Demand in 10 Major Occupational Groups (EU-28)**

![Replacement Demand and Overall Requirement 2015-2025](image)

*Source: 2016 Cedefop skills demand and supply forecasts*

Replacement demand, as compared to expansion demand, is often low in occupations that have experienced net growth in recent years and in which the workforce is relatively young as a result (e.g. technicians and associate professionals). On the other hand, replacement demand tends to be relatively high in occupations belonging to traditional sectors with an older workforce on balance (e.g. skilled agricultural workers). An interesting special case is that of occupations which require specific education and work experience (e.g. legislators, senior officials and managers⁷). In this occupational group, replacement demand is high. However, these openings may not be available to many job seekers, as the lion’s share of such employees are aged 40 and over and job requirements are very specific.⁸
When it comes to vocational education and training (VET) policy, a deeper look is therefore necessary to identify the right solutions to shortages arising from replacement demand. While encouraging an initial vocational career orientation and vocational education and training may help in some areas, supporting the immigration of qualified specialists or providing continued opportunities for adult training and education may be the right answer in others. In any case, VET policy should factor in occupational fields that will experience large replacement demand, not only the ‘new and interesting’ occupations that are growing in absolute terms.

Figure 2 also shows that the total number of openings (overall requirement) tends to be large in both high-skilled and elementary occupations, but less so in occupations which are considered to require medium-level skills. In the former groups, replacement demand occurs jointly with expansion demand, i.e. openings arising from both replacement demand and the overall growth of the occupation. In some of the latter occupational groups, negative expansion demand means that the overall number of jobs is declining. This phenomenon has often been described as job market polarisation.

The highest number of job vacancies for entrants to the labour market or the unemployed will thus be in occupations that have high replacement and expansion demand, and are not primarily senior or executive occupations: for example, business and administration associate professionals, and also elementary service occupations such as cleaners and helpers. In these fields, demand may be expected to remain high over the years to come.

**Sectoral differences in replacement demand**

Due to different occupational and qualification structures, different sectors will face replacement demand to varying degrees. Measured by the share of workers expected to leave the sector from 2015 until 2025, replacement demand is largest in agriculture (65%) and in some non-marketed services such as education (45%). Agriculture is deserving of particular policy attention, since hard-to-fill vacancies in this sector persist despite an absence of overall growth and low formal qualification requirements for most sector-specific occupations – indicating low (perceived) attractiveness. In the education sector, the large replacement demand is mainly due to a high proportion of teaching professionals expected to leave their jobs (49 % from 2015 until 2025).

The lowest replacement demand rates can be found in mining and quarrying, some manufacturing subsectors, construction and distribution (35 % to 36 %).

**Replacement demand for low qualifications, expansion demand for high qualifications**

Figure 3 indicates that there will be 47 million total job openings for ISCED education levels 5 and 6 (tertiary education) between 2015 and 2025, but only 12 million openings for ISCED education levels 1 and 2 (lower secondary education or below).

**Figure 3: Replacement Demand and Overall Requirement for Qualification Levels (EU 28)**
Job openings for lower education levels are expected to arise primarily due to replacement demand, because the overall number of these jobs is declining. Therefore, not all workers who leave the workforce will be replaced, and the total number of openings will remain relatively low. While VET policy does not necessarily need to focus on these fields, the openings may present opportunities for low-skilled unemployed persons who can be re-integrated in the labour market after some job-specific training.

For higher education levels, job openings are expected to arise both from replacement demand and expansion demand, creating a large total number of openings. It is striking that, according to 2016 Cedefop skills and demand forecasts, demand for higher levels of educational attainment will also increase in elementary occupations. Whether this is a result of qualification mismatch, or whether it reflects skills upgrading in formerly basic occupations, remains to be fully seen. Current research indicates that both effects may play a role. These findings are relevant because they indicate that an education policy solely focused on increasing the supply of highly qualified persons may be misguided, and that addressing skills mismatch is at least equally important.

References


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**Footnotes**

[1] ‘Europe’ includes the EU-28. Unless stated otherwise, all results in this Analytical Highlight are taken from the 2016 Cedefop skills demand and supply forecasts.

According to Eurostat (2015), in Bulgaria, Ireland, Greece, Spain, Croatia, Cyprus, Poland, Portugal, Romania and the three Baltic Member States, emigrants outnumbered immigrants in 2013, the latest year for which reliable data is available. In the 16 other member countries, there was more immigration than emigration.


Bulgaria is an example of a country that has experienced net emigration during the last years – see OECD (2015), p.190-191. The emigration of younger workers to other European countries has created a challenge for some Baltic countries. Consider Statistics Estonia (2015) as an example.

This occupational group includes ISCO codes 11 (Chief executives, senior officials and legislators), 12 (Administrative and commercial managers) 13 and 14 (Managers in services).

According to Cedefop (2014b), O*NET (available at: https://www.onetonline.org) and Cedefop (2013) senior management and legislative occupations require a high overall skills level, including specific skills such as complex problem solving, decision making, communication, numeracy/financial, intellectual and technological skills, but also prior experience.


