



# Will you still need me when I'm 64? Training and demographic change

## The decline in vocational education and training students and graduates

Assuming constant education and training participation and graduation rates, Europe will lose two million vocational education and training (VET) students between 2005 and 2030 and around 600 000 VET graduates over the same period. Fewer VET students and graduates may lead to labour-market shortages for people with VET qualifications.

These are some of the findings of a Cedefop report <sup>(1)</sup> that fills a gap in understanding the impact of demographic trends on initial VET in the European Union (EU). The report emphasises the major challenge demographic change poses for Europe in the coming decades. The decline and rapid ageing of Europe's population have considerable consequences for future labour supply and may negatively affect European economic growth and competitiveness.

### Not many years from now: baseline, high and low population scenarios

The report presents short-, medium- and long-term projections of the future number of students and graduates, aged 15 to 24, in prevocational and vocational programmes for secondary, post-secondary and tertiary education levels <sup>(2)</sup> over the

period 2005-50 with a focus on the years up to 2030. The analysis is based on Eurostat population projections. It assumes unchanged participation and graduation rates and unchanged policies to track solely the effects of demographic trends. The trends clearly point to declining numbers of VET students and graduates for several population scenarios (see Table 1).

**Table 1: Population trends scenarios**

- **Baseline:** assumes a gradual rise of the total fertility rate, a continuing increase of life expectancy and a surplus net migration in the future.
- **High population:** assumes high fertility rates, high life expectancy and high net migration.
- **Low population:** assumes low fertility rates, low life expectancy and low net migration.

Source: Eurostat, EUROPOP 2004.

## Wasting away: fewer VET students and graduates

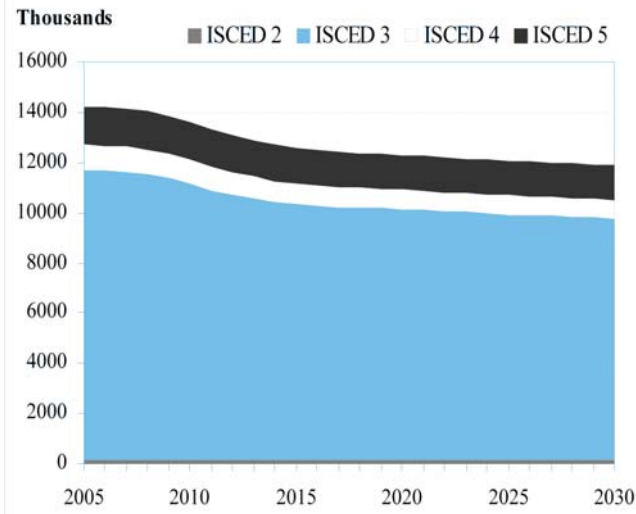
Assuming education and training participation rates remain unchanged; in 2030 the EU will have 2.3 million fewer VET students aged 15-24 compared to 2005, under the baseline scenario. This is a fall of 17 % from 14.2 million in 2005 to 11.9 million in 2030. Particular problems lie at upper secondary level (ISCED 3) where VET student numbers fall by almost two million from 11.5 million in 2005 to 9.6 million in 2030. A sharp fall is imminent as the loss of VET

<sup>(1)</sup> Cedefop. *Implications of demographic change for vocational education and training in the EU*. Luxembourg: Publications Office, 2008.

<sup>(2)</sup> International Standard Classification of Education: ISCED 2 – lower-secondary education; ISCED 3 – upper-secondary education; ISCED 4 – post-secondary education; ISCED 5 – in the analysis understood as 5B, first stage of tertiary education.

students is particularly steep between 2009 and 2015 (Figure 1).

Figure 1: Projected number of VET students aged 15-24 by ISCED level, EU-27, 2005-30, baseline scenario/constant education and training participation



Fewer VET students obviously means fewer VET graduates. Assuming constant rates, the number of initial vocational education and training (ISCED 3-5) graduates will fall by 600 000 between 2030 and 2005, according to the baseline scenario.

Even the high population scenario foresees a decline in student numbers by more than 10 % until 2020. Although afterwards the number of students is expected to recover, in 2030 it is still 4 % lower compared to 2005. The low population scenario makes the situation even worse: in 2030 there will be four million fewer students than in 2005, a decline of around 30 %.

Differences between countries are shown in Table 2, which gives projected numbers for students in prevocational and vocational streams at all ISCED levels. Eleven Member States (Bulgaria, the Czech Republic, Germany, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovenia and Slovakia – 10 of which are newer EU Member States), account for a fall of 1.7 million VET students, which represents 73 % of the total decline in the EU by 2030. Denmark, Ireland and Luxembourg are likely to experience an increase of VET students.

Table 2: Projected number of students aged 15-24 in prevocational and vocational streams, ISCED 2-5, EU-27, 2005-30, baseline scenario/constant education and training participation (000s)

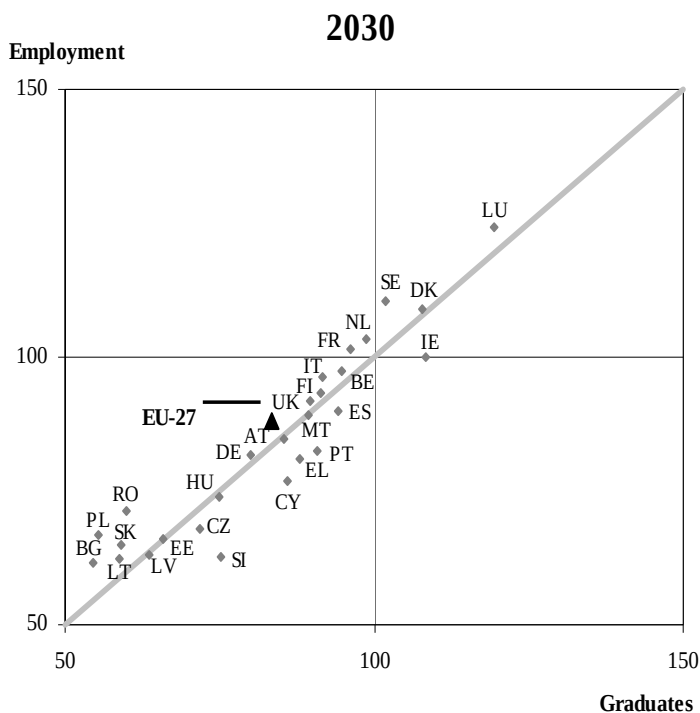
| Member State   | 2005   | 2010   | 2030   |
|----------------|--------|--------|--------|
| EU-27          | 14 247 | 13 623 | 11 890 |
| Belgium        | 522    | 535    | 489    |
| Bulgaria       | 199    | 157    | 108    |
| Czech Republic | 441    | 411    | 318    |
| Denmark        | 108    | 123    | 111    |
| Germany        | 2 344  | 2 287  | 1 866  |
| Estonia        | 40     | 35     | 26     |
| Ireland        | 100    | 91     | 107    |
| Greece         | 312    | 278    | 270    |
| Spain          | 585    | 534    | 552    |
| France         | 1 907  | 1 846  | 1 836  |
| Italy          | 1 331  | 1 319  | 1 186  |
| Cyprus         | 18     | 17     | 14     |
| Latvia         | 53     | 45     | 33     |
| Lithuania      | 74     | 70     | 43     |
| Luxembourg     | 13     | 15     | 16     |
| Hungary        | 194    | 185    | 146    |
| Malta          | 7      | 7      | 6      |
| Netherlands    | 510    | 535    | 501    |
| Austria        | 320    | 330    | 273    |
| Poland         | 1 220  | 1 042  | 720    |
| Portugal       | 100    | 93     | 91     |
| Romania        | 725    | 550    | 430    |
| Slovenia       | 105    | 90     | 79     |
| Slovakia       | 224    | 198    | 137    |
| Finland        | 144    | 149    | 133    |
| Sweden         | 233    | 261    | 233    |
| UK             | 2 420  | 2 420  | 2 165  |

Whether and to what extent fewer VET graduates entering the labour market will lead to labour market shortages for those with VET qualifications is not yet clear.

## Who could ask for more? Potential skill shortages

A comparison of projected supply of VET graduates with projected employment trends for young people aged 15-24 <sup>(3)</sup> is shown in Figure 2. Many EU Member States are above the diagonal, indicating that numbers of VET graduates are declining relative to employment. Belgium, Bulgaria, France, Italy, Lithuania, Luxembourg, the Netherlands, Poland, Romania, Slovakia, Finland, Sweden and the UK, as well as the EU as a whole, are expected to experience a bigger fall in VET graduates compared to job growth for 2030. This indicates potential labour market shortages of VET graduates.

Figure 2: Indices of projected numbers of VET graduates, ISCED 3-5, and projected employment, by Member State, age group 15-24, 2030 (2005=100)



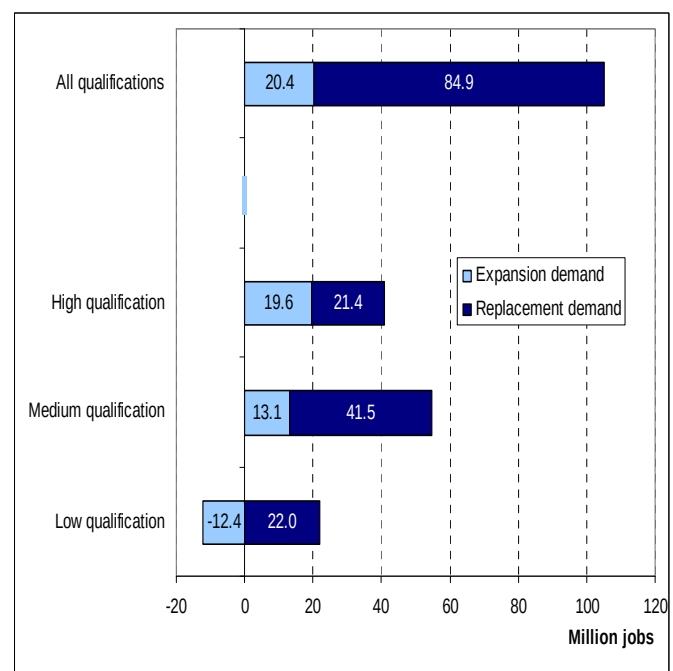
There is other evidence that fewer labour market entrants with VET qualifications may have severe implications for the skilled labour supply. A separate

<sup>(3)</sup> Estimated on the basis of European Commission's long-term labour force projections, Carone 2005.

Cedefop study <sup>(4)</sup> looks at skill needs in economic sectors, occupations and levels of qualification required over the period 2006-20. It concludes that high replacement demand and increasing skill requirements threaten to increase skill gaps and shortages.

According to the study, most new jobs over the period 2006-20 will require high-level qualifications. The study also has different scenarios and, according to its own baseline scenario, some 55 million, nearly 58 % of the forecast total of 105 million job openings, (new jobs plus jobs open to replace people leaving the labour market) are expected to require medium-level qualifications (Figure 3). Many of these jobs will require vocational qualifications. Cedefop is working on a complementary forecast of skill supply to identify potential future labour-market imbalances. Results are expected in 2009.

Figure 3: Demand by level of qualifications, EU, 2006-20, changes in millions, EU-25+ <sup>(5)</sup>



<sup>(4)</sup> Cedefop. *Future skill needs in Europe: focus on 2020*. Available from Internet: [www.trainingvillage.gr/etv/Information\\_resources/Bookshop/publication\\_details.asp?pub\\_id=498](http://www.trainingvillage.gr/etv/Information_resources/Bookshop/publication_details.asp?pub_id=498)

<sup>(5)</sup> All EU Member States (except Bulgaria and Romania), plus Norway and Switzerland.



## When I'm 64? Policy implications

The nature of demographic change in the EU is quite clear. How to deal with its consequences is another issue. Cedefop is analysing how Member States are addressing these problems <sup>(6)</sup>.

Over 50 % of upper secondary education graduates in the EU come from prevocational and vocational programmes, but with significant differences across countries. To increase the number of VET graduates, most countries are trying to attract more young people, of all abilities and backgrounds, into VET by improving its quality. Some countries are (re)introducing apprenticeship or alternance training to encourage people to stay in or re-enter education and training. However, more effort is needed.

Keeping the number of students in initial vocational education and training at current levels would require a 20 % increase in participation rates by 2030, according to the baseline scenario. As education participation rates are already high for those aged 15-19, this implies a substantial shift from general to vocational education. This raises the question of the balance between general and vocational education and training. Fewer students in initial vocational education and training could have far-reaching implications for teacher and trainer recruitment, infrastructure requirements as well as the labour market.

If the number of VET graduates cannot be raised, demographic change offers unprecedented opportunities to deepen rather than widen investment in human capital. Potential public budget savings resulting from the falling numbers of students could be used to improve the quality and effectiveness of VET. This may include increased and targeted learner support, smaller student-teacher ratios, more and better teacher and trainer training throughout their careers and investment in infrastructure and equipment. More and better training measures could be provided to specific groups underrepresented in training and/or employment participation.

The European population's ageing requires tapping the employment potential of people throughout their lives by improving quality of work, investing in human capital, equal opportunities and modernising social protection systems. Member States are increasingly providing targeted VET and support for low-skilled people, migrants, ethnic groups, early school leavers, older workers and disabled people.

Examples of good practice range from tailor-made training to inclusive education. Guidance and counselling support work and learning choices and validation of non-formal and informal learning is seen as a tool to make better use of skills and knowledge acquired in the labour market. There is a trend to combine targeted support, mentoring and language learning to help migrants succeed in VET. Overall, the measures come together to ease transition from education to work or re-entry into education and training and the labour market.

More broadly, there is some discussion of better arrangements to combine (part-time) jobs, education and childcare and even allowing people to work after 65, supported by adequate training. However, there is no uniform policy response. The challenge for European VET is to target diversified groups adequately.

However, the need for continuing VET and lifelong learning programmes can be expected to expand considerably as they are crucial to Europe's efforts to reposition itself in the global economy and respond to the social challenges posed by ageing societies.



<sup>(6)</sup> Cedefop policy report, 2009 (forthcoming).