

*Since the 1990s, the percentage of Europeans with higher education has increased significantly, rising to nearly 50% of those in the labour market in some countries. Concurrently, labour markets are increasingly losing middle-skilled jobs to either low-skilled or highly skilled ones. This has been coupled with equally significant demographic changes, with the number of elderly people rising relative to the number of working-age people. As a result of these ongoing transformations, there are many uncertainties around the future of work. Furthermore, trying to predict the evolution of labour demand by skill level over the next 15 years is proving to be challenging.*

*This **Migration Data Brief** focuses on the evolution of the working-age population with higher education and on the labour force of European countries up to 2030. It takes a particular look at the potential role of migration flows, based on projections carried out under the joint OECD - European Commission project, "Migration Demography Database: A Monitoring System of the Demographic Impact of Migration and Mobility".*

## Will migration help increase the educational level of the European labour force by 2030?

- OECD projections show that the share of individuals with higher education in the working-age population of EU countries is likely to increase from 26% in 2015 to 34% under mild assumptions regarding future migration flows and educational attainment trends.
- Between 2015 and 2030, the number of those with higher education is set to increase by a total of 28 million. Over the same period, the number of individuals with secondary education or less will decline tremendously in most age groups, with an overall decrease of 29 million.
- In the time horizon until 2030, migration flows from third countries will play a relatively minor role in the evolution of the highly-educated labour force in the EU as a whole. In a number of countries, such as Luxembourg, Ireland, or Sweden, the impact could be considerable. In those countries, the anticipated rise of the highly educated working-age population would be quite sensitive to migration policies.
- More selective migration policies from third countries would lead to a gain of about 3% in the tertiary-educated working-age population of EU countries in 2030.
- In about half of EU Member States, the tertiary-educated working-age population is expected to increase by up to 25% between 2015 and 2030, with little sensitivity to the migration scenario.

## Educational levels are rising in OECD labour markets, even as jobs are changing

Over the last few decades, the share of the working-age population with higher (tertiary) education has increased very significantly in OECD countries, including European ones. In the early 1990s, the share of 25-64 year-olds with tertiary education in EU countries ranged from less than 10% to about 25%. In 2016, it ranged from 20% to more than 40%. The speed of this progression has naturally varied across countries, but the overall trend is clear. This change has been even more acute in the labour force (those actively looking for work or in work), where the share of tertiary educated is approaching 50% in several EU countries.

The economic and social underpinnings and implications of this evolution cannot be overlooked. In a globalised economy, and in the current context of fast technological change – which is itself fuelled by innovations made possible by the rising educational attainment of the population – companies in most economic sectors need a skilled workforce to remain competitive. To retain existing firms and encourage new investments, governments therefore have strong incentives to promote and fund higher education systems, as well as try and attract highly educated foreign workers through selective immigration policies. At the same time, future workers (and their parents) who wish to benefit from good employment prospects need to invest time and money in their education. In doing so, they will sometimes choose to emigrate to countries where their skills will be better rewarded.

Recent analyses have also highlighted an increasing polarisation of labour markets, in which middle-skill jobs have lost out to low and highly skilled ones, in almost all European countries since the mid-1990s (Autor and Dorn, 2013; Goos et al, 2009; OECD, 2017a). This labour market polarisation is partly explained by a shift away from manufacturing, a sector historically characterised by a high number of middle-skill jobs, and into services. Polarisation has also occurred within industries and not only as a consequence of the decline in manufacturing. Moreover, as a result of population ageing itself, labour demand will probably increase in the future in sectors such as healthcare or domestic services, where a mix of relatively low-skilled and highly-skilled jobs are required.

As a result of these ongoing transformations and of emerging new jobs and services associated to digitalisation, there are important uncertainties around the future of work. This is also why trying to predict the evolution of labour demand by education and skill levels over the next 15 years is particularly challenging. Yet, it is possible to look at the plausible evolution of labour supply.

## From where will the future workforce come?

Labour supply will evolve more predictably because it is conditioned by its current structure and by demographic trends, which are partly deterministic: mortality rates are not expected to change radically for working-age population groups over the next years in Europe, thus the future size of existing cohorts is predictable. Migration flows can be more volatile and are notoriously difficult to predict, but in most European countries, despite fluctuations and the recent increase in inflows of humanitarian migrants, annual permanent migration flows have not exceeded 1% of the total population during the past decade (OECD, 2017b). In terms of educational attainment of the working-age population, it is highly likely that the ongoing increase of the share of tertiary-educated will continue. In its Europe 2020 Strategy, the European Commission has set a target of at least 40% of the population aged 30-34 having completed higher education by 2020. This goal can help frame expectations about the evolution through to 2030.

The potential role of migration in mitigating the economic challenges raised by ageing has been widely discussed (United Nations 2000; Coleman 2008; Chapter 2.2 in European Commission 2016). Migration has sometimes been put forward as a solution to those problems, but the overarching consensus is that it cannot offset the negative effects of population and labour force ageing in the long-term. Its impact on the dynamics of the labour market is more complex and varies across countries. In addition to age structure, there are key differences between natives and migrants, as well as between different groups of foreign-born people, which all have implications for the composition of the labour force. For example, net migration patterns of immigrants are different from those of the native-born. Net migration rates of immigrants are typically positive at all ages, but decreasing with age, while net migration rates of natives are typically close to zero at all ages, except between 20 and 35 where they are negative in most countries. Another crucial difference is that EU governments have more political control on the flows of third-country nationals than on the flows of their own nationals and EU nationals. Moreover, projecting the labour force requires making assumptions about future participation rates. Some categories of immigrants, in particular women and the low-educated from third countries, tend to have lower participation in the labour market than their native counterparts (OECD, 2015). To account for these factors, the projections therefore need to be disaggregated, not only by educational attainment, but also by place of birth.

## Can migration make a difference in the future education distribution of the workforce?

From a demographic point of view, the dynamics of the educational structure of the working-age population is driven by two potential factors: the replacement of older, less-educated cohorts by younger ones with higher educational attainment and net positive inflows of migrants with higher education.

The OECD has found that the share of individuals with higher education in the working-age population of the

European countries increased from about 17% in 2000 to 26% in 2015. Additionally, the OECD projects that it will increase to 34% under mild assumptions regarding future migration flows and educational attainment trends. Between 2000 and 2030, the absolute number of those with higher education is set to increase by a total of 67 million (Figure 1 breaks this down by age group). Over the same period, the number of individuals with secondary education or less will have declined tremendously in most age groups, with an overall decrease of 51 million.

**Figure 1 Distribution of the working-age population of European countries in 2000, 2015 and 2030 (projection), by age and educational attainment (in thousands)**



*Notes:* The 2030 projection assumes baseline net migration flows [this variant assumes that net migration flows between 2015 and 2030 are similar to those observed during 2010-2015] and a medium trend for the education distribution [under this scenario, the share of tertiary-educated among people aged 30-34 increases by 9 percentage points between 2015 and 2030]. The countries covered in this analysis are: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, United Kingdom, Norway, and Switzerland.

See Meghnagi and Spielvogel (2018) for a detailed presentation of the methodology.

*Sources:* OECD estimates.

At the European level, the most significant migration policy lever is the size of future migration flows of third-country nationals and their educational attainments. Indeed, although EU countries can provide incentives to retain their highly-educated nationals, or to help them return from abroad, they cannot control their international mobility.

As shown in Figure 2, panel A, the age distribution of the tertiary-educated working-age population projected for 2030 is only slightly different under two contrasting scenarios for non-EU net migration: one with relatively large inflows of better-educated migrants (the “high” scenario) and the other with smaller inflows and a lower level of educational attainment (the “low” scenario).

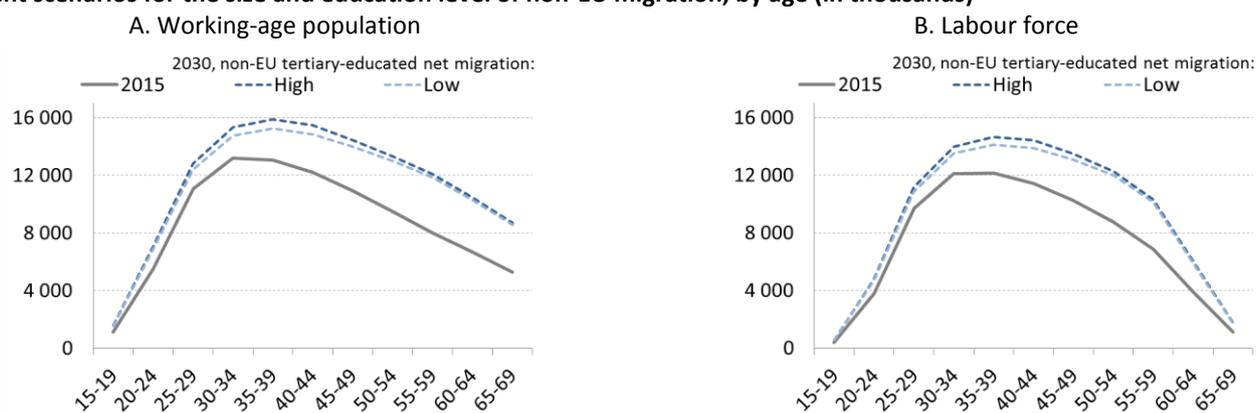
In view of the overall expected evolution between 2015 and 2030, migration flows from third countries are unlikely to play a major role in the evolution of the working-age population with higher education, but could still represent a non-negligible contribution. Compared to the least favourable scenario, seeking to recruit a larger number of third-country nationals with higher education through more attractive and selective migration policies will lead to a gain of about 3% in the tertiary-educated working-age population of the

European countries in 2030. This gain represents almost 15% of the expected increase of this population segment between 2015 and 2030. For the labour force, the findings are quite similar (Figure 2, panel B). More attractive, more selective immigration policies would result in an overall increase of 3% in the labour force with higher education in the European countries in 2030.

This potential contribution of migration of third-country nationals varies widely across countries, however (Figure 3). In about half of the European countries, the tertiary-educated working-age population is expected to increase by 25% or less between 2015 and 2030, with little sensitivity to the migration scenario. For countries such as Italy, France and Germany, policies favouring the entry of highly educated third-country nationals would have very little impact on the tertiary-educated working-age population.

On the other hand, in countries such as Luxembourg, Ireland, Norway or Sweden, the anticipated rise of the highly educated working-age population would be quite sensitive to such migration policies.

**Figure 2 Tertiary-educated working-age population and labour force of European countries in 2015 and 2030, according to two different scenarios for the size and education level of non-EU migration, by age (in thousands)**

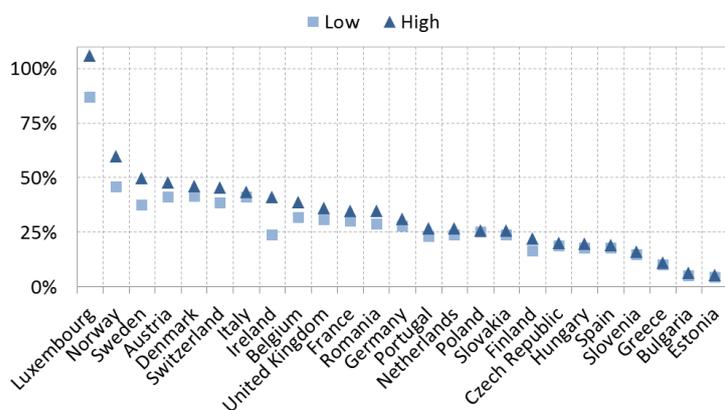


Notes: For the native-born and immigrants born in EU countries, the 2030 projections assume baseline net migration flows [this variant assumes that net migration flows between 2015 and 2030 are similar to those observed during 2010-2015] and a medium trend for the education distribution [the share of tertiary-educated among people aged 30-34 is assumed to increase by 9 percentage points between 2015 and 2030]. In the high scenario, net migration of immigrants from third countries is set to high [for a given population cell (country, sex and origin), net migration rates by age for 2016-2030 are set to the baseline level, plus 30% of the absolute value of the total net migration rate of the cell] and a high trend is assumed for the education distribution [the share of tertiary-educated among people aged 30-34 is assumed to increase by 12 percentage points between 2015 and 2030]. In the low scenario, net migration of immigrants from third countries is set to low [for a given population cell (country, sex and origin), net migration rates by age for 2016-2030 are set to the baseline level, minus 30% of the absolute value of the total net migration rate of the cell] and a low trend is assumed for the education distribution [the share of tertiary-educated among people aged 30-34 is assumed to increase by 6 percentage points between 2015 and 2030]. Labour force participation rates [the labour force participation rates observed in 2015 are assumed to remain constant until 2030]. The countries covered in this analysis are: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, United Kingdom, Norway, and Switzerland.

See Meghnagi and Spielvogel (2018) for a detailed presentation of the methodology.

Sources: OECD estimates.

**Figure 3 Increase in the tertiary-educated working-age population of European countries between 2015 and 2030, according to two different scenarios for the size and education level of non-EU net migration (in percent)**



Notes: See notes of Figure 2. See Meghnagi and Spielvogel (2018) for a detailed presentation of the methodology.

Sources: OECD estimates.

### References

Autor, D., and D. Dorn (2013), The growth of low-skill service jobs and the polarisation of the US labor market, *American Economic Review*, 103, 1553-1597.

Coleman, D. (2008), The demographic effects of international migration in Europe, *Oxford Review of Economic Policy*, 24, 452-476.

European Commission (2016), *Employment and Social Developments in Europe 2015*, Directorate-General for Employment, Social Affairs and Inclusion, Publications Office of the European Union, Luxembourg.

Goos, M., A. Manning, and A. Salomons (2009), Job polarization in Europe, *American Economic Review*, 99, 58-63.

Meghnagi, M. and G. Spielvogel (2018), Assessing the role of migration in European labour force growth by 2030, *OECD Social, Employment and Migration Working Papers*, forthcoming, OECD Publishing, Paris.

OECD (2015), *Indicators of Immigrant Integration 2015: Settling In*, OECD Publishing, Paris.

OECD (2017a), *OECD Employment Outlook 2017*, OECD Publishing, Paris.

OECD (2017b), *International Migration Outlook 2017*, OECD Publishing, Paris.

United Nations (2000), *Replacement Migration: Is It a Solution to Declining and Ageing Populations?*, Department of Economic and Social Affairs, Population Division.

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