

Globalisation, technological progress and demographic changes are having a profound impact on the world of work. These mega-trends are affecting the number and quality of jobs that are available, how they are carried out and the skills that workers will need in the future to succeed in an increasingly competitive landscape.

On average across the OECD countries analysed by the Skills for Jobs database, more than five-out-of-ten jobs that are hard-to-fill (i.e. in shortage) are found in high-skilled occupations (Figure 5.7). These jobs range from managerial positions to highly skilled professionals in the health care, teaching or ICT sectors. A relatively large share of occupational shortage (approximately 39% of total jobs that are hard-to-fill across the OECD) is also found in medium-skilled occupations, such as personal service workers or electrical and electronic trades workers. Fewer than one out of ten jobs in shortage across the OECD are found, instead, in low-skilled occupations. The intensity of occupational shortages, however, varies significantly across countries both within the OECD and in developing countries. In Finland, more than nine out of ten jobs in shortage are of the high-skilled type. In Mexico and Chile, the demand for highly skilled professionals is significantly lower, with less than two out of ten jobs in shortage being “high-skilled” and the majority of jobs in shortage being found, instead, in medium to low-skilled occupations.

Emerging mega trends are increasingly reshaping the demand for specific types of skills. **On average across OECD countries and during the period between 2004 and 2014, the shortage of high-level cognitive skills has increased, while the demand for physical abilities and routine skills has decreased relative to the supply** (Figure 5.8). For instance, cognitive abilities related to reading, understanding and processing information and ideas (e.g. written comprehension or expression) or others related to the ability of applying general rules to specific problems (e.g. deductive reasoning) are among the several cognitive dimensions for which shortages increased between 2004 and 2014. Physical abilities such as Trunk Strength, Stamina or Arm-hand steadiness (typically used in many occupations that are nowadays at risk of being automated by more precise machines) have seen the sharpest declines in demand in the last decade.

The misallocation of talent in the labour market leads to qualification mismatch, i.e. workers are under- or overqualified for their job. **On average across the OECD, approximately 36% of workers are mismatched by qualifications with shares of under and over-qualified workers being roughly the same, 19% and 17% respectively** (Figure 5.9). The prevalence of both types of mismatch speaks to both an insufficient supply of talent (causing under-qualification to emerge in some parts of the labour market) as well as to weak skill demand (commanding the

emergence of over-qualification). The magnitude of qualification mismatch changes substantially from one country to the other. On the one hand, approximately one in two workers in Mexico and Chile are mismatched by qualifications, with large shares of workers being over-qualified. On the other hand, less than two in ten workers are mismatched by qualifications in the Czech Republic and only 8% of these are over-qualified in their jobs.

Definition and measurement

The OECD Skills for Jobs database (www.oecdskillsforjobsdatabase.org) defines skills as either hard-to-find (in shortage) or easy-to-find (in surplus). The indicators measuring these imbalances in the labour market (both shortages and surpluses) are constructed following a two-step approach that delivers two different, though related, sets of information on:

- Skills shortages and surpluses – measuring the extent by which each skill dimension is (or not) hard to find in the labour market.
- Occupational imbalances – measuring the extent by which jobs in each occupational group are hard or easy to fill for firms in the current labour market.

The Occupational shortage indicator is a composite indicator that ranks occupations in shortage or in surplus within each country based on the analysis of five sub-components: wage growth, employment growth, hours worked growth, unemployment rate, change in under-qualification.

Information on skill requirements in each occupation are extracted from the O*NET database which provides categorical data about the skills required to perform the tasks of more than 800 different occupations.

Further reading

OECD (2018), Skills for Jobs, www.oecd.org/employment/skills-and-work.htm.

OECD (2017), *Getting Skills Right: Skills for Jobs Indicators*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264277878-en>.

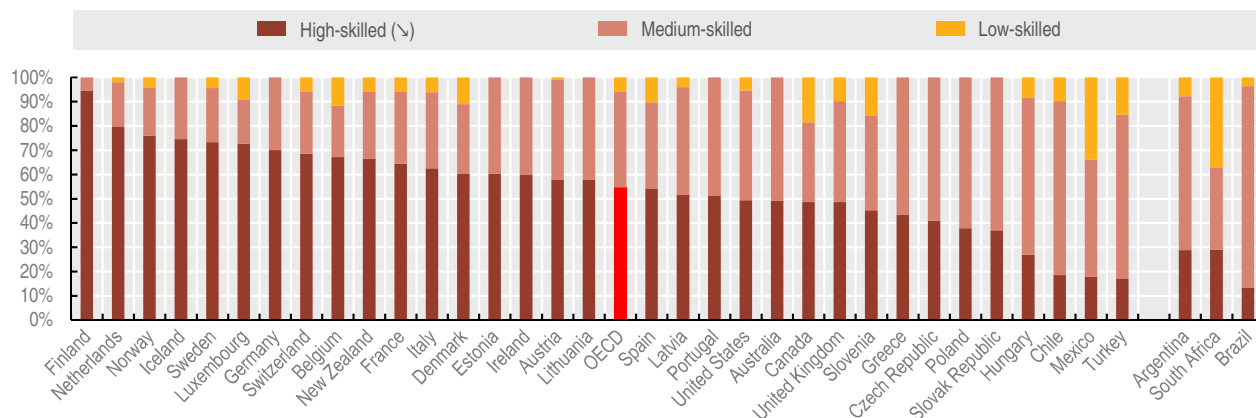
Figure notes

Figure 5.7: High, medium and low skilled occupations are ISCO occupational groups 1 to 3, 4 to 8 and 9 respectively.

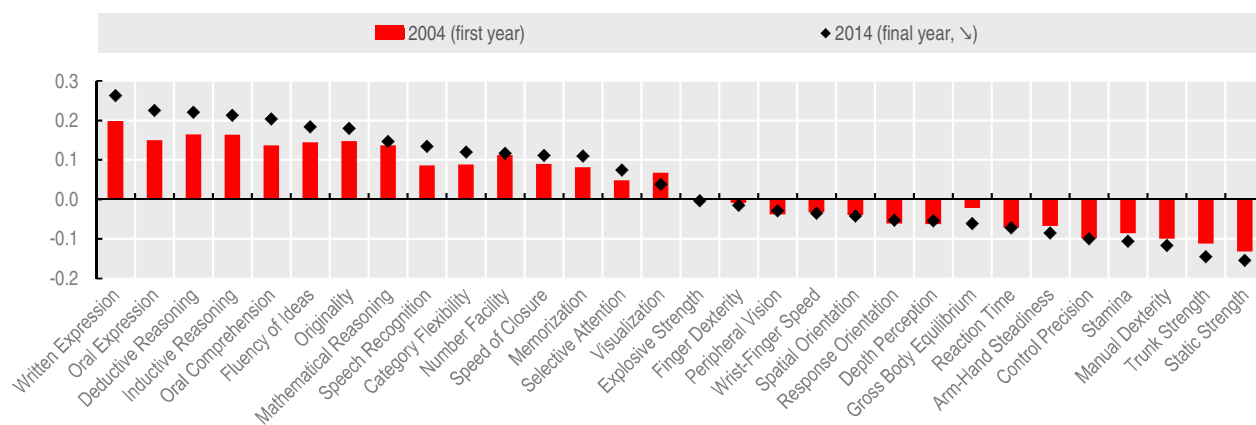
Figure 5.8: Results are presented on a scale where the maximum value reflects the strongest shortage observed across OECD (31) countries and skills dimensions.

5.7. More than five-out-of-ten jobs in shortage are found in high-skilled occupations

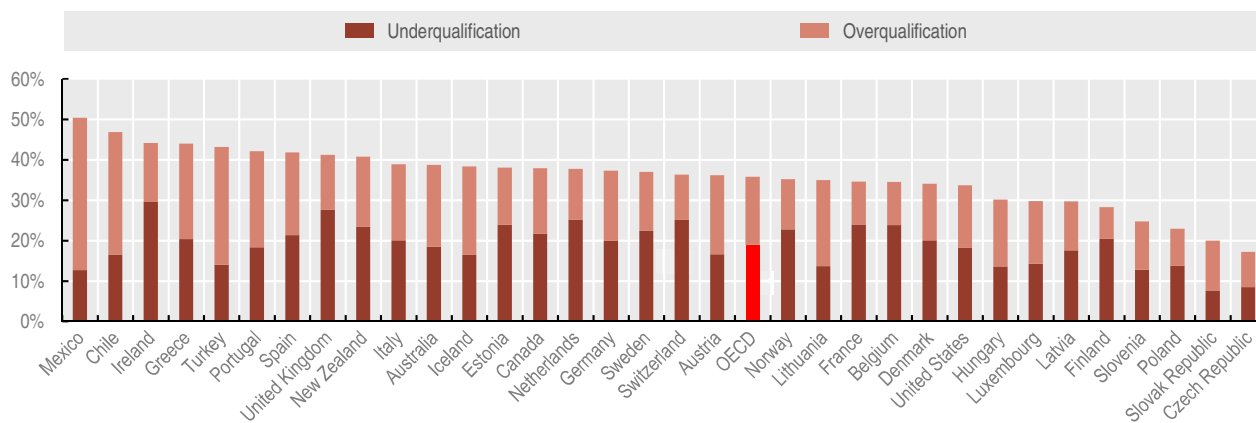
Percentage of employment in shortage, by skill level, 2015 or closest year available

Source: Calculations based on the OECD Skills for Jobs database (2018), www.oecd.org/employment/skills-and-work.htm.StatLink <http://dx.doi.org/10.1787/888933938857>**5.8. Increasing shortages of high-level cognitive skills as well as increasing surpluses of routine skills and physical abilities**

Skill shortages (+) and surpluses (-), OECD average, in 2004 and 2014 or closest year available

Source: Calculations based on the OECD Skills for Jobs database (2018), www.oecd.org/employment/skills-and-work.htm.StatLink <http://dx.doi.org/10.1787/888933938876>**5.9. Almost four-out-of-ten workers are either under-qualified or over-qualified**

Percentage of workers who are either under-qualified or over-qualified, 2015 or closest year available

Source: Calculations based on the OECD Skills for Jobs database (2018), www.oecd.org/employment/skills-and-work.htm.StatLink <http://dx.doi.org/10.1787/888933938895>



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