

European Construction Sector observatory

Improving the human capital basis

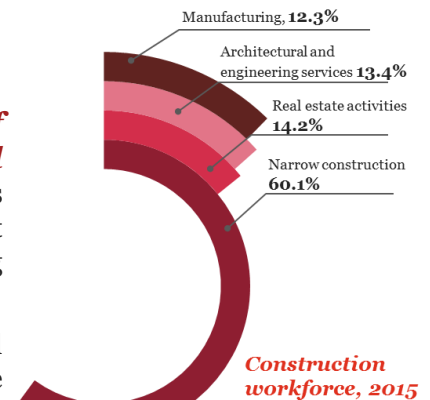
Executive summary

This analytical report is part of the European Construction Sector Observatory (ECSO) and aims to provide insight into the Thematic Objective 2 “Improving the human capital basis of the construction sector” of the EU Construction 2020 Strategy. It provides an overview of the characteristics of the construction sector workforce in the EU-28, the main drivers and obstacles to the development of skills and the policy responses adopted by Member States.

1 Demographics

EU trends are pointing towards a **progressive ageing of the population and increasing emigration and mobility outflows**. In 2015, the median age in the EU was 42.4 years, compared to 40.4 years in 2008, while net migration and mobility was negative, with outflows exceeding inflows in 2015.

Projections for 2020 indicate that the EU-28 population will reach 510 million individuals, with 64% of working-age individuals and 20% individuals of retirement age. In contrast, by 2050, the working population will account for 57% of the total and the population over 64 for 28% of the total.



Share of workers employed in Construction in 2015 in the EU

2 Employment in construction



drop in the number of full-time construction workers over 2008-2015

The **broad construction sector in the EU employed 21.1 million people in 2015**, a 3.4% increase compared to 2014, but 11.8% lower than 2008.

The construction sector has been experiencing an ageing workforce, with the share of adults aged 25-49 years old having shrunk from 65.3% in 2008 to 61.8% in 2015, while workers aged 50 to 64 years old have increased from 22.2% to 28% during the same period. This could be due to the **lack of attractiveness of the sector to younger workers**, among others.

In terms of gender analysis, women represented 16.5% of the total workforce of the EU broad construction sector in 2015 (15.1% in 2008), potentially indicating a general improvement in gender inclusiveness.



increase in part-time employment, from 1.14 to 1.21 million workers.

Women’s representation in the construction sector increased over the last few years showing a general improvement in gender inclusiveness



This is the highest in Luxembourg at 21.2% but the lowest in Ireland at 6%

9.5% of narrow construction workforce were women in 2015 vs. 9% in 2008

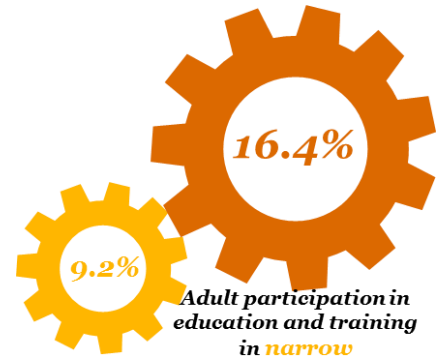


This goes up to 13.0% in the Czech Republic but down to 2.8% in Belgium

3 Level of education

Adult participation in education and training in narrow construction increased from 8.3% in 2008 to 9.2% in 2015, whereas for real estate activities it improved from 13.1% to 16.4%.

Furthermore, 48% of highly qualified employees in the EU construction sector hold a STEM (Science, Technology, Engineering and Mathematics) degree. **In most Member States, less than 30% of their construction workforce is represented by low skilled individuals**, with the exception of Portugal (71.9%), Malta (68.3%), Luxembourg (56.5%), Spain (54%), Italy (51.3%), Greece (49.1%), and the Netherlands (33.6%) in 2015.



Adult participation in education and training in narrow construction was 9.2% and in real estate activities stood at 16.4% in 2015.

 **174,138** graduates in architecture and building in 2014

The level of education of the EU construction workforce has been improving, with an **increase in high-skilled and a decline in low-skilled workers**. Tertiary graduates in engineering and construction, specifically in architecture and building, increased from 140,962 in 2008 (i.e. 0.7% of the total construction workforce) to 174,138 in 2014 (0.9% of the total).



48% of highly qualified employees hold a STEM degree

The proportion of low skilled workers declined between 2008 and 2015 across almost all countries, indicating that the sector has made efforts to increase its appeal to the more qualified profiles

4 Skill shortages

Vacancy rates in narrow construction and real estate activities in the EU increased from 0.9% to 1.1% and from 1.0% to 1.2% over 2009-2015, respectively, indicating that the mismatch between the supply and demand of labour in the construction sector is increasing and that **the sector is experiencing a skill shortage**.



Over **3 million** construction workers in Europe need to increase their skills in energy efficiency and renewable energy systems by 2020



There is a lack of technicians, namely electricians and machine operators, as well as other occupations, such as roofers, carpenters and stonemasons, often due to unattractive working conditions, mobility, and emigration trends

This observation is in line with recent developments of regulations regarding energy efficiency and sustainability in the sector, which may have created a skills gap.

In most cases, the main reason explaining skills shortages is the inadequacy of educational programmes and vocational training

5 Drivers

The stringent energy efficiency targets and the increasing demand for sustainable construction solutions are expected to drive the transformation of the skills required during all stages of the building process, from planning to design, production, maintenance and renovation and finally demolition.

The professions with the highest number of workers requiring training include electricians, plumbers, carpenters and joiners, bricklayers and technicians.

Digital technologies such as BIM are increasingly supporting offsite construction techniques, thus paving the way towards a real standardisation and industrialisation of construction and diversification of skills. Offsite will result in a need for specialists skilled in repetitive tasks, whereas onsite assembly requires professionals with a high level of situational awareness.

6 Obstacles

Obstacles to the development of skills include structural barriers, such as the low predictability of the industry and structural fragmentation, which lead to short-term employment and limited incentives for long-term investment in the skill-base of the workforce. The construction industry suffers from a negative image, being considered tiring, unattractive, unproductive and having low service orientation.

The quality of vocational education and training (VET) is often suboptimal, with curricula being outdated and not aligned with the industry's needs or technological developments

Member States often require recognition processes for accessing certain regulated professions in the construction sector and apply different requirements, making it difficult for qualified professionals to apply for vacancies in other EU countries and reducing their mobility.

7 Policy initiatives

Initiatives to strengthen energy efficiency skills are a major area of policy activity at national and the EU level (e.g. BUILD UP Skills).

Up to **80,000** workers to be trained in BIM by 2020 in France alone

Measures to build the digital skill-base of the construction workforce, and

particularly in relation to BIM, are in place in many countries, as well as EU-wide through EU-funded projects.

Multiple initiatives to improve the image of the construction sector, attract young workers, as well as to incentivise apprenticeships and improve the quality of VET, are in place.

8 Conclusion

Going forward, future efforts should ***focus on reinforcing cross-industry cooperation, training the trainers, increasing the availability of apprenticeships and strengthening mutual recognition of qualifications.*** This will lead to a less fragmented training offer across the EU, a stronger link between education and skills and a more sustainable and attractive construction sector.

For more details download the full report at:

<https://ec.europa.eu/docsroom/documents/24261>