

Executive Summary

This is an updated version of the Analytical Report “Improving the human capital basis” published in 2017. Based on both statistical data and policy analysis, it provides insights and lessons learnt related to the workforce in the construction sector.

The data collection for this report was performed before January 2020, before Brexit went into effect. Therefore, this report refers to EU as EU-28 and the United Kingdom is considered as a part of European Union.

This Analytical Report was drafted prior to COVID-19 pandemic in the EU. Therefore, this Analytical Report does not include the reflection or the analysis of the impacts of COVID-19 on the construction sector and related skill needs.

Chapter 1 (“Introduction”) raises the issue of the human capital in the construction sector, taking recent policy developments in account, and highlighting some of the key issues, including skill shortages. Chapter 2 (“Workforce and skills in construction”) presents the general demographic developments in the European Union (EU) and in the construction sector, underlining trends such as an ageing population and a shrinking labour force. It also analyses the current state of skill needs and vacancies. Chapter 3 (“Drivers of skill acquisitions”) focuses on the main driving force for skill updates including, inter alia, market trends and policies on energy and resource efficiency, occupational safety and health (OSH), digitalisation, and a broader upskilling movement.

Chapter 4 (“Obstacles to skill development”) presents the key factors that impede skill development in the construction sector, discussing the situational and structural barrier factors, the negative image of the sector, the often-suboptimal vocational education and training (VET) as well as future and persistent challenges in skill recognition in construction. Chapter 5 (“Policy initiatives”) presents some policy initiatives led by policy-makers and the industry alike to address the issue of skill development in the construction sector. In doing so, it provides an overview of national policy responses to the main drivers and obstacles identified. Lastly, Chapter 6 (“Lessons learnt”) summarises the obstacles identified in this report and policy options to support the development of skills in the construction sector.

Workforce and skills in construction

The demographic trends across the EU are characterised by lower birth rates, increasing life expectancy and a shrinking proportion of the working-age population. Such demographic changes are influenced, not only by internal changes in the structure of population, but also by increasing migration and mobility trends.

Declared migration and mobility movements across the EU accounted for an inflow between 2 and 4.5 million individuals per year (including both extra and intra community movements).

EU’s working-age population is expected to decline each year until 2060. This is particularly the case in Lithuania, Bulgaria, Latvia, Croatia and Romania, in which working-age populations are expected to experience the sharpest declines in the coming decades across the EU, partly driven also by mobility of their workforce within the EU. On the other side of the spectrum, Luxembourg, Malta, Sweden and Cyprus’ working-age populations are expected to grow in the years to come.

The sum of persons employed in the construction sector in Germany, United Kingdom, France, Italy and Spain accounted for 61.5% of the total workforce of the EU construction sector in 2017.

Across the EU, the top three construction-related occupations in 2017 were construction workers, science and engineering technicians and electro engineering workers. At the same time, a growing share of high-tech occupations was recorded across the EU in 2018. It is estimated that, by 2030, the employment in the EU construction sector will increase by 4.3%. This growth, however, will vary across EU Member States (MS). While Romania, Estonia, Germany and Latvia construction sectors are expected to experience a decrease in terms of employment by 2030, it is in France, Malta, Ireland and Cyprus that such a decrease will be most significant.

According to the European Centre for the Development of Vocational Training (CEDEFOP), about 1 million new and replacement workers will be needed by 2025¹. Additionally, the skills needed in construction are likely to change to meet the demands for “green” and energy-efficient buildings.

The growing necessity for a workforce in the construction sector translated into an increasing number of available vacancies. Between 2010 and 2018, the Czech Republic and Slovenia recorded the largest increase in the share of vacancies to the amount of people employed in the sector (621.9% and 411.7% respectively).

While the number of job vacancies in the sector has grown dramatically in recent years, tertiary education and VET have not kept pace with the existing demand.

The participation of adults in education and training in the construction sector remained static over the 2010-2017 period. The largest increase in the number of tertiary education graduations is seen in Luxembourg, Cyprus and Germany. Skills needed in construction are likely to move towards “green”, energy efficiency (EE) and digitalisation trends, that follow new designs and use new materials. The demand for people with high-level qualifications is expected to double, to account for one third of all jobs in construction by 2025.

Drivers of skill acquisition

Resource efficiency, digitalisation and OSH are some of the most influential drivers for skill acquisition in Europe.

The main EU policies, regulations and instruments that frame EU’s sustainable development and EE affect the European construction sector and its skill needs and demands.

The newly adopted European Green Deal aims to activate the education and training system to support the transition to a green economy. From 2021 to 2027, the Green Deal will focus on the development of the European competence framework with a EUR 3 billion investment into school infrastructure and the creation of the European Social Fund+ will support re-skilling and upskilling of the workforce. In addition to the European Green Deal, the European Commission published in 2020 five communications, which are likely to have an impact on skills development in Europe, namely: i) A New Industrial Strategy for Europe; ii) A SME strategy for a sustainable and digital Europe; iii) Long-term action plan for better implementation and enforcement of single market rules; iv) Identifying and addressing barriers to the Single Market; and v) A new Circular Economy Action Plan. Last but not least, an Updated Skills Agenda for Europe is expected to be launched later on in 2020.

Additionally, by setting ambitious EE goals for Europe, the Energy Efficiency and the Energy Performance of Building Directives drive the needs for additional skills in green energy and energy efficient construction.

3 to 4 million construction workers in Europe will need to develop their EE related skills in the building sector.

The renewable energy industry has contributed to the creation of 1.2 million jobs in Europe so far and is expected to employ up to 2 million people by the end of 2020, with most new jobs being created in the

¹ CEDEFOP skills forecast, 2016

construction sector. Several policy initiatives have been developed in Europe to upgrade and/or set up large-scale qualification and training schemes to meet the expected demand of the near future. The BUILD UP Skills initiative is a frontrunner in energy efficient construction skills and plays a key role in this process.

Developments in OSH in construction have an impact on i) the attractiveness of the sector; ii) the retention of the older workforce and; iii) the increasing need for OSH related skills.

75% of construction companies struggle to follow OSH requirements and 40% of construction employees do not work safely. To address this issue, OSH-related training for the construction sector must increase by 60%.

In order to tackle these challenges, in 2018, the European Commission (EC) launched the Blueprint for Sectoral Cooperation on Skills for the Construction sector, which also includes OSH as one of the key areas for skill development. The analysis of current and anticipated OSH skill needs in the construction sector is expected to contribute to i) revising OSH occupational profiles and professional qualifications, ii) identifying good practices at regional and national levels, iii) developing an OSH training proposal adapted to the new needs for “green” profiles, and iv) creating a more favourable image of the sector that proactively addresses OSH issues.

Upskilling the workforce in the construction sector is one of the main challenges of the sector: how to update and align the qualifications and skills of the workforce to new technologies and digitalisation? Upskilling towards EE, innovation and safety must be considered throughout the entire value chain of the construction sector, e.g. designers, architects, engineers and workers.

According to an evaluation of the BUILD UP Skills initiative, 3 to 4 million blue collar workers will need upskilling in the field of EE alone.

Standardisation and building industrialisation are some of the drivers for new skills in the sector. Offsite construction is increasingly technology-driven, relying on approaches and tools such as Design for Manufacture and Assembly (DFMA), Lean production, Building Information Modelling (BIM) and BIM-related Enterprise Resource Planning tools. Managerial and technical skills will need to be increasingly intertwined, especially in higher level occupations. Construction professionals of the future will be characterised by a balance of core soft and technical skills, as well as relevant knowledge and evolving behaviours.

Where offsite factories are built, there will be an increase in new employment opportunities for skilled trades, as well as the creation of new apprenticeships.

While skill shortage is often linked to the emergence of new technologies and/or processes in the construction sector, much less attention is paid to the loss of traditional skills. Without such a set of skills it could notably impact the management, protection and conservation of historic and cultural heritage, which, consequently, generates direct and indirect income and provides jobs.

Obstacles to skill development

Three types of factors, in particular, affect the skill development in the construction sector. The first refers to situational barriers such as an ageing population or the slow digital transformation of the construction sector. The second consists of structural barriers that include, for instance, the fragmentation of the market and the construction of value chains, as well as the uncertainties of the construction sector’s development. Last, the construction sector is subject to cyclical factors, which make skill development more difficult to achieve.

Due to the lower predictability of the construction sector, many companies adopt a temporary employment model to their staffing strategy, limiting the incentives for long-term investment in the workforce.

In addition to these factors, initiatives to upskill construction workers, such as training workshops, are often challenged by a lack of public support, limited availability, as well as the uncertainty over the quality of the training. For migrant workers, cultural and linguistic barriers may also pose a difficulty to attend and complete training workshops successfully. Plus, the cost of training is often considered too high for small construction companies.

The construction sector also suffers from an overall poor image associated with low job security, tough working conditions and health and safety concerns. Studies find that the construction sector has become synonymous with low-quality work and low health and safety levels.

A lot of creative construction-related professions are often overlooked, such as jobs in architecture and design. Young people, and especially women, rarely view the construction sector as a potential and attractive employer.

VET is key for skill development in the construction sector. While the alignment of the VET system with the needs of the market is crucial for its overall efficiency and effectiveness, the continuous collaboration between public and private sector actors is often too limited. Adult learning programmes can be effective in upskilling and reskilling people, especially when combined with on-the-job training. On-the-job trainings, however, need to target professionals adequately and meet required quality objectives. Apprenticeships, like VET, are lacking quality and accessibility across the EU. Apprenticeships in the construction sector have several specific features, compared with other sectors:

1. Availability of training funding;
2. Remuneration for apprentices tends to be regulated;
3. Stricter requirements for companies providing apprenticeships;
4. Stricter OSH requirements;
5. Frequent use of a formal contract;
6. Large share of practical training compared to theoretical learning.

As of 2015 the construction sector participated in the European Alliance for Apprenticeships² (EAfA) initiative, which aims to strengthen the quality, supply, mobility and the image of apprenticeships across Europe.

Mobility of skilled workers from areas of low demand to areas of higher demand can contribute to alleviating skill shortages in the EU.

In the EU context, Professional Qualifications Directive (PQD) is the main instrument for recognition of professional qualifications, while the European Qualifications Framework (EQF) and the European Credit system for Vocational Education and Training (ECVET) are the two main instruments to facilitate the academic recognition of qualifications across EU MS.

To reform and simplify the related administrative procedures, the Professional Qualifications Directive (PQD) aims to increase the flexibility of the labour market and the liberalisation of the provision of services, promoting automatic recognition of professional qualifications in EU countries. The Services Directive complements the PQD by removing legal and administrative barriers to trade through simplification measures to increase transparency and facilitate the provision of, and access to, cross-border services. Finally, the European Professional Card (EPC) in some cases eases the recognition of selected professional qualifications within the EU. However, when put into practice, sometimes MS regulations might pose additional requirements for specific professions, impeding workers' mobility.

² EAfA website available at https://ec.europa.eu/growth/sectors/construction/apprenticeships_en

Policy initiatives

EU MS have developed policy instruments to tackle the construction sector's skill-related issues, through broad or specific training schemes. In some instances, policy initiatives aim to improve the image of the construction sector and attract young workers by supporting the development of digital skills, incentivising apprenticeships and improving the quality of VET.

The implementation of skill policies often follows a multi stakeholder approach, combining governments, construction companies, associations, VET providers and, in some cases, academia.

This Analytical Report summarises the key trends in skill-related policies in the construction sector in Europe:

- Policy initiatives addressing the issue of skill development mostly include construction strategies, dedicated training institutions and horizontal programmes;
- There are increasing trends in advancing training and skill development programmes focusing on specific problematic areas. EE has gained prominence in most of MS, with the number of initiatives increasing over the last three years;
- EE initiatives are greatly supported by the EU co-funded BUILD UP Skills programme, which is present in all EU MS. This programme plays a key role in upgrading the skills of workers in the construction sector;
- Most EU MS have made dedicated efforts to supporting digitalisation and digital skills in the construction sector;
- Only a limited number of MS have implemented dedicated initiatives to apprenticeships in the construction sector;
- Most of the EU MS are reforming their VET to update curricula and provide workers with the latest set of knowledge and skills needed; and increase collaboration with the construction sector to align education and trainings with labour market needs;
- Over half of the EU MS have introduced initiatives aiming at improving the image of construction, which in most cases target young people, and increasingly women;
- Efforts for skill recognition have evolved in recent years and are no longer revolving only around the implementation of the skill cards.

Lessons learnt

To overcome the obstacles to skills development highlighted in this report (e.g. suboptimal vocational education, skill recognition, the negative image of the sector etc.) and take full advantage of the opportunities, the insights regarding three main policy areas should be considered:

1. Vocational Education and Training

- a) Reinforce the cooperation between educational institutions and the industry to improve the quality of training
- b) Increase the availability and quality of apprenticeships
- c) Development of more tangible goals for the national strategies and action plans for construction sector
- d) Focus on training the trainers.

2. Upskilling and re-skilling of workers

- e) Develop and integrate upskilling frameworks at the national and sector level
- f) Favour more flexible and innovative types of training
- g) Ensure the new skills of construction workers, obtained through VET, apprenticeship or irregular on-the-job training are recognised by national authorities.

3. Horizontal measures

- a)** Policy makers should support the upskilling awareness raising campaigns including among businesses to support competitiveness of the sector
- b)** Design sustainable training programmes to ensure their relevance, efficiency and uptake.