

# Skills for the labour market: EU policies for VET and upskilling

## KEY FINDINGS

Technological, environmental, and demographic changes, alongside globalisation, are changing the nature of work, the content of jobs, and the demand for training. The competitiveness of the European Union (EU) is seen to be dependent upon its capacity to effectively adapt to these changes. But if it is to do so it needs to ensure that: (i) skill shortages do not inhibit growth; and (ii) individuals are equipped with the skills to adapt to future change and avoid the risk of job loss. Vocational Education and Training (VET) represents one of the principal means through which individuals acquire skills, especially young people. And it is through participation in continuous professional development and learning that adults will access, on an ongoing basis, the upskilling and reskilling necessary to adapt to change. This briefing addresses EU policy on VET and upskilling.

Across the EU, there is evidence of **widespread skill mismatches** where people report that they are under- or over-qualified for their current job. This has taken place against a backdrop of major investments in education and training by Member States over recent years. It is also apparent that many people possess relatively **low levels of proficiency in literacy and numeracy**. These are some of the basic skills required to enter and sustain a position in the labour market. People with poorly developed skills are likely to be at relatively high risk of job loss in the future

In the future, **people will be increasingly dependent upon upskilling throughout their adult lives** so that they are able to adapt to whatever changes the 4<sup>th</sup> Industrial Revolution might bring about. In order to meet the demands which will be made of it, **VET will need to build upon the progress it has made over the recent past** in improving the quality and breadth of provision. Important here are making VET a first choice for young people, promoting particularly effective means of delivering VET (notably apprenticeships), and ensuring that there is sufficient labour market intelligence available to guide individuals' investments in skills.

In relation to upskilling, it is vitally important that individuals have access to training throughout their adult lives. This is particularly important with respect to the more vulnerable or marginalised groups in the labour market who have less access to training and are therefore more vulnerable to labour market change. Developing **individual training accounts** is one means of assisting this group access training. Giving adults access to what might have been regarded as Initial Vocational Education and Training for young people provides one means of delivering upskilling the labour market needs.



## Emerging skill needs in the EU

There are a number of **megatrends affecting the demand for skills**<sup>1</sup>, including:

- digitalisation (how automation will affect the demand for skills);
- globalisation (where low skilled, routine jobs are transferred to countries with lower labour costs);
- the greening of the economy (with the emergence of new 'green jobs'); and
- demographic trends (the ageing and shrinking of the population).

How will these trends affect the demand for skills? There is no consensus regarding the impact of digitalisation/automation on the number of jobs. Some evidence suggests that robots, for example, will result in net job loss, especially for low skilled workers. But other evidence suggests that the overall impact of technological change on employment levels continues to be positive<sup>2</sup>. The evidence base reveals more of a consensus is with respect to:

- digitalisation/automation bringing about an **increased demand for highly skilled and qualified workers**;
- **changes in the composition of tasks which comprise a job** (often to the benefit of the individual worker where hard physical toil can be undertaken by machines); and
- the **disappearance of some jobs and the emergence of new ones** the skill content of which is only just beginning to emerge.

Globalisation and the greening of the economy are also seen to favour highly skilled and qualified workers. It is becoming apparent that the greening of the economy is also leading to the emergence of new 'green jobs' associated with reducing Europe's carbon footprint.

It needs emphasising that the way in which digitalisation/automation, globalisation, and greening of the economy will affect the demand for skills, especially over the longer term, is highly uncertain. Over the shorter-term, as will be explained below, there is a clearer picture.

Demographic change, other things being equal, places a constraint on the EU's supply of labour and skills. But it also results in an increased demand for people to work in jobs which are linked to supporting older people (i.e. care jobs) and poses questions about how people's skill development can be supported over what is likely to be a longer working life than experienced hitherto in the EU.

All of the above have drawn attention to a number of cross-cutting themes related to the changing demand for skills, including:

- the hollowing out of the occupational structure and **polarisation of employment**;
- the **capacity of skill systems** to meet the changing demand for skills; and
- mitigating the impact of skills obsolescence.

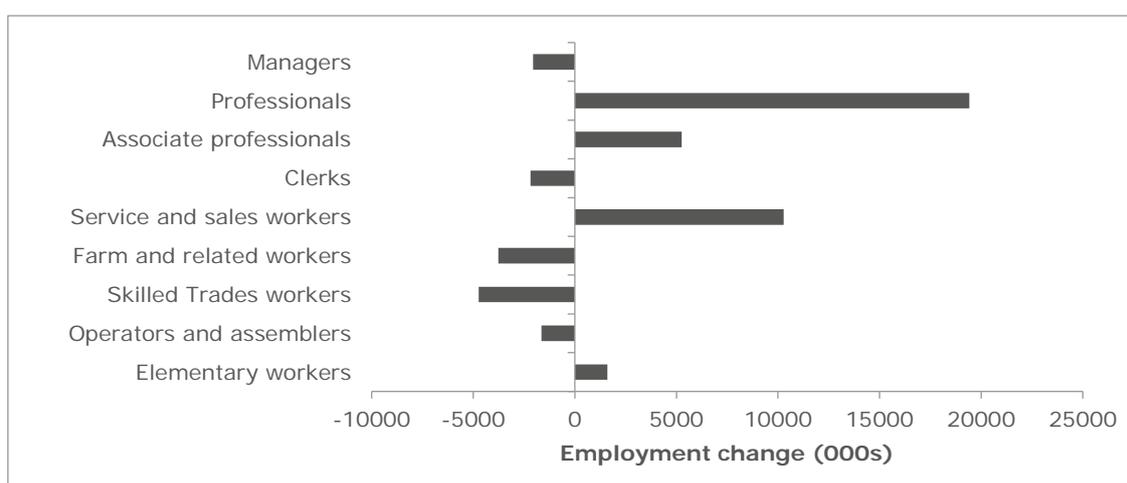
Occupation – alongside educational attainment – is typically used as a measure of skill. By looking at changes in the occupational structure of employment over time it is possible to gauge how the demand for skills is developing. Figure 1 shows that over time there has been **growth in high skilled jobs** (notably professionals and associate professionals) and in less skilled jobs (service and sales workers and elementary occupations). In contrast, **it is the number people employed in jobs which sit in the middle of the occupational hierarchy which has decreased** (e.g. clerks, skilled trades workers).

One of the principal drivers of change in the occupational structure has been the role of technology. It has been seen to have most impact on routine jobs which do not require their incumbents to respond to outside stimuli<sup>3</sup>. These jobs can be replaced by machines. It has been further observed that routine jobs are typically found in the middle of the occupational structure: administrative jobs and production jobs<sup>4</sup>. Higher level

skilled jobs which require their incumbents to utilise cognitive skills cannot be readily substituted by automation; similarly lower skilled jobs which require their incumbents to interact with customers are also not readily substituted by automation. Globalisation may also have an impact whereby many low skill/low wage jobs have been transferred to countries with lower labour costs. The result of all this is a **hollowing out of the occupational structure** with growth in relatively high skilled jobs (professionals and associate professionals) and in relatively less skilled ones (sales and service workers and elementary occupations).

The hollowing out of the occupational structure has implications for the **polarisation of employment**<sup>5</sup>. Many countries in the EU have observed increases in non-standard forms of employment. In particular there are concerns that false self-employment, the use of short-term temporary contracts resulting in insecure/precarious employment, and certain forms of platform working (the gig economy)<sup>6</sup>, have a detrimental impact on the quality of work available to those at the bottom end of the occupational hierarchy. It is certainly the case that temporary, self-employment, and some forms of platform working are concentrated in relatively low skilled occupations. In general there is disquiet that the labour market is becoming polarised between high skilled jobs (with relatively good terms and conditions of employment) and low skilled jobs (which are inherently precarious).

Figure 1: Change in occupational employment (ISCO major groups) 2002-2018



Source: Eurostat/European Labour Force Survey

The demand for skills can only be fulfilled if the supply-side is able to keep pace with change. Accordingly attention has been focussed on **the capacity of education and training systems to keep pace with changes in the demand for skills**. The response has been to increase investments in human capital development with the result that people now have a higher level of educational attainment than in the past. At the same time it has become apparent that **many relatively low skilled jobs are filled by people with a level of education typically in advance of that which is required by these jobs** and this is likely to continue into the future (see Figure 2 below). This has raised questions about the extent of skills mismatch – i.e. the extent to which people are under- or over-qualified for their current jobs – and the need to ensure that investments in education and training are better guided to meet demand.

Cedefop's European Skills and Jobs Survey reported that 25 per cent of those in work feel that they are over-qualified for the work they undertake<sup>7</sup>. Data collated by the OECD suggests that the EU is not unique in the extent of skill mismatch it experiences (see Table 1)<sup>8</sup>. The inference is that skill systems are failing to sufficiently respond to the skill needs resulting from technological change and the like and that the EU is not alone in facing this challenge<sup>9</sup>. The USA, for instance, experiences similar levels of mismatch. As will be demonstrated below the policy response has been to improve systems of skills anticipation to better identify emerging changes so that education and training systems are better informed about where investments in skills are needed.

Table 1: Percentage of workers under- or over-qualified (2016)

	Either over- or under qualified	Under-qualified	Over-qualified
USA	33.5	17.7	15.6
EU	33.5	18.7	14.7
OECD	35.7	18.9	16.8

Source: OECD Skills for Jobs Indicators

Technological change, alongside other changes, is likely to result in the loss of some jobs and the creation of others. This has focused attention on **skills obsolescence** and identification of those jobs which are most likely to be affected by it. Estimates have suggested that as much as 47 per cent of jobs in the USA are at risk of being substituted by machines<sup>10</sup>. This may well be an over-estimate with other analyses based on PIAAC data suggesting around 14 per cent of jobs could be replaced by automation<sup>11</sup>. **The jobs which are thought to be most at risk are those that do not require specific skills training**, followed in second place by those jobs which are principally concerned with interacting with machines. For the most part all of the jobs which are likely to be at high risk of automation are those that require relatively low levels of skill.

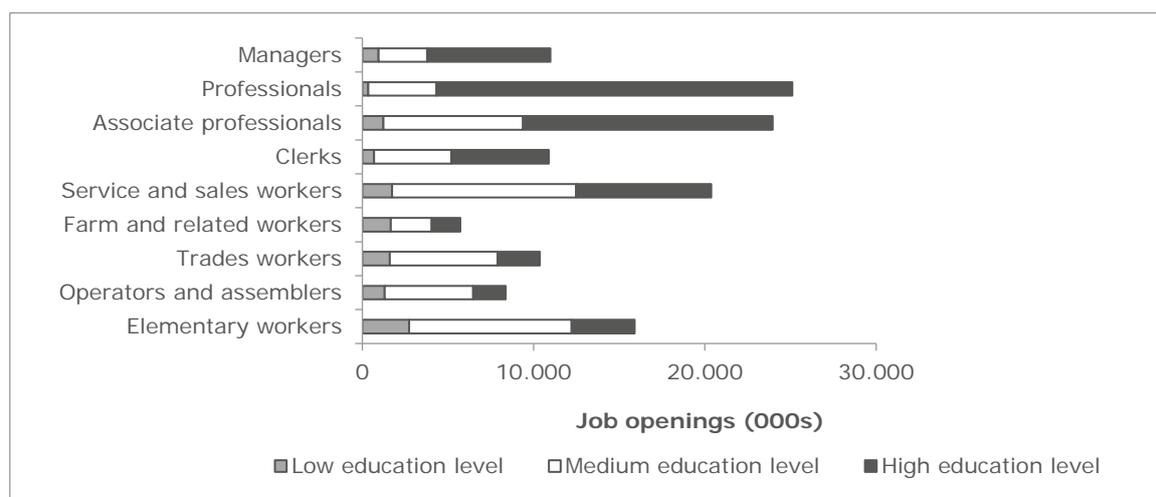
Those jobs which are much less at risk from technological change tend to require a high level of education and training and/or involve a high degree of social interaction. Data that specifically looks at the EU suggests that where workers have access to (re)training the risk of being substituted by machines of one kind or another is reduced further – to around 8 per cent<sup>12</sup>. The implication is that in the future technological change will increase the demand for retraining<sup>13</sup> but, at the same time, the extent of imminent job loss may be relatively modest.

## Future skill needs in the EU

The foregoing has focussed on developments in the past. Of interest is whether these trends will continue into the future. In other words, **will the future look like the past?** Figure 2 shows the total number of job openings that will need to be filled over the period 2018-2030. This includes the jobs that will be created or destroyed over the period, plus those jobs where the job holder has left (mainly due to retirement) and will need to be replaced. It is estimated that over the period around 130 million jobs will need to be filled in the EU - many of them are relatively high skilled ones (managers, professionals, and associate professionals) - with the majority of people filling them (just over 50 per cent) being qualified to a high level.

Perhaps what is most striking about the information contained in Figure 2 is that there will continue to be a substantial demand for people to work in all occupations – not just those in higher and lower skilled jobs. This simply reflects the fact that many people working in jobs today will leave them and will need to be replaced. So whilst technological change will bring about an increased share of people working in, for instance, professional and associate professional jobs, there will be a strong demand for people to work in other types of job too<sup>14</sup>. Sometimes the impact of factors such as technological change on skill demand can be over-stated over the short to medium-term. Many people are still required to work in existing jobs.

Figure 2: Future Job Openings by Skill Level, 2018-2030



Source: Cedefop Skills Forecasts (data from Skills Panorama)

The above conclusion should not invite complacency. In the future technological change has the capacity to affect the content of many if not most jobs. And even those people working in jobs which were thought to be relatively immune to the risk of being replaced by a machine may find that this is no longer the case. The OECD has drawn attention to those employed in professional jobs such as lawyers having parts of their task repertoire being replaced by machines/artificial intelligence. But these changes will take time to settle in<sup>15</sup>. Nevertheless, the implication of the above is that there is a need to keep abreast of emerging trends and how they are likely to affect the tasks which comprise a job so that this can be addressed by national Vocational Education and Training (VET) systems and through re-training and re-skilling, supported by EU policies in the areas of VET and upskilling.

## The role of VET

VET is generally recognised as an effective means to delivering training that is of direct relevance to the labour market. It is seen as being particularly effective in allowing young people to make the transition between learning and work. For instance, when the employment rates of young VET graduates are compared with those from the general stream at the same educational level, it is the VET graduates who have the higher rates<sup>16</sup>. The evidence from CEDEFOP's [Changing Nature of VET](#) study demonstrates how this form of training has been able over recent decades to increase its relevance to the labour market through, amongst other things, the following<sup>17</sup>:

- providing something which is not just limited to a form of learning traditionally delivered through apprenticeships;
- making use of skills intelligence to guide provision;
- providing broader pathways of learning (thereby giving individuals a wider choice of career choices);
- becoming embedded with the formal education system (i.e. it is one of the formal options young people are presented with especially at the upper secondary level); and
- diversifying the target groups at which it is aimed (for example, reaching out to adult workers).

The evidence shows that enrolments in VET have been stable over the recent past in many Member States<sup>18</sup>. Overall, 48 per cent all students in upper secondary education take the vocational pathway through the formal education system, but this masks wide variation between Member States. In some countries it is a well-established pathway through upper secondary school where a majority of students take the IVET pathway (e.g. Czech Republic and Finland) but in others only a relatively small share do so (e.g. Ireland and

Cyprus). In many countries there remains a preference to take the general pathway through the education system because this is seen as providing access to higher education.

As noted above, **apprenticeships** are regarded as a particularly effective means of delivering VET of direct relevance to the labour market. The way in which work and learning are combined is considered to be particularly effective in delivering skills and ensuring young people are work-ready. A study for the European Parliament entitled *Skills Development and Employment: Apprenticeships, Internships and Volunteering* outlined the manifold benefits apprenticeships and open-market internships (i.e. those that are not provided as work experience within an education programme)<sup>19</sup> confer upon those who participate in them. At the same time the study points to the need for<sup>20</sup>:

- these programmes to reach out to more disadvantaged groups in the labour market such that more is done to engage under-represented groups and ensure they obtain the benefits these types of training experience deliver; and
- a more structured approach be taken to the delivery of open-market internships such that the contractual status, remuneration, and envisaged learning outcomes are clearly spelled out. In this way the benefits an internship can provide to an individual can be optimised (i.e. not just supplying relatively low labour cost labour).

The report prepared for the European Parliament draws attention to the fact that the term apprenticeship applies to systems of Initial Vocational Education and Training that look very different one another. It points to the need for a clear definition to be provided so that there is a common point of reference<sup>21</sup>.

## EU VET policies

EU policy in the area of Vocational Education and Training and upskilling has focused on both **improving the quality and quantity of provision** often through sharing of information on relatively good practice across the EU. Over the recent past there has been several [policy developments in relation to VET](#) designed to:

- **promote work-based learning** - with special attention given to apprenticeships - by involving social partners, companies, chambers and VET providers in its design and delivery;
- introduce **quality assurance** mechanisms in VET in line with the Recommendation on the establishment of a [European Quality Assurance Reference Framework for Vocational Education and Training \(EQAVET\)](#);
- **enhance access to VET** and qualifications for all through more flexible and permeable systems, notably by offering efficient and integrated guidance services and by enabling the validation of non-formal and informal learning;
- **strengthen [key competences in VET curricula](#)** and provide more effective opportunities to acquire or develop those skills through IVET and CVET;
- introduce systematic approaches to, and opportunities for, initial and continuous professional development for VET teachers, trainers and mentors in both school- and work-based settings;
- **facilitating the delivery of high quality apprenticeships** via the Council Recommendation on a [European Framework for Quality Apprenticeships](#) and promoting their take up through the [European Alliance for Apprenticeships](#) and the [Youth Guarantee](#); and
- raise the profile of VET and the benefits it confers on individuals and employers through the **European Vocational Skills Week**.

[Cedefop](#) is the EU agency which supports the development of VET policy and its implementation through the provision of research, analyses and information on VET systems, policies and practices, skill needs and demands in the EU. The [ETF](#) (European Training Foundation) is the EU agency which supports countries around the EU to reform their education and training systems.

A key challenge is that of ensuring VET is relevant with respect to meeting the future needs of the labour market. To achieve this it needs to be attractive to both learners and deliver outcomes which are relevant to the needs of the employers. This is being addressed through<sup>22</sup>:

- **placing an emphasis on apprenticeship type** training because this is regarded as a particularly effective way of imparting skills relevant to the needs of the labour market;
- **ensuring that VET programmes can change in a timely manner** to address changes in the demand for skills and are informed by up to date labour market intelligence;
- **providing VET at higher levels** so that it is not limited to delivering training at upper secondary level (i.e. at EQF levels 3 and 4) such that it is now increasingly provided at levels 5 and above<sup>23</sup>;
- giving **access to what has been traditionally regarded as Initial Vocational Education and Training (IVET) to adults** and not just young people so that they have the benefit of updating their skills using well established IVET programmes;
- expanding VET beyond the traditional sectors and occupations with which it has been historically associated; and
- **making the transition from vocational education to tertiary education easier** by ensuring that vocational qualifications give access to higher education and/or by increasingly providing vocational programmes at the tertiary level.

BusinessEurope has stressed the need: (i) to strengthen the labour market relevance of VET to help companies to address their skills needs; and (ii) for VET policy framework needs to support reforms, mutual learning and exchanges. And the ETUC has been active in promoting apprenticeships and ensuring that they are of high quality (cf. the European Framework for Quality Apprenticeships).

When thinking what to do next, the Commission's [Advisory Committee on Vocational Training](#) (ACVT) outlined a **vision for the future of VET**<sup>24</sup>. It outlined the core elements required for the EU to deliver better quality, more inclusive VET that supports the economy and society more generally. These are:

- fostering the acquisition of skills, competences and qualifications which ensure employability, adaptability, personal development and active citizenship of individuals;
- providing accessible, attractive, valued and innovative quality assured provision for all; and
- that actions are integrated, responsive, diversified and quality assured and they are underpinned by governance, funding and guidance which foster excellence, inclusion, effectiveness and shared responsibility.

At the EU level, the ACVT has set out the elements that might be included in any future Commission proposal for an **EU VET policy framework**. The framework would be designed to deliver on the vision set out above, and would include, amongst other things, simplifying governance at the EU level, continued use of Cedefop and ETF research and analyses in developing policy, establishing a clear and light monitoring framework (i.e. setting indicators and benchmarks, define levels of EU support (via Erasmus and ESF+ programmes), and embedding social partnership and dialogue in the process of implementing initiatives.

VET is seen as providing a high quality learning pathway, but its future is not necessarily secured despite the manifold benefits it confers upon both individual learners, employers and, in aggregate, the entire economy. Despite this concerns endure that it remains a second-choice for young people. **Many still prefer to take the general pathway through education because it is seen to more readily give access to university education** and from there entry into high prestige, high-wage jobs. While public opinion tends to hold VET in high esteem, the Cedefop opinion survey on VET found that most people agreed that 'general education has a more positive image than vocational education'. And 75 per cent agreed that students with low grades were directed towards vocational education<sup>25</sup>. Perhaps these findings explain why VET has been regarded, in some countries at least, as a second-best option.

## The continuing need for upskilling

A substantial tranche of VET provision is concerned with individuals' initial education and training, though not exclusively so. There is also a need to consider what happens after Initial VET (IVET) has been completed. Adult learning, and the upskilling it provides, covers the spectrum of post-IVET learning, including work- and career-oriented learning, obtaining new qualifications, up-skilling or re-skilling for employment, and learning for personal development and active citizenship. Persuading people to participate in adult learning is dependent upon persuading individuals and employers of the relative merits of doing so. This requires effective guidance to be in place – through public employment services and other agencies – which can direct them to upskilling/reskilling which will improve their employability.

**EU policy** in relation to upskilling has been developed with particular reference to **improving access to adult learning** and **training** so that people acquire the skills needed to cope with future change. The [Resolution adopted by the Council in 2011](#) on a renewed European Agenda for Adult Learning highlights the need to significantly increase adult participation in formal, non-formal and informal learning. The agenda also outlined a vision of how adult learning should develop, including significantly increasing the supply and demand for high-quality provision, especially in literacy, numeracy and digital skills. It also notes the need to develop effective outreach, guidance and motivation strategies to reach and assist adult learners, offering more flexible opportunities for adults to learn and improved access through more learning at the workplace, the use of ICT, and 'second chance' qualification programmes. The [Electronic Platform for Adult Learning in Europe](#) provides a multilingual online space to exchange, showcase and promote best practices in adult education, as well as to promote peer learning.

The EU has also been active in identifying those skills individuals will need to acquire to safeguard their employability. The [Recommendation on Key Competences for Lifelong Learning](#), identified eight key competences required for employability, active citizenship, and personal fulfilment:

- Literacy;
- Multilingualism;
- Numerical, scientific and engineering skills;
- Digital and technology-based competences;
- Interpersonal skills, and the ability to adopt new competences;
- Active citizenship;
- Entrepreneurship; and
- Cultural awareness and expression.

The **European Pillar of Social Rights** and the **New Skills Agenda**, tackle the various factors which relate to upskilling and access to training. [The European Pillar of Social Rights](#), launched in 2017, sets out 20 key principles and rights to support fair and well-functioning labour markets and welfare systems in the EU. More specifically: "The aim of the European Pillar of Social Rights is to serve as a guide towards efficient employment and social outcomes when responding to current and future challenges which are directly aimed at fulfilling people's essential needs, and towards ensuring better enactment and implementation of social rights." The first principle concerns education, training and lifelong learning: "Everyone has the right to quality and inclusive education, training and life-long learning in order to maintain and acquire skills that enable them to participate fully in society and manage successfully transitions in the labour market."

Within the ambit of the European Pillar on Social Rights is the New Skills Agenda. It has its roots in the need to tackle a common set of challenges being faced by all Member States and has identified 10 actions designed to:

- **improve the quality and relevance of training** and other ways of acquiring skills (e.g. strengthening basic skills provision, developing competencies in higher more complex skills, making VET a first choice, etc.);

- **make skills more visible and comparable** (e.g. improving the transparency and comparability of qualifications, and early profiling of migrants' skills and qualifications); and
- **improve information and understanding of trends and patterns in demands for skills and jobs** (skills intelligence) to enable people make better career choices, find quality jobs and improve their life chances (e.g. boosting skills intelligence, better understanding the labour market outcomes for graduates).

Of particular note within the New Skills Agenda is the Council Recommendation on the [Upskilling Pathway](#). It is designed to assist the estimated 61 million people with low skills so that they can improve their literacy, numeracy and digital skills and/or increase their level of educational attainment to the upper secondary level (i.e. at levels 3 or 4 of the European Qualifications Framework). The Upskilling Pathway is built on the concept of providing: (1) a skills assessment to identify existing skills and upskilling needs; (2) a tailor-made offer of learning and mentoring, to enable them to update skills and fill important deficits; and (3) the opportunity to have their acquired knowledge and skills validated and recognised towards a qualification or access to employment. Early evidence from the Upskilling Pathway's roll-out suggests that these types of programme have the capacity to raise skill levels, though to date the focus appears to have been on unemployed adults. A stronger focus, however, on supporting low skilled workers in employment who represent a significant share of the target group for the Upskilling Pathway is becoming evident<sup>26</sup>.

Evidence points to **continuing progress being made in upskilling the workforce** over the past few decades. For instance, the percentage of EU workers employed in relatively high skill occupations (such as managers, professionals and associate professionals) has increased: from 32 per cent in 1995 to 43 per cent in 2018. And the **percentage of people with tertiary level qualifications has nearly doubled over the same period from 16 to 30 per cent**. Nearly three quarters of the population are now qualified to at a level equivalent to completing upper secondary education. There have been other achievements too in relation to upskilling the workforce. The **targets set by ET2020** are close to being reached at the EU level even if performance across Member States is variable. For example, the target rate:

- for **early leavers from education and training** aged 18-24 was set at 10 per cent. It has fallen from 17 per cent in 2002 to stand at 11 per cent in 2018;
- that at least 15 per cent of adults should participate in learning was achieved in 2013; and
- that at least 40 per cent of people aged 30-34 should have completed some form of higher education was achieved in 2018.

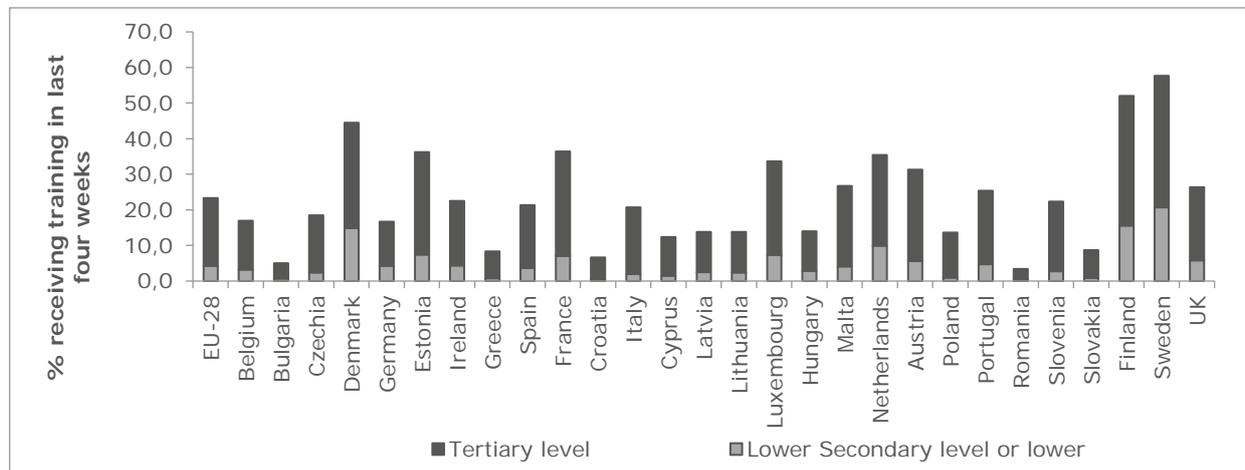
Notwithstanding these achievements in upskilling, the need for actions such as the Upskilling Pathway remains vitally important. There remain large swathes of the workforce whose skills remain under-developed with the OECD's Survey of Adult Skills (PIAAC) revealing that **substantial shares of people in each Member State possess relatively low levels of proficiency in literacy and numeracy**. The implication is that these people will find it increasingly difficult to compete in the labour market of tomorrow unless they are able to increase their skill levels. The evidence points to low levels of proficiency in literacy and numeracy being associated with a higher risk of being unemployed; in contrast, relatively high levels of proficiency are associated with higher levels of personal, social and economic wellbeing.

Those with low levels of basic skills tend to face particular problems in accessing the ongoing training and development which will help them to improve their skills and progress in the labour market. It is well known that it is the more highly educated who are most likely to be in receipt of training. Figure 3 shows the percentage of people reporting that they had been in receipt of training over the past four weeks according to their highest level of educational attainment. It demonstrates clearly that in every Member State the higher the level of educational attainment the greater the chance of being in receipt of training.

Participation in training also declines markedly with age. One of the major demographic trends with which the EU has to grapple is its ageing population. There is an increasing expectation that people will retire later and thereby spend longer in the labour market. It is clear that the skills someone obtains around their late

teens and early twenties through their Initial Vocational Education and Training will not be sufficient to carry them through fifty or more years in the labour market. This points clearly to the need for people to have access to training in later life. This can require the introduction of specific measures which address the situation faced by older workers (e.g. validating and certificating skills acquired through informal learning, provision of lifelong guidance, guaranteeing access to training, etc.)<sup>27</sup>.

Figure 3: Participation in training by level of educational attainment, 2018



Source: Labour Force Survey (Participation rate in education and training (last 4 weeks) by educational attainment level - trng\_lfse\_03)

## Recommendations for the future of VET and upskilling

In 2010, the Bruges Communiqué set out a vision for VET for the forthcoming decade. Given the various megatrends to which VET and upskilling must respond over the next decade, how should policy respond in 2020? Set out below are recommendations which relate to VET and upskilling respectively. In many respects they should not be seen in isolation. They need to work together with VET providing access to upskilling and reskilling over a lifetime. VET also has a capacity to assist those out of work access the labour market – especially more marginalised groups – through provision of key employability skills and thereby straddle the fields of education and employment policy.

VET policy in the future needs build upon its achievements to date. The key recommendations which might be encompassed within a VET framework relate to finding the means of increasing VET's relevance to the needs of the labour market and, in so doing, increase its attractiveness to individuals as a learning destination. This will include:

- ensuring that the content of VET programmes are broad based so that they equip individuals with the capability to move between jobs and acquire new skills as the demand for skills changes. If there is too narrow an occupational focus in the delivery of VET then this potentially inhibits the learners' occupational mobility and decreases its attractiveness;
- engaging the social partners in the design of VET programmes to ensure that VET addresses skill needs in the labour market;
- giving adults access to training that has been traditionally been considered the preserve of IVET delivered to young people. If people are to spend longer in the labour market then their skills will periodically need updating. There is no reason why someone aged, say, 40 years old, should not participate in an apprenticeship if it is the most effective means for him or her to acquire the skills needed in a new occupation;
- reinforcing the work-based element in VET. This has been particularly effective to date in delivering skills that employers are looking for. All VET provision could include a workplace based element, though employers may need support to do so;

- there is scope to ensure that apprenticeships serve a wide range of occupations and not just the traditional ones with which they have been traditionally associated; and
- ensuring that VET is available at all levels from upper secondary to tertiary levels. VET can serve those occupations at a higher level (where a university education is typically required at present). The barriers which prevent people from progressing through the VET pathway from secondary to tertiary level education still need to be fully addressed.

If further improvements are made to the VET system, the challenge of reaching vulnerable, marginal groups remains. Without access to the skills of tomorrow the danger is that this group will become more marginalised and excluded. The barriers to this group are multifarious. But there is scope to make progress through ensuring that this group is effectively guided towards participating in upskilling, and that they are in some way **empowered to participate in training**.

More generally, individuals can be empowered to participate in upskilling through a number of actions many of them linked to what is known to work well in assisting older workers engage in training<sup>28</sup>. These include:

- the use of **individual learning accounts** or vouchers. These can increase the likelihood that those with relatively low level skills are able to gain access to training<sup>29</sup>, but they will need to be funded in such a way that they are attractive to training providers and target the low skilled as there is a tendency for them to be used by those with relatively high levels of skill;
- provision of **training leave** within companies so that individuals are able to update and renew their skills; and
- the use of collective/workplace agreements to guarantee employee access to training – for example as set out in the in the [Joint Recommendations of the European Social Partners on Promoting Social Partnership in Employee Training](#).

A distinction needs to be made between those who are in employment and those out of work. Many low skilled people are in work, but it is precarious and low paid. Ideally, these people can be supported to engage in upskilling before they become unemployed. At the same time, there is a need to provide training to unemployed people too so that they are able to acquire labour market relevant skills, especially the basic functional skills related to literacy and numeracy – and increasingly digital literacy – without which access to the jobs market can prove to be difficult. Different types of programme may well be needed to assist those with low skills who are in employment or unemployed.

If the state, individuals, and companies are to make investments in skills, then they need to know which skills to invest in. This is where skills anticipation is so important in supporting VET and upskilling. The EU agencies' Cedefop and the ETF have a critical role to play in this regard. In particular there is scope for them to continue with improvements in skills anticipation they have made to date through using new techniques related to, for instance, big data analysis allied to skills foresight. This potentially provides the means to further improve capacity to predict emerging skill needs. Information is not enough though. The role of information, advice and guidance services are vitally important too. These are the conduits through which people will access information about the skills and the labour market. . It is important that adults – both in employment and those who are unemployed - as well as young people have access to this type of service. Without improving access to information, advice and guidance services, any improvements made to the provision of VET and upskilling are unlikely to be fully realised.

Because the provision of VET and upskilling vary across the EU there is, so to speak, a natural experiment in place. The EU is well placed to gauge what works well in differing contexts and use its influence to guide Member States towards actions that are likely to benefit them. In this way mutual learning can be used to improve the provision of VET and upskilling across the EU.

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