



Study on mapping opportunities and challenges for micro and small enterprises in offering their employees up- or re-skilling opportunities

Final report¹

Vol.1

¹For a detail report per Member States (Germany, Denmark, France, Ireland, Italy, the Netherlands and Slovakia), you can download the study's volume 2: Country Reports at: <https://europa.eu/!ft98uc>

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List of abbreviations

AES	Adult Education Survey
CEDEFOP	European Centre for Development of Vocational Training
CVT	Continuing Vocational Training
CVTS	Continuing Vocational Training Survey
EC	European Commission
ESF	European Social Fund
ESJS	European Skills and Jobs Survey
EU	European Union
EU-OSHA	European Agency for Safety and Health at Work
EWCS	European Working Conditions Survey
HRM	Human Resources Management
ICT	Information and Communication Technology
ISCED	International Standard Classification of Education
LFS	Labour Force Survey
OECD	Organisation of Economic Cooperation and Development
PES	Public Employment Services
PIAAC	Programme for the International Assessment of Adult Competences
SBS	Structural Business Statistics
SMEs	Small and Medium Enterprises
UNESCO	United Nations Educational, Scientific and Cultural Organization
VET	Vocational Education and Training
WB	World Bank

List of EU27 countries acronyms¹

AT	Austria
BE	Belgium
BG	Bulgaria
CY	Cyprus
CZ	Czech Republic
DE	Germany
DK	Denmark
EE	Estonia
EL	Greece
ES	Spain
FI	Finland
FR	France
HR	Croatia
HU	Hungary
IE	Ireland
IT	Italy
LT	Lithuania
LU	Luxembourg
LV	Latvia
MT	Malta
NL	The Netherlands
PO	Poland
PT	Portugal
RO	Romania
SE	Sweden
SI	Slovenia
SK	Slovakia

¹ EU country abbreviations are used only in the Figures.

EXECUTIVE SUMMARY

Objectives

Micro and small companies are crucial for the European economy. Companies with less than 50 employees are responsible for 52% of jobs and 39% of the economic activity in the European Union (EU). Digitalisation, globalisation, population ageing and the transition to a climate-neutral economy are changing a large share of these jobs and activities. The up- and re-skilling of the employees in micro and small companies is therefore urgent, especially in times of rapid change and economic uncertainty. Yet employees in these smaller companies are currently participating less in adult learning compared with those employed in larger firms, which makes both the employees and the companies more vulnerable.

Action is required by all relevant actors (i.e. companies, intermediaries, social partners and regional/national/EU policymakers) to increase participation of employees in micro and small companies in adult learning, with particular attention to the low qualified, as they tend to participate even less in up- and re-skilling activities.

This study aims to develop a sound knowledge of the opportunities and challenges encountered by micro and small companies in supporting up- and re-skilling of their employees, including those that are low qualified. Additionally, the study aims to collect and analyse good practices at company level and good examples of policies for up- and re-skilling in micro and small companies.

Although the study was undertaken before the Covid-19 outbreak, its conclusions and recommendations are relevant in the context of the post-Covid economic crisis. First, the pandemic and related confinement measures have affected sectors to different degrees and economic restructuring is expected as a result. Re-skilling needs to accompany workers and companies in the transition from shrinking to new or expanding sectors. Post-Covid reorganisation of production and service provision, as well as new working arrangements to comply with confinement measures, also require up-skilling of the workers. For example, digital skills are necessary to keep many jobs and businesses running, even more than before. Similarly, behavioural skills are increasingly required to work remotely and deal with continuous changes in job tasks. Also, the economic impact of the pandemic is felt more strongly by micro and small enterprises, which often operate in those sectors that have been strongly hit by the crisis (e.g. retail trade, accommodation and food services). These companies are expected to suffer more than before, and more than larger companies, from liquidity constraints and limited access to credit markets. As a result, they are likely to reduce their investments, including in up- and re-skilling. This can widen the gap in access to adult learning across firm size. Given their limited resources and technology, micro and small companies have, moreover, less access than larger ones to digital learning opportunities that can be deployed during the confinement. In this context, support for micro and small companies in regard to up- and re-skilling is needed, more than ever.

Methodological approach

The analytical framework consists of four groups of challenges to be assessed and addressed: i) market failures affecting investment in adult education and training, ii) financial and time obstacles, iii) informational deficiencies, and iv) constraints of the supply of education and training to micro and small companies. To assess these challenges and identify solutions, the empirical investigation covers seven Member States: Germany, Denmark, France, Ireland, Italy, the Netherlands and Slovakia.

The data collection relied on quantitative and qualitative methods and took place between May and October 2019. A survey involving employers in 345 micro and small companies was carried out. Interviews were also undertaken with both employers and employees in micro and small companies. In total, the study involved 432 micro and small companies. As a source of validation and to complement the company level data, interviews took place

with experts and stakeholders in 55 organisations (e.g. research organisations, social partners, training and education providers, and national and regional governments).

Results

The study revealed that **there is widespread awareness of the importance of up- and re-skilling among micro and small companies**. Despite this, only a minority of respondents take concrete actions to foster the participation of their employees in such activities. Moreover, there is still a significant share of companies that do not fully recognise the potential opportunities of up- and re-skilling to improve human resource management (HRM) and business development. Yet most of the respondents recognise that up- and re-skilling provide the opportunity to reward employees and increase their job satisfaction, to supply the right skills to existing or new employees and to increase the company competitive advantage. These results suggest that, in general, micro and small companies have sufficient information about the value of up- and re-skilling. However, other obstacles affect the provision of up- and re-skilling in micro and small companies, which remain generally limited and unstructured.

Looking at practices for up- and re-skilling in these companies, three approaches have been identified, namely baseline, conservative, and forward-looking (see Figure 1). The **baseline and the conservative approaches** are commonly adopted but are characterised by a short-term vision, defined by the company's immediate needs. The former includes provision of basic training that often results in certifications, expressly to comply with the legal requirements. The latter includes the provision of training in line with market developments, but less regular and less structured, and more rarely resulting in certifications. The **forward-looking approach**, where skills development is an integral part of the business strategy, is the most commendable and strategic for the companies. However, only few micro and small companies adopt it, either because they operate in sectors that are rapidly affected by digitalisation, such as information and communication services or niche manufacturing, or because they are themselves strongly innovation-oriented, regardless of sector. Under the leadership of the owner-manager, these companies place learning at the centre of their business activities and relations, and make sure that their employees develop skills by taking advantage of all learning opportunities that arise in business operations, with minimum extra investment in terms of financial resources or time. In these companies, identification and tracking of employees' skills is a systematic and structured practice. Even if seldom completely formalised, this practice is conducive to learning being embedded in the working environment and in each employee's job tasks, and to leveraging up- and re-skilling opportunities in daily activities and providing additional ones alongside. These companies offer examples of good practices for other companies to follow and to scale up, including the practices for skills assessment and tracking.

Figure 1 Determinants of up- and re-skilling in micro and small companies

Baseline	To comply with legal requirements
<ul style="list-style-type: none"> • Compliance with health and safety requirements in the workplace • Attainment of certification required to operate in certain sectors/professions 	
Conservative	To maintain business relations and market position
<ul style="list-style-type: none"> • Alignment with clients' requests and needs, on the market or within the value chain • Signalling to the market high quality standards of the work 	
Forward-looking	To build a forward-looking business strategy
<ul style="list-style-type: none"> • Driven by the sector of operation, affected by fast pace of technological change • Driven by the orientation towards innovation, in different sectors 	

Source: Authors' formulation based on the study results

When excluding training in compliance with the law, **up- and re-skilling in micro and small companies rarely happens through formal education and training** (i.e. institutionalised and planned through public organisations and recognised private bodies, leading to formal qualifications) **or through non-formal education and training** (i.e. structured and provided by any education and training provider). When informal learning is considered (i.e. intentional but not fully structured and planned), participation in up- and re-skilling in micro and small companies is much higher. The internal social proximity and close collaborations with customers and suppliers in the value chain that characterise micro and small companies seem to make informal learning suitable to their structure and needs. However, in most companies, informal learning is not as effective as it could be because it consists of unstructured and random activities. It is not inspired by a thorough assessment of skills gaps and it is not followed by tracking, validation and recognition of skills developed.

Skills assessment for identifying and tracking skills is generally underdeveloped in the majority of micro and small companies involved in the study. The owner-manager is often in charge of these tasks, deciding on and managing skills development within the company, and tends to adopt informal practices and privilege informal learning opportunities. However, the initiative to identify and select opportunities for up- and re-skilling is left up to the individual employees frequently, especially when these wish to engage in formal or non-formal education and training.

Although the study has pointed to a good level of awareness about up- and re-skilling opportunities, the companies involved also reported high barriers that still existed and prevented them from engaging in or getting the maximum benefits from up- and re-skilling, even if they wanted to. **There are several interrelated challenges that prevent companies from providing sufficient (or any) up- and re-skilling for their employees.** The limited provision of up- and re-skilling can be explained, at least partially, by lack of time and financial resources to allow employees to participate. Managers also lacked the time to search and organise activities. In micro and small companies, a single employee often takes care of multiple functions. HRM, including skills development, is often carried out by the owner-manager, who also holds responsibility for managerial and operational tasks. Even when financial resources might be available to participate in up- and re-skilling activities, employers in micro and small companies indicate that they cannot afford to have their employees participate because it would affect one or more functions in the company.

The struggle to find adequate education and training courses is cited as a further challenge by companies. On the one hand, education and training providers tend not to tailor their offer to the specific and differentiated needs of micro and small companies. On the other

hand, the companies are likely to miss suitable courses because they do not have sufficient time to look for them.

The challenge most often mentioned in both the survey and the interviews is the impossibility of finding public support for up- and re-skilling. Most countries and/or regions, however, have support measures for up- and re-skilling in place, so it is rather the lack of information about available support and the modalities to access it that may explain such a widespread perception of the problem. As a result, a large part of the demand for up- and re-skilling in micro and small companies remains unmet and unfinanced, even when these companies would be willing to provide these opportunities to their employees, and even when public financial support would be available to this aim.

With regards to low-qualified employees, the current practices show that these employees are not systematically excluded from participating in up- and re-skilling in micro and small companies, but that they tend to be only included in activities relevant for the tasks that they perform in the company. Low-qualified employees participate in formal education and training when the company's operations require mandatory certification. Otherwise, they are involved mainly in informal learning. Participation in up- and re-skilling activities is hindered by the fear of employers that their low-qualified employees would leave if provided with further qualifications and certifications. In contrast, this fear does not seem evident in relation to more highly qualified employees. In addition, lack of motivation to participate in education and training emerges more often as a challenge for low-qualified than for highly qualified employees.

Policy approaches can help overcome the obstacles to participation in up- and re-skilling for employees of micro and small companies. Rather than being alternative options, different policy approaches appear to complement each other to build a comprehensive strategy for up- and re-skilling. This allows several challenges to be tackled from multiple angles, in an integrated manner.

Most Member States provide different types of financial support to incentivise companies or their individual employees to invest in education and training. Some countries even provide compensation for the productive loss of an employee participating in training, for example Denmark, through its AMU programme.

Public measures to foster up- and re-skilling sometimes include the removal of informational barriers that affect micro and small companies. Awareness-raising campaigns and public support for skills assessment and tracking are in place, as part of broader programmes for up- and re-skilling, for example in Germany (WeGebAu programme), Denmark (AMU programme), Ireland (Skillnet and SOLAS), Spain (*Aula Mentor* programme) and France (AFEST programme; *Compte Personnel de Formation*). Frameworks of qualifications, such as the European Qualifications Framework and its implementation at national level, contribute to enhancing information on validation and recognition of skills for both employers and employees.

Member States have also been supporting networks of companies. These allow companies to join efforts and exchange information and practices on sourcing, organising and accessing private and public up- and re-skilling opportunities. Being generally sectoral or local/regional entities, networks strengthen the cooperation within sectors or territories, along the value chains where companies are embedded. The facilitation of these networks is pursued, for example, in Italy and in the Netherlands, through training funds that can be organised at sectoral level or among micro and small companies, and in Ireland, through agencies such as SOLAS and Skillnet. Other options to enhance the supply of education and training to micro and small companies are to promote digital learning, as in Spain, with the *Aula Mentor* programme, or to provide support to companies to develop informal learning programmes in-house, as in France, with the AFEST programme.

Among these policy measures, companies involved in the study perceive public financial support as by far the most impactful one. This can be in the form of grants, tax incentives, individual-based training budgets, or reimbursement of time spent in education and

training. The provision of information about available public support and how to access it is the second most impactful measure according to the companies involved in the study. Facilitation of networks of companies for up- and re-skilling are also deemed relevant. By contrast, companies in general attribute limited value to public support for detecting skills needs and tracking skills development, despite the identification of skills gaps being a prerequisite and considered good practice in companies with a forward-looking approach to up- and re-skilling.

Recommendations

The study has shown that challenges for up- and re-skilling in micro and small companies are interrelated, so a comprehensive set of solutions addressing multiple obstacles needs to be simultaneously developed. To account for such a complex context, the joint action of companies, policymakers at regional, national and EU-level, as well as of intermediary organisations and social partners, is required.

Such a collective effort is necessary to build skills ecosystems at national, regional, local or sectoral level. The study has highlighted challenges that are in part linked to internal characteristics of companies, but also barriers that can be identified in this context. Therefore, developing skills ecosystems is a key condition to promote a culture of learning in the broader sense and to foster up- and re-skilling for employees within micro and small companies. Well-functioning skills ecosystems rely on coordinated actions, including skills forecasting to direct public and private investment in education and training, public support and incentives for skills development, as well as guidance to the taking up of existing opportunities that acknowledge the context in which skills are developed and used. These ecosystems also require a flexible and transparent offer of skilling opportunities from both the public and private sector and a shared framework for validation and recognition of the skills acquired. For all these elements to be in place and functioning, several actors can contribute. The following recommendations, in order of priority, apply (see also Table 1).

- ***Raise awareness and information about available support and programmes***

Companies repeatedly mentioned difficulties and lack of information about how to find and access public support, even where such support is available. This highlights that policymakers at both regional and national level should actively reach out to micro and small companies, to inform them about available public support for up- and re-skilling and how to access it. Longstanding programmes that represent good examples of policies for up- and re-skilling, such as the AMU programme in Denmark and the WeGebAu programme in Germany, include awareness-raising actions to involve micro and small companies. Chambers of commerce, education and training providers and social partners can complement this action, informing and guiding companies on public support and private programmes that suit their needs, as happens, for example, with the training funds in Italy and in the Netherlands. Putting in place support measures or programmes is not enough if companies are not aware of their existence or do not know how to access them. If information about available opportunities does not reach micro and small companies, the potential effects of public and private investments vanish.

Companies, for their part, can actively contact chambers of commerce, education and training providers or social partners to ask for support in collecting this information and in accessing available opportunities, at both public and private level. This can increase the capacity to find public support and suitable up- and re-skilling opportunities, which the study identified as the two main challenges.

- ***Promote collaborative approaches at sectoral and local/regional level***

The study highlighted that micro and small companies have relatively limited resources to invest in up- and re-skilling. To leverage economies of scale and join efforts to maximise the effect of relatively limited investments in skills development, national and regional policies should facilitate and incentivise sectoral and local/regional networks of companies.

Education and training providers should contribute by building and coordinating such networks, and by developing a training offer aligned to national/regional policies and their industrial and socio-economic priorities. Social partners, on their part, can play a role in identifying such priorities, and also act as aggregators of networks themselves.

In the context of the ongoing economic transformations, sectoral and local/regional approaches to up- and re-skilling can be developed around strategic value chains that are key to succeed in the transition to a digital, green and inclusive economy. Some examples include the low-carbon industry, the industrial internet of things, digital communication and information services, and healthcare and social assistance systems.

The study has evidenced that positive examples of networks for up- and re-skilling exist and that their experience can be drawn on: in Ireland through Skillnet and SOLAS, in the Netherlands with its sectoral training funds, and in Italy through its professional training funds, some of which encourage networks.

Companies should join existing networks or build on their business relations to develop new ones. This can help them pool financial efforts and share information and good practices for up- and re-skilling, and lowering the informational barriers and administrative burdens that they indicated as main challenges to their provision.

- ***Tailor up- and re-skilling to the features of micro and small companies***

In the light of the struggles that micro and small companies reported in finding up- and re-skilling activities that are relevant to their needs and adequate to their work organisation, education and training providers should tailor their programmes specifically to their features. This tailoring could mean leveraging the prevalence of informal learning in micro and small enterprises, as it emerged from the study. One example is the AFEST programme in France, where providers, in cooperation with the company, develop an ad hoc plan for employees to learn during their daily job tasks. Moreover, in the short term, highly focused programmes, including for specific micro skills, can be developed to account for time constraints experienced by micro and small companies and their employees that emerged as one of the main challenges. In general, education and training providers can regularly screen companies' needs and engage them to develop responsive and effective programmes. Training funds, in which social partners play a key role, can provide a framework infrastructure to collect companies' needs and inputs for tailored programmes.

Companies should build on their strengths and on good practices in companies with a forward-looking approach to up- and re-skilling. Close relations between employees and managers (i.e. internal proximity) and collaborations in value chains (i.e. external business relations) can be leveraged with a stronger attention to learning, to provide up- and re-skilling opportunities that arise in daily business operations. A strategic and more structured approach that takes advantage of these opportunities requires identification of the learning objectives and a plan of how they are to be achieved. For this, companies can seek support from education and training providers, but also from other external actors, for advice on human resources.

Although further investigation beyond the objectives of this study is needed to establish conditions for success, both providers and companies should explore and tap the potential of digital learning tools. These could lower the costs and the management time and increase the tailoring of up- and re-skilling opportunities. Policy should facilitate deployment of digital tools for learning, looking at good examples of policies, such as the *Aula Mentor* programme in Spain.

- ***Tailor public funding for up- and re-skilling to the features of micro and small companies***

Provided that public investments in up- and re-skilling are already being made, national and regional policies should target micro and small companies specifically. This could deliver results even without dramatically increasing the allocation of resources for up- and

re-skilling. Considering the challenges reported by micro and small companies in the study, public support should be accessible with minimum bureaucracy, to reduce the time needed to obtain and manage it. Public financial incentives should account not only for training costs, but also for the company's productive loss of an employee participating in training, to compensate companies for the investment in time, without forcing employees to take training outside paid working hours. The longstanding Danish AMU programme provides an example of such compensation. Public measures should include support for informal learning, to leverage existing practices within the company, responding to their features and needs. A good example of how public programmes can support and help companies in structuring and unlocking the potential of informal learning is offered by the French AFEST programme.

However, further investigation is needed to thoroughly assess the effectiveness and the trade-offs of such tailored policy actions. To ensure optimal use of public resources, monitoring access of micro and small companies to public support measures, as well as evaluating the quality and the results of subsidised education and training activities, should be embedded in policy design.

EU-level policymakers can develop guidelines to tailor national/regional policies to micro and small companies. Considering that they provide financial resources for up- and re-skilling, for example through the European Social Fund (ESF), EU-level policymakers can define, in cooperation with Member States, criteria for preferential access of these companies to EU funds. Delivery to micro and small companies can be included as a criterion in monitoring and evaluation of EU funds.

- ***Target the key actors***

Both national/regional policymakers and education and training providers should target, respectively, policies and programmes to those actors that bear the responsibility for up- and re-skilling within the company or that need it the most. The study has identified the owner-manager as the main person responsible within the firm. Yet it has also highlighted the proactive initiative that individual employees have to take to participate in up- and re-skilling. Targeting training and related public support to the owner-manager can help to build capacity within the company, to plan strategically, with a long-term vision, and give better structure to up- and re-skilling. Targeting individual employees is equally important, because it allows them to pursue up- and re-skilling beyond the short-term needs that often drive company-led initiatives.

Targeting support directly to individuals, either employees or managers within micro and small companies, contributes to universal access to adult learning opportunities. Individual learning accounts, such as the *Compte Personnel de Formation* in France, provide a good example of policy that adopts a systemic approach on a large scale to ensure such universal access. Individual learning accounts offer the possibility to pursue up- and re-skilling on an individual basis both to managers, to help them plan better and think strategically, and to employees, once their needs for up- and re-skilling are identified. By allowing everyone to access financial support and guidance, individual learning accounts have the potential to trigger a system-wide change in the way up- and re-skilling is approached, shifting the focus from the actions led by the company to actions that can be initiated by individuals. This could overcome the limitations for up- and re-skilling that are linked to firms' characteristics, including size. However, given recent and ongoing reforms in countries that adopt individual learning accounts on a large scale, such as the Netherlands and France, further evaluation of these types of instruments is needed to establish under which conditions expected results are delivered.

Targeting low-qualified employees is especially recommended, to encourage their participation in education and training beyond informal learning and the company's needs, factors which the study finds prevalent in up- and re-skilling of these employees. Individual entitlements to public support for low-qualified employees can help overcome the limited investment in education and training by the employers, who fear these employees would leave the company, once trained, before the investment is recouped. Such individual

entitlement can be pursued, for example, by targeting individual learning accounts to this group. However, the pivotal role of companies in up- and re-skilling of low-qualified employees should not be dismissed. Employers and colleagues are in a privileged position to be able to support and encourage these employees, particularly to help them overcome lack of motivation. Education and training providers, in addition, should develop an offer that is suitable to this audience, and can address their needs and attitudes towards learning.

- ***Enhance skills assessment and identification***

National and regional policies should enhance support to assess skills gaps and to track skills development to ensure that up- and re-skilling opportunities respond to the actual needs of the company and its employees. In fact, the study has highlighted that assessment and tracking of skills is underdeveloped in micro and small companies, while acknowledging skills gaps and needs can help target relatively limited investments and avoid wasting resources at both company and policy level. If not as a standalone measure, this necessary step should always be included in other measures that provide support for up- and re-skilling.

Social partners should assist companies and their employees in skills assessment and tracking. Education and training providers should go through this phase at the beginning of their collaborations on up- and re-skilling with micro and small companies and, at the end, should facilitate the validation of skills acquired.

Following the example of those that have a forward-looking approach to up- and re-skilling, and thanks to enhanced support of policies, social partners and education and training providers, companies should put in place practices for assessing the skills of their employees and tracking how these evolve. Even if not completely formalised, these practices can help companies to have a strategic vision and a structured plan for up- and re-skilling, which is important to leverage the existing potential, as remarked on in other recommendations.

- ***Recognise the value of informal learning***

As this form of learning is widespread and reckoned to be adequate for the features and characteristics of micro and small companies, national and regional policymakers should develop and strengthen frameworks for validation and recognition of skills acquired through informal learning. Building on the action taken to implement the Council Recommendation on validation of non-formal and informal learning and on the experience of the European Qualification Framework, EU-level policymakers should foster their action to coordinate efforts at national level towards the validation and recognition of informal learning.

As key stakeholders, education and training providers, as well as social partners, should have a role in defining these frameworks, bringing in knowledge and representing different actors involved in the validation and recognition process. Both these organisations should also strengthen their efforts into validating and certifying skills acquired through informal and non-formal learning.

Following the recommendation on skills need assessment and skills identification, companies should make visible and reward the evolution of employees' skills even if this happens through informal learning. Lack of motivation among low-qualified employees is sometimes mentioned as an additional challenge for up- and re-skilling of these employees, and visibility and rewards can also help to overcome this.

To implement recommendations, this study is accompanied by booklets on good practices for companies and good examples of policies for policymakers, as well as by a repository of existing guidance resources for companies, intermediaries and policymakers, to foster up- and re-skilling.

Table 1 Summary of recommendations

Recommendation	Actor			Priority	
	Companies	Intermediaries and social partners	National/regional policymakers	Importance of the action	Timing for the action
Raise awareness and information about available support and programmes				High	Short term
Reach out to intermediary organisations and social partners	X			To inform on existing possibilities, otherwise efforts are vain	Implementable immediately at low cost
Reach out to companies to inform them on public and private opportunities		X			
Raise awareness and increase information about existing policies			X		
Promote collaborative approaches at sectoral and local/regional level				High	Short term
Join existing networks (or build on learning-centred business relations to create new ones)	X			To join efforts, develop economies of scale, share information and build on existing good practices	Implementable in the short term, building on sectoral/territorial connections at relatively low cost
Act as leaders of networks of companies		X			
Align programmes with national/regional policies and their industrial and socio-economic priorities		X			
Facilitate and incentivise networks and sectoral approaches			X		
Tailor up- and re-skilling to the features of micro and small companies				High	Medium term
Leverage on proximity and internal relations	X			To unlock existing potential and increase relevance of up- and re-skilling to needs	Requiring time for planning and change of mindset, but the costs are relatively low
Develop learning-centred business relations	X				
Identify and maximise opportunities in business operations	X				
Reach out to companies to scan their needs (and engage with them to develop adequate programmes)		X			
Make the best use of digital learning opportunities	X	X	X		

Recommendation	Actor			Priority	
	Companies	Intermediaries and social partners	National/regional policymakers	Importance of the action	Timing for the action
Tailor public support to the features of micro and small companies				High	Medium term
Limit bureaucracy			X	To facilitate access to companies addressing time and financial constraints, and ensuring delivery and results	Requiring time for policy design and evaluation, and (possibly) increase in public financing
Offset loss for time that employees spend in education and training			X		
Make informal learning eligible for funding			X		
Ensure regular and thorough monitoring and evaluation of education and training provided with public support			X		
Develop guidelines to tailor policies and define criteria to assign EU funds to micro and small companies			X		
Target the key actors				Medium	Medium term
Target support and training to owner-managers		X	X	To build capacity, and to empower individuals to up- and re-skill in their interest	Requiring time for design, change of mindset and (possibly) additional investment
Target individual employees		X	X		
Target low-qualified employees	X	X	X		
Enhance skills assessment and tracking				Medium	Medium term
Assess skills and monitor their evolution through a structured approach	X			To increase knowledge about skills gaps and evolution, as well as enhance relevance of up- and reskilling	Requiring awareness raising on importance of this step and time for planning, but with low additional investments
Reach out to companies to assess skills gaps <i>ex ante</i>		X			
Facilitate validation of skills acquired		X			
Embed and enhance support for skills assessment in public programmes			X		
Recognise the value of informal learning				Medium	Long term
Recognise and value skills development within the firm, including through informal learning	X			To enhance the visibility and incentivise an important source of learning	Requiring political coordination and definition of criteria and systems for validation, as well as a change of mindset
Design and implement activities that use informal learning in the workplace		X			
Develop and strengthen frameworks for validation and recognition of skills beyond formal qualifications			X		

1 INTRODUCTION

Most businesses in the European Union (EU) are micro and small enterprises and constitute an important source of employment and added value. These enterprises therefore merit special attention, especially because there is **a negative correlation between company size and employees' rates of participation in learning opportunities** (Muller et al., 2018).

Technological change and other trends, such as a population ageing and climate change, are driving **transformations in the labour market and the nature of work**. This means that there is an even greater need to up- and re-skill the workforce (WB, 2019).

The present **Study on mapping the opportunities and challenges for micro and small enterprises in offering their employees up- or re-skilling opportunities aims to develop a sound understanding of the subject**, to help define strategies and policies for this important share of EU businesses and their employees.

1.1 Micro and small enterprises matter

In this study, **micro and small enterprises are defined as those enterprises with fewer than 10 employees and between 10 and 49 employees, respectively**, excluding the self-employed. In both the literature and policymaking, these companies are often included in the larger group defined as Small and Medium Enterprises (SMEs), namely those companies with fewer than 250 employees. Even among SMEs, however, micro and small enterprises represent the majority.

The share of micro and small enterprises in the total number of enterprises is greater than 98% in almost all EU countries, except in Ireland, where they amount to 94% of all companies². At EU27 level, micro and small companies employ more than half of Europe's workforce (i.e. 52%), but this percentage is generally higher for South-East European countries. Regarding the value added, again, Southern European countries have the highest share. However, several North-West European countries, which show lower shares of employment, are above the EU27 average (i.e. 39%) in their shares of value added produced in micro and small companies. Comparing the share of employment and of value added in each country, as in Figure 1.1, offers indications about the characteristics of micro and small companies. For example, where the difference between the share of employment and of value added is low, micro and small companies are expected to operate in a highly productive sector, with higher levels of labour productivity.

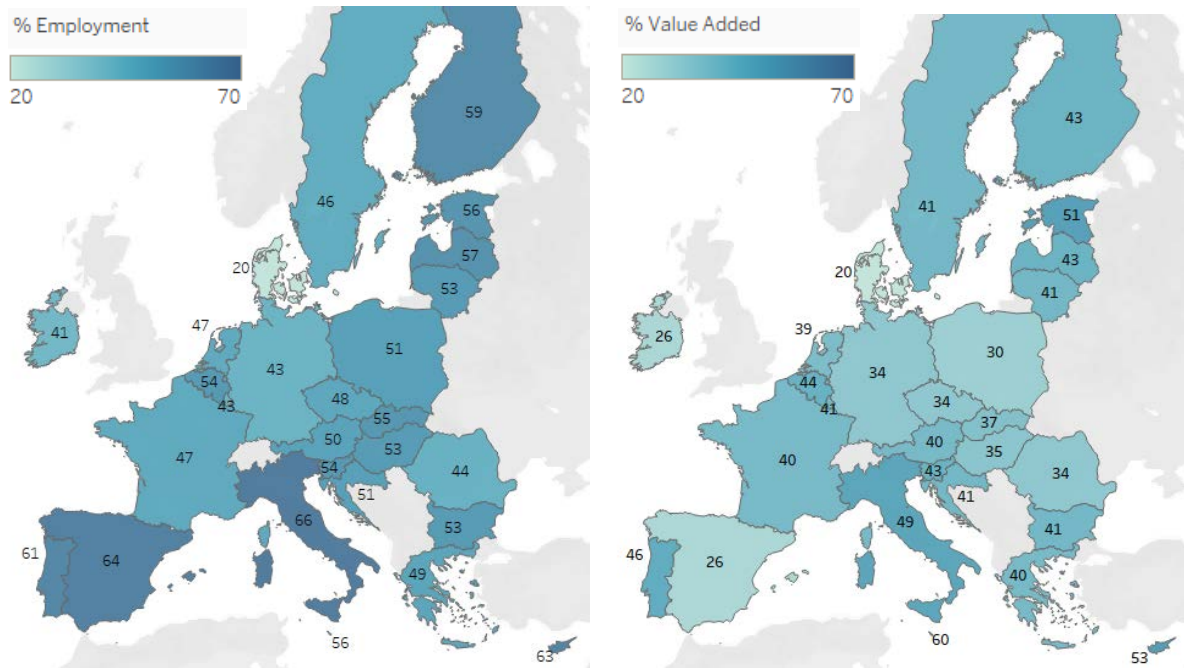
Differences also exist in the distribution of small and micro enterprises across sectors. As shown in Figure 1.2, below, one third (30.4%) of small and micro enterprises operate in the wholesale and retail trade sector, and in motor vehicle and motorcycle repair. Sectors such as professional, scientific and technical activities and construction follow, with 21% and 16% of micro and small companies, respectively. By contrast, there are few small and micro companies in mining and quarrying, but they are still fairly present in sectors such as manufacturing (9.8%), accommodation and food service activities (9.5%), information and communication (4.9%) and real estate (6.7%). Although the precise distribution of micro and small enterprises varies across sectors in each country, these trends are generally consistent in all EU27 countries.

The sectoral distribution of micro and small companies is strongly influenced by the knowledge- and technology-intensity of the sector. When considering SMEs as a whole, micro and small firms are underrepresented in sectors with a high intensity of knowledge and technology. Muller et al. (2018) report that, among 93.1% of micro enterprises in the non-financial business sector, more than half, namely 56.3%, operate in low knowledge-intensive services. Another 4.8% operate in low-tech services. However, 28% of micro and small enterprises provide considerable knowledge-intensive services. Considering the

² Source: Eurostat – SBS, 2016.

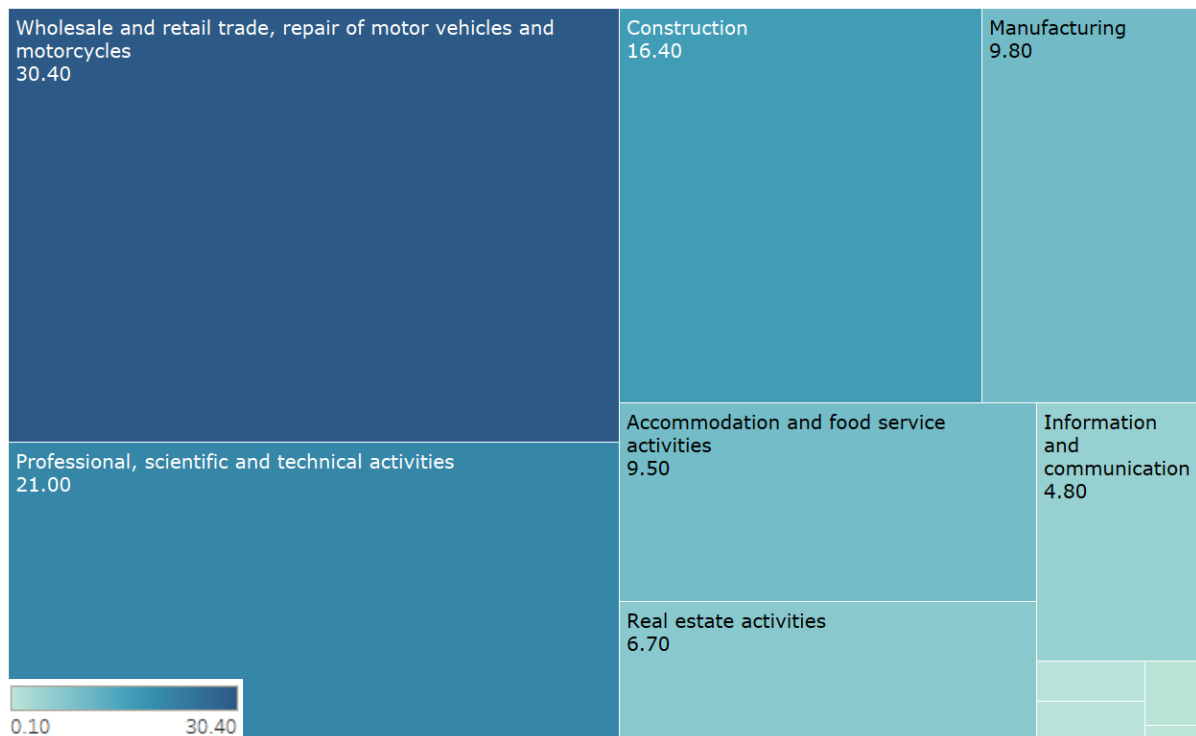
high absolute number of micro and small enterprises in the EU, this last category still represents many EU companies.

Figure 1.1 Share of total employment (left) and total value added (right) in micro and small companies (%)



Source: Authors' formulation based on Eurostat – SBS, 2016.
 Notes: For Denmark, only micro companies' share is taken into account due to data availability; for Cyprus, the share is a value estimated by the authors based on data available in Eurostat.

Figure 1.2 Share of small and micro companies by NACE Rev.2 sectors, non-financial business sector, EU27 (%)



Source: Authors' formulation based on Eurostat – SBS, 2016.

1.2 The benefits of adult learning

In view of this high number of micro and small enterprises on the EU employment landscape, the need for skilled human capital should not be overlooked. **Adult learning, defined as the entire range of formal, non-formal and informal learning activities – both general and vocational – undertaken by adults after leaving initial education and training**³, is important in this regard.

At the macroeconomic level, adult learning, or allowing human capital accumulation, can boost growth (Romer, 1990), employment (Gros, 2019) and innovation (Crescenzi and Rodríguez-Pose, 2012) in Europe. At the microeconomic level, adult learning benefits both companies and individuals. In particular, it can help micro and small companies to thrive. Companies that invest in education and training benefit from increased productivity (Acemoglu and Pischke, 1996) and higher staff retention and competitiveness, as well as higher worker motivation (Eurofound, 2017). For individuals, adult learning can deliver significant advantages. Trained workers experience higher intra-firm mobility and job stability (Sanders and de Grip, 2004; Dietz and Zwick, 2016; Ranganathan, 2018). Moreover, adult learning has the potential to positively impact workers' wages (Fialho et al., 2019).

Above all, adult learning is necessary to keep pace with change after leaving initial education and training. Up- and re-skilling have an important role to play in a constantly evolving economy and society⁴. Indeed, as digitalisation and automation lead to major labour market transformations and changing skills demand in fast and virtually unpredictable ways, education and training are increasing in importance (ILO, 2019b; WB, 2019). By 2030, almost 40% of the net job growth in the EU will be in occupations that require high qualifications (EPSC, 2019). Moreover, occupations themselves change rapidly; in the period 2010-2014, 43% of EU workers have experienced change in the technologies they use at work and 47% have experienced change in working methods and practices (Cedefop, 2019b).

It is important to recognise that the gradual transformation of initial education and training systems is ongoing but cannot keep pace with the speed and uncertainty of changing labour market and skill demands. Therefore, even the most future-proof schools and universities might not be enough to ensure that workers have, from the beginning, the right set of skills for all the changes that will affect their careers throughout the years. Furthermore, workers faced with labour market transformation may even lack basic skills in the first place. In fact, at international level, the indicators from the Programme for the International Assessment of Adult Competences (PIAAC) show that 19.5% of adults have poor reading skills and 22.7% have poor numeracy skills (OECD, 2016). Moreover, nearly half of the adults surveyed under PIAAC lack proficiency in problem-solving in technology-rich environments – a skill that is increasingly important with the digitalisation of the economy and society. This lack of basic skills can hinder workers' capacity to up- and re-skill. In effect, **low-qualified individuals, namely those with a level of qualification below upper secondary education** (UNESCO-UIS, 2012) are more likely to lack basic skills (OECD, 2019c) and have less access to adult learning than those with higher qualifications.

Given the uncertainty about which skills and jobs will be required in the future, it is essential to build on strategies that allow people to keep learning throughout their lives and careers. Such strategies should focus on the capacity to take up continuous learning, known as 'learning to learn' (Ashoka and McKinsey, 2018). Skills will become obsolete more and more rapidly. Thus, a positive attitude to learning should be instilled early on and continue throughout working life. For this, it is important for individuals to acquire basic general skills, notably horizontal cognitive and socio-behavioural skills rather than manual or job-related technical skills. Indeed, horizontal cognitive skills and socio-

³ Definition based on the [Council Resolution on a Renewed European agenda for adult learning](#).

⁴ See the [Recommendation on Key Competences for Lifelong Learning](#).

behavioural skills are key to continuous learning and to managing changes in jobs and tasks (OECD, 2019a; Ashoka and McKinsey, 2018; WB, 2019). Supplementary specific, job-related technical skills can be acquired as needed, to match the evolving demand led by digitalisation of the economy and society. Such specific skills are also likely to be required in emerging fields. For example, new skills for jobs in the green economy (ILO, 2019b) or in sectors related to population ageing are also expected to grow and will need further development (EPSC, 2019).

In summary, the goal of future-proof education and training systems is to combine sound initial education and training in early life stages with enhanced learning opportunities in adult age. This combination appears important to provide foundational, socio-behavioural and cognitive skills, complemented with on-time job-specific skills that emerge and rise in demand with ongoing transformations, such as digitalisation, climate change and population ageing.

This is key to avoiding skills mismatches and resulting economic slowdown, but also to prevent social exclusion. The need to create a solid basis for skills development for all is even more evident in view of the growing prominence of non-linear career paths and non-standard forms of employment, such as temporary, on-demand and platform work. As workers are likely to change jobs and careers more frequently than in the past, it is necessary to equip them with transferable skills that can be used in different contexts, namely across firms, sectors and occupations. Only in this way can workers maintain their employability and avoid being left behind when moving from one job to another. This underlines the role of policy and right tools to encourage both employers and employees to invest in adult learning, even under non-standard employment arrangements, and to ensure the recognition and portability of developed skills across jobs, employers and employment status (OECD, 2019b).

1.3 Rationale of the study

This study is concerned with two principal issues. First, it looks at the insufficient provision of up- and re-skilling opportunities for working adults in micro and small enterprises. Second, it looks at structural imbalances in existing adult learning provision, more specifically the bias towards more educated employees. The overall aim of the study is to gain a better understanding of the reasons for this situation, looking at the challenges faced by smaller firms in up- and re-skilling and exploring opportunities, strategies and policy measures to remedy the situation.

The specific objectives of the study are:

- **to identify, synthesise and assess policy-relevant information on the opportunities and the nature and scale of the challenges** encountered by micro and small companies in supporting their employees' skills development;
- **to collect and evaluate good practices in micro and small companies and from national or regional public policy** in supporting these companies, and to incorporate them into a repository of guidance resources for policymakers and other stakeholders.

To this end, **the study relies on an analytical framework** that systematises in four main groups the challenges affecting the decisions of micro and small companies to engage in up- and re-skilling. The analytical framework distinguishes:

1. market failures regarding investment in education and training,
2. financial constraints and opportunity costs of these activities,
3. informational deficiencies skills development and related opportunities for up- and re-skilling, and,
4. supply constraints that limit the provision of adequate and quality training to micro and small enterprises.

The framework also groups adult learning policies to foster up- and re-skilling according to the challenges mentioned above.

The analytical framework was devised as a result of a **desk research**. This included reviewing the literature, gathering evidence on the topic and then **selecting seven countries for empirical examination**. The aim was to find countries that are differentiated according to a set of indicators and thus are representative of different contexts. These indicators take account of skills demand and supply; the education and training system for adults; the economic and labour market situation; and geographical representativeness⁵. **Germany, Denmark, France, Ireland, Italy, the Netherlands and Slovakia** were selected for empirical investigation in this study.

To generate new data on the topic, the study drew on several tasks performed in these selected countries. It entailed **collecting survey-based data from micro and small companies** on the challenges and opportunities related to up- and re-skilling of their employees and conducting a detailed analysis of this data. The study also consisted of **interviews with micro and small employers and employees** and **interviews with national and regional authorities and other stakeholders** to complement the survey information with more detailed qualitative data. Overall, **432 micro and small companies** and **60 experts and stakeholders from 55 organisations** were involved in the data collection phase of the study.

Finally, the study **draws recommendations for companies, intermediary organisations and policymakers**. In addition, recommendations were complemented by **good practices at company level and good examples of policies for up- and re-skilling** that emerged from the data collection and additional desk research. **These are practical proposals to foster up- and re-skilling in micro and small enterprises** and are available in dissemination format, together with this report, as outcomes of the study.

The remainder of the report is organised as follows. Chapter 2 illustrates the available data on the state of play regarding up- and re-skilling in the EU. Chapter 3 discusses the specific characteristics of micro and small enterprises related to up- and re-skilling, as well as the challenges and the opportunities experienced. Chapter 4 presents the results and analysis of the primary data collection concerning levels, features, challenges and opportunities of up- and re-skilling in micro and small enterprises. This chapter also discusses the policy approaches that are available to address the situation and presents the views and policy suggestions gathered through the data collection regarding these policy approaches. Finally, Chapter 5 draws conclusions from these results and puts forward recommendations for actors involved in up- and re-skilling.

⁵ A table summarising these criteria is available in Annex 1: Methodology/A1.1).

2 ADULT LEARNING IN THE EU

Key points

- EU-level policy actions have been put in place to foster adult learning, through the European Agenda for Adult Learning, the Skills Agenda and the Copenhagen process on vocational education and training (VET) and its various updates.
- Participation in adult learning is still too low at EU level, although geographical patterns show that Northern and Western European countries tend to have better rates than Southern and Central Eastern European countries.
- When comparing different types of up- and re-skilling opportunities, there are major differences in rates of participation in formal and non-formal education and training, as well as in informal learning, both within and across Member States.
- Participation in adult learning is consistently and particularly low in micro and small companies, and for low-qualified employees, who are more likely to work in these firms.

2.1 EU policy framework

Worldwide, in the context of the important transformations that impact the labour market and the nature of work, there is increasing attention to the role of education and training to ensure fair and sustainable growth (WB, 2019). Investing in people's capabilities through lifelong learning is considered a key element of the ILO's Human-Centred Agenda for the Future of Work. Its importance leads to advocate for establishing a universal right not only to initial education and training, but to continuous up- and re-skilling throughout multiple transitions during individuals' working lives (ILO, 2019b). In particular, the crucial role of adult learning in economic growth, employment, innovation and social inclusion makes it a relevant topic for the future of Europe. It explains the increasing interest and actions at EU level. The Treaties of the EU formally recognise education and vocational training as areas where the EU has the competence to support Member States and thus EU-level policy has developed alongside three axes. First, it has moved towards the establishment of lifelong learning, including adult learning for up- and re-skilling, as an individual right. Second, it has built and progressively strengthened a policy framework for lifelong learning, including initial education and training, as well as adult learning. Third, it has provided financial support to achieve the goals of the adult learning policy in the EU.

The **establishment of lifelong learning and up- and re-skilling as an individual right** has gained unprecedented importance with the Charter of Fundamental Rights of the European Union, which stipulates that 'everyone has the right to education and to have access to continuing and vocational training'⁶. This commitment has been reinforced by the more recent **European Pillar of Social Rights**, which in its Chapter 1 establishes everyone's right to 'quality and inclusive education, training and lifelong learning'⁷.

At the same time, **the development of an EU policy framework** to support adult learning in the EU draws on important initiatives such as the Renewed European Agenda for Adult Learning and the 2016 **New Skills Agenda for Europe**⁸. Specific needs for up-

⁶ Article 14 of the [Charter of Fundamental Rights of the European Union](#).

⁷ Article 1 of the [European Pillar of Social Rights](#).

⁸ The New Skills Agenda for Europe is available [here](#). In January 2020 the EC has announced the adoption of the adoption of the Updated Skills Agenda for Europe.

skilling are recognised as applying to low-skilled and low-qualified individuals, who are specifically targeted by the **Recommendation on Upskilling Pathways**⁹ as part of the Skills Agenda. The Agenda also encompasses various tools that provide insight into skills supply and demand. These include the Europass framework, which offers standardised templates to help individuals communicate their skills; the European Qualifications Framework for lifelong learning (EQF), which makes national qualifications comparable across the EU, and the European Skills, Competences, Occupations and Qualifications (ESCO) database, which establishes reference terminology that can be used to describe the skills and qualifications needed in a specific occupation. This policy framework has been enhanced thanks to important initiatives to strengthen the EU cooperation in the field of up- and re-skilling. For example, in 2002, the Copenhagen Process was initiated through a Declaration signed by relevant EU Ministers and the EC, with the aim to enhance the EU cooperation in vocational education and training¹⁰. The Copenhagen process is in turn an important part of the Strategic Framework for European Cooperation in Education and Training (ET2020), which builds on the previous ET2010 and sets out the strategic objectives for fair and sustainable economic prosperity in Europe by 2020, including for what concerns up- and re-skilling¹¹.

EU Financial resources from different streams, such as the European Social Fund (ESF), the Erasmus+ Programme and Youth Employment Initiative have been invested under the umbrella of adult learning policy framework and its objectives. The aim has been to promote up- and re-skilling opportunities, to boost participation in adult learning, which is still low in many EU countries and the EU overall.

2.2 Current situation

Against this policy background, it is worth reviewing the evidence regarding access to up- and re-skilling opportunities for adult Europeans.

For the purposes of this study, formal education and training is defined as education that is 'institutionalised, intentional and planned through public organisations and recognised private bodies and – in their totality – constitute the formal education system of a country' (UNESCO-UIS, 2019a), while non-formal education and training is 'institutionalised, intentional and planned by an education provider' (UNESCO-UIS, 2019b). Another form of learning considered by the study is informal learning, which consists of 'forms of learning that are intentional or deliberate but are not institutionalised' (UNESCO-UIS, 2019c), such as learning that occurs in the family, workplace or elsewhere in daily life. For example, typical informal learning activities include the use of web resources to search information, independent reading or research and collaboration with colleagues. These definitions are in line with the terminology used in the EC policy documents¹², which refer, respectively, to formal, non-formal and informal learning for each category presented above (EC, 2019).

This study defines levels of qualifications drawing on the International Standard Classification of Education (ISCED), as in Table 2.1. This includes formal education and training and has recently been part of ongoing, yet not finalised, efforts to fully recognise competences and skills from non-formal education and training. A similar classification at EU level is provided by the EQF¹³, which broadly overlaps with ISCED and adopts the same criteria to classify all forms of formal or non-formal education and training. Both ISCED and the EQF cover qualifications recognised by relevant national authorities, regardless of how they are obtained. This is to allow for classification of qualifications obtained through the demonstrated acquisition of skills and knowledge that is comparable to successful completion of a formal programme and acknowledged through a formal qualification

⁹ The Recommendation on Upskilling Pathways is available [here](#).

¹⁰ [Declaration on Enhanced European Cooperation in Vocational Education and Training](#).

¹¹ [ET2020 – the Strategic Framework for European Cooperation in Education and Training](#).

¹² See, for example the [Council Recommendation on the Validation of Non-formal and Informal Learning](#).

¹³ The EQF is based on the Recommendation on the European Qualifications Framework for lifelong learning, available [here](#).

(UNESCO-UIS, 2012). At national level, the identification of these qualifications obtained outside formal channels, to certify skills acquisition outside formal education and training, is still ongoing. Non-formal and informal learning are more difficult to recognise statistically, and commonly do not provide official certifications. Nevertheless, especially for adults, they are important sources of skills.

Table 2.1 Classification of qualification levels

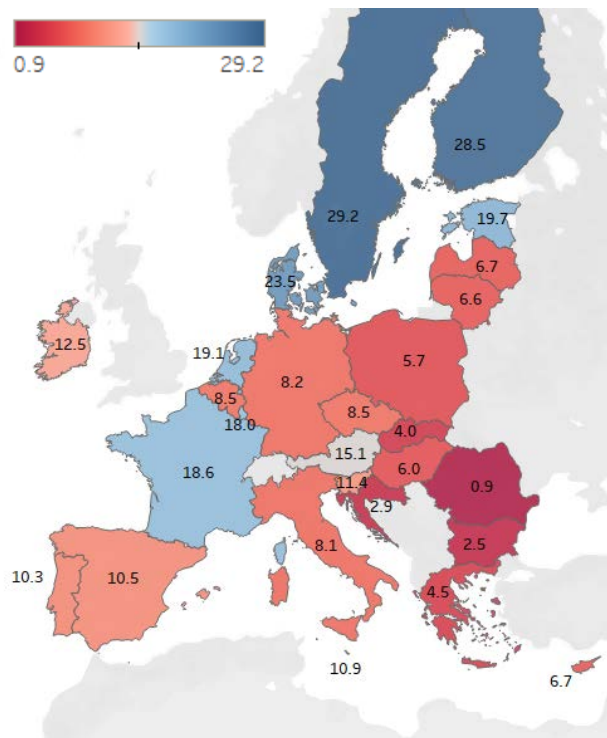
Level of qualification	ISCED level	Level of education
Low-qualified	ISCED 0	Early childhood education (less than primary)
	ISCED 1	Primary education
	ISCED 2	Lower secondary education
Medium-qualified	ISCED 3	Upper secondary education
	ISCED 4	Post-secondary non-tertiary education
High qualified	ISCED 5	Short-cycle tertiary education
	ISCED 6	Bachelor's or equivalent level
	ISCED 7	Master's or equivalent level
	ISCED 8	Doctoral or equivalent level

Source: Authors' formulation based on ISCED 2011.

With these definitions in mind, the analysis starts by noting that overall in the EU27, only 10.6% of adults in the age range 25-64 participated in education and training during the four weeks before the survey, in 2018. This EU average is still significantly lower than the ET2020 benchmark of 15% of adults (25-64 years old) in learning by 2020¹⁴. There are notable difference across countries. Participation rates vary from around 20-30% in Nordic countries, to below 5% in Central and Eastern European countries as shown in Figure 2.1.

¹⁴ See the ET2020 – [Strategic Framework for European Cooperation in Education and Training](#).

Figure 2.1 Adult learning participation rate in the EU27 (%)



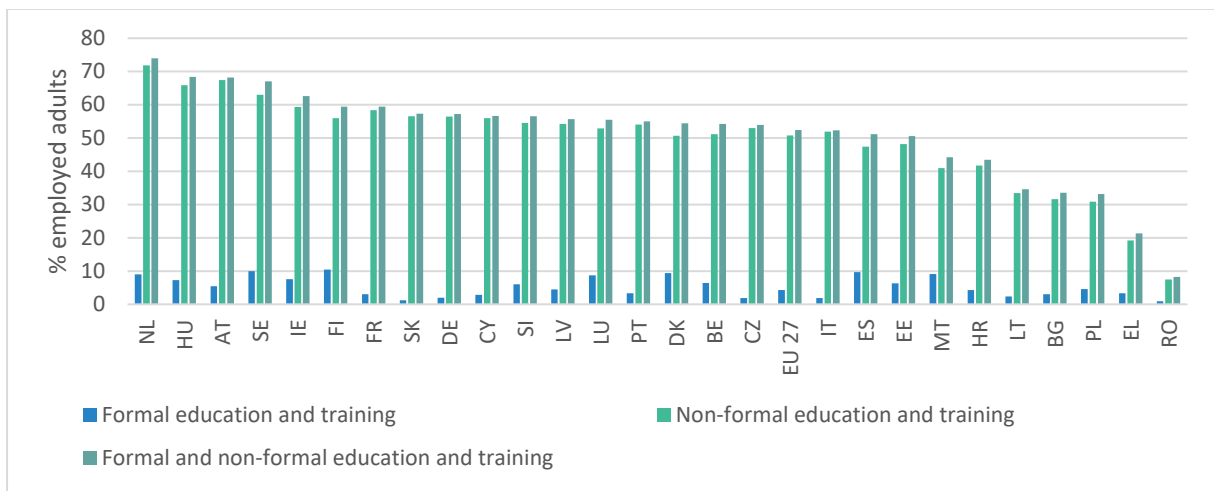
*Note: Adult learning participation rate is defined as the share of the population 25-64 years old in formal and non-formal education and training in the 4 weeks before the survey date (Eurostat – LFS, 2018). Countries in red are below the ET2020 benchmark of 15% adults participating in learning.
Source: Authors' formulation based on Eurostat - LFS, 2018.*

The Labour Force Survey (LFS), from which the adult learning participation rates are calculated, collects annual data on any adult participation in education and training during the four weeks prior to the survey interview. In addition, the Adult Education Survey (AES) is a dedicated survey that occurs more rarely but collects more detailed information. It is carried out every five years and collects a broader set of information on different types of adult learning during a longer reference period, namely the last twelve months prior to the survey interview (EC, 2018a).

Data from the AES on participation in formal and non-formal education and training in the twelve months before the survey show a more complete picture. For this reason, in this section, mainly data from the AES are discussed. The adult learning participation rate, above, is referred to the entire population in the age range 25-64 to provide a broad overview on adult learning in the EU27. By contrast, the indicators in this section refer only to the employed adult population, who is the interested population by this study on up- and re-skilling in micro and small firms. Figure 2.2 indicates that, on average, in 2016, 52.4% of employed adults participated in formal or non-formal education and training in the EU27. This indicator shows that several countries that did not perform well in the figure above, referred to four weeks prior to the survey, namely Germany, Slovakia, Ireland, Belgium, Portugal, Czech Republic, Slovenia, Hungary, Latvia and Cyprus are above the EU average in the figure below, which considers twelve months before the survey.

Most of the education and training undertaken by employed adults appears to be non-formal. In fact, while 50.8% undertook such education and training, only 4.3% participated in formal education and training. This underscores the significance of non-formal education and training for employed adults. Although there are country differences in participation rates, formal education and training is lower than non-formal education and training in all countries.

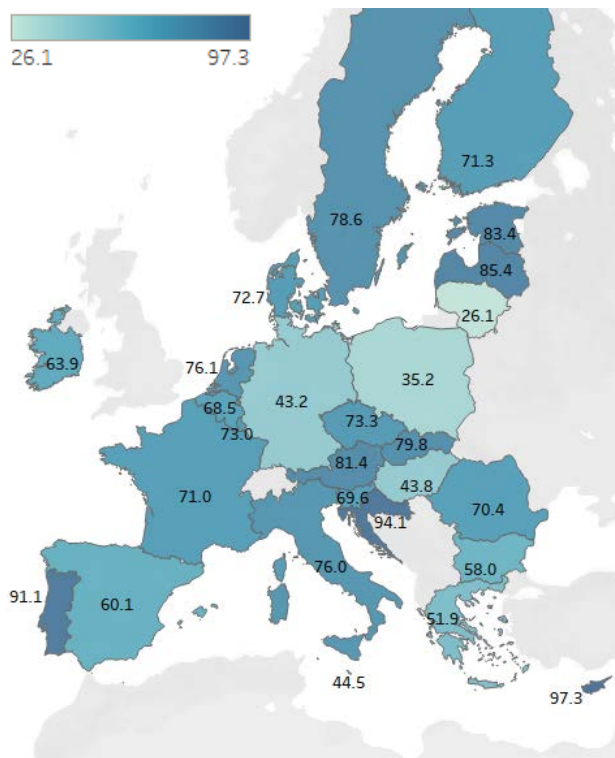
Figure 2.2 Share of employed adults participating in formal and non-formal education and training in the 12 months before the survey (%)



Source: Authors' formulation based on Eurostat – AES, 2016.

The highest participation rates are observed for informal learning. In 2016, the overall participation rate in informal learning in the EU27 was 61.9%. However, the share of participants in informal learning varies widely across countries, as shown in Figure 2.3. There is a slightly different geographical pattern than that observed for participation in formal and non-formal education and training, above. When looking at informal learning participation rate, it is not possible to identify a clear geographical clustering across EU regions. For example, many countries that perform poorly in formal and non-formal education and training, namely several Southern and Central Eastern European countries tend to do much better in terms of participation in informal learning. This, again, adds further nuance to the picture of adult learning in the EU27.

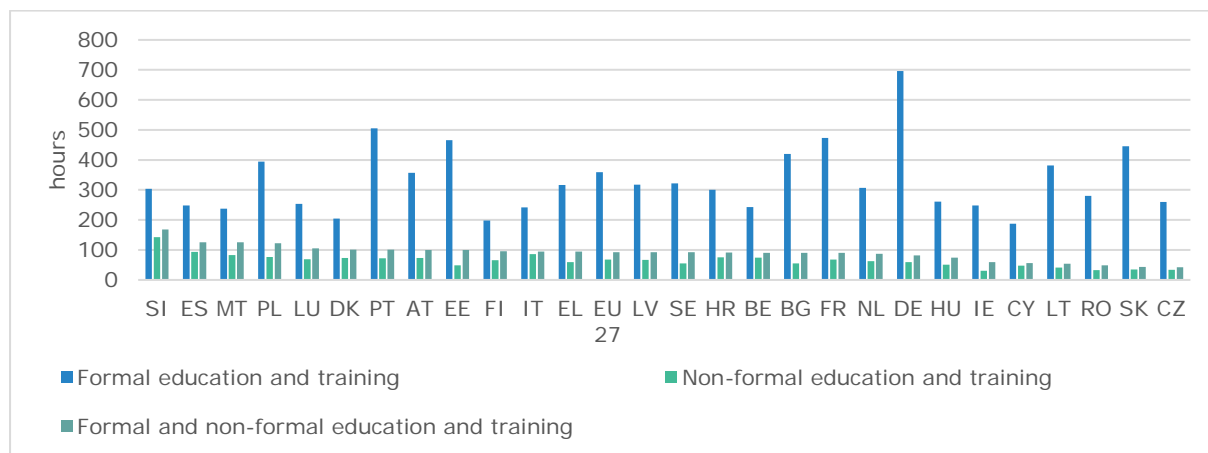
Figure 2.3 Share of employed adults participating in informal learning in the 12 months before the survey (%)



Source: Authors' formulation based on Eurostat - AES, 2016.

The intensity of formal and non-formal education and training can be investigated by looking at the average number of instruction hours for each person participating in these activities. Figure 2.4 shows a total of 359 hours per employed person in the EU27, for formal education and training. By contrast, this amount is 68 hours for non-formal education and training. As before, there are differences across Member States. For example, the time spent in formal education and training is much higher in Portugal, which does not have a very high adult participation rate, than in Finland and Denmark, which are among the top performers in adult learning.

Figure 2.4 Number of instruction hours for employed persons in formal and non-formal education and training during the 12 months before the survey, per person

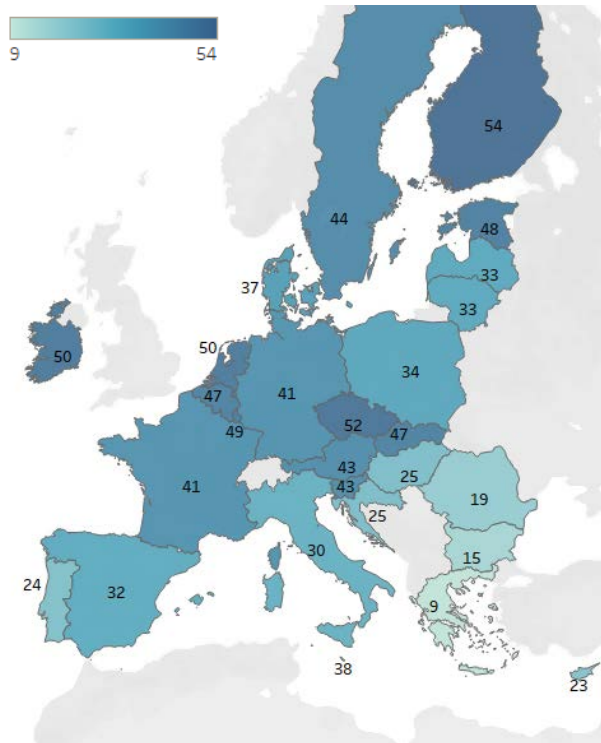


Source: Authors' formulation based on Eurostat - AES, 2016.

As regards covering the costs of up- and re-skilling of European workers, data show that job-related non-formal training is largely covered, either partially or completely, by the employer in all countries. The large proportion of job-related non-formal training sponsored by the employer, in comparison to training not sponsored by the employer, is confirmed in all EU countries except Greece¹⁵. However, the percentage of workers that received training paid by employers shows a wider variety, with a geographical clustering of mainly North-Western European countries having higher shares, followed by the Southern European countries and finally by certain Central Eastern European countries and Greece (Figure 2.5).

¹⁵Source: Eurostat - AES, 2016.

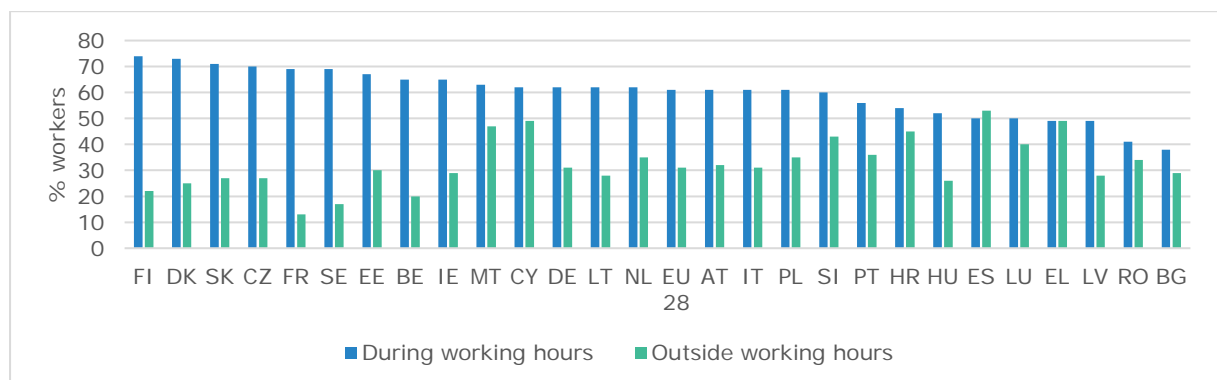
Figure 2.5 Share of workers that had training paid by their employer in the 12 months before the survey (%)



Source: Authors' formulation based on Eurofound – EWCS, 2015.

The costs of adult education and training can also be expressed in terms of time remuneration. In this respect, in general across the EU27, a higher percentage of workers undertake training during paid working hours rather than in their free time (Figure 2.6). This is the case in all countries except Spain and Greece. The percentage of workers undertaking training during working hours is particularly high in Northern and Western European countries, such as Finland, Denmark, Sweden and France and tends to be lower in Southern and Eastern European countries such as Spain, Greece, Romania and Bulgaria. However, significant exceptions are the Czech Republic and Slovakia, where the number of workers undertaking training during working hours is also very high.

Figure 2.6 Share of workers undertaking training during and outside working hours in the 12 months before the survey (%)



Note: At the date the EU average has not be updated to the EU27 for the European Skills and Jobs Survey (ESJS), therefore the EU28 average is reported.

Source: Authors' formulation based on Cedefop – ESJS, 2014.

Finally, besides the question of who pays for the training provided and whether the time invested is remunerated or not for workers, it is worth noting that the actual providers of

education and training vary greatly. Employers are the most common provider of education and training in the EU27¹⁶, although there are also a range of other providers. Among these other providers, non-formal education and training institutions are the most common after employers¹⁷.

The literature points to a range of factors that may contribute to regional differences in adult education and training systems, as depicted above, both in terms of participation and intensity of adult education and training (Acemoglu and Pischke, 1996, 1998; Bassanini et al, 2005; Pont, 2004; Roosma and Saar, 2017; Wolter and Ryan, 2011). These factors include different economic structures, varying size of economic sector, levels of productivity and sophistication of production. Also, different employee characteristics, in terms of skill levels, age and gender, also play a role. Finally, differences are determined by institutional context. The policy framework for adult learning, as well as incentive mechanisms based on the employer or on the individual play a role in shaping results. As does the structure of the education system, in particular the adult education system. Finally, the overall state capacity and the governance influence the effectiveness of any policy effort that is put in place for adult learning. For these reasons, at subnational level, differences in education and training provision, participation and outcomes are also common (Filippetti et al., 2018).

In addition to geographical disparities in training participation of adults, there are likely to be sectoral differences. Across sectors, differences in technological intensity and the level of innovative activity have led to differing skills requirements and consequently training needs (Antonioli et al, 2011). In particular, it is worth noting that sectors with a higher presence of micro and small firms are associated with lower rates of participation in education and training, as for example in the construction, food processing, retail and tourism sectors (Cedefop, 2009, 2010).

2.2.1 The situation in micro and small enterprises

The evidence shows that participation in training activities is much lower in smaller firms. When considering only employed adults in the EU27, across all enterprises¹⁸, the share of those having followed formal and non-formal education and training in the four weeks before the survey date rises to 12%. This share, however, is lower for people employed in micro enterprises¹⁹, at 10.3% of total employees (Figure 2.7). This is below the EU average of adult learning participation rate for the whole population aged 25-64.

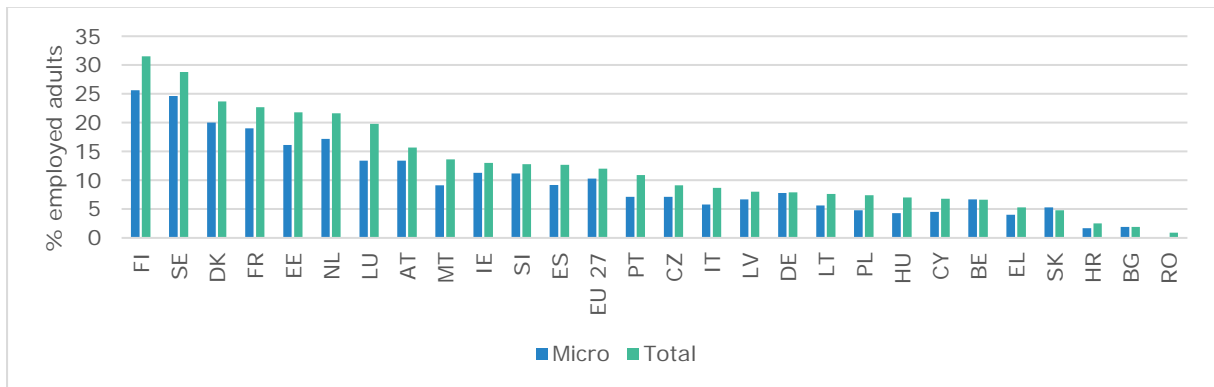
¹⁶ Large differences appear across countries in terms of providers. Moreover, the understanding of training providers may differ across countries. For this reason, it is hard to establish from the [formulation of the AES questionnaire, from which these data are obtained](#), whether this percentage refers to employers who paid for the training or to those who actually provided training internally.

¹⁷ Source: Eurostat – AES, 2016.

¹⁸ The comparisons in these sections are between micro or small enterprises, according to data availability, and the totality of enterprises of all sizes. This is because data on subgroups of company sizes are not completely comparable across the different sources used in this section.

¹⁹ In this section, according to the data available, micro enterprises refer to units with 10 or fewer employees. This applies to both text and figures that report information on micro enterprises only in this section.

Figure 2.7 Share of employed adults in formal and non-formal education and training in the 4 weeks before the survey date, by company size (%)



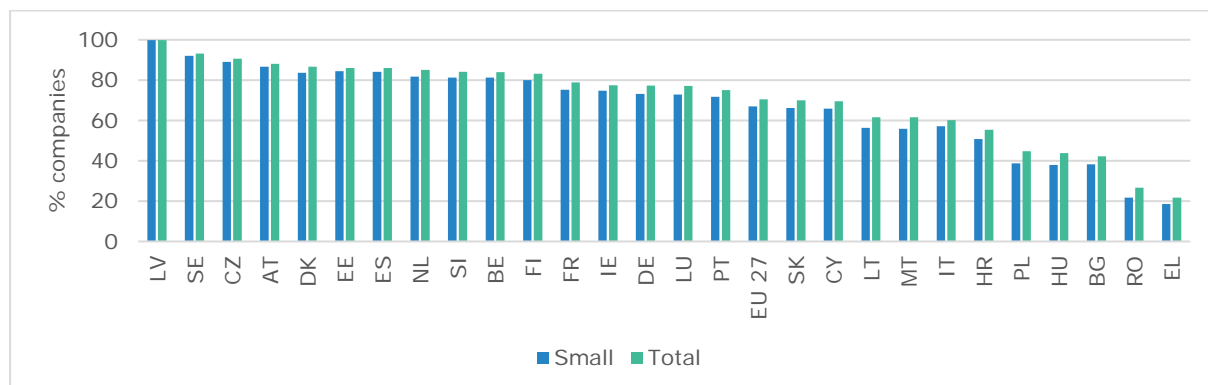
Source: Authors' formulation based on Eurostat - LFS, 2018.

Additional data confirm lower access to up- and re-skilling opportunities in smaller firms. As shown in Figure 2.8, in the EU27, only 66.9% of small enterprises provide Continuing Vocational Training (CVT) to their employees, while the proportion reaches 70.5% in the totality of enterprises. Moreover, Figure 2.9 shows that the share of participants in CVT among all employees is significantly lower in small enterprises, in comparison to the totality of enterprises. In fact, in the EU27, only 29.9% of employees participate in CVT in small enterprises, while this share rises to 42.9% when considering all enterprises. This difference in the shares of participants across firm size underscores that, despite the share of small enterprises providing CVT is relatively high (i.e. higher than 50%), only a limited share of employees participate in CVT in these companies. Finally, aggregated data for the EU27 show that the hours spent in CVT per 1,000 hours worked are 3.8 in small enterprises, but almost double to 6.4 when considering all enterprises (Figure 2.10).

This disparity is confirmed in all countries but the extent of it varies geographically. In particular, North-Western countries such as Austria, Denmark, Sweden and the Netherlands have relatively high shares of small enterprises providing CVT and high proportions of working hours spent on CVT in these companies. By contrast, these indicators are lower in the Southern and Central and Eastern European countries such as Italy, Greece, Poland, Romania and Bulgaria. The exceptions are Spain and the Czech Republic, where provision and hours of CVT are higher, also in small enterprises. This pattern is consistent with a study by the SME observatory based mainly on data from the ESNR Enterprise Survey 2002 (ENSR, 2003). This study found that SMEs in Northern Western and Central European countries show a high involvement in formal and non-formal competence development activities and a wide selection of methods for developing an in-house competence base. On the contrary, the study notes that in Southern European countries, as well as in France and Luxembourg, involvement is much lower. Interestingly, the study reveals in Ireland, the hours spent in CVT are higher in small companies than for the overall population of firms.

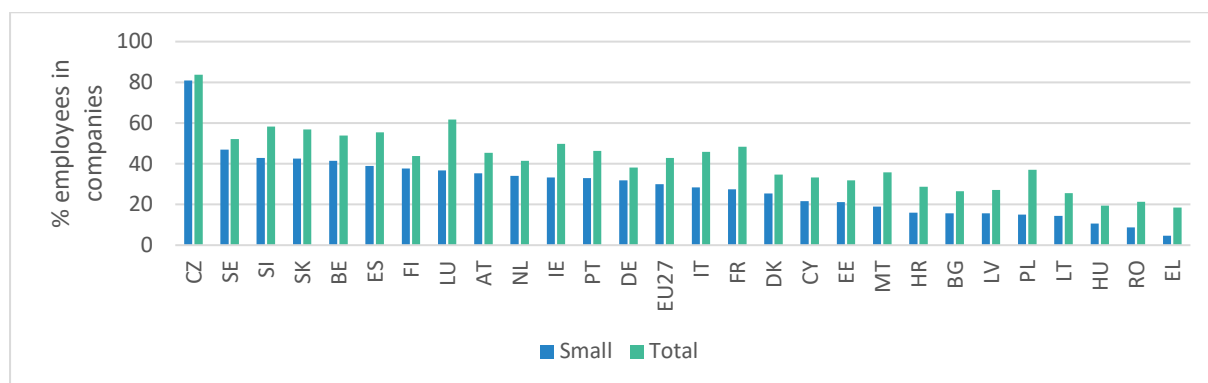
While the data presented below refers to vocational training, there is evidence in the literature that the lower provision of skills development opportunities by small enterprises is even more pronounced with respect to general education than with vocational training. Only one-tenth of firms with fewer than 50 employees offer their employees formal education, compared to 50% for firms with 250 or more employees (Dawe and Nguyen, 2007).

Figure 2.8 Share of companies providing CVT, by company size (%)



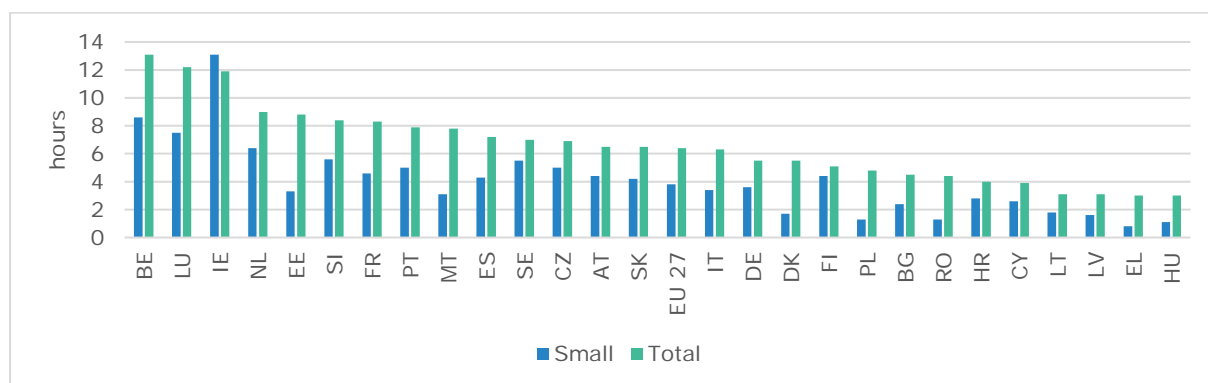
Source: Authors' formulation based on Eurostat – CVTS, 2015.

Figure 2.9 Share of participants in CVT among employed in all enterprises, by company size (%)



Source: Authors' formulation based on Eurostat – CVTS, 2015.

Figure 2.10 Hours of CVT in companies, by size, per 1000 hours worked

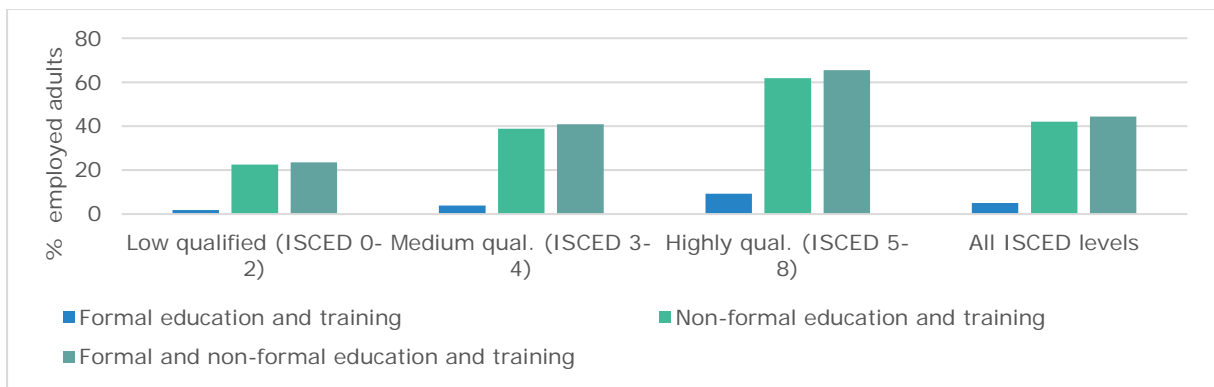


Source: Authors' formulation based on Eurostat – CVTS, 2015.

2.2.2 The situation for low-qualified individuals

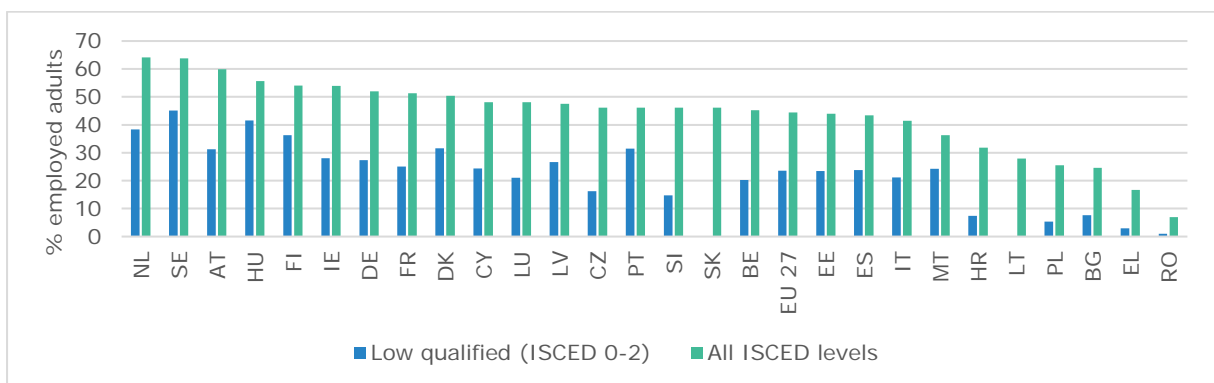
Not only do employees in micro and small companies access adult learning opportunities less than the rest, on an individual level, access is particularly limited for low-qualified employees (Figure 2.11). In 2016, in the EU27, only 23.6% of low-qualified workers participated in education and training activities compared to 40.9% of the medium-qualified, and 65.4% of the highly qualified. This pattern applies to both formal and non-formal education and training, but particularly to the former, which is likely to be a more intense and potentially transformational learning experience. Additional data show that this disparity is widespread across countries, as in Figure 2.12. The disparity in participation is highest in many Central Eastern European countries.

Figure 2.11 Share of employed adults in formal and non-formal education and training by qualification level and type of education and training, EU27 (%)



Source: Authors' formulation based on Eurostat - AES, 2016.

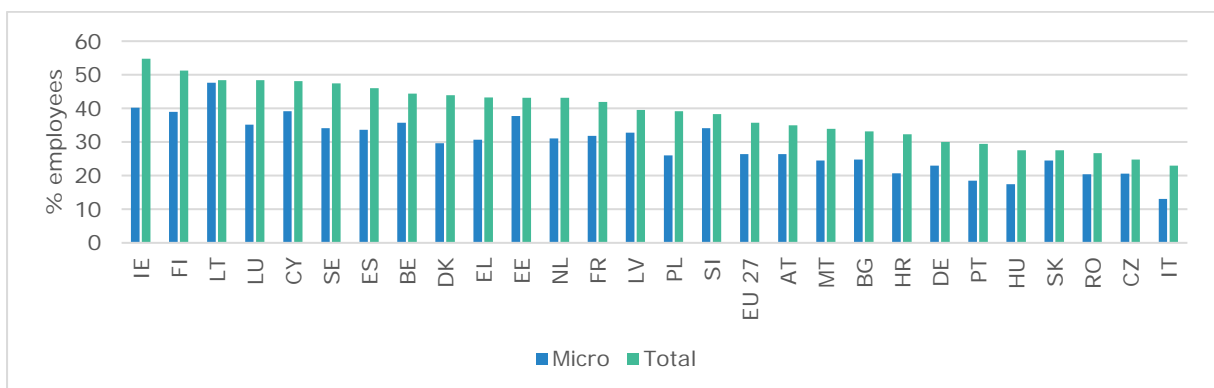
Figure 2.12 Share of employed adults in formal and non-formal education and training by qualification level (%)



Source: Authors' formulation based on Eurostat - AES, 2016.

Interestingly, low-qualified employees are more present in smaller than in larger firms. On average in the EU, low-qualified employees are more represented in smaller firms, while highly qualified employees are underrepresented in these firms. This trend is largely consistent across EU27 countries. In fact, Figure 2.13 shows that across Europe, micro companies employ lower shares of workers with tertiary education than all companies. The difference between shares of workers with tertiary education is larger in Greece, Ireland, Spain, Finland, Luxembourg, Denmark, Croatia, Sweden, Poland and Portugal. The main reasons that drive lower rather than higher qualified individuals to be employed in smaller firms are outlined in the next section, presenting the specificities of these companies.

Figure 2.13 Share of highly qualified employees by company size (%)



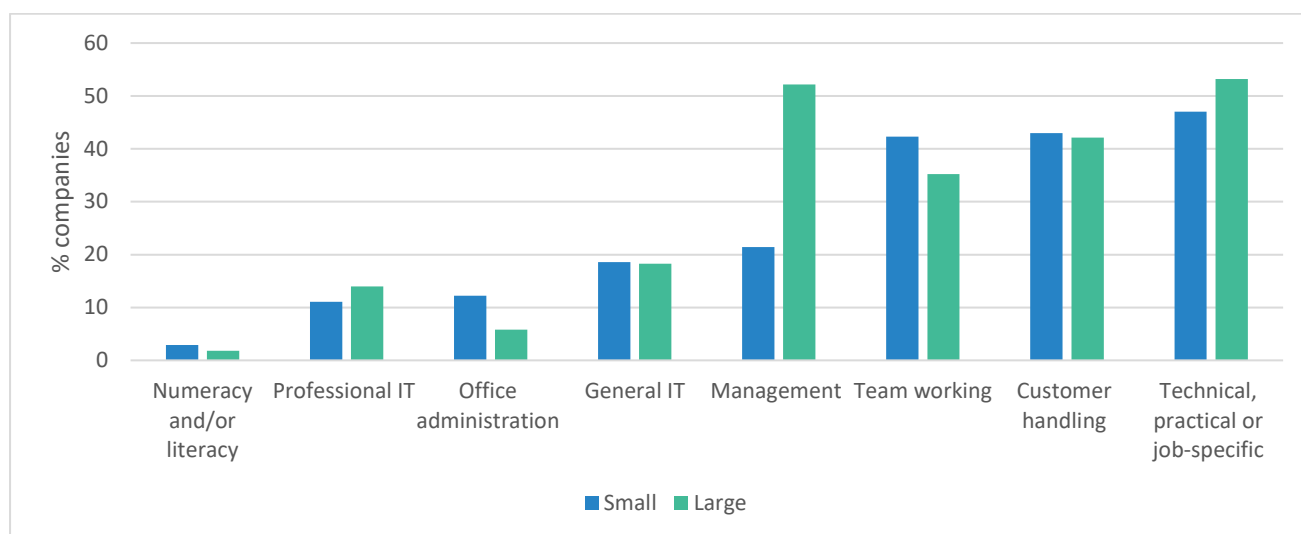
Source: Authors' formulation based on Eurostat - LFS, 2018.

2.3 Skills demand and supply

Differences in adult learning participation in European countries exist against a backdrop of heterogeneous demand and supply of skills across the EU27. As highlighted by the Joint Employment Report²⁰, the overall trend in the EU shows a rise in the skills demanded in services, as the share of employment in this sector has steadily increased at a faster pace than in other sectors, reaching 74% of the total employment in 2018. Moreover, at EU level, a higher employment rate among highly qualified individuals (i.e. 84.5%) in comparison to the employment rate among low-qualified individuals (i.e. 56.1%) indicate the tendency towards a rising demand for high qualifications, which are often a proxy for high levels of skills.

To gain insights on how these trends reflect in smaller enterprises and to learn more about what specific skills are in demand in these firms, however, it is instructive to examine data from the Continuing Vocational Training Survey (CVTS). In the CVTS, the degree of absorption of a variety of workforce skills is available across company sizes, as shown in Figure 2.14. On average, at EU level, demand for team-working skills, office administration skills, and basic skills (numeracy, literacy) tends to be higher in small firms than in large ones. In contrast, there tends to be less demand for management skills and professional Information and Communication Technology (ICT) skills in these firms²¹. General ICT skills and customer handling skills are needed to roughly the same extent in both small and large companies.

Figure 2.14 Share of companies in need of skills for their development, by type of skills and company size, EU27 (%)



Source: Authors' formulation based on Eurostat – CVTS, 2015.

As regards the supply of skills across the EU, information available on types of skills is less detailed. However, looking at broad indicators can help assess the skills supply in the European labour markets. The Joint Employment Report shows that the overall level of qualifications of Europeans has constantly increased over the last decades. In fact, in 2018, 40.7% of the EU population aged 30-34 had completed tertiary education, reaching a positive peak over the last two decades. Yet, in the same year, the rate of early leavers from education and training has stabilised at 10.6% of the population aged 18-24. These indicators differ significantly across EU Member States, as well as within each Member

²⁰ See the COM(2019) 653 final: Proposal for a Joint Employment Report from the Commission and the Council. EU averages reported from the Joint Employment Report refer to the EU28 as the report still includes the UK.

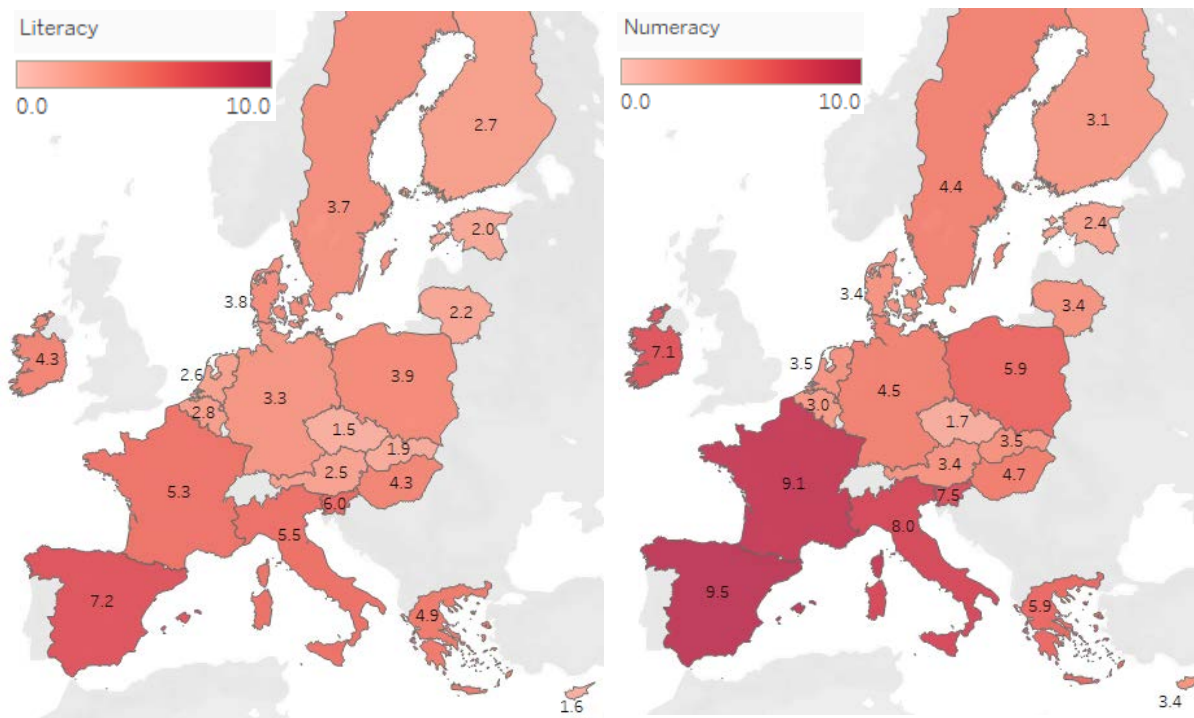
²¹ The full list of skills needed by companies, by company size, is available from the Eurostat – CVTS, 2015.

States, for example between urban and rural areas (EC, 2019). This evidence shows that there is still room for improvement to enhance skills supply in the EU.

Indeed, investment in skills development, through formal education and training, has not increased in the last years. A significant gap in such investment remains, especially considering that the largest part of the expenditure in education and training, up to 80.9% in 2015, is carried out by governments. A closer monitoring of the public investment in formal education and training shows that while the number of students increased in all EU Member States, the expenditure *per* students did not increase (EC, 2019). Therefore, it seems worth it to assess the supply of skills in the labour market going beyond educational attainments. To develop a better understanding of the actual levels of skills available in the EU labour markets, a look at the PIAAC scores reveals the general level of skills of the adult population in most EU27 countries²². According to PIAAC results, regarding basic skills, such as literacy and numeracy, some Northern and Western European countries, as well as some Central Eastern European countries, tend to perform best. These countries have the lowest share of adult population who lack basic skills, both literacy and numeracy. Southern European ones and France perform worst in these regards, showing the highest percentage of adult population lacking basic skills. This creates very different skills supply backgrounds across EU Member States.

These skills supply backgrounds are further differentiated with regards to digital skills, which are increasing important in the context of the digital transformations of the economy. The Joint Employment Report refers to the share of individuals who have at least basic digital skills and shows that the EU average in 2017 was 57% of the population aged 16-74. The shares across Member States, however, ranged from the 29% of the reference population in Bulgaria and Romania, to the 79% in the Netherlands and the 85% in Luxembourg.

Figure 2.15 Share of adult population below basic levels of literacy (left) and numeracy (right), (% below level 1 of OECD PIAAC results)

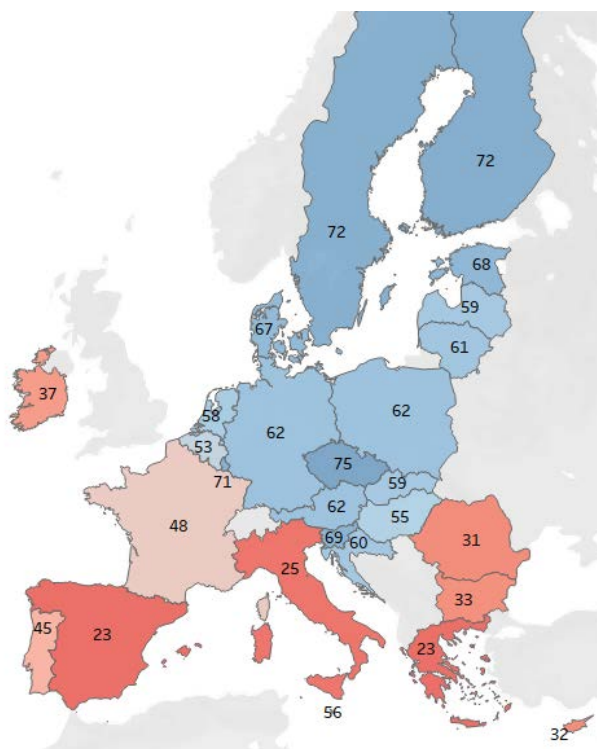


Source: Authors' formulation based on OECD PIAAC, 2015.

²² PIAAC results are available only for 20 EU Member States that participates in the Programme, thus excluding Bulgaria, Croatia, Malta, Latvia, Luxembourg, Portugal, Romania.

Considering this heterogeneity across countries in skills demand and supply, the European Skills Index developed by the European Centre for Development of Vocational Training (Cedefop) is a measure that combines skills demand and supply indicators. It takes into account skills development (i.e. the situation of the education and training system), along with skills activation and skills matching as indicators of how well the labour market integrates individuals with different skills. Looking at the index as a whole, as shown in Figure 2.16, the worst performing countries scoring below 50 are mostly, but not always, Southern and Central Eastern European countries. By contrast, North Western Europe performs better, as do some of the Central Eastern European countries. Notably the Czech Republic performs best²³. The Joint Employment Report, in addition, points out that, skills mismatching, expressed by the over-qualification rate²⁴, is more common in countries that show higher unemployment rates. Over-qualification and high unemployment are, for example, associated in Southern European Member States, such as Greece, Spain, Italy and Cyprus.

Figure 2.16 European Skills Index in EU27, overall score



*Note: the European Skills Index score from 0 (worst performance) to 100 (best performance).
Source: Authors' elaboration based on Cedefop - European Skills Index, 2016.*

²³ However, there are significant differences in the individual index components, as emerge by exploring the [European Skills Index website](#).

²⁴ Over-qualification rate is defined in the Joint Employment Report as the share of people aged 20-64 with tertiary education and working in occupations that do not require tertiary education (i.e. ISCO levels 4-9).

3 OPPORTUNITIES AND CHALLENGES FOR UP- AND RE-SKILLING IN MICRO AND SMALL ENTERPRISES

Key points

- The specific characteristics of micro and small companies affect their up- and re-skilling activities; generally, these characteristics are namely low capital intensity; unstructured organisation and short-term business vision; social proximity and less formal or precarious employment relationships; and embeddedness in value chains.
- There are significant benefits stemming from up- and re-skilling that could help micro and small enterprises address skills needs in their workforce, improve Human Resources Management (HRM) and, thus, achieve better company performance.
- External and internal challenges can be categorised as those relating to financial and time limitations; market failures; imperfect information and supply constraints. These challenges prevent micro and small enterprises from taking advantage of the opportunities that up- and re-skilling could deliver.

In an attempt to analyse and devise tailor-made solutions to improve adult learning participation in the EU, **this study, as mentioned before, relies on an analytical framework**. The framework acknowledges the specificity of micro and small companies in general and in relation to up- and re-skilling in particular. With this specificity in mind, it identifies the opportunities that can stem from up- and re-skilling, if obstacles are overcome. These obstacles are grouped into four categories. Both the opportunities and challenges are identified from the literature and existing evidence. Whenever specific literature and evidence is not available for the micro and small enterprises subgroup, the review refers to SMEs as a proxy. The opportunities and challenges identified are then tested through the empirical analysis on the primary data collected in micro and small enterprises involved in the study, to assess their relevance. This is a necessary background from which to identify the types of policies and strategies that can be put in place to address each of these challenges and to support up- and re-skilling in micro and small companies.

3.1 The specificity of micro and small enterprises

Micro and small enterprises have specific characteristics linked to their limited resources and size. These characteristics, *per se*, are not necessarily negative nor positive, as such, but they do influence micro and small companies' innovative and competitive performance, as well as their capacity to provide up- and re-skilling opportunities to their employees (Muller et al., 2018). In considering these characteristics, it should be borne in mind that this group is indeed very heterogeneous. A first significant difference lies in the **size of the company** and the distinction between a small and a micro company. Moreover, characteristics differ according to **economic sector and geography**.

On average, **micro and small companies tend to be less capital-intensive** than larger ones, with resulting lower investment in technology than larger firms, especially in ICT (Duan et al., 2002; Arendt, 2008). This in turn limits the need and thus the opportunities to upgrade their employees' skills.

Second, they tend to function **with a less structured organisation and with fewer long-term strategic visions** (Brien and Hamburg, 2014). Micro and small enterprises often lack Human Resources Management (HRM) and suffer administrative burdens more than their larger counterparts (Panagiotakopoulos, 2011). Regarding the latter, the scarcity or complete lack of administrative staff means that the daily administration of the

business, for example in terms of payslips, holidays, public funding procedures, falls on workers or on the business owners themselves. This increases the opportunity cost of the additional administrative procedures that education and training activities require. Indeed, the administration and some form of HRM are often performed directly by the owner-manager of the company (Hasle et al., 2012). As is thoroughly documented by European Agency for Safety and Health at Work (EU-OSHA, 2016), the underdeveloped managerial capacities of the owner-manager, the lack of knowledge of HRM issues and a lack of financial resources often preclude an HRM function in micro and small companies, despite its evident importance in the success of a company and its up- and re-skilling policy.

Third, micro and small companies can usually offer **lower remuneration to their employees, in terms of both wages and benefits**, which means they are also less attractive to skilled workers, that are often highly qualified workers, especially for entry-level positions (Farvaque et al., 2009). In fact, the Eurobarometer (2007) Observatory of SMEs reports that 35% of SMEs have trouble finding skilled labour. In particular, 33% of micro enterprises experience this difficulty. This results in a workforce that is less qualified and often less skilled than in larger firms and therefore needs more up- and re-skilling. It also means lower economic resources for employees in these firms, who are also less likely to invest in training at their own initiative.

Fourth, **employment arrangements within small and micro firms tend to be informal or partially informal** (ILO, 2019a). In some cases, employment in these firms takes the form of undeclared work, especially when relying on family or kinship networks (Edwards and Ram, 2006). Often, employment in micro and small firms is associated to low unionisation of employees (Broughton, 2011). This results in generally lower guarantees, benefits and opportunities offered to employees, including in terms of up- and re-skilling. Furthermore, precariousness of workers in micro and small enterprises puts workers in a more vulnerable position, with typically temporary employment relationships and less entitlement to training provisions than those employed in larger companies or with permanent arrangements. On the other hand, informality of the employment relationship and close proximity in micro and small firms can create a high level of socialisation among workers and between the owner-manager and workers. Under this arrangement workers can have a feeling of shared responsibility with the owner-manager about the economic performance of the business, a limited perception of conflicting interests and fewer worker demands – either for training or general working and employment conditions (Mallet and Wapshott, 2014).

Another important feature of micro and small companies is **their embeddedness in larger value chains**, which is increasingly a strategy to survive the structural change of the economy (Edwards and Ram, 2006; Tomlinson, 2011). This strategic and necessary embeddedness has two implications for these companies. On the one hand, while providing opportunities for value creation, outsourcing and subcontracting from larger firms, it also puts these companies in a position of functional dependency and vulnerability. Outsourcing and subcontracting transfer onto micro and small companies the risk of production, because they must undertake the investment to produce what is demanded by the contractor, without having full control over future demand. This exposes them to the uncertainty of the market. These higher risks include the knowledge to develop for future production (Atherton, 2003; Massaro et al., 2016). On the other hand, the drive to upgrade production through technological innovation and education and training in micro and small companies often comes from participation in value chains. Indeed, collaboration with larger firms, as well as quality production requirements, represents an impetus for new knowledge acquisition that should not be overlooked when considering skills development in smaller firms (Massaro et al., 2016; Tomlinson, 2011; Torchia and Calabrò, 2019).

3.2 Benefits stemming from up- and re-skilling

Considering these characteristics, up- and re-skilling is not only important for overall economic and social goals, **it can deliver significant opportunities to micro and small firms, specifically**. The realisation of these opportunities can improve their performance

in terms of productivity, growth and innovation (ENSR, 2003). Providing up- and re-skilling to employees can encourage the firm **to address both existing skills mismatches and those they face when hiring a new employee**. Further, it can be pivotal to adjusting the skills of existing employees to the company's evolving business needs and broader economic context. This is especially important when considering the agility these firms need to acquire to be successfully involved in a value chain (Lei and Jia, 2007).

In addition, education and training opportunities can represent a means **to improve HRM in micro and small firms, offering an additional benefit to employees**. By acknowledging the potential for learning and skills development, skilled workers can be more attracted to working in these companies. Benefiting from learning opportunities also increases motivation in these companies, which can have a positive effect on productivity and retention rates (Cheng and Ho, 2001; Truitt, 2011).

Following on from these first two types of opportunities, when a company's skills set is adequate to business needs, when employees are motivated and up to date in terms of knowledge and competences in their field, **the company can achieve better results**. These results translate into being more innovative, staying competitive in internal and external markets and increasing revenues, ensuring returns to the investment in up- and re-skilling (Almeida and Carneiro, 2009; Bartel, 2002).

For these opportunities to become reality, it is important, first, that they are acknowledged by the management in micro and small companies. Second, the barriers that prevent up- and re-skilling in these companies need to be removed. This can be done by devising suitable strategies within the company but also with the support of policy interventions.

3.3 Challenges for up- and re-skilling

As in Table 3.1, looking at all firm sizes, the results from the CVTS indicate that **the most common reason for not providing training is that firms do not acknowledge any need for further education and training**, either because the current skills levels of the firm are satisfactory or because people recruited have the skills needed by the company. Other obstacles to participation in training mentioned by firms participating in the CVTS relate to **problems of time**, due to high workload that leave limited or no time for training. Further, the **cost of the training** affects firms and limit the provision to employees. Finally, more than 10% of firms report difficulties in assessing the training needs and to find suitable training courses for their needs.

Table 3.1 Main reasons for firms not providing training (%)

Reasons for not providing training	% of firms
Existing qualifications and skills corresponded to the current needs of the enterprise	81.2
People recruited with the skills needed	53.4
High workload and limited / no time available for staff to participate in CVT	31.7
High costs of CVT courses	29
Difficult to assess enterprise's training needs	15
Lack of suitable CVT courses in the market	12.9
Other	17.1

Source: Authors' formulation based on Eurostat – CVTS, 2015.

The obstacles to up- and re-skilling mentioned above are common to all companies. However, **importantly, these common obstacles tend to be more serious for SMEs** (Farvaque et al., 2009; De Vos and Willemse, 2011) because of the characteristics of micro and small enterprises, as highlighted in a previous section. For example, the limited staff available in the firm restricts the time that can be devoted to training by each employee

as well as by the owner-manager. Embeddedness in value chains increases revenues volatility and vulnerability and can put micro and small companies' finances at risks, preventing the possibility to invest in training courses. Moreover, low structure of working organisation and underdeveloped HRM in micro and small companies make it even harder than in other companies to assess training needs and identify suitable courses.

All these obstacles represent key challenges that must be addressed to increase participation in education and training. These challenges are grouped and described below. It is important to remark that these obstacles are interlinked, affecting micro and small companies in a joint, complex way. For this reason, the challenges experienced by micro and small companies are not to be regarded and tackled in silos but with a comprehensive vision.

3.3.1 Financial constraints and opportunity costs

Simple economic models assume that enterprises and individuals can always borrow against future earnings if the investment makes economic sense. In reality, due to imperfect capital markets, there is often a liquidity constraint in place, particularly for smaller enterprises, which can prevent such investments. This applies especially to risky investments, such as education and training (Brunello and De Paola, 2004; Lynch, 1994; Schumpeter, 1942). In fact, **smaller enterprises are more vulnerable to financial constraints because of their limited turnover and assets, and because they often experience less access to credit** (Eurobarometer, 2007) than larger enterprises. Moreover, **limited financial resources is a constraint, in particular for individuals with lower education, which is often associated with lower income** (EC, 2015). Therefore, low-qualified individuals are further excluded from access to training if the firm cannot pay fully or in part for their training (Bassanini and Wooseok, 2004).

In addition to the monetary costs, there is a high opportunity cost to the time spent in education and training in adult life (WB, 2019), namely in terms of loss of production when an employee spends workdays learning rather than producing. **The opportunity cost can again be far greater for smaller enterprises which, by definition, have few employees.** Therefore, the necessity to stop or lower the production output, either goods or services, to participate in education and training constitutes a non-trivial factor when making decisions about up- and re-skilling in micro and small enterprises. Letting an employee take working time out for training has indeed a higher opportunity cost if there is no colleague to replace them in the meantime (ENSR, 2003). Furthermore, small firms tend to be more oriented to immediate goals, notably survival, and operate to shorter horizons than larger ones (Brien and Hamburg, 2014). This reasoning counts in any calculation of the benefits of training investment. Finally, **individuals also have personal life commitments in adult age that limit their possibility to pursue education and training in their spare time.** Moreover, when employers do not cover the cost for education and training but just allow employees to undertake these activities during working hours, the individual employees may themselves face financial constraints to bear up- and re-skilling costs. These obstacles can all fit into the category of liquidity constraints and opportunity costs as they indicate a lack of resources to pay for the direct costs of education or to 'buy out' their time from work and personal lives.

Remote geographical locations of the firms or the employees appear to increase such financial and time barriers. Indeed, costs for training, in both monetary and time terms, increase consistently if workers must travel to access relevant training courses in person (Farvaque et al., 2009; Ganah and Rennie, 2010).

Moreover, when addressing financial and time barriers, a distinction should be made regarding different types of training. Both **monetary and opportunity costs are higher for formal and non-formal training, which tend to be longer and more intensive.** By contrast, informal learning can occur without drastically changing the pace of production of goods or provision of services. In addition, it can allow firms to meet immediate business imperatives at lower costs and with higher flexibility (Brien and Hamburg, 2014). For example, the Observatory for SMEs (ENSR, 2003) finds that the main

source of competence development for European SMEs are their clients or suppliers, highlighting the role of informal and incidental learning, especially for those enterprises with a very limited size, such as micro enterprises. Through a selection of case studies in six countries, the Organisation for Economic Cooperation and Development (OECD) discusses how informal training is more likely to deliver better results in SMEs (OECD, 2013). Similarly, Fialho et. al (2019) estimate **higher returns of informal learning compared to other forms of training**.

3.3.2 Market failures: externalities and increasing returns to education

From an economic point of view, underinvestment in a certain good or service can occur if private actors cannot capture all the benefits stemming from the investment. Investment in education and training is a prominent example of this so-called positive externality, which is a recurrent economic argument for public investment in this area (Acemoglu and Angrist, 2000; McMahon, 2004). In the case of training and on-the-job learning, **human capital accumulation processes and decisions occur within the firm. As such, they are subject to profit-seeking logics that fail to capture and account for the positive externalities** (Acemoglu and Pischke, 1996). This may lead to **underinvestment, especially in firms where allocation of resources must be more selective, as in micro and small enterprises**.

Skills, including those acquired in the workplace, do not solely benefit economic activities, but might also make an individual a better, more informed citizen or parent, as well as have positive outcomes in terms of his or her health and well-being (Wolfe and Haveman, 2001). In this case, the positive spill-overs of education constitute non-market benefits to society as a whole. This benefit is not captured by the employer, who instead bears the cost of education and training.

Moreover, **contractual freedom and free movement of labour make the risk of not capturing the benefits within the firm** even higher. Indeed, employers might not be able to recoup the investment they make if another employer outbids the current employer and effectively 'buys' the skills of the employee before the investment can pay off to the original employer. This would result in free-riding behaviours on the part of the next employer. Legal provisions can offer some protection for employers in such cases, for example requiring trained employees to stay in the company that pays for their training for a certain period of time. However, enforcement can be difficult both legally and practically, resulting, for example, in the decreased productivity of an employee who would rather be elsewhere. This can prevent employers from investing in skills or decreasing investment compared to what employers themselves would prefer if they could be assured of capturing the full return (Bishop, 1996). In fact, data show that temporary and non-fixed employees have in practice less access to training, despite legal provisions for non-discrimination, because employers expect a lower return on investment when paying for the training of non-permanent workers (OECD, 2019b).

In addition, Becker (1964) and Mincer (1974) develop a theory whereby **firms have greater incentives to provide job-related training rather than training for general skills** because the latter are easier to transfer and thus are more susceptible to free-riding behaviours from other employers. Nonetheless, Acemoglu and Pischke (1996) find that this is rather dependent on the labour market context. For example, if the labour market is not very dynamic and the job turnover rate is low, firms are willing to provide training for general skills, at least through apprenticeships because they develop a monopsony power over the trained labour force. However, it is likely that people will now change jobs more frequently throughout their lifetime, working with short-term contracts (OECD, 2019b). This is expected to exacerbate market failure, because employers would benefit from trained employees only for short periods of time and would therefore have even less incentive to invest in training and training for general skills.

Overall, this situation is **particularly challenging for micro and small enterprises, because qualified employees tend to gravitate towards larger firms** (Farvaque et al., 2009), especially when acquiring further skills, which further weakens incentives to

invest in training for these enterprises. The reluctance to invest in skills development for employees who might readily leave to another employer, thereby benefiting a competitor, is documented by the SMEs Observatory study (ENSR, 2003). The study uses the term 'competence paradox' to explain the phenomenon, i.e. that when enterprises invest in their employees, the chances of them leaving the firm simultaneously increases.

To mitigate this risk, when smaller firms decide to train, they are likely to **invest in job-specific skills that can benefit the firm itself in the short term and are less transferable**. Riddell et al. (2009) find that, apart from those in knowledge-intensive sectors, SMEs have a restricted approach to learning; they invest in training for skills to do the job more effectively but with no focus on wider growth or development of the employee or the organisation itself. This approach, resulting from the market failure to capture the externalities of education and training, is detrimental to the innovative capacity and competitiveness of SMEs. At the same time, it is disadvantageous for the employability of workers, because it fails to provide skills for adaptability at both individual and organisational level, which are needed for example with the ongoing digitalisation of work.

Another market imperfection that affects the provision of education and training to workers relates to the increasing returns of investment to education. This explains why low-qualified workers are relatively disadvantaged in accessing training and education. Increasing returns on education mean that **investments in training are expected to pay off more, in terms of skills enhancement and thus productivity, for individuals who already possess high skills on which to build**. Because of this mechanism, it makes economic sense for an employer to invest in those employees with higher education (Brown and Sessions, 2004). In fact, the European Company Survey 2013 finds that the majority of companies in the EU (i.e. 67%) offer selective training; that is training directed only at a minority of their employees (Eurofound, 2015). **In the majority of the cases those that are offered training, especially in very small firms, are workers in occupational groups that already have high skills**, such as managers and directors. Also, the least educated employees tend to show little interest in education and training, especially if formal, so they push less to participate. The outcome of their training may also be more uncertain for employers (Fouarge et al., 2010; Keeley, 2007; Rainbird, 2000).

3.3.3 Information deficiencies: lack of awareness, transaction costs and skills mismeasurement

The literature widely documents the economic barriers to engaging in education and training, such as risky investment due to market failure, financial burdens and high opportunity costs. However, there are also significant barriers that relate to **incomplete and imperfect information on the part of firms, which hinders their decision-making**. Again, simple economic models assume that all pertinent information is available to all economic actors at the same time and that they can take decisions with full information. This does not appear to be the case in reality, however (North, 1990). For this reason, it is necessary to acknowledge transaction costs, including costs of coordination and gathering the information necessary to make decisions, which are frequently ignored by these models (Williamson, 1981).

While evidence in Table 3.1 shows that individual firms have an immediate perception of no further need for training among existing and new employees, skills gaps are a reality at macro-economic level, accelerated by ongoing labour market transformations mentioned earlier. There are three main possible issues concerning information deficiencies that hinder investment in education and training in micro and small companies.

First, the literature has pointed to a **lack of information, and thus awareness, of the importance of up- and re-skilling, which is often associated with a culture of reluctance and negative attitudes to training among smaller enterprises**. These

attitudinal barriers are indeed reported in several studies. For example, managers' mentality and smaller companies' mindset that do not recognise the importance of training and its value for investment limit the engagement of these companies in learning opportunities (De Vos and Willemse, 2011). Similarly, Panagiotakopoulos (2011) describes SMEs' negative attitudes towards employees' training and an underestimation of its importance for business survival. Vandenberg and Trinh (2016) analyse situations in which SMEs are satisfied with the status quo of skills, even if they recognise it as being low level, ignoring or overlooking the importance of skills upgrading to increase competitiveness and innovation performance. Lange et al. (2000) and Riddell et al. (2009) also report prevalent scepticism in SME culture and a lack of awareness as being among the main barriers to investing in skills development in Scottish enterprises. Farvaque et al. (2009) describe a lack of forward-planning in SMEs, where training is not perceived as important by managers or workers themselves.

Second, there is an issue of **higher transaction costs for micro and small companies to gather information about education and training opportunities**. This results in poorer information on the possibilities for training. The cost of collecting information that is relevant for skills development is largely a fixed cost as it concerns the state of the labour market, regulatory environment, programmes offered by private and public providers and other relevant, yet general, information. Given their limited size, for micro and small enterprises this cost can be spread over only a small number of employees and is thus higher per employee (Nootboom, 1993). The same applies not just to the cost of searching information, but also to transaction and coordination costs, costs of interactions with other actors, for example in collaboration with public authorities. At the same time, managers in micro and small enterprises have less possibility to specialise in HRM or similar functions dealing with up- and re-skilling. This results in less capacity in smaller companies to deal with complex information about up- and re-skilling opportunities as few staff, if any, can do it efficiently (Brien and Hamburg, 2014; Farvaque et al., 2009; Panagiotakopoulos, 2011).

These factors explain why **participation in education and training remains low even when public funds are made available for this purpose**. In fact, the OECD (2010) notes that Polish SMEs report high cost as one of the main barriers to investing in training, even in a region where large amounts of public funds are available under EU programmes to reduce the costs of training, which suggests informational and attitudinal barriers. Belgian SMEs in the East Flanders province struggle to have a clear view of the different training possibilities in the region, despite public support being largely available, because of insufficient information about this support. In addition, the administrative burden to manage the funds are too high to encourage smaller enterprises in this region to take advantage of public support for training (De Vos and Willemse, 2011). Farvaque et al. (2009) discuss the case of French SMEs that experience difficulties in finding training opportunities, even when the information is publicly available. Similarly, Riddell et al. (2009) find that, for both employers and employees, in Scottish SMEs it is hard to identify suitable routes for accessing subsidy schemes, due to the complex information and funding arrangements in the region. This relates to what Dawe and Nguyen (2007) argue when concluding that the removal of financial barriers may still not be enough to foster education and training in SMEs, if these firms do not find the offer adequate to their needs and lack information about it. This stresses the fact that micro and small companies face several challenges at the time in the provision of up- and re-skilling and that removing only one of them would fail to support them significantly.

Third, there is **lack of information about skills and thus about what is needed to develop new skills**. Skills assessment and skills audits practices are particularly poor in smaller enterprises, because they lack HRM capacity (Besic et al., 2018; Farvaque et al., 2009). In addition, poor information about skills needed is a result of skills mismeasurement and from uncertainty about the skills that will be needed in the future with fast-paced technological change (WB, 2019; ILO, 2019b).

The literature finds that smaller firms have greater difficulty than their larger counterparts in assessing employees' skills and thus detecting skill gaps in their organisations. The CVTS data in Table 3.1 show that overall, 15% of EU companies have difficulties in assessing training needs. This share, however, amounts to 10.5% among large companies and to 14.8% among small companies. The results of the quantitative survey undertaken by OECD (2010) show that most of the SMEs in the Polish sub-region under analysis are unable to assess employees' skills needs and hence plan their HRM needs. The SMEs Observatory also cites several studies and surveys that document SMEs' difficulties in diagnosing their competences and needs effectively, reporting that only half of European SMEs have a designated person or group responsible for identifying possible existing skills gaps and shortages – that role usually falls to the owner or general manager (ENSR, 2003). Cedefop reports (2009, 2010) highlight the difficulties of SMEs in assessing skills, and thus training needs, in sectors such as food processing, retail and tourism, due to lack of HRM functions. Farvaque et al. (2009), as well as Dawe and Nguyen (2007), reach similar conclusions.

Indeed, assessing skills and skills gaps is particularly difficult if considering that the level of qualification of an employee, although indicative of their ability (Brown and Sessions, 2004), is only a proxy for their skills. This mismatch between the level of qualification and the actual skills that a worker possesses is particularly significant in the case of low-qualified employees. They can have skills that are relevant in certain sectors and acquired through experience, without having a high-level qualification (Farvarque et al., 2009). The study on training in Polish SMEs notes that difficulties in assessing skills needs is the most common barrier for low-qualified employees to access training (OECD, 2010).

Another strand of explanation relates to the mismeasurement and misconceptualisation of skills and their acquisition. The argument is that there might be a significant volume of skills acquisition that is not captured by the current statistics, studies and evaluations at firm level, because it is not formally recognised and thus not visible (Bjornavald, 2001). Often, such skills acquisition does not even take place as a distinct learning activity, but only as **learning by doing** or skills development through experience. For example, Beblavý et al. (2016) examine skills requirements among employers across the EU and the US in a range of skills groups and professions and conclude that experience is often mentioned as the key requirement, rather than specific skills or qualifications. This indicates that, for employers, just performing the job brings skills they value highly, but without further knowledge about what the skills are or which ones must be developed through experience. This shows that employers often look at skills beyond formal credentials, as they are more focused on experience and on micro skills, such as the use of word processor or spreadsheet, which are not skills that are captured by formal qualifications. Therefore, understanding both challenges and opportunities requires a recalibration of what is measured and recognised as skills and consequently what counts as their acquisition. Lack of validation and recognition of skills acquired through on-the-job training, which is more common in micro and small enterprises than in larger ones, (Bjornavald, 2001; Farvarque et al., 2009) results in imperfect information in the labour market and in the firm itself about which skills are available and which skills are needed in reality.

3.3.4 Supply constraints

Even assuming that all the obstacles mentioned in the previous sections are overcome, given their characteristics, micro and small enterprises may still face significant challenges in finding up- and re-skilling opportunities that are adequate to their needs. Part of **the supply constraints consist in the schedule and the location of the training**, which does not allow enough flexibility (Brien and Hamburg, 2014; Farvaque et al., 2009). These aspects increase the opportunity costs of participating in training also for employees in micro and small enterprises. In addition, there are supply constraints in terms of content and methods of training that prevent companies and their employees from finding a suitable education or training activity.

Education and training providers can be reluctant to supply training developed exclusively for these enterprises. As there are fixed costs involved in organising and customising the training, providers might consider it a worthless and risky investment for such an uncertain and underdeveloped market. It follows that providers tend not to tailor the supply of education and training only to the needs of micro and small enterprises. This supply constraint clashes with the need to have tailor-made training for smaller firms, given their specificities. The result is often a mismatch between both private and public supply of education and training opportunities and micro and small companies' demand (Farvarque et al., 2009).

Lack of adequate content is one of the main barriers to accessing training for employees in micro and small enterprises, according to the literature (Brien and Hamburg, 2014). For example, Belgian SMEs report difficulties finding specific training, despite the broad offer available, because educational funds are still mainly accessed by large enterprises and thus oriented to their needs. Moreover, the SME workforce is generally less specialised and more multitasking than that in larger firms. Therefore, rather than in-depth knowledge over long courses, the SME workforce often requires specific skills to find just-in-time solutions, for which educational funds appear to be insufficiently flexible (De Vos and Willemse, 2011). This issue is also acknowledged by Dawe and Nguyen (2007), who argue that there is a specific learning pattern in SMEs. This pattern favours informal practices and applicable skills and knowledge. However, this is currently not taken into account in the design of training opportunities. As reported by the Observatory of European SMEs (ENSR, 2003), European SMEs are critical of training content that is often too theoretical and not tailored to their needs. The report indicates that this mismatch is even greater in the case of formal education, because the mainstream education curriculum is too little oriented to the business-driven needs of SMEs. On the other side, providers of education and training report difficulties in supplying SMEs because of different cultures between them and SMEs, as well as informal learning practices and time constraints experienced in SMEs.

In addition to the specific constraints of the supply for SMEs, it is also worth noting that learning in adult age requires, in general, specific methods, that are currently too seldom taken into account when designing education and training programmes for this group, especially formal ones. This results in an inadequate supply of adult learning opportunities in terms of curriculum, methods and contents (EC, 2015; WB, 2019). The supply of programmes for adult learning is particularly inadequate for low-qualified workers, who are by definition most in need of education and training. The inadequacy of these programmes lies, for example, in inflexible curricula that do not facilitate a return to education, especially in the case of formal education, unless previous qualifications are attained. A lack of permeability between qualifications awarded by formal and non-formal institutions acts as a barrier to such adults later in life. And when it comes to basic skills – those more frequently needed by low-qualified workers - the training programmes are rarely tailored to adult learners. As such, these programmes fail to adapt to the learning capacity and time schedule of potential beneficiaries (EC, 2015).

4 RESULTS AND ANALYSIS OF THE STUDY

Key points

- Despite the empirical analysis reveals a good level of awareness of the importance of up- and re-skilling and related opportunities, up- and re-skilling appears to take place in micro and small companies in an *ad-hoc*, limited way.
- Only in a minority of companies did up- and re-skilling occur regularly, following a planned strategy with learning as a priority for company success in a changing environment. This happens mainly in sectors particularly exposed to digital transformation, such as information and communication, professional services and finance.
- The main drivers for up- and re-skilling are legal requirements and short-term needs arising from companies' involvement in value chains.
- Up- and re-skilling takes place mainly through unstructured practices and informal learning.
- Informal on-the-job learning, which is learning that occurs while working, takes place through self-learning or collaboration with supervisors or colleagues and is even more common among low-qualified employees.
- The owner-manager often bears responsibility for skills development, but employees also play an important proactive role in identifying and proposing up- and re-skilling opportunities.
- Even if the employees have a key role in proposing and identifying up-and re-skilling activities, the ultimate decision is left to the employers, especially when these activities are during working hours and paid by the company.
- The most common form of collaboration with externals is the provision of education and training courses by other private companies and, in some cases, by employers' organisations.
- Financial and time constraints are the most significant challenges, with lack of time cited even more often than lack of means. Lack of adequate education and training courses follows among the most common challenges for up- and re-skilling in micro and small companies.
- Fears about employees leaving the firm once they acquire transferable skills and possibly lack of motivation from the employees are additional challenges regarding only up- and re-skilling of low-qualified individuals.
- Public support is provided in all countries surveyed, yet micro and small companies access it only to a certain extent. The main barrier is lack of information about available opportunities.
- Financial support is the most accessed and desirable policy instrument for micro and small companies, especially in the form of grants.

4.1 Methodology of data collection

As summarised in the introduction to the study, in chapter 1, following desk research, **data collection took place in seven selected countries**, namely Germany, Denmark, France, Ireland, Italy, the Netherlands and Slovakia (See Annex 1: Methodology/ A1.1 Selection of seven countries).

A survey among micro and small companies was carried out. Micro- and small companies were identified according to the definition of the study, excluding the self-employed. Only employers or their representatives (i.e. business owners, managers and HRM departments) qualified as respondents to the survey. The survey questionnaire was developed based on the desk research (See Annex 1: Methodology/ A1.2 Online Survey Questionnaire). Recognising that the response rate for these types of surveys is typically low among micro and small companies, the survey remained open for two months from May to July 2019. A final count of **345 responses** was made. The survey results are published only in aggregate form, so answers cannot be attributed to any specific respondent. Following data collection the responses were analysed in detail; open-ended comments were collected and analysed to provide additional qualitative details. For closed questions, **a Likert scale was employed.** Box 1 details how this scale was conceived and explains the way results of the analysis are represented visually and should be interpreted in the following sections.

Box 1 Data visualisation for Likert-scale questions

The survey included a number of five-level Likert scale questions where respondents were asked to rank the frequency of occurrence (from 1-never to 5-always) of a given event or to report their attitude (from 1-not at all to 5-to the fullest extent) towards a given subject.

The **aggregated results** of Likert-scale questions are presented by showing:

- **Bar charts with averages.** For each item, average scores were computed. Averages do not account for those respondents who answered 'don't know' or did not provide an answer to the question under analysis. The data labels of the bar charts feature the average score on the left and the number of respondents on the right.
- **Top-two box/ bottom-two box tables.** Each bar chart with averages is followed by a top-two box/ bottom-two box table. The top-two box/ bottom-two box approach is a survey analysis technique that summarises the positive and negative responses from a Likert-scale survey by combining the highest and lowest two responses of the scale to create a single number (in this case, the percentage of respondents that provided the two highest and two lowest responses). It simplifies the analysis and allows for a better comparison of the results. In addition, a colour scale from red to green provides a swift overview of the results. Red is assigned to lower shares of respondents and green to higher shares of respondents.

Parallel to the survey, **semi-structured interviews were conducted to gain in-depth knowledge** and complement the results of the survey. The interviews took place between June and October 2019 by country experts (See Annex 1: Methodology/A1.3 List of country experts), relying on standard interview questionnaires (See Annex 1: Methodology/ A1.4 Interview questionnaire for interviews with employers and employees in micro- and small companies; A1.5 Interview questionnaire for interviews with stakeholders). Participants provided consent to use their input for research purposes and, in accordance with the consent form, all data were anonymised.

Two sets of interviews were carried out. **On the one hand, employers and employees from micro and small companies were interviewed.** Respondents were identified from the survey, as well as with the help of relevant stakeholders and through the country experts. For each country, the sample included interviewees in companies from at least four different sectors, in at least one company with low-qualified employees and in at least four micro companies. In addition, for each country, the sample included at least one low-qualified employee. In addition, interviews were used to identify up to **20 examples of good practice in micro- and small companies on supporting employees in developing their skills.**

Interviews were also conducted with national or regional authorities, as well as with other stakeholders. The aim was to gather insights from the perspective of key informants. In each country, at least one employer representative, one employee representative, one government representative (at national, regional or local level), one representative of an education and training institution, one representative of the public employment services (PES) and one expert in adult learning or related topics was interviewed. However, in several countries the interviews involved more representatives, to arrive at a fuller picture of the topic. **In the end, 60 individuals took part in interviews as government representatives and other stakeholders.** These stakeholders were identified by the country experts and the core research team. The information gained from the interviews was used to complement research results from other tasks and to identify **10 good examples of policies** for up- and re-skilling in micro- and small companies.

It is important to stress that **the data collection sample of micro and small companies has some limitations. First, neither the survey sample nor the sample of interviews is representative of the entire population of micro and small companies.** The number of country responses is not proportional to the number of micro and small companies in the countries analysed. Neither is the sample representative by sector, relative company size or other measures. However, the aim of the survey analysis and the interviews was not to provide a representative study and draw generalisable conclusions, such as shares of micro and small companies experiencing certain issues in the EU. Rather, the aim was to identify which of the various possible opportunities and challenges, identified through desk research and presented in chapter 3, apply to many micro and small enterprises and which ones apply only to some extent or not at all. To this end, **the dataset does offers significant variety across countries, sectors and size, which can provide interesting information for researchers and policymakers.** A sense of the importance of the various factors and an indicative estimate of the extent to which they apply can however be derived from the data collected by the survey and the interviews, while making no claim to representativeness of the study and generalisation of its results.

Moreover, it should be acknowledged that companies that agreed to participate in both survey and interviews might be more aware and interested in the topic of up- and re-skilling, which could represent **a source of bias** in the sample towards a more positive perception and attitude regarding up- and re-skilling activities. Potential sample bias should especially be highlighted with regard to the Irish sub-sample. Here, respondents had to be identified through contacts provided by stakeholders, as the response rate would otherwise have been too low. As a result, it is likely that companies participating in education and training and their assessment of opportunities are overestimated, as companies included are more likely to be connected to education and training providers in Ireland.

Finally, the results of the data collection were complemented with additional desk research, to draw recommendations and identify good practices for up- and re-skilling for firms, intermediary bodies and policy makers. The results of the study and its conclusions are presented below. A set of practical examples and recommendations is developed in dissemination formats and a repository of existing guidance resources is made available for stakeholders (see Annex 3: Resources for stakeholders).

4.2 Overview of the sample

Considering both the survey and the interviews, **432 micro and small companies were involved in the study. The survey sample comprises 345 micro and small companies** in the seven selected countries, almost equally split between micro and small companies, but with significant variety in terms of country (Table 4.1). While the results are presented below for the overall sample, country reports are made available (see Annex 2: Country Reports).

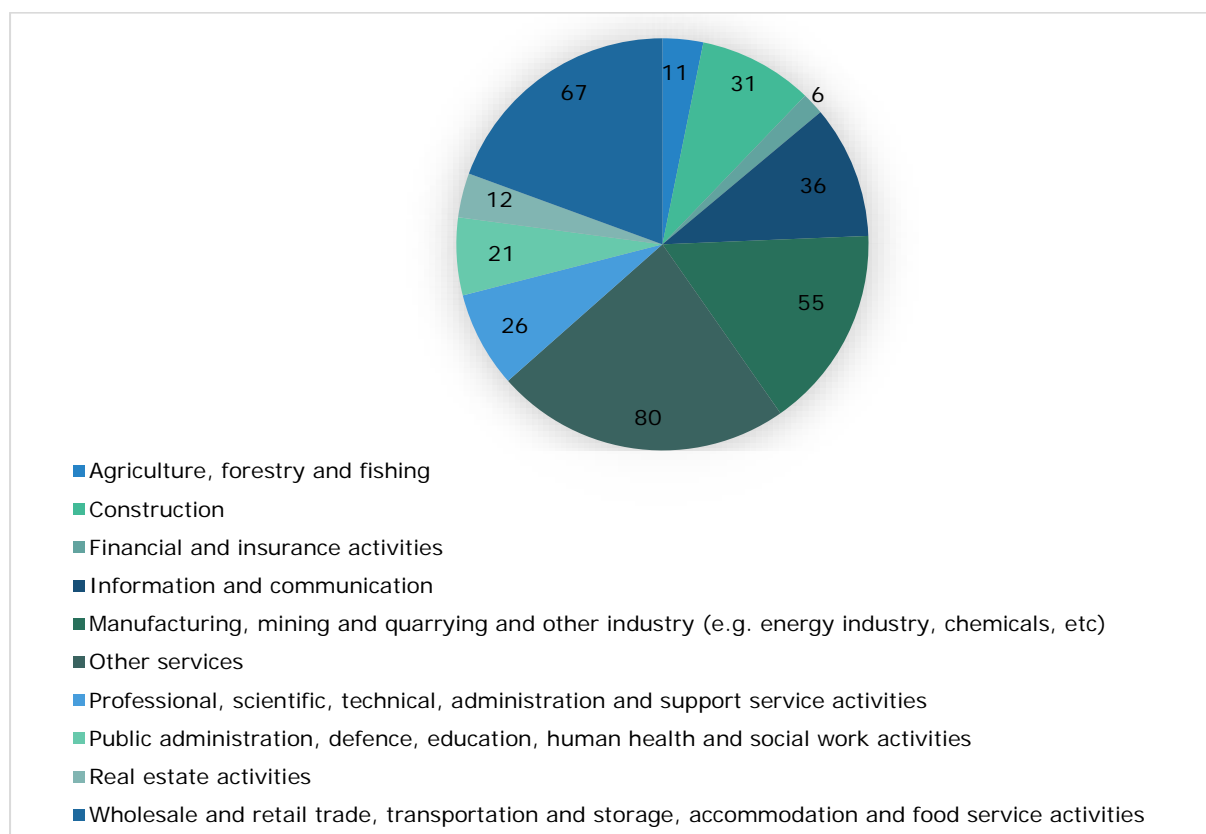
Table 4.1 Survey respondents by company size and country (number and share)

Country	Number (%) of small companies	Number (%) of micro companies	Total by row (%)
DK	56 (49%)	59 (51%)	115 (100%)
FR	27 (64%)	15 (36%)	42 (100%)
DE	76 (72%)	29 (28%)	105 (100%)
IE	16 (80%)	4 (20%)	20 (100%)
IT	17 (77%)	5 (23%)	22 (100%)
NL	13 (62%)	8 (38%)	21 (100%)
SK	7 (35%)	13 (65%)	20 (100%)
Total (%)	212 (61%)	133 (39%)	345 (100%)

Source: Authors' computation of survey results.

A large proportion of companies is in services, either in wholesale and retail trade, transportation and storage, accommodation and food service activities, or other services. Furthermore, another significant share of companies operates in manufacturing, mining and quarrying and other industries. Other significant shares are in the information and communication sector and construction. Other sectors featuring in the sample appear in Figure 4.1, below.

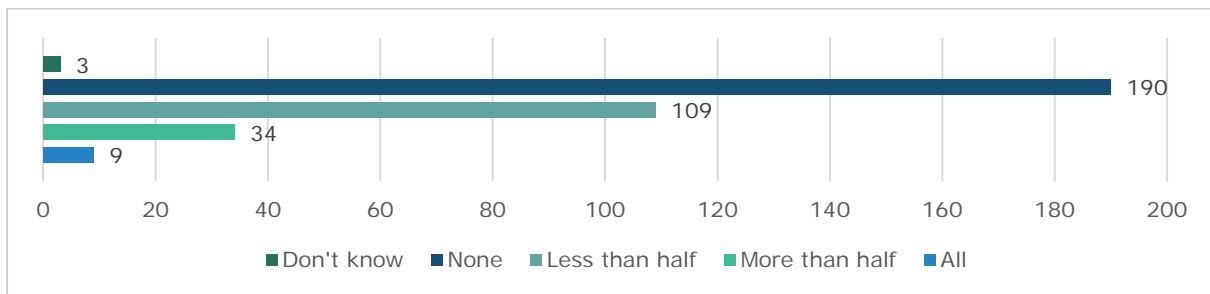
Figure 4.1 Number of survey respondents by sector



Source: Authors' computation based on survey results.

As regards the share of low-qualified employees in the companies that participated in the survey (Figure 4.2), the majority of companies had no low-qualified employees. In one third of companies, less than half of employees were identified as low-qualified by respondents, compared to more than half in a smaller number of companies. Only a small minority of companies indicated that all employees were low-qualified. Three companies indicated that they did not know how many of their employees were low-qualified.

Figure 4.2 Number of survey respondents by share of low-qualified employees

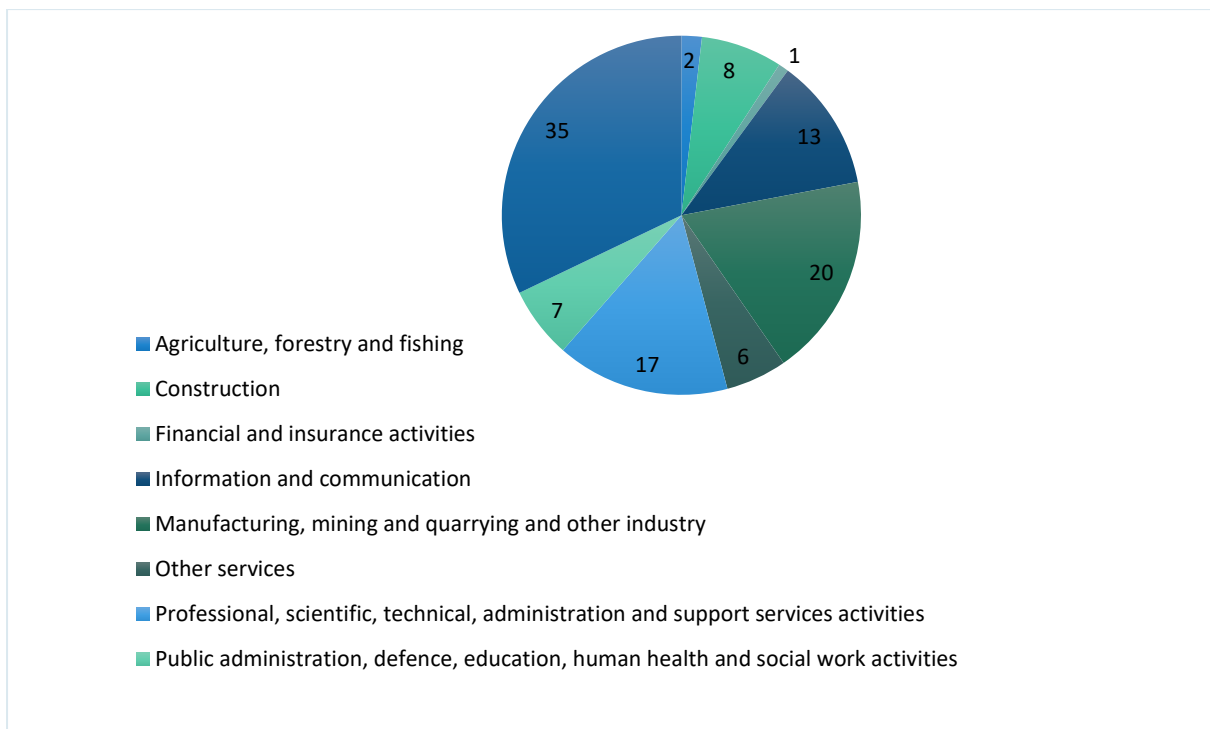


Source: Authors' computation based on survey results.

Additionally, **109 companies were involved through interviews with employers and employees** in the seven selected countries. Namely, 19 companies were involved in Denmark and in France, 18 in Germany, 15 in Slovakia, 13 in Ireland and the Netherlands and 12 in Italy. Among these companies, 22 companies had already participated in the survey. Namely, 2 in Ireland, 3 each in Denmark and Italy, 4 in the Netherlands and 10 in Germany. **The total number of interviews reached 142 individuals – employees and employers – in these countries**, in almost equal shares for all countries (i.e. 70 employees, 10 per country, and 72 employers, 10 per country plus 2 additional interviews with employers in Slovakia).

In total, 49 micro enterprises and 60 small enterprises were involved in the interviews, in a variety of sectors, as shown in Figure 4.3. In the interview sample, 29 companies had low-qualified employees and 4 additional ones, 3 in Slovakia and 1 in Ireland, were owned by low-qualified employers. In total, 14 low-qualified employees were involved in the interviews, at least one *per* country, except Slovakia, where the low-qualified involved in the study were employers.

Figure 4.3 Number of companies involved in the interviews by sector

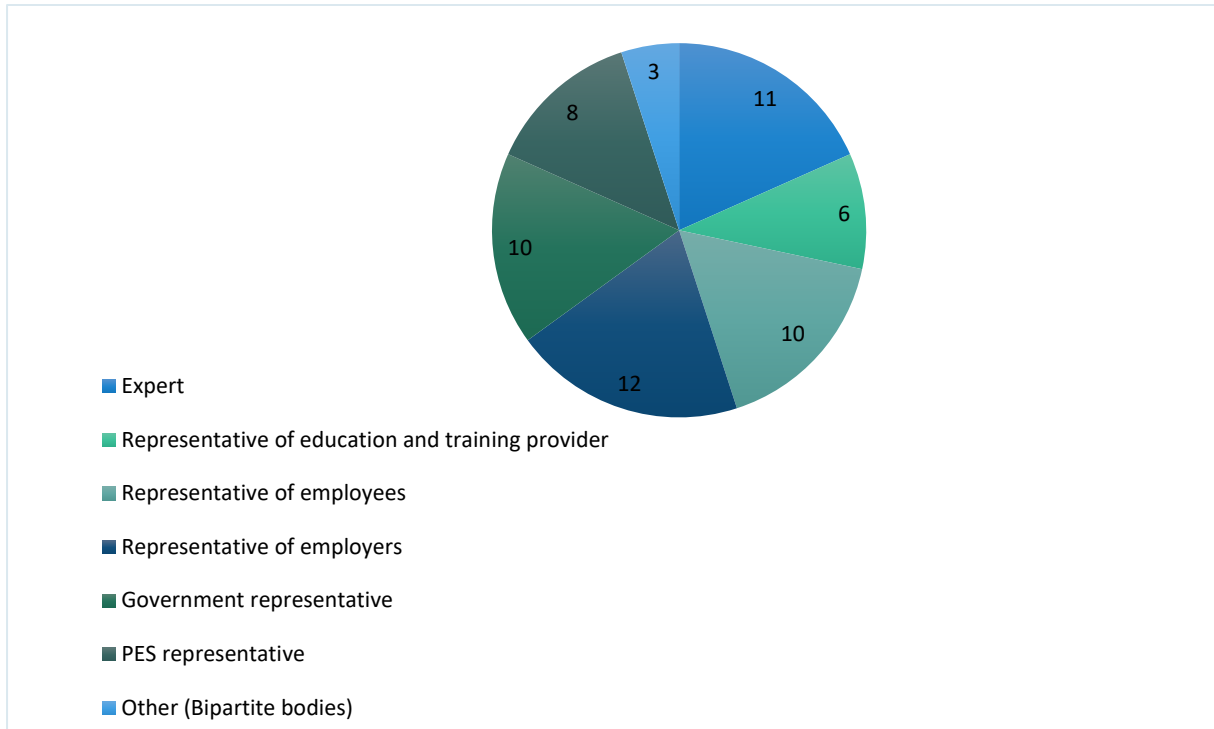


Source: Authors' computation on interviews results.

In addition to micro and small companies, 60 experts and stakeholders from 55 organisations were involved in the interviews. In particular, these interviews involved 11

experts, 10 government representatives, 8 representatives of PES and 6 representatives of education and training providers. Regarding social partners, the interviews involved 10 representatives of employees and 12 representatives of employers. In addition, 3 representatives from bipartite professional training funds, directly involved in supporting up- and re-skilling, were interviewed in Italy.

Figure 4.4 Number of interviews with experts and stakeholders by type of interviewee



Source: Authors' computation on interviews results.

4.3 Up- and re-skilling patterns and features

Identification and tracking of the qualifications and skills of employees within a company is an essential early step to put in place strategies for up- and re-skilling. As highlighted in the literature reported in the previous chapters, a sound knowledge of skills available and those needed within the company allows the identification of skills gaps. In addition, tracking skills development is important to assess the results of education, training and learning efforts, helping to make these efforts more visible for both employers and employees in the company. Skills audits and skills assessment are indeed a precondition to removing the informational barriers at firm level that prevent investment in up- and re-skilling.

One of the first issues investigated was the extent to which micro and small companies use these practices. Results show that the identification and tracking of employees' qualifications, which is a partial but still useful indicator of the general skill level of staff, is rather high. In fact, as indicated in Figure 4.2 in the previous section, only three companies participating in the survey did not know the number of low-qualified employees in their company, meaning that only a minority of companies did not have a complete overview of the level of qualifications in their firm. However, evidence from the interviews highlights the **prevalence of informal and unstructured practices**. The majority of employers involved in the interviews could indicate the level of qualification of their employees, showing that they did keep track of this, but mainly by memory. Sometimes, a lack of interest and motivation in collecting information, especially on employees' qualifications, became apparent. Many companies in all countries professed a greater

interest in the actual proven skills of their employees, which they observe through the employees' performance, as explained more in details below. An exception was those companies that needed to provide specific qualification or certification obtained by their employees to operate in their sector or profession, and thus paid more attention to qualifications than other companies (e.g. in food service, construction, financial market, professional consulting).

Overall, in line with the literature, skills tracking, rather than simply considering qualifications, appears to be of higher interest for micro and small companies. However, **while the level of knowledge about employees' qualifications appears good, information about precise skills of the employees was scant.** This was also due to a lack of clarity around the concept of skills, skills monitoring and skill development. In some cases, especially in Italy and France, there was a **difficulty in understanding the terminology used to define the concept of skills**, of skills monitoring or evolution, and in precisely describing employees' skills. Difficulties in understanding and using the terminology to describe skills possessed and needed was also detected from the side of employees themselves. While this situation represents a finding *per se*, the reasons behind such lack of understanding lie beyond the scope of the study and would require further investigation. It is sufficient to remark here that, in sum, employers appear more interested in skills rather than qualifications of the employees. Nonetheless, skills emerge to be harder to define and measure, being less visible and trackable than qualifications.

For skills assessment and tracking, there were few structured procedures in place, while the majority of firms based these activities on informal practices. Even if there is no formal way to document employees' skills and their evolution, the owner-manager or the direct supervisor roughly knows what skills each employee owns or develops because of close collaboration. In fact, in many cases, and especially in smaller firms, the person responsible for tracking and monitoring skills works closely with employees and is able to track and monitor skills evolution on a daily basis, thus not perceiving any additional advantage to a more formal or structured system. The interviews with employers highlighted that formalising procedures for assessment and tracking can be seen as a possible additional burden for the management of smaller firms such as micro companies. However, some employees manifested higher satisfaction with the process of skills assessment and tracking was more visible, when they could acknowledge their progress and when such progress was linked more explicitly to pay raise or career progressions. This could indicate that even if the necessity to fully formalise the skills assessment and tracking process did not emerge from the interviews with employers, a better structuring of this process is appreciated by the employees.

Regarding more structured practices for tracking and monitoring skills evolution, a common procedure was a periodic meeting between the employer or the line manager and the employee, although this was not common to all companies in all countries. For example, in France, despite such meetings being required by law, only few companies or employees mentioned this as a means of skills development. By contrast, in Denmark these meetings were rather common across companies and were used to agree on annual up- and re-skilling. In some cases, in Denmark, these meetings were accompanied by written documents to set objectives and plan skills development. Similar practices were described in the Netherlands. Across all countries, companies that described this practice indicated that during this meeting there was normally an assessment of employees' performance, skills development, and skills gaps. In many cases, it was indicated that such skills gaps were identified by comparing what employees could do with what is required by clients in the services or products. Long-term strategic objectives, both for the company's future or for the employees' career, were seldom mentioned. Following the identification of such immediate gaps, sometimes targeted actions were taken to develop skills in demand. Follow-up actions were more readily undertaken when written documents accompanied these meetings.

Either during daily activities or during the meetings described above, informal practices to track, monitor and assess skills were based on loose performance indicators, often related

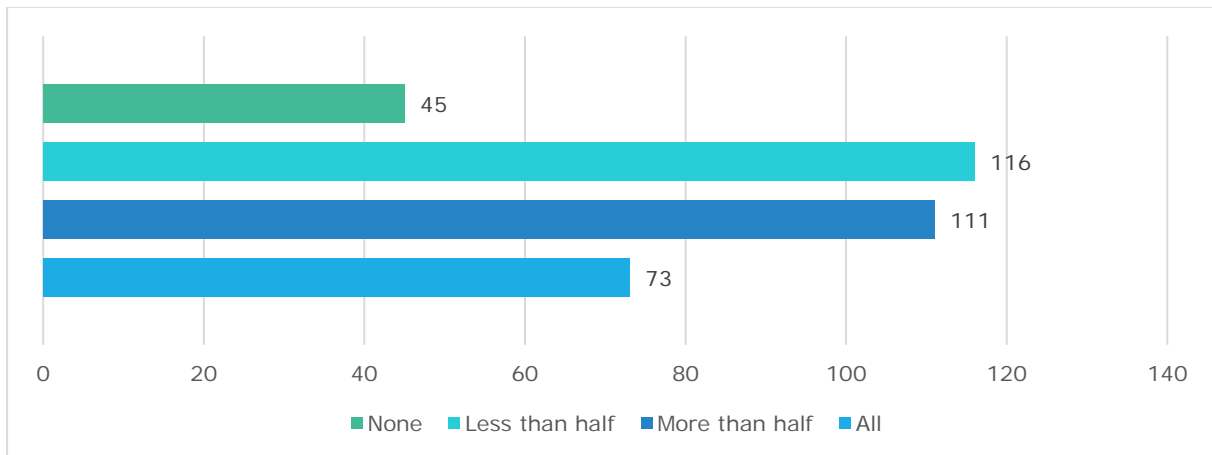
to productivity or volumes of production of goods and provision of services. This shows that **micro and small firms made scarce use of specific skills indicators and definitions.**

Other, more structured, practices included **ICT tools**, such as electronic sheets or online systems, managed mainly by the owner-manager or sometimes by administrative staff, where present. Others required inputs from employees themselves. These ICT tools were mentioned by some companies in all countries. However, in only a minority of cases was how this monitoring system linked to career progression or to a strategic vision for skills development explained. An exception was firms in Ireland, where these tools were used to plan the work ahead and for necessary changes in skills resulting from new job tasks. In Denmark, these tools were used more often and explicitly to tackle the skill needs of low-qualified employees or to establish pay levels of professionals, but also, in general, to agree on needed up- and re- skilling opportunities. Likewise, in Slovak high-end firms, these practices were linked to individuals' development plans and company growth. In Italy, a company mentioned that this tool was useful to identify skills needs and progress, resulting in career progression and improvements in performance at both individual and firm level. Similarly, some companies in Germany described how linking skills development to career advancements thanks to skills monitoring and tracking was particularly appreciated by employees. By contrast, in French companies, criteria related to skills development did not appear to be explicitly related to career developments, which remained obscure to employees.

The responsibility of all these practices, more or less structured and regarding both qualifications and skills, was on the firm owner-manager in most cases, confirming the situation described by the literature. This was especially, but not only, the case in micro firms. In other cases, the line manager was mentioned, indicating that the company was somehow more structured. HRM departments were never mentioned explicitly, with the exception of a few larger German companies. Other actors, external to the company, such as trade unions, were mentioned as being responsible for skills tracking in certain Danish companies. Public sector organisations (i.e. competence centres) were indicated in one case in Germany, as external actors that assisted the company and its employees in skills assessment.

Regarding the level of employees' participation in education and training, companies that participated in the survey were approximately equally distributed between those where all or more than half of employees participated in education and training over the past three years, and those where less than half or none did so. In 13% of companies (i.e. 45) that took part in the survey, no employees at all participated in education and training activities between 2017 and 2019 (Figure 4.5). Notably, among micro companies, the share of companies where no employees participated in education and training doubled compared to the overall sample (27%). Among companies with a higher share of low-qualified employees, it was also slightly more common that no employees took part in training activities (18%) in comparison to the overall sample. There are 12 micro companies with a high share of low-qualified employees in the sample. In 67% of these companies, none or less than half of employees participated in education and training activities over the past three years.

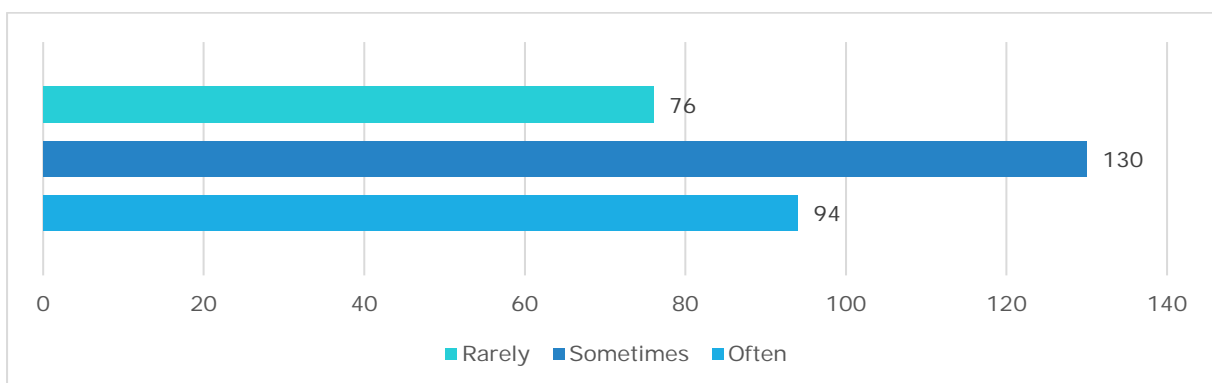
Figure 4.5 Number of survey respondents by share of employees participating in education and training activities over the period 2017-19



Source: Authors' computation based on survey results.

At first sight, the level of participation in education and training in the sample appears higher than expected. However, the picture needs to be completed by information about the frequency of such participation. In fact, the results regarding frequency of education and training reveal a patchier state of affairs. Among the companies involved in the survey where at least some employees had participated in education and training (300, i.e. 87% of the survey sample), the frequency of participation was most often indicated as intermediate, meaning that the employees partook in education and training only sometimes (Figure 4.6). This result is robust across company sizes. It was also not strongly affected by the share of low-qualified employees in a company. However, in companies with large shares of these employees, rare participation is somewhat more frequent than in the other companies.

Figure 4.6 Number of survey respondents whose employees participated in some education and training activities by frequency of participation over the period 2017-19



Source: Authors' computation based on survey results.

Furthermore, when investigating the levels of participation and frequency of up- and re-skilling activities in the interviews with micro and small companies, further details emerge. Such in-depth information allows for a mitigation of the survey results, revealing trends that are widely consistent with the existing data and literature on the topic.

The general level of awareness about the importance of these activities is high. Both on the company and workers' side, there was widespread acknowledgement of the ongoing changes affecting the economy and society at large. Respondents are aware that these changes necessitate continuous learning. **However, high levels of awareness do not necessarily engender a proactive attitude to learning.** In fact, data collected

through in-depth interviews in micro and small companies reveal that **the levels and frequency of up- and re-skilling are limited**, and lower than expected considering the high level of awareness about the importance of this action. **Up- and re-skilling activities observed tend to lack a solid structure and strategy**, meaning that these activities appear neither regular, planned, nor strategic for employers and employees. The exception is compulsory training required by law, such as health and safety training or upgrading certain certifications (e.g. special driving licences), that occurs more regularly and often follows a clear schedule, to comply with the law. Moreover, the interviews identified few exemplary companies that were innovative or that included their staff's skills development as part of their business strategy.

Importantly, degrees of company innovativeness and proactivity in up- and re-skilling varied across sectors and even within sectors. **Companies that needed to stay competitive and up to date clearly valued up- and re-skilling and could describe concrete actions to illustrate their statements.** Another group of companies that appeared to place high importance on education and training for up- and re-skilling and were proactive in this regard were those companies that were required by law to provide training to their employees and update their certification to work. This was the case for regulated professions or sectors across all countries.

The survey results show the following sectoral patterns: in finance and insurance, information and communication services, public administration, education and health, professional services and real estate, participation in education and training was the highest. At least 60% of the surveyed companies in these sectors indicated that more than half or all of their employees took part in training in the past three years. By contrast, participation was low in the wholesale and retail trade, accommodation and food services sectors. There, at least some employees participated in training in only 35% of companies. In the remaining sectors, the level of participation was intermediate.

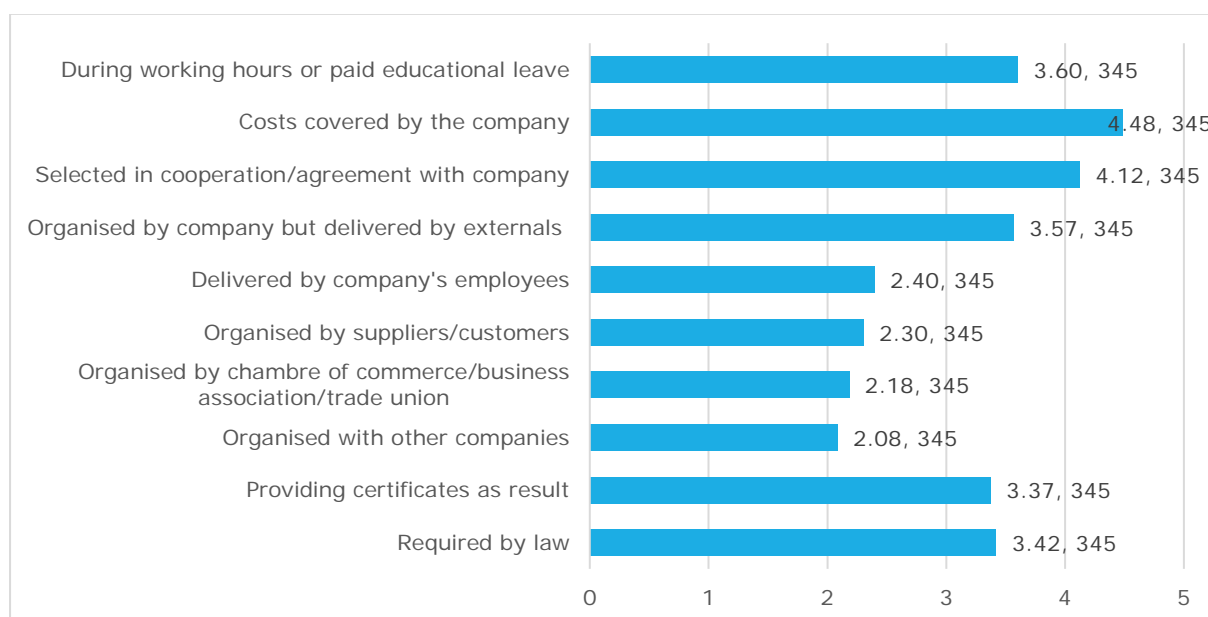
Bearing in mind this already complex and heterogeneous picture, **to gain better knowledge of how up- and re-skilling happens in micro and small companies, information was gathered about the characteristics of such activities.**

In the survey, companies' responses indicated that **the cost of training was often covered by the company** and selected in cooperation or agreement with the company itself, in the vast majority of cases. In approximately half the companies, education and training often or always occurred during working hours or paid educational leave (52%), was required by law (45%), included the provision of certificates (49%) and was organised by the company but delivered by externals (57%). By contrast, delivery of education and training by the company's employees as well as through cooperation external organisations such as suppliers or customers, associations such as the chamber of commerce and social partners or other companies occurred only rarely in the majority of companies (Figure 4.7 and Table 4.2).

These patterns are broadly similar when examining only the sample of micro companies. However, here the provision of certificates as a result of training and training required by law occurred less frequently. This somehow indicates less formal training provisions in these companies.

In companies with relatively high shares of low-qualified employees, patterns were slightly different. In particular, education and training was more frequently required by law (58%) and resulted in the provision of certificates (68%) in most companies. Education and training was also more frequently delivered by externals in the large majority of companies with high shares of low-qualified employees (71%). By contrast, the organisation of training by suppliers, customers or associations such as chambers of commerce or trade unions and employers' organisations occurred even less frequently than in the overall sample. These patterns were similar in the sub-sample of micro companies with a higher share of low-qualified employees.

Figure 4.7 Features of education and training activities over the period 2017-19 (average frequency, left; number of respondents, right)



Note: (1) never; (2) rarely; (3) sometimes; (4) often; (5) always.

Source: Authors' computation on survey results.

Table 4.2 Features of education and training activities over the period 2017-19 (% in top/bottom two boxes)

	Top	Bottom
During working hours or paid educational leave	52.01	21.14
Costs covered by the company	83.22	6.04
Selected in cooperation/agreement with company	72.97	12.16
Organised by company but delivered by externals	56.71	23.15
Delivered by company's employees	16.50	55.56
Organised by suppliers/customers	17.23	60.81
Organised by chamber of commerce/business association/trade union	14.77	61.41
Organised with other companies	13.09	67.11
Providing certificates as result	48.66	25.17
Required by law	45.02	31.27

Note: The first column 'Top' indicates the share of respondents that gave an answer in one of the Top 2 boxes=always + often; the second column 'Bottom' indicates the share of respondents that gave an answer in one of the Bottom 2 boxes= rarely + never.

Source: Authors' computation on survey results.

These findings are confirmed and enriched by additional information from the interviews. Indeed, education, training and learning can occur in very diverse forms throughout working life within a company. In micro and small companies, it is necessary to unpack practices that are less conventional than in larger companies, yet important for up- and re-skilling.

According to the interviews, **the cost of education and training was covered by the company in most cases across all countries**. However, the interviews highlighted that **the role of the company was rather passive** in this regard. Most employers are open to financing training but do not take actions to encourage it. Again, the few exceptions to this trend were in exemplary firms and when training was required by law. Otherwise, **the initiative to identify, search and suggest education and training opportunities was left to the employee**. The role of the company is then to approve it, according to criteria that are generally linked to the relevance of the training for the company's business

and necessities, as well as financial availability. Undertaking education and training during working hours was common but less obvious than having the cost covered by the firm. Indeed, several interviews in different countries showed that sometimes **employees were expected to undertake training in their own free time, even if this training was paid by the employers.**

Despite a somewhat passive attitude, companies played an important role in influencing employees' choices about up- and re-skilling opportunities, since they were willing to approve and pay mainly for something that was relevant for their business. In some cases, where the company had a more active role, the company decided on all training provision. In other cases, employees suggested the training but the final decision was nonetheless taken in agreement with the company. Such decisions were mostly taken by the business owner-manager, who is generally in charge of skills development within the company. Indeed, **working closely with employees, the owner-manager knows them well and, with the interests of the company in mind, is the most obvious person to take decisions on up- and re-skilling activities.** In companies where the owner-managers themselves appeared more proactive and interested in up- and re-skilling activities, such activities happened more often and were part of a strategy. Only a minority of companies in Ireland and the Netherlands mentioned HRM departments as being in charge of decisions about up- and re-skilling. A few companies across countries stated that HRM issues, and thus skills development, were the responsibility of a larger management body or group of partners.

In any case, across all countries, respondents indicated that **decisions on training were driven by short-term business needs**, often following specific clients' requests, or by the need for certification to operate in that sector. Some exceptions were found in Denmark and Ireland, where companies mentioned employee development as the underlying motive for education and training. **Firm-level policies and strategies for up- and re-skilling are thus not common across the small and micro firms interviewed.** However, informal practices were largely in place to respond to ongoing changes and occasional needs.

Indeed, **there was a prevalence of informal learning as a means of up- and re-skilling** across all countries. Informal learning is described in the interviews as self-learning, very often with the aid of online digital resources. Self-learning appeared relevant in all companies that described informal learning, but even more in micro companies, where self-learning relies more on external sources of knowledge. In addition, informal learning is described as team-working and pair-working with senior colleagues or with colleagues with different skills. The latter allows knowledge sharing and skills development through internal cross-fertilisation.

Sometimes, informal learning accompanies non-formal training. This type of training is the second most common form of up- and re-skilling that micro and small companies provided to their employees. Here, a variety of practices emerge, ranging from internally organised courses, especially in larger firms, to participation conferences, workshops and courses delivered by externals, even online.

Formal education and training was only mentioned in a few interviews, mainly in the case of compulsory training for certification required by law. Certification was indicated as the main motivation and result of formal training for those companies and employees in regulated professions or sectors where such certification is required to practise. In addition, this form of up- and re-skilling was described only by two highly qualified employees. One of the two enrolled to an online education course.

Online digital resources appeared relevant for all types of learning described above. However, these were mentioned more often in Denmark than in other countries because the supply was considered to be relevant and of good quality. In other countries there was less take-up of online learning, especially in the sectors where the nature of the job tasks and skills made digital learning redundant. Some companies also considered that their training needs were too specific to be fulfilled by online training courses. Yet even if

the level of engagement in digital was still rather low overall, this opportunity was considered to be more relevant for the future by several companies across countries. It was described as a viable option to overcome the financial and time constraints to further up- and re-skilling. In fact, those that engaged in online training highlighted the low cost of this opportunity and the high level of time flexibility that it offered.

For the provision of formal and non-formal education and training, external private providers were widely mentioned in all countries. Private providers appeared, as in the survey, the most common external organisation that cooperate with micro and small companies for up- and re-skilled. According to both survey and interviews, some sectors relied more on external private providers. Namely, in the real estate, construction, finance and insurance, manufacturing and public administration sectors, cooperation with external private providers for the organisation and delivery of training was more common than in other sectors.

In line with the survey results, chambers of commerce are rarely indicated as relevant providers of training. These are only mentioned in Germany and Slovakia. In the latter, also professional associations, including international networks of professionals, appear to play an important role.

The role of employers' organisations in cooperation with micro and small companies for up- and re-skilling is slightly more common across several countries. By contrast, trade unions were cited by a few companies only in Denmark and the Netherlands.

Public bodies that support companies were also rarely mentioned, except for companies in Denmark that cooperated with the municipality and local employment services and government agencies in charge of national programmes for up- and re-skilling (i.e. the AMU programme – *Arbejdsmarkedssuddannelser*). The sectoral training funds (i.e. O&O funds – *Onderwijs en Ontwikkeling*) were largely mentioned in the Netherlands and accredited skills operators (i.e. OPCO – *OPérateurs des COmpetence*) were mentioned by some companies in France.

Concerning cooperation with other firms, **informal collaboration with clients and especially suppliers are mentioned more often than other types of collaboration as a means to provide up- and re-skilling opportunities to employees.** However, in the Netherlands, this practice seems less popular. Across countries, there was little evidence of small and micro companies independently (i.e. if not driven by policy actions) cooperating with other similar companies for up- and re-skilling. Examples of such cooperation are nonetheless found in some companies in Germany, Denmark and Slovakia. Other companies showed an interest in developing such practices in Italy and Denmark. By contrast, there was no evidence in the interviews that companies drew on other companies' experience and approach or were willing to do so regarding skills development. A small minority of companies seemed interested in knowing what their peers did in this regard, albeit underlining the fact that all firms are different.

4.4 Challenges

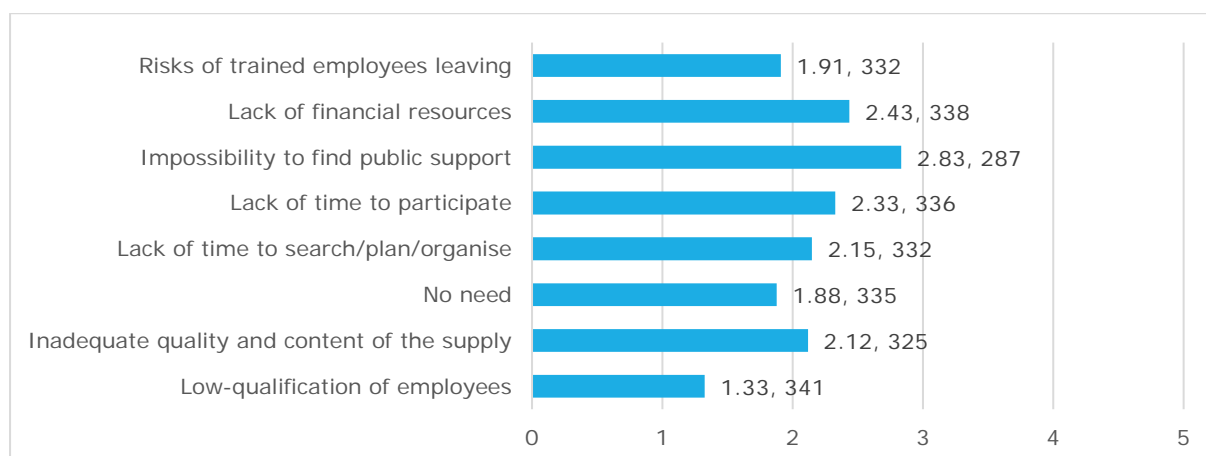
According to the survey results, the companies perceive certain challenges to providing education and training to employees more than others (Figure 4.8 and Table 4.3). Difficulty in finding public support was the challenge that applied to a high or full extent in the largest share of companies (34%). Other challenges were cited as occurring only to some extent. These included lack of financial resources and lack of time to participate in education and training activities. Moreover, the remainder of the challenges are indicated as applying only to a limited extent or even, in the case of the low qualification of employees, not at all. Notably, in the overall sample, 'no need for training' was indicated as applicable to a high or full extent only to a minority of the companies participating in the survey (i.e. 6.87%). Despite it could result from sample bias towards companies with a more positive perception of up- and re-skilling, as discussed in the methodology section, this finding is surprising, given what emerges from the review of the literature and existing evidence presented in chapter 3. The statistics from the CVTS, presented in the previous

chapter, show that a large share of companies did not perceive any need for further education and training thanks to satisfactory skills levels of existing and new employees. Similarly, the risks of trained employees leaving was not regarded as a challenge to a significant extent by the surveyed companies, in contrast to what is discussed in the literature.

These results are similar across company sizes. However, for companies with higher shares of low-qualified employees, the lack of financial resources and the inadequate quality and content of the supply posed a greater challenge than for the rest of the sample. Moreover, these companies indicated that the low qualification of employees posed a challenge to a limited extent, which is a slighter higher perception than for the rest of the companies involved in the survey. Looking specifically at the micro companies with a high share of low-qualified employees, all challenges were seen as applying to a greater extent than in the overall sample. This is particularly the case for the inadequate quality and content of the supply, which was considered a serious challenge by these companies.

Finally, in companies where no employees participated in education and training in the past three years, challenges were seen as applying to a higher extent than in the overall sample. In particular, lack of financial resources, lack of time to either participate in or organise training and inadequate quality and content of supply were all perceived as challenges to some extent. The impossibility of finding public support was the challenge perceived to the highest extent, also in this subgroup of companies.

Figure 4.8 Main challenges to the provision of education and training to employees (average evaluation, left; number of respondents, right)



Note: (1) not at all; (2) to a limited extent; (3) to some extent; (4) to a high extent; (5) to the fullest extent.
Source: Authors' computation on survey results.

Table 4.3 Main challenges to the provision of education and training to employees (% in top/bottom two boxes)

	Top	Bottom
Risks of trained employees leaving	8.13	74.40
Lack of financial resources	17.75	49.70
Impossibility to find public support	33.80	41.11
Lack of time to participate	17.56	56.85
Lack of time to search/plan/organise	15.06	62.65
No need	6.87	71.04
Inadequate quality and content of the supply	15.08	67.08
Low qualification of employees	3.81	91.50

Note: The first column 'Top' indicates the share of respondents that gave an answer in one of the Top 2 boxes= to a high extent + to the fullest extent; the second column 'Bottom' indicates the share of respondents that gave an answer in one of the Bottom 2 boxes= not at all + to a limited extent.

Source: Authors' computation on survey results.

The answers provided by companies in the survey show some sectoral patterns to challenges. In particular, lack of time to participate in and organise education and training were perceived as greater challenges by companies in the wholesale and retail, professional services, other services, manufacturing and construction sectors. Compared to other sectors, lack of resources and the low qualification of employees in the agricultural sector were seen as challenges to a greater extent. Some companies in the wholesale and retail, other services and construction sectors indicated that there was no need to train employees more often than in the rest of the sample. Finally, the inadequate quality and content of supply was indicated as a challenge to great or full extent by more companies in the wholesale and retail trade and financial and insurance services sectors than in the rest of sample.

Despite these sectoral patterns, no challenge in the overall sample is perceived as occurring more than to some extent. **However, this picture needs to be completed by the interviews with employers and employees, which underline a higher relevance of these challenges.** When complemented with the interview findings, the overview of challenges experienced by companies involved in the data collection come to converge, overall, with what was suggested in the literature. Certain trends are more or less prominent than expected, as highlighted below.

The interviews largely confirm the prevalence of the same types of challenges that emerge from the survey, yet to a higher extent. The perception of the types of challenges appear to be largely shared between employers and employees. However, **on average, employers mentioned challenges more often and more prominently than employees.**

In line with the survey, and in contrast with the literature, **challenges related to market failures were never mentioned spontaneously as a major concern.** This means that there is no evidence of employers not providing up- and re-skilling opportunities because of the fear that employees would leave the company after having been trained. Employers did not mention the risk of being unable to repay for the cost of training or of having their employees leave to work for competitors after being up- or re-skilled. Similarly, no employee expressed concern about their employers not providing up- and re-skilling opportunities, or that, in general, up- and re-skilling would give them the opportunity to leave the firm and find a better job. Nevertheless, **this challenge emerged to some extent when the employment contract was temporary**, as it was clearly described in a few interviews in Italy and Slovakia. With high staff turnover, the firms tended to look for employees that already had suitable skills and replaced them when their skills were no longer suitable for the company. In these cases, employers considered that there was no profitable reason to train employees internally and considered this as an external responsibility, up to the employees themselves or to the public education and training system.

Interestingly, and in line with the literature, **challenges related to financial and time constraints were by far the most common across all countries.** This emerged from both employers and employees. Financial constraints were more salient in Denmark, where employers stated that they overcame this challenge by relying on public bodies or trade unions to access free or subsidised training. In Italy and in Slovakia, lack of financial resources was more stressed by companies undergoing a phase of stabilisation following the economic crisis, especially but not exclusively in the manufacturing sector. In these cases, the high cost of labour was cited as a factor hindering further spending for employees' education and training. In these two countries, also some employees perceived this as a barrier to their up- and re-skilling, noting that their participation in education and training was limited either due to a lack of individual financial resources or because they recognised that their company was not in a good position to pay.

It is worth noting that, **even more than financial constraints, lack of time was considered as the main challenge** in most countries. Similar to what emerges from the literature review, many interviews described a situation where, if an employee participated

in education and training, work organisation within the firm is highly impacted. Indeed, due to limited staff, there would be no one else to replace this employee. This situation translates into a considerable opportunity cost, added to financial costs. For example, in Italy, interviewees referred to this cost as a main barrier to training. However, when probing further, it emerged that the true 'cost' interviewees were referring was the cost of time and lost production due to absence during education and training. Likewise, in the Netherlands, some employers mentioned the wages paid to employees when they stopped production to participate in education and training. Employers pointed out that they generally managed to solve the financial cost issue, but lack of time and the need to keep up the fast pace of production to meet market pressures were harder to overcome. This was evident in Denmark, where good public provision of up- and re-skilling opportunities can help firms overcome the lack of financial resources. Yet project-based work and tight deadlines resulted in little time for education and training, which was harder to address. There were similar findings in Ireland where companies can rely on financial support for training, but sometimes have to cancel their participation due to pressing business needs. A few employers in the Netherlands, however, were more positive about finding replacements for employees participating in training. In Italy and Slovakia, continuous cuts to staff due to high costs of labour and an unfavourable financial situation seemed to limit this possibility. By contrast, in France, time did not emerge significantly as a constraint to up- and re-skilling. They reported the administrative burden of education and training carried by companies when engaging in these activities.

Lack of time for up- and re-skilling was a concern that also emerges on the employees' side. In particular, in Denmark, employees worried about lagging behind if they stopped their daily activity to pursue education and training. This also emerged from statements by Italian employees, who declared that in some cases they had to quit training courses because of clashing schedules with their work commitments. A similar declaration was made by an Irish employee. Moreover, in line with the literature, **employees highlighted difficulties engaging in training due to personal commitments, such as family life.** This was mentioned more often **when training required travel, and often by female respondents**, especially in Denmark, Slovakia and Italy.

In some cases, in Slovakia, Italy and the Netherlands, companies reported that the need to comply with the law concerning compulsory training, for example for health and safety in the workplace, further limited the possibility to engage in other, more relevant up- and re-skilling opportunities. In this case, **training required by law was seen as a burden that exacerbated the challenge related to time and financial constraints.**

Lack of information about available public or private opportunities for up- and re-skilling emerged as another important challenge. It applies in particular to public support for up- and re-skilling, even in countries where these were available. In the Netherlands, most employers indicated that they were not aware of existing measures put forward by the government and other actors such as social partners or training centres. In Italy, when asked about existing support for training by public institutions, most interviewees had no or very little knowledge. Similarly, in Denmark, interviewees did not know where to look for information about available training opportunities. **Lack of time to seek available opportunities for up- and re-skilling was mentioned as a constraint.** Most of the owner-managers declared that they were too busy to search such information.

The **inability to find suitable training was a further challenge**, which relates to the supply constraints highlighted in the literature. This was mentioned mainly in Germany, France and Italy, among others. In Italy, in particular, this was driven by a negative experience with previous training courses, especially those supplied by public bodies or those required by law. Overall, even if not mentioned explicitly, the unsuitability of training supply emerged as an issue in all countries. Interviewees, both employers and employees, often declared that they were not able to apply what they had learned in education and training in their daily activities or to contribute to the company's objectives. This was also

evident when interviewees stated that their company or their job was too specific to learn by participating in education and training.

Lack of motivation did not emerge as a common challenge in any country. When it came up in the interviews, lack of motivation could always be linked back to some of the challenges mentioned above. For example, an Italian employer said that employees lacked motivation to engage in training, but when asked for further details it emerged that this employer expected workers to follow training in their free time, outside of working hours. In other cases, when interviewees seemed uninterested in either providing or pursuing training, it emerged that they did not find it useful in the past. Lack of motivation emerged as a standalone obstacle, mainly among senior employees, for example in Italy and in Slovakia. These employees thought that they could not learn much anymore or that they did not need to learn because they were close to retirement age. In addition, in the Netherlands, Italy and Slovakia, this lack of motivation emerged as a result of lack of support from employers in some cases.

4.5 Opportunities

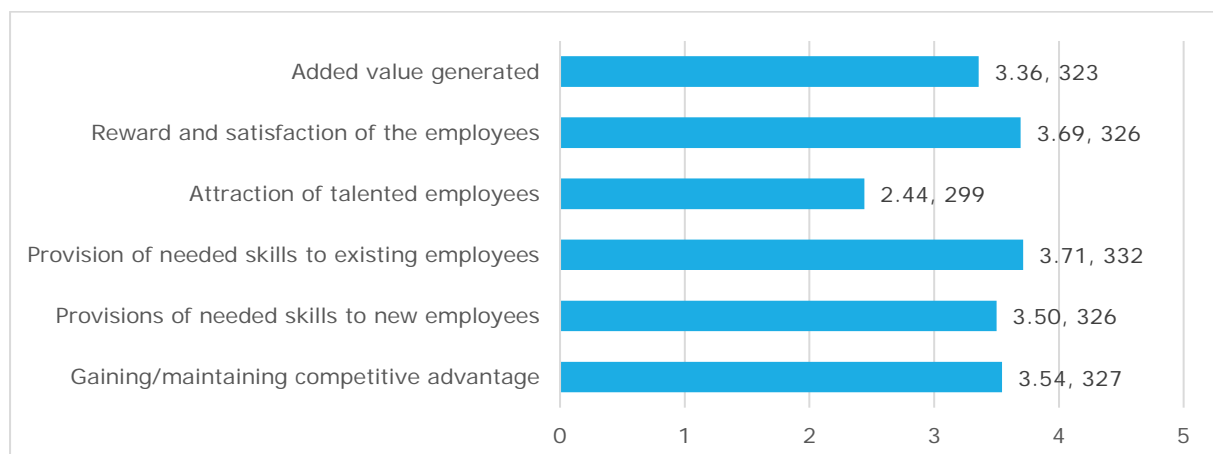
Overall, the companies involved in the survey and in the interviews appeared to be aware of the opportunities that up- and re-skilling could deliver. In the survey, in particular, the opportunities were perceived to a greater extent than the challenges by the majority of the companies in the sample.

Among the opportunities mentioned in the survey, most are considered as applying to a high or to the fullest extent by the majority of companies (Figure 4.9 and Table 4.4). This was the case for opportunities to reward and satisfy employees (61%), to provide skills to existing employees (60%) or new employees (53%) and to gain or maintain a competitive advantage (57%). The generation of added value was seen as an opportunity to some extent, and the attraction of talented employees only to a limited extent.

These patterns are robust across company sizes. Companies with high shares of low-qualified employees tended to be more sceptical of the opportunities experienced from education and training, except for the provision of needed skills to new employees. Micro companies with high shares of low-qualified employees appeared even more sceptical.

The evaluation of potential opportunities by companies where no employees participated in education and training in the past three years follows the same patterns as those in the overall sample. However, these companies appeared slightly more sceptical of the opportunities that could be gained from providing training compared to other companies.

Figure 4.9 Main opportunities experienced (or expected to experience) when providing education and training to employees (average evaluation, left; number of respondents, right)



Note: (1) not at all; (2) to a limited extent; (3) to some extent; (4) to a high extent; (5) to the fullest extent.
Source: Authors' computation on survey results.

Table 4.4 Main opportunities experienced (or expected to experience) when providing education and training to employees (% in top/bottom two boxes)

	Top	Bottom
Added value generated	45.82	20.12
Reward and satisfaction of the employees	61.04	9.20
Attraction of talented employees	21.07	57.53
Provision of needed skills to existing employees	59.94	9.64
Provisions of needed skills to new employees	52.76	18.40
Gaining/maintaining competitive advantage	56.88	20.49

Note: The first column "Top" indicates the share of respondents that gave an answer in one of the Top 2 boxes= to a high extent + to the fullest extent; the second column "Bottom" indicates the share of respondents that gave an answer in one of the Bottom 2 boxes= not at all + to a limited extent.

Source: Authors' computation on survey results.

The interview findings are generally in line with those of the survey. Either implicitly or explicitly, both employers and employees appeared to be aware of opportunities stemming from up- and re-skilling, although responses were not as specific as for the challenges. This could indicate more experience of challenges than of opportunities.

While employers concentrated on company-level opportunities, employees focused on those at individual level. However, the latter always referred to aspects that improved their job performance and thus benefited the company overall. In general, mutual interests of both employers and employees were shown to recognise transformations of the economy, to stay competitive, innovative and thus be successful in the market.

Overall, employers tended to see up- and re-skilling as necessary **to provide the skills needed for the job to new employees**. Therefore, most companies put in place more or less structured procedures ranging from pair-working to apprenticeship programmes subsidised by the government, which highlights the priority and importance of initial training compared to continuing training for existing employees. Yet, in addition to this, a significant number of employers and employees recognised that education and training was an opportunity **to maintain, upgrade and increase the skills of existing employees**. Almost everyone who mentioned this as an opportunity referred to the ongoing digitalisation of the economy that called for up- and re-skilling.

The perception of skills provision as an opportunity stemming from education and training was more marked in sectors such as ICT or those that highly exposed to digital technologies such as manufacturing, information and communication and trade services. These sectoral patterns were consistent and complemented the survey results, where more than 60% of companies in financial and insurance services, public administration services and real estate perceived the provision of skills to existing or new employees as an opportunity to a high or full extent. Similar results in the survey applied to information and communications services and other services sector. Surprisingly, also firms in the agricultural sector recognised this opportunity stemming from up- and re-skilling, more than the rest of the sample.

All employers, but also many employees, recognised that up- and re-skilling could **ultimately benefit company performance**. The Netherlands and Ireland were the only countries where employees pointed out more often that education and training was linked to **personal development and career progression**. Finally, some respondents highlighted that training gave the opportunity **to comply with existing regulation** on providing and upgrading employees' skills and certifications. This was the case in Slovakia, especially in regulated professions and sectors.

Although **less often, employers also mentioned satisfaction of employees as an opportunity** that resulted from up- and re-skilling. Particularly in Germany, employers mentioned that participation in training increased the **contentment and confidence of employees, ultimately improving their performance and the value they created for the company**. This was also largely recognised in Denmark, where employers

mentioned advantages for individual employees in terms of pay rise and career progression following their better performance driven by participation in training. In Italy, provision of education and training as a means to increase satisfaction and retain employees was sometimes highlighted by employers and, more prominently, by employees. For one employer specifically, the provision of up-skilling opportunities was **key to attracting talented employees and to retaining good ones**. In line with the literature, this employer explained that learning opportunities could compensate for the lower salary levels that smaller firms could offer in comparison to large companies. Employees of this company confirmed this view, which was also found in other interviews with employees in Italy. Similarly, in France, the possibility to recruit qualified employees by offering them further up-skilling opportunities was mentioned as an advantage. Therefore, provision of up- and re-skilling opportunities could be considered, according to respondents, as **a tool for human resource management, ultimately improving the functioning of the company and its performance**. Across sectors, the survey results suggest that this opportunity is particularly overlooked by firms in the construction sector, in comparison to the rest of the survey sample.

Following from the opportunities above, **the most commonly mentioned opportunity stemming from up- and re-skilling was the possibility to enhance company performance overall and job performance specifically**. Many interviews with employers and employees across all countries explained that employees' higher skills reflected in higher client satisfaction and thus a rise in the volume of orders and turnovers. This applied to all sectors and across very different firms, where clients can be customer of retail trade, as well as other companies that buy from these smaller firms as part of the value chain. Sometimes training, especially if resulting in certification or qualifications obtained, is seen as **a signal to clients of a company's high quality work**, as mentioned in some interviews in Slovakia and Italy. In the Netherlands, some indicated that up-to-date skills were considered necessary to maintain the relationship with the client, especially when the business model was based on on-demand projects.

Indeed, frequently, the reason to engage in up- and re-skilling arises from client request to fulfil new requirements and respond to shifts in demand. This is especially the case for consultancy firms or ICT companies, innovative manufacturing companies, and information and communication companies engaging with social media and digital marketing.

Higher competitiveness of the firm following up- and re-skilling is also mentioned regularly in all countries. On the one hand, companies in highly innovative sectors need to upgrade their skills to innovate or to anticipate and keep the pace of innovation. On the other hand, companies in less innovative sectors such as retail trade or accommodation and food services can better compete with larger companies by being up to date in their business and by offering better services thanks to a skilled workforce. Higher productivity is mentioned, although less often, in the Netherlands and by some Italian employees.

Many interviewees explained that, following education and training, employees learn something that can be used in their daily work, especially when the training is not conceptual. Indeed, to see this opportunity unfolding, both employees and employers across all countries agreed that **training needs to be practical**. Its content must be easy to put into practice in everyday operations. Interestingly, **training on soft skills** such as managerial or relational skills represents an exception to this general statement. Even if highly conceptual, this type of training is considered very effective to increase the performance of the employee and the company.

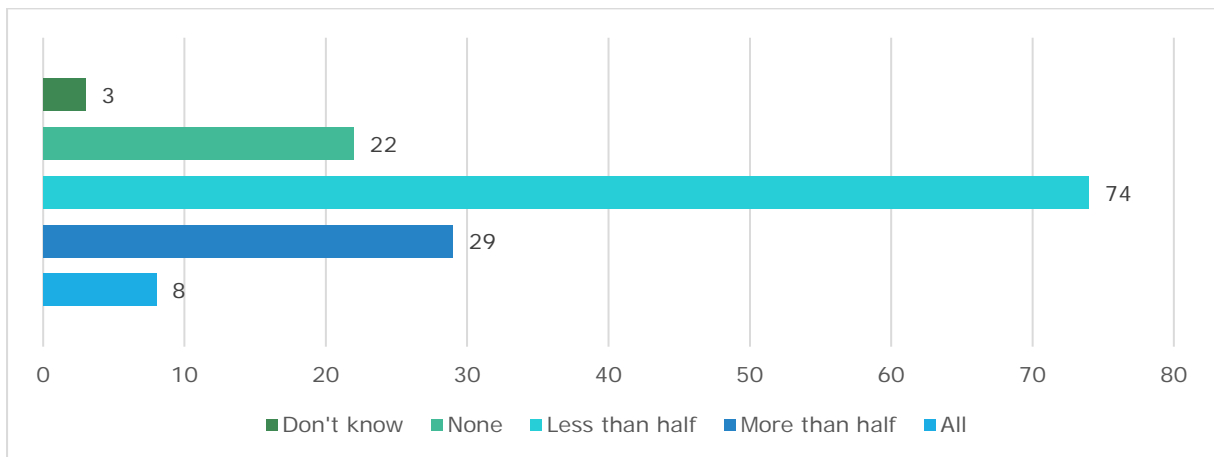
In addition, some companies in Italy and in Denmark highlighted **a domino effect**: when one or some employees, or the owner-manager, attend training, it ultimately benefits the entire company. Learning material can be shared with the rest of the company. Moreover, given the close cooperation in smaller companies, knowledge can spread more quickly because these companies do not work in silos. Thus, the company's level of knowledge can be increased overall even with minimal investment in training.

4.6 In focus: up- and re-skilling for low-qualified employees

In contrast with existing statistics and the literature, the evidence collected through the survey and the interviews **does not identify any systematic exclusion of low-qualified employees from up- and re-skilling activities**. Rather than lower participation, the **differences between low-qualified employees and the rest concern the types of learning activities** that appear more common for these employees.

Looking at the survey results, in companies with a higher share of low-qualified employees, it is slightly more common that no employees took part in training activities compared to the overall sample. Moreover, participation was less frequent than in the other companies. Nonetheless, when training happened in these firms, it did not seem to systematically exclude low-qualified employees. In fact, among companies where at least some employees were low-qualified, namely almost half of the companies in the survey sample (i.e. 154), 74 companies reported that out of the employees that participated in training in the previous three years, less than half were low-qualified (Figure 4.10). In 22 companies with low-qualified employees, none of the employees that received training were low-qualified, while in 37, more than half or all employees participating in training were low-qualified.

Figure 4.10 Number of survey respondents by share of low-qualified employees out of total employees participating in education and training activities over the period 2017-19



Note: The total number of respondents excludes those companies reporting that none of their employees was low-qualified.

Source: Authors' computation on survey results.

However, regarding format of the training, the survey results showed different patterns in the answers of firms with a higher share of low-qualified employees in comparison to the rest of firms in the sample. For example, education and training in such firms was delivered by externals, required by law and resulted in the provision of certificates more often than in other firms. This might be explained by the fact that low-qualified were likely to be involved in formal training activities to comply with legal requirements or to acquire basic skills or technical skills necessary in their sectors, and thus certified.

Looking at the interviews, findings confirm that if an employer provides up- and re-skilling opportunities, in principle no differentiation between low- and high-qualified employees was made by employers in the companies involved in the study. However, informal on-the-job learning opportunities are more explicitly mentioned. For example, in Germany, an employer declared that thanks to on-the-job learning/internal training the low-qualified employees have become highly skilled employees. Similar findings apply to France, where a positive assessment of up- and re-skilling opportunities available for low-qualified is shared by both employees and employers. Likewise, in Italy, companies that employ low-

qualified do not report any significant difference in up- and re-skilling opportunities for these employees compared to the others. One employer stated that these employees are even more motivated to learn on the job, and another employer noted that low-qualified employees were able to take up opportunities of informal learning on a daily basis. Similar statements are found in the relevant Slovak interviews with employers.

On the low-qualified employees' side, this view was partially confirmed, including for informal learning activities being the prevalent means to benefit from up-skilling and re-skilling. One of the Italian low-qualified employees declared motivation for learning through daily activities and self-learning. On the other hand, the other Italian low-qualified employee involved in the study believed that it was responsibility of the employer to provide and suggest further training. The latter has participated in publicly organised initial vocational training, which he considered of poor quality and not useful, discouraging further participation in training. A similar negative attitude of some low-qualified employees was also found in Ireland, where inadequacy of training provided to low-qualified employees was also mentioned. **Negative experiences with formal and non-formal education and training were considered a prohibitive factor**, also in the Netherlands. In this country, low-qualified employees appeared less interested than other employees, especially in formal education and training. Yet, employees needing certifications to perform their tasks and their employers were well aware of the importance of education and training and were involved on regular basis, even if low-qualified.

Across countries, differences in the content of training for low-qualified employees were found between sectors. For example, in countries such as Denmark and Italy, in manufacturing companies, low-qualified employees were often engaged in production activities. For this reason, these employees were involved in training activities relevant only for their job tasks and thus different from other training opportunities offered to highly qualified employees that work outside production lines. Often, non-formal training opportunities for low-qualified employees consist of suppliers or external consultants providing seminars or short courses to explain how to use new machinery or tools. In this sense, **the content of up- and re-skilling for low-qualified appears to be very specific and oriented to short-term company needs**.

The survey showed that firms with higher shares of low-qualified employees experience or perceive challenges more than others in the sample. For them, the low qualification of employees posed a challenge to a limited extent, which is however a slighter higher perception than the rest of the companies involved in the survey. These companies also tended to be slightly more sceptical than the others regarding the opportunities stemming from up- and re-skilling. Although not so marked, these two findings appear consistent with the hypothesis of increasing returns to scale of investments in education, which is explained in the literature.

The interviews confirm that low-qualified employees and their companies face additional challenges to engaging in education and training compared to the rest of the sample. In Denmark, for example, employers of low-qualified staff describe **more reluctance to provide education and training to low-qualified staff, in comparison to highly qualified employees, because they feared that the trained employee would request a higher salary, different job tasks or leave the company**. In particular, one employer admitted that training these employees was undertaken informally to prevent them from gaining certification that would help improve working conditions and switch companies. While this fear was not an issue in the overall sample of the employers interviewed, it emerged when talking about up- and re-skilling of low-qualified employees specifically. By contrast, one employer encouraged up-skilling but said this opportunity was not always taken up by the low-qualified employees. In fact, some employers of low-qualified reported their employees' **lack of motivation to participate in education and training**. However, age also played a role insofar as the reluctant employees were described as the oldest ones, in one example. Moreover, some employers argued that low-qualified employees do not like to go back to the classroom and are not willing to participate in further education and training. Consistent with this claim, low-qualified

employees in Denmark showed low motivation for education and training because they felt they could better learn what was needed on-the-job. Nonetheless, Danish companies with low-qualified employees provided them in many cases with some education and training opportunities, mainly linked to certification, in line with the findings in the survey. Often this training was strictly related to their business needs, but sometimes addressed missing basic skills, thanks to the aid of public bodies (e.g. AMU programme). Lack of motivation of low-qualified employees as well as the fear of these employees leaving the company once they are up-skilled are also reported as challenges by Irish employers.

It emerged consistently across countries that despite their low qualification, **low-qualified employees are often not considered as low-skilled by their employers**. Indeed, they mastered the skills needed for their job in very diverse sectors. Yet, it is a fact that **these skills are only very rarely formally recognised**.

4.7 Policies available to face challenges and maximise opportunities

In response to the aforementioned challenges, a variety of policy responses have emerged to facilitate up- and re-skilling. Available policy measures can be grouped in four categories. These categories reflect the types of challenge that micro and small companies face with regards to up- and re-skilling, as pointed out by both the literature and the evidence gathered through the data collection of this study. The first group of policies deals with compensating financial constraints and opportunity costs and correcting market failures by stimulating employers to do more. The second is based on the same logic but focuses on employees. The third addresses information deficiencies and looks at how they can be remedied. The last group includes measures to remove constraints on the supply of education and training, rather than intervening on the demand side. Below, the policies that have been put in place to support up- and re-skilling are reviewed. However, as the empirical analysis has showed that micro and small companies still face significant challenges in providing up- and re-skilling to their employees, it is necessary to assess the extent to which micro and small companies are able to use and actually access these types of policies. Some measures might be more appropriate than others for micro and small companies, while further actions could still be necessary to address their needs specifically. For this reason, in the next section, after providing a comprehensive review, these policy measures are scrutinised among the micro and small companies involved in the study and further policy suggestions are sought from them.

4.7.1 Addressing financial constraints, opportunity costs and market failures

Policies targeting employers

To positively stimulate employers to provide up- and re-skilling to their employees, policies can help employers in their investment, alleviating financial constraints and opportunity costs. By doing so, these policies aim to **increase companies' demand for education and training**.

A common policy response is **to provide funding to these companies**. Among these policies, it is useful to distinguish between subsidies and levy schemes (Müller and Behringer, 2012). **Subsidies**, either direct or indirect, include grants, training vouchers, interest-free loans and tax incentives, such as tax credits and tax allowances. **Levy schemes** ensure a training budget that is independent of public sources of funding through compulsory levy schemes, consisting of a certain percentage of a company's payroll (Cedefop, 2014a). An example of the former is when micro and small enterprises that invest in vocational training beyond what is strictly needed are eligible for tax credit, in France and many other EU countries (Stone, 2010). Also levy schemes are common in EU countries and can be seen, for example, in the Italian or Dutch training funds (OECD, 2019a).

Policies more rarely **address time constraints**. An exception is the Danish *AMU* programme, which provides a fund through which employers can be **compensated for the productive loss** resulting from the participation of their employees in *AMU* training programmes (DA, 2018; UFM et al., 2016). Meanwhile, France compensates small enterprises in kind, providing them with replacement workers when their employees participate in re- and skilling activities (Stone, 2010).

Policies targeting employees

When employers do not offer up- and re-skilling opportunities, employees should nonetheless be able to access these opportunities. In addition, up- and re-skilling objectives of individuals might in some cases be detached from the short-term needs that drive employer-led up- and re-skilling, especially in micro and small enterprises. Therefore, policies also need to **stimulate individuals' demand for training**.

Germany has a long history of offering **individual funding for up- and re-skilling**, as evidenced by the *Weiterbildungsstipendium* ('Continuing training grant'), a fund that since 1991 has enabled young skilled workers to participate in post-initial education. Likewise, through respectively the *Aufstiegsstipendium* ('Upgrading scholarship') and the *Aufstiegsfort-bildungsförderungsgesetz* ('Upgrading Training Assistance Act'), talented skilled workers with at least two years' experience and crafts people can obtain funds for further training (Hippach-Schneider and Huisman, 2016). A fund with a broader target audience can be found in France, where **individual learning accounts** have been recently established through the *Compte Personnel de Formation* ('Personal training account'). These entitle all adult individuals to a portable and cumulative amount to spend in training actions, independently from the employer or the employment status (Eurofound, 2019, OECD, 2019c). Meanwhile, as in several other countries, in the Netherlands all employees are entitled to a **tax deduction for any post-initial education costs** they might have incurred in the preceding year (CPB, 2016). However, the Dutch government is replacing this scheme with a *Persoonlijk ontwikkelbudget* ('Personal development budget'), a voucher-based system that allocates funds ex ante (Ministerie van OCW, 2019).

Other examples of where funding is provided in kind rather than in money can be found in Spain, where the Public Service of State offers **fully subsidised online courses for workers, freelancers and even employers**, providing recognised qualifications as outcomes of training (Comunicae, 2018). Similarly, in Ireland, free courses are offered to citizens through the ESF-funded *Springboard+* initiative (Higher Education Authority, 2019).

In some cases, low-qualified individuals are the target of these policies and funds are exclusively or preferentially made available to them. For example, as part of its efforts to support working lives and enterprise growth in Ireland, the Irish government has opted to waive any costs associated with up- or re-skilling for low-qualified employees aged 50 years or older, and those facing potential economic displacement (SOLAS, 2018). In Denmark, an *Omstillingsfond* (Conversion fund') is available to unskilled individuals who can use the fund to waive any fees they might incur when seeking continued education to pursue re- or up-skilling (BM, 2017a; BM, 2017b). Several initiatives are being put in place in Italy, too, under the implementation of the EU Recommendation on Upskilling Pathways (MLPS and MIUR, 2019).

Often, attached to funds and in-kind support, individuals can benefit from **paid training leave**, providing employees guaranteed paid time-off to partake in up- and re-skilling. These help to reduce the opportunity costs arising from participation in training and education, at least for the employee. Training leave is for example implemented in France, (EC, 2018b; Eurofound, 2019). Likewise, in Spain all employees who have been with a company for at least one year are granted 20 hours of paid leave to carry out job-related training activities. In Italy, employees with at least five years' work relationship with their employer can ask for training leave, although not paid (Beblavý and Martellucci, 2015;

OECD, 2018). In Denmark, collective agreements stipulate minimum rights regarding training leave periods (Cedefop, 2014a).

Thanks to paid training leave, employees can participate in training and education without having to worry about any financial consequences of absence from the job. **However, implementation of paid training leave remains hard for micro and small companies because limited staff means they cannot reallocate the work of those absent on training.** Yet, when the productive loss or salaries for participation in training is compensated by public funds, company resources can be freed to hire replacements for employees in training.

4.7.2 Facing information deficiencies

Both employers and employees' experience information deficiencies regarding skills gaps and of possible opportunities to remedy these skill gaps. Policies to address these information deficiencies are reflected in measures to raise awareness in some countries, for example, often alongside financial or in-kind support. Other measures include organisational support to employers, efforts to provide insight into current skill levels and gaps at both firm and individual level, and efforts to enhance skills classification, validation and recognition.

Awareness-raising campaigns and activities

The analysis above has highlighted a good level of awareness on the part of both employees and employers about the importance of up- and re-skilling actions, but awareness-raising about specific policies and opportunities would still seem to be important, especially for low-qualified individuals, for whom lack of motivation is more often reported.

A notable example in this context is Germany, where numerous awareness-raising campaigns have been set up. For the *WeGebAu* programme, the development of opportunities for up- and re-skilling for micro and small enterprises was preceded by **awareness-raising activities** (OECD, 2014; BMBF, 2018). Likewise, through the *Berufsbildung ohne Grenzen* ('Vocational training without borders') programme, a proactive outreach campaign was set up to make micro and small enterprises aware of opportunities for up- and re-skilling (BMBF, 2018). Especially **to tackle the lack of motivation of low-qualified** individuals, a media-based awareness campaign was initiated to stimulate employees to seek support in the acquisition of basic skills, as part of the National Strategy for Literacy and Basic Adult Education in Germany (OECD, 2014). A similar approach was taken in Denmark, where the government committed to an outreach campaign whereby businesses were approached to make them aware of the need to invest in basic skills (BM, 2017a). A more hands-on approach emerged in the Netherlands, where *Leerambassadeurs* ('Learning representatives') – **low-qualified employees who have participated in up- or re-skilling are asked to help motivate their peers** to do the same (Onderwijsraad, 2012; RWI, 2011).

Support for the HRM function

Some EU countries provide guidance services to help micro and small enterprises gain insights into their need for up- and re-skilling and the opportunities available to satisfy this need. These policies aim to remedy the underdeveloped or absent HRM departments in these firms.

Counselling, for both employees and employers, has been the principal means for addressing the underdeveloped HRM function in micro and small enterprises in Germany, primarily organised through the JOBSTARTER plus programme. This programme seeks to help micro and small enterprises in implementing measures with which they can maintain a skilled workforce (BMBF, 2018). Support to companies is complemented by **employee-focused counselling services** (BMBF, 2018). Meanwhile, in France policymakers opted to provide **counselling on HRM issues to micro and small enterprises** (Ministère de l'Économie, 2019a). Similarly, some policies in Italy have focused on employer capacity.

For example, the T.I.M.E. programme in Lombardy was developed to provide counselling on up- and re-skilling to local enterprises (OECD, 2017a). Likewise, in Slovakia, the National Business Centres provide a comprehensive approach to organising up- and re-skilling at micro and small enterprises, with various supplementary services being provided alongside counselling services (NPC, 2019). Similarly, the Irish SkillNet programme plays a role beyond counselling. It includes planning and delivery of training organised through its networks. As such, the programme **alleviates the administrative burden of up- and re-skilling on micro and small enterprises** (Skillnet, 2017). The Irish programme, Supporting working lives and enterprise growth 2018-2021, provides micro and small enterprises with **guidance services to identify their employees' needs for skills and related up- and re-skilling activities available** (SOLAS, 2018; National Competitiveness Council, 2018).

Skills tracking and assessment

Tracking and assessing skills at individual or firm level is another important way to remove informational deficiencies that prevent the uptake of up- and re-skilling, or indeed wrong choices being made, which would be a waste of resources.

For this reason, several Member States have put in place **measures for skills audits** to identify knowledge, skills and competence of individuals and support them in career development and further education and training (Besic et al., 2018). For example, in the Netherlands efforts are made to institute regular *Loopbaan-APK* ('career check-ups'), providing employees with frequent insight into their current skills and competences, and the skills and competences they might need in the future (AVWN, MKB-Nederland, & VNO-NCW, 2019; Ministerie van SZW, 2017). Meanwhile, as a preparatory step to undertake training, the *Aula Mentor* programme in Spain assesses skills and knowledge of individuals before offering them online courses (OECD, 2015).

Skill audits generally include services that employees can use to have the skills they learned informally on-the-job recognised in the form of certification. This recognition is subject to a validation process that is shorter and more targeted at micro skills than acquiring a full qualification through formal education. This is particularly relevant because most up- and re-skilling in micro and small companies occurs through informal learning, as highlighted by the results of the study. **Pathways towards Recognition of Prior Learning** have been developed in Denmark, France and the Netherlands (Cedefop, 2016; Ministère de l'Éducation Nationale et de la Jeunesse, 2019c; RWI, 2011). However, the implementation appears to be the most sophisticated in Germany, where the *ValiKom project* was set up to **validate vocational skills acquired through informal training**, providing a standardised process for identifying, evaluating and certifying skills (BMBF, 2018; also see: BMAS, 2018).

These measures also provide greater incentives for individuals and firms to invest resources in up- and re-skilling because the visibility of the results increases both within the firm and on the market.

Frameworks for skills validation and recognition

When an individual acquires a qualification or a certificate, employers should recognise the worth of it. Frameworks for skills validation and recognition offer standardised categorisations of education and training in relation to expected skill levels.

The European Qualifications Framework (EQF) and the more recent European Skills Competences and Occupations (ESCO) are examples of such a framework at EU level. For the implementation of the EQF, Member States have developed **National Qualifications Frameworks**. Consequently, awareness has grown in the Member States about different forms of education and training that are part of a comprehensive framework of qualifications (Cedefop, 2011). However, education and training outside formal education are often not included in qualification frameworks (Cedefop, 2019a). In this regard, the French and Irish qualification frameworks are exemplary, as they have integrated all types

of qualification, public and private, and accommodate non-formal and informal learning (Cedefop, 2019a).

To tackle information deficiencies at macro level, activities of skills monitoring and intelligence can also be put in place. In Slovakia, monitoring up- and re-skilling of needs has been organised through the **National System of Professions**, as part of which the labour market is continuously monitored to produce a classification of occupations that trainers and educators can rely on to provide relevant up- and re-skilling (AZZZ SR, 2019). In Spain, **multiannual forecasts** have been scheduled to align the supply of up- and re-skilling activities with skill needs in the labour market (OECD, 2015; BOE, 2015). The Irish National Training Fund too is used to **monitor the labour market** to identify future needs for up- and re-skilling (National Competitiveness Council, 2018; Department of Education and Skills, 2016). An exception is represented by Denmark, where identification of businesses' needs for skills is left to businesses themselves, which are expected to report these through the national *Meldesystem Kompetencebehov* ('Reporting system competence needs') (STAR, 2018).

4.7.3 Removing supply constraints

Greater involvement of micro and small companies in up- and re-skilling can be achieved by providing up- and re-skilling programmes tailored to them. Alternatively, the supply can be stimulated by organising and coordinating the needs of micro and small companies in networks.

Facilitating up- and re-skilling networks

Attempts to address the financial and organisational deficiencies of micro and small enterprises have given rise to up- and re-skilling networks whereby enterprise resources are pooled together, allowing for economies of scale and a critical mass in the demand for education and training. Across countries, there are **sector- or region-based networks**. For example, in Spain, the *Fundación Laboral de la Construcción (FLC)* exists for the construction sector (EC, 2017b). The same applies to the Dutch training funds *O&O funds*, all of which have been organised around specific sectors (MKB-Nederland 2018b; SER, 2017a; SER, 2012; Stichting van de Arbeid, 2015; Onderwijsraad, 2012; RWI, 2011). A benefit of this approach is that these networks tend to satisfy sectoral needs for skills, but, in contrast, their investment in inter-sectoral skills tends to be limited (Ministerie van SZW, 2017). Meanwhile, some networks for up- and re-skilling have also been organised regionally. Notable examples include the Danish *Regionale Arbejdsmarkedsråd* (BM, 2018) and the Irish Network of Regional Skills Fora programme (EC, 2017a). In Ireland, some of these networks also operate through SkillNet, with an approach that mixes sectoral or regional aggregation of companies (EC, 2018b).

Modularisation of training and education

Another approach has been to increase the flexibility of the supply. When training and education are formal, access to up- and re-skilling generally requires significant costs and time. In recent years **modularisation of formal training and education programmes** has emerged to alleviate these burdens. Learners can take up only parts of such programmes, which requires a lower time commitment and allows them to focus on only acquiring the skills they really need. This trend is most clearly visible in the Netherlands, where the Dutch government is actively experimenting with **modularisation of Vocational Education and Training (VET)** with the aim of making the provision of education more flexible (Ministerie van OCW 2016). To this end, privately funded providers have been permitted to develop certified educational modules, while government-funded providers have been allowed to provide 'drop-out' certificates to allow for the recognition of the partial completion of VET programmes (SER, 2017b; SER, 2015). The same goal has been pursued in Denmark, where provision of both VET and academic programmes has been made more flexible (BM, 2017b; BM, 2019b; BM, 2017c). The *Aula Mentor*, in Spain, also adopt a modularised approach to training provided (OECD, 2015).

Promotion of digital learning

To increase flexibility, online learning platforms are in place in several countries. Digital technologies can facilitate the provision of education and training, increasing flexibility in terms of time and access to remote training. The cost can also be significantly reduced (Beblavý et al., 2019). The variety of richness of methods in terms of content and topics can address the heterogeneity and specific needs of micro and small enterprises. However, evidence suggests that the suitability and adoption rates of digital solutions vary enormously according to the sector, specific business area of the firm and the characteristics of its employees. There is also variation across countries in terms of policy support to digital learning and, consequently, the extent to which this type of education and training is adopted by firms in each country (Beblavý et al., 2019; EC, 2018c). As an example, in Spain, the *Aula Mentor* subsidised online programme has been implemented to stimulate adults to seek up- and re-skilling in several fields (OECD, 2015). In Luxembourg, the eBac platform allows low-qualified adults that dropped out of school to achieve their diploma through blended distant programmes, to access further levels of education, or to take part in modules more oriented to vocational training (Beblavý et al., 2019).

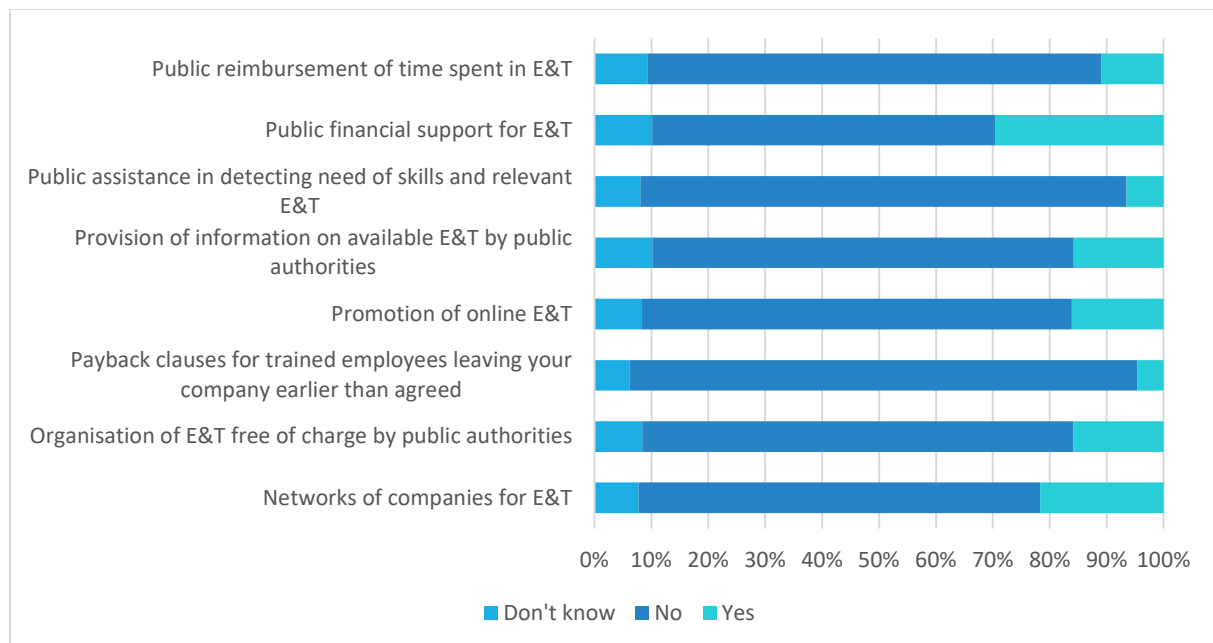
4.8 Policy approaches and suggestions

Taking stock of all the policy measures available, the empirical investigation has assessed the level of access of micro and small companies to existing policies, as well as the most desirable policy approach for these companies.

Across the survey sample, companies are more or less equally split between those that accessed at least one policy measure to support education and training in the past (49%) and those that had never accessed any policy measure (51%). The proportion that did not benefit from any support is slightly higher among the micro companies in the sample (59%), among companies with high shares of low-qualified employees (53%) and particularly among companies where no employees had participated in education and training in the past three years (76%).

With regard to the particular types of support measures accessed (Figure 4.11), those most commonly accessed were public financial support for education and training (30%) and networks of companies for education and training (22%). Around 15% of companies benefited from the provision of information on education and training by public authorities, promotion of online education and training and free education and training organised by public authorities. Less commonly accessed measures were public reimbursement of time spent in education and training (11%), public assistance in detecting skills needs and relevant training (7%) and payback clauses for trained employees leaving the firm (5%). These patterns are similar among micro companies and companies with higher shares of low-qualified in the sample. However, the proportion of micro companies that accessed each measure is generally lower than for the overall sample.

Figure 4.11 Share of survey respondents that have benefited (or not) from specific support measures



Source: Authors' formulation based on survey results.

While almost half of the companies in the survey sample accessed policy support, in the interviews, which involved additional companies in comparison to the survey, **both employees and employers show little awareness and limited knowledge of policies in place to support up- and re- skilling**. Only few interviewees mentioned relevant support measures in their country. Even fewer respondents involved in the interviews said they have benefited from any of these measures in the past. A key example of lack of awareness about policy support is the case of Italy. There, professional training funds are constituted to give access to training for all employees in any firm and are financed by a compulsory levy that employers pay on the salary slips. However, no Italian interviewees mentioned such funds. A similar situation applies to France, where no interviewees mentioned having accessed up- and re-skilling measures, not even the individual learning accounts in place in this country to give universal access to adult education and training. For Denmark, Germany and the Netherlands, the level of awareness is slightly higher. In Denmark, some respondents mentioned the AMU programme and others the support of the municipality or of the local unemployment public centres. In the Netherlands, some respondents mentioned the O&O funds and one described the support received from this source in detail.

Moreover, **respondents showed a lack of confidence in a policy being able to actually support them in providing or participating in up- and re-skilling**. Denmark was an exception, as respondents appeared generally more likely to seek public support than in other countries. However, in some cases, discontent was highlighted also in this country, in particular with the administrative burden and the bureaucracy that public support entails. Ireland is another exception, because employers showed a fair awareness of and satisfaction with policies such as SOLAS, Skillset and Local Agenda 21.

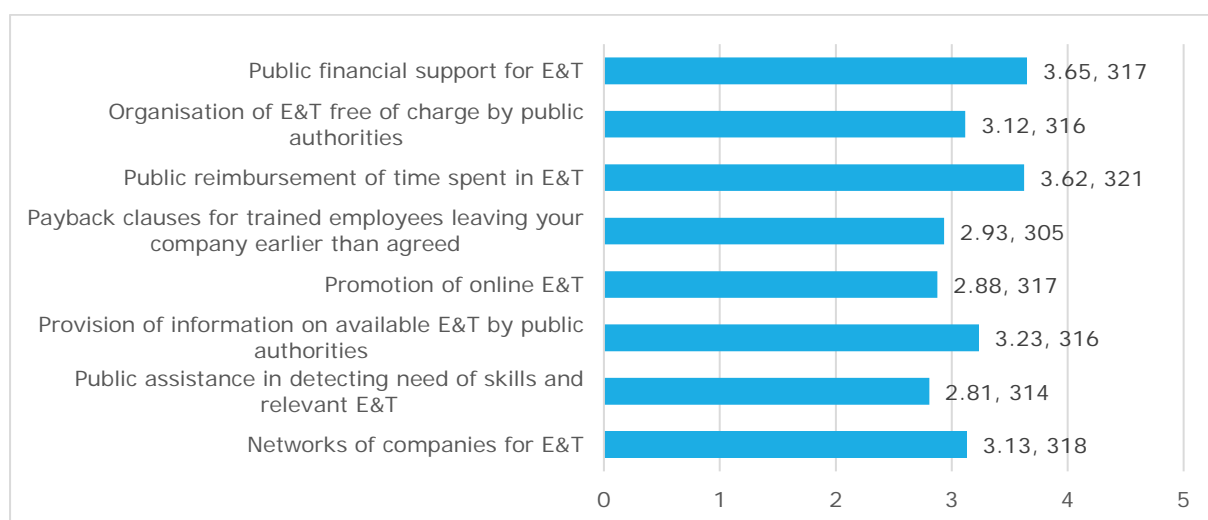
Considering the types of policies available to tackle each challenge, as presented above, **companies indicated the desirability of different policy approaches** (Figure 4.12 and Table 4.5). The measures judged to have higher impact by most companies in the sample were **public financial support for education and training and public reimbursement of time spent in education and training** (i.e. 60% each). This finding is very much in line with the main challenges that micro and small companies experience for up- and re-skilling, namely financial and time constraints. All the other support

measures presented in Figure 4.12 were considered to have an impact only to some or limited extent by the majority of surveyed companies. However, organisation of courses free of charge by public authorities, provision of information on available courses by public authorities and facilitation of networks of companies are considered somewhat more impactful.

With regard to specific types of financial support measures (Figure 4.13), grants to cover education and training costs were strongly preferred by companies in the sample. Tax incentives to reduce education and training costs were the next preferred option, followed by a dedicated training budget for every employee. On the contrary, soft loans to fund education and training were far less popular.

These patterns are robust across company sizes. By contrast, companies with higher shares of low-qualified employees assess the impact of payback clauses for trained employees leaving the firm somewhat more positively. This mirrors the fact that employers' of low-qualified workers fear these employees to leave the company once they are trained more often than employers' of highly qualified employees. Similarly, free training organised by public authorities was expected to be more impactful among these companies than among the others. Rather, these companies were more sceptical of online education and training. These patterns are more evident in micro companies with high shares of low-qualified employees.

Figure 4.12 Expected impact of measures supporting the provision of education and training to employees (average evaluation, left; no. of respondents, right)



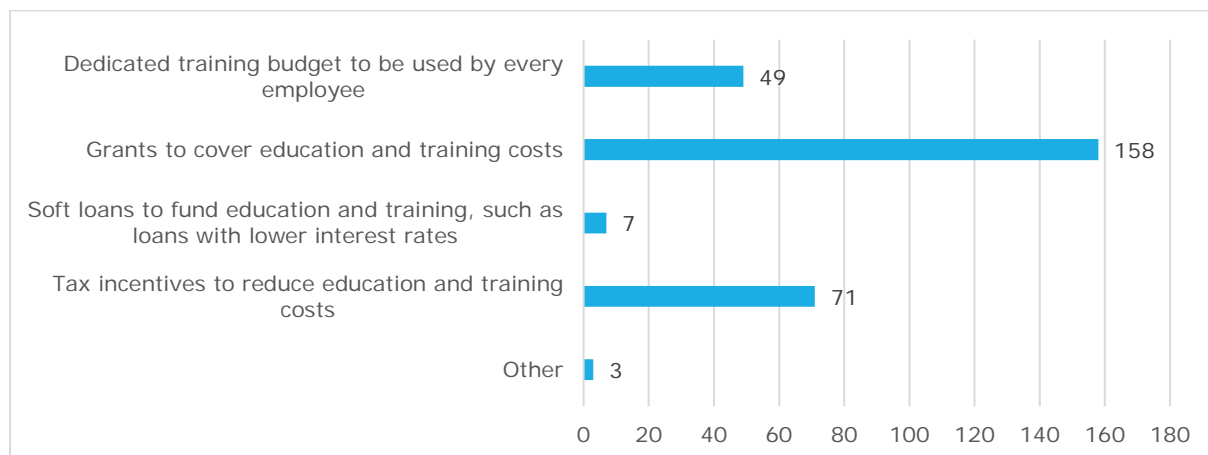
Note: (1) not at all; (2) to a limited extent; (3) to some extent; (4) to a high extent; (5) to the fullest extent.
Source: Authors' formulation based on survey results.

Table 4.5 Expected impact of measures supporting the provision of education and training to employees (%)

	Top	Bottom
Public financial support for E&T	59.94	14.83
Organisation of E&T free of charge by public authorities	41.77	33.86
Public reimbursement of time spent in E&T	60.12	19.31
Payback clauses for trained employees leaving your company earlier than agreed	38.03	40.00
Promotion of online E&T	31.55	41.01
Provision of information on available E&T by public authorities	44.62	29.75
Public assistance in detecting need of skills and relevant E&T	29.94	42.04
Networks of companies for E&T	39.94	30.50

Note: The first column 'Top' indicates the share of respondents that gave an answer in one of the Top 2 boxes= to a high extent + to the fullest extent; the second column 'Bottom' indicates the share of respondents that gave an answer in one of the Bottom 2 boxes= not at all + to a limited extent.
Source: Authors' formulation based on survey results.

Figure 4.13 Preferred public support measures to fund education and training for employees (number of votes received)



Note: Respondents believing that public financial support measures would contribute at least to some extent to provide education and training to employees were requested to select the two most impactful measures.
Source: Authors' formulation based on survey results.

Several suggestions for improvements of policy actions emerge from the interviews. The most salient suggestion that respondents put forward was **to increase information and awareness about the policy programmes and specific instruments that are available** to support micro and small companies in up- and re-skilling. The creation of a dedicated online portal was mentioned by several interviewees in Italy, for example, as a possible solution to patchy information on policies and programmes. Scattered information, complicated procedures to apply and continuous changes in policy provisions for up- and re-skilling are reported to make it too time consuming to access policy support. Similar suggestions emerged from German interviewees, who depicted a system with too many platforms, resulting in a lack of clarity and transparency. In addition, **the need to reduce bureaucracy associated with public policy support** was clearly stated by several firms in Italy, the Netherlands and in Germany.

In line with the literature, another notable issue pointed out by interviews was **the inadequacy of publicly provided training courses**. Many respondents indicated that it should be more specific to their needs, especially when considering formal education and training. In the Netherlands, some interviewees suggest facilitating, through public financial support, ad hoc provision of training in-house or by external private providers, which could better respond to the needs of company in terms of content and timing. In Italy, two respondents noted the urgent need to eliminate the delay between the request for funds and the actual release of such funds to initiate training. This delay discourages companies from request funding because training can only be provided when it no longer needed, in some cases.

On the employees' side, suggestions concerned the need **to increase awareness of employers about the necessity for up- and re-skilling** for their business. This somehow contradicted what emerged at employer level, where many interviewees said they were well aware of the importance of these activities. Another suggestion from employees was **to make a certain amount of training compulsory by law** so that it would become part of the planned working duties, as with health and safety training.

On the employers' side, **financial incentives for education and training** were by far the most cited policy recommendation. In Italy and in Slovakia, this was often coupled with the need to reduce the cost of labour and taxes so that more resources could be available to invest in up- and re-skilling of employees. Reducing the costs of compulsory training was also mentioned in several countries as means to make more resources available for further training.

None of the interviewees, either employees or employers in any of the countries surveyed spontaneously mentioned **individual learning accounts** as a desirable policy. However, when explicitly asked about this, the attitude was positive in all countries, especially on the side of employees rather than the employers. In most countries, employees appeared willing to contribute to such a budget from part of their salary. Nonetheless, in Italy, several employees raised concerns about a further reduction in salary, which was considered already low due to high indirect costs of labour, a remark supported by certain employers. Some employees across different countries thought that employers should also contribute with their resources to these accounts. For their part, employers in most countries were in principle in favour of individual learning accounts and were willing to contribute, although a number across several countries noted that employers would be willing to contribute if they had a say in this training and if employees also contributed. In Slovakia, employers stated that transparency and simplicity were necessary conditions for this instrument to work for them. Fears about a lack of motivation to make the best use of this instrument were raised in both Slovakia and Italy.

Against this background, **interviews with national and regional authorities and other stakeholders** established that policy measures are in place to support up- and re-skilling in all the selected countries, and some good examples can be identified²⁵

Most of these policies concerned stimulating either employers or employees, or both, through financial support for up- and re-skilling. Support for employers was found in almost all countries, albeit in different forms, as was individual-based financial support.

These were described in more detail in interviews in the Netherlands and in France, referring to recent reforms that introduced **individual learning accounts**. Another policy that supports individuals directly is the **REPAS+ and KOMPAS+**, developed in Slovakia, with the EU financial contribution, including through the ESF, to facilitate the acquisition of a vocational qualification following training courses subsidised by the government.

In addition, **some policies are also in place to remove supply constraints**, especially by facilitating networks of companies to create a critical mass and activate training courses that are relevant to their needs. Finally, **a minority of policies aimed to tackle information deficiencies exclusively**. This type of policy includes those efforts to develop national qualifications and occupations frameworks to validate and recognise workers' skills.

It should be noted that **the policies described show a combination of all these elements in practice**. For example, policies that provide funds to employers to encourage the provision of education and training to their employees often facilitate the creation of networks of micro and small companies to better address their needs and their specificities. This is also the case with the **Professional Training Funds** that are described in interviews with Italian authorities and stakeholders. Similarly, the Irish **Skillsnet and SOLAS** work with the same principle. These agencies facilitate networks of either smaller companies or companies in same sector or region, to provide tailored training responding to their needs. The **O&O sectoral training funds in the Netherlands** are similar, providing financial support and facilitating the design of training courses that address the need of very specific sectors, some of which are featured by small and micro companies. In addition, although seldom developed as standalone policies, efforts to remove informational deficiencies in micro and small firms are present in other policies that support up- and re-skilling financially. These is in the form of awareness raising or guidance services, as in the **AMU system** in Denmark. There, skills assessment is the first step after accessing the policy support, to identify which skills are needed at company or individual level and to channel financial support for training. In this programme, certification of the skills acquired is also given importance, providing a further incentive to employees to participate and helping overcome informational deficiencies around skills development. An interesting policy that merges financial support with

²⁵ Policies investigated in the selected countries are described in Annex 2: Country Reports.

removing supply constraints and information deficiencies is found in France. Here, the **AFEST²⁶ programme** supports companies in assessing skills and planning informal learning paths for employees, based on their day-to-day work.

Although preferential access to policy support for low-qualified workers is found in several examples, a more systematic policy approach to address the needs of these populations and their employers is developed only in Denmark and Germany. In Denmark, public authorities and stakeholders interviewed said that policies have focused on access to up- and re-skilling opportunities of low-qualified individuals, as described for the AMU system. Similarly, in Germany the **WeGebAu policy** has prioritised the learning of low-qualified employees. Awareness-raising has been one important pillar of this policy, acknowledging higher motivational barriers to involve low-qualified employees and their employers in up- and re-skilling.

The WeGebAu also appears to be one of the few policies to target micro enterprises specifically. Indeed, while several policies have preferential measures for SMEs, the design of these policies very rarely considers that SMEs are a rather heterogeneous group and that micro firms differ from small ones, which in turn differ from medium firms, which can reach up to 250 employees. Although not specifically dedicated to micro and small firms, some Italian Professional Training Funds facilitate these firms by promoting networks of companies, thus managing to involve even only a few employees because training courses can be organised jointly. Similarly, by design, the AFEST programme is targeted to meet the needs and take into consideration the operational characteristics of micro and small companies to improve their informal learning paths.

Together with the evidence collected at company level about challenges, opportunities and policy suggestions, information gathered on these policies provides input for recommendations for different actors involved in up- and re-skilling, including companies and policymakers.

²⁶ *Action de Formation En Situation de Travail.*

5 CONCLUSIONS AND RECOMMENDATIONS

The prime objective of the study was **to identify, synthesise and assess information about the challenges and opportunities encountered by micro and small firms** in up- and re-skilling. An analytical framework was developed that acknowledges the specificity of these companies, outlines the opportunities of up- and re-skilling for micro and small companies and looks at the reasons for limited involvement in these activities, especially for low-qualified employees. At the same time, the study aimed **to collect and evaluate evidence of good practice at company level and good policies at country level**. The ultimate aim was to help devise solutions to improve the access of micro and small companies and their employees, especially the low qualified, to up- and re-skilling opportunities. For this reason, policy measures complement the analytical framework.

The study has analysed the results of primary data collection in seven selected countries, namely Denmark, Germany, France, Ireland, Italy, the Netherlands and Slovakia. Overall, 432 micro and small companies, as well as experts and stakeholders from 55 organisations, were involved in the study. The results of this empirical analysis are compared with the review of the existing literature and evidence on up- and re-skilling in micro and small companies so as to draw the conclusions of the study and to highlight to what extent the study confirms, complements or contradicts the existing knowledge on up- and re-skilling in micro and small enterprises. Based on these conclusions, the study begins to formulate recommendations to companies, intermediary organisations and policymakers – all those with a key role to play in increasing participation in up- and re-skilling in micro and small enterprises.

5.1 Conclusions

Prevalence of informal practices

The literature suggests that a sound knowledge of the skills available within a firm is a precondition to initiating appropriate up- and re-skilling actions. Yet this study's results show that while **the identification and tracking of skills in micro and small companies exists as a practice, it is generally underdeveloped**. In almost all companies there is a good knowledge of the level of qualifications attained by their employees, but knowledge about actual skills is more scattered. Identifying and tracking of both qualifications and skills is mainly performed informally in these companies. **The person with this role, especially in micro firms, is usually the owner-manager**, who tends to remember qualifications by heart and to be aware of skills by working closely with the employees.

However, **when there are legal requirements at stake, the identification and tracking of existing qualifications and certified skills follow more structured procedures**. These procedures benefit from digital tools, such as digital archives and documents to register and track development and occasionally involve social partners, such as trade unions and employers' organisations, to assist firms in the process. A more spontaneous approach is represented by **certain exemplary companies that have a more structured, yet still informal, procedure in place**. Digital tools are often used to support these procedures. However, despite these exceptions, no need is perceived at company level to formalise skills tracking. Nonetheless, those employees that acknowledge how their skills are tracked and evaluated and that can see positive outcomes from their skills evolution tend to report higher satisfaction about the company's management of pay rises and promotions. Furthermore, it is worth highlighting that those companies that show a more structured, albeit informal, approach to skills identification and tracking are those where up- and re-skilling is given more importance and where concrete actions are systematically put in place.

In keeping with this finding, **micro and small companies do offer up- and re-skilling opportunities to their employees, but in an unstructured way that leaves considerable untapped potential to build on**.

In line with the literature, formal education and training is found to be an ancillary category to up- and re-skilling in micro and small companies, often thought to be too long and not specific enough to their needs. Non-formal education and training is more common, but still not prevalent. By contrast, **informal learning, defined in this study as a form of learning that is intentional and deliberate but not institutionalised or fully structured, appears to be widespread and to respond well to the needs of micro and small companies.**

Informal learning in micro and small companies is facilitated by close interactions with supervisors and peers, as well as with clients and suppliers. This form of learning emerges as necessary for the daily operations of these firms, thus happening continuously but in a highly unstructured and random manner. Embedded in complex value chains, these companies need to adapt more often and more rapidly than larger ones to market changes and thus continuously and autonomously seek informal sources of knowledge and learning. And given the limited staff numbers, everyone needs to adapt and take on a multiplicity of roles that evolve with time and follow clients' requests.

Examples of common informal learning practices are self-learning and exchange of knowledge with colleagues and supervisors at the workplace through teamworking and pair working. Despite their prevalence, informal learning activities are rarely coordinated by any HRM function or planned by employees, the management or owner-manager, with the main purpose of developing skills. Rather, they are established as a form of collaboration to run the business and respond to immediate daily needs. In addition, although with some caveats, online learning has emerged as a relevant practice to enhance both informal learning and, interestingly, participation in formal and non-formal education and training. However, this is mainly the case for highly skilled workers in consultancy professional services, the information and communication sector and in professional roles within manufacturing.

Across size, **employees in micro companies appear to have less access than those in small companies to up- and re-skilling opportunities**, especially to formal and non-formal education and training activities. Informal learning, as mentioned above, is the most common type of learning in micro companies. Yet this type of learning is also more limited in these companies than in small ones. In fact, the particularly limited numbers of staff in micro companies hampers internal knowledge exchange for up- and re-skilling. Thus, external sources of learning and self-learning are more frequently observed in micro companies.

However, **practices for skills development differ more by sector than by size.** In particular, differences depend mainly on the innovativeness of the firm, even within each sector. Moreover, **firms with a higher share of low-qualified employees show patterns of up- and re-skilling that are different from those in other companies.** In addition, **these employees are involved in training activities that are relevant only for their job tasks**, unlike other training opportunities offered to highly qualified employees. With the exception of training activities resulting in certifications because of legal requirements for the firm, informal learning through self-directed learning or on-the-job experience is also far more common for low-qualified employees than for other members of staff.

Approaches to up- and re-skilling

Overall, **when considering informal learning, participation in up- and re-skilling in micro and small companies presents a more positive picture** in reality than the literature and existing statistics might suggest. That said, concrete and coherent actions for up- and re-skilling are put in place only in forward-looking companies, namely those that are **more innovative and can see changes rapidly affecting their businesses.** A proactive attitude towards up- and re-skilling is also found in those companies that engage in education and training to comply with the law, although with a baseline approach covering only mandatory training. In fact, as recognised by the Art. 13 of the Directive (EU) 2019/1152 on transparent and predictable working conditions in the EU, mandatory

training for employees can be prescribed by EU or national law, as well as by collective agreements. When this is the case, the Directive prescribes that employers, including micro and small companies, are required to take action to provide such training free of cost and accounting for it as working time. This legal provision contributes to explain the systematised and formalised procedures for up- and re-skilling put in place by micro and small companies that are subjected to this obligation. All the other companies **approach up- and re-skilling in a conservative way, as being driven by necessity**. Their up- and re-skilling activities are based on the short-term objectives of their business and emerging trends in their market of operation, rather than as strategic and regular practices. It follows that in most cases, up- and re-skilling opportunities are for job-specific skills, linked to an immediate demand from the market in which the company operates. In any case, overall, decisions on up- and re-skilling are driven mainly by the needs of the company. These needs reflect three types of determinants, as summarised in Figure 5.1.

Figure 5.1 Determinants of up- and re-skilling actions in micro and small companies

Baseline	To comply with legal requirements
<ul style="list-style-type: none"> • Compliance with health and safety requirements in the workplace • Attainment of certification required to operate in certain sectors/professions 	
Conservative	To maintain business relations and market position
<ul style="list-style-type: none"> • Alignment with clients' requests and needs, on the market or within the value chain • Signalling to the market high quality standards of the work 	
Forward-looking	To build a forward-looking business strategy
<ul style="list-style-type: none"> • Driven by the sector of operation, affected by fast pace of technological change • Driven by the orientation towards innovation, in different sectors 	

Source: Authors' formulation based on the analysis

Regarding training undertaken to **comply with the law**, there is much evidence of activities being organised for health and safety training. Training organised to meet legal requirements can also be directed at obtaining certification or qualifications to recognise specific skills that are needed to work in a specific sector, such as professional services, financial markets or construction. In these cases, obtaining such qualifications is an intrinsic objective of training, which thus results in certification. By contrast, when there are no legal requirements, skills development in micro and small companies, being mainly informal, rarely results in validation, certification or recognition through ad hoc documents; nor do companies consider these documents as important and necessary for their operations if there are no requirements in place.

Strong influence of the company and the owner-manager

The company largely determines the type of up- and re-skilling opportunities offered to employees. In particular, within the company, it is often the **responsibility of the owner-manager to deal with skills development and to decide on this matter**. This person thus plays a vital role in orienting the attitude and actions of the entire company and its employees regarding up- and re-skilling.

In practice, however, **it is often left up to employees to take the initiative to identify and suggest up- and re-skilling opportunities**. Yet also in these cases the decision is always taken in agreement with the company's management or owner-manager. When bearing the cost of training activities, as is often the case, companies are only willing to finance training that is relevant to their needs. While the costs are almost always covered by the employers, the time commitment for education and training is sometimes required

of the employees, who are often expected to invest their free time for up- and re-skilling. This shows that employees are expected to show motivation, and indeed appear to do so, in their skill development process.

Unexploited role of external actors

Because up- and re-skilling are largely influenced and funded by employers, activities are often organised by the company. Yet, given their limited size, **collaboration with external private education and training providers seems to be the most prevalent form of training delivery**. In some countries, some public education and training providers cooperate with micro and small companies, especially where a specific long-term policy is in place to support the supply of courses to the firms.

It follows that social partners can provide support. The role of employers' organisations was mentioned more often than trade unions, and this is probably linked to relatively low unionisation of employees in micro and small companies. The former assisted companies in accessing public support for education and training as well as in organising and providing relevant training courses. The latter offered support more in the phase of assessing skills needs and providing tracking of qualifications and skills of the employees. Apart from trade unions, micro and small companies rarely mentioned external organisations supporting identification and tracking of employees' qualifications and skills. This means that cooperation between these companies and external actors, if trade unions are excluded, was generally limited to the provision of up- and re-skilling opportunities and did not entail support in assessing skills needs or planning skills development.

The level of cooperation with other similar companies was low, but some examples were found in the form of companies' business networks and some interest is shown in this – as yet – unexploited opportunity. By contrast, such cooperation was higher in the case of suppliers and customers, which are often indicated as a source of learning opportunities.

Good awareness of the benefits

The level of awareness about the importance and the benefits of skills development was high and resulted in a generally positive attitude towards up- and re-skilling among the companies involved in the study, compared with what is suggested by the literature. Despite this possibly being linked to a sample bias towards companies that are more prone to up- and re-skilling, it represents an interesting finding to build on. Overall, up- and re-skilling is considered an important factor in the sustainability of the business. Most companies recognise that it enhances the capacity to stay competitive, linked to both the ability to comply with clients' requests and the possibility to adapt to changes, especially those related to digital transformation. For this, training appears as an opportunity to increase employee skills but also to provide new employees with the right skills. To a lesser extent, some mentioned the opportunity to improve HRM with up- and re-skilling, referring to greater satisfaction among employees and to more transparent procedures for promotion, pay rises and career advancement.

Despite an overall positive pattern regarding the perception of opportunities at both company and individual worker level, **there was still some evidence that both employers and employees in micro and small firms considered education and training, particularly formal and non-formal types, as more of a burden than an opportunity**. This perception was especially driven by the fact that these activities needed to be undertaken to comply with the law rather than to meet actual skill needs. Companies that engaged more in up- and re-skilling appeared more aware of the opportunities, in comparison to companies that had no previous experience. This suggests that an initial engagement in up- and re-skilling could trigger a virtuous circle in which companies and individuals become increasingly interested and aware of the benefits. However, this positive trigger can fail if the initial involvement in training does not match the needs and expectations of participants. In some instances, scepticism about education and training

was linked to past experience with publicly supplied or compulsory training that did not match the expectations of the company and its employees.

Lack of time, money and information as main challenges

At first sight, companies appeared to be more aware of opportunities stemming from up- and re-skilling than they were concerned by the challenges to overcome. However, in-depth interviews suggested that such positive attitudes did not translate into practical actions that firms put in place for up- and re-skilling. This means that **significant obstacles still limit companies' efforts, even when the benefits are well acknowledged on both the employers' and employees' side**. The mention of challenges featured quite prominently in the interviews.

Regarding the nature and scale of these challenges, both internal and external challenges are highlighted in the study. However, the main finding is that **one of the most serious challenges concerns the company's internal organisation and the lack of time to engage in significant up- and re-skilling efforts**. Limited staff and related work constraints are the main characteristics that define micro and small businesses. These are also the main barriers to engage in more structured up- and re-skilling, beyond informal learning on the job. Small and especially micro companies have only one person taking care of fundamental functions in the company, so cannot afford to let employees participate in training that would stop production of goods or provision of services. **Lack of financial resources is another internal barrier that constitutes one of the main challenges**. However, when financial constraints were mentioned as a challenge, they often related to time issues, in terms of loss of production caused by an employee in training.

Among external challenges, the most notable one was **the insufficient information about available up- and re-skilling opportunities provided by both the public and private sector**. Considering that policies are in place in all the countries investigated, and in some cases (e.g. Slovakia) with the contribution of EU funds such as the ESF, **the impossibility of finding public support for up- and re-skilling reported as a serious challenge by most companies appears to be a major informational gap**. The inadequate training supply to fulfil the needs of the micro and small companies follows as another external challenge, but it could indeed be a result of scarce information.

Two additional external challenges are mentioned with reference to up- and re-skilling of low-qualified workers. When low-qualified employees had to be provided with basic skills – which are easy to transfer onto the labour market – employers were less willing to invest because they feared staff would leave before they could recoup the cost of the investment. This is an example of a market failure that limits investment in up- and re-skilling. However, it applies only in the case of skills development for the low qualified. No evidence was found of this as a general pattern, in contrast with what is suggested by the literature. Moreover, a lack of motivation to pursue education and training was more often reported in the case of the low qualified, although this finding also depended on the age of the employee and on the type of education and training to be provided. In fact, lack of motivation was noted more often in older employees and when talking about formal or in-class education and training.

Difficulties accessing policy support

To address these challenges, the study has established the existence of policies to support companies and individuals in up- and re-skilling in all countries investigated. However, **much more rarely, these policies are specifically targeted at small and micro enterprises**, and thus take account of their specific characteristics. This in part explains the limited reach of these policies to this group of companies, which also have insufficient awareness of the support measures in place.

The most accessed and, importantly, the most desirable policy measure for micro and small companies and their employees was **public financial support to stimulate**

employers or employees in the form of grants or tax incentives. This was considered by companies as the most impactful measure to lower the burden of up- and re-skilling. However, it remains limited for up- and re-skilling in micro and small enterprises, because, although it is the most accessed measure, public financial support has, in the past, benefitted only a minority of the companies surveyed. This leads to a high level of demand for up- and re-skilling in those companies that remain unfinanced, especially considering the good level of awareness and interest about the benefits of up- and re-skilling that is found among the companies involved in the study.

Dedicated learning accounts or vouchers provided on an individual basis comprise one form of financial support. These are considered as a relevant policy option, mainly in those countries that have this type of policy already in place, such as the Netherlands and France, where individual financial entitlements to support adult learning have been introduced. This also appears to be a desirable policy in countries that have not fully developed individual learning accounts or vouchers. However, in countries where these are in place, the level of access to this type of instrument to support up- and re-skilling was very low in the study sample. Both employers and employees expressed positive opinions about individual financial entitlements for up- and re-skilling, but voiced different concerns about their possible implementation modalities. Whereas employees raised a concern about personally financing the instrument from their salary, employers feared that the support provided by this measure would not be oriented to their business needs and were not willing to contribute if they did not have a say in the education and training financed.

In contrast to public financial support, **micro and small companies have much less access to policies that remove information deficiencies**, such as public assistance in detecting needs for skills and relevant education and training activities. This could be because this type of policy is rarer, or because companies are less interested in these measures, are unaware of their potential benefits and therefore do not use this kind of public support. In fact, according to companies, public assistance in detecting skills development needs and opportunities is the least impactful type of measure in providing education and training to their employees.

Finally, **public provision of education and training courses supplied to micro and small companies are mostly accessed only by those companies that have a higher share of low-qualified employees**. These employees require training in more general, often basic, skills that can be provided more easily on a large scale by public authorities. By contrast, among those measures that remove supply constraints for education and training provision to micro and small companies, a very relevant policy option is **the facilitation of networks of companies**. These networks are commonly in place in almost all the countries surveyed and one of the most accessed measures among micro and small companies. Companies that have never participated in networks expressed interest in joining collaborations with other companies to identify, share and develop up- and re-skilling opportunities. Often facilitated by an intermediary organisation such as an education and training provider, a specific agency or an employers' organisation, such networks help micro and small companies access up- and re-skilling opportunities, including obtaining financial support provided by public authorities. Networks are constituted at sectoral or local/regional level and, as such, bring together common interests and needs of micro and small companies regarding the education and training to be provided to their employees.

5.2 Recommendations

The analysis highlighted that rather than being non-existent, **up- and re-skilling in micro and small enterprises responds to the key features of these companies**.

Any valid recommendation needs to consider these features as a starting point, to build on the potential that they represent to deliver up- and re-skilling activities. Such activities might be different from those in larger firms but are equally successful because they better respond to the context in which they are put in place.

The recommendations also take into account that **several challenges at the same time affect the capacity of micro and small companies to provide up- and re-skilling** to their employees. Internal and external challenges experienced by these companies act on different layers but are all interlinked, and thus hamper up- and re-skilling in complex ways. Solutions, whether at private or public level, should be designed to tackle these challenges in a comprehensive manner and consider the complete picture, rather than focusing on and removing one specific obstacle at the time.

The study acknowledges, and the analysis has confirmed, that **even when limited to micro and small entities, there is enormous heterogeneity across companies** and significant variety is found across company size. Moreover, variety is driven by sector, even within the same sector, by the specific business context in which each company operates. The level of innovativeness and the business strategy of the company (e.g. forward-looking versus short-term oriented) also play a role in increasing heterogeneity across companies. Therefore, it remains implicit that rather than representing universal measures to apply en bloc to any micro and small company in any context, recommendations are presented as sets of tools and guidelines from which to develop tailored solutions, with some fitting better than others in each context and for each target group of companies.

Recommendations to micro and small companies

Addressing recommendations to micro and small companies is important because these companies play **a key role, especially in the person of the owner-manager, in influencing the up- and re-skilling of their employees**. Micro and small companies that appear as frontrunners succeed in delivering learning opportunities to their employees because they take a **strategic approach** that places learning at the centre of the daily operations of the firm and introduces elements that are simple to implement in line with their characteristics. These elements **structure and give purpose to the informal learning practices** that are the main source of up- and re-skilling for these companies, significantly contributing to their capacity to stay competitive in the market.

The main recommendations to help companies build on their capital for a strategic and more structured approach to up- and re-skilling are presented below.²⁷

- **Assess skills and monitor their evolution through a structured approach**

A clear definition of the skills possessed and those needed allows gaps to be clearly identified and resulting actions to be evaluated. Up- and re-skilling plans can thus be developed to achieve goals at both company and individual level. Once the assessment is done and the actions are put in place, it is easier to monitor and evaluate skill development and what works in its delivery. This activity of initial assessment and continuous monitoring is necessary. However, it does not have to become a fully formalised procedure, which would increase the administrative burden on the company. Some changes can be introduced to structure information on skills development. Some practical proposals include periodic meetings to discuss skills development, resulting in written plans to allow follow-up actions, and the use of digital tools to easily keep track of progress.

- **Leverage proximity and internal relations**

Personal connections and trust, which are key for learning, characterise micro and small firms. Collaboration with peers and supervisors is part of the daily operations of these firms, facilitated by proximity. Such collaboration and exchanges can set skills

²⁷ See also A3.3 Brochure of good practices for micro and small companies.

development as a clear objective, in addition to being necessary for daily work. This would promote working environments that are conducive to learning and adaptability of the staff to take on different roles, increasing the firm's agility. Fostering learning through work-based collaborations allows the firm to contain the financial and time resources invested in up- and re-skilling. When strategically oriented, such collaboration can respond to short-term operational needs as well as to longer-term business and individual plans. Practical proposals to structure such collaboration include rotating team and pair working designed with learning objectives, in-house courses, drawing on different expertise within the firms, and digital repositories of learning resources to collect and share material that employees can access individually.

- **Develop learning-centred business relations**

When internal sources for knowledge and competences are exhausted, micro and small companies can still exploit their embeddedness in value chains. Suppliers and customers provide precious linkages for micro and small companies' business and often drive their need for up- and re-skilling. As such, learning opportunities can be pursued with these external companies to grow skills in the company, at limited costs. To do so, the company can identify clients and suppliers, as well as business partners, according to the potential up- and re-skilling opportunities they can deliver to employees. Similarly, the company can develop activities that further learning with clients, suppliers and partners as part of its business relations. Practical proposals for this include collaboration with suppliers and clients to organise training related to specific products or services, as well as on-site visits to take a hands-on approach to learning, which is particularly good for low-qualified workers. Moreover, work exchange visits between companies can be organised to overcome the problem of replacing employees in training. For instance, a company could send one of its employees to work for a customer or supplier company, which in turn sends an employee in the same function to work there. These types of work exchange, especially if in the same sector, can allow employees to learn new methods and tools in other companies, which could in some case be larger companies with more structure and knowledge to absorb. In the meantime, none of the companies participating in the exchange loses the working time of its employee, thanks to the replacement by the other company's employee.

- **Identify and maximise up- and re-skilling opportunities in daily business operations**

Micro and small companies adapt quickly and need to continuously find new ways of doing business; learning opportunities unfold with new projects and new services delivered by the company. Embedding employees' up- and re-skilling objectives in these activities allows for skills to develop without interrupting day-to-day business and thus significantly reducing the out-of-work time that is necessary for up- and re-skilling. Some examples of up- and re-skilling opportunities in daily business activities include participation in events with a networking dimension, allowing for both skills development and new business partnerships, or linking training to a company project, defining clear learning objectives for the employees involved.

- **Recognise and value skills development within the firm**

It is important to assign a tangible value to up- and re-skilling activities to incentivise employees to take up these opportunities, even when it is through informal learning. This is also necessary to make their progress visible and rewarded, to increase job satisfaction, especially for low-qualified employees that tend to learn mainly by unrecognised informal learning. Each company has its own ways of giving recognition and value to skills development. Including skills development as a criterion in performance assessment for career progression and a pay rise is one example.

- **Reach out to intermediary organisations and join existing networks of companies**

This action is important for collecting information about opportunities for up- and re-skilling, available at public and private level, which can be too scattered to be accessed autonomously by one company. Policy measures to support micro and small companies exist. Engaging with existing actors, including education and training providers and social partners, and networks of companies, allow companies to overcome the lack of information or administrative burdens that prevent them from accessing this support. In addition, providers and social partners and networks of companies can also provide support in developing a strategic approach to up- and re-skilling, assisting the HRM function within the firm.

Recommendations for intermediary organisations

Intermediary organisations are those that liaise with micro and small companies, supporting them on a public or private basis to deliver up- and re-skilling opportunities to their employees. For example, these organisations provide education and training courses to companies or counselling and guidance on related matters, including HRM. Their role includes facilitation in accessing public support that is made available for companies and for individuals to pursue up- and re-skilling opportunities. These organisations are often **public or private education and training providers, employers' organisations and trade unions (i.e. as social partners), chambers of commerce, trade and crafts or other professional organisations.**

They also appear to play a useful role when they **resolve to understand the needs of micro and small companies and cooperate with them on a regular basis.** Through this ongoing collaboration, **education and training providers, in particular,** can respond to the companies' needs, **putting in place opportunities that respect the time limitations** in these firms and the willingness to engage in **learning that is immediately relevant for their job.** However, intermediary organisations, often education and training providers, employers' organisations and trade unions, also appear successful when **relieving companies from the administrative burden related to up- and re-skilling opportunities.** This is important, especially when public financial support entailing significant bureaucracy is involved. Intermediary organisations, especially but not only education and training providers, are directly involved in the implementation of policies and represent important actors to channel funds for adult learning. As such, **their capacity to set up a dialogue and cooperate with public authorities** in charge of policymaking in adult learning represents a key factor for success.

A set of recommendations is presented below to increase their success in supporting micro and small companies²⁸ in up- and re-skilling, as well as to enhance their support for policymaking.

- **Reach out to micro and small companies, to scan regularly their needs for up- and re-skilling, assess their skills gaps *ex ante* as well to inform them and their employees**

Acknowledging and assessing micro and small companies' skills needs is key to putting in place both private and public actions that respond to their expectations, to overcome the supply constraints that they experience. This *ex ante* evaluation is important when developing the programmes to offer but also before any training actions. It is a necessary first step to avoid wasting micro and small companies' limited resources in terms of time and funds. Education and training providers are recommended to involve micro and small companies in co-design and co-creation of content (i.e. skills, knowledge) and methods of education and training programmes. This cooperation is important to align adult education

²⁸ See also A3.3 Brochure of good practices for micro and small companies.

and training courses to the needs of low-qualified employees in particular. In addition, in reaching out and closely cooperating with micro and small companies, education and training providers, as well as social partners, can play a proactive role in advising on the necessity and possibilities available to up- and re-skill their workforce. This allows micro and small companies to overcome the lack of time and unstructured organisation that prevent them from seeking information on up- and re-skilling. Information is particularly needed about the public support available for up- and re-skilling in micro and small companies. By providing this information on a regular basis, both providers and social partners can significantly lessen the burden on the company.

- **Design and implement up- and re-skilling activities that use informal learning in the workplace**

Rather than substituting informal learning practices in micro and small companies, education and training providers can play a key role in providing guidance and support to structure these practices. Providers have to acknowledge that on-the-job informal learning can respond to the needs of micro and small companies in terms of both content and methods. It respects their specific organisation of work, while removing constraints in the supply of up- and re-skilling opportunities. In addition, even when cooperating with micro and small companies for formal and non-formal education and training, education and training providers can design courses that develop synergies with on-the-job informal learning, making such courses complementary to employees' tasks and immediately relevant in the daily operations at work.

- **Make the best use of digital learning opportunities**

Digital learning can increase the supply of courses for micro and small companies. Education and training providers can produce lower-cost and more tailored digital learning resources than in-person courses. Training can be developed that addresses the micro skills often needed in the short term by micro and small firms. It can also be rolled out to acquire basic digital skills that are increasingly needed in all jobs and all sectors and are in fact often mentioned as skills in high demand by micro and small companies. Moreover, digital learning platforms provide not only education and training courses, but also tools for skills assessment. With the aid of education and training organisations that provide courses to micro and small companies, this assessment can be undertaken *ex ante*, to identify skills gaps, and *ex post*, to track skills evolutions, allowing companies to have structured procedures for skills identification and tracking to hand. All these up- and re-skilling opportunities can also be accessed flexibly in terms of time and space, and even just by one person within the company, thereby addressing the time and financial constraints of micro and small companies. Developing a quality offer in this field is important to achieve positive outcomes, boost engagement and overcome resistance to this method that persists among certain companies and employees, especially for more manual professions.

- **Target training to the owner-manager(s)**

As the main person responsible for skills development, the owner-manager requires information and training to acquire competences to provide up- and re-skilling opportunities for his or her employees. Education and training providers, as well as employers' organisations, can target training to them. Alternatively, where existing, HRM departments that are underdeveloped in micro and small companies can be targeted. The content of such training can include an awareness-raising component, but more importantly, skills that are needed to plan and implement up- and re-skilling actions in the company. These actions, importantly, include guidance and mentoring to the employees, as well as skills assessment and tracking. Providing employers with the skills to put in place these preliminary but necessary steps is key to ensuring that high awareness about the importance of up- and re-skilling is followed by concrete up- and re-skilling activities. In this way, the initiative is not completely left to the employees, but rather led by the

employers in line with the company's objectives. Helping the owner-manager to think strategically and plan up- and re-skilling triggers a virtuous circle for skills development in the company.

- **Facilitate validation of skills acquired**

Validation and recognition also needs to happen beyond formal education and training courses, for skills that are acquired by non-formal training and through on-the-job informal learning. Education and training providers and social partners, especially trade unions, can help companies set strategies to keep track of skills possessed and developed by their employees. Education and training providers, as well as trade unions, could support validation and recognition of workers' skills by issuing documents indicating the skills identified and tested, even if they don't represent formal certification. This is particularly relevant for low-qualified employees that otherwise have little visibility for the skills they possess and, consequently, little knowledge about which ones to improve through further up- and re-skilling.

- **Act as leaders of networks of companies focused on up- and re-skilling**

While these networks already exist in some sectors and countries, their scope could further focus on up- and re-skilling with the aid of education and training providers and social partners. Individual companies, because of all their characteristics but mainly because of lack of time, often do not have the capacity to run these networks by themselves. Therefore, there is a role to play by providers and social partners: to organise, develop and lead the network. These organisations can become the main aggregator of the networks and involve companies in up- and re-skilling actions. In this role, education and training providers as well as social partners have to implement informational and awareness-raising campaigns to include as many companies as possible in the network, especially those companies that tend not to engage in up- and re-skilling (i.e. micro companies). These organisations and the constituted networks can develop comprehensive and long-term strategies, beyond what an individual company could do by itself. Finally, education and training providers and social partners, thanks to their structure, can facilitate access to available public support for single companies in the network or build on a collaborative approach and economies of scale.

- **Align programmes, national/regional policies and their industrial and socio-economic priorities**

As a general remark, education and training providers play a key role in implementing adult learning policies, so it is important that their programmes are developed in line with the strategic policy objectives that reflect business needs. Social partners can contribute by collecting and communicating such companies and workers' needs to both education and training providers and policymakers. This way public funds can be channelled to respond to strategies in place at local, regional and national level, to develop synergies between funds, other actors and private investment.

Recommendations for policymakers at national and regional level

Despite the existence of various policy approaches and the roll out of measures to support up- and re-skilling, micro and small companies still face significant challenges and, de facto, do not experience easy access to the available support. A set of recommendations for policymakers is presented below, drawing from policy suggestions in the study and the good examples of policies investigated.²⁹ These recommendations concern the provision of incentives for up- and re-skilling, as well as the creation of framework conditions to favour up- and re-skilling. Depending on the repartition of competences between national

²⁹ See also A3.4 Brochure of good examples of policies.

and regional governments within each Member State, these recommendations apply to policies at national, regional or both levels.

- **Raise awareness and increase information about existing policies**

Micro and small companies do not have time to look for public support for up- and re-skilling. As a result, they remain largely excluded from the benefits that this support can provide. Widespread action seems necessary to inform micro and small companies about existing policy opportunities and help them overcome the lack of time and, to some extent, the lack of confidence to seek out this information and get involved in policy programmes. Systems could be established that easily communicate what policies are in place and how policy support can be accessed, such as dedicated one-stop online portals or actively reaching out to micro and small companies to inform and guide them. Otherwise the risk is that policies for up- and re-skilling benefit only the larger of the smallest companies or those that are already well aware of such support and their benefits. Importantly, awareness-raising and communication efforts should target terminology and language to a non-expert audience, that defines and describes up- and re-skilling in an accessible manner.

- **Tailor public support for up- and re-skilling to micro and small companies**

Micro and small companies have a hard time accessing policies that do not take into consideration their specificity and needs, but rather include them in a more heterogeneous group such as SMEs, or all firms together. How micro and small companies work must be considered if the most serious challenges they face in up- and re-skilling their workforce are to be understood. Some elements to consider in policies aimed at micro and small companies are:

- **Limited bureaucracy.** As time is a major constraint, accessing public support should not be complex or time consuming.
- **Funds to offset loss of production of goods and provision of services from an employee participating in training.** As this is the main obstacle to engaging in education and training, financial support should include this indirect cost.
- **Eligibility of informal learning.** As this is the main and most suitable practice for up- and re-skilling in micro and small companies, this should be eligible for support that aims at its structuring and leverages its results.
- **Embeddedness of support for skills assessment and planning.** As information about skills are scattered and short-term needs drive all the efforts, this *ex ante* step is necessary for publicly supported up- and re-skilling to deliver results.
- **Sectoral approach.** Although further investigation is needed, the study has highlighted certain sectoral patterns in up- and re-skilling and its related challenges. Even within the same sector, the degree of innovativeness within firms plays an important role in establishing what the needs and obstacles are. Sectoral policies for up- and re-skilling in micro and small companies could help to better target the action.

- **Ensure regular and thorough monitoring and evaluation of education and training provided with public support**

This is necessary to ensure that publicly provided training is tailored to the specific needs of companies in terms of duration, content, methods and administration required. If firms take part in policy programmes that provide inadequate or irrelevant training to their employees, it reinforces any prejudices about training being a waste of time (time being the resource that such firms are least willing to waste). Ultimately, inadequate training can discourage rather than foster up- and re-skilling. To this end, monitoring and evaluation should go beyond participation rates. It should address the quality of courses and their capacity to fulfil up- and re-skilling needs through well-designed evaluation

strategies. Through such monitoring and evaluation, policymakers can learn what works better and what does not work. As a result, policymakers can make selective choices about what to finance or continue to finance. Adequate quality appears to be a game changer in the attitudes of micro and small companies to engaging in up- and re-skilling and thus should be a priority.

- **Address the key actors that drive up- and re-skilling in micro and small companies, namely the owner-manager and the employees**

Firms are, in the end, made up of individuals. This is even more evident in micro and small companies, where personal relationships shape business strategies, daily operations and HRM. Individual training in these companies has a positive domino effect on others in the company, because of proximity and cooperation. Policies stimulating individuals in micro and small companies can focus on:

- **The owner-manager**, to support or provide training to increase their competences to think strategically, develop a forward-looking approach, plan a coherent and long-term strategy for up- and re-skilling of employees.
- **The employees**, to support their proactive attitude towards up- and re-skilling that appears key in micro and small firms. For example, individual learning accounts could help them to gain independence from the needs of the employers, which in micro and small companies are very focused on short-term goals. This instrument could also remove much of the administrative burden for companies when accessing public support to up- and re-skill their employees because it would be managed on an individual basis. By stimulating the individual demand for learning opportunities, it could also trigger a more dynamic and competitive market of education and training courses. This would contribute to removing the supply constraints that micro and small companies face because of their specific and heterogeneous needs. In addition, individual entitlement to incentives would overcome the limitation in provision of education and training to employees working on a temporary basis or with informal working arrangements, which is more common in smaller firms. On the other hand, the interest of companies in education and training could be reduced if the employee chooses activities that are not related to their needs. To mitigate this concern and make the instrument useful to micro and small companies, some degree of job-related conditionality should be introduced to access such support. For example, employers could have a say in the training to be undertaken and financed through individual learning accounts, selecting it according to company needs, with the condition that such training takes place during working hours so as not to put additional time burdens on the employees. Alternatively, employers could be given the choice to co-finance individual learning accounts, provided that they can agree with employees on a certain amount of job-related training to be undertaken through such accounts.
- **Low-qualified employees**, to support them in accessing education and training beyond informal learning. They, in fact, experience more difficulty than others in accessing general training for basic skills provided by employers because these skills are highly transferable. These employees can also be less motivated and could therefore benefit more from incentives. Moreover, on-the-job informal learning is the main source of learning for these employees, who often actually prefer informal learning practices to others. This, however, should not constitute a disadvantage for them. Policies should facilitate the recognition and validation of skills acquired through informal learning in general and by these employees specifically.

- **Facilitate and incentivise networks and sectoral approaches**

This can be done by providing support and higher incentives for up- and re-skilling actions undertaken in networks of micro and small companies or through sectoral cooperation.

This approach allows firms to pool resources and address common needs. As such, actions undertaken through networks can overcome important barriers such as low financial resources and specific demand for training in micro and small companies. For this reason, policies should further encourage them, to leverage individual efforts. Moreover, sectoral cooperation builds bridges between different recipients of training, for example between smaller and larger companies, which face similar business challenges but can exchange different approaches to skills development. Cooperating with larger firms in sectoral networks can represent an additional source of capacity building in smaller firms and should thus be encouraged. Collaborative approaches can build on the role of intermediary organisations, including social partners, by fostering dialogue on up- and re-skilling at territorial, sectoral and firm level.

- **Develop and strengthen frameworks for validation and recognition of skills beyond formal qualifications**

Up- and re-skilling is increasingly about the foundations of specific micro skills rather than the attainment of qualifications, so it is important that they are progressively validated and recognised throughout the varied career paths that everyone may follow. Employers should track skills developed by employees more innovatively, reflecting the non-formal nature of skills attainment. This is necessary to provide the right incentive to invest in developing these skills, especially since informal learning is more common in micro and small firms.

Recommendations for EU-level policymakers

Building on the above and the conclusions of the study, specific recommendations are developed **for the EC, as a key actor that can support and supplement the action of Member States with EU-level policies to foster up- and re-skilling.**

Specific recommendations for the EC are:

- **Develop guidelines for up- and re-skilling policies targeted at micro and small companies, rather than at SMEs generically**

Policies targeting SMEs exist at national and EU level. However, these are limited because they fail to consider the smallest among the SMEs, which are the companies that need support the most. Targeting policies specifically at micro and small companies could be a way of taking into consideration how their features and needs differ from those of the larger companies within the group of SMEs. Policies targeted at micro and small companies can also ensure that access mechanisms to policy support are tailored to their capacity to deal with administrative procedures that benefiting from policy often entails. Such targeted policies could ensure that support is not biased towards larger companies in the group of SMEs (i.e. medium firms), whose more structured organisation allows them to access this support more easily than micro and small companies.

- **Ensure that policies funded by EU financial instruments are assigned using criteria that consider the specificities of micro and small companies**

To ensure that financial support from EU funds dedicated to up- and re-skilling is delivered to micro and small companies specifically, rather than generically to all companies or to SMEs, the criteria to assign these funds should clearly be tailored to micro and small companies. This would apply, notably, to the ESF, which represents one of the main sources of funding human capital development at the EU level, especially for disadvantaged groups such as low-qualified workers. Micro and small companies, with their limited capacity to deal with administrative burdens, need simple administrative procedures that can help lift these limits to accessing funds, and this should be pursued to help them benefit from support measures. In addition, company size thresholds should clearly be designed around the definition of micro and small companies, rather than for

SMEs. Finally, actions eligible for financing should include up- and re-skilling practices that are easier to implement for micro and small companies, namely non-formal training and informal learning practices. Importantly, this recommendation also applies to Member States, in all the cases where the criteria to access EU funds are set at national level.

- **Include criteria that take into consideration delivery to micro and small companies in monitoring and evaluation of EU funds across countries**

To make sure that dedicated EU funds make a difference for up- and re-skilling in micro and small companies, monitoring and evaluation of EU funds, including the ESF, should establish to what extent they access funds. Only if a significant share of these funds is allocated to micro and small companies can improvement be expected. Acknowledging this share will allow the impact to be estimated. This would ultimately allow an assessment of whether the limited participation in up- and re-skilling in micro and small companies is linked to the limited effectiveness of EU funds or to the fact that these funds are not accessed enough by small and micro companies.

- **Coordinate efforts at national level towards the validation and recognition of informal learning and micro skills**

Thanks to its competence in coordinating and supporting actions in the area of education and training, the EU has a role to play in leading efforts towards the development of frameworks for validation of informal learning, building on action taken to implement the Council Recommendation on validation of non-formal and informal learning and on the European guidelines for validation.³⁰ This would enhance the recognition of a type of learning that is particularly important in micro and small companies and for low-qualified individuals. Better visibility of skills acquired outside formal and non-formal education and training, including micro skills, could significantly facilitate both companies and individuals to gain benefits from up- and re-skilling. Ultimately, this visibility would act as an additional non-financial incentive to engage in these activities.

- **Intensify research on what works and what does not work in adult learning, maintaining focus on those that are more excluded from up- and re-skilling, such as smaller companies and low-qualified individuals**

Strengthening support for up- and re-skilling in micro and small companies and for low-qualified individuals, through policies and funds, would be effective only if what works best for them is identified and further supported. Evaluation of policies and their trade-offs is also necessary to maximise their effectiveness and efficiencies. For this, continuous research efforts should be pursued. To make sure that research in the field of up- and re-skilling captures information about the situation and needs of micro and small companies, and of low-qualified individuals, the research design, including methodologies and tools, must be tailored to this audience. This means acknowledging that these actors tend not to engage in large surveys and that formal terminology and categories to define and describe skills and adult learning are not familiar to non-expert actors, possibly leading to misunderstanding and mismeasurement. Qualitative and interactive research design therefore appears to be more suitable for investigating unstructured and less formal practices in micro and small companies, especially for low-qualified workers.

To conclude, the analysis has shown that several types of barriers must be overcome to foster up- and re-skilling in micro and small companies. **While the role of policy for up- and re-skilling is justified by the fact that skills development is a matter of public interest for both growth and inclusion, several actors need to help trigger a system-wide change in adult learning.** For this reason, a concerted action by multiple

³⁰ Cedefop 2015, [European guidelines for validating non-formal and informal learning](#)

actors simultaneously following the recommendations above can develop synergies and remove the barriers identified, to truly exploit the potential of micro and small companies.

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ANNEX 1: METHODOLOGY

A1.1 Selection of seven countries

Table A1.1 Assessment of skills demand and supply in ten shortlisted EU countries

Country code	Micro and small enterprises' value added VS employment	Level of tertiary educational level in micro and small	Adults' level of skills in the country	Level and integration of low-qualified in the labour market	Participation in adult education and training	European Skills Index
CZ	High difference	Average	High	High, not integrated	High	High
DE	Low difference	Low	High	Low, integrated	High	High
DK	Low difference	High	High	Low, integrated	High	High
ES	High difference	High	Low	High, integrated	Low	Low
FR	Low difference	High	Low	High, integrated	High	Average
IE	High difference	High	Low	High, integrated	High	Low
IT	High difference	Low	Low	High, integrated	Low	Low
NL	Low difference	High	High	Low, integrated	High	High
RO	Low difference	Low	n.a.	Low, integrated	Low	Low
SK	High difference	Average	High	High, not integrated	High	High

Source: Authors' elaboration based on indicators presented in the Introduction and Section 1

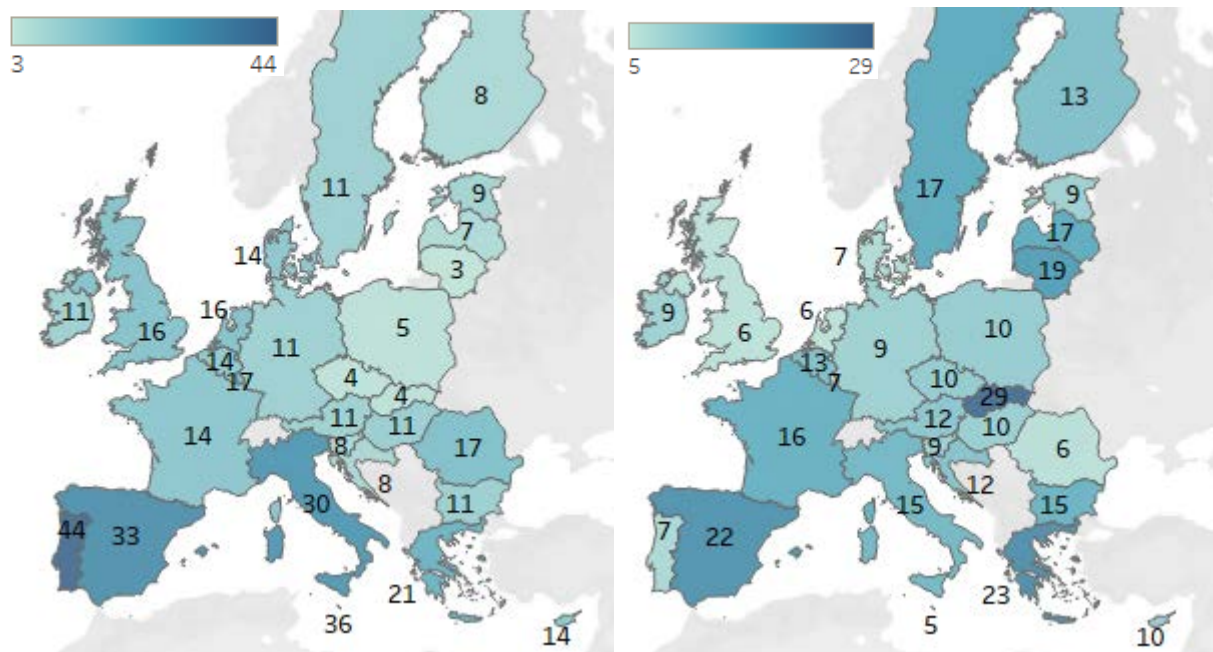
Table A1.2 Geographical position and framework conditions for adult education and training, labour market and economy in ten shortlisted countries

	Management of adult education and training	Measures for low-skilled	Economy and labour market	EU geo group
CZ	PES	Yes	Low income but low unemployment	Central East
DE	PES and other public bodies	Yes	High income and low unemployment	North West
DK	Other public bodies	Yes	High income and low unemployment	North West
ES	PES and other public bodies	Yes	Low income and high unemployment	South
FR	PES and other public bodies	Yes (very structured)	High income but high unemployment	North West
IE	Other public bodies	Yes(recent)	High income and low unemployment	North West
IT	Other public bodies	Yes (recently enhanced)	Low income and high unemployment	South
NL	PES and other public bodies	Yes (recent)	High income and low unemployment	North West
RO	PES	Yes (EU funds)	Low income but low unemployment	Central East
SK	PES	Yes(recent)	Low income but average unemployment	Central East

Source: Authors' elaboration based on desk research

The final selection of countries is done out of ten preselected countries and includes frontrunners, which are important to identify good practices and policies, as well as countries presenting a negative performance, to shed lights on the issues that these countries encounter and what are the strategies that can be put in place, possibly learning from the front runners. In addition, countries facing specific issues are also interesting to investigate. These countries perform well in some areas but poor in others, making it relevant to compare them and draw lessons from their experiences. This first evaluation is made on the basis of the skills demand and supply conditions as in the Table A1.1, where the green indicates a relatively good performance (i.e. above the EU27 average) and the red indicates a relatively poor performance (i.e. below the EU27 average). Skills demand was measured from Eurostat data, using the difference between contribution of micro and small enterprises to employment and to value added, considering that this would proxy for the level of productivity and thus skills in these firms, as well as using the share of employees with tertiary education in these firms. The indicators used to identify skills supply included the level of education and skills in the adult population and measures on participation in adult education and training, from Eurostat and OECD data. Moreover, the skills supply was assessed by looking at the share of low-qualified in employment and unemployment. Indeed, looking at the share of the low-qualified in employment and unemployment jointly, as shown in the figure below, allows to gain insights on how these workers are integrated in the labour market. There are some countries, such as Slovakia, Poland, Latvia and Lithuania, where there is a high share of the low-qualified in unemployment but a lower share in employment, meaning that these workers are not well-integrated in the labour market. In other countries, such as Portugal, Italy, the Netherlands and Denmark, the opposite is the case, showing good integration. Other countries, like France and Ireland, have similar shares of low-qualified in both employment and unemployment, indicating that high shares of low-qualified apply as a general feature of the national labour market as a whole.

Figure A1.3 Percentage of low-qualified in employment (left) and percentage of low-qualified unemployed in active population (right)



Source: Authors' own elaboration based on data from Eurostat – LFS, 2018

Finally, the Cedefop's European Skills Index was taken into account to assess the labour market functioning in terms of skills.

As framework conditions, the management system for adult education and training, the existence of policy measures for low-skilled and the economic and labour market conditions were taken into account, together with geographical balance.

As result the following countries were selected:

- The **Netherlands, Germany and Denmark** as frontrunner countries
- **Italy** as a country that performs negatively in all criteria considered
- **Ireland** as a country with relatively high participation in adult learning, in comparison to other countries, but still with significant issues in all other indicators
- **France and Slovakia** as countries with an overall good performance but specific issues, namely the low level of skills for France and the low performance of micro- and small companies and lack of highly qualified employees in these companies in Slovakia

This sample includes countries in **North Western Europe (Denmark, Germany, France, Ireland and the Netherlands)**, in **Southern Europe (Italy)** and in **Central Eastern Europe (Slovakia)**.

Moreover, the macro-economic framework of the country presents significant variety, including **countries with good framework conditions (Denmark, Germany, Ireland and the Netherlands)**, **some with low income and high unemployment (Italy)** and **others with mixed performance (Slovakia, with low income but moderate unemployment, and France with high income but high employment)**.

Denmark presents a very positive situation in terms of skills demand and supply for all the criteria assessed. It shows high rates in participation in training and education for adults and in fact the desk research has identified effective policies, such as AMU, that precisely address the challenges that are stronger for smaller enterprises, such as time and financial resources constraints. Desk research however indicated a need for reform. Thus, it is interesting to investigate room for improvement. In addition, the country has specific measures for low-skilled individuals, who in fact appear to be well integrate in the labour market. By contrast, no specific policy has been identified, through desk research to target specifically smaller companies. The country appears worth of investigation to learn from best practices and to understand emerging challenges to see how a well-functioning system addresses these challenges.

The Netherlands presents the best performance when it comes to adult education and training. In fact, the country has the highest rate of participation in the EU27. This matches with an overall positive situation in terms of skills demand and supply. From the table above, all the criteria are marked in green, meaning that the country has a good performance. Taking this country into account for further investigation appear important for two reasons. On the one hand, the investigation would highlight best practices, especially considering that the desk research has identified a variety of policies for education and training, interestingly also addressing temporary workers, as well as business-led practices. In effect, the public management of education and training for adults involves in effect several actors, at public level but also including social partners. On the other hand, although they appear to be integrated in the labour market, the desk research highlighted that low-skilled individuals have less access than others to training. Indeed, in the Netherlands, policy measures for low-qualified adults were launched only 2018 as part of the implementation of the Recommendation on Upskilling Pathways, so it would be interesting to investigate further this specific issue and possibly compare it with other countries.

Germany also represents a frontrunner, with positive performance in almost all the criteria to assess skills demand and supply. However, from the evaluation criteria, the country appears to have an issue specifically with the level of qualification of employees in small and micro enterprises, which appear to be lower than the EU average, so that these enterprises in Germany may need more attention on up- and re-skilling to avoid

lagging behind. In fact, the desk research has highlighted that several policies are in place specifically for these firms, so that the country is worth closer examination with reference to the specific target group of the study.

France represents a very positive example in terms of adult education and training participation and the desk research has highlighted many policies that indeed foster it, in a complex system that involves a variety of regional, local and national public bodies. However, despite high supply of skills development for adults, the overall level of skills appears low. So, it is interesting to analyse how these policies are addressing this issue and to what extent this benefits the smaller firms in the country.

Italy is selected because it presents very negative assessment in all the criteria that are considered. Italy is the country with the highest share of employment in micro and small enterprises, yet such enterprises contribute to a smaller part of the value added. Indeed, Italy is one of the countries with the lowest level of qualifications of employees in micro and small firms. This country has also one of the lowest rates of participation in education and training in micro enterprises, vis-à-vis their large majority among enterprises in the country. The desk research has highlighted the lack of overarching policy for adult learning and the European Skills Index has indicated serious issues in matching the skills supplied by the educational system with the labour market needs. Although several initiatives exist, including for small firms and led also by the business sector, there is a lack of coordination that makes it hard to access to these opportunities. , Given its poor performance in the criteria assessed, as well as in the framework conditions, it appears worth to explore and compare Italian challenges and opportunities for up- and re-skilling with other countries.

Similarly, **Ireland** has a negative assessment in almost all the criteria considered, with the only exception of level of education in micro and small enterprises and participation in education and training, which both score as high in the country. However, despite these two positive dimensions, the micro and small enterprises in Ireland seem to be low value added and labour intensive, as shown by the first criteria in the table, which scores negative. In addition, the skills index is negative, despite education and training participation is high. Finally, overall the level of adults' skills is low and this may require specific attention by policy. Indeed, Ireland has already implemented important policies for up and re-skilling, also with specific measures dedicated to SMEs. For this reason, the country is worth further investigation to explore how this policy have impacted the situation and possible lessons to learn for other countries.

Finally, **Slovakia** appears, similarly to France, as a case in between countries that are frontrunners and those that have serious issues in all the aspects considered. However, Slovakia presents a somehow opposite situation to France. It appears to have a good supply of skills in the labour market, notably with a better assessment in skills *per se* rather than in the level of qualification. However, the performance of micro and small enterprise does not appear so positive and there is a low level of highly qualified employs in these enterprises. Probably given the generally high supply of skills in the country, these firms do not experience severe shortage of qualified employees but still do not appear to have a good ratio between employment and value added. There are several policies addressing adult education and training, also specifically for small business, but none targeted at the low-skilled, which in fact access training to a much lower extent. Given this specificity, Slovakia is interesting to be investigated further, also adding a Central Eastern European country in the sample.

A1.2 Online Survey Questionnaire (English version)

INTRODUCTION

Micro and small firms are very important for the economy of the European Union (EU), being the very large majority of firms and providing half of employment in the EU. These firms have a key role to offer skills development opportunities to many workers in the EU, to stay competitive in a global and digital economy. However, employees in smaller firms participate less in education and training in comparison to larger firms, because micro and small enterprises face significant challenges in providing education and training to their employees.

Education and training include any activity to enhance skills related to the job, such as workshops, seminars or classes, events, professional courses or schools, university courses.

[CEPS](#) in cooperation with [Panteia](#) is conducting a "Study on mapping opportunities and challenges for micro and small enterprises in offering their employees up- or re-skilling opportunities" for [DG Employment, Social Affairs and Inclusion](#) of the European Commission.

As part of the study, this survey collects views of micro and small companies in seven EU countries: Germany, Denmark, Ireland, Italy, Netherlands, France and Slovakia. The results will directly inform EU policymakers and contribute to influence policy for micro and small companies.

Data and information provided **will not be disclosed to any third party and will be treated according to [personal data protection provisions](#)**. Results will be published in aggregate form so as not to be attributable to any specific respondent.

The survey takes 15 minutes. Thank you for taking this time and for your valuable input!

Should you require any further information regarding this survey and/or the study, please contact:

- *Sara BAIOTTO*
Researcher, CEPS
Phone: +32(0)2.229.39.35
Email: sara.baiotto@ceps.eu

AD.1 [Confirmation box] I agree with the [personal data protection provisions](#).

COMPANY

COM.1 What is the name of your company?

[Text]

COM.2 In which sector does your company mainly operate?

[Dropdown menu and single option to be selected; List of NACE Aggregated Main Sections (10)³¹]

1. *Agriculture, forestry and fishing*
2. *Manufacturing, mining and quarrying and other industry (e.g. energy industry, chemicals, etc)*
3. *Construction*
4. *Wholesale and retail trade, transportation and storage, accommodation and food service activities*
5. *Information and communication*
6. *Financial and insurance activities*
7. *Real estate activities*
8. *Professional, scientific, technical, administration and support service activities*
9. *Public administration, defence, education, human health and social work activities*
10. *Other services*
11. *Other – Please specify [open field]*

COM.3 How many employees does your company have?

[Single option to be selected]

- o *9 or less*
- o *Between 10 and 49*
- o *More than 49*

[if More than 49] End of the survey

COM.4 How many of your company's employees are low-qualified (**lower secondary education – examples: middle schools/ intermediate schools**) (Please provide your best estimate)

[Single option to be selected]

- o *None*
- o *Less than half*
- o *More than half*
- o *All*
- o *Don't know*

EDUCATION AND TRAINING ACTIVITIES

ETR.1 How many of your company's employees participated in education and training activities in the last 3 years, namely in 2019, 2018 and 2017? (Examples of education and training are: workshops, seminars or classes, events, professional courses or schools, university courses, etc. - Please provide your best estimate).

[Single option to be selected]

- o *None*
- o *Less than half*
- o *More than half*
- o *All*

ETR.1.1 [If ETR.1 > None] How often your company's employees took part in education or training in the last 3 years, namely in 2019, 2018 and 2017? (please provide your best estimate)

- o *Rarely*
- o *Sometimes*

³¹ <https://ec.europa.eu/eurostat/documents/3859598/5902521/KS-RA-07-015-EN.PDF>

- o Often

ETR.1.2 [If ETR.1 >None] Considering education and training undertaken by your company's employees in the last 3 years, how often the following occurred? (Please provide your best estimate from 1 to 5 based on the following scale: (1) never; (2) rarely; (3) sometimes; (4) often; or (5) always. Select DK if you don't know)

1. Your company's employees participated in education and training activities during working hours or paid educational leave	1	2	3	4	5	DK
2 The costs of the education and training activities were covered by your company	1	2	3	4	5	DK
3. Your company's employees selected education and training activities in cooperation/agreement with your company	1	2	3	4	5	DK
4. Education and training activities were organised by your company but delivered by externals	1	2	3	4	5	DK
5. Education and training activities were directly provided by other employees of your company (including yourself)	1	2	3	4	5	DK
6. Education and training activities were organised by your customers or suppliers	1	2	3	4	5	DK
7. Education and training activities were organised by chambers of commerce, business associations or trade unions	1	2	3	4	5	DK
8. Education and training activities were organised by your company in cooperation with other companies in common network or associations	1	2	3	4	5	DK
9. Your company's employees obtained certification as result of education and training	1	2	3	4	5	DK
10. Your company's employees attended education and training activities that were required by law (for example, health and safety regulations related to your products or services, workplace safety, etc.)	1	2	3	4	5	DK

ETR.1.3. [If ETR >None & COM4 >None] Among your company's employees that undertook education and training activities in the last 3 years, how many of them were low-qualified (lower secondary education – examples: middle schools/ intermediate schools)?

[Single option to be selected]

- o None
- o Less than half
- o More than half
- o All
- o Don't know

ETR.1.4. [If ETR.1 >None] Please provide details (topics, providers, organisation, methods, etc.) on a good example of education and training activity attended by your company's employees in the last 3 years, which substantially contributed to improving their skills:

[Text]

CHALLENGES

CHA.1 To what extent does your company experience the following challenges to provide education and training to employees? (Please provide your best estimate from 1 to 5 based on the following scale: (1) not at all; (2) to a limited extent; (3) to some extent; (4) to a high extent; or (5) to the fullest extent. Select DK if you don't know)

1. After completing education and training, there is a risk that your company's employees will move to another company	1	2	3	4	5	DK
2. Your company has no money to train employees	1	2	3	4	5	DK
3. Your company cannot find public support for training and education	1	2	3	4	5	DK
4. Your company's employees cannot dedicate any working hours to education and training	1	2	3	4	5	DK
5. Your company's management cannot dedicate any working hours to discuss, search, plan and organise education and training	1	2	3	4	5	DK
6. Your company's employees do not need any further education and training	1	2	3	4	5	DK
7. Your company does not find any provider of education and training of adequate quality and content to provide your employees with the skills needed	1	2	3	4	5	DK
8. Your company's employees are too low-qualified (lower secondary education – examples: middle schools/intermediate schools) to undertake education and training activities	1	2	3	4	5	DK

CHA.2 Please indicate any additional challenge faced or (expected to be faced) by your company to provide education and training to employees:

[Text]

OPPORTUNITIES

OPP.1 To what extent has your company experienced (or expect to experience) the following advantages when providing education and training that is adequate to your needs? (Please provide your best estimate from 1 to 5 based on the following scale: (1) not at all; (2) to a limited extent; (3) to some extent; (4) to a high extent; or (5) to the fullest extent. Select DK if you don't know)

1. After education and training, the employees generate more value for your company (e.g. increase in revenues, increase in profits, increase in client satisfaction, etc.)	1	2	3	4	5	DK
2. By participating in education and training, the employees feel more rewarded and happier to work at your company	1	2	3	4	5	DK
3. More talented employees decide to join your company because education and training opportunities are included in their 'salary package'	1	2	3	4	5	DK
4. Education and training can provide the skills needed by your current company's employees	1	2	3	4	5	DK
5. Education and training can provide the skills needed when your company hires new employees that are not enough skilled	1	2	3	4	5	DK
6. Education and training activities improve the skills of your company's employees and are crucial to maintaining/creating a competitive advantage (e.g. e-commerce, selling abroad and/or more)	1	2	3	4	5	DK

OPP.2 Please indicate any additional advantage experienced (or expected to be experienced) by your company when providing education and training to employees:

[Text]

RECOMMENDATIONS

REC.1 To what extent the following support measures would help provide education and training to your company's employees? (Please provide your best estimate from 1 to 5 based on the following scale: (1) not at all; (2) to a limited extent; (3) to some extent; (4) to a high extent; or (5) to the fullest extent. Select DK if you don't know)

1. Public financial support, for example grants to cover education and training costs, tax incentives to reduce costs, soft loans to fund training, dedicated training budget to be used by every employee	1	2	3	4	5	DK
2. Organisation of education and training activities free of charge by public authorities (PES, regional, national or local authorities)	1	2	3	4	5	DK
3. Public reimbursement for educational leave or compensation of the time spent by your company's employees in education and training	1	2	3	4	5	DK
4. Payback clauses entitling your company to claim compensation from an employee for education and training costs, if they quit the job earlier than a certain period after participating in education and training activities	1	2	3	4	5	DK
5. Promotion of online education and training	1	2	3	4	5	DK
6. Provision by public authorities of more information on training and education activities available	1	2	3	4	5	DK
7. Assistance to identify the skills needed by your company's employees and relevant education and training for them	1	2	3	4	5	DK
8. Participation in network of companies that have similar needs and can cooperate to arrange education and training activities	1	2	3	4	5	DK

REC.1.1. [If REC.1>3] With regards to **public financial support**, which of the following options would help most to provide education and training to your company's employees? (Please select max 2 options)

- o *Grants to cover education and training costs*
- o *Tax incentives to reduce education and training costs*
- o *Soft loans to fund education and training, such as loans with lower interest rates*
- o *Dedicated training budget to be used by every employee*
- o *Other – please specify [Open field]*

REC.2 Please indicate any additional support measures would help provide education and training to your company's employees:

[Text]

REC.3 Has your company ever benefitted from one of the measures above?

1. Public financial support, for example grants to cover education and training costs, tax incentives to reduce costs, soft loans to fund training, dedicated training budget to be used by every employee	YES	NO	DK
2. Organisation of education and training activities free of charge by public authorities (PES, regional, national or local authorities)	YES	NO	DK
3. Public reimbursement for educational leave or compensation of the time spent by your company's employees in education and training	YES	NO	DK
4. Payback clauses entitling your company to claim compensation from an employee for education and training costs, if they quit the job earlier than a certain period after participating in education and training activities	YES	NO	DK
5. Promotion of online education and training	YES	NO	DK

6. Provision by public authorities of more information on training and education activities available	YES	NO	DK
7. Assistance to identify the skills needed by your company's employees and relevant training and education for them	YES	NO	DK
8. Participation in network of companies that have similar needs and can cooperate to arrange education and training activities	YES	NO	DK

REC.3.1. If yes, please provide details about the best measure your company has benefitted from (name of the programme, length, benefits, problems, etc)

[Text]

ADDITIONAL INFORMATION

ADI.1. Would you be available for a short follow-up interview on the topics covered by this survey? Your opinion is very important!

- Yes*
- No*

ADI.1.1. [if Yes] Please indicate your:

- *Surname: [text]*
- *Name: [text]*
- *Email address: [email]*

ADI.2. Could you please provide additional relevant contact (e.g. website, email address) of other companies, training providers or public bodies with whom your company cooperated on education and training?

[Text]

ADI.3 . Please feel free to add any additional observation below

[Text]

Thank you for your contribution!

A1.3 List of country experts involved in task 3 and 4

Table A1.3: List of country experts

Country	Name of expert	Affiliation	Position
Denmark	Lone Fajstrup Toftild	University of Southern Denmark	Head of the IER Development, Entrepreneurship and Relationship Management
France	Isabelle Recotillet	Institute of labour economics and industrial sociology (LEST)- CNRS	Associated member - Independent Consultant
Germany	Ileana Hamburg	Institute for Work and Technology	Researcher
Ireland	Willem Pieter De Groen	CEPS	Research Fellow and Head of Financial Markets and Institutions Unit
Italy	Sara Baiocco	CEPS	Researcher
Netherlands	Karolien Lenaerts	KU-Leuven/HIVA	Research Manager
Slovakia	Lucia Mytna Kurekova	Slovak Governance Institute	Researcher

A1.4 Interview questionnaire for interviews with employers and employees in micro- and small companies

Introduction to the interview: Background and definitions

Thank you for accepting the invitation to participate in this interview, which is part of a **study on mapping opportunities and challenges for micro and small enterprises in offering their employees up- or re- skilling opportunities** commissioned by the European Commission – Directorate-General Employment, Social Affairs & Inclusion (EC – DG EMPL) to the Centre for European Policy Studies (CEPS).

Micro and small enterprises are central in the economy of the European Union. They represent more than 98% of all EU non-financial business sector enterprises and generate more than one third of overall value added and half of total employment in the EU.

Micro and small enterprises can play a pivotal role in offering education and training to a substantial share of workers based in the EU. Nevertheless, empirical evidence shows a negative correlation between company size and employees' rate of participation in learning activities, as smaller companies faces major challenges when trying to provide education and training opportunities to their employees.

A few definitions follow for clarity:

- **Micro and small enterprises:** any enterprise with less than 10 employees (micro) and between 10 and 49 employees (small)
- **Education and training activities:** any activity that is aimed at increasing skills that are related to the job. These activities include **formal education and training**, which is provided by public organisations or recognised private bodies (ex: university courses), **non-formal education and training**, which is institutionalised, intentional and planned by any education provider (ex: workshops, private lessons, etc.), and **informal learning**, which is any form of learning that are intentional or deliberate but not institutionalised (ex: all kinds of events or collaborations that deliver learning for the job)
- **Qualification:** formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
- **Skill:** ability to apply knowledge and use know-how to complete tasks and solve problems. They can be described as cognitive (involving the use of logical, intuitive and creative thinking) or practical (involving manual dexterity and the use of methods, materials, tools and instruments). Examples are: writing, use of computers and digital tools, use of specific machineries, foreign language, work in team, customer care
- **Low-qualified workers:** workers who have completed a lower secondary level of education or below (ex. No education, Primary schools, Middle schools)

This study aims to develop a sound understanding of what are challenges and opportunities regarding education and training in micro and small enterprises, as well as to identify good practices and policy options, to inform policies directed to micro and small enterprises at EU level.

Please be aware that the information provided during this interview will be used as an input for the final report and presentation of the study, but anonymously so. For this purpose you are asked to sign a consent form that will be kept as part of project's documentation but not shared outside the project team.

[Any additional clarification on the concept of education and training? + Check consent or ask consent]

Questionnaire for the semi-structured interview with employers in micro and small companies

To be answered by managers, owners, or HR department

Structure of the interview

The following paragraphs describe the content of the interview, and describe what you may wish to think about or whom to consult with, prior to the interview if you have received the questionnaire in advance. Overall, the interview includes 22 main questions, but some may not be relevant to your case and thus will be skipped.

As a first step, you will be asked to provide an overview of your company's business and structure.

Part 1 – Identification and tracking of employees' skills (3 questions)

This section includes questions that are aimed to understand to what extent your company tracks and collects information related to qualifications and skills of your employees

Part 2 – Education and training to the employees, including human resource practices, challenges and opportunities for skills development (9 questions)

This section is at the core of the interview and includes questions that are aimed to understand to what extent your company's employees undertake education and training, as well as what is the role and practices of your company in this regard. It explores what kind of education and training occur in your firm and what are the main challenges and opportunities for your company.

Part 3 – Education and training for low-qualified employees, only if relevant for your company (3 questions)

This section includes questions to understand specifically the extent to which low-qualified employees in your firm are involved in education and training, as well as what are the specific practices, challenges and opportunities for education and training of these employees.

Part 4 – Policies and good practices (4 questions)

This section includes questions to identify desirable and/or existing policies and good practices that can support your company's in providing education and training to the employees.

Part 5 – Additional remarks and further contacts (3 questions)

This sections includes closing questions, to offer you the opportunity to complement the interview with additional remarks and give us further contacts and information to follow up on your interview.

[Any of your views, insights and thoughts are welcome, but also feel free to skip questions that are not relevant for you, as well as to add other information you consider important related to a question or in general]

(Q0) Please give a brief overview of your company's business and structure. Please describe what your company does, how many employees it has and what are the main functions that they cover (e.g. administrative, sales, etc.).

Part 1 – Identification and tracking of employees' skills

(Q1) What is the level of education of your company's employees? Please provide a description, differentiating across categories/functions (e.g. administrative VS professionals), if applicable

[Note if they mention low levels of education and for how many -> Section 3 is relevant if they have at least one low-qualified employees + note the extent to which they know about the qualifications held by their employees]

(Q1.1) Does your company have a record system of qualifications obtained by your company's employees? If yes, please explain what your company does to collect/record such qualifications and who takes care of it (e.g. human resources department? External consultancy?)

(Q2) What are the main skills that your company's employees have and use in their jobs at your company? Please provide a description for different categories/functions (e.g. administrative VS professionals), if applicable

[Recall definition and examples of skills if needed, in relation to the interviewee's business]

(Q2.1) Does your company have a record system to map the skills that your company's employees have? If yes, please explain what your company does to collect/record such skills and who takes care of it (e.g. human resources department? External consultancy?)

(Q3) Does your company monitor how these skills evolve, in terms of level of each skill and number of skills held, during the time employees work for your company (e.g. performance assessment, increasing responsibility/difficulty of the task, career progression)?

(Q3.1.a) If yes, how does your company keep track of these skills? Is there any documentation that is filled in to record your company's employees skills and their evolution over time? Who takes care of it (e.g. human resources department? External consultancy)?

(Q3.1.b) If not, how does your company monitor your company's employees' performance? Or how does your company decide upon career progression and/or pay rise?

[Note if they mention something that is relevant for skills mapping, monitoring, development]

Part 2 - Provision of education and training to the employees (including HR practices, opportunities and challenges for skills development)

(Q4) How do your employees learn what is needed for their job during the time the work for your company?

[To have an overview and spontaneous mentions of skills development practices - Give examples of formal, non-formal and informal learning if they do not reply/ seem not to understand the question]

(Q5) What is the attitude and role of your company in driving skills development opportunities for your employees? Does your company actively engage in funding, selecting or providing education and training of any kind (formal/ non- formal/ informal) to the employees?

(Q5.1.a) If yes, please explain why and how and provide examples

(Q5.1.b) If not, please explain why

(Q6) Does your company have any specific human resource practice/policy in place for enhancing your employees' skills?

(Q6.1.a) If yes, please explain why and how and provide examples

(Q6.1.b) If not, please explain why

(Q7) Have your company's employees participated in education and training in the last three years, namely in 2019, 2018 and 2017?

[provide examples of education and training activities of any type – see definitions above]

(Q7.1.a.1) If yes, please describe such education and training activities

(examples of follow up questions to detail the answer: Which type? for which skills? How was it organised and funded? by whom? How was it identified? When and how often was it undertaken? How many employees participated and what is their job position in the company? What was their level of qualification? Has your company supported it? How? Was it successful? Why? How?)

[Note what the role of the company is – e.g. the company promoted/encouraged/selected/organised/funded the training or no role + note the cooperation/ support from any other actor, such as public body, or external consultancy]

(Q7.1.a.2) If yes, what are the advantages that your company has experienced after the employees took part in education and training, if any? What are the main positive outcomes of education and training for your company?

(Q7.1.a.3) If yes, and if not enough, what are the factors that limit further participation in education and training for your company's employees? Are the main challenges related to time, financial or administrative constraints, or others?

(Q7.1.b.1) If not, why your company's employees did not participated education and training? What were/are the specific challenges encountered in your company? Are the main challenges related to time, financial or administrative constraints, or others?

(Q7.1.b.2) If not, what are the advantages that education and training could deliver and your company is missing because none of its employees participates in education and training?

(Q7.1.b.3) Do you think that it is mainly lack of interest/motivation that limits or prevents participation in education and training?

If yes, please explain following these points:

- *The lack of motivation/interest concerns mainly your company's management or your company's employees, or both? Why?*
- *If your company was interested/motivated in education and training, would it have sufficient funds and time to do it? Or would it know how to get access public support for that?*
- *Has your company ever offered to its employees any training opportunity that was refused? Please provide an example*

(Q8) Does your company consider learning as an objective when assigning tasks or group work to the employees? Why? If yes, please describe the process (e.g. who decides, for which employees, how, criteria, results)

(Q9) Does your company choose to do business with certain suppliers, customers or companies similar to yours because this can increase the skills of your employees? If yes, please provide details

(Q10) Do you think that it would be useful to know what other companies in your sector do for skills development, to put in place a strategy in your own company? Why?

(Q10.1) Have you already experienced this approach and/or drawn inspiration by other companies' strategy for skills development in your sector? If yes, please provide details

(Q11) Does your company collaborate with external companies in the field of human resources or training or with social partners or public training bodies for education and training? Why?

(Q11.1) If yes, please describe this collaboration. With whom? What support/service external actor provides? When providing training, is the supply of externally provided training relevant for the company's needs? Could it be more relevant? How?

(Q12) Do you consider distant learning/online courses as an education and training opportunity? Why?

(Q12.1) Have you already experienced online education and training in your company? If yes, please describe

Part 3 – Education and training for low-qualified employees

[If the company has low-qualified employees]

(Q13) Do your company's employees that are low-qualified lack the skills that are needed for their job?

(Q13.1.a) If yes, what are these skills? How can the situation be improved for your company?

(Q13.1.b) If not, please explain why

(Q14) Have your company's employees that are low-qualified participated in education and training in the last three years, namely in 2019, 2018 and 2017?

[provide examples – see definitions above]

(Q14.1.a.1) If yes, can you describe such education and training activities? Do these activities differ from those undertaken by other employees? If so, how and why?

(Follow-up questions to detail the answer: Which type and for which skills? How was it organised and funded? and by whom? How was it identified? When and how often was it undertaken? How many employees participated and what is their job position in the company? Has your company supported it? How? Was it successful? Why? How?)

(Q14.1.a.2) If yes, what are the advantages that your company has experienced after low-qualified employees took part in education and training, if any? What are the main positive outcomes of education and training for your company when training low-qualified employees?

(Q14.1.b.1) If not, why your company's low-qualified employees did not participated education and training? What were/are the specific challenges encountered in your company for training these employees?

(Q14.1.b.2) Has your company ever tried to support, fund and/or organise education and training for these employees? Why/How? What were/are the specific challenges encountered in your company for training these employees?

(Q15) Apart from education and training, are there learning opportunities for low-qualified employees in their job at your company? For example through collaboration with colleagues or suppliers or customers?

[provide examples – see definitions above]

(Q15.1.a) If yes, please describe and assess their relevance for your company

(Q15.2.b) If not, please explain why and how the situation could be improved

Part 4 – Policies and good practices

(Q16) Can you provide an example of good practice in education and training, at either public or private level, that your company experienced or that you are aware of?

(Q16.1.a) if yes, please describe such good practices and why you consider it as a good practice

(examples of follow-up questions: how does the practice work? By whom was/is it implemented? when and why was/is it implemented? Is it specifically dedicated to micro and small companies? how successful was/is it? Is there any follow up or upscale?)

(Q17) What do you think could help your company in providing education and training to the employees?

(Q17.1) Is there any specific support measures that public authorities could implement? Which specific public authority could implement it? Please provide examples

(Q17.2) Is there any private sector-led initiative that could be implemented to this aim? Please provide examples

(Q17.3) If your company's employees were entitled to an individual budget to spend for training each year, independently from the job in your company and with the possibility to record all education and training undertaken throughout their career, would this help your company's engagement in education and training? Why?

(Q17.4) Would you be willing to contribute to such budget while your employees work for you, assuming that the government will also contribute to it?

(Q17.5) if your company's employees are already entitled to such budget, please name/describe the policy and share your experience and opinions on this measure (e.g. Especially for France and the Netherlands)

(Q18) Are there any government programmes or measures supporting companies like yours in the provision of education and training to employees? What measures are these (e.g. financial incentives, easy access to programmes)?

(Q19) Has your company ever benefitted from any support measures or programmes provided by public authorities?

(Q19.1.a) if yes, please describe

(examples of follow-up questions: what is the name of the programme/policy? How did you know about it? Was it easy to access? What were the problems encountered? Was it a positive/relevant experience? Is it still in place)

(Q19.1.b) If not, why? What were the obstacles in accessing these measures and/or programmes?

Part 5 – Additional remarks and further contacts

(Q20) Would you like to add any other information that was not covered during the interview and you feel is important for the topic? any closing remarks?

(Q21) Do you have any relevant contact (e.g. similar companies, providers of education and training, public authorities involved in education and training programmes) to share with us, so that we can

contact them for a similar interview? Could you suggest any website or material that we should consult as follow-up from your interview? Can we get in contact with some of your employees for a similar interview and get their point of view (please remember that interviews are anonymous and the name of the interviewee and of the company will not be shared nor published)?

(Q22) Can we contact you again if any clarification is needed? Can we share with you a brief survey on the topic to complete as follow-up of this interview?

Questionnaire for the semi-structured interview with employees in micro and small companies

To be answered by any employee

Structure of the interview

The following paragraphs describe the content of the interview, and describe what you may wish to think about or whom to consult with, prior to the interview if you have received the questionnaire in advance. Overall, the interview includes 15 main questions, but some may not be relevant to your case and thus will be skipped.

As a first step you will be asked to provide an overview of your professional profile.

Part 1 – Company background about skills development (3 questions)

This section includes questions to understand your company's attitude and practices on skills development.

Part 2 – Education and training activities, including your company's role in it, as well as challenges and opportunities (5 questions)

This section includes questions to understand your views and experience with education and training, considering the main barriers and opportunities as well as the role of your company in it.

Part 3 – Policies and good practices (4 questions)

This section includes questions to gather information about existing policies and good practices for education and training and about your participation in it.

Part 4 – Additional remarks and further contacts (3 questions)

This section includes closing questions, to offer you the opportunity to complement the interview with additional remarks and give us further contacts and information to follow-up on your interview.

[Any of your views, insights and thoughts are welcome, but also feel free to skip questions that are not relevant for you, as well as to add other information you consider important related to a question or in general]

(Q0) Please give a brief overview of your professional profile, mentioning your studies, previous and current jobs, career stage and your future career perspectives

[Note if they are low-qualified – if so mark it in the transcript, as it should be seen if /how the answers differ]

Part 1 – Company background about skills development

(Q1) Does your company support and encourage education and training for the employees?

(Q1.1) if yes, please explain how and what type of activities

[Note if they mention that the company organises and provides the training directly]

(Q1.2) if not, why do you think is that?

[Note if they mention any specific challenge/obstacle spontaneously]

(Q2) Does your company have any practice/policy concerning education and training?

(Q2.1) If yes, please give details (who takes care of it, problems, results, etc.)

(Q3) Does your company keep track of how your skills improve and/or increase? Do you have formal or informal meetings with your boss about this? Is there a performance assessment system in place?

(Q3.1) If yes, please describe with examples and give details (who takes care of it, problems, results)

(Q3.2) If not, how is your job performance monitored or how does your company decide your career progression and/or pay rise?

[Note if they mention something that is relevant for skills mapping, monitoring, development]

Part 2 – Education and training activities, including your company's role in it, as well as challenges and opportunities

(Q4) Do you need to learn for your job? Why? If yes, how do you learn what is needed for your job?

[To have an overview and spontaneous mentions of skills development practices - Give examples of formal, non-formal and informal learning if they do not reply/ seem not to understand the question]

(Q5) Have you participated in any activity of education and training in the last three years, namely in 2019, 2018 and 2017?

[provide examples of formal, non-formal education and training, and informal learning– see definitions above]

(Q5.1.a.1) If yes, what type of training was it? Which kind of activity? What was the topic? Who organised/provided the training? Please provide any detail available

(Q5.1.a.2) If yes, what was the role of your company? Did it cover the cost of the training? Did it organise/provide such training? Did it influence your choice? How?

(Q5.1.a.3) If yes, did you find it beneficial for your job? How? What were the main improvements and advantages that you had after training, if any?

(Q5.1.a.4) If yes, did you have to face any specific challenge to participate (for examples, schedule, timing, private life responsibilities, lack of employers' support, etc.)? How did you overcome them?

(Q5.1.a.5) If yes, would you like to take further education and training? Why? For which skills? Any barrier?

(Q6) *[If answered NO to previous question]* Would you like to participate in education and training? Why?

(Q6.1) If yes, please provide details: What kind of training and for what skills? How would you benefit from that?

(Q6.2) If yes, what were the main factors that prevent/prevented you to participate in education and training? (for examples, time, cost, private life responsibilities, lack of employers' support, no suitable/interesting training etc.)?

(Q6.2.1) What could help you overcoming such barriers that prevent your participation in education and training? In particular, how could your company support you in undertaking education and training?

(Q6.3) If not, would you say that you are not interested or motivated to undertake education and training? Why?

- *If you were interested in education and training, would you have sufficient money, time and support by your company in that? Or would you know how to get access to public support for that?*
- *Has your company ever offered you any training opportunity that you refused? Please provide an example and explain why*
- *Has any other organisation ever offered you any training opportunity that you refused? Please provide an example and explain why*

(Q7) Do you have opportunities for learning at your workplace, such as collaborating with colleagues, sharing practices with suppliers or customers? Does your employer consider potential learning when giving you tasks to perform?

(Q7.1.a) If yes, please describe with examples and mentioning main problems/advantages

(Q7.2.b) If not, would you find it useful? How could the situation be improved?

(Q8) Do you consider distant learning and online resources for education and training? Why?

(Q8.1) Have you ever searched for online education and training opportunities? Why? If yes, please describe

(Q8.2) Have you ever participated in online education and training activities? Why? If yes, please describe

(Q.8.3) Do you use online resources for learning what is needed for your job? Why? If yes, please describe

Part 3 – Policies and good practices

(Q9) Can you provide an example of good practice in job-related education and training, at either public or private level, that we are aware of?

(Q9.1) If yes, please describe such good practice and why you consider it as a good practice

(Q9.2) If yes, have you participated in such good practice? If yes, please provide details your views on the experience, its effectiveness, strength and weaknesses

(Q10) Do you know any government measures or programme concerning job-related education and training?

(Q10.1) If yes, please provide details (name of the programme, implementation, duration, topics, specifically for micro and small companies)

(Q11) Have you ever benefitted from any government support for job-related education and training?

(Q11.1) If yes, please describe the experience

(Q12) In your opinion, what could be the best government measure to support education and training for employees in smaller business like your company?

(Q12.1) If you were entitled to an individual budget to spend for training each year, independently from where/whether you work and with the possibility to record all education and training undertaken throughout your career, would you be encouraged to engage in education and training?

(Q12.2) Would you be willing to contribute to such budget with a share of your salary while working, assuming that the government will also contribute to it?

(Q12.3) if you are already entitled to such budget, please name/describe the policy and share your experience and opinions on this measure (e.g. Especially for France and the Netherlands)

Part 4 – Additional remarks and further contacts (3 questions)

(Q13) Would you like to add any other information that was not covered during the interview and you feel is important for the topic? any closing remarks?

(Q14) Do you have any relevant contact (e.g. micro and small companies, providers of education and training, public authorities involved in education and training programmes) to share with us, so that we can contact them for a similar interview? Could you suggest any website or material that we should consult as follow-up from your interview? Can we get in contact with some of your colleague for a similar interview and get their point of view (please remember that interviews are anonymous and the name of the interviewee and of the company will not be shared nor published)?

(Q15) Can we contact you again if any clarification is needed?

A1.5 Interview questionnaire for interviews with stakeholders

Introduction to the interview: Background and definitions

Thank you for accepting the invitation to participate in this interview, which is part of a **study on mapping opportunities and challenges for micro and small enterprises in offering their employees up- or re- skilling opportunities** commissioned by the European Commission – Directorate-General Employment, Social Affairs & Inclusion (EC – DG EMPL) to the Centre for European Policy Studies (CEPS).

Micro and small enterprises are central in the economy of the European Union. They represent more than 98% of all EU non-financial business sector enterprises and generate more than one third of overall value added and half of total employment in the EU.

Micro and small enterprises can play a pivotal role in offering education and training to a substantial share of workers based in the EU. Nevertheless, empirical evidence shows a negative correlation between company size and employees' rate of participation in learning activities, as smaller enterprises faces major challenges when trying to provide education and training opportunities to their employees.

A few definitions follow for clarity:

- **Micro and small enterprises:** any enterprise with less than 10 employees (micro) and between 10 and 49 employees (small)
- **Up-skilling:** the process of developing new skills, strengthening the set of existing skills. Often, it refers to employed people. In the scope of this study, it refers to activities for adults, who concluded their education and are already in the labour market, not young adults/students etc.
- **Re-skilling:** the process of developing new skills, with the underlining intention to change the set of existing skills. Often, it refers to unemployed people. In the scope of this study, it refers to activities for adults, who concluded their education and are already in the labour market, not young adults/students etc.
- **Education and training activities:** any activity aimed at increasing skills that are related to the job. These activities include **formal education**, provided by public organisations or recognised private bodies (ex: university courses), **non-formal education and training**, institutionalised, intentional and planned by any education provider (ex: workshops, private lessons, etc.), and **informal learning**, which is any form of learning that are intentional or deliberate but not institutionalised (ex: all kinds of events or collaborations that deliver learning for the job)
- **Skill:** ability to apply knowledge and use know-how to complete tasks and solve problems. They can be described as cognitive (involving the use of logical, intuitive and creative thinking) or practical (involving manual dexterity and the use of methods, materials, tools and instruments). Examples: writing, use digital tools, use specific machineries, foreign language, work in team, customer care
- **Low-qualified workers:** workers who have completed a lower secondary level of education or below (ex. No education, Primary schools, Middle schools)

This study aims to develop a sound understanding of what are challenges and opportunities regarding education and training in micro and small enterprises, **as well as to identify good practices and policy options, to inform policies directed to micro and small enterprises at EU level.**

Please be aware that the information provided during this interview will be used as an input for the final report and presentation of the study, but anonymously so. For this purpose you are asked to sign a consent form that will be kept as part of project's documentation but not shared outside the project team.

Questionnaire for the semi-structured interview with national/regional authorities and other stakeholders

Eligible respondents:

- *Employee representative*
- *Employers representative*
- *Government representative (national, regional or local authorities)*
- *Representative of education or training institution or organisation*
- *Representative of PES*
- *Academic expert*

Structure of the interview

The following paragraphs describe the content of the interview. Overall, the interview includes 20 main questions. Some may not be relevant to your case and thus will be skipped.

As a first step, you will be asked to provide an overview of your/your organisation's work in the field.

Part 1 – Overview of up and re-skilling context in the country (6 questions)

This section includes questions that are aimed to gain a general knowledge of the framework for up and re-skilling, in particular in small and micro enterprises, in each country and to identify policies beyond those already identified in desk research and by country experts ex-ante

Part 2 – Focus on identified policies: POLICY X = policy(ies) identified for the country either through desk research and throughout other interviews (9 questions)

This section includes questions that are aimed to gain in-depth knowledge on certain policies to be analysed as good example of policy for up- and re-skilling. It explores in detail the policies identified for each country through desk research and/or throughout other interviews

Part 3 – Good examples of policy and good practices for up and re-skilling (2 questions)

This section includes questions to identify examples of good policies as well as good practices in micro and small firms for up- and re- skilling, asking you to provide details

Part 4 – Existing resources for policy makers and stakeholders (1 questions)

This section include on question for you to suggest references for existing practical guidance resources for policy makers and stakeholders to get involved in up and re-skilling.

Part 5 – Additional remarks and further contacts (2 questions)

This sections includes closing questions, to offer you the opportunity to complement the interview with additional remarks and give us further contacts and information to follow-up on your interview.

[Any of your views, insights and thoughts are welcome, but also feel free to skip questions that are not relevant for you, as well as to add other information you consider important related to a question or in general]

(Q0) Please give a brief overview of what you/your organisation do and of your/your organisation's involvement in the field of up- and re-skilling, in particular for micro and small enterprises, if applicable

Part 1 – Overview of up and re-skilling context in the country (6 questions)

[Aim: to gain a general knowledge of the framework for up and re-skilling, in particular in small and micro enterprises, in each country and to identify policies beyond those already identified in desk research and by country experts ex-ante]

(Q1) Is there a general awareness about up- and re- skilling in your country? To what extent? Please describe the level of awareness considering policy makers, business sector and general public (i.e. individuals).

(Q2) Is there any specific aspect of up- and re- skilling to which particular attention is dedicated in your country? (e.g. up-skilling or re- skilling, specifically for whom, skills for unemployed people, digital skills, soft skills, continuing vocational/professional training, internships, etc.)

(Q3) Who are the actors mainly engaged in up- and re-skilling and how? (e.g. national government/ministries, regional or local authorities, PES, social partners, private enterprises both as beneficiaries or training providers, individuals, education and training institutions, etc.)

(Q3.1)

[Select for which is/are relevant for each stakeholder, while these are all applicable for academic expert]

- *Can you describe the government action in this field? Please specify to which government level(s) and specific government bodies you are referring to*
- *Can you describe the action of PES in this field? Feel free to refer to other public centres that also address up and re-skilling in your country*
- *Can you describe the action of employers'/business associations in this field?*
- *Can you describe the action of trade unions or other workers' associations in this field?*
- *Can you describe the role of education or training institutions or organisations in this field?*

(Q4) What are the main barriers for provisions and participation in education and training in micro and small enterprises in your countries? Can policy actions or private initiatives help to overcome these barriers? Why? How? Please provide an example, if possible

(Q5) Is there any factor that is specific to micro and small enterprises that can be exploited to encourage provision and participation in education and training in these enterprises? Can policy actions or private initiatives help to do so? Why? How? Please provide an example, if possible

(Q6) What government measures are in place to support up and re-skilling for both enterprises and individuals? To what extent they answer to the existing needs? Please mention at least two, if you can, and give a brief description of how these work in practice (e.g. objectives, actors involved, main beneficiaries).

(Q6.1) What do these policies do, among the following? Select one or more options from below and explain how:

- Stimulate employers to provide or promote participation in education and training (e.g. financial incentives to firms, networks of firms for economy of scale)*
- Stimulate employees to participate in education and training (e.g. financial incentives to people, training leaves)*
- Improve information for providing and participating in education and training (e.g. awareness campaigns, Human Resources Management Support), including improvement of skills validation*
- Remove supply constraints (e.g. cooperation of firms, development of tailored training), including e-learning opportunities*

(Q6.2) How are these financed? Please specify role of public funds, employers, employees and social partners' contributions or a combination of these.

(Q6.2.1) Are these entirely or partially financed by EU funds? If yes, explain how and which one(s).

(Q6.2.2) Is the EU funding used in the framework of a long-term policy on up and re-skilling? Please describe.

[This is to make sure that interviewees do not mention only standalone projects that are only based on EU funds]

(Q6.3) Have these measures been evaluated? How? What is their impact and overall results? How many beneficiaries (firms and/or individuals) have been involved? Please provide an estimate and refer to existing documentation if available.

(Q6.4) What are their main strengths and weaknesses of these policies?

(Q6.5) Are these measures specific for small and micro enterprises? If not, are there any measures specific to micro and small enterprises in your country?

(Q6.5.1) If not, do policies for up- and re-skilling manage to involve small and micro enterprises anyways? To what extent? Why? How?

(Q6.5.2) What do you think could be done to increase involvement of micro and small enterprises in policies for up- and re- skilling?

(Q6.6) Are these measures specifically dedicated to low-qualified people (either employed or unemployed)? Or are there any measures specifically for low-qualified people?

(Q6.6.1) If not, do policies for up- and re-skilling manage to involve low-qualified people anyways? To what extent? Why? How?

(Q6.6.2) What do you think could be done to increase involvement of low-qualified people in policies for up- and re- skilling?

Part 2 – Focus on identified policies: POLICY X = policy(ies) identified for the country either through desk research and throughout other interviews (9 questions)

[Aim: to gain in-depth knowledge on certain policies to be analysed as good example of policy for up- and re-skilling. This section is to explore the policies identified for each country through desk research (see interim report and supported documents for country experts for task 4) and/or by the country expert her/himself, through their own background knowledge of the topic or during the interviews for task 3 and 4 (e.g. policies that are mentioned several times during the interviews in task 3 and 4)]

(Q7) What does POLICY X do, among the following? Select one or more options from below and explain how:

- Stimulate employers to provide or promote participation in education and training (e.g. financial incentives to firms, networks of firms for economy of scale)*
- Stimulate employees to participate in education and training (e.g. financial incentives to people, training leaves)*
- Improve information for providing and participating in education and training (e.g. awareness campaigns, Human Resources Management Support), including improvement of skills validation*
- Remove supply constraints (e.g. cooperation of firms, development of tailored training), including e-learning opportunities*

(Q8) How, when and why POLICY X was developed, what was the background? Please provide an overview of the main objectives and problems addressed by POLICY X

(Q9) Which body(ies)/institution(s) is responsible for its implementation and what other actors are involved in its implementation? How? Please provide an overview of how POLICY X works in practice

(Q9.1)

[If relevant to the specific stakeholder]

- *How is you/your organisation/institution involved in this policy? Any specific role? Please elaborate*

(Q10) Who are the main target groups and beneficiaries of POLICY X? Can you provide an estimate of how many beneficiaries (firms and/or individuals) are involved? To what extent, if any, they are involved in policy design and implementation?

[Note if they mention micro and small enterprises and/or low-qualified]

(Q11) How is POLICY X financed? Please specify role of public funds and at which level (national, regional, local), employers, employees and social partners' contributions or a combination of these.

(Q11.1) Is it entirely or partially financed by EU funds? If yes, explain how and which one(s).

(Q11.2) Is the EU funding used in the framework of a long-term policy on up and re-skilling? Please describe.

(Q12) Has POLICY X been evaluated? How? What is its impact and overall results?

(Q13) What do you think are the main strengths and weaknesses of POLICY X in facilitating provision and participation of education and training?

(Q13.1) Is there any beneficial aspects specifically for micro and small enterprises, even if POLICY X is not specifically dedicated to micro and small enterprises? What is this?

(Q13.2) Is there any specific beneficial aspect for low-qualified people, even if POLICY X is not specifically dedicated to low-qualified people? What is this?

(Q14) Do you think that POLICY X is a good example of policy for up- and re- skilling, in general and in particular for micro and small enterprises? Why?

(Q15) Do you think POLICY X can be up-scaled or replicated in other contexts (e.g. country, sectors)? Why? How?

Part 3 – Good examples of policy and good practices for up and re-skilling (2 questions)

(Q16) Can you provide any (other) good example of policy for up- and re- skilling in which your organisation is/was involved or that you are aware of?

(Q16.1)

[If policies mentioned here were not discussed earlier – follow up with additional questions]

if yes, please describe such good example of policy for up- and re-skilling and why you consider it as such.

(examples of follow-up questions: how does it work? By whom was/is it implemented? when and why was/is it implemented? Is it specifically dedicated to micro and small enterprises? how successful was/is it? How many firms/individuals benefit from it? Is there any follow-up or upscale?)

(Q17) According to your experience, can you provide any example of good practices in micro and small companies in providing or promoting participation in education and training?

(Q17.1) if yes, please describe these good practices and why you consider them as such. Also provide a reference if possible (e.g. document, website or contact)

(examples of follow-up questions: how does it work? By whom was/is it implemented? when and why was/is it implemented? Is it specifically dedicated to micro and small enterprises? how successful was/is it? Is there any follow-up or upscale?)

Part 4 – Existing resources for policy makers and stakeholders (1 question)

(Q18) Can you suggest any document, database, toolkit/practical guide, website that policy makers and stakeholders, including companies, can consult to improve their engagement in up- and re-skilling? If yes, please provide a reference or a link.

Part 5 – Additional informational and further contacts (2 questions)

(Q19) Would you like to add any other information that was not covered during the interview and you feel is important for the topic? any closing remarks?

(Q20) Do you have any relevant contact (e.g. enterprises, providers of education and training, public authorities involved in education and training programmes, experts) to share with us, so that we can contact them for a similar interview?

- *Could you suggest any website or material that we should consult as follow-up from your interview (especially with reference to POLICY X and practical guidance tools for micro and small companies)?*

ANNEX 2: COUNTRY REPORTS

Submitted as a separate document

“Study on mapping opportunities and challenges for micro and small enterprises in offering their employees up- or re- skilling opportunities - Vol. 2, Country reports”

[<http://ec.europa.eu/social/BlobServlet?docId=22765&langId=en>]

ANNEX 3: RESOURCES FOR STAKEHOLDERS

A3.1 Repository of existing resources

The desk research has led to produce a repository of existing resources for policy makers and other stakeholders involved in up- and re- skilling. The repository is not limited to academic and policy literature, but it is instead aimed at covering also databases, web resources and any other type of information that is relevant to policy makers and stakeholders. The repository has been continuously populated with additional relevant sources encountered the study. In particular, the survey and the interviews provided specific examples of best practices, experiences and programmes at private and public level in the countries selected for further investigation. Therefore, practices and examples, whenever referred to a web source, have been included in the repository. The repository is presented in an excel file, so that is easier to navigate through, based on different categories of resources, and to export the information needed in other formats. Each line represents a single resource entered in the repository, for which several pieces of information are available in columns.

Namely, the first columns contain the “**identifiers**”, such as the author, year, title and link to access the resource. These columns are ordered in such way to facilitate the export of a selection of resources to prepare the skeleton of a bibliography or a reading list, according to the most common referencing styles (Author, Year, Title). The link, which can also be exported, provides ready access to the resource both for consultation and for retrieving additional publication details of the resource.

After these, the other columns are “**describers**” of the resource, so that the users of the repository can browse it and select sources that better respond to their needs without having to access and open all of them. In turn, the describers are divided into columns that give information about the content, to check for their relevance to users, and columns that give information on the possibility to access the resource by users.

First, a short description of the resource and its content is reported, to allow for a synthetic overview. Apart from this column, other columns to describe the resource can be operated as filters, as explained below. The column on **keywords** contains the words that are representative of the content of the resource, up to five words. However, to make the list of keywords meaningful, coherent and comprehensive, rather than extremely long and fragmented, the overall list has been prepared and defined based on the different dimensions of up- and re-skilling tackled during the study. The list of keywords is only available in English. With the list of keywords available in the repository, it allows for selecting those resources that address specific aspects of up- and re-skilling. The column on type of resource describes the nature of the resource and allow for filtering resources accordingly. The list of categories includes research paper, policy document, legislation, country report, press article, project deliverable, website, database. If the users are interested only in data, for example, they can select only the last category. The column on country coverage, similarly, can help identify resources that are at EU level, beyond, or that look specifically at one country or a group of countries. The last two columns are describers that give information about the possibility for users to access the document and can also operate as filters in the repository. The first one reports the language in which the resource is available. Finally, a column is dedicated to indicating whether the resource is open source or not. Given the aim of the repository, to facilitate access to policy makers and stakeholders, open access sources are given priority in the repository.

The repository is designed and structured to be easily updated and enriched with additional resources, even beyond the end of the project, as knowledge and experience on up- and re-skilling develops.

The repository is made available on the EPALE platform.

[available soon]

***A3.2 Leaflet on challenges and opportunities of up-
and re-skilling in micro and small companies***

Submitted in a separate document

[available soon]

***A3.3 Brochure of good practices for micro and small
companies***

Submitted in a separate document

[available soon]

A3.4 Brochure of good examples of policies

Submitted in a separate document

[available soon]

***A.3.5 Guidance package for micro and small
enterprises***

Submitted in a separate document

[available soon]

***A.3.6 Guidance package for intermediary
organisations***

Submitted in a separate document

[available soon]

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