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Towards an improved adult learning monitoring framework.

Revisiting the available data and indicators

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Abstract

Adult education is recognised as an essential driver of economic growth and social development within the European Union and has been a political priority for nearly two decades. It is deemed to play a pivotal role to create better jobs in Europe, improve quality of life and promote individual development, personal fulfilment and active citizenship.

A number of Commission initiatives in the recent past have underscored the importance of adult learning. In particular, the European Pillar of Social Rights, proclaimed and signed by the Council of the EU, the European Parliament and the Commission during the Gothenburg Social Summit for fair jobs and growth announced the right to quality and inclusive education, training, and life-long learning as its very first principle. In addition, as part of the Education and Training 2020 (ET2020) strategy, EU Member States have agreed on a common target to increase participation in adult learning in the EU.

Fostering adult learning is now more important than ever because of three concurrent factors: technological change, population ageing and global migration flows.

Technological change, and in particular automation and digitisation, affecting the world of work by altering or erasing certain tasks, often the most repetitive and standardised, and creating new ones. Adult and learning is essential to ensure that workers, and especially older ones, are equipped with the necessary skills throughout their lifetime, so that they can thrive in a constantly changing labour market.

Similarly, in the context of population ageing, adult learning and continuing education become crucial as they can provide older people with the capabilities they need to stay in work well into their sixties and seventies.

Finally, adult learning has a central role to play in a context of international migration, since it can be a tool to support the linguistic, social and cultural integration of immigrants. .

The "Education and Training 2020" (ET 2020) strategic framework is a crucial tool to monitor participation in adult learning; it set the average participation rate in adult learning at 15% of the population aged 25-64 by 2020. Yet, so far, only a few Member States have reached the benchmark. Furthermore, to underpin the adult learning target and support its monitoring within the European Semester, in 2018 Member States approved a comprehensive framework, developed by the Commission, for benchmarking adult skills and adult learning systems in the EU,.

This report aims to reflect on the performance of the existing ET 2020 benchmark on adult participation in learning, by comparing cross-country patterns of participation using different sources of data. In particular, this report provides empirical evidence on participation in adult learning, with a specific focus on different subgroups, such as older people or others belonging to groups that are traditionally excluded from learning, which are identified as a priority by the European Council's "Renewed European Agenda for Adult Learning" (EEAL). The report also discusses the strengths and weaknesses of the current data source used to create the indicators, i.e. the EU Labour Force Survey (EU-LFS) and extended coverage of adult learning in the EU-LFS as of 2022, enabling improved indicators, and further introduces the possibility to create other indicators based on different, complementary data sources, such as the Adult Education Survey (AES), the Continuing Vocational Training Survey (CVTS), the OECD Survey on Adult Skills (PIAAC), and others.

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1 Introduction

Adult learning refers to the participation of adults in learning, that is, all learning activities undertaken throughout the working life with the aim of improving knowledge, skills and competences, within personal, civic, social or employment-related perspectives (i.e. lifelong learning). ⁽¹⁾

Adult education is recognised as an essential driver of economic growth and social development within the European Union and has been a political priority for nearly two decades. The 2006 European Commission's Communication 'Adult learning: It is never too late to learn' and the subsequent resolution by European Parliament underline the importance of adult learning to create 'better jobs in Europe, improve quality of life and promote individual development, personal fulfilment and active citizenship' (p. 5).

Fostering adult learning is now more important than ever because of three concurrent factors: technological change, population ageing and global migration flows.

Technological change, and in particular automation and digitisation, affecting the world of work by altering or erasing certain tasks, often the most repetitive and standardised, and creating new ones. Adult and learning is essential to ensure that workers, and especially older ones, are equipped with the necessary skills throughout their lifetime, so that they can thrive in a constantly changing labour market.

Similarly, in the context of population ageing, adult learning and continuing education become crucial as they can provide older people with the capabilities they need to stay in work well into their sixties and seventies.

The JRC, in collaboration with DG employment, is carrying out a series of studies to build up evidence on adult education, as well as work-based learning (Flisi, 2019). In addition, given the increasing complexity in the types of tasks workers are required to carry out and the parallel upskilling needs, the JRC is working on the formulation of a unified framework for tasks, skills and competences (Rodrigues and Fernández-Macías 2020; Fernández-Macías and Bisello 2020). This includes a pilot programme on the compilation of data on tasks at the national level leading to the development and testing of a tasks questionnaire (Cirillo and Guarascio 2020). This report, in particular, provides empirical evidence and a conceptual discussion on monitoring participation in adult learning in Europe. So far, the main tool to monitor how Member States have fared in terms of participation in adult learning has been the indicator identified for the Education and Training 2020 (ET 2020), which sets the benchmark at an average of at least 15 % of adults should participate in lifelong learning. However, this report will present empirical evidence to show why the current benchmark is inadequate, or at least incomplete to measure progress if we are to achieve the goals established by the strategy, such as the need to improve access to high quality learning opportunities for all adults, regardless of their gender and family circumstances, with a particular emphasis on less traditional groups of learners, such as older people. It should be mentioned that this report is in line with other research in the field, such as the OECD study (EC-OECD, 2019) according to which there is significant room for improving the coverage of adult learning systems.

To sum up, the aim of this report is twofold:

1. To reflect on the performance of the existing ET 2020 benchmark on adult participation in lifelong learning, by comparing cross-country patterns of participation using different sources of data.
2. To discuss the potential use of alternative data sources to select a series of complementary indicators of adult learning in future monitoring exercises.

1.1 Milestones in EU Adult Education and Training policy

The Lisbon European Council in March 2000 was the turning point for the development of adult and lifelong learning policy in the EU.

The Education and Training 2010 programme was set up in 2002, when, in a thoughtful attempt to strengthen the European dimension of national educational policies, an expert **Standing Group on Indicators and Benchmarks (SGIB)** was established.

⁽¹⁾ Eurostat Glossary – Statistics Explained: https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Lifelong_learning.

The SGIB aimed to “give advice on the use of indicators as tools for measuring progress towards the common objectives”. By July 2003, the Group proposed up to 29 indicators in the field of education (DG-EAC 2003), spread across the 8 Lisbon objectives. Identifying and developing indicators proved both technically and politically challenging, as the lack of relevant and comparable data caused difficulties in some areas; for this reason, the European Council and the European Commission emphasised the need to improve the quality and comparability of existing indicators (Council of the EU 2004, p32). As a consequence, long-term activities/strategies were scheduled (3 or more years) to generate surveys that collected the information required for those indicators which lacked data at national or international level (CEC 2004, p. 4.).

In May 2003, the European Council agreed:

to establish a series of reference levels (benchmarks) of European average performance, while taking into account the starting point of the individual Member States (MS) which will be used as one of the tools for monitoring the implementation of the “Detailed work programme on the follow-up of the objectives of education and training systems in Europe”.

The overall idea was to enable the European Commission and the Member States (MS) to:

- (a) underpin key policy messages;
- (b) analyse progress both at the EU and national levels;
- (c) identify good performance for peer review and exchange; and
- (d) compare performance with third countries. (CEC 2008, p. 10)

In 2009, through the strategic framework for education and training (ET 2020),(²) EU countries identified four common objectives to be addressed by 2020: (1) make lifelong learning and mobility a reality; (2) Improve the quality and efficiency of education and training; (3) promote equity, social cohesion, and active citizenship; and (4) enhance creativity and innovation, including entrepreneurship, at all levels of education and training.

Up to eight targets -or benchmarks- were identified with the core indicators covering the whole learning continuum from pre-school to adult education, teachers' professional development and investment in education and training (the main six are reported in Table 1).(³) Since 2004 the Commission has published several reports on the progress made by these indicators of education with the visualization tool produced by DG JRC and available at <https://crell.jrc.ec.europa.eu/ET2020Indicators/> being an important landmark (see also DG EAC yearly flagship publication “Education and Training Monitor” and European Commission, 2012).(⁴)

(²) https://ec.europa.eu/education/policies/european-policy-cooperation/et2020-framework_en

(³) The ET 2020 framework includes two more benchmarks on “learning mobility in higher education” and in “initial vocation and educational training” (<https://ec.europa.eu/eurostat/web/education-and-training/eu-benchmarks>), but since there are only partial or no data available, they are left out of the main table.

(⁴) Flisi, et al., (2014) provides more detailed information on how the different benchmarks are collected when data becomes available, as well as information regarding their sub-indicator. For Adult participation in lifelong learning, the only visualization tool available is from 2014 at https://crell.jrc.ec.europa.eu/ET2020_2014/index.htm .

Table 1: Targets in education and training (ET 2020 Indicators)

			Current EU28⁽⁵⁾	Target	
Headline target	1	Reduce the share of Early leavers from education and training	The share of the population aged 18-24 fulfilling the following two conditions: (1) the highest level of education or training attained equals International Standard Classification of Education (ISCED) level 0, 1, or 2; (2) respondents declared not having received any education or training in the four weeks preceding the survey. Data comes from the EU Labour Force Survey.	10.6 % (EU-LFS 2018)	Below 10 % (2020)
	2	Increase Tertiary education attainment	The share of the population aged 30-34 years who have successfully completed university or university-like (tertiary-level) education that equals International Standard Classification of Education (ISCED) level 5,6, 7 or 8. Data comes from the EU Labour Force Survey.	40.7 % (EU-LFS 2018)	At least 40 % (2020)
	3	Increase participation in Early childhood education and care	The share of the population aged four to the age when the compulsory education starts who are participating in early education. Data comes from the UOE data collection.	95.4 % (UOE 2017)	95 % (2020)
Other targets	4	Reduce Low achievement in reading, maths and science	The share of 15-year-olds failing to reach level 2 in reading, mathematics and science as measured by the OECD's Programme for International Student Assessment (PISA).	Reading: 19.7% (PISA 2015) Maths: 22.2% (PISA 2015) Science: 20.6 % (PISA 2015)	15 % (2020)
	5	Increase Employment rate of recent graduates	The share of employed people aged 20-34 having successfully completed upper secondary or tertiary education 1 to 3 years before the reference year of the survey and who are no longer in education or training. Data comes from the EU Labour Force Survey.	81.6% (EU-LFS 2018)	82 % (2020)
	6	Increase Adult participation in lifelong learning	The share of the population aged 25-64 who stated that they received formal or non-formal education or training in the four weeks preceding the survey. Data comes from the EU Labour Force Survey.	11.1 % (EU-LFS 2018)	15 % (2020)

Source: Authors' re-elaboration of data from the Education and training Monitor, 2019.

As shown in Table 1, the ET 2020 gave special attention to adult participation in lifelong learning with the approval of an indicator that collected information on the share of participants in adult learning using the annual EU Labour Force Survey (EU-LFS) as their main data provider.

The ET 2020 framework is implemented through a variety of tools and instruments, including working groups, peer learning activities, peer counselling, and above all the Annual Education and Training Monitor reports on Member States' progress towards achieving the ET2020 objectives and benchmarks. The analysis carried out in these reports feeds into the evaluation of broader socio-economic progress by Member States within the framework of the European Semester.

Moreover, in order to go beyond the first snapshot provided by the six operational ET 2020 benchmarks, each indicator is broken down by standard JAF sub-groups: sex (male/female) and country of birth (foreign-born/native-born) and a standard set of about five quantitative sub-indicators per benchmark to shed light on the overall country performance, in order to better explain the picture provided by the main indicator. More specifically, the selection of the sub-indicators has been carried out with the purpose of: (a) Hinting at possible policy levers to be identified with additional, country-specific information; (b) Assessing the broader context (socio-demographic characteristics, labour market and economic conditions, etc.), in order to evaluate to what extent the country-specific situation affects the performance in terms of the benchmarks; (c) Shedding light on closely related domains of interest and; (d) Explaining the behaviour of the benchmark performance in the medium and long term. It is also worth pointing out that data availability and comparability across countries, was another key factor driving the selection of the sub-indicators. More information on the sub-indicators chosen for each benchmark can be found at Flisi, et al., (2014)

⁽⁵⁾ The UK is still included in average figures.

To emphasise the importance of adult learning, in 2011, the European Council adopted the “Renewed European Agenda for Adult Learning” (EAAL).⁽⁶⁾ The EAAL defines the focus for European cooperation in adult education policies for the period to 2020 and highlights the need to significantly increase adult participation in formal, non-formal and informal learning whether to acquire work skills, for active citizenship, or for personal development and fulfilment. The adoption of the New Agenda was partly motivated by the acknowledgement that adult learning was “the weakest link in national lifelong-learning systems” and that participation had failed to increase, mainly due to low motivation and a lack of care facilities to help women and men combine family and work responsibilities (Council resolution 2011/C 372/01, page 2). Overall, the objective of the EAAL is to improve access to high quality learning opportunities for all adults, regardless of their gender and family circumstances; a particular emphasis is also put on less traditional groups of learners, such as older people, and on the importance of involving employers and promoting workplace learning.

After taking stock of the findings of the 2015 Education and Training Monitor, the European Council and Commission produced a report highlighting the crucial role of adult learning in up-skilling, re-skilling, active citizenship and social cohesion. Given the persistent low levels of basic skills in adults, the report stressed the importance of implementing the Renewed European Agenda for adult learning (EAAL) and stated that priorities should include more effective governance, significant increases in supply and take-up, more flexible provision, broader access, closer monitoring and better quality assurance.⁽⁷⁾

Furthermore, to support the analysis of adult learning systems across the Member States, the Commission developed and in 2018 Member States endorsed a comprehensive framework for benchmarking adult skills and learning systems across EU Member States. This benchmarking framework belongs to the broader work on benchmarking in the labour market and social domain that was initiated in 2015 following the 2015 Five Presidents' Report, the Commission Communication of October 2015 “On steps towards completing EMU”⁸, and the 2017 Commission Communication on “Establishing a European Pillar of Social Rights”⁹. It supports the monitoring of the performance of adult learning systems as well as the measures taken by Member States to increase participation in adult learning in line with the agreed target (see more details in the Annex).

The ET 2020 adult learning benchmark is a crucial indicator to monitor participation in adult learning; however, it may not be sufficient to assess the achievement of most of the objectives set out by the agenda, as the remainder of this report is going to show.

Given that it is now 2020, the time to critically assess the current benchmark has come, so this report will provide empirical evidence on participation in adult learning, with a specific focus on different subgroups, such as older people or others belonging to groups that are traditionally excluded from learning, which are identified as a priority by the EAAL. The report also discusses the strengths and weaknesses of the current data source used to create the indicators, i.e. the EU-LFS, and further introduces the possibility to create other indicators based on different, complementary data sources, such as the Adult Education Survey (AES), the Continuing Vocational Training Survey (CVTS), the OECD Survey on Adult Skills (PIAAC), and other.

1.2 A Renewed European Agenda for Adult Learning: Objectives and Actions

It is widely accepted that the accumulation of human capital is not something that takes place only during the early years of an individual's life, but in a process of lifelong learning and that adult participation in lifelong learning must be monitored with adequate indicators. So far, only a few member states have reached the 15% participation rate benchmark, as can be concluded from the low overall EU average shown in table 1. Key to monitoring is to properly identify meaningful indicators which are easily understood by those who seek to use the information they provide. More importantly, it is necessary that indicators are linked to specific objectives and/or actions.

Regarding this matter, the Council's Resolution on a Renewed European Agenda for Adult Learning and the Commission's Communication, Rethinking Education⁽¹⁰⁾ adopted in 2012 emphasised the role of adult learning to respond to economic challenges facing Member States and the need for an active Adult Learning Policy. The Council resolution recognises the “substantial contribution which adult learning can make to economic development — by strengthening productivity, competitiveness, creativity, innovation and entrepreneurship” and urges Member States to take action to support it.

⁽⁶⁾ [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011G1220\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011G1220(01)&from=EN).

⁽⁷⁾ [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52015XG1215\(02\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52015XG1215(02)&from=EN).

⁽⁸⁾ COM(2015) 600 final, <https://ec.europa.eu/transparency/regdoc/rep/1/2015/EN/1-2015-600-EN-F1-1.PDF>.

⁽⁹⁾ COM(2017) 250 final, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2017:250:FIN>.

⁽¹⁰⁾ Commission Communication Rethinking education: investing in skills for better socio-economic outcomes http://ec.europa.eu/education/news/rethinking/com669_en.pdf.

Investment in education and training beyond initial/compulsory education is critical to increase participation in adult learning so as to: (1) upgrade the skills of working age individuals and increase the economy's overall skill level; but also (2) contribute to non-economic objectives such as personal fulfilment, improved health, civic participation and social inclusion.

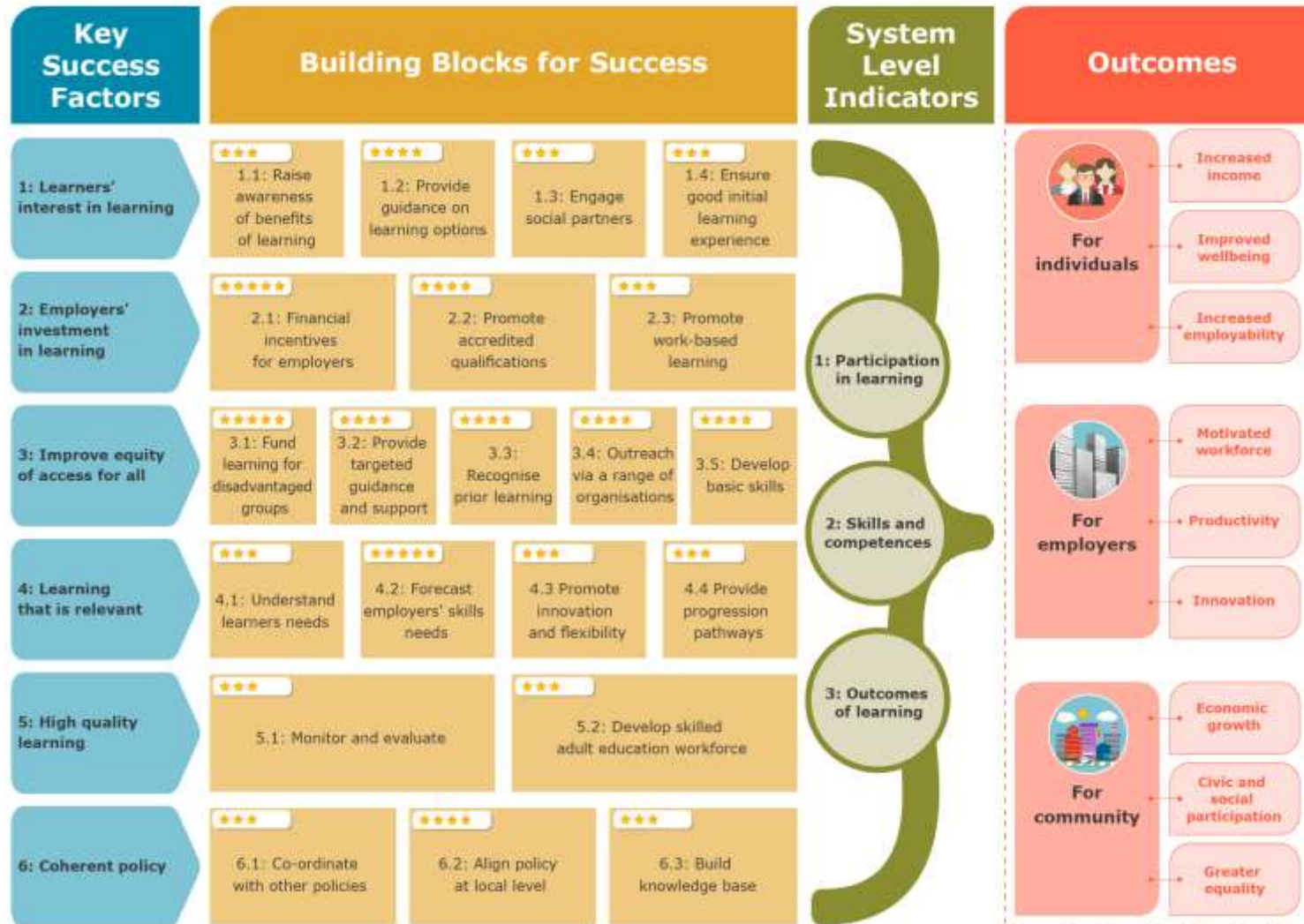
By re-elaborating some of the key concepts expressed in the most recent European Commission report on adult learning (Molyneux et al, 2019), this report suggests that policy goals should aim at:

1. **Enhancing public/private investment in adult learning.** Participation in adult learning is strongly linked to the availability of government funded learning opportunities, and the amount of government investment in learning. Nonetheless, industries and individuals should also be encouraged to invest. Still public intervention is needed to ensure an adequate supply of trainers and instructors;
2. **Facilitating Access:** in particular, Member States should offer adults with a low level of skills access to education and training so that they can acquire minimum level of literacy, numeracy and digital competence; and/or acquire a wider set of skills, knowledge and competences, relevant for the labour market and active participation in society;
3. **Effectively updating knowledge and raising skills.** Provision of employment- and work-related training so that individuals can acquire the necessary skills and key competences to succeed in economic and social life (non-economic rewards).
4. **Reducing inequalities:** Member states should identify priority target groups by taking also into account gender, diversity and various sub-groups in the targeted population. Greater investment on under-represented groups is important since not only it reduces inequalities in accessing learning, but also increases overall adult participation in learning. This objective may request a proper account of adult learning needs, as well as barriers to participation of those under-represented;
5. **Deliver high quality adult learning.** Recognising competencies and skills through an appropriate certification system. Moreover, in the face of increasing informal learning, mechanisms need to be put in place to foster self-directed and other informal ways of learning with the appropriate recognition systems.

Previous work undertaken by the Directorate General for Employment, Social Affairs and Inclusion (European Union, 2015) identified six key factors for successful adult learning policies, related to these policy goals: 1. Improve learners' disposition towards learning; 2. Increase employers' investment in learning; 3. Improve equality of access for all; 4. Deliver learning that meets the needs of employers and learners; 5. Deliver high quality adult learning; 6. Co-ordinate an effective lifelong learning policy. Based on a **policy model** which presents each policy goal ('key success factor'), as well as the key elements that would ensure its successful implementation ('building blocks for success') and then the resultant output and outcome they built up a conceptual framework for effective adult learning (see Figure 1) ⁽¹⁾ .

⁽¹⁾ For a detailed description how the framework was devised and the evidence underpinning it, please see "An in-depth analysis of adult learning policies and their effectiveness in Europe" European Union, 2015. .

Figure 1: Conceptual framework for the analysis of effectiveness of adult learning policies



Source: Molyneux et al, 2019; page 104.

The policy goals (objectives) to be monitored and the theoretical framework constitute then a solid basis for the definition and selection of a list of indicators for monitoring adult learning. Similar exercises have been undertaken by Borkowsky (2013) for the OECD and by the World Bank (2013). Despite the differences in how they have been shaped, these frameworks agreed upon the complexity of collecting satisfactory, comprehensive information on participation on adult learning.

In terms of data collection, several European initiatives coordinated by Eurostat and aimed at improving the coverage of lifelong education and learning activities by the European Statistical System have been implemented in the last 15 years. The primary source for monitoring adult learning is the European labour Force Survey (EU-LFS); to appreciate its potential limitations, cross country comparisons will be presented in the next section along with a discussion on the strengths and weaknesses of this data source. In addition, we will present descriptive statistics based on the EU-LFS ad hoc module on adult participation in lifelong learning carried out in 2003.

Section three looks at other data sources for monitoring adult learning, with a specific focus on the objectives mentioned above, and suggests some useful indicators. The other data sources include: The Adult Education Survey, a European Union harmonised survey on adult participation in learning activities; the Continuing Vocational Training Survey (CVTS), European Union harmonised survey on continuing vocational training in enterprises; and the Survey on Adult Skills part of the OECD's Programme for the International Assessment of Adult Competencies (PIAAC). Statistics⁽¹²⁾ from different, but comparable, education and training systems and other European surveys such as the European Community Household Panel (ECHP) and its successor the European Survey on Income and Labour Conditions (EU-SILC), but also the European Working Condition Survey (EWCS) and the European Skills and Jobs Survey (ESJS) will also be introduced and briefly analysed.

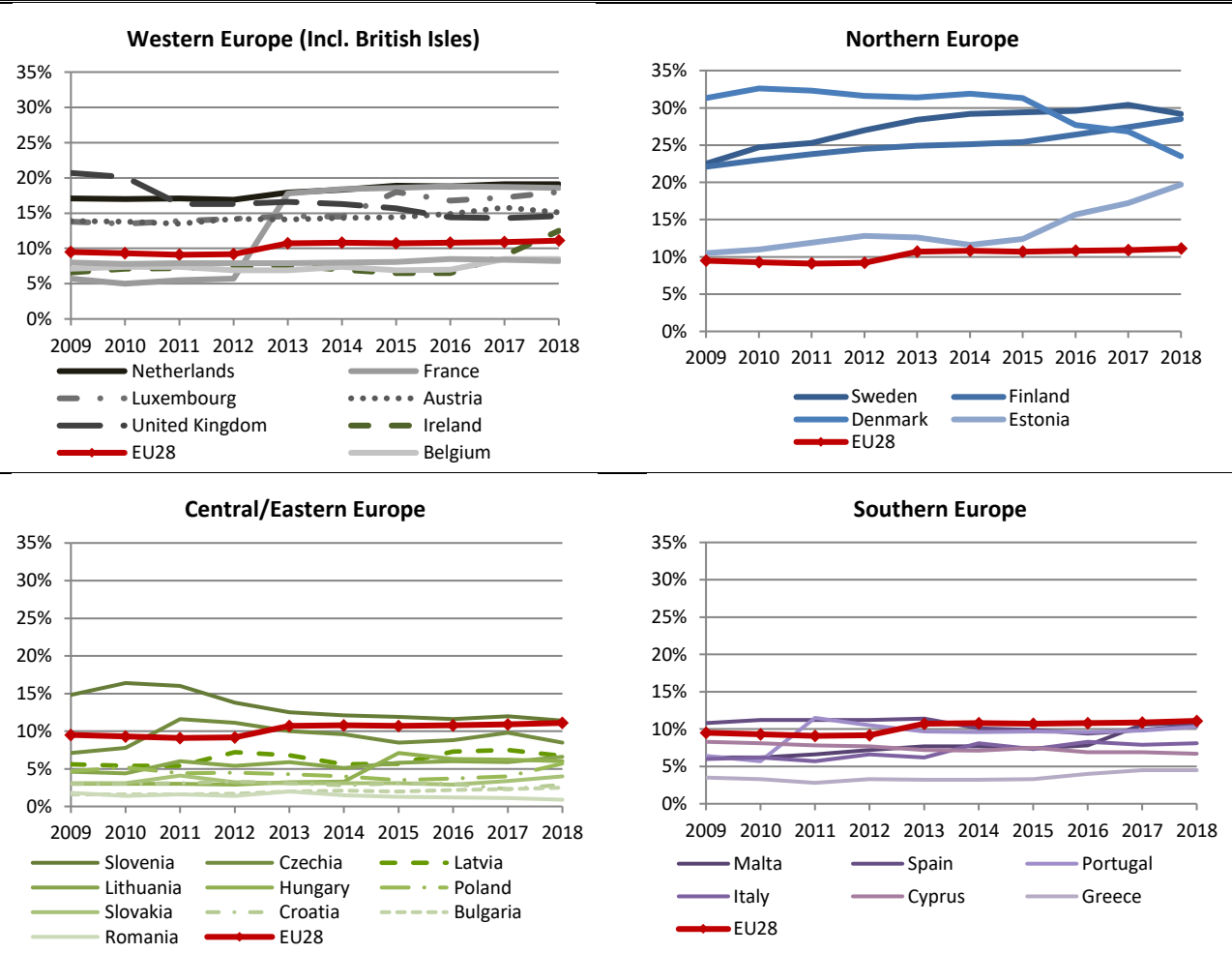
This exercise will serve as an additional piece of empirical evidence towards future developments in monitoring (and benchmarking) adult learning across the European Union.

⁽¹²⁾ These are all international statistics collected nationally in national languages. They are aggregated according to common standards and definitions to ensure comparability across Member States.

2 An examination of the ET2020 benchmark of adult participation in lifelong learning: Features, caveats and challenges

Adult learning was already a key component of the Lisbon Strategy. Reviews of available data on adult learning carried out in early 2000s revealed a lack of harmonisation and conceptual unity across Europe. In parallel with the Lisbon Strategy issued by the Council, Eurostat set out to create two task forces: the task force on measuring lifelong learning (2000-2001) and the task force on the Adult Education Survey (2002-2004). The task forces benefited from the active involvement of EU member states, as well as non-EU countries (Switzerland, Canada) and international organisations (OECD, Unesco Institute for Statistics, International Labour Office) having experience and interest in the field. (EC, 2005). The joint efforts by the Council and the task forces culminated in the adoption, among others, of the EU2010 benchmark of increasing by 2010 adult participation in lifelong learning to an average of at least 12.5 % of the adult working age population (25-64 years-old) across EU MS (CEC 2003, p.6). In May 2009, the Council raised this benchmark: “By 2020, an average of at least 15% of adults should participate in lifelong learning”. Eurostat’s European Union Labour Force Survey (EU-LFS) includes a section on participation in lifelong learning; the information collected relates to all education or training received (formal and non-formal) in the four weeks preceding the survey, whether relevant or not to the respondent’s current or possible future job. Estimates starting in 2009 are summarised in Figure 2⁽¹³⁾.

Figure 2: Participation rate of adults (aged 25-64) in education and training (last 4 weeks)



Source: Eurostat [trng_lfse_01]. Since 2006, the indicator on adult participation in learning is calculated as annual average of quarterly data. Note that the questionnaire design was substantially changed in France in 2013, hence the jump in values. Other significant breaks in time series occurred in 2011 for Czechia and Portugal, in 2015 for Luxembourg and Hungary, in 2016 for Denmark and in 2017 for Malta.

⁽¹³⁾ Please note that participation in adult education and training (last 4 weeks) is available in Eurostat since 1992 though not for all current EU Member States. For more information see online table [trng_lfse_01].

2.1 The European Labour Force Survey as the main data provider for the ET2020 benchmark on adult participation in lifelong learning.

The *EU-LFS*, administered by the different EU MS but coordinated by Eurostat, seems to fulfil three of the main requirements for monitoring any benchmark performance across EU MS, namely a high degree of comparability, country coverage of data and, most important, frequency of data availability. This means that there must be data on adult participation in lifelong learning across the EU for practically all EU countries to almost the same standards on a regular basis (e.g. yearly). EU-LFS measures are reported in Table 2.⁽¹⁴⁾

Table 2: Variables related to adult participation in lifelong learning as posed in the EU-LFS (4-weeks reference period) from 2003 onwards.

	Variable name	Question	Additional information
Formal education and training	EDUCSTAT	Student or apprentice in regular education during the last 4 weeks. Prior to 2003, formal and non-formal education were collected through the variable EUDC4WN.	Mandatory; asked to everybody aged 15 years and more; information on the level and the field also provided.
Non-formal education and training	COURATT	Did you attend any courses, seminars, conferences or received private lessons or instructions outside the regular education system (hereafter mentioned as taught learning activities) within the last 4 weeks. Prior to 2003, formal and non-formal education were collected through the variable EUDC4WN.	Mandatory; asked to everybody aged 15 years or more Information on the length, purpose, field and whether it took place during working hours is also provided.
Informal learning	None		

Source: EU Labour Force Survey Database user guide, page 28 and 29 ;
<https://ec.europa.eu/eurostat/documents/1978984/6037342/EULFS-Database-UserGuide.pdf>

While Eurostat supervises the comparability of data, each country conducts its own national LFS which retains – to a greater or lesser extent – some national characteristics. An annual report outlines the “main characteristics of the national practices” (Eurostat 2010) showing some national distinctive histories. The French LFS has functioned for several decades. It started in 1950 and was organised in 1954 as an annual survey. An extensive revision of the questionnaire of the French LFS (in use from 1 January 2013 onwards) explains the level shift break for France, which had an impact also on the EU aggregates. ⁽¹⁵⁾ The Finnish and Swedish LFS started in 1959. The Spanish LFS was launched for the first time in 1964, referencing to some quarters in each year until 1968. Between 1969 and 1974 it was biannual, but quarterly from 1975. In 1999 the survey was redesigned as a continuous survey providing quarterly results. The UK LFS survey started in 1973 as a biennial survey (not using the ILO definition of unemployment) and was redesigned in 1984 as an annual survey and from 1992 as a continuous, quarterly survey. The Belgian LFS started in 1983 as an annual survey but has been continuous since January 1999 providing quarterly and yearly results. The Greek LFS survey began in 1981 as an annual survey covering all weeks of the second quarter. It was redesigned as a continuous survey providing quarterly results in 1998.

The LFS was introduced in Eastern Europe in the 1990s. In the Czechia, Hungary and Poland was introduced since 1992, in Bulgaria, Romania, Slovakia and Slovenia in 1993, in Latvia in 1995, in Estonia in 1997, and in Lithuania in 1998 (Eurostat, 2010). In summary, each country’s LFS is regularly revised to improve methodologies at country level, but also a EU level methodological adjustment are undertaken, which generates multiple breaks in time series and impacts comparability over time.

Moreover, the LFS questionnaire follows a different approach from country to country. In fourteen countries participation is compulsory, while it is voluntary in twenty-one countries (Eurostat 2019, Annex p. 80). The response rate varies from 48.9 per cent in the UK to 100 per cent in Iceland, even though participation is voluntary in both. The average quarterly sample achieved in 2008 varied from 2,700 (Luxembourg) to 131,400 (Germany).

⁽¹⁴⁾ For more details see: <https://ec.europa.eu/eurostat/web/microdata/european-union-labour-force-survey> .

⁽¹⁵⁾ https://ec.europa.eu/eurostat/cache/metadata/en/trmq_lfs_4w0_esms.htm .

The extent of this heterogeneity and variation has sparked a long debate among practitioners on the appropriateness of the existing measure of adult participation in lifelong learning. In particular, in relation to: (i) the way the different national LFS surveys are structured and their main objective, which affects the attention dedicated to the specific issue of adult participation in lifelong learning, and therefore its quality, scope and reliability; (ii) the reference period used for the question (the 4-weeks vs. 12-months); and (iii) the types of learning that are included (e.g. formal and non-formal learning). These have been the three major concerns among users. We will devote the remaining of this section to bring further insights into these three issues.

2.1.1 Structure and objectives of national LFS surveys

Holdford and Mleczo (2011) provide an interesting insight on the potential association between high participation rates and the extent of apparent national contextualization of interview questions. One may assume that a common questionnaire is applied in all countries but this is not the case. Questions are administered in national language(s) and some adaptation to the national character of educational systems also takes place. Starting from the 2009 English versions (published on the Eurostat website for most countries), the authors reflect on the association between phrasing and reported participation rate. They identify a set of countries which poses questions on education other than formal education in the most comprehensive and inclusive way, giving detailed examples. These countries report the highest participation rates (see Figure 2): Sweden, Finland, Denmark, The Netherlands, United Kingdom, Slovenia, Austria and Estonia.

By contrast, as the degree of inclusiveness decreases and questions become brief or general, reported adult participation rates in lifelong learning significantly drop, and it is difficult to say to what extent the definition used is clear to the participants and accurately describes their educational experiences.

Moreover, in France some specificities of the questionnaire design may produce non-comparable results. There was (in 2007) no question relating specifically to education taken in a four-week period. In the French LFS, two questions strongly related to participation in adult learning were posed (“During the last three months, have you attended classes or a training course, however short?” and “Are you attending training as part of your work contract?”). From these, and supplementary questions related to the starting and ending dates of these courses, the participation rate for the four weeks preceding the interview is presumably calculated. Therefore, data always need to be interpreted with caution, especially when revisions/updates of the national questionnaires (aimed at improving the way adult learning is captured in the survey) can significantly affect EU averages.

2.1.2 The impact of using a 12-months or 4-weeks reference period and the type of education and training recoded: A short look at the 2003 LFS ad hoc module on lifelong learning. ⁽¹⁶⁾

On the one hand, the **4-weeks reference** period may be considered **appropriate for monitoring** the level and characteristics of participation in education and training – even though it was clearly thought-out to measure current participation in formal/long programmes or traditional courses and may not be as suited to measure adult learning, given the characteristics of the learning activities. However, the measure is consistent with the reference periods used most frequently for other variables in the LFS. Second, it reduces problems associated to recall bias, because it focuses on a very recent period. Finally, it corresponds to the most appropriate reference period to cover different degrees of participation in all Member States (a way between generally high levels in the Northern countries and low levels in the Southern countries) while time series are available on this basis from 1992 (with a break in 2003 see https://ec.europa.eu/eurostat/cache/metadata/en/trmg_lfs_4w0_esms.htm for further details about how this variable has been collected since 1992).

On the other hand, there are a number of reasons to question its appropriateness:

⁽¹⁶⁾ For more information on this matter, access: https://circabc.europa.eu/sd/d/32d8e3e2-d91b-4178-a0d0-0893141b570f/AL_Metadata_Section4_Dissemination_Coherence_AllSources.htm .

The 4-weeks reference period can be seen as a measure of “training events” dividing the year in blocks of four weeks. Since the calculation is an annual average of quarterly data, it may provide the same value for two different situations: for example, in **country A** 10% annual adult participation rate might correspond to the same individuals all over the year, but in **country B** this 10% annual adult participation rate per each quarter may correspond to up to 4 times the population of **country A** all over the year if different individuals are involved.

1. The 4-weeks reference period is a sort of snapshot of the situation in a given country at that moment in time. The risk of misinterpretation is high: since the variable does not measure individual paths along the year, if an individual has completed an educational program but the question is asked just a little later than 4 weeks after the completion, he/she figures as not involved in any education or training. However, if we are interested in observing the number of people participating in education and training at a particular moment, this 4-weeks reference period should work as a good tool. In other words, the 4-week reference period is an adequate measure of what could be considered as “recent exposure to adult learning”.
2. If policy interests lie in the number of persons participating in education and training in a particular moment, the indicator on adult participation in learning based on the LFS measures well the phenomenon. However if the interest is in the number of people who were involved in any education and training in a given year, an indicator covering participation over the full year (i.e. the past 12 months) might capture this better.¹⁷
3. Finally, a short reference period limits the possibilities of cross tabulations and analysis of the individual's paths, for instance, the impact of education and training on the duration of unemployment. One could argue that a short and incidentally captured activity might not increase employability of the individual. Moreover, as it concerns flexicurity and employability, the indicator based on a 4-week reference period does not fully reflect the individual perspective of accumulating relevant knowledge and competencies through education and training, and it is more difficult to assess the performance of countries on the basis of data referring to such a short reference period.

Clearly, considering a time span of 12 months is much more inclusive and tends to provide higher proportions since the likelihood of finding an individual who participated in lifelong learning in the previous 12 months is higher than the likelihood of finding an individual who only received training in the previous 4 weeks. In addition, including more individuals results in a larger sample size which also allows for the analysis of smaller population sub-groups. Overall, if we are interested in looking at general access to education and training, the 12-month reference period is a better option. In light of this, the Regulation 2019/1700 of the European Parliament and Council¹⁸ established that from 2022 onwards, the LFS will include information on participation in formal and non formal education and training in the last 12 months¹⁹.

The new indicators will be collected biennially (every two years) on even years, so in 2022, 2024 and so on. The target population will be all individuals aged 15 to 74, which will guarantee that the new measure is inclusive and representative of the overall population. The stated purpose is to collect a more comprehensive measure of participation in education and training for the calculation of an indicator on 'adult participation in (lifelong) learning' (AL). The 12 months time-frame will capture more activities and avoid seasonal effects.

The first instrument to deal with this limitation of the time span was the *ad hoc* module on lifelong learning (now adult learning) included in the LFS questionnaire in the spring 2003 EU-LFS⁽²⁰⁾. The initial outline for the *ad hoc* module on lifelong learning was developed by the task force on measuring lifelong learning in 2000. This *ad hoc* module consists of a series of questions (participation in lifelong learning, time spent in learning, etc.) prepared by Eurostat and representatives from the MS and adopted by the Employment Statistics working group. It was implemented in the EU member states (excluding Croatia) and in UK, Norway, Iceland and Switzerland.

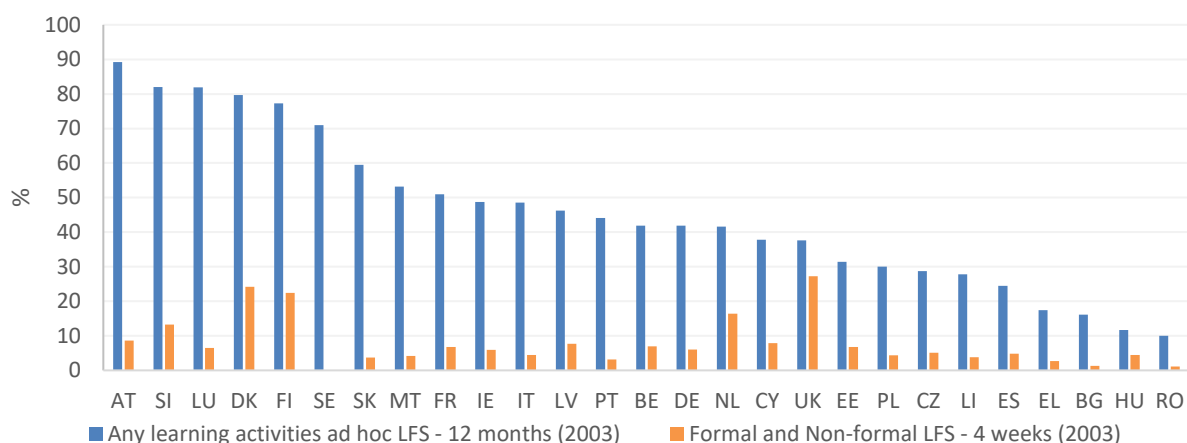
(17) For the 2016 AES, there had been a discussion “reference period = calendar year” vs “12 months prior to the interview”. There was agreement that calendar year would be methodologically better but this can only be asked if the survey is done early in the year after the reference period. In the majority of countries, AES can only be conducted in Q3 or Q4, therefore this was not an option for AES. For the quarterly LFS, the calendar year as reference year does also not make sense as interviews are conducted in all quarters.

(18) <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R1700&from=EN>

(19) Please note that “guided on-the-job training” remains excluded from non-formal education and training in the EU-LFS.

(20) The legal basis for the module is the Commission Regulation (EC) No 1313/2002 of 19 July 2002 implementing Council Regulation (EC) No 577/98 on the organisation of a labour force sample survey in the Community concerning the specification of the 2003 *ad hoc* module on lifelong learning.

Figure 3: Adult participation 'Formal and non-formal learning activities LFS – 4 weeks (2003)'



Source: Eurostat [trng_any1]; [trng_lfse_01]. A detailed description of the variables is available in Table 3.

Results reported in Figure 1 show a much greater participation in adult learning if captured from the ad hoc module than from the general LFS. As already discussed, the 12 months reference period increases the possibilities for an individual to participate in adult learning activities and highlights one of key differences in institutional setting and course duration across countries. For example, the prevalence of non-formal learning in certain countries (e.g. FI) significantly increases the participation in adult learning if a longer window is considered. Conversely, those countries with a more formally structured system of adult education (greater occurrence of formal learning) will display less discrepancy between the 4 weeks and 12 months periods.

Moreover, as reported in Table 3, the ad hoc module of the LFS collected information on the different types of learning activities as developed by Eurostat (2003), namely:

- **Formal** (intentional, institutional learning of at least 6 months, with official recognition and other specific features);
- **Non-formal** (intentional, institutional learning of any duration, that does not lead to official recognition); and
- **Informal** (intentional but non-institutional learning).

Table 3: The variables related to participation in education and training of the 2003 *ad-hoc* module on lifelong learning of the EU-LFS

Variable	Description
LLLSTAT	During the last 12 months has been a student or an apprentice in regular education (FORMAL)
LLLCOURATT	Did you attend any courses, seminars, conferences or receive any private lessons or instructions outside the regular education system (hereafter mentioned as taught activities) within the last 12 months? (NON-FORMAL)
LLLINFORATT	Did you use any of the following Methods for non-taught learning including self-learning with the purpose to improve your skills during the previous 12 months, which wasn't part of a taught activity or program of studies? (INFORMAL)

Source: Explanatory notes for the Labour Force Survey Specification of the 2003 ad hoc module on lifelong learning; available at: <https://ec.europa.eu/eurostat/documents/1978984/6037334/Explanatory-notes-AHM-2003.pdf>

Given the importance of the type of learning provided, Figure 4a and 4b below present the share of adult population (aged 25-64) attending formal and non-formal training as reported by the 2003 *ad hoc* EU-LFS module, using the 12 months reference period and, by the 2004 EU-LFS, using the 4 weeks reference as in the ET2020 benchmark⁽²¹⁾.

⁽²¹⁾ Information on formal and non-formal education using the general LFS is only available from 2004.

In 2004, using the four-week reference period, 10.6 % of adults participated in some formal and/or non-formal learning (EU-25), while only 3.3% participated in formal learning. Similarly, in 2003, using a 12-month reference period of the ad hoc LFS, 20.5 % of adults stated that they have undertaken some formal or non-formal learning, but only 4.5 % stated that they have done any formal adult learning during the year. Participation in non-formal learning is larger if the 12-month window is considered. Great heterogeneity is observed among MS with those countries reporting higher level of adult participation in lifelong learning also reporting higher involvement in the non-formal learning type, namely: Sweden, Denmark, Finland, UK and Austria.

Figure 4a. Adult participation in formal learning: ET2020 benchmark (4-weeks) and EU-LFS ad hoc module indicators (12 months)

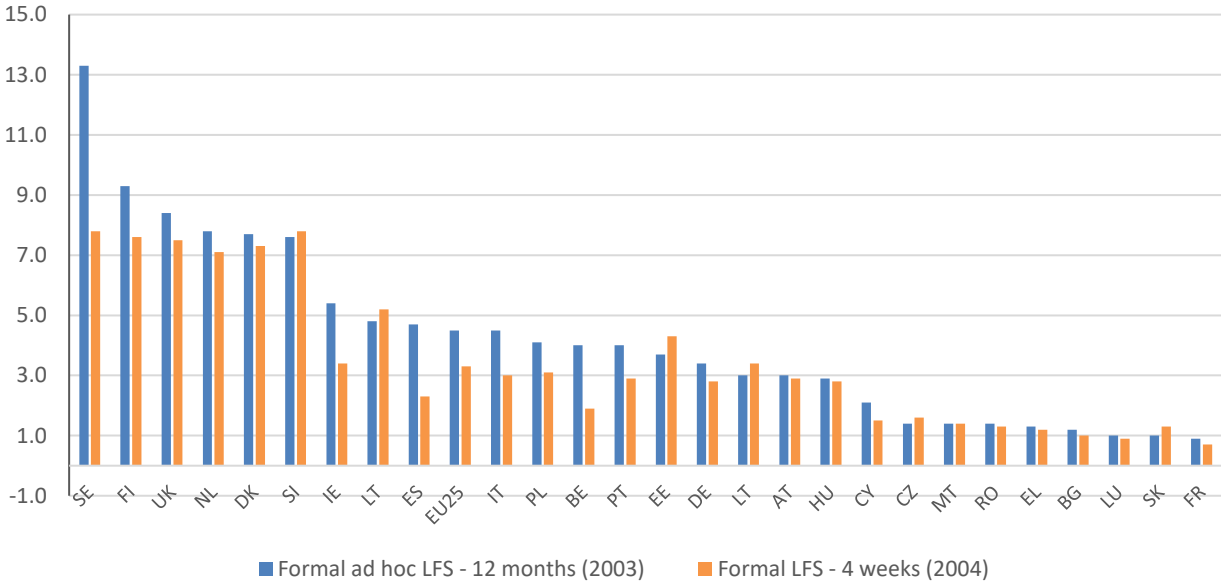
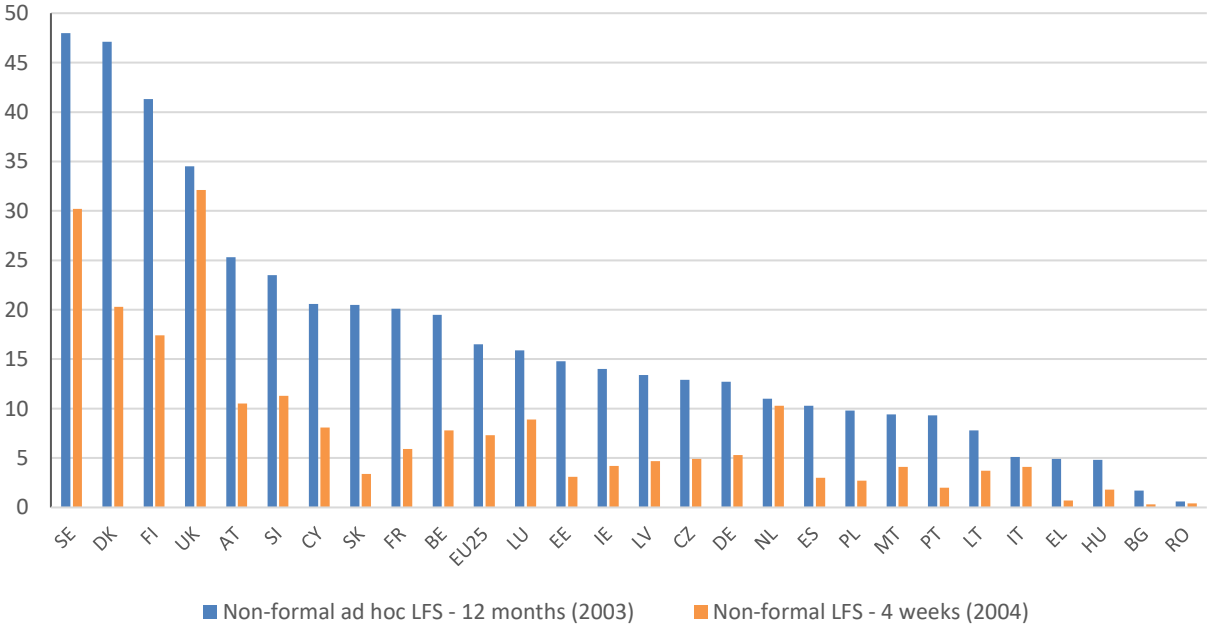


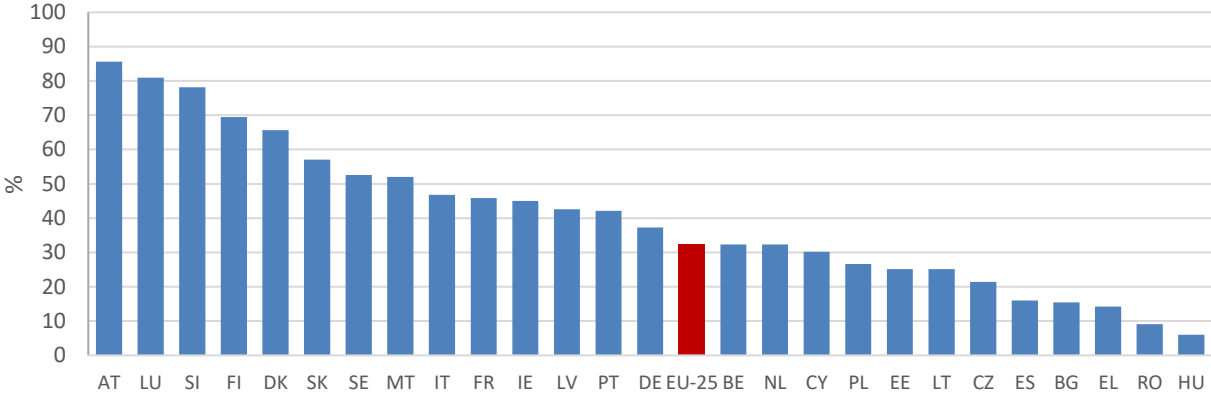
Figure 4b. Adult participation in non-formal learning: ET2020 benchmark (4 weeks) and EU-LFS ad hoc module indicators (12 months)



Source: Eurostat [trng_fed1]; [trng_nfe1]; [trng_lfs_09]
 Note: MT Formal and non-formal learning LFS 4 weeks: definition differs; MT Formal learning LFS 4 weeks: low reliability.

Informal learning (collected in the ad hoc module of the LFS) is arguably the most prevalent mode, as shown in Figure 5. On average, nearly one in three Europeans claimed that they had been involved in informal learning, more specifically self-learning, by using different methods like books, computers, learning centres or educational broadcasting. However, this type of learning is not part of either formal or non-formal education and training and, therefore, not collected in the regular cycles of the EU-LFS. Given the importance of upgrading human capital as a lifelong learning process, these results show that a great deal of valuable learning also takes place informally. Policy makers need to be aware of it and find a structured way to classify it and report it on a regular basis.

Figure 5: Adult participation in informal learning: EU-LFS *ad hoc* module indicator (2003)



Source: Eurostat [trng_inf1]
 Note: Information of the UK is not available

2.2 The distribution of adult lifelong learning by individual characteristics across the EU.

The purpose of this section is to examine more in depth the level and distribution of adult participation in education as reported by the ET 2020 benchmark. More specifically, observed cross-country patterns are considered in relation to a set of individual characteristics that drive unequal chances to participate both between and within countries. As reported in the previous section, one of the main goals of adult learning policies is to improve access for groups that are traditionally less likely to participate, but stand to benefit the most, for instance older individuals, those with low skills or people who are not part of the labour market. The following charts show a detailed breakdown of participation in adult learning, by age groups, level of educational attainment (which can be considered as a proxy for skill), occupation and employment status. The underlying idea is to understand whether the average participation rate reported for the benchmark is in fact hiding substantial heterogeneity.

Results in this section are reported for the most recent year available, that is, 2018.

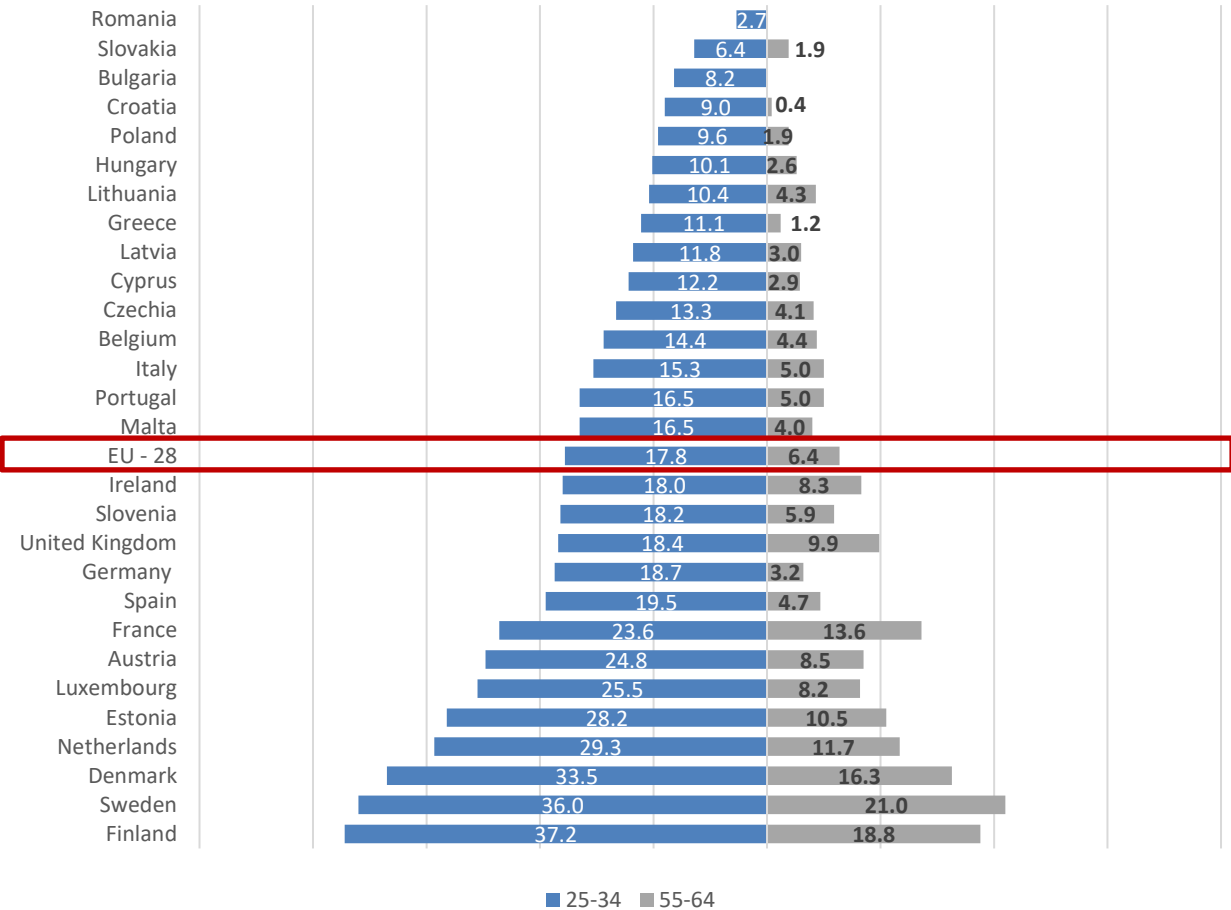
2.2.1 Adult participation in lifelong learning and age.

The human capital theory suggests that investment in skills is likely to be concentrated in the early years of an individual’s life and career so as to ensure higher rates of return (Becker, 1962). Indeed, basic schooling and initial vocational training are generally concentrated in the pre- or early-career years. However, there may be significant differences in the way in which workers continue to receive education and training later in their working lives. Nowadays, it is widely accepted that inappropriate training (especially if not properly updated) may lead to skill obsolescence, which in turns may generate employment difficulties for some older workers, while also reducing the adaptive capacity of the economy as the workforce ages in coming decades (Callahan, et al. 2003; Desjardins and Warnke, 2012; Picchio and van Ours, 2013).

The policy indicator for ‘adult participation in learning’ is defined for 25-64; Figure 6 differentiates between younger and older adult learners by reporting rates of participation separately for adults aged 25 to 34 and those 55 to 64, and comparing the two. In 2018, the EU28 participation rate in adult learning activities was 17.8% for younger adults (aged 25-34) and 6.4% for older adults (aged 55-64). However, the cross-country heterogeneity is huge: from 2.7% in Romania to 39.1% in Sweden among the young, and from 1.2 in Greece to 22.4% in Sweden for the older adults. In general, there is a very strong correlation between participation

rates of the young and of the older age groups (about 0.93), but again there are some differences across countries. While on average younger adults show a participation rate that is 2.8 times the rate of the older adults, this ratio varies from a minimum of 1.7 times in Sweden and France to a maximum of 9.3 times in Greece. These findings strongly suggest not only that adult education opportunities vary greatly across Europe, but also that several states may be failing to engage older age groups. It should also be mentioned that while the current indicator only covers a portion of the population, excluding the very young (under 25) and the elderly (over 65).

Figure 6: Percentage of adults aged 25 to 34 and 55 to 64 who participated in education and training in the 4 weeks preceding the survey – LFS 2018.



Source: Eurostat [trng_lfse_01]
 Note: Croatia 55-64: low reliability.

Research done by CRELL (2011) based on LFS data confirms that participation in formal training programmes at a later career stage is among the factors that reduce early retirement. Enrolling in a learning activity, especially for women, increases the expected time in the labour market and is strongly correlated with the belief that more opportunities for skills upgrading would keep one longer at work.

2.2.2 Adult participation in lifelong learning and level of educational attainment

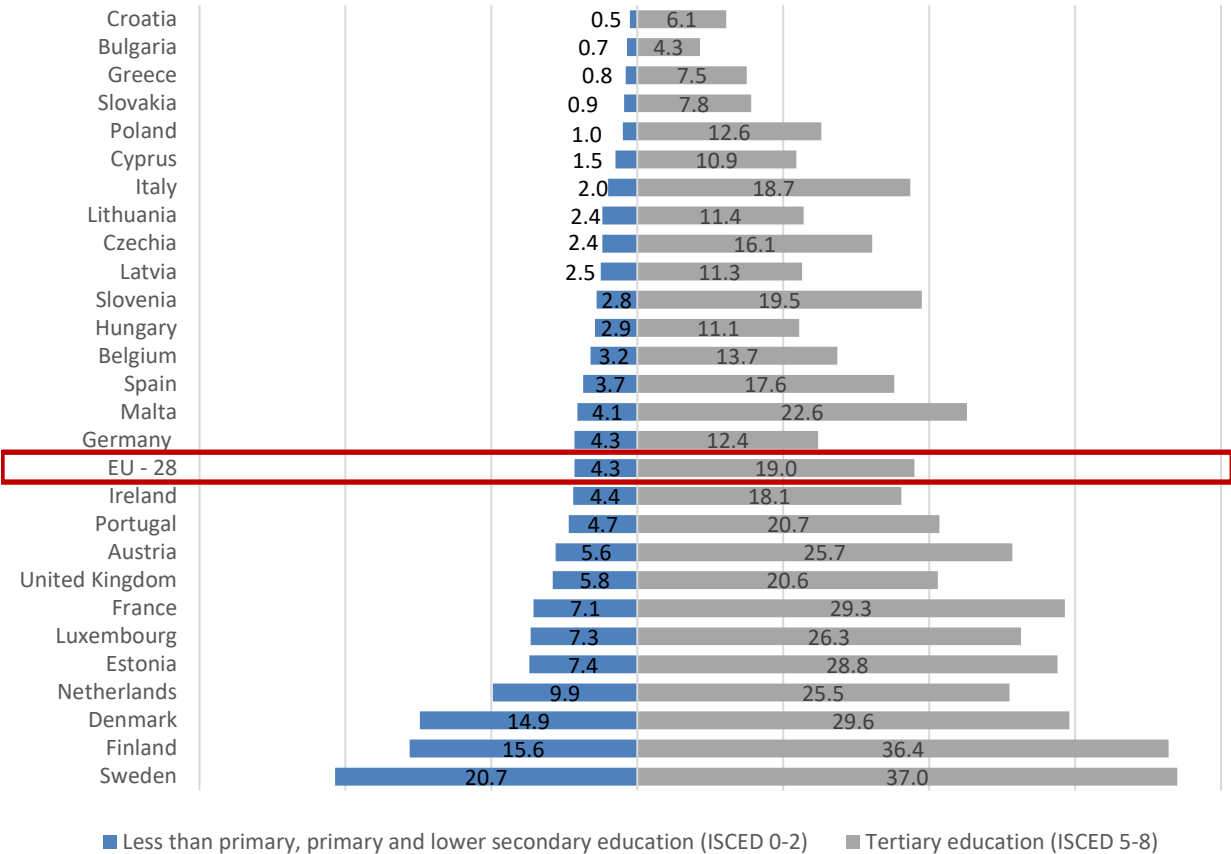
The demand for a highly qualified and adaptable workforce is projected to increase in the near future: European labour market projections indicate that around 35% of all jobs will require tertiary graduate-level qualifications by 2020, however only 31% of the EU’s labour force (aged 25-64) was qualified at this level in 2017 (<https://ec.europa.eu/eurostat/web/products-eurostat-news/-/EDN-20181008-1>).

Figure 7 provides participation rates in education and training for adults aged 25-64 who at most completed lower secondary education (ISCED 0-2) and those who completed tertiary education (ISCED 5-8). Once again,

inequality in participation (in this case between the more and less educated) is present in all countries; Nordic countries, as well as the Netherlands are much more successful at extending adult learning opportunities to both those who initially had low levels of educational attainment and those who already attained tertiary education.

This goes completely against the stated objectives of adult learning policies according to the Council and Commission, given that adult with low skills should be the primary target and access should be facilitated above all for this group.

Figure 7: Percentage of adults aged 25 to 64 who participated in education in the 4 weeks preceding the survey by low and high level of educational attainment – LFS 2018.



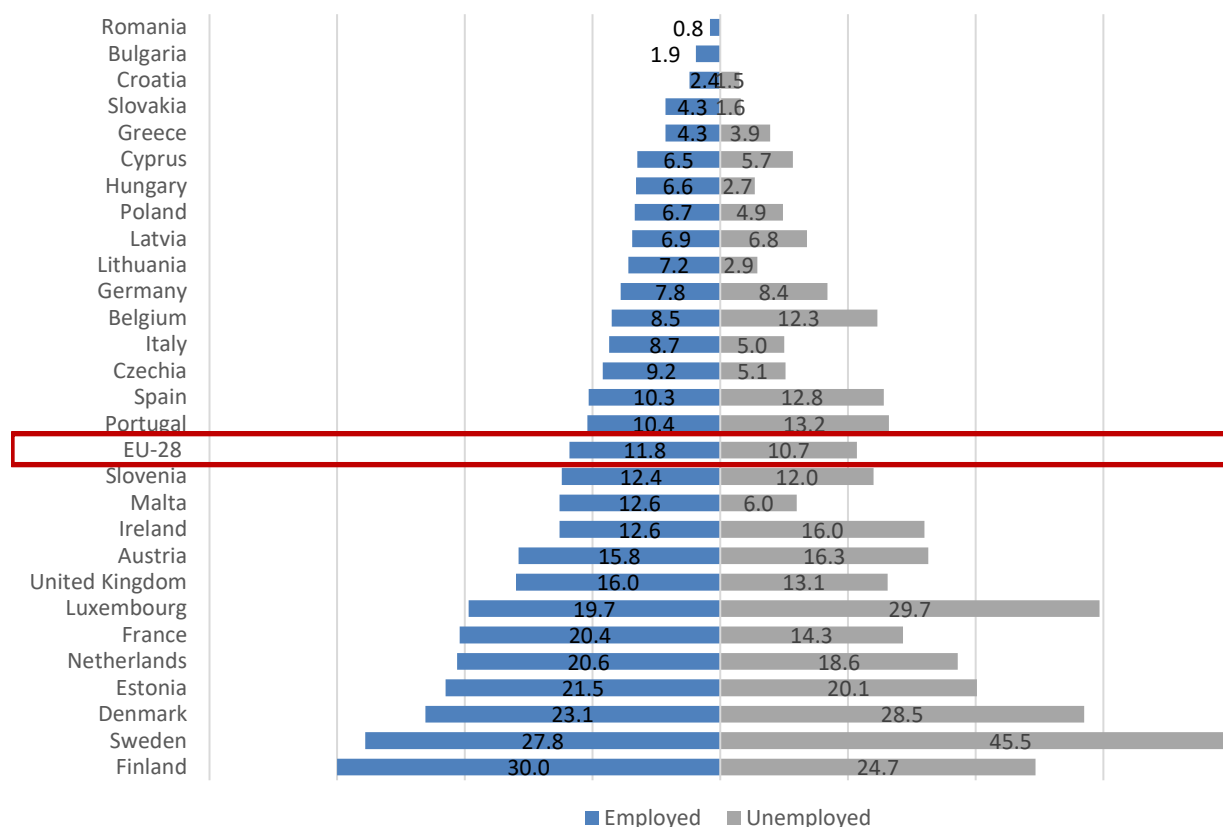
Source: Eurostat [trng_lfse_03]
 Note: Information for Romania is only reliable for tertiary education (ISCED 5-8) with 2.2% of adults aged 25-64 participating in adult education (4 weeks window); Less than primary, primary and lower secondary (ISCED 0-2): low reliability for Bulgaria, Cyprus, Croatia, Latvia, Slovenia and Slovakia.

2.2.3 Adult participation in lifelong learning and labour market status.

According to the literature, employment status is greatly correlated with participation in adult learning (OECD, 2011, 2012). According to the estimates reported in figure 8, having a job (being employed) seems to have a small positive effect on participation in adult learning, since 11.8% of the employed individuals participate in education and training vs. 10.7% of their unemployed peers. However, there are substantial cross-country differences: in a few countries it seems that participation in adult learning is significantly more frequent among the unemployed than the employed, as for instance in Sweden, Luxembourg or Denmark; whereas in other countries, such as Malta, France or Finland, the proportion of participants in adult learning is significantly higher among those who have a job.

This association could be related to the need to improve one's knowledge and skills in order not to lose one's job or, in the case of unemployed people, to enter the labour market (initial entry or re-entry).

Figure 8: Percentage of adults aged 25 to 64 who participated in education in the 4 weeks preceding the survey by labour status – LFS 2018.



Source: Eurostat [trng_lfse_02]

Note: Croatia, Hungary, Lithuania and Malta: low reliability for unemployed.

Active Labour Market Policies (ALMP) — including measures such as job assistance, labour market training, wage subsidies to the private sector, and direct job creation in the public sector — are a central element of Europe's strategy to combat unemployment. According to DG employment, training absorbs the largest share of the amount spent on ALMP. ⁽²²⁾ Empirical work undertaken by Card, Kluve, & Weber (2009) between 1995 and 2007 found that formal and non-formal training programmes exhibited insignificant or negative impacts on the reduction of unemployment in the short-term (after one year from completion) but have significantly positive effects in the medium-term (after two or three years). One possible explanation of the short-term negative effect of training programmes could be that these programmes are typically used to renew the eligibility to unemployment benefits; thus, discouraging unemployed to look for possible occupation (Sianesi, 2008).

Likewise, Newton, Hurstfield, Miller, Akroyd, & Gifford (2005) studied more closely the determinants of the participation in training programmes among unemployed and inactive people in the UK and identified four factors affecting the decision to participate in training. They found a negative correlation between age and the likelihood of engaging in training and greater engagement in training among people with higher qualifications. Moreover, recent training is a predictor for training participation; that is, the likelihood to receive training is higher for the unemployed that have attained their higher qualification(s) more recently (two years before the survey).

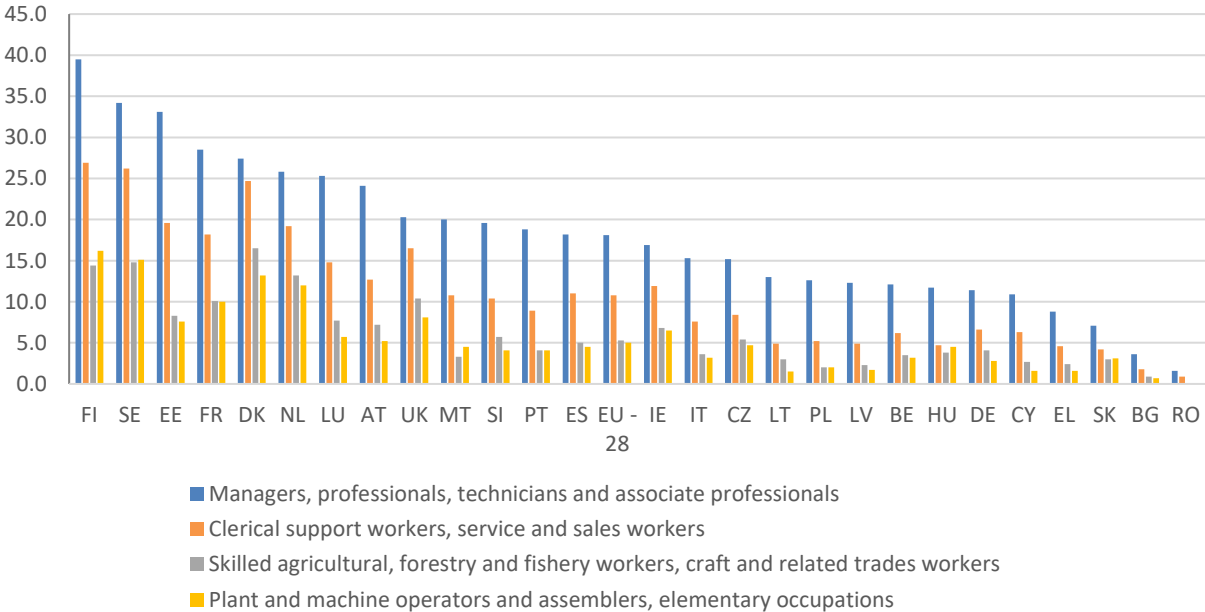
⁽²²⁾ https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Archive:Labour_market_policy_interventions&direction=next&oldid=159378 ..

Overall, the literature suggests that the institutional setting of the different EU MS plays a substantial role when it comes to adult education. For this reason, it is important to identify the role of national governments in putting in place publicly financed education programs to support unemployed individuals in their transition to full employment, but also the relevance, scope and quality of job-related training provided by employers concerned with competitiveness. Similarly, to understand what explains differences in participation rates between employed and unemployed it is necessary to assess which learning activities are job-related and likely subsidized by the employer, and which ones are publicly financed through, for example, active labour market policy programmes.

2.2.4 Adult participation in lifelong learning and type of occupation.

Figure 9 presents participation rates of adults in formal and non-formal education activities among different types of occupations classified according to the level of skills demanded, from high skills (Managers, professionals, technicians and associate professionals) to medium and low skills (Plant and machine operators and assemblers, elementary occupations). Overall, participation in adult learning is more frequent among highly skilled occupations than elementary ones. Clearly, we cannot infer any sort of causality from this chart, given that people in high skill occupations are more likely to be offered training opportunities, and at the same time people who receive training can potentially access better jobs; however, it is still worth mentioning how adult educational opportunities are distributed in light of the policy priorities already discussed. Once again, adult learning appears to be most evenly distributed across occupational profiles in the Nordic countries (Finland, Sweden and Denmark), the Netherlands, Austria or the UK. Eastern and Southern European countries stand out as the most unequal ones in providing learning.

Figure 9: Percentage of employed adults aged 25 to 64 who participated in education in the 4 weeks preceding the survey by type of occupation – LFS 2018.



Source: Eurostat [trng_lfs_04]

Note: Clerical support workers, service and sales workers: low reliability for HR; Skilled agricultural, forestry and fishery workers, craft and related trades workers: low reliability for BG, CY, HR and MT; Plant and machine operators and assemblers, elementary occupations: low reliability for BG, CY, HR and LT.

2.3 Discussion on the limitations of the existing ET2020 benchmark on adult participation in lifelong learning: Challenges ahead. ⁽²³⁾

The purpose of this Section has been to thoroughly revise the existing ET2020 benchmark on adult participation in lifelong learning. A number of drawbacks and limitations have been identified, including limitations that depend on the data source, namely the LFS, and limitations that go beyond it:

- Limitations related to the current variables in the EU-LFS:
 - The 4 weeks window appears too narrow for the analysis of adult participation in lifelong learning, since most of it is of non-formal type with short duration. Having a short time reference limits the probability of capturing any of these activities and it is sensitive to significant changes. The LFS from 2022 will have variables for both 4 weeks and 12 months (biannually) reference periods.
 - The EU-LFS does not provide information on informal learning, even though data from the 2003 the ad-hoc module shows that potentially it is also very frequent as shown in Figure 5; this makes the current benchmark incomplete. While it is true that informal learning may not be the most appropriate indicator to convey information on upskilling needs of the workforce, it would still provide useful generic information on a person's human capital.
- More generic limitations related to the definition of the benchmark:
 - The benchmark is an average participation rate among all adults aged 25 to 64 and does not specifically give higher weight to participation rates among older groups and low-qualified adults, even though they are the main target groups (according to the Council resolution); if average participation rates keep increasing, but these individuals rarely take part in any adult learning, it cannot be inferred that adult learning policies have been successfully implemented. Efforts are needed to better monitor those more disadvantaged which should be at the core of any lifelong learning policies for upskilling and re-skilling. Disaggregating by key sub-group could be already a significant improvement. ⁽²⁴⁾
 - Given that participation in adult learning is higher among people in work, and especially among those who are in better occupations (see Figure 8 and Figure 9), a useful indicator should give information on private, employer provided or personally sought training, as well as and publicly funded adult learning.

To summarise, core indicators, as the one used for the ET 2020 benchmark, generally provide headline figures for summary overviews, without assessing national systems or policies; however, in doing so, they risk oversimplifying the complexity of the measured phenomenon resulting less useful. More detailed breakdowns of adult participation in lifelong learning would result in more efficient monitoring and could adequately inform policy makers.

⁽²³⁾ Additional analysis on the measurement of adult learning and its weaknesses has also been done in Education and Training Monitor 2018 (page 64-65) <https://ec.europa.eu/education/sites/education/files/document-library-docs/volume-1-2018-education-and-training-monitor-country-analysis.pdf> ; and ESTAT methodological guide on measuring skills: <https://ec.europa.eu/eurostat/documents/3888793/7753369/KS-TC-16-023-EN-N.pdf/438b69b5-2fcb-4923-b9e2-fa7b59906438> .

⁽²⁴⁾ Some attempts have already been done as in pp. 72-73 of the Education and Training Monitor 2018: <https://ec.europa.eu/education/sites/education/files/document-library-docs/volume-1-2019-education-and-training-monitor.pdf> .

3 Towards a better framework for monitoring adult participation in lifelong learning within the EU.

The previous section discussed the main strengths and weaknesses of the current benchmark as a tool to monitor the success of adult learning; it also pointed out some limitations concerning the data source used to build the main indicator for participation in adult learning, namely the EU-LFS. This section discusses the appropriateness of other available sources for monitoring participation in adult lifelong learning highlighting their uniqueness and appropriateness in light of the policy goals and theoretical framework mentioned in section 1.2.

The data sources described in this section include: The Adult Education Survey, a European Union harmonised survey on adult participation in learning activities; the Continuing Vocational Training Survey (CVTS), a European Union harmonised survey on continuing vocational training in enterprises, both carried out according to European legislation, with results published by Eurostat; and the Survey on Adult Skills part of the OECD's Programme for the International Assessment of Adult Competencies (PIAAC). The UNESCO-UIS – OECD – Eurostat (UOE) joint data collection on education and other statistics collected at the national level; and finally, this section discusses what information could be drawn from national statistics from different education and training systems and other European surveys such as the European Survey on Income and Labour Conditions (EU-SILC), as well as the European Working Condition Survey (EWCS) and the European Skills and Jobs Survey (ESJS).

3.1 The Adult Education Survey (AES): A rich source of evidence on adult learning statistics

The AES provides an overview of the participation of individuals in education and training including formal and non-formal education and training as well as informal learning. It collects information beyond the limits of publicly offered educational opportunities for adults. The reference period for the participation in the learning activities is the twelve months prior to the interview. The survey focuses on people aged 25-64. Apart from participation in formal, non-formal and informal learning, the following information is also available:

- Access to information on learning possibilities
- Time spent on education and training
- Characteristics of the learning activities
- Reasons for (not) participating
- Obstacles to participation
- Employer financing and costs of learning
- Self-reported language skills⁽²⁵⁾

Three waves of the AES have been implemented so far. The first AES (2007 AES) was a pilot survey conducted in 26 EU Member States (Ireland and Luxembourg did not participate), as well as in Norway, Switzerland and Turkey. The second wave (2011 AES) was conducted in 27 EU Member States (Croatia did not participate), Norway, Switzerland as well as in Serbia and Turkey. The third wave (2016 AES) was conducted in 28 EU Member States, Norway, Switzerland as well as in Serbia, Turkey, Albania, Bosnia and Herzegovina and the Former Yugoslav Republic of Macedonia. The next AES is planned for 2022.

See Table 3 to find out how the questions related to adult participation in lifelong learning (formal, non-formal and informal) are presented in the survey.

⁽²⁵⁾ For more detailed information visit: <https://ec.europa.eu/eurostat/web/microdata/adult-education-survey> .

Table 3: Questions related to adult participation in lifelong learning as posed in the 2016 AES. (12-month reference period)

	Variable name	Question	Additional information
Formal education	FED	<p>"During the last 12 months, that is since <<month, year>> have you been a student or apprentice in formal education or training?"</p> <p>The AES includes the following note: The question(s) for this variable should be phrased by countries in a way that the concept of education designed to lead to achievement included in the National Framework of Qualifications is described as fully as possible.</p>	Number of formal education activities, start year and month, level, completion, field, orientation, method of learning, reasons for participation, whether learning took place during working hours, number of instruction hours, who paid and , outcomes and use of skills or knowledge.
Non-formal education	NFE	<p>Activities in which the respondent participated during the last 12 months with the intention to improve knowledge or skills in any area (including hobbies) either in leisure time or in working time.</p> <p>This includes completed and ongoing activities.</p> <p>a. During the last 12 months have you participated in courses at the workplace or in your free time? (NFECOURSE)</p> <p>Examples: language, computer, driving, management, cooking, gardening or painting courses.</p> <p>b. During the last 12 months have you participated in workshops or seminars at the workplace or in your free time? (NEFWORKSHOP)</p> <p>Examples: Data workshop, inspiration day, study day, inspirational workshop, work information seminar, health seminar.</p> <p>c. During the last 12 months have you participated in guided-on-the-job training, which means planned periods of education, instruction or training directly at the workplace, organised by the employer with the aid of a designated teacher/instructor? (NFEGUIDEDJT)</p> <p>Examples: Training to operate a new machine or to learn new software (for one or two people).</p> <p>d. During the last 12 months have you participated in private lessons with the aid of a teacher or tutor for whom this is a paid activity? (NEFLESSON)</p> <p>Examples: mathematics or piano lessons. A lesson should be included if provided by a professional teacher and excluded if provided by a friend, family member or colleague.</p>	Information on number of activities, type, purpose (job-related or not), whether they took place during working hours and whether the employer paid partly or fully. For two randomly selected activities information are provided also on: field, method, reason for participation, number of hours, providers, whether the activity lead to certificate, who paid, personal cost, use of skills or knowledge and outcomes.
Informal learning	INF	<p>During the last 12 months, apart from the activities mentioned earlier, have you <u>deliberately</u> tried to learn anything at work or during your free time to improve your knowledge or skills through any of the following means?</p> <p>a. Learning from a family member, a friend or colleague (INFFAMILY)</p> <p>b. Learning by using printed material (books, professional magazines, etc.) (INFMATERIAL)</p> <p>c. Learning by using computers (online or offline) (INFCOMPUTER)</p> <p>d. Learning through television/radio/video (INFMEDIA)</p> <p>e. Learning by guided tours in museums, historical or natural or industrial sites (INFMUSEUM)</p> <p>f. Learning by visiting learning centres (including libraries) (INFLIBRARIES)</p>	

The 2016 Adult Education Survey provides a detailed view on who is most or least likely to be learning, the type and intensity of learning, what their motivations are and the barriers adults experience when seeking to take up learning. A brief statistical analysis of some of the key variables is provided here to highlight the potential of this survey to explore what the policy levers might be to engage more people.

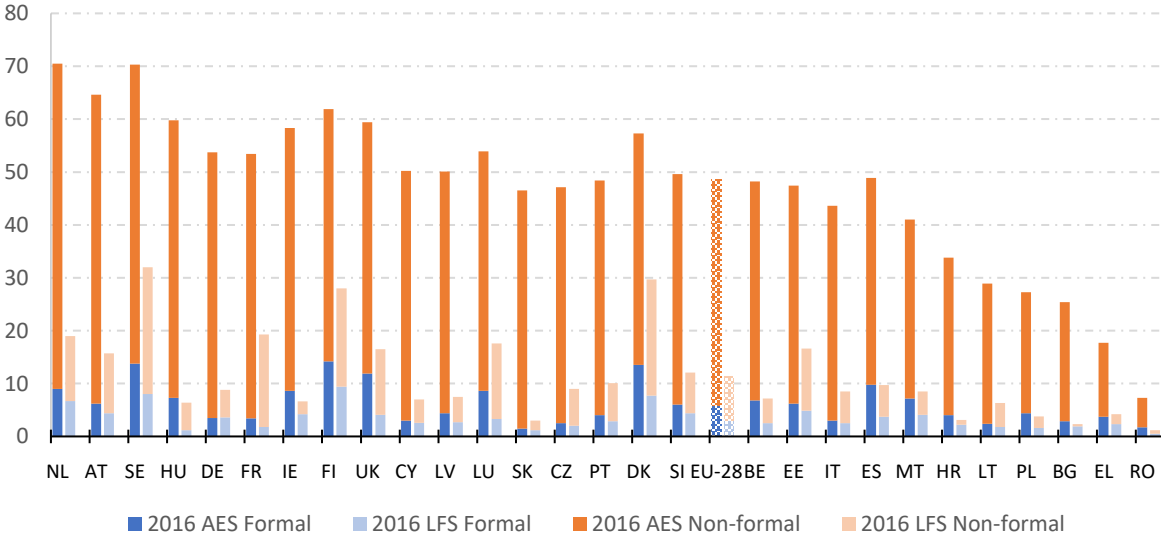
To begin with, Figure 10 compares the results of participation in formal and non-formal learning obtained using the AES (12-month reference period) with those provided by the 4 weeks reference period of the EU LFS. We use the same year to compare them, 2016.

First, as expected, there is a greater probability of reporting adult learning if the timeframe is longer: in 2016, for the EU-28 average 45.2% of the individuals reported participation in adult learning (formal and non-formal) using the 12-month reference period (AES) while only 10.8% was the share of participants if the EU-LFS (4 weeks periods) was used. It has to be noted that the coverage of non-formal learning is different between the two sources as AES covers guided-on-the-job training while the EU-LFS excludes them.

Second, Figure 10 shows that adult learning is mostly non-formal;

Finally, as we already observed with the ad hoc module of the EU LFS in 2003 (Figure 5), participation in informal learning as reported in the AES for 2016 is overall high with 60.5% of adults reporting some type of informal learning at EU-28 level and going as high as 96.1% for Cyprus to 22.4% for Lithuania [for full detailed statistics from the AES informal learning see: Eurostat, trng_aes_200].

Figure 10: Participation in formal and non-formal learning: The AES and the LFS compared – 2016



Source: [trng_lfs_09] and [trng_aes_100].
 Note: 2016 AES Formal: low reliability for SK.

These results in Figure 11 further show that adult learning takes place in different forms. While some individuals learn in a formal education institution (formal learning), a big majority participates in work-related learning (non-formal), while overall, there is an increasing prevalence of informal learning. In fact, as identified in the 2018 E&T Monitor (DG EAC, 2018) for most adults, the learning activities are job-related and sponsored by the employing organisation.

Figure 11: Participation in job-related non-formal adult learning over 12 months, by type of sponsor – 2016 AES



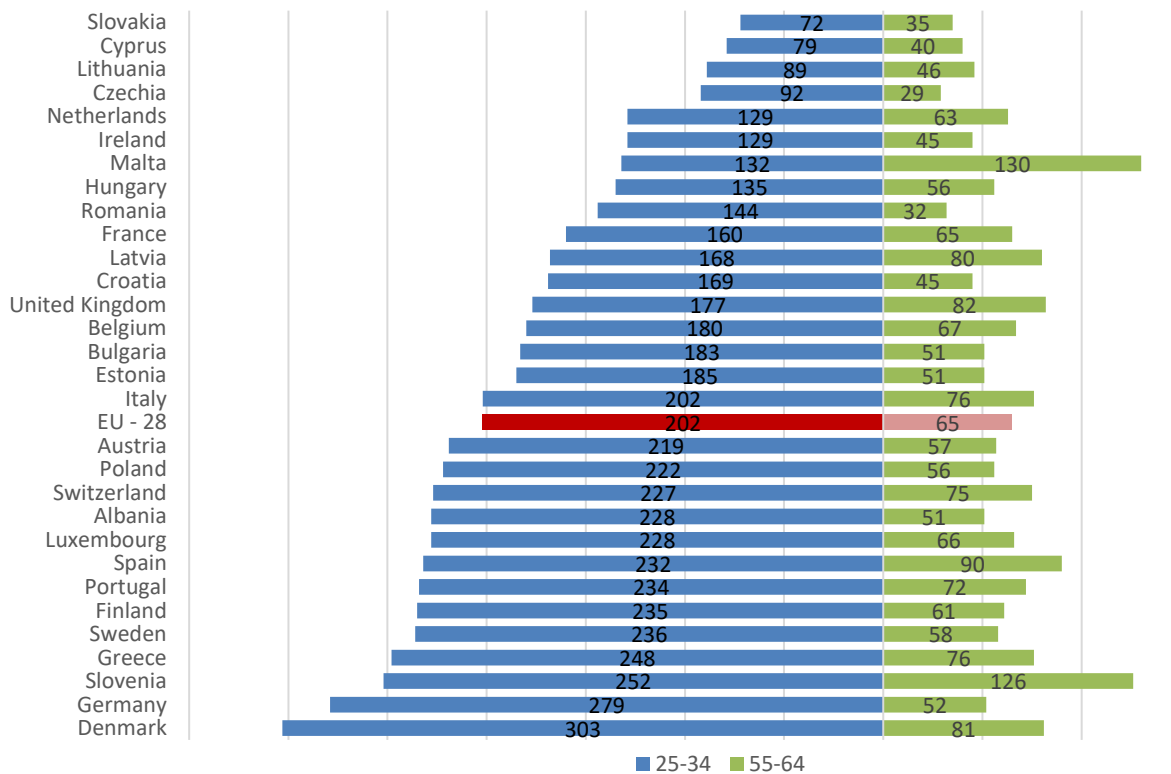
Source: [trng_aes_120].

Note: Not sponsored by the employer: low reliability for SE,

It is important to estimate not only participation in adult learning but also the intensity of training, measured as number of hours of instruction, as it seems to increase inequality among potential recipients of adult learning. For instance, not only do younger people report higher participation rates, they also devote significantly more hours to learning than their older counterparts, therefore widening the gap already mentioned in section 2.

Further, Figure 12 shows that at EU-28 level, during the 12 months prior to the interview in 2016, individuals aged 25-34, spent 202 hours on average in education and training whereas those aged 55-64 spent an average of 65 hours. .

Figure 12: Mean instruction hours in formal and non-formal learning by age group – 2016 AES.

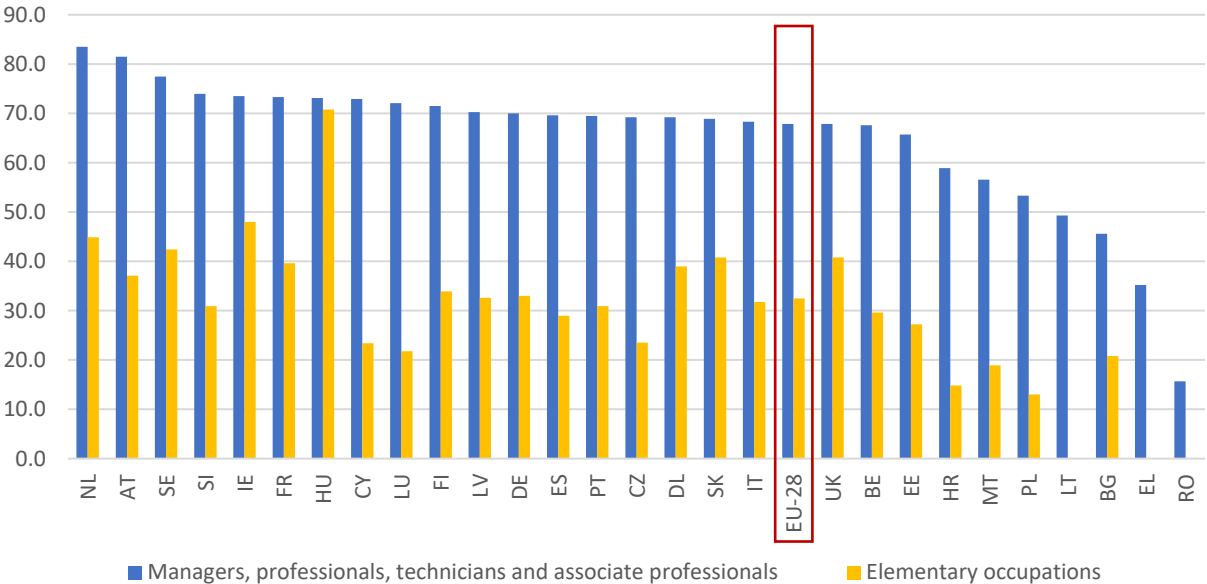


Source: [trng_aes_147]

Note: 55-64: low reliability for RO.

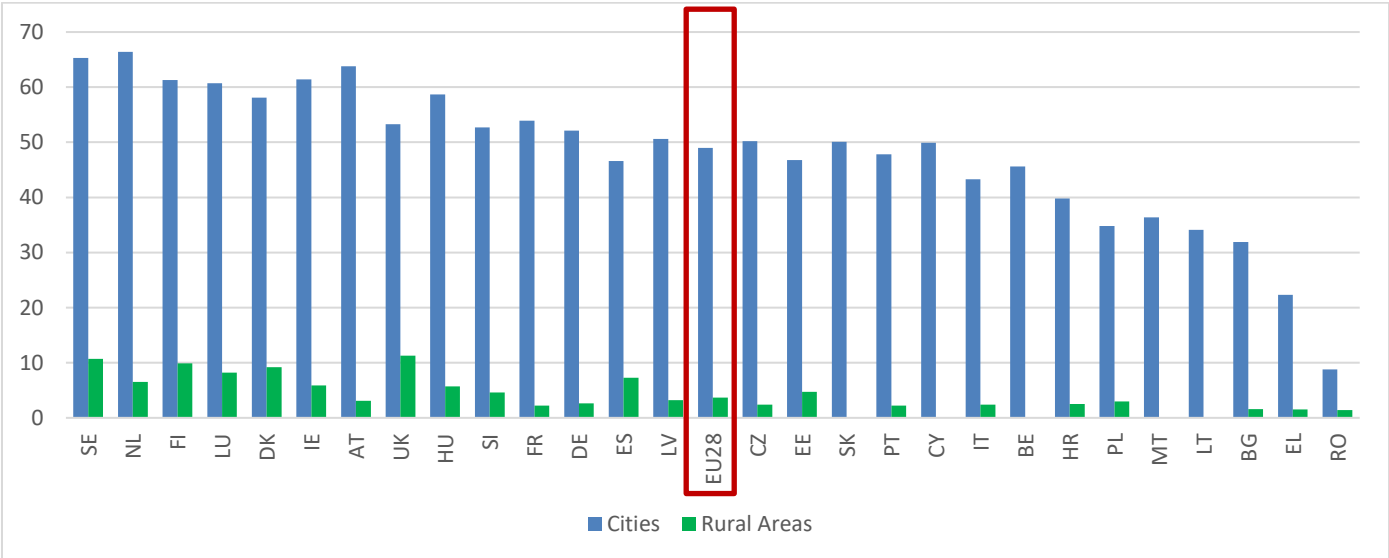
Just like the EU-LFS, the AES provides the necessary tools to analyse participation in adult learning by different socio-economic characteristics. For brevity, estimates are not described in detail here, however, they suggest the same conclusion: outreach and interventions should seek to target adults in lower occupations (**Figure 13**); adults who live outside urban areas (see **Figure 14** that compares participation between individuals living in cities and rural areas); but also older adults, and those with lower education. In addition, the AES provides very useful information on the willingness to participate in adult learning, the reasons for not participating and the barriers identified.

Figure 13: Participation of employed adult in formal or non-formal learning by low and high skills occupations – 2016 AES



Source: [trng_aes_104]
 Note: Elementary occupations: low reliability for DK, EE, HR, LU, MT, NL, SK, FI and SE.

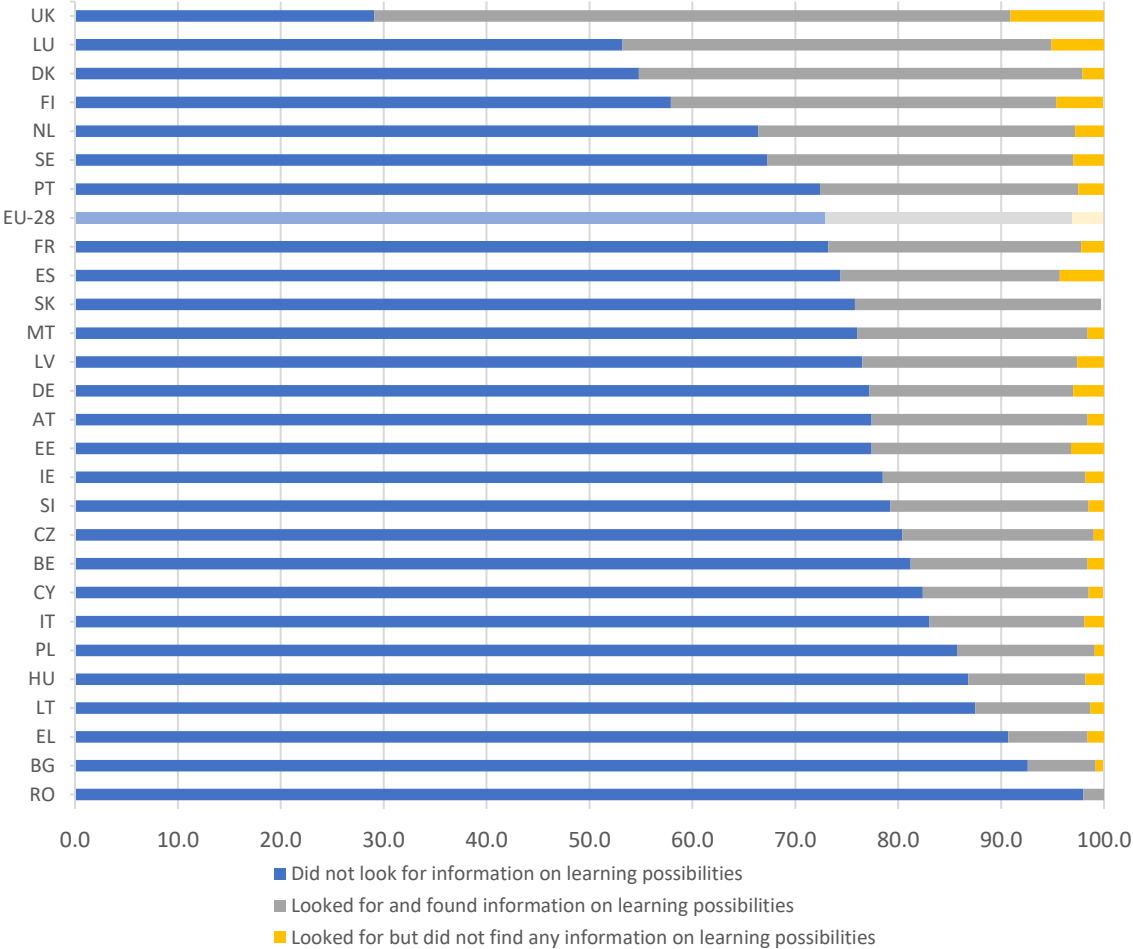
Figure 14: Participation rate in formal and non formal education and training by degree of urbanisation – 2016 AES



Source: [trng_aes_105];
 Note: data for participation in rural areas in Slovakia, Cyprus, Belgium, Malta and Lithuania are not available.

The results of the search for information on learning possibilities summarised in Figure 15 are rather disappointing: in 2011, for the EU-28 average: 72.9% of the individuals aged 25-64 did not look for information on possible courses available. Interestingly, the UK, Luxembourg, Denmark, Finland and the Netherlands have the highest rates of successful search for information of learning possibilities (looked and found information on learning possibilities in Figure 15). This is a good indication of educational institutions efficiency in reaching the target audience.

Figure 15: Result of the search for information on learning possibilities – 2011 AES

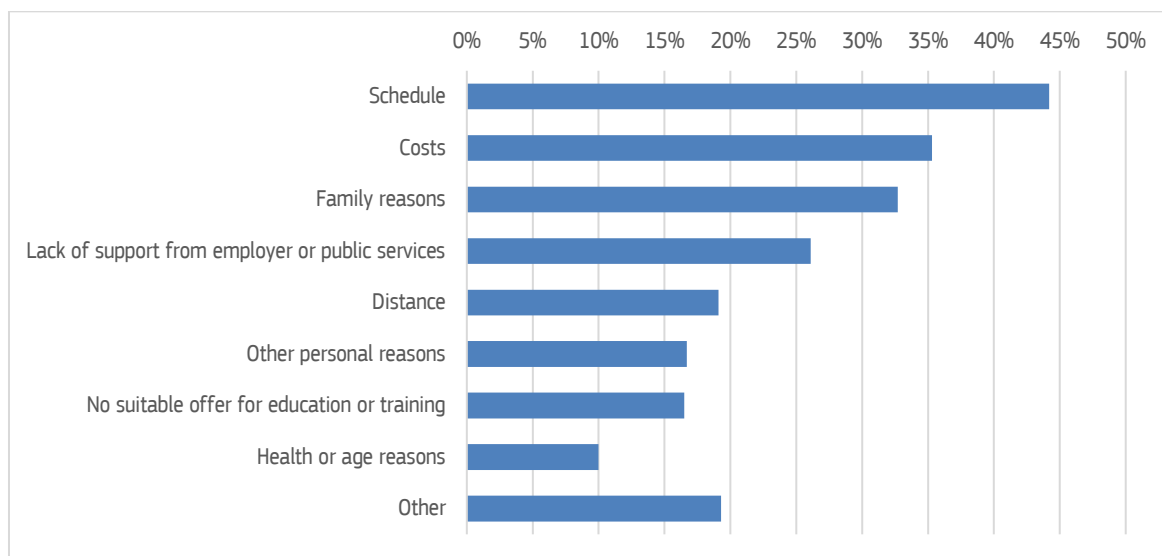


Source: [trng_aes_186]

Note: Looked for but did not find any information on learning possibilities: low reliability for BG, CY, LT and MT.

AES also provides more specific information on the most frequent barriers to learning. More specifically, adults who say that they wish to participate in education and training are given are asked to provide reasons for not doing so. At EU-28 level, in 2016, the most common obstacle to participate in adult learning was a conflicting schedule, selected by 44.2 per cent of respondents (see **Figure 16**); the second most frequently mentioned term was costs selected by 35.3% of respondents, followed by family reasons (32.7%). The least frequently mentioned obstacle was age or health related reasons.

Figure 16: Population wanting to participate in education and training, by reason for not participating EU-28



Source: [trng_aes_176]

3.2 The Continuing Vocational Training Survey (CVTS): An employer's survey.

Continuing Vocational Training (CVT) are training measures or activities which have as their primary objectives the acquisition of new competences or the development and improvement of existing ones and which must be financed at least partly by the enterprises for their persons employed who either have a working contract or who benefit directly from their work for the enterprise such as unpaid family workers and casual workers. Part financing could include the use of work-time for the training activity as well as financing of training equipment..⁽²⁶⁾

The CVTS is a European Union harmonised survey on continuing vocational training (CVT) in enterprises and is part of the EU statistics on lifelong learning⁽²⁷⁾.

The survey aims to gather comparable statistical information on continuing vocational training in enterprises and covers the following topics:

- Continuing vocational training, skills supply and demand and training needs
- Measurement of the forms, contents and volume of continuing training
- The enterprises own training resources and the use of external training providers
- The costs of continuing training
- Initial vocational training

CVTS covers enterprises with 10 or more persons employed in the business economy (mainly). The detailed coverage according to NACE Rev 2 categories is: B, C10-C12, C13-C15, C17-C18, C19-C23, C24-C25, C26-C28+C33, C29-C30, C16+C31-C32, D-E, F, G45, G46, G47, H, I, J, K64-K65, K66, L+M+N+R+S. Data from the CVTS are available for 1993, 1999, 2005, 2010 and 2015. The next CVTS is planned for the reference year 2020.

Some important differences are found between the CVTS and the EU-LFS or the AES for monitoring adult learning.

⁽²⁶⁾ For more information visit: <https://ec.europa.eu/eurostat/web/microdata/continuing-vocational-training-survey>.

⁽²⁷⁾ Information available in the CVTS manual available at https://circabc.europa.eu/sd/a/43cebd2-6b09-4298-b9b9-ba57d1f42301/1_CVTS5manual_V1-2_20161201.pdf

Table 4: Type of training included in the CVTS manual

CVT courses are typically separated from the active workplace (learning takes place in locations specially assigned for learning like a class room or training centre).

They are organised (time, space and content) by a trainer or a training institution. The content is designed for a group of learners (e.g. a curriculum exists).

- Two distinct types of CVT courses are identified **Internal CVT courses** (designed and managed by the enterprise itself, and the responsibility for the content of the course lies within the enterprise)
- **External CVT courses** (designed and managed by organizations which are not part of the enterprise itself, e.g. third-party organizations. The course is then selected and ordered/ purchased by the enterprise)

Other forms of CVT:

- **Guided on-the job-training** (planned periods of training, instruction or practical experience in the work place using the normal tools of work, either at the immediate place of work or in the work situation)
- **Job-rotation, exchanges, secondments or study visits** (these are considered as “other” forms of CVT only if these measures are planned in advance with the primary intention of developing the skills of the workers involved. Transfers of workers from one job to another which are not part of a planned developmental program should be excluded)
- **Learning or quality circles** (groups of persons employed who come together on a regular basis with the primary aim of learning more about the requirements of the work organization, solving production and work place-based problems, through discussion)
- **Self-directed learning-learning** (when an individual engages in a planned learning initiative where he or she manages the settings of the learning initiative/activity in terms of time schedule and location, using one or more learning media. Learning can take place in private, public or job-related settings. It might be arranged using open and distance learning methods, video/audio tapes, correspondence, computer-based methods (including internet, e-learning) or by means of a Learning Resources Centre.
- **Participation in conferences, workshops, trade fairs and lectures** (considered as training actions only when they are planned in advance and if the primary intention of the person employed for participating is training/learning)

Source: Eurostat

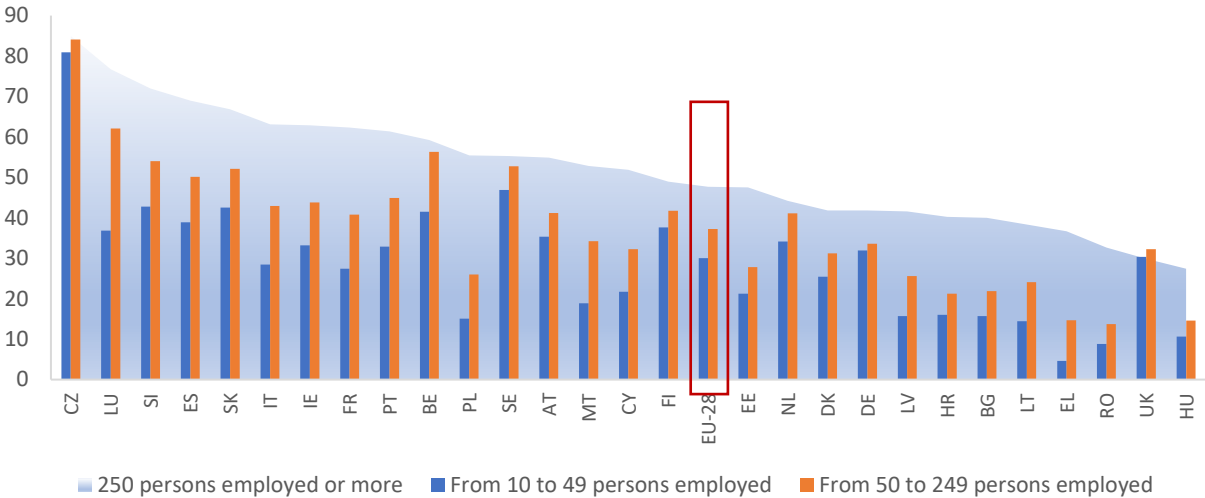
First, CVTS poses the training questions to employers (at enterprise level) and not workers; there are likely to be systematic differences in how these two groups report training activities. Little is known about the differences in reported training activities between employer and employees. An exception is a study by Barron (1997) which uses data from a matched employer-employee survey to see to what extent their responses are consistent. They find that correlations between the employee and the employer measures are less than 0.5 and that employers report 25 percent more hours of training on average than workers do, suggesting a substantial differences in data as reported by employees compared to data reported by employers.

Second, while all surveys mentioned here provide measures of the level of continuing education and training among the adult workforce, there are important differences in how the training questions are phrased. The AES and the EU-LFS use definitions based on ISCED where learning is understood to be ‘any improvement in behaviour, information, knowledge, understanding, attitude, value or skills’; and while the AES covers all types of learning opportunities and education and learning pathways including formal, non-formal and informal, the EU-LFS focus on formal and non-formal education only. However, the CVTS collects participation in continuing vocational training (see table 4 to learn about the type of training included in the CVTS questionnaire) defined as training measures and activities which the enterprise finances, partially or entirely, for their employees who have a working contract. The CVTS distinguishes between initial and continuing training, so that the former can be explicitly omitted from the training estimates. It should be mentioned that CVTS does not distinguish between formal and non formal education, even though we can safely assume that it is non formal, and it only asks the number of participants in CVT courses, and not about other forms of training.

Third, CVTS excludes workers in enterprises with fewer than 10 persons employed and all enterprises in certain sectors of activity (see Figure 17 for participation rates by enterprise size). Because of these exclusions the CVTS cannot be used to infer participation rates in the total economy, since the exclusion of small firms could bias the training participation rates upwards given that these rates tend to rise with enterprise size over the observed range (Eurostat, 2002). More specifically, participation in training among smaller firms is likely to be lower because: i) training involves fixed costs and scale economies; ii) small firms

might find more difficult to replace a worker who goes training; and iii) small firms might have fewer opportunities to fully obtain the benefits of training through internal reallocation of workers.

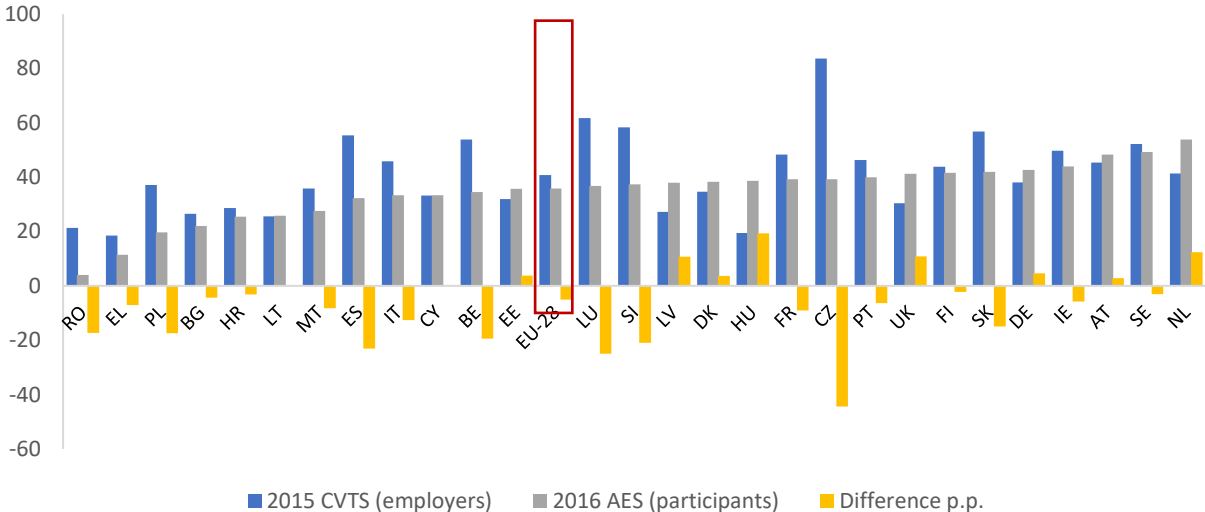
Figure 17: Participants in CVT courses by sex and size class - % of persons employed in all enterprises (2015 CVTS)



Source: [trng_cvt_12s]

Bearing in mind all highlighted concerns, Figure 18 compares the share of participants in job-related non-formal training as reported by the 2016 AES (aged 25-64, employed or not) with its ‘quasi’ equivalent share from the 2015 CVTS (any working age, only persons employed in enterprise with 10 and more persons employed in specific sectors of activity). The difference between both surveys is shown in yellow. It is worth repeating that the comparison is purely indicative, since the reference populations are different. ⁽²⁸⁾

Figure 18: Share of participants in adult learning: 2016 AES and 2015 CVTS



Source: [trng_cvt_12s]; [trng_aes_120]

⁽²⁸⁾ A presentation given at the 22nd meeting of the INES Network on Labour Market, Economic and Social Outcomes of Learning (INES-LS) in Riga (14-16 October 2019), Statistics Sweden provided some comparable data between AES and CVTS. In essence, results do not vary enormously from those provided in Figure 18.

First, we observe that, in general, employers' reported figures from CVTS are higher than those reported by individuals (employed or not) in AES (except for Lithuania, Estonia, Latvia, Denmark, Hungary, the UK, Germany, Austria and the Netherlands), as we expected. Second, despite all the differences between surveys, countries like Romania, Greece, Bulgaria, Croatia or Lithuania report low shares of participants in both surveys, while top performers in adult learning (Nordic countries, Austria, the Netherlands and the UK) also behave similarly in both surveys. Considering the unique features of the CVTS, and the fact that a large share of non-formal training is job-related and funded by the employer as reported in figure 18. Earlier on, we argue that this data source could be used to provide additional indicators and for better understanding the demand and supply of non-formal adult learning.

3.3 The OECD Survey on Adult Skills (PIAAC): Skills acquisition beyond formal education

The OECD has carried out a comprehensive thematic review of adult learning to improve the quality and effectiveness of its activities in member countries. The DeSeCo Project (Definition and Selection of Competencies project at <http://deseco.ch/>) was initiated by the OECD at the end of 1997 and was carried out under the leadership of Switzerland. It was embedded in the OECD's long-term programme on education indicators (INES), which aimed to provide measurements on the functioning, development and impact of education and lifelong learning. The DeSeCo project claims that adult learning can play an important role in helping people to develop and maintain key information-processing skills and acquire knowledge and other skills throughout their lives (beyond educational attainment). Indeed, workers need to adapt to changes during their careers as the skills demanded by the labour market change. It is thus crucial for adults to have access to organised learning opportunities beyond their initial formal education.

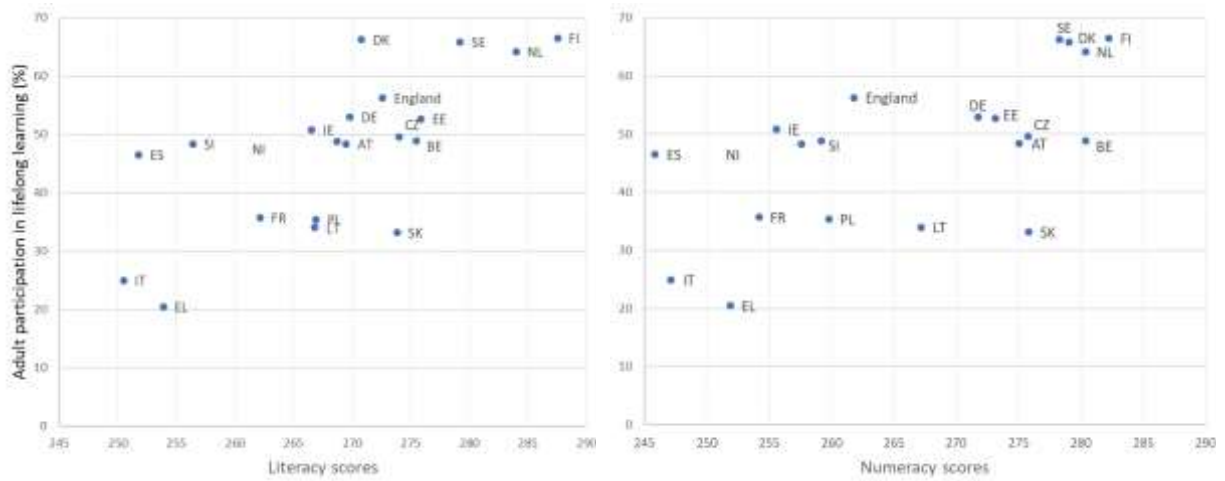
The OECD and Statistics Canada implemented cross-national surveys such as the International Adult Literacy Survey (IALS) in 1994 to assess people's literacy scales on top of educational attainment (a final report was produced in 2000, see OECD/STATCAN, 2000), and the Adult Literacy and Life Skills (ALL) conducted between 2003 and 2008 (<https://nces.ed.gov/surveys/all/index.asp>), also sought to profile the skills of adults and their participation in lifelong learning among the contributing countries.

The introduction in 2008 of the OECD's Survey of Adult Skills (PIAAC), which measures literacy, numeracy and problem-solving in technology-rich environments and specifically looks into participation in adult learning, has placed greater attention to this topic across Europe. Seventeen EU countries participated in the first round in 2011/2012 (Austria, Belgium-Flanders, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Ireland, Italy, Netherlands, Poland, Slovak Republic, Spain, Sweden and UK-England and Northern Ireland) while Greece, Lithuania and Slovenia participated in the second round (2014/2015) and Hungary in the third round (2017/2018).

PIAAC collects information on formal and non-formal education. It uses a list of possible non-formal education activities, including open or distance learning courses, private lessons, organized sessions for on-the-job training, and workshops or seminars to prompt respondents to list all their learning activities during the previous 12 months. Some of these learning activities might be of short duration. Formal education is defined as planned education provided in the system of schools, colleges, universities and other formal educational institutions, and which normally constitutes a continuous "ladder" of full-time education for children and young people. The providers may be public or private.

As reported in Figure 19, there seems to be a clear relationship between participation in adult lifelong learning programmes and literacy and numeracy scores, with those reporting higher participation in adult learning (Nordic countries and the Netherlands) also scoring higher in literacy and numeracy skills.

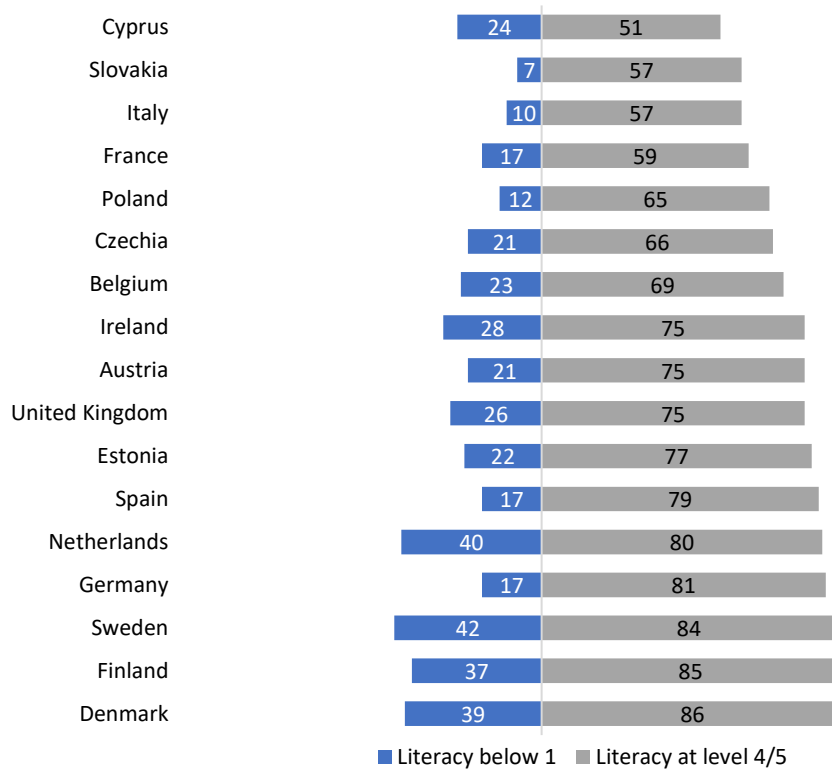
Figure 19: Participation in adult learning and literacy and numeracy scores (PIAAC)



Source: Survey of Adult Skills; PIAAC 2011-12 (round 1) and 2013-14 (round 2).

However, participation in adult learning is not evenly distributed. Figure 20 compares rates of participation in education activities between adults who display very low levels literacy (Level 1 or below) and adults who display the highest levels of literacy (Level 4/5). The Nordic countries as well as the Netherlands appear to be the most successful in ensuring that adults with low literacy take up adult education opportunities. On the contrary, in some Eastern and Southern European countries, the most literate can have over four to five times the probability of participating than adults with the lowest levels of literacy.

Figure 20: Percentage of adults aged 16-65 (youth 16-24 in initial cycle of formal studies excluded) who participated in education in the 12 months preceding the survey, by high low levels of literacy proficiency - PIAAC



Source: Survey of Adult Skills

The PIAAC dataset contains also questions on barriers to further participation in adult education. However, they are only asked to those who have stated that they would like to participate in adult learning while those who answered that they have no interest in participating in adult learning have not received any questions about barriers.

The uniqueness of PIAAC data for studying adult learning (formal and non-formal) resides in its link to literacy, numeracy and problem solving, functional skills very much needed to accommodate to a changing labour market and society. While it would be a very useful tool for research purposes, low frequency, changes over time and the limited coverage of EU Member States reduce its appeal for monitoring purposes.

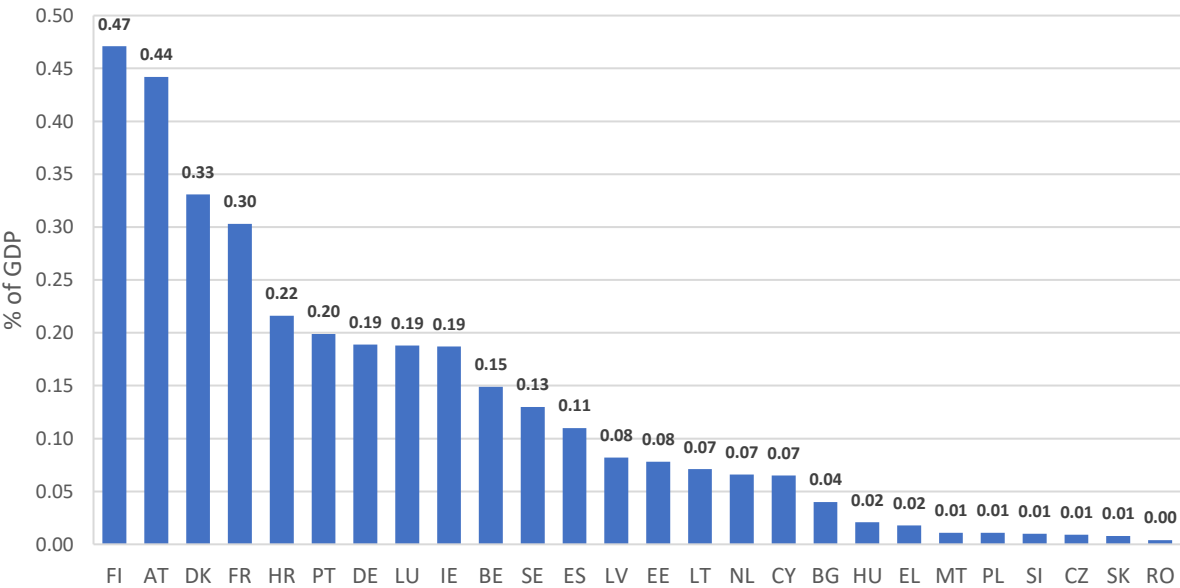
3.4 UNESCO-UIS OECD Eurostat (UOE) joint data collection on education, DG EMPLOYMENT’s labour market policy database, and other European statistics.

The objective of the UOE data collection on education statistics is to provide internationally comparable data on key aspects of formal education systems (participation, completion, cost and type of resources).

Under UOE data, ‘adult education’ or ‘continuing education’ are included only if they are part of regular educational programmes; that is, data is available only for formal education. The different indicators (downloadable at: <https://ec.europa.eu/eurostat/web/education-and-training/data/database>) provide useful figures for summary overviews and cross-country comparisons; in particular data is available by age allowing to focus analysis on different age groups. However, as discussed in this report, a thorough monitoring would require also the coverage of non-formal adult learning, which is outside of the scope of UOE data collection.

The timeliness of data depends on national accounting procedures and in some cases, there is a significant delay before the annual data are finalized, particularly those related to expenditure. As a result, data for all countries are only available 18-20 months after the reference period. However, its usefulness is not negligible, as, for example, one of the sub-indicators in the ET2020 benchmark of adult participation in lifelong learning relies on these statistics. This sub-indicator focuses on the expenditure on training as part of active labour market policy interventions. It covers (at least partially) the supply side for training and measures how many individuals who want to work participate in training paid by the government (through active labour market policies). Results in Figure 20 show that Finland, a country with a high participation rate in adult learning, spends 0.47% of its GDP in publicly financing training aimed to increasing employability. By contrast, countries with the lowest participation rate in adult learning (Romania, Bulgaria, Slovakia, Poland or Greece) spend below 0.05% of their GDP for this type of initiatives.

Figure 21: Public expenditure on labour market policy (LMP) interventions: Training – 2016



Source: https://webgate.ec.europa.eu/empl/redisstat/databrowser/view/LMP_EXPSUMM/default/table

UOE data and national statistics have their limitations including that to be understood properly they must be read in the context of the national education systems they represent; and they are subject to inevitable time lags. However, they are undoubtedly the most appropriate when it comes to monitor the policy goal of greater public investment in adult education.

In relation to adult learning, information is also collected on labour market interventions, including training, from administrative sources in all MS (see DG EMPLOYMENT's labour market policy database: 'lmp_ind_actsup') ⁽²⁹⁾

On this topic, it's worth mentioning the work coordinated by the Conference of European Statistician (CES) to develop a more comprehensive measure of human capital in a way that is aligned with the principles of the national accounts and comparable among countries. In particular, the CES and its Bureau have established a task force aimed at developing a framework for constructing satellite account for education and training including the breakdowns of the various expenditures on training and education, including the identification of the financing arrangements for these expenditures. ⁽³⁰⁾

3.5 Other European Surveys: ECHP, EU-SILC, EWCS and ESJS.

Other European Surveys have also been used to study adult learning. While they might not be the most appropriate ones for monitoring trends, either because the concept of adult learning is not properly measured or there is not enough information over time on the variable we want to measure, they might be extremely useful to investigate different aspects adult participation in lifelong learning. For example, through multivariate analysis we could identify some socio-economic determinants that may encourage/prevent adult participation in lifelong learning. These EU Surveys include:

The European Community Household Panel⁽³¹⁾ (ECHP), which delivers comparable data on training participation for 13 EU countries (Belgium, Denmark, Ireland, Greece, Spain, France, Italy, the Netherlands, Austria, Portugal, Sweden and the United Kingdom. Germany is excluded due to short training spells and Luxembourg due to sample size). The total duration of the ECHP was 8 years, running from 1994 to 2001 (8 waves). The key question on education and work-related training in the survey is: "Have you at any time since January in the previous year been in vocational education or training, including any part-time or short-courses?". While this question is informative on training incidence among workers (informal on-the-job training is not included), it is silent on the duration of training spells as well as their source of financing. The duration of the last training spell is reported in classes (less than 2 weeks, 2-9 weeks, more than 9 weeks). Unfortunately, the information on the duration of training in the ECHP is completely missing for the Netherlands and Sweden, and largely missing for the UK. The disadvantage of the ECHP is primarily on the fact that additional training information (financing, duration, etc.) is of less good quality (since it is provided only for the last course taken and training refers to a time interval the length of which can vary from country to country and even from one interviewee to another). In a separate question, the respondent is asked whether the last training spell was paid or provided by the employer. This information is, however, not available for Sweden. Interestingly, results show that on average 72.0% (17.25/23.97) of the training courses on which we have information on the source of financing (for the last course only) is employer-sponsored (see Table 5).

⁽²⁹⁾ https://webgate.ec.europa.eu/empl/redisstat/databrowser/view/LMP_IND_ACTSUP/default/table .

⁽³⁰⁾ https://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/bur/2017/February/06-ToR_TF_on_Satellite_Accounts_for_Education_and_Training_final.pdf.

⁽³¹⁾ <https://ec.europa.eu/eurostat/web/microdata/european-community-household-panel> .

Table 5. Training participation rates by source of financing in the ECHP - 1997

Country	Total training	Employer-sponsored training are
Austria	25.33	20.78
Belgium	18.76	15.23
Denmark	53.21	48.55
Finland	43.50	39.20
France	15.56	14.20
Greece	6.96	6.14
Ireland	13.72	11.30
Italy	8.79	7.31
Netherlands	11.75	7.63
Portugal	5.11	4.10
Spain	19.98	14.09
UK	39.67	39.40
Average	23.97	17.25

Source: ECHP, taken from Bassanini, et al., (2005)

The main advantage of the ECHP lies in its large set of individual socio-economic and demographic characteristics and its longitudinal dimension, covering a significant number of European countries with a commonly designed questionnaire. Furthermore, while using ECHP systematically underestimates the relative training effort (given the way it is measured), Bassanini et al. (2005) argue that the ranking of countries is approximately the same if OECD data are used, showing that certain cross-country differences are persistent across surveys and reassuring about the comparability of large cross-country micro datasets.

Since 2005 the **European Union Statistics of Income and Living Conditions**⁽³²⁾(EU-SILC) has succeeded the ECHP covering a larger number of countries. The information for adult participation in learning activities among workers is collected from the question where the individual reports if he/she is currently involved in some learning (education or training) programme defined under ISCED-11 as “*a coherent set or sequence of educational activities or communication designed and organized to achieve pre-determined learning objectives or accomplish a specific set of educational tasks over a sustained period.*” (UNESCO, 2012, p. 9. Again, adult learning is measured as whether an adult participates in any **formal** learning process, over his/her own working-life cycle, leaving aside any type of non-formal or informal learning and limiting the potential use of this survey.

Finally, the European Working Conditions Survey⁽³³⁾ (EWCS) managed by Eurofound and the European Skills and Job Survey⁽³⁴⁾ (ESJS) from Cedefop also collect information on participation on education and training. In the EWCS the question asks: “Have you had training paid by your employer (or self if self-employed) in the last 12 months?” and thus only includes employer sponsored training. This survey is a cross-sectional one running since 1990 every five years. Starting with only 12 countries in 1990, it covers all EU MS in its last release from 2015. Understandably, lower estimates of adult learning are obtained when using this dataset. However, the EWCS indicates that the percentage of EU workers receiving training paid for by their employers is relatively low at 38% in 2012, even though it has increased from 26% in 2005, and is mainly targeted at high-skilled and highly educated workers (information retrieved from European Working Conditions Survey – Data visualisation tool: https://www.eurofound.europa.eu/data/european-working-conditions-survey/?locale=EN&dataSource=EWCS2017NW&media=png&width=740&question=y15_Q65c&plot=euBars&countryGroup=linear&subset=agecat_3&subsetValue=All).

Similarly, the ESJS launched in 2014 across all 28 MS with a greater focus on skill mismatch over time, also collects information on employer sponsored training. Results indicate that training is needed for employees to keep up-to-date but is not supported by all employers. In fact, they found that more than 30% of European adult workers experienced changes (e.g. new technologies) in the workplace and were not supported by training activities paid for by the employer (European Union, 2018).

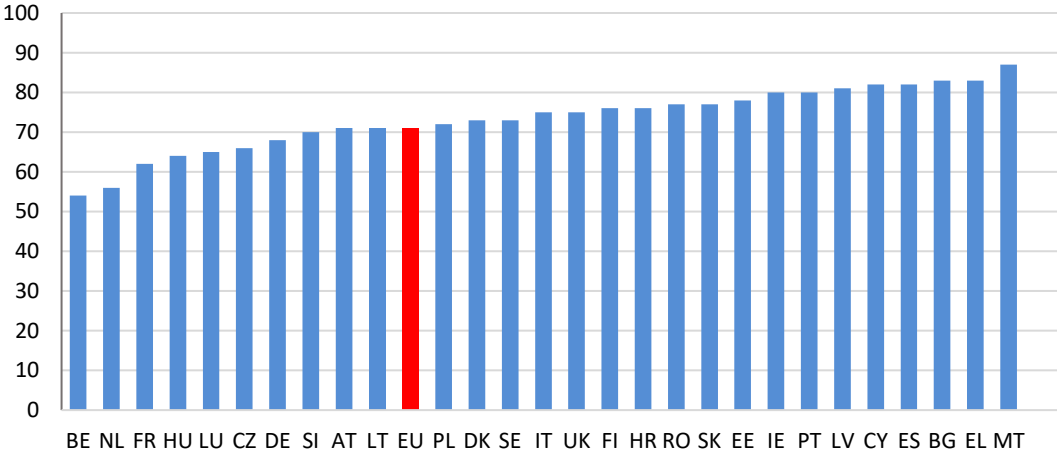
⁽³²⁾ <https://ec.europa.eu/eurostat/web/microdata/european-union-statistics-on-income-and-living-conditions> .

⁽³³⁾ <https://www.eurofound.europa.eu/surveys/european-working-conditions-surveys>.

⁽³⁴⁾ <https://www.cedefop.europa.eu/en/events-and-projects/projects/european-skills-and-jobs-esj-survey>.

Interestingly, 2010 EWCS allowed collection of self-reported information on the quality/appropriateness of the training when individuals were asked to answer to the following statement: “I feel my prospects for future employment are better because of my training.” This information could be useful, for example, for monitoring quality of adult learning, an ideal policy goal. Results in Figure 22 show that Belgium was the country with the lowest share of respondent (workers) who think their prospects for future employment are better due to their training (54%), while Malta had the highest share with 87% of the respondents.

Figure 22: Percentage of respondents who agree to the statement: “I feel my prospects for future employment are better because of my training”



Source: EWCS, 2010.

Despite the limitations of these surveys in relation to the definition of adult learning, their country coverage and their time span, the additional information they provide in relation to socio-economic and demographic characteristics of their respondents make them certainly a rich and useful source of information to better understand the incidence and determinants of adult learning in its various forms.

3.6 Considerations for Policy and Practice

This section has reviewed, as comprehensively as possible, alternative available datasets (beyond the EU-LFS needed for producing the existing ET2020 benchmark on adult participation in lifelong learning) that could potentially be used to learn more and to properly monitor adult learning as it evolves nowadays.

Different surveys are presently used to study the importance of adult learning (i.e. Eurostat’s AES, CVTS, , ECHP, and EU-SILC; OECD’s PIAAC; Eurofound’s EWCS and Cedefop’s ESJS). All these surveys evaluate human capital accumulation from different point of views (e.g. through vocational or general training); and consider different definitions and concepts of adult education (e.g. formal, non-formal or informal learning). They also cover different populations, a different range of countries and have been in place during various periods apart from their cross-sectional or longitudinal features. These are some of the reasons why it is often rather difficult to compare their empirical results. Likewise, the System of National Accounts (SNA) and other international statistics such as UOE data have proven very useful for cross-country comparisons, however, more detailed breakdown by different socio-economic characteristics may be needed for a thorough understanding.

Having said this, a few more considerations about the usefulness of some of these surveys are presented here to suggest how a successful, more inclusive adult learning policy (and monitoring) can be achieved:

- Adults engage with different types of learning, some of which is non-formal or informal and some of which is formal (and leads to a qualification).⁽³⁵⁾ A broad learning offer needs to be available to adults and should be delivered flexibly, including at the workplace as well as remotely (for example through online learning), as well as through formal education institutions. The AES is a better option than the EU-LFS to monitor non-formal and especially informal learning.

⁽³⁵⁾ Non-formal education can also lead to formal qualifications (including through recognition and validation of prior learning; this is already included in some countries in UOE data).

- The AES could be used to gather information on the disengaged, i.e. adults who are not interested in furthering their learning.
- Identifying and potentially removing the obstacles to participation is also important to engage adults. The AES can help us identify them and making the case of the value and relevance of learning to the potential learners.
- Overall, outreach and interventions should seek to target adults in low skill occupations, adults who are furthest from core labour markets (remote areas where labour market opportunities are limited), older adults, and those with lower level of education.
- Adults look for information about learning from a wide range of sources. In order to engage adults who are less likely to learn, relevant information should be made available in public places and through individuals and services that people come in contact with..
- Employers are likely to be more precise about enterprises/firms' choices and characteristics of training than employees. For this reason, CVTS can provide rich and useful information regarding main skills targeted by CVT courses, intensity (hours) and cost. The benefits obtained from the training can also be analysed. However, we must be aware that the survey provides a large set of characteristics for the enterprises, but only sex, training participation and total training hours in CVT courses for the employed people.
- Further, the need for individuals to remain employed at older ages has been widely recognized, as well as the importance of lifelong learning to uphold a skilled workforce to ensure a competitive labour force and economic growth. PIAAC data permit more in-depth analyses of the general and workplace skills of individuals, particularly those among the lower income groups and the unemployed, who are likely the most in need of skill upgrades and most at risk for economic insecurity.

4 Summary and Conclusions

This report aimed at shedding some light on the current state of the evidence about the existing ET 2020 indicator on adult participation in lifelong learning, and its effectiveness in monitoring adult learning as it is evolving in the 21st century. Arguably, the present ET 2020 indicator may work as a headline figure for summary overviews and country ranking, nevertheless an efficient monitoring of adult learning requires more detailed breakdowns.

In particular, it has been argued that monitoring of adult learning should go beyond mere measurement of participation of adults in lifelong learning programmes and include indicators of other policy goals such as: (1) Enhancing public/private investment in adult learning; (2) Facilitating access; (3) Effectively increasing knowledge and skills; (4) Improving quality of adult training; or (5) Reducing inequalities. To comprehensively cover these objectives a richer set of indicators (as opposed to mere sub-indicators) may be a better approach.

This technical report did not attempt to comprehensively provide the set of indicators for efficient adult learning monitoring, but to reflect on the existing information and how to move forward. Thus, an identification and review of comparable data sources across member states has been undertaken and their appropriateness to monitor the defined policy goals has been discussed. The LFS is a good tool to measure participation in adult learning for a number of reasons: it is a regular, established survey, with high degree of participation and collects the relevant information in a simple and parsimonious way.

In addition, from 2022, the LFS will include information on participation during the 12 months preceding the interview. A time span of 12 months is more inclusive and tends to provide higher level of participation; this is due to the fact that participation in adult learning is a rather rare occurrence – the absolute majority of individuals declare only one or two learning activities per year. Also, unlike formal learning which is often of a relatively long duration (6 months or more), non-formal learning is often of a short duration, sometimes taking place for only a couple of hours. Therefore, for a more representative coverage of non-formal learning, a longer reference period than 4 weeks is preferred. Overall, if there is an interest to monitor general access to education and training, the 12-month reference period is a better option.

A specific focus should also be put towards monitoring the participation of disadvantaged groups, such as low-qualified or unemployed adults, given that an overall increase in participation does not automatically lead to an increase for all population groups. In practice it may even happen, that participation among disadvantaged groups decline at the same time when the participation rate of the total populations increases.

This notwithstanding, the main aim of the LFS is to collect information on employment, and cannot be burdened with a large number of questions related to adult learning in the same way that the AES could be. For this reason, and to collect more in depth information, such as the type and form of adult learning, who is in charge of financing, and so on, other sources can be used as a complement. For instance, the AES provides essential information on informal learning, which is not captured by the LFS. The OECD Survey of Adult Skills (PIAAC) is the appropriate tool for monitoring skills acquisition beyond formal education; the CVTS provides information on employers' sponsored type of training (i.e. demand side of adult learning programs); finally, National Statistics for precise monitoring of adult learning public investment.

Having said this, the empirical evidence provided shows that with the enumerated datasets there is no full coverage of the policy goals identified. While the goals of monitoring “skills acquisition” and “reducing inequalities” can be reasonably covered using AES and PIAAC data, information on “investment in adult learning” is more heterogeneous relying on surveys for employer’s sponsored activities and National Statistics (with some lags in availability and missing data) for public investment. Moreover, significant efforts are needed to collect information on the “quality of training” and “facilitating access”.

The list of indicators may be long and the AES is produced every five years up to 2016 and every six years from 2016 onwards. These are two important problems. Strategic decisions may be needed from the statistical offices regarding future development of surveys. While yearly information may not be needed for each indicator (associated to a policy goal) a five-year or six-year period may be too long for indicators calling for action. The forthcoming introduction of three biennial indicators on participation in adult learning during the past 12 months in the EU-LFS is a good step forward towards the monitoring of those policy goals that may require more frequent attention.

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Annex – A Benchmarking Framework

Benchmarking is intended to strengthen the European Semester by supporting mutual learning and promoting upward socio-economic convergence, with a primary focus on specific policy parameters that can lead to better outcomes. The process should also contribute to the sharing of best practices implemented in Member States, while taking into account the insights and experience accumulated within the European Semester since 2011. Benchmarking can be used to underpin the analysis in the European Semester by bringing better insights to country-specific analysis and more comparability to country performance and progress over time, thereby also supporting the formulation of Country-Specific Recommendations.

Indicator-based monitoring frameworks have already been developed. Examples are the Europe 2020 headline targets, the ET2020 benchmark indicators and the Employment Performance Monitor (see Box 1). Work on benchmarking should be consistent with these and other existing frameworks.

Box 1: Existing monitoring frameworks in the field of education and training

The Commission's Education and Training Monitor monitors several dimensions which have been agreed in the context of the Education and Training 2020 (ET 2020) cooperation framework.

Two of the ET2020 benchmarks have also been recognized as Europe 2020 headline targets in the field of education: **early leavers from education and training** (the share of early leavers from education and training should be less than 10%) and **tertiary education attainment** (the share of 30 to 34 year-olds with tertiary education attainment should be at least 40%).

The four other ET2020 benchmark indicators that are monitored are **early childhood education and care** (at least 95% of children between the age of four and the age for starting ISCED 1 should participate in education); **underachievement in reading, mathematics and science** (the share of 15-year-olds with underachievement in reading, mathematics and science should be less than 15%); **employment rates of recent graduates** (82% of recent graduates from upper secondary to tertiary education (age group 20-34) who are no longer in education or training should be in employment); **participation in adult learning** (an average of at least 15% of adults (age group 25-64) should participate in formal or non-formal learning). The Commission has identified, in collaboration with Eurydice³⁶, several structural policy lever indicators in most of these areas (except for adult learning, which is covered in more detail in the Joint Assessment Framework (JAF)). The ET2020 indicators and benchmarks are reviewed in the annual Education and Training Monitor; this analysis is supported by the structural indicators provided by Eurydice.

Adult skills, employment and training policies are also a part of the ten employment areas of the Joint Assessment Framework (JAF), an analytical tool which was adopted at the request of the Belgian Presidency in July 2010, and mandated by the EPSCO Council, EMCO and SPC. The ten employment policy areas (PA) monitored under the JAF are: (1) labour market participation; (2) labour market functioning, combating segmentation; (3) ALMPs; (4) adequate and employment oriented social security systems; (5) work-life balance; (6) job creation; (7) gender equality; (8) improving skills supply and productivity, adult learning; (9) improving education and training systems; (10) wage setting mechanism and labour cost development.

The **Employment Policy Monitor** (EPM), a joint Commission-EMCO report that is adopted twice a year by the Council, provides an overview of Member States' performance with respect to selected JAF indicators, and identifies "*particularly good labour market outcomes*" and "*key employment challenges*". Similarly, the **Social Protection Performance Monitor** (SPPM) identifies "*Member States with significant improvements*" as well as "*Social trends to watch*". The **Social Scoreboard**, put forward by the Commission in 2017 to monitor progress with the implementation of the European Pillar of Social Rights, comprises several indicators in the area of education, skills and adult learning: early school leaving, adult learning, underachievement in education, tertiary attainment, digital skills, as well as an indicator for the impact of parental background on education performance.³⁷

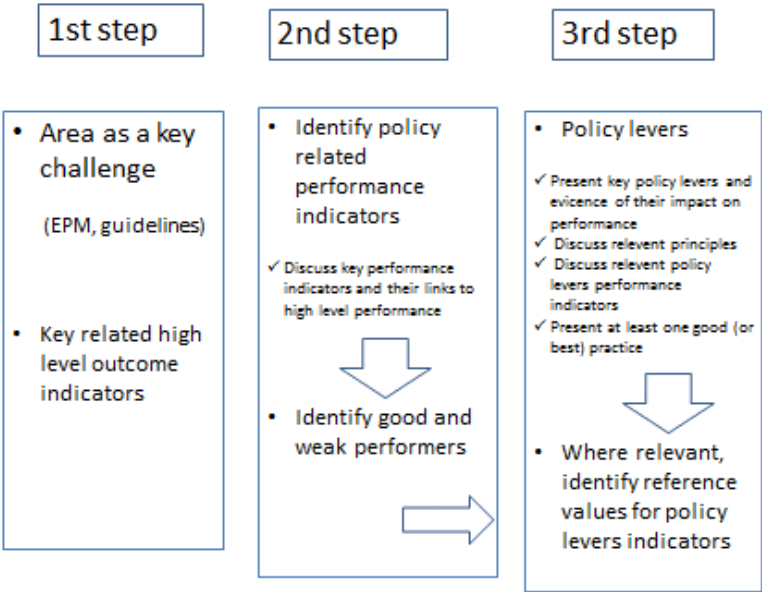
⁽³⁶⁾ Eurydice is an information network on education established by the Commission and Member States in 1980 to offer policy-makers and all those involved in the provision of education in Europe with information and analyses in this area.

⁽³⁷⁾ The Social Scoreboard replaced the Scoreboard of Key Employment and Social Indicators (KESI). The latter identified different categories of performance (very low, low, average, high and very high) based on the levels and trends by Member State of six major indicators (unemployment rate, youth unemployment rate and NEETs rate, gross household disposable income, at-risk of poverty and inequality rate).

However, there is still a gap that needs to be filled. In particular, headline targets and outcome indicators are difficult to translate into policy action, since they are very general and can result from different factors, only some under the remit of employment policies. Also, the ET2020 benchmarks or the Joint Assessment Framework (JAF) and the Employment Policy Monitor (EPM) lead to the identification of Key Employment Challenges (KECs) and good outcomes which are not immediately transferable into policy action.

The benchmarking framework would contribute to filling this gap, based on the three-step approach endorsed by EMCO and SPC in June 2017 (Figure 23).

Figure 23: A three step approach



In a first step, based on broad key challenges in the field of adult skills and learning a set of high-level outcome indicators is identified. These high-level outcome indicators include indicators which have been identified in the Commission's growth and jobs agenda and show a positive relationship with the performance of education systems, although they can also be influenced by many other (economic and institutional) variables.

In a second step, a set of performance indicators are identified. These performance indicators allow for cross-country comparisons of performance in the area of adult skills and learning based on the scoreboard methodology previously agreed with EMCO. This methodology accounts for significant deviations from the EU average, taking into account levels as well as changes in performance indicators.

For the third step, a thematic approach is followed to identify key policy levers that are effective in improving performance of adult skills and learning systems. The analysis is focused on the area of adult learning given its strong link with labour market outcomes and its relevance for the implementation of the Social Pillar.



Benchmarking framework indicators on adult skills and learning:

- Employment rates by education level (age group 20-64)
- Macroeconomic skills mismatch (age group 20-64)
- Labour productivity: GDP at 2010 reference levels per person employed (in euros, at 2010 exchange rates), as compared to the EU average

Main performance indicators on skills policies (from benchmarking):

- Supply of medium and high skills: the share of adults with at least upper secondary education attainment (age group 25-64)
- Adult learning: participation of adults in learning (age group 25-64)
- Digital skills: the share of the population with basic or above basic overall digital skills (age group 16-74)
- Demand for medium and high skills: the share of occupations requiring at least upper secondary education attainment (share of employment in occupations classified under ISCO categories 1-8) (age group 15-64).

Secondary (outcome) indicators:

- Labour shortages: the share of employers in manufacturing reporting that labour shortages are a major factor limiting their production (EU-BCS)
- On-the-job skills mismatch: over-qualification rate (the share of people aged 20-64 with tertiary education working in ISCO 4-9 sectors not requiring tertiary education).

Policy lever indicators:

- Access to guidance: The share of adult population, aged 25-64, who have received free of charge information or advice/help on learning opportunities from institutions/organisations during the last 12 months (AES)
- Participation of unemployed in adult learning: the share of unemployed adults 25-64 who participated in learning activity during the last four weeks, as part of all unemployed adults (LFS)
- Participation of low-qualified in adult learning: the share of low-qualified adults 25-64 who participated in learning activity during the last four weeks, as part of all low-qualified adults (LFS)
- Financial incentives for companies to provide training: the share of companies that report to have received any type of public co-financing for training activities in the reference year (CVTS)

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