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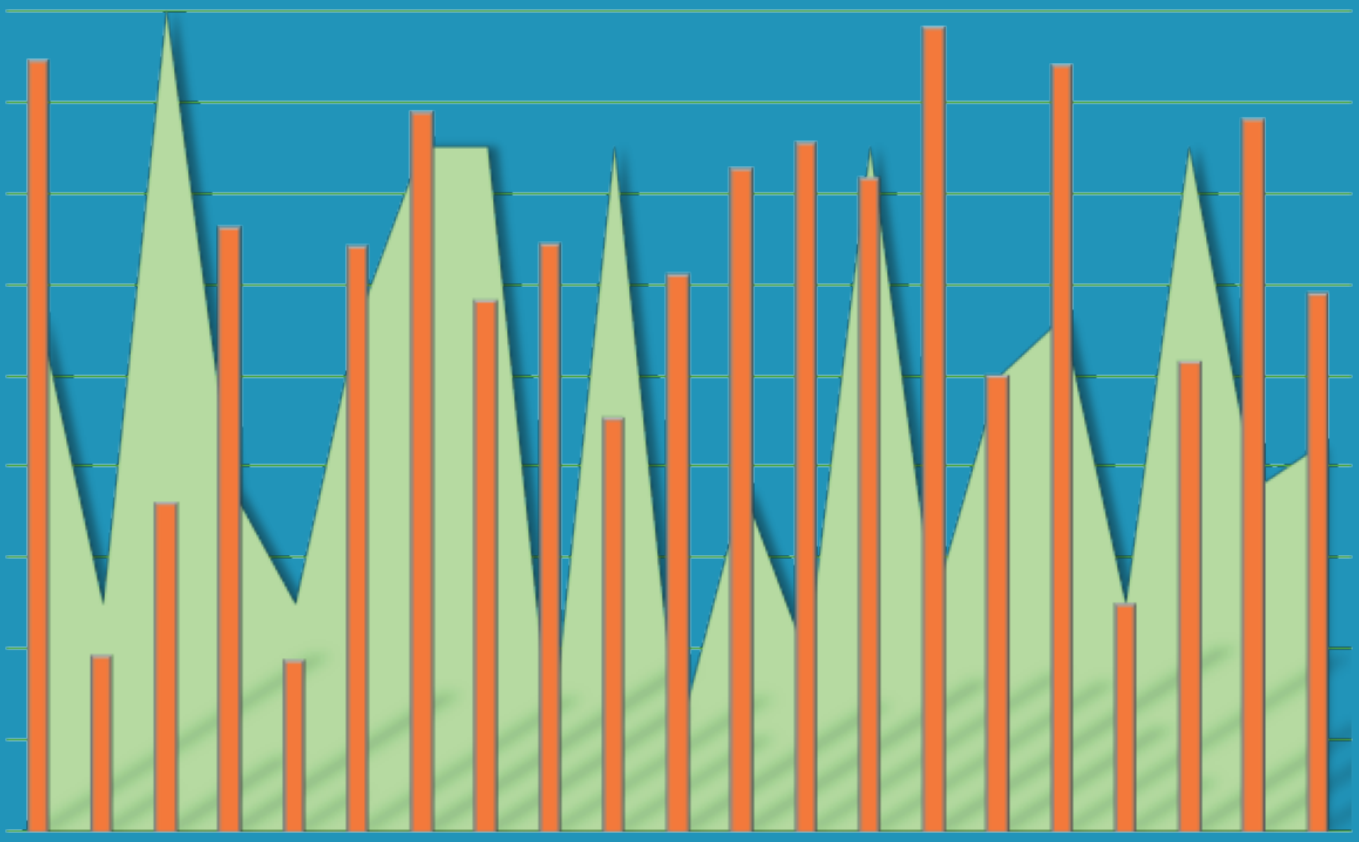
EDUCATION, SKILLS AND EMPLOYMENT — TRENDS AND DEVELOPMENTS

An ETF cross-country monitoring report

2024



THE EU AGENCY SUPPORTING COUNTRIES TO DEVELOP THROUGH LEARNING

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This cross-country monitoring report has been drawn up by Mihaylo Milovanovitch, Senior Human Capital Development Expert and Coordinator for System Change and Lifelong Learning at the ETF, with contributions from Stefano Lasagni and Mirela Gavoci, data analysts and experts in human capital development at the ETF. The work was carried out under the overall supervision of Hugues Moussy, Head of Systems Performance and Assessment Unit, ETF.

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CONTENTS

KEY TAKEAWAYS

- Scope of reporting: This cross-country monitoring report provides a comprehensive overview of education, training and employment trends in 2024 across 26 ETF partner countries in Central Asia, South Eastern Europe, including Türkiye (SEET), the Southern and Eastern Mediterranean (SEMED) and the Eastern Partnership (EaP) regions.

  Building on the 2023 edition, the report continues the focus on key themes. All data has been updated, with a particular emphasis on lifelong learning. The report examines the flexibility, adaptability and equity of learning opportunities in evolving socio-economic and demographic contexts, drawing insights from the ETF Torino Process and KIESE databases. More specifically, data are drawn from 206 KIESE indicators and 82 Torino Process System Performance Indices, covering policy and system outcomes related to access, quality, relevance and organisation for different groups of learners.

- Scope of the 2024 update: The 2024 report continues much of the thematic focus of the 2023 report, particularly on lifelong learning, access, quality and equity of learning opportunities, including through vocational education and training (VET). The overall structure and choice of themes remain consistent with the previous year to allow for reliable tracking of progress over time.

  As part of the ETF's biannual monitoring cycle, the 2024 update prioritises existing indicators, primarily from the KIESE database, rather than introducing new data or undertaking another round of qualitative input from countries, as was the case in 2023. As a result, the 2024 report is more selective in reporting on changes in system performance, focusing only on those for which there is updated quantitative evidence from international data sources.

- Lifelong learners and demand for learning: The 2024 monitoring highlights ongoing disparities in how education systems serve different groups. Young people continue to face significant challenges, particularly in countries with high levels of socio-economic inequality. NEET (Not in Employment, Education or Training) rates remain above the EU average in many ETF partner countries, and disadvantaged young people often struggle to access equitable learning opportunities.

  The need for lifelong learning among working-age adults is expected to grow as demographic changes, such as ageing populations, increase the demand for re-skilling and up-skilling. Vulnerable groups, including women and first-generation migrants, still face barriers, highlighting the importance of targeted interventions to make lifelong learning more inclusive and accessible to all.

- Access and participation: Education and training systems in the ETF partner countries vary considerably in the way they provide access to different groups of learners. Many countries still prioritise access for young people, especially in VET, while adult participation in lifelong learning remains more limited. In some countries, however, adults are now more likely to participate in lifelong learning than young people, reflecting changing policy priorities to support the expansion of adult learning. However, gaps between youth and adult participation are still widespread. Despite these gains, gender disparities and overall participation rates in lifelong learning remain a persistent challenge. In some contexts, support for disadvantaged young people has also weakened.

- Quality and relevance: In 2024, system performance data confirm the persistence of a marked skills gap between young people and adults. Adults generally outperform younger people, often bridging gaps in their earlier education through work experience. However, there are exceptions where young learners, particularly those in vocational education and training (VET), achieve levels of skills and competences that match or exceed the international average of countries participating in the ETF monitoring exercise.

Despite these successes, skills mismatches remain a major concern, particularly for tertiary graduates, many of whom struggle to find jobs that are aligned with their qualifications. Women, socio-economically disadvantaged youth, and first-generation migrants tend to acquire basic skills at higher rates, but overall employability challenges remain, especially for young graduates.

- System management and organisation: ETF partner countries vary widely in both the level and allocation of spending on education, with investments ranging from 2% to 7% of GDP. However, higher financial allocations do not always translate into more effective use of resources. Some countries with above average spending still face suboptimal learning conditions, while others manage to achieve better results with more limited resources.

  Human resource management is a persistent challenge, with significant differences between countries in teacher workload, class sizes and the professional capacity of school leaders across countries. Education and training systems that prioritise inclusive governance and strong accountability mechanisms tend to perform better. However, for all countries ensuring the strategic use of both financial and human resources remains essential to improving the quality of education and training.

1. INTRODUCTION

1.1 Overview

Each year, through initiatives such as KIESE[1] and the Torino Process[2], the European Training Foundation (ETF) collects comprehensive evidence on trends and developments in employment, education, and training in its partner countries. Each year, these efforts culminate in the publication of a cross-country monitoring report, which provides key insights drawn from the data collected. The 2023 edition is available at https://bit.ly/3UcJMWr.

This publication is the 2024 edition of the ETF cross-country monitoring report. It has been produced on the assumption that readers and users will expect some continuity in the choice of issues for monitoring and reporting, so that progress can be tracked over time. The report therefore retains much of the focus of the previous edition. As in 2023, it discusses the extent to which learners can benefit from lifelong learning opportunities that are accessible, of good quality and well managed. The report describes who the learners are, presents evidence on how well countries support their diverse learning pursuits and discusses whether this support is equitably distributed among learners of different backgrounds, genders, countries of origin and ages.

The number of countries included in the monitoring may vary from year to year. In 2024, the cross-country report covers 26 ETF partner countries in Central Asia, Eastern and Southeastern Europe, the Caucasus, and the Southern and Eastern Mediterranean. Depending on the availability of evidence, this number may vary from theme to theme. The countries included in the 2024 round of ETF monitoring are as follows: Albania, Algeria, Armenia, Azerbaijan, Bosnia and Herzegovina, Egypt, Georgia, Israel, Jordan, Kazakhstan, Kosovo[3], Kyrgyzstan, Lebanon, Libya, Morocco, Moldova, North Macedonia, Montenegro, Palestine[4], Serbia, Tajikistan, Turkmenistan, Tunisia, Türkiye, Ukraine and Uzbekistan.

1.2 Coverage and sources of evidence

To ensure the continuity of themes, the 2024 monitoring has prioritised updating existing indicators rather than introducing entirely new data. As in 2023, this edition of the cross-country report draws on indicators from the ETF's KIESE database, covering a wide range of areas from demographics, educational attainment and labour market data to resource allocation in education systems and participation in lifelong learning.

Some of these indicators were obtained directly from the ETF's partner countries through active collaboration with members of the KIESE data network — national statistical offices, authorities in charge of active labour market policies, such as Public Employment Services (PES) and, in some cases, line ministries responsible for data on education, training and/or employment. Most of the other indicators were obtained from international repositories such as UNESCO, the World Bank, the OECD, Eurostat and the ILO. Table 1 sets out an overview of the sources.

[1] Key Indicators on Education, Skills, and Employment.
[2] The Torino Process is a biannual review of vocational education and training (VET) in Southeastern Europe and Türkiye, Central Asia, the Southern and Eastern Mediterranean region and the Eastern Partnership region, which the ETF is carrying out in partnership with countries in these regions on a regular basis since 2010. For more information see https://www.etf.europa.eu/en/what-we-do/torino-process-policy-analysis-and-progress-monitoring
[3] This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.
[4] This designation must not be construed as recognition of a State of Palestine and is without prejudice to the individual positions of the Member States on this issue – hereinafter 'Palestine'.

Table 1. Provenience of KIESE data in 2024

Data repository	No. of indicators	Data repository	No. of indicators
UNESCO	67	UN DESA	6
OECD PISA	47	IMF	2
National sources	25	ILO	3
The World Bank	25	TIMSS, PIRLS	2
Eurostat	21	Cornell University, INSEAD, and WIPO	1
PIAAC	13	Portulans Institute, Oxford Said Business School	1
National Public Employment Services	8	European Social Survey	1
UNHCR	6	Cedefop	1
OECD TALIS	7		

Source: ETF KIESE database

The cross-country monitoring report also draws on 82 policy and System Performance Indices (SPIs). A significant proportion of the indicators in the KIESE database are valuable not only as stand-alone data points, but also for their ability to capture different aspects of policy and system performance in education and training. In the context of ETF monitoring, 'performance' describes the extent to which education and training systems, and VET in particular, deliver to learners against a targeted selection of national and international commitments.

Through its Torino Process initiative, the ETF tracks a total of 82 SPIs, covering commitments (system outcomes) in three broad areas: access, quality and system organisation, as well as how well these outcomes are delivered to different groups of learners, including young people and adults, female learners, socio-economically disadvantaged young people, adults at risk of exclusion and first generation migrants.

Many of these outcomes are complex and multifaceted and cannot be fully captured by a single, stand-alone indicator. The diversity of learners in the different countries limits the extent to which a single indicator can capture performance across different populations or settings. Therefore, ETF's monitoring combines a conceptually coherent selection of KIESE indicators into the System Performance Indices (SPIs) mentioned above, one for each of the 82 outcomes monitored through the Torino Process[5].

The SPIs are aggregate metrics that describe performance in delivering outcomes by combining multiple KIESE indicators to provide a fuller, more realistic picture of what policies and systems are delivering across countries – whether they are fulfilling their commitments in terms of outcomes for different learners in different settings. Where indicators are missing for the calculation of SPIs for a particular outcome, these gaps are filled by self-assessment questionnaires administered to countries, and the responses are quantified to calculate the SPI[6].

Since their first use in the 2023 round of system monitoring, the SPIs have proven to be an intuitive, user-friendly way of presenting complex aspects of system performance. Although their composite nature and the multiple layers of conceptualisation involved make them more fragile and perhaps less stable than individual data points, the single score they provide simplifies the interpretation of otherwise complex data for policymakers and stakeholders, allowing them to quickly grasp and use the results in planning and decision-making. The SPIs are also highly applicable in areas that are otherwise difficult to monitor using traditional administrative measures.

[5] The full list of KIESE indicators and the indicators selected as proxies in constructing the Torino Process SPIs can be found at https://bit.ly/4exAkF0.
[6] For a full overview of the Torino Process system performance monitoring framework, see https://bit.ly/47YGA6l.

These indices are the second main source of information used the cross-country reporting, alongside KIESE data which are the primary source.

1.3 Evidence limitations

KIESE data and the Torino Process System Performance Indices provide a sound basis for cross-country reporting. However, it is important to recognise that both sets of data have limitations. Some of these are due to methodological choices made to ensure continuity, while others are the result of factors beyond ETF's control. Together, they affect the scope and reliability of the data presented this year.

Limitations due to methodological choices in 2024

The 2024 monitoring update is the result of several interrelated decisions aimed at achieving a good compromise between the accuracy, reliability and feasibility of data collection. Some of these decisions, while necessary, required trade-offs that introduced some limitations in the coverage and comparability of both KIESE data and SPIs as sources of monitoring insights.

As noted above, when KIESE indicators are not available for certain policy and system outcomes, the system performance indices for these outcomes are typically calculated by quantifying countries' self-assessment responses to a questionnaire. A key methodological decision underlying the 2024 monitoring process was to establish a biennial cycle, with self-assessment data collected in the first year (in this case 2023) but not in the second (2024), in order to avoid placing an additional burden on countries. As a result, the 2024 SPI update is based solely on an update of the KIESE indicators, without any additional qualitative input from countries.

As the SPIs are based on updates of the KIESE indicators only, any observed changes in the countries' SPI scores and monitoring targets between 2023 and 2024 are driven purely by these quantitative updates. This means that if the SPI scores for some outcomes/monitoring targets remain unchanged for some countries, this is not necessarily due to a lack of progress or stagnation in performance. It may also be due to the lack of new data beyond the existing proxies in the KIESE database. In this context, lack of new data means either the absence of 2024 data for certain indicators or the unavailability of consistent data for both 2023 and 2024. For this reason, the ability of some SPIs to capture the full scope of changes in policy and system performance may be more limited in some countries compared to 2023. There may also be fewer noticeable shifts in the overall SPI landscape.

To ensure that only genuine, i.e. valid changes in performance are reported, a further methodological decision was taken to introduce thresholds to help distinguish valid SPI changes — typically smaller and more gradual — from larger shifts that are likely to be due to technical issues, outlier data or measurement inconsistencies. While this approach helps to filter out noise and ensure that the reported changes reflect real changes in performance, it may further reduce the number of notable changes that qualify for reporting in 2024.

Table 2 shows the result of these efforts. It sets out the total number of monitoring targets with validated changes by country, as well as the share of all framework targets that have undergone a real change by country[7].

As the monitoring targets are designed to track the performance of policies and systems in a wide range of areas of education and training, the validated changes in these targets reflect tangible shifts in how well the systems are functioning and delivering for learners. The data in Table 2 therefore provide a good approximation of the extent of change in policy and system performance in each country between 2023 and 2024. However, as the table only includes targets where data-driven

[7] A full list of monitoring targets with validated changes in 2024 by country can be found here: https://bit.ly/4eWzQbC

changes have been validated, it is likely to provide a more conservative estimate of changes in system performance.

Table 2. Extent of validated change in policy and system performance between 2023 and 2024, ETF partner countries

Country	Targets with validated change (total number)	Targets with validated change (share of all targets)
ALB	24	29.27%
ARM	12	14.63%
AZE	12	14.63%
BIH	33	40.24%
DZA	7	8.54%
EGY	28	34.15%
GEO	32	39.02%
JOR	32	39.02%
KAZ	27	32.93%
KGZ	12	14.63%
LBN	11	13.41%
MAR	31	37.80%
MDA	15	18.29%
MKD	33	40.24%
MNE	33	40.24%
PSE	10	12.20%
SRB	43	52.44%
TUN	21	25.61%
TUR	46	56.10%
UKR	30	36.59%
XXK	5	6.10%

Source: Torino Process database.

Another decision taken in the course of preparing the 2024 monitoring update that introduced some limitations was to accept changes in the selection of certain KIESE indicators following their discontinuation or replacement by the international repositories from which they are drawn. For example, the Organisation for Economic Co-operation and Development (OECD) discontinued some of the contextual questions in its Programme for International Student Assessment (PISA), and UNESCO revised elements in the questionnaires of its GRALE[8] survey. While the acceptance of these adjustments was necessary to ensure that the KIESE selection is up-to-date, it also limits the ability to compare certain indicators over time, potentially disrupting their use for analysis of long-term trends.

External limitations

Factors beyond ETF's control also played a role in shaping the reliability and completeness of data in the 2024 monitoring cycle. In addition to changes introduced by the organisations providing some of

[8] GRALE stands for Global Report on Adult Learning and Education. It is a periodic report published by UNESCO to monitor progress in adult learning and education (ALE) globally and to promote its development across member states. See https://www.uil.unesco.org/en/adult-education/global-report-grale (accessed 10 October 2024).

the KIESE data, another important factor was the varying degree to which countries were able or willing to provide data to the ETF and/or to international evidence collection initiatives.

Table 3 shows that data availability improved for most ETF partner countries in 2024 compared to 2023 — an increase that in countries such as Palestine, Azerbaijan, Türkiye and Moldova was largely driven by the provision of new evidence through these countries' participation in the 2022 round of OECD's PISA. However, some countries, such as Egypt and Kyrgyzstan, saw their evidence gap narrow despite not participating in international assessments. In others, such as Kosovo and Lebanon, the data gap widened. Despite these different trends, the overall availability of internationally comparable indicators for ETF partner countries increased from 36.34% in 2023 to 43.18% in 2024.

Table 3. Availability of internationally comparable KIESE data for system performance monitoring, ETF partner countries (2024)

Percentage of indicators available out of total

Country	Data availability 2023 (%)	Data availability 2024 (%)
ALB	42.11	57.80
ARM	22.56	25.20
AZE	20.30	52.60
BIH	47.37	33.30
DZA	12.78	14.10
EGY	15.79	22.20
GEO	52.63	57.80
JOR	47.37	51.90
KAZ	47.37	49.60
KGZ	14.29	20.00
LBN	51.88	25.20
MAR	49.62	55.60
MDA	36.84	56.30
MKD	51.13	57.00
MNE	36.84	56.30
PSE	5.26	44.40
SRB	59.40	72.60
TUN	15.04	17.80
TUR	60.90	80.00
UKR	45.11	53.30
XXK	28.57	3.70
International average	**36.34**	**43.18**

Source: KIESE and Torino Process databases

Gaps in this type of data are often not intentional but the result of challenges in accessing or compiling the necessary information. Some ETF partner countries struggle with limited resources, capacity issues in national data systems, and sometimes bureaucratic hurdles that delay data collection and submission. In other cases, it is the political and/or economic environment that creates barriers to

timely and complete data provision. In addition, national priorities or strategies for data collection and reporting may differ from those set by international data collection initiatives.

Report structure

The structure of this report is organised around three main areas that are central to ETF's monitoring: access, quality and system organisation. These are central because they reflect the typical trajectory of learners through a learning opportunity, as well as the overarching policy perspectives and priorities of educational institutions and stakeholders along this journey.

The report devotes a chapter to each area, while also addressing an often neglected question: who are the learners and how big is the challenge for countries to meet their needs? These needs are linked to factors such as age and gender, socio-economic background, level of educational attainment and migration status.

In particular, Chapter Two examines the different profiles of lifelong learners in terms of age, socio-economic status, educational attainment and migration background. The assumption is that the scale of the challenge in meeting their needs is closely related to the size and diversity of these groups. Larger or more diverse learner populations, particularly those at risk of exclusion or disadvantage, are likely to require more tailored resources and support, thus posing a greater challenge to the education and training systems of ETF partner countries.

This is followed by Chapter Three which looks at the accessibility of learning opportunities and the extent to which they are available to this diverse range of learners. The chapter also examines the extent to which learners, both young and adult, are able to successfully navigate and complete their studies, be it in secondary general, higher or vocational education.

Chapter Four examines the provision of essential skills to learners. It presents evidence on how well education and training in ETF partner countries are aligned with labour market demand and wider societal needs, and whether the skills and knowledge provided to learners are of sufficient quality and relevance.

Finally, Chapter Five discusses various aspects of system organisation and management in education and training, including the availability and adequacy of human and financial resources, and the provision of teaching and learning materials.

The report uses a narrow selection of indicators and system performance metrics, chosen for their ability to capture key aspects of the relationship between learners, education and their skills, and employment. These indicators capture both developments and policy progress in these areas. All graphs and tables displaying system performance indices reference the reporting year, 2024. For all other data, the year of reference is specified in the title and may be prior to 2023. For readers seeking a deeper understanding, a separate file provides additional data from the KIESE and Torino Process evidence repositories. The file can be found here: https://bit.ly/3YNbvOC. In addition, the source file used for all figures and tables in the report can be found here: https://bit.ly/4hFQfTJ.

The narrative refrains from speculating on the reasons behind the data. Instead, it focuses on providing a clear and balanced presentation of the evidence. The report does not contain a description of the education systems or the policies that guide them.

While it occasionally suggests possible implications based on the evidence and may refer to some contextual factors, it is important to recognise that these are interpretations. The real reasons behind the monitoring findings may be complex and context-specific, making it difficult to discuss them in a cross-country perspective. Although the decision to refrain from analysing the underlying reasons in terms of policies and systemic arrangements may be seen by some as a limitation, it ensures the integrity and impartiality of the information. It also allows readers to use the data as a basis for their own purposes, in a way that suits their own needs and expectations.

2. A FOCUS ON LEARNERS

2.1 Who are the learners in focus of ETF's monitoring?

As explained in the previous edition of this report, the ETF monitoring has a learner-centred perspective. This means that the realisation of educational commitments by countries is assessed through the perspective of learners, with a focus on how policies and systems meet the specific needs and expectations of different groups of learners in different educational settings and employment contexts[9].

In 2024, the emphasis remains on lifelong learning and the same strategic selection of learners as in 2023. The most fundamental learner characteristic guiding this selection is the age of the learner. By its very nature, the concept of lifelong learning recognises age as an inherent characteristic of learners that has a decisive impact on their educational needs and pathways, and on the policies that countries put in place to meet those needs.

Age is therefore a critical learner characteristic and a key factor in how ETF's monitoring assesses policy and system performance in its partner countries. For the purpose of monitoring, learners are grouped into two main categories and performance is captured separately for each of them: 'young people', who are typically engaged in education — from early childhood to the tertiary stages — and transitioning to the labour market; and 'adults', who may have completed their formal education but continue to need to update their skills to remain relevant in a dynamic labour market. For the sake of clarity, in this report 'young people' refers to individuals aged 0-24, while 'adults' refers to those aged 25 and over. In terms of enrolment in VET, 'young people' refers to learners in initial VET, while 'adults' denotes those enrolled in continuing vocational education and training (CVET) programmes or other programmes to which VET could or should contribute.

A common guiding principle of national and international commitments in education is that lifelong learning opportunities should be accessible and relevant to all individuals, regardless of their starting point or circumstances. Therefore, in defining the learners who are the focus of ETF monitoring, another key consideration is that some of them may be vulnerable due to demographic and situational (socio-economic) factors, which may put them at risk of exclusion from education and/or employment and jeopardise the adequate delivery of key policy and system outcomes in countries.

The notion of 'vulnerability' opens the door to a wide range of characteristics to be considered, each of which has its own relevance when discussing education, training and employment. Some of these are widely recognised and commonly monitored in relation to vulnerable populations in education and employment contexts, as they align with national and international policy priorities to reduce vulnerability. These common characteristics include socio-economic disadvantage (for young people), gender (for both young people and adults) and risk factors such as long-term unemployment, low educational attainment or economic inactivity (for adults).

Assuming that a country's education and training sector can be judged by how it treats those most in need, the ETF's monitoring results would be incomplete if they didn't include a performance assessment of how well the needs of vulnerable learners are being met. For socio-economically disadvantaged young people, for example, lifelong learning can provide a pathway out of poverty through education, training, and skills development that continue beyond compulsory schooling. For female learners in contexts where gender inequalities persist, lifelong learning ensures that women and girls have equal access to education and employment opportunities, which can help break cycles of disadvantage. For adults at risk of exclusion, such as the long-term unemployed, those with low or no education and the economically inactive, lifelong learning can be the key to reintegration into the labour market and society.

[9] See the second chapter in the 2023 edition of the cross-country monitoring report at https://bit.ly/3UcJMWr.

In order to assess how well lifelong learning commitments are being met, it is therefore essential to monitor the performance of the system in supporting these specific groups of learners: young people from disadvantaged socio-economic backgrounds, women who may face gender barriers and adults who may face difficulties in re-entering the labour market or continuing their education due to long-term unemployment, low educational attainment or economic inactivity.

The third and final consideration in defining the learners in focus of ETF's monitoring is their country of origin, with a particular focus on first generation migrants. These learners often face unique challenges, such as adapting to a new language, education system and cultural environment. Depending on how they are being addressed, these challenges can be significant barriers to the integration and educational success of migrant learners. By examining how well countries provide education and training for them, ETF's monitoring provides some insight into the capacity of education and training systems to manage diversity.

2.2 Gauging demand for learning

In the previous section, we identified the key learner groups to focus on for monitoring. This was the first step in setting the stage both for determining the overall focus of ETF's monitoring framework and for reporting on how well education and training systems in ETF partner countries are meeting the demand for learning. The next step is to gauge the demand for learning among these groups.

Understanding who and how many need learning opportunities is an important prerequisite for designing relevant education programmes and policies. This information also provides a useful background against which to contextualise the system performance results and understand how far-reaching the strengths or weaknesses of performance may be in the different areas of monitoring. For example, in a national context with a high demand for lifelong learning among adults, weaknesses in access to adult learning may be a more pervasive and significant finding than in contexts where demand for adult learning is lower.

To date, however, no single international metric for measuring demand for education and training has been agreed. Instead, existing data sources can be used to estimate the educational needs and aspirations of potential learners through a mix of indirect indicators. But which indirect indicators?

The metrics commonly used to estimate and understand educational demand in countries include demographic trends, enrolment rates and socio-economic factors, as well as various labour market indicators. Of these, the indicators that provide information about the size of the learner population of interest can be a sufficiently informative metric for assessing the potential educational needs of a country.

The number of learners in particular groups — young people, adults, vulnerable populations, etc. — is directly related to the potential need for education and training in terms of, for example, infrastructure, teachers, facilities and educational materials. Larger populations place greater demands on the system in these areas, making the size of a given group a key factor in the estimated resource and capacity needs for education. While there are many types of demand, such as for specific curricula, support services or attention, the most feasible estimate based on available country data relates to resource and capacity needs.

ETF's monitoring prioritises learners by age, gender and country of origin, as well as learners at risk (socio-economically disadvantaged young people, adults who are long-term unemployed, economically inactive or have low or no education). Consequently, and for the purposes of this report, demand for learning is measured using data that approximate learning needs by examining the presence and, where possible, the distribution of specific groups of vulnerable learners in the population of ETF partner countries. The KIESE indicators which were selected for the purposes of this report include the share of young people who are not in education, employment or training (NEETs) and socio-economically disadvantaged young people, the share of adults with low or no education, and the share of first generation migrants in the student population.

This is complemented by demographic data showing the distribution of the population by age, which provides a broad but effective measure of potential demand for both youth and adult education. Countries with a high proportion of young people are likely to need more youth education infrastructure, while countries with a growing/ageing adult population may face greater demand for adult education and lifelong learning opportunities.

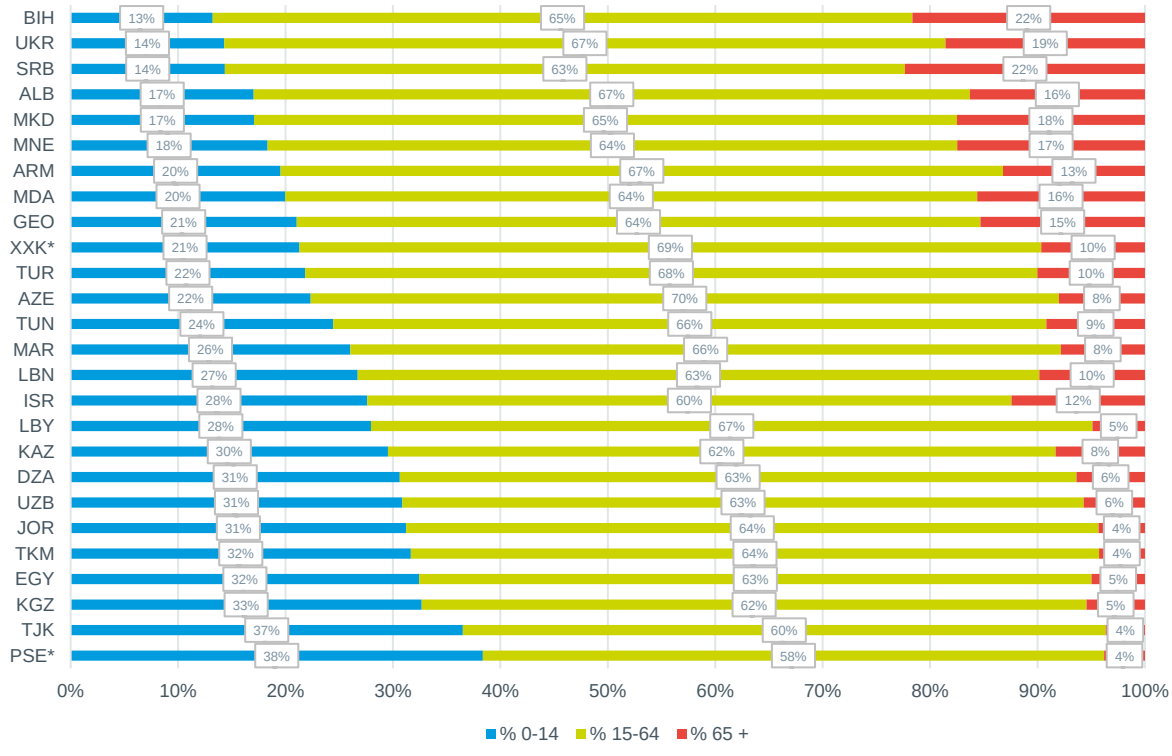
The sections below provide a snapshot of the extent to which ETF partner countries are faced with the challenge of diverse learning needs of different groups of learners — needs that are related to age, socio-economic disadvantage, educational attainment and migration status.

Demand for learning by age

In 2023, the cross-country analysis and reporting focused on future demographic projections, in particular the expected decline in youth population in the ETF partner countries. It highlighted how a shrinking share of young people signals a forthcoming shift in the demand for education and work. The projections underlined the growing need for education and training systems to adapt and place a much greater emphasis on adult learners and lifelong learning in line with the increasing proportion of older people in the population.

In 2024, the long-term trends remain valid, but the focus of reporting shifts to the realities of the present. One way in which this section of the report examines demand for education and training is by looking at the distribution of the population by age as a proxy for current demand. This focus provides a more direct understanding of who the current learners are and helps to project their needs in terms of capacity and resources, particularly from a lifelong learning perspective which includes adult learning.

Figure 1. Distribution of the population by age, ETF partner countries (2023)



Note: Countries are displayed in ascending order based on the percentage of the population aged 0-14 years.
Source: ETF KIESE, calculations based on UN DESA data.

Figure 1 highlights important demographic trends in the different countries that have an impact on the demand for education and training. In countries such as Palestine, Tajikistan, Kyrgyzstan and Egypt,

more than 30% of the population is under the age of 15. This suggests a strong demand for education services in the form of schooling and early childhood education and care. These countries are likely facing pressures on their education systems to meet the needs of their young populations in a satisfactory way.

In contrast, countries such as Bosnia and Herzegovina, Serbia and Ukraine have a much smaller proportion of young people, with only 13–14% being under the age of 15. This suggests lower future demand for pre-school and school education (except perhaps in larger urban areas) and could also signal challenges in maintaining a dynamic workforce over time. These countries need to urgently shift their focus to adult education and reskilling programmes.

Some ETF partner countries such as Azerbaijan, Kosovo, Türkiye and Morocco have relatively large working age populations. In such contexts where 66% to 70% of adults are of working age, the demand for employment opportunities is higher and education and training systems are likely to be under greater pressure to match skills with labour market needs and provide opportunities for reskilling and lifelong learning. The risk of skills mismatches, higher unemployment and underemployment is also higher.

On the other hand, countries such as Serbia, Ukraine and Bosnia and Herzegovina have somewhat smaller working age populations. This, combined with the lower number of young people, points to future challenges for the sustainability of the workforce. Here too, the demographic situation suggests the need for strategies to promote skills development in a lifelong learning perspective for the benefit of adults and older workers.

The older population (aged 65 and over) is also crucial in assessing current and future learning and skills needs. Bosnia and Herzegovina, Serbia, Ukraine and Montenegro have the largest elderly populations (more than 17%). This points to potential labour shortages in the coming decades and underlines the need strategies to retain workers and retrain adults. In contrast, countries such as Palestine, Tajikistan and Jordan have much smaller elderly populations of around 4%. The younger demographics of these countries indicate a greater need for youth employment opportunities and targeted education programmes to prepare the younger population for the labour market.

Demand for learning by disadvantage: young people

Young people not in education, employment or training (NEET)

A high prevalence of NEETs often indicates that education, training and labour market systems may not be fully serving young people, particularly those at risk of exclusion or disadvantage. While not all NEETs are from disadvantaged backgrounds, a high proportion suggests that these systems may not be able to provide sufficient support for a smooth transition from school to work. Challenges such as inadequate training opportunities, poor career guidance or limited job prospects can widen this gap. Therefore, NEET rates often reflect how well national systems are equipped to address the needs of vulnerable learners.

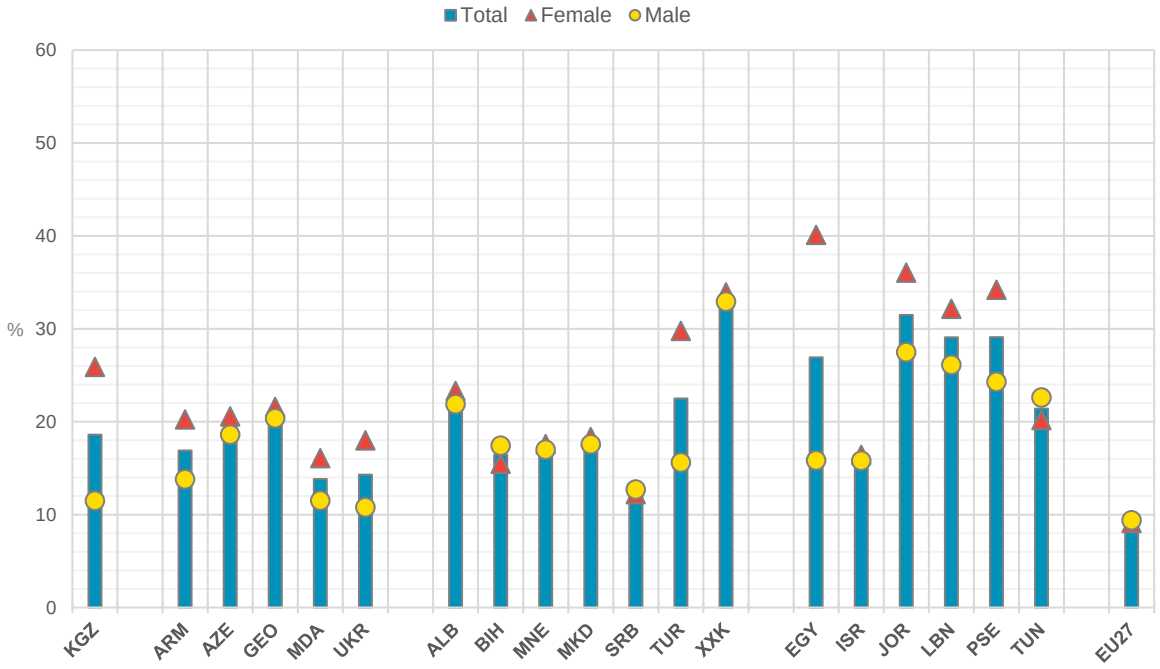
In all ETF partner countries for which data are available, NEET rates are significantly higher than the EU27 average of 9.2% (Figure 2). This gap suggests that there may be structural barriers to ensuring that no young people are left behind, such as limited access to relevant vocational training, a lack of job opportunities, and education systems that may not fully meet the needs of the labour market.

For example, countries such as Georgia, Armenia and Kyrgyzstan report NEET rates of 18% to 21%, indicating persistent problems in integrating young people into either education or the labour market. While there have been some positive developments, these countries continue to face barriers that keep NEET rates well above those in the EU, indicating areas where national systems are still struggling to effectively support young people.

Moldova has made notable progress, with a sharp decrease in NEET rates from 17.2% in 2022 to 13.8% in 2023. This reduction is a positive development, but the NEET rate remains high compared to

the EU average. Similarly, Georgia and Armenia have seen modest improvements, but their NEET rates remain high, which may indicate persisting gaps in their youth engagement strategies.

Figure 2. Percentage of the 15 to 24-year olds identified as NEET by country (2023)



Note: Year 2021 for Ukraine, year 2022 for North Macedonia, Egypt, Jordan, Lebanon and Palestine*. Data for Tunisia refers to 2nd quarter of 2023.
Source: ETF KIESE (from LFS data received through Eurostat and the national statistical offices of ETF partner countries)

Meanwhile, the NEET rate in Ukraine is reported as stable at 14.3%, which remains lower than that in many ETF partner countries. While this figure could suggest a level of resilience in sustaining youth engagement despite difficult socio-economic and political circumstances, it's important to note that the rate remains based on data from Ukraine's most recent labour force survey in 2021. Thus, the same figure appears in both the 2023 and 2024 reports and may not fully reflect recent shifts in youth employment and education. Without more recent LFS data, tracking NEET trends and monitoring changes in youth engagement remains challenging, limiting the ability to assess progress amid evolving pressures in the country.

Overall, most of the ETF's partner countries could benefit from a more integrated approach to providing learning opportunities to young people — one that not only focuses on improving the quality and relevance of education but also addresses the wider structural issues that prevent young people from successfully staying in education and then transitioning into employment.

Socio-economically and educationally disadvantaged young people

Given the limited choice of international indicators, another way to gauge demand for education among disadvantaged young people is to use data from the OECD's PISA. In 2022, the OECD processed and published a number of PISA indicators, one of which is a combined metric of socio-economic disadvantage and low performance in mathematics. The indicator tracks the share of socioeconomically disadvantaged students (those in the bottom quarter of the ESCS index) in the PISA sample of each participating country who face a 'double disadvantage' by also scoring below proficiency Level 2 in this assessment domain.

Like other PISA indicators, this one is statistically representative of the student population in each country. For participating countries, it can serve as a valuable proxy for estimating the size of the

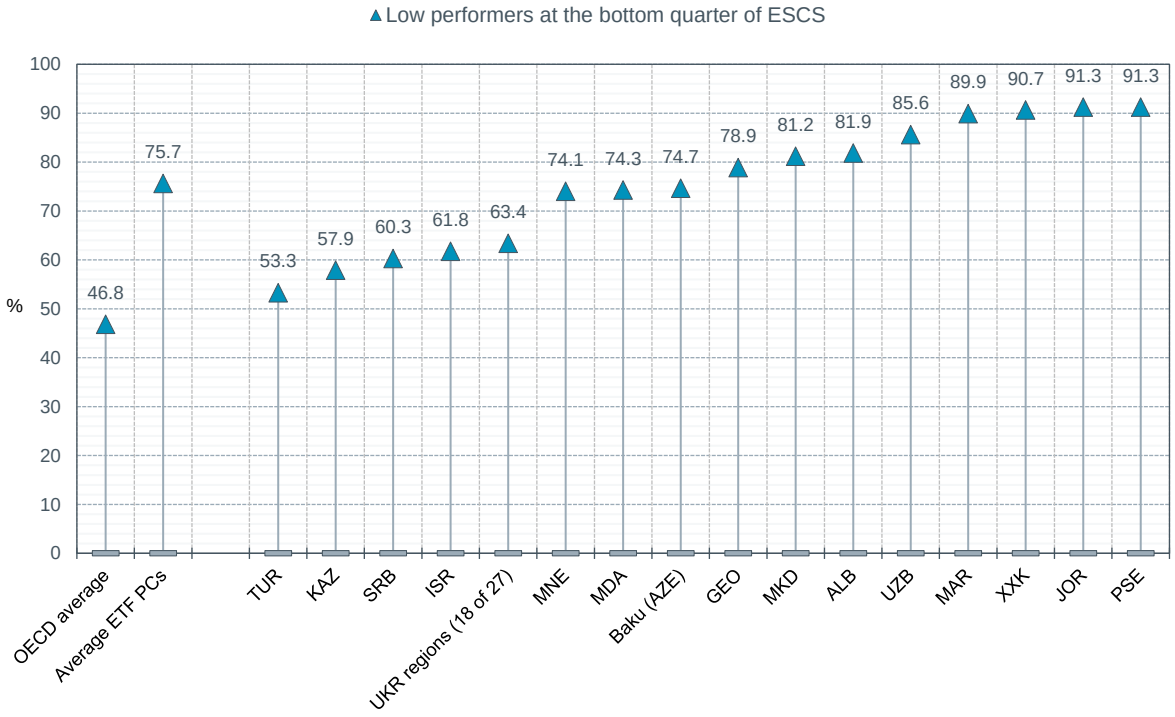
vulnerable youth population and its potential demand for education, especially in contexts where detailed data on school education and VET are scarce.

This metric offers greater insight than socioeconomic data alone. Not all socioeconomically disadvantaged students struggle academically; some perform well despite their circumstances. By considering both learning outcomes and socioeconomic status, the metric identifies students who face compounded barriers to education and opportunity. Capturing this double disadvantage provides a more nuanced understanding of vulnerability and the potential demand for educational support among disadvantaged youth.

Figure 3 shows this data for ETF partner countries that participated in the 2022 PISA round and the OECD average. In all ETF partner countries, well over half of the school students are educationally and economically disadvantaged (Figure 3). In some partner countries, such as Palestine, Jordan, Kosovo, Morocco and Uzbekistan, almost all students fall into this category. Albania, North Macedonia, Georgia, Moldova and Montenegro also have high proportions of disadvantaged pupils.

Figure 3. Youth at a socio-economic and educational disadvantage, ETF partner countries and OECD average (2022)

Percentage of students in the bottom quarter of the PISA index of economic, social and cultural status (ESCS), who score below proficiency Level 2 in PISA



Note: Countries and economies are ranked in ascending order of the share of low performers in mathematics for students in the bottom quarter of national socio-economic status.
Source: OECD PISA 2022 database

By contrast, countries such as Türkiye, Israel, Kazakhstan and Serbia have lower proportions of students in the lower ESCS quartile who are struggling academically. However, even in these countries, the proportion remains well above the OECD average.

These data undoubtedly suggest that there is widespread demand in ETF partner countries for better learning for vulnerable students, student support and equity measures. Given the large proportion of low performing students in the lower quartile of ESCS across all partner countries in the sample, it is likely that their education systems are facing (or will soon face) an increasing demand for targeted

support services. These may include remedial programmes, targeted interventions and financial assistance to ensure that disadvantaged students can overcome the barriers they face. The systemic nature of these challenges means that interventions must address both academic and socio-economic factors simultaneously to have a lasting impact.

At the same time, it is also important not to overstate the impact of PISA results on real-world practice in schools and national education systems. In many contexts, international assessments such as PISA may have limited visibility or impact on local educational practice, particularly because the results are not linked to formal consequences or follow-up actions that affect individual learning providers and their students. As a result, in many ETF partner countries, there can be varying degrees of disconnect between the international assessment data and the way the education system operates or responds to equity challenges and learner demand. Despite its value, this underlines the limitations of this PISA metric as a proxy for gauging demand by disadvantaged young people.

Demand for learning by disadvantage: adults

Adults with a low level of educational are often a high priority group in national education and training policies due to their increased vulnerability to unemployment or low-skilled and low-paid employment. In economic terms, this population group is at higher risk of exclusion due to under-participation in the labour market, which in turn affects the overall productivity of the workforce.

By focusing on the size of this group in countries, it is possible to gauge the potential demand for education and training opportunities, particularly those aimed at upskilling or reskilling. Targeting education programmes at these adults not only improves their employability and earning potential but also helps to address skills gaps in the economy. Moreover, from a social perspective, investing in the education of low-skilled adults helps to reduce inequalities and prevent cycles of disadvantage from becoming entrenched and deepening.

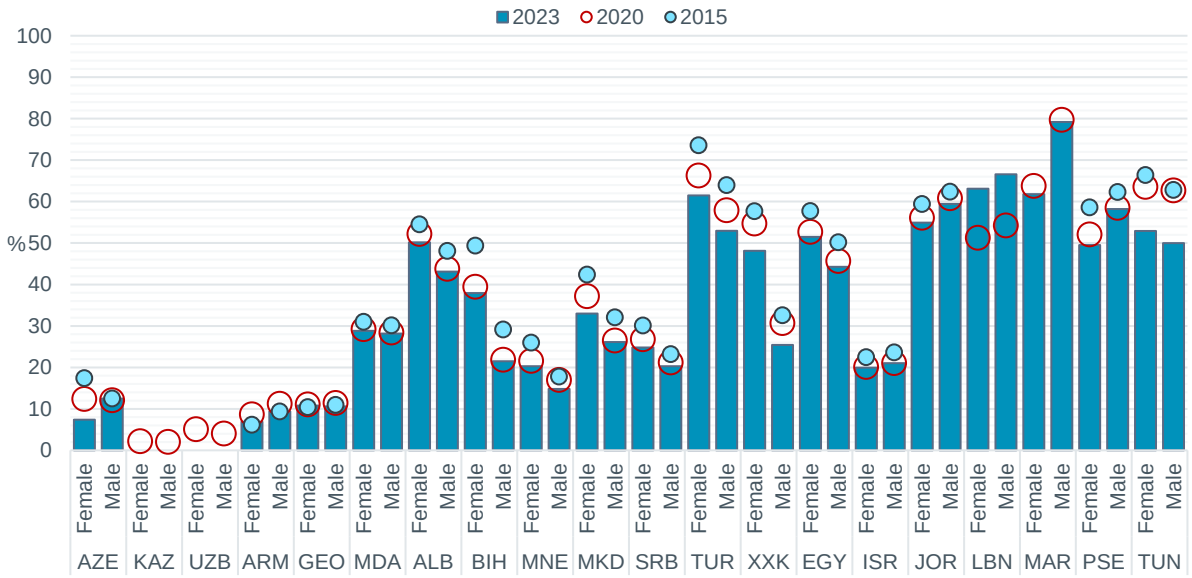
This section discusses data on the share of the male and female population with less than basic education and less than upper secondary education. Evidence from ETF partner countries suggests that in some regions, a significant proportion of the population has not attained the minimum level of education typically required for meaningful participation in the labour market or access to further education.

In particular, countries in the Southern and Eastern Mediterranean (SEMED) region face quite serious challenges in terms of the low educational attainment of their working age population, especially Palestine, Lebanon, Jordan and Morocco. Egypt and especially Tunisia show some positive developments between 2015 and 2023, but even there, the share of disadvantaged people in terms of educational attainment remains high (Figure 4). In Tunisia, the percentage of women with a low level of education decreased from 66.4% in 2015 to 52.9% in 2023, while for men the share decreased from 62.8% to 50% in the same period. Egypt shows a similar trend, although the gender gap remains significant. In 2023, 51.5% of women and 44.3% of men in Egypt had a low level of education, reflecting progress but also persistent disparities.

In contrast, Jordan and Palestine continue to struggle with high levels of low educational attainment, despite some improvement. In Palestine, 49.5% of women and 58.2% of men had a low level of education in 2023. In Jordan, figures are similarly high, with 54.9% of women and 59.5% of men falling into this category. Morocco also faces significant challenges, with a striking 84.5% and 79% of men having low level of education in 2023. This makes Morocco one of the most affected countries in the SEMED region in terms of low educational attainment.

Lebanon, on the other hand, is an outlier, with its situation worsening rather than improving over the same period. In 2023, 63.1% of women and 66.6% of men reported low educational attainment, which is a significant increase compared to previous years and most likely reflects the wider challenges facing the country. Meanwhile, Israel stands out as the country with the lowest proportion of low achievers (19.9% for women and 21% for men in 2023).

Figure 4. Population aged 15+ with low educational attainment by sex in ETF partner countries, as a share of the total population (2015, 2020, and 2023)



Notes: Age range 15-74 for Serbia. Last year available for Kazakhstan is 2021; Last year available for Egypt, Lebanon and Morocco is 2022. For Lebanon, data have been provided for the year 2018 instead of 2020.
Source: ETF KIESE (from LFS surveys, Eurostat and Ilostat)

The trends in Eastern Europe and the Caucasus, on the other hand, are more mixed. In Armenia, there have been some fluctuations, with a slight increase in low educational attainment between 2015 and 2020, followed by a slight decrease by 2023. In Georgia, the share of educationally disadvantaged adults has remained relatively stable, with low educational attainment rates for both sexes remaining around 10% and 11% between 2015 and 2023. In Moldova, the share of women at risk of exclusion dropped from 31% in 2015 to 28.8% in 2023, while the rate for men decreased from 30.2% to 28.2% over the same period. There is a decrease in the share of women with low educational attainment in Azerbaijan, from 17.4% in 2015 to 12.4% in 2023, while the share of men with low educational attainment remained stable at 12.5%.

The region of South East Europe, including Türkiye, shows significant overall improvement, but gender disparities remain noticeable. Kosovo and Bosnia and Herzegovina have the largest gender gaps in low educational attainment, not only compared to other SEET countries but across all ETF partner countries. However, both Türkiye and Bosnia and Herzegovina have seen improvements in reducing low educational attainment rates for both sexes. At the same time, Central Asia shows some of the best results in the dataset, with both Kazakhstan and Uzbekistan maintaining very low levels of low educational attainment, in stark contrast to countries in South East Europe and the SEMED region. There is no significant gender gap in Azerbaijan, Kazakhstan and Uzbekistan, which suggests greater gender parity in access to and participation in education than in other ETF partner countries.

Demand for learning by country of origin: first generation migrants

The final section on gauging demand for education and training focuses on first generation migrant students. While the majority of migrants are adults, a proportion of this group are young people either in education or entering the labour market. Monitoring and quantifying the presence of this population is essential not only to understanding how well education systems are accommodating diversity, but also to gaining a sense of the potential need for tailored policies to support these learners.

The data presented in this section are again taken from the OECD's PISA study, which defines first generation migrant students as those who, together with their parents, were born outside the country in which they are currently attending school. Due to the representative nature of the PISA sample, the data provide a useful proxy for understanding the size and characteristics of this learner group in the 15-year-old school population in the ETF partner countries participating in PISA.

Table 4 shows the percentage of first generation migrant students in the PISA sample for each country, as well as the average percentages for ETF partner countries and OECD countries.

Table 4. Learners by immigrant background, share of total in the PISA sample, ETF partner countries and OECD average (2022)

Country	Notes	First generation migrant students in the PISA sample
ALB		0.5%
Baku (AZE)		1.4%
GEO		0.5%
ISR	1	15.1%
JOR		10.0%
KAZ		1.8%
XXK		0.4%
MNE		0.8%
MAR		0.4%
MKD	1	2.0%
PSE	1	2.2%
MDA	1	1.8%
SRB	1	10.7%
TUR		1.4%
UKR (18 of 27 regions)		0.2%
UZB		0.3%
Average ETF partner countries		**3.1%**
OECD average		**4.6%**

Note: 1. Includes both first- and second-generation immigrant students.
Source: OECD PISA 2022 Database

Interesting patterns emerge from the data. In general, the proportion of first generation migrant students varies widely between ETF partner countries, reflecting differences in migration patterns and socio-economic factors. For example, Israel (15.1%) and Serbia (10.7%) stand out as having the highest proportion of first generation migrant students. These figures suggest that both countries have received a significant influx of migrants in recent years, reflecting wider demographic trends related to migration. Israel, for example, has a long history of receiving migrants, which is a likely explanation of its high percentage of migrants by international standards. The figure for Serbia, on the other hand, could be influenced by intra-regional migration flows and also by the strengthening of forward-looking sectors of the economy such as ICT, which attract foreign talent.

Jordan (10.0%) also has a relatively high proportion of first generation migrant students. This is consistent with Jordan's role as a major host country for refugees from neighbouring conflict zones, such as Syria, which forces the education system to absorb a significant number of migrant learners. On the other hand, countries such as Ukraine (0.2%), Uzbekistan (0.3%) and Kosovo (0.4%) have very low percentages of first generation migrant pupils. These countries are traditionally countries of origin rather than destination and their education systems do not necessarily have to focus on integrating newcomers.

On average, ETF partner countries have a lower proportion of first generation migrant students (3.1%) compared to OECD countries (4.6%). This reflects broader global migration trends, where wealthier OECD countries tend to be more common destinations for migrants due to greater economic opportunities and more established migrant networks. In contrast, most ETF partner countries in the ETF PISA sample continue to be countries of origin, where fewer migrants arrive and settle.

Nevertheless, the data suggest that there are important differences in the migration context of ETF partner countries in PISA 2022. Another aspect to consider is that the reasons why people migrate — whether fleeing conflict, seeking employment or moving for professional opportunities — play a role as well.

The wide disparity in the proportion of first generation migrant students across ETF partner countries underlines the need for data contextualisation. For example, refugees in Jordan likely have different educational needs compared to expatriates in Israel or Serbia. These different migration contexts may shape the specific needs of migrant students which, in turn, may have implications for the education and training needs and policies for migrant students in each country.

3. ACCESS AND PARTICIPATION

Building on the thematic areas outlined above, which trace learners' pathways from entry to completion of education or training, this chapter of the cross-country monitoring report focuses on access to learning opportunities. The aim is to present evidence on whether different groups of learners in ETF partner countries have equal opportunities or whether there are inequalities in access and participation.

Access to and participation in education and training, as well as the monitoring results presented in this chapter, are shaped by two main factors: the policies in place and the choices made by learners. Policies create opportunities, set guidelines and provide incentives for access to learning. Meanwhile, learners' choices reflect their preferences and how they engage with the opportunities available to them. The data in this chapter are a combination of indicators from the ETF KIESE database and system performance indices from the Torino Process database, which have been curated to capture both dimensions: the effectiveness of policies in providing access and promoting participation, and the prevailing choices made by learners within this framework.

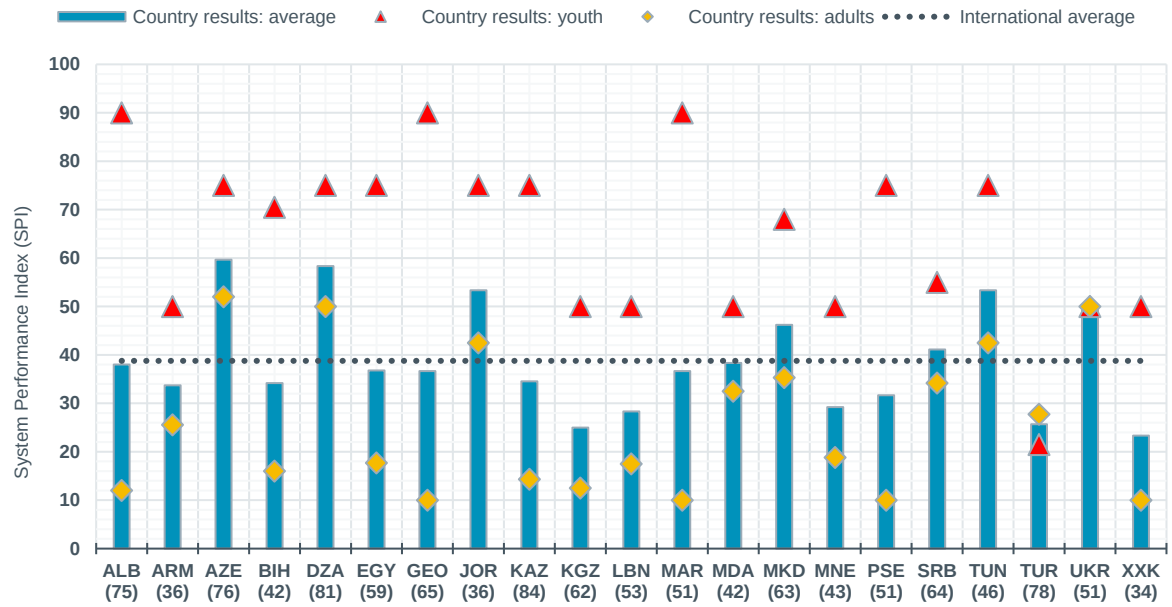
3.1 Access to learning: a policy and systems perspective

A significant proportion of the Torino Process System Performance Indices focuses specifically on access to and participation in learning. These indices provide an approximation of how well countries create favourable conditions for young people and adults to engage in learning that is relevant to their needs and labour market demand, including initial vocational education and training (IVET), continuing vocational education and training (CVET), and other lifelong learning opportunities for adults.

Overall results by country and age of learner

Figure 5 shows the performance of education and training systems in providing access to learning for both young people and adults. The figure presents three System Performance Indicator (SPI) scores for each country: an overall average score (shown as 'country results: average' in the key), a score specific to the youth population (labelled 'country results: youth' in the key) and a score for the adult population (represented as 'country results: adults' in the key). A dotted line shows the international average SPI (shown as 'international average') and serves as a benchmark for comparison. The figure also includes the countries' self-assessment scores on their own performance shown in brackets under the respective country codes. A lower self-assessment score indicates that the country is more critical of its performance, while a higher score (up to 100) reflects a more positive view.

Figure 5. Access to learning opportunities by country and age of learner — index of system performance, ETF partner countries and international average (2024)



Note: Theoretical[10] system performance index (SPI) range: min/low performance=0, max/high performance=100
Source: ETF Torino Process database

Most countries have a common pattern of access by age: young people are more likely than adults to enrol in learning and VET programmes. Türkiye is an outlier in this group of countries, as the pattern of system performance in terms of access is reversed when the age of the learner is taken into account: adults are more likely to enrol in VET and lifelong learning than young people.

In countries such as Albania, Georgia, Morocco and Palestine, the gap between youth and adult participation in learning is particularly marked. Some of these countries also have a system performance in supporting access for young people that that is well above that of other countries in the Torino Process sample.

In other countries, such as Moldova, Serbia, Ukraine, and Türkiye, the gap between young and adult learners is narrower. This suggests a more balanced system performance in terms of supporting access for both groups, although the smaller gap seems to be associated with lower overall performance in terms of access and participation. For example, Moldova has one of the narrowest gaps between young and adult learners, but it also ranks in the bottom third of all countries in terms of its average SPI score in this monitoring area. These findings suggest that, despite the shared commitment to lifelong learning, adult education requires more attention.

In this context, it is important to note that some of the higher scores shown in Figure 5 are partly based on self-assessments (see the numbers in brackets next to the country codes). Countries with higher scores may appear more satisfied with their policies and outcomes, although their system performance in supporting access and participation may still require attention.

In addition to providing a snapshot of participation patterns, this year's monitoring data also allows, for the first time, an examination of how system performance in the different monitoring areas has evolved

[10] The Torino Process makes a distinction between theoretical (full) index range and index range used for reporting purposes. For reporting purposes, instances of extreme values on the low end (SPI < 10) and on the high end (SPI > 90) of the index scale are truncated at the lower (10) and upper (90) decile end. This means that the reporting does not discriminate SPI values below 10 and above 90.

since 2023. A comparison between 2023 and 2024 shows that performance in providing access to learning has declined in some countries (Table 5).

Some of these declines are significant, particularly for young people. For Azerbaijan, the monitoring recorded a 15-point drop in the System Performance Index in this domain, which indicates potential challenges or setbacks in providing sufficient learning opportunities for young people. In Kyrgyzstan there was a sharp drop by 25 points in the SPI for access for young people, but also a significant fall in the SPI for adults. Montenegro also saw a decline in system performance for both young people and adults, pointing to wider problems of access and participation throughout the education and training system. In Türkiye, although youth participation declined, there was a slight improvement in access for adult learners. This suggests a possible shift in policy focus between different groups of learners.

Table 5. Access to opportunities for learning by country and age of learner: change in system performance over the period 2023-2024, ETF partner countries and international average

Country	Country results: average	Country results: youth	Country results: adults
ALB	0	0	0
ARM	10.37	0	15.56
AZE	-5.00	-15.00	0
BIH	6.36	15.33	1.88
DZA	0	0	0
EGY	4.80	0	7.21
GEO	0	0	0
JOR	0	0	0
KAZ	-1.28	0	-1.92
KGZ	-17.50	-25.00	2.50
LBN	0	0	0
MAR	0	0	0
MDA	0	0	0
MKD	18.89	18.00	19.34
MNE	-17.78	-18.00	-17.67
PSE	0	0	0
SRB	11.63	18.50	8.20
TUN	0	0	0.0
TUR	-3.36	-24.50	7.21
UKR	0	0	0.0
XXK	0	0	0.0
International average	0.71	-4.38	4.70

Note: Cells marked with a '0' indicate that there is no valid change in SPI results between 2023 and 2024, either because there was no progress or because changes could not be confirmed due to the absence of updated data or other technical reasons.
Source: Torino Process database

Some ETF partner countries also saw positive changes in their performance scores. Armenia has improved by 10.4 points overall, with an increase of 15.6 points for adults, suggesting an expansion of adult learning opportunities. Bosnia and Herzegovina have also recorded a 15.3 point increase in

access for young people, reflecting possible gains for young learners. North Macedonia has seen a broader improvement, with the highest increase of 18.9 points for all groups of learners, while Serbia has shown progress in access for both young people and adults, with a particularly strong improvement for young people.

Results for specific groups of learners by age and disadvantage

Looking at the age of learners, the new 2024 monitoring data also reveals some shifts in the performance of support systems for disadvantaged and otherwise vulnerable learners in ETF partner countries. While countries have made progress in certain areas, the overall landscape shows that system outcomes vary considerably depending on learner group and its specific vulnerability (Table 6).

Table 6. Access to learning and participation in learning — average System Performance Index for ETF partner countries by learner background and type of disadvantage (2024), and change from 2023 to 2024

	Youth: disadvantaged	Adults: long-term unemployed	Adults: inactive	Adults: low/ no education	Youth (average)	Adults (average)
SPI scores in 2024	58	52	45	42	61	26
Change in SPI from 2023 to 2024	-7.32	0.15	2.00	4.91	-5.87	6.98

Note: Theoretical SPI range: min/low performance = 0, max/high performance = 100.
Source: Torino Process database

Despite a significant improvement in performance in supporting access for adults (an average increase of 6.98 points since 2023), countries continue to perform better for adults at risk of disadvantage (SPIs between 42 and 52) than for the wider adult population (SPI of 26). Policy and system performance in support of adults with low or no education has seen the biggest positive change (an increase by 4.91 points across countries). Similarly, economically inactive adults saw their SPI score increase by 2 points, while system performance in supporting access for the long-term unemployed improved only marginally.

In contrast, support for disadvantaged young people has weakened, with the SPI score decreasing by 7.32 points. Although the average masks positive and negative developments across different countries, the overall decline is cause for concern. It suggests that, while many countries remain committed to tackling socio-economic barriers for young learners, overall, conditions for this group may have worsened compared to 2023 in a worrying number of national contexts. This reflects a broader pattern of weaker results in supporting young learners' access to VET compared to one year ago.

The most notable improvement was in the area of providing access for the general adult population. This increase suggests that, while targeted interventions for vulnerable adults remain effective, there is growing support for adult learners in general is increasing, helping to narrow the gap between vulnerable groups and the wider population.

3.2 Access to learning: a learner's perspective

As noted in the previous edition of this report, policies and systems provide different opportunities for access to learning. However, the success and effectiveness of these opportunities depend not only on how they are designed, but also on the choices made by learners.

Because of the specificities and difficulties of describing and discussing policy and system performance in a comparative perspective, the previous section had to rely on specially constructed performance metrics such as the SPIs. In contrast, the actual choices that learners make, such as which educational pathways they follow, can be tracked using the more basic, administrative

indicators such as enrolment and participation rates that are included in the ETF KIESE data collection.

In 2024, the monitoring report maintains the 2023 grouping of the choices that learners can make about their educational pathways into several standard, broad educational segments: secondary education (including VET), tertiary education, and enrolment in VET programmes. The next sections of this chapter provide a more detailed examination of enrolment statistics in these education segments. Using statistics on early school leavers and data on system performance in terms of progression and graduation, the final section of this chapter assesses how well policies and systems are aligned with and support learners' choices.

The results show that, despite ongoing efforts to promote a diversity of choice, certain pathways continue to be significantly more attractive to learners than others, as was the case in 2023. In many contexts, this attractiveness comes at the expense of vocational education and training, with fewer learners opting for VET. In some countries, however, VET remains one of the more attractive options, either because it is defined more broadly to include a wider range of programmes, or because students face limited alternatives to VET. In addition, certain education sectors and countries are more effective in supporting learners' choices of pathways. As a result, the likelihood of success can vary considerably depending on the educational route chosen and the socio-economic background of the learner.

How many learners choose secondary education?

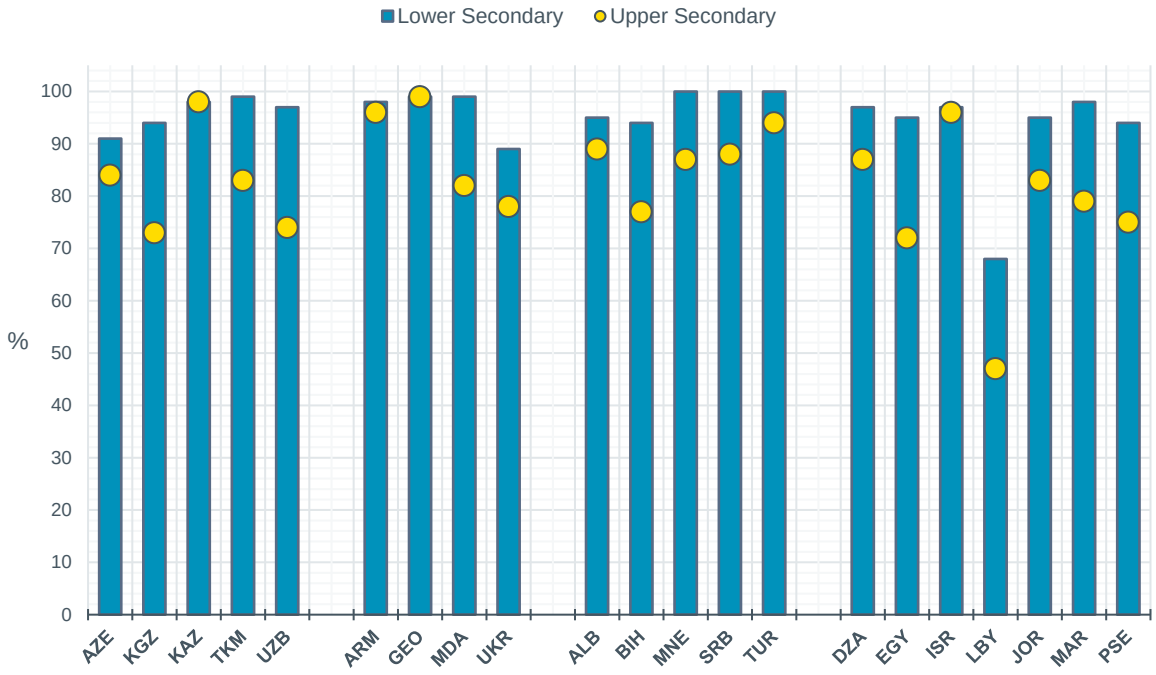
Figure 6 shows the enrolment rates in upper and lower secondary education in ETF partner countries, using data from 2023 or, for some countries, the most recent year available.

The data indicate that enrolment rates remain high in most countries. For example, Kazakhstan and Georgia report almost universal enrolment, with rates of 98% or more for both lower and upper secondary education. In most partner countries, particularly those with high enrolment rates, this trend is likely to reflect deep-rooted traditions of valuing formal education. High enrolment rates also suggest that secondary education has long become the norm and is a basic requirement for job seekers in the countries with which the ETF works.

This shift puts the spotlight on post-secondary learning opportunities and how well countries are equipped to provide them. In particular, non-tertiary programmes, despite the continued dominance of tertiary education in most contexts, are well-placed to emerge as an increasingly viable route for further skills development beyond secondary education.

However, some countries still face challenges in terms of enrolment. For example, while Kyrgyzstan and Uzbekistan, have high enrolment rates at the lower secondary level (94% and 97% respectively), they fall short at the upper secondary level, with enrolment rates falling to 73% and 74%, respectively. Morocco and Jordan, while showing improvements compared to 2021, continue to have lower enrolment rates in upper secondary education, with 79% and 83%, respectively. The persistent gap between lower and upper secondary enrolment rates in these countries suggests that barriers to access or progression persist, or that learners may choose not to continue due to factors such as limited opportunities, financial constraints or the perception that further education does not lead to improved employment prospects.

Figure 6. Total net enrolment rate in secondary education (lower and upper), ETF partner countries (2023 or latest available year)



Notes: Reference year for Turkmenistan, Georgia, Türkiye and Israel: 2022. Reference year for Egypt, Ukraine and EU27: 2021. Reference year for Moldova: 2020.
Source: ETF KIESE (from UNESCO UIS data)

Libya stands out with its significant low enrolment rates, especially at the upper secondary level (47%). This gap in access to education is less likely to reflect learners' choices and more likely to reflect the wider instability and difficult conditions in the country, which continue to hamper the functioning of the education system and limit the opportunities available to learners.

How many learners choose tertiary education?

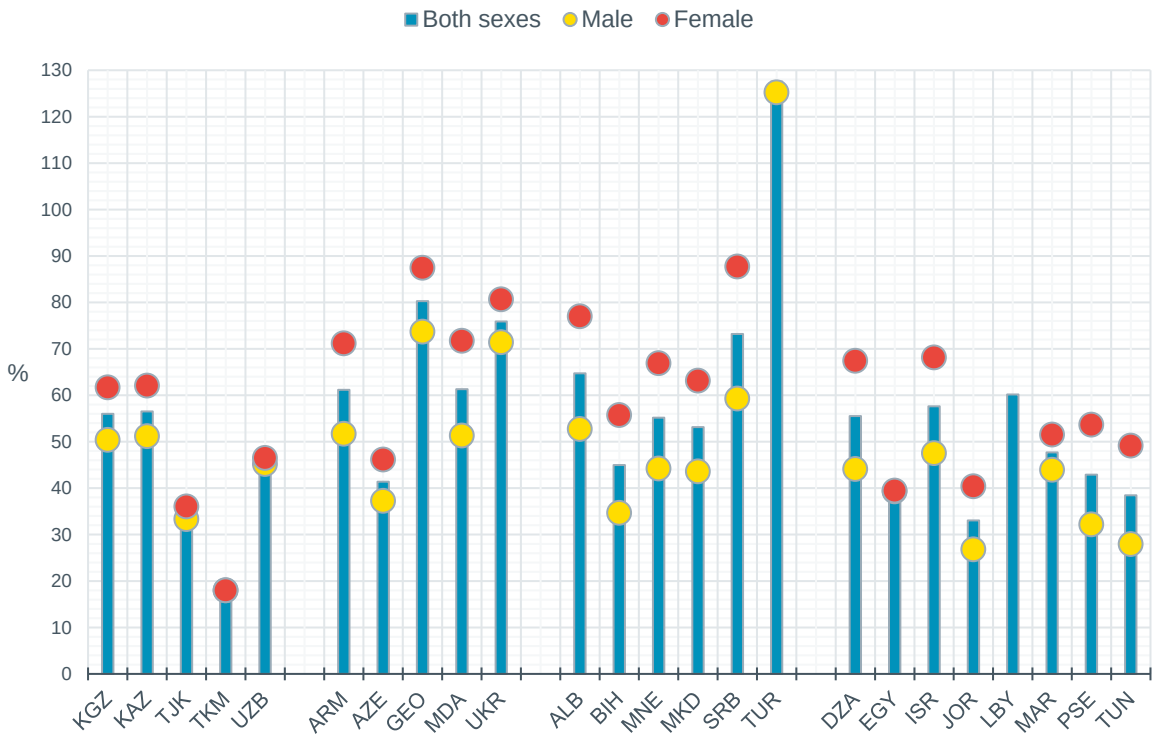
The Gross Enrolment Ratio (GER) represents the total number of enrolments, regardless of age, relative to the population of the official age group for a given level of educational — in this case, tertiary education. This indicator helps to assess the choices made by students in favour of tertiary education.

The data in Figure 7 show considerable variation in these enrolment choices across ETF partner countries. Several countries, including Georgia, Ukraine[11] and Serbia, have relatively high enrolment rates of 70% or more. For example, Georgia's GER is 80%, while Ukraine and Serbia have enrolment rates of 76% and 73%, respectively. Such high enrolment rates are likely to reflect a combination of student choice in favour of higher education and increased receptiveness on the part of higher education institutions. Many of these have both financial and reputational incentives to enrol as many students as possible, which may also contribute to the persistently high access rate. Moldova, Albania, and Armenia also have particularly high gross enrolment rates (61%). In many other countries, such as Kazakhstan or Israel, gross enrolment in tertiary education is in the middle range (57%, 58% and 65%, respectively).

Overall, in most of the ETF partner countries, the higher education systems are mature, and university access is broad and inclusive. GER above 50% in higher education typically reflects widespread access, indicating that a large portion of the population within the relevant age group is enrolled.

[11] Data from Ukraine is from 2021 and may not reflect the current situation.

Figure 7. Gross enrolment rate (GER) in tertiary education by sex, ETF partner countries (2023 or latest available year)



Notes: Reference year for Turkmenistan, North Macedonia, Türkiye, Israel: 2022. Reference year for Moldova and Ukraine: 2021.
Source: ETF KIESE (from UIS UNESCO data)

At the lower end, enrolment rates are close to one third of the population in the official age group, as in Jordan (33%), Tajikistan (35%) or Tunisia (38%). With an average gross enrolment rate of only 18%, Turkmenistan is an outlier in the group of countries shown in Figure 7.

Over the last decade, most partner countries have shown stable or upward trends in tertiary enrolment rates. In some cases, such as Türkiye, the gross enrolment rate exceeds 100%. This means that the number of students enrolled in tertiary education is higher than the official population in the age group typically associated with higher education. Such rates suggest that the student population in Türkiye may be more diverse, with greater age variation, the presence of more international students, students returning to higher education later in life, or a combination of these factors.

Aome countries have experienced notable changes in tertiary enrolment rates since the last round of cross-country reporting. For instance, North Macedonia saw a significant increase, with its GER rising by 13 percentage points (from 41% to 53%), while Kazakhstan experienced a decrease of 8 points (from 65% to 57%). However, none have seen GERs exceeding 100% like Türkiye.

A continuing trend is the higher enrolment of women in tertiary education compared to men across most ETF partner countries. In Georgia, for example, the GER for women reaches 87% and 81%, respectively, significantly higher than for men. However, the higher participation of women in tertiary education does not necessarily translate into improved employment prospects, an issue that is further explored in Chapter 3.

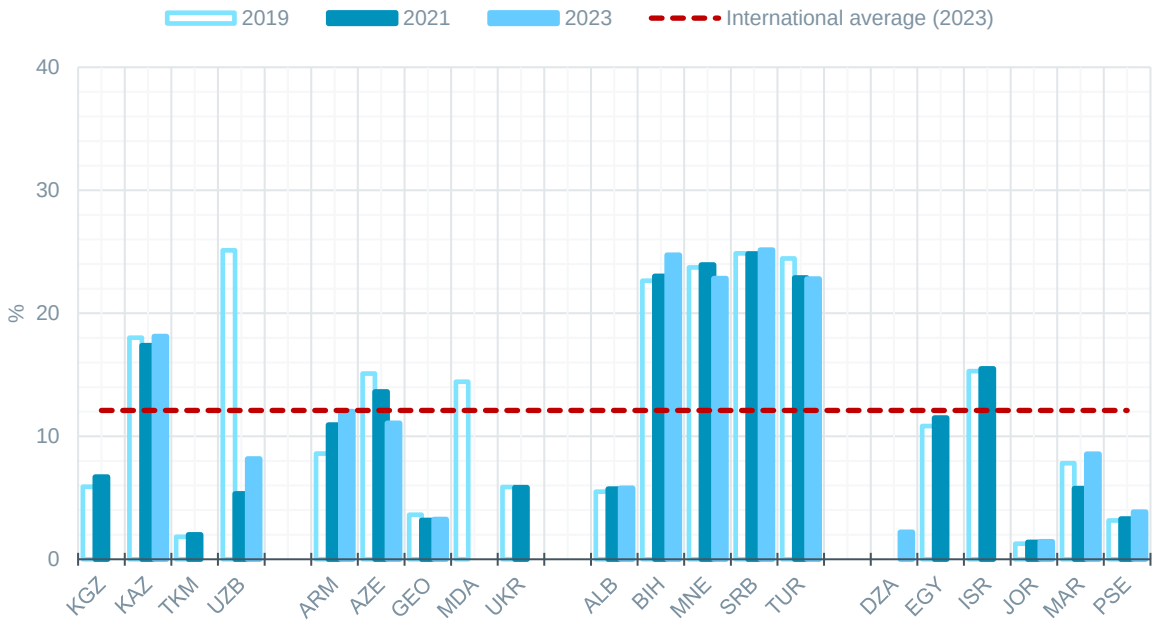
How many learners opt for vocational education and training (VET)?

The indicator ‘Participation rate in technical-vocational programmes (15 to 24 year olds)’ is as a key metric for measuring participation in VET. It aligns with targets 4.3 and 4.4 of the United Nations’

Sustainable Development Goal 4 (SDG 4), which emphasise access to affordable and quality technical and vocational education for all.

By 2023, the participation of young people in VET showed mixed trends across several of ETF's partner countries. In some, the data suggested an increase in interest in VET programmes, for example in Armenia where the rate of participation increased from 8.6% in 2019 to 12.0% in 2023. Bosnia and Herzegovina also registered a slight increase from 22.6% in 2021 to 24.7% in 2023. Overall, Bosnia and Herzegovina as well as Serbia, Montenegro and Türkiye have some of the highest VET participation rates in the Torino Process sample of countries for which data are available (Figure 8a).

Figure 8a. Trends in VET participation (% of the population aged 15-24), ETF partner countries (2019, 2021 and 2023)



Note: International average covers countries for which there is data in 2023: Kazakhstan, Uzbekistan, Armenia, Azerbaijan, Georgia, Albania, Bosnia and Herzegovina, Montenegro, Serbia, Türkiye, Algeria, Morocco, and Palestine. Year of reference for Serbia and Türkiye: 2022.
Source: ETF KIESE database (from UIS UNESCO SDG data)

In most countries, however, participation in VET has stagnated or even declined. Azerbaijan's participation rate fell from 15.1% in 2019 to 11.1% in 2023, marking a continuous decline over the years. Uzbekistan also shows a significant decline between 2019 and 2023.

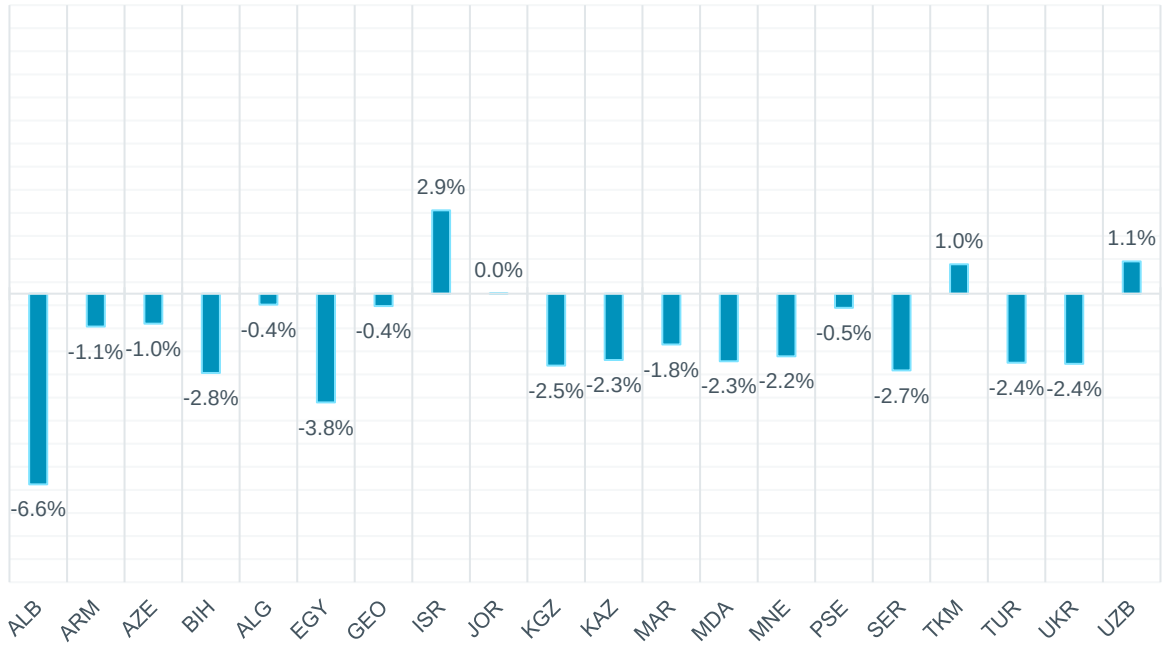
Some countries continue to report very low participation rates in VET. Jordan has kept its rate at just 1.4% from 2021 onwards, and Turkmenistan's and Algeria's rate remain low at around 2%. Data for Egypt shows no significant change in VET participation in recent years, with a rate of 11.5% in 2021, slightly below the international average of 12.1%.

Although the United Nations has long endorsed this indicator to monitor progress towards SDG 4 and promote VET, many countries still do not provide comprehensive data. While several countries have updated their data for 2023, there are still gaps in data availability. This makes it difficult to provide a full picture of participation in VET participation in ETF partner countries.

Most ETF partner countries for which data is available also struggle with persistent gender gaps in VET. The difference between female participation in VET and male participation in VET as share of the population aged 15-24, which is a useful proxy for understanding the gender gaps in VET, suggests that females participate less in VET than males (Figure 8a).

For example, Albania has the largest gender gap, with female participation at -6.6% compared to male participation. This suggests that women in Albania are significantly underrepresented in VET programmes compared to men. Other countries with significant gender gaps are Egypt (-3.8%), Bosnia and Herzegovina (-2.8%) and Serbia (-2.7%) (Figure 8b).

Figure 8b. Gender gap in VET participation: difference in female and male participation in VET as a share of the population aged 15-24, ETF partner countries (2023)



Notes: Reference year for Egypt, Israel, Kyrgyzstan, Serbia, Turkmenistan, Türkiye and Ukraine: 2021. Reference year for Moldova: 2019.
Source: ETF KIESE database (from UIS UNESCO SDG data)

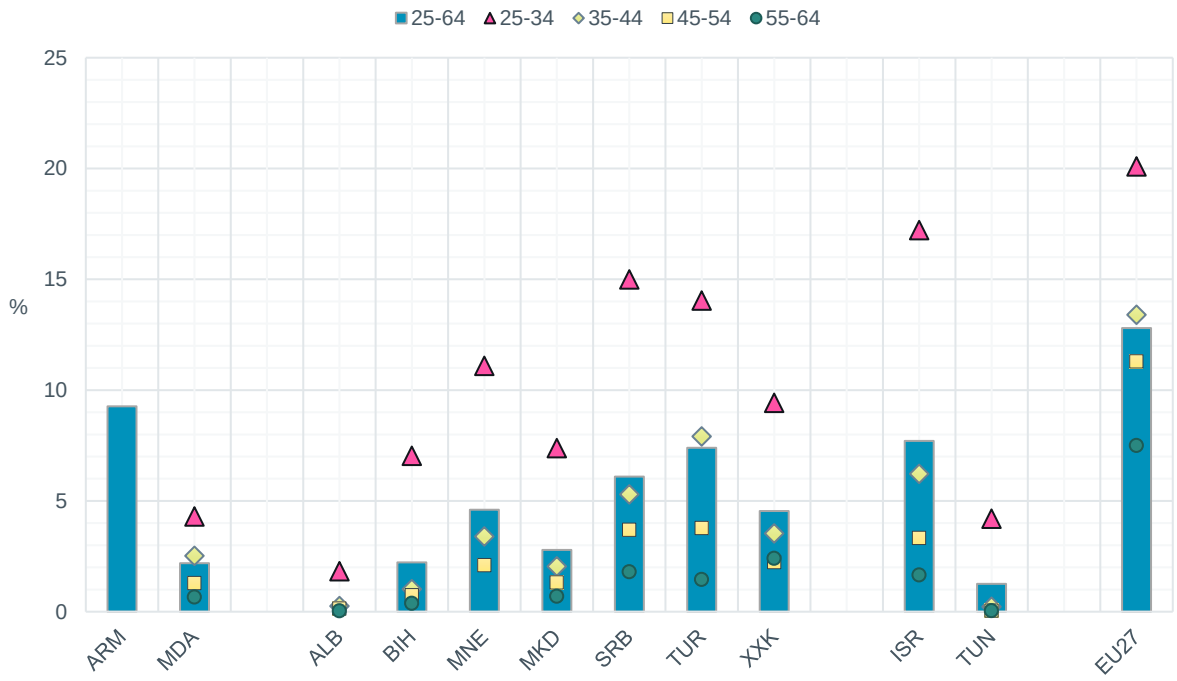
On the other hand, some countries show a more balanced participation between the sexes, or even the opposite, with women participating more. In Israel, for example, the participation of women in VET exceeds the participation of men by 2.9%. Similarly, Uzbekistan (1.1%) and Turkmenistan (1.0%) report a positive gender balance, with more women than men participating in VET. Jordan stands out for its gender parity, with no difference in participation between women and men.

Are adults participating in lifelong learning?

As in 2023, measuring and monitoring adult participation in lifelong learning remains a challenge, particularly in regions such as Central Asia and the Southern and Eastern Mediterranean, where data are often sparse or incomplete.

The new data collected for this round of monitoring underline the continuing difficulties in developing and implementing lifelong learning strategies, particularly for vulnerable groups such as the inactive, the unemployed and low-skilled (see also Figure 5 and Table 6).

Figure 9. Adult participation in lifelong learning, by age, ETF partner countries (2023)



Note: Reference year for Armenia and Montenegro: 2022. Data for Israel: Percentage of individuals studying today.
Source: ETF KIESE database

The participation of adults (aged 25-64) in education and training varies considerably between ETF partner countries for which data are available. While the overall participation rate remains low compared to the EU27 average of 12.8%, some countries have made modest progress. Serbia and Türkiye, for example, report participation rates of 6.1% and 7.4% respectively, and Armenia reports a rate of 9.3%. All three are still below the EU benchmark, however.

There are significant differences between age groups, with younger adults (25-34) more likely to participate in education and training than their older counterparts. In Serbia, 15% of adults aged 25-34 participate in lifelong learning, while participation drops to just 1.8% for those aged 55-64. Similarly, in Türkiye sees 14% of adults aged 25-34 participate compared to only 1.5% of those in the 55-64 age group. This trend is consistent across ETF partner countries, where older adults are generally less likely to participate in lifelong learning. Montenegro and Israel report relatively higher participation rates among younger adults. In Montenegro, 11.1% of adults aged 25-34 participate in education and training, while Israel leads with 17.23%. However, as in other countries, participation declines sharply with age. In Montenegro, only 2.1% of adults aged 45-54 participate, and in Israel, participation falls from 17.23% in the 25-34 age group to only 1.66% in the 55-64 age group.

Other countries have mixed results. Armenia, for example, has a relatively high overall adult participation rate of 9.3%, while Moldova lags behind with only 2.2%. Tunisia reports one of the lowest overall rates at only 1.3%, with participation of older adults (55-64) almost negligible at 0.1%. The rates are low also in Bosnia and Herzegovina (2.2%) and North Macedonia (2.8%).

3.3 Learners' participation and graduation prospects

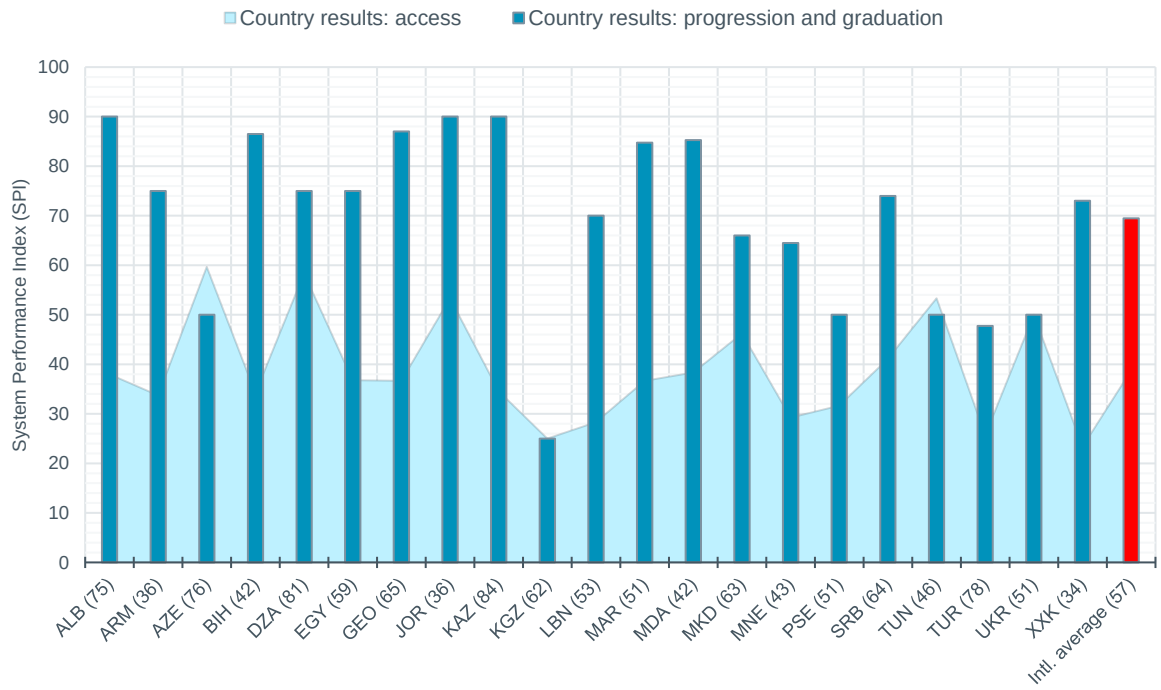
In addition to assessing how well countries provide learning opportunities to different groups of learners, it is also important to monitor whether learners succeed once they have enrolled. To this end, some of the SPIs tracked by the ETF through the Torino Process focus specifically on policy and system outcomes related to learner progression and graduation. The key question is: once learners have chosen a learning opportunity and pathway, do they manage to progress and graduate?

This section of Chapter 2 seeks to answer this question. In addition to the SPIs that track whether learners can successfully progress through their chosen pathway and graduate, the section also draws on KIESE data, such as the rate of 'early leavers', to provide insights into the challenges that may lead learners to drop out prematurely.

System performance in support of progression and graduation in VET

'Progression and graduation', or in other words, how well countries support learners in completing their chosen paths, is a key SPI metric in the ETF monitoring. As in the previous year, it is presented in combination with the average SPI metric on access. Combining the two metrics in the same section and figure makes it possible to assess not only how well policies and systems open doors for learners (access), but also how effectively they help them move through the system and successfully complete their education (progression and graduation). This approach could provide insights into whether systems are simply enrolling learners without providing the necessary support to help them succeed, or whether they are supporting learners all the way through to completion. Figure 10 sets out a comparison of these metrics across countries.

Figure 10. Access and participation in opportunities for LLL — System Performance Index, ETF partner countries and international average (2024)



Note: Theoretical index range: min/low performance = 0, max/high performance = 100.
Source: ETF KIESE/Torino Process database

Countries are represented by their individual country codes. As in Figure 5, the data also includes the countries' own perceptions of their performance (shown in brackets next to their codes). The term 'access' in this context includes both initial and continuing VET, as well as other adult learning opportunities, such as those provided within active labour market policy frameworks.

The figure shows that there are significant differences in how policies and systems provide access to learning for different age groups, and in the extent to which they succeed in supporting the progression and graduation of learners. In some contexts, learners find it more difficulty to access learning, but those who do enrol have better prospects of progressing and completing their programmes. In other cases, access is relatively easy, but learners may not receive sufficient support to successfully navigate their educational pathways.

In Albania and Kazakhstan, for example, access to learning opportunities remains a domain of below-average performance (with SPI scores of 38 and 35, respectively), but learners who manage to enrol are more likely to benefit from stronger support to progress and graduate, as reflected in the high SPI scores for progression and graduation. Although both countries tend to be very positive about the performance of their systems, the result still suggests a need to widen enrolment opportunities while maintaining support for successful outcomes.

The same pattern can be observed in Bosnia and Herzegovina, Georgia, and Kosovo, where system performance is much stronger in support of progression and graduation (SPI of 87 for Bosnia and Herzegovina and Georgia, and 73 for Kosovo) than it is for access (SPIs of 34, 37, and 50 respectively). Indeed, such discrepancies in performance can be observed in most of the partner countries shown in Figure 10.

In Ukraine and Kyrgyzstan, there is a balance between access and progression, while Azerbaijan and Tunisia, on the other hand, are the only two countries where the pattern between access and success is reversed compared to others. Both countries show better results for access to learning than for progression and graduation. This could indicate weaker support for learners throughout their educational journey or more rigorous, restrictive assessment criteria prior to graduation.

In some contexts, this may be due to the fact that VET programmes are less attractive because of outdated curricula, limited career prospects or a lack of labour market relevance. As a result, fewer people have been motivated to enrol in these programmes. However, once enrolled, learners may have progressed and graduated more easily, possibly because of lower academic standards or minimal monitoring of academic rigor.

In other contexts, the opposite may be true. More selective enrolment processes or barriers at the point of entry may mean that fewer learners are initially enrolled. However, once enrolled, they benefit from strong support systems to help them succeed.

A comparison between 2023 and 2024 shows that several countries experienced shifts in their performance in supporting learners' progression and graduation.

North Macedonia improved significantly, increasing its system performance index (SPI) for progression and graduation by 4.0 points. Montenegro also recorded a small increase of 1.0 point. On the other hand, several countries registered a decrease. Türkiye experienced the sharpest decrease in its SPI of 9.0 points, followed by Serbia with a decrease of 3.0 points. Bosnia and Herzegovina recorded a smaller decrease of 1.5 points. The average SPI for the countries monitored in the framework of the Torino Process also decreased by 1.9 points.

The interpretation of the findings on performance in support of progression and graduation requires a context-specific approach, perhaps more so than for other performance results covered by this report. Positive scores in this domain do not always indicate improvement, and negative scores do not necessarily reflect a decline in system quality.

For example, a decline in performance may be due to the introduction of more rigorous criteria or improved assessment practices that raise the bar for graduation. In such cases, the decline in SPI scores may be the result of higher standards rather than weaker student support. Conversely, a decline in performance could also signal gaps in support mechanisms, or it could reflect external factors beyond the immediate remit of education policy, such as a lower quality of student intake.

Similarly, a positive score is not always a sign of improvement. Good progression and graduation results could indicate a lowering of standards, allowing more students to pass and graduate unchallenged, without ensuring that they have acquired the necessary skills or knowledge. In other cases, good results may genuinely reflect strong support systems that have been put in place to help learners succeed.

Therefore, both the positive and negative changes in performance reported here should be seen as starting points for further investigation rather than evidence to support definitive conclusions.

Early school leavers (% aged 18-24)

The 'early leavers' metric (ELE) is important for assessing whether young people with low educational attainment are taking up opportunities to improve their skills. Early leavers from education and training are defined by Eurostat as individuals aged 18-24 who have completed only lower secondary education and who were not in education or training in the four weeks prior to the Labour Force Survey (LFS). This metric reflects the proportion of young people who are not participating in any form of education or training.

Tracking this group is essential, as early school leavers often face significant challenges in securing employment. As education becomes increasingly important to employers, leaving school early can have long-term consequences for both individuals and society.

The ELE metric shows considerable variation across ETF partner countries. Armenia reported the lowest rate in 2023, at 2.2%, maintaining a level that has historically remained below 3.7% since 2018. Other countries with low ELE rates in 2023 include North Macedonia (3.7%), Bosnia and Herzegovina (4.2%), Israel, Georgia, and Serbia (5.8%). North Macedonia, Georgia, Serbia, and Kosovo recorded no significant gender gap in ELE rates.

In countries with more pronounced gender gaps, Palestine and Tunisia stand out, with substantially lower rates of female early leavers compared to males. Other notable gender differences include Bosnia and Herzegovina (where the rate for females is 2.0% lower than for males), Albania (2.5% difference), and Moldova (2.2%). Montenegro reported an overall ELE rate of 6.8%, with a gender gap of 1.9% (5.7% for females vs. 7.6% for males), similar to other countries with small but notable gender differences.

Georgia recorded a moderate early leaver rate of 5.3%, with slightly more females than males leaving early. Israel had an overall rate of 5.1%, with males (7.6%) outnumbering females (5.7%) in early leaving. Countries such as Palestine and Tunisia have historically had particularly high rates of ESL, suggesting the need for targeted interventions to reduce ESL.

The latest data confirm a trend observed in previous years, with males generally outnumbering females as early school leavers across both the EU and ETF partner countries. However, there are exceptions, such as in Montenegro, where a higher percentage of male early school leavers has been reported.

4. QUALITY AND RELEVANCE

Quality in education and training is a broad concept that can be interpreted differently by different people and in different contexts. However, when assessing quality in a cross-country perspective, two main criteria emerge.

The first is ‘quality’, understood as the attainment of basic skills and key competencies necessary for personal development and active participation in society. This often refers to the intrinsic value of education or training. It considers the level of knowledge, skills and competences of learners, and whether they are attained in the most effective way, i.e., by looking at the standards of teaching methods, content, resources and the overall learning experience.

The second criterion is ‘relevance’, understood as the employability of learners and graduates. This refers to the extrinsic value or the applicability of education or training in real-world contexts. It looks at how well the learning outcomes match external needs, such as labour market demand, societal challenges or further academic pursuits.

Quality and relevance in education are interrelated and mutually reinforcing. High quality education that equips learners with competences and strong basic skills often improves their chances of finding a job. Conversely, policies that focus solely on immediate employability may result in learners acquiring a narrow set of skills, leaving them less adaptable to changing circumstances than those with a well-rounded education. It is also important to recognise that while these two aspects are interrelated, they do not always go hand in hand. It is possible to gain employment without necessarily having a well-rounded skill set, just as it is possible to have key competences but still face challenges in securing suitable employment.

Assessing this tandem of criteria — quality and relevance — is not without challenges. Measuring the attainment of basic skills and key competences can be a complex task as educational standards, cultural attitudes, and individual learner needs vary between and within countries. In addition, employability as a metric of relevance can be influenced by external factors such as economic conditions, labour market fluctuations, and regional disparities. As a result, employability metrics may sometimes reflect wider socio-economic conditions rather than the effectiveness of education and training systems in delivering relevance.

Given these measurement challenges, this chapter relies on a carefully selected combination of System Performance Indices (SPIs) and KIESE indicators. The SPIs assess the quality of the provision of basic skills and key competences to learners in IVET and CVET taking into account their age and background, while KIESE indicators track the relevance of education in terms of their employability.

4.1 Quality: Skills and competences of young people and adults

Overall results by country and age of learners

Some of the Torino Process monitoring SPIs track how well initial VET equips young people with basic skills and key competences. The dataset also provides insights into the level of basic skills and key competences of working age adults.

Figure 11 shows the monitoring results for 2024 of all ETF partner countries participating in the Torino Process. It highlights the performance of policies and systems in providing skills to the youth cohort within formal education, particularly those enrolled in or graduating from VET (shown in the key as ‘Country results: youth’), and compares these to the competence levels of the wider working age population (shown in the key as ‘Country results: adults’).

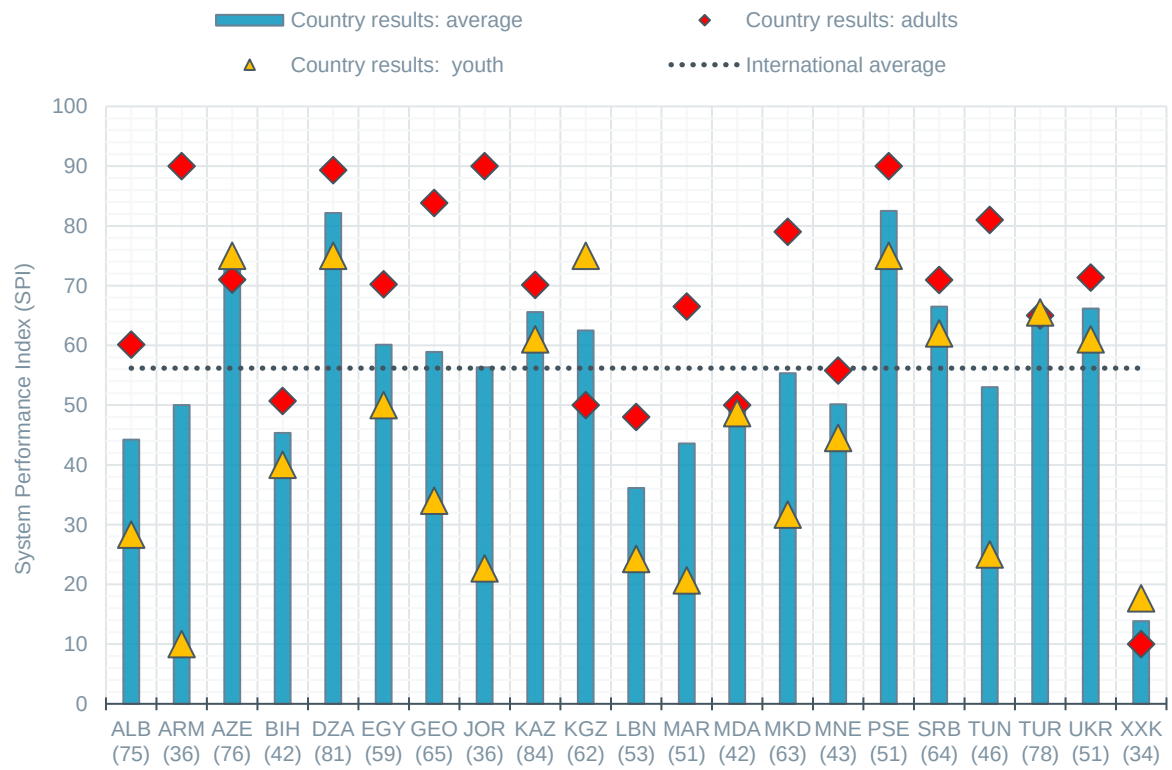
In addition, Figure 11 presents an average for both youth and adults (shown in the key as ‘Country results: average’) to provide a point of reference for assessing the overall performance of each country in providing quality education and training for these two broad groups of learners. This average is

shown alongside the international average (represented by the dotted horizontal line), providing a comparative frame of reference for assessing the performance of individual country countries in relation to the group of countries included in the Torino Process monitoring sample.

As in previous figures showing monitoring results in the form of SPIs, the data also capture the countries' self-perception of their performance (noted in brackets under their codes). A lower score indicates a more self-critical attitude, while a higher score indicates a less self-critical attitude.

In 2024, VET in most countries continues to underperform in terms of the quality of skills and competences provided to young learners compared to those of adults. In these contexts, adults (and their employers) often compensate for the gaps left by earlier formal education, including VET, by acquiring or cultivating additional competences through work experience. Seen in this light, the existence of performance gaps and compensatory learning points to persistent quality problems in VET. Another factor contributing to age-related differences in skill levels may be that adults in some countries were educated in periods when education and the labour market were more closely aligned than they are today.

Figure 11. Quality of skills and competences by country and learners' age — System Performance Index, ETF partner countries and international average (2024)



Note: Theoretical index range: min/low performance=0, max/high performance=100
Source: Torino Process database

Although two consecutive years of monitoring are not enough to establish a trend, the 2024 results suggest a persistent pattern of underperformance in VET in equipping graduates and first-time jobseekers with the skills needed to compete effectively with more experienced workers. In some countries, such as Armenia, Jordan, Tunisia, Georgia, and North Macedonia, the age-related gap in the quality of skills and competences is particularly large (Figure 11).

There are also cases, such as Türkiye and Moldova, where the skills provided to young people and those of adults are more or less the same in terms of quality and relevance. In other countries, such as Kyrgyzstan, and Kosovo, VET graduates as entrants to the labour market are more likely to have

key skills than their adult counterparts, whether jobholders or jobseekers. However, these countries remain the exception rather than the rule. In some cases, such as Kosovo or Moldova, the results may also be influenced by high emigration rates among skilled adults.

As outlined in the previous chapter, this year's monitoring data goes beyond a snapshot of the quality and skills that learners receive and/or possess. For the first time, it also allows for a discussion of how system performance in different areas of monitoring has evolved since the first round of monitoring in 2023.

The data shown in Table 7 suggests that system performance in the provision of skills and competences has evolved in different directions, depending on the country and the target group. While some countries, such as Türkiye, North Macedonia, or Egypt have seen an improvement in the outcomes related to the skills provided to young people, others, such as Albania, Montenegro or Jordan, have seen a decline (in some cases significant).

For adults, the trends are generally more negative, with significant declines in some countries, such as Montenegro, Ukraine and Serbia. Other countries, such as Egypt and North Macedonia, buck the trend and stand out with better performance in 2024 compared to 2023 in this domain of the monitoring exercise.

Table 7. Quality of skills and competences by country and age of learners: change in system performance 2023-2024, ETF partner countries and international average

Country	Country results: average	Country results: adults	Country results: youth
ALB	-16.10	-11.28	-20.92
ARM	0	0	0
AZE	-2.00	-4.00	0
BIH	0	0	0
DZA	0	0	0
EGY	6.12	12.24	0
GEO	0.54	2.82	-1.75
JOR	-5.79	0	-11.58
KAZ	4.61	0	9.22
KGZ	0	0	0
LBN	0	0	0
MAR	-1.29	-3.50	0.92
MDA	-1.67	0	-3.33
MKD	5.20	23.23	-12.83
MNE	-14.86	-23.23	-6.50
PSE	0	0	0
SRB	-2.15	-12.55	8.25
TUN	-4.50	-9.00	0
TUR	6.51	5.01	8.00
UKR	-8.20	-18.65	2.25
XXK	1.46	0	2.92
International average	**-2.29**	**-3.54**	**-2.11**

Note: Cells marked with a '0' indicate that there is no valid change in SPI results between 2023 and 2024, either because there was no progress or because changes could not be confirmed due to the absence of updated data or other technical reasons.
Source: Torino Process database

These trends suggest that the challenges in providing young people with high-quality skills are not limited to VET but reflect wider issues in the education and training systems of the different countries. In some cases, such as Montenegro, the decline mirrors the wider stagnation or plateauing of student performance since 2015, while in others, such as Albania and Jordan, the downward trend is part of a longer-term trajectory that includes VET.

Outcomes for specific groups of learners based on age and disadvantage

The commitment of education and training systems to deliver outcomes, such as skills and competences, does not stop at the average learner; policies must also ensure that vulnerable, marginalised, or otherwise strategically important groups of learners are given equal opportunities. For most countries, this inclusive approach is a priority, enshrined in laws, regulations, and international agreements. It is also essential from the perspective of fundamental human rights and economic and social responsibility.

In order to take account of the different backgrounds and needs of learners in different countries, this section examines system performance for specific groups of learners: women, young people and adults at risk of disadvantage and exclusion, and first generation migrants.

In order to understand how well policies and systems address the unique challenges faced by these groups, it is necessary to look beyond averages and age-based data. As noted above, factors such as socio-economic status, educational attainment or migration history can have a significant impact on educational and labour market outcomes. This section takes a closer look at these differences.

Table 8 shows system performance in providing skills and competences to female learners, socio-economically disadvantaged young people, several groups of disadvantaged adults (the long-term unemployed and the economically inactive) and first generation migrants within the youth and adult cohorts. The table also shows the average system performance for the broader population of young people and adults to allow an assessment of how well policies and systems are delivering for different groups of learners compared to the broader population of young people and adults in ETF partner countries.

Table 8. Quality of skills and competences — average System Performance Index for ETF partner countries by age, gender and type of disadvantage of learners (2024), and change from 2023 to 2024

Population of learners	Average SPI score in 2024	Change from 2023 to 2024
Young people: females	49	-6.54
Young people: disadvantaged	48	-1.24
Young people: migrants	63	2.29
Average for youth	**45**	**0.15**
Adults: females	64	-1.37
Adults: long-term unemployed	48	1.94
Adults: economically inactive	43	0.40
Adults: migrants	51	-0.78
Average for adults	**67**	**-4.72**

Theoretical index range: min/low performance = 0, max/high performance = 100
Source: Torino Process database

Overall, data show that ETF countries are better at supporting certain groups, in particular young people with a migrant background and adult female learners, while the needs of others, such as the long-term unemployed and economically inactive adults, are less well addressed.

The results for disadvantaged young people are relatively close to the average for all young learners, suggesting that countries are to some extent taking an equitable approach to the provision of quality education and training. However, the significant decline in the average performance of young women (a decrease by 6.54 points) in ETF partner countries suggests that this group may not be benefiting as much as other groups from initiatives to improve quality and relevance. In contrast, the positive change in the SPI for young people with a migrant background (an increase by 2.29 points) suggests that targeted interventions are making a difference for migrant learners participating in education and training.

The performance gaps are wider for adults. Adult learners at risk, such as the long-term unemployed and the economically inactive, struggle to achieve the same quality of skills and competences as adults who are not in a disadvantaged position. Among the strategic policies aimed at learners, those supporting working age female learners appear to be most effective in terms of skills provision. However, performance remains slightly lower than the adult average, with a decrease in the average SPI score since 2023 by 1.37 points.

ETF partner countries seem to struggle the most with providing basic skills to adults who are de facto excluded due to inactivity. While policies to reach this group are gaining traction in many countries (see Table 6 for data on performance in supporting access and participation), the data in Table 8 suggest that challenges remain in ensuring that these individuals receive quality education and training. This may be due to a lack of tailored programmes, a failure to address the decline in skills over time — as many economically inactive adults have been out of the labour market for long periods — and a lack of incentives. For economically inactive adults, who may not re-enter the workforce immediately, the perceived urgency to demand and deliver high quality outcomes may be lower, both from a learner and a system perspective.

The long-term unemployed, on the other hand, are one of the few adult groups to experience positive change, with an increase of 1.94 points compared to 2023, albeit from a lower than average starting point (SPI of 48). This improvement suggests that targeted interventions, such as job retraining or reskilling programmes, may be effective.

Finally, adults who are first generation migrants experienced a slight decline in performance, with an SPI score of 51 and a change of -0.78 compared to 2023. While this decline is less significant than the overall decline for adults (-4.72), it still highlights the challenges in ensuring that adult migrants receive adequate support in acquiring the basic skills and competences necessary for labour market participation. This trend contrasts with the positive improvement seen for young people of migrant background.

4.2 Relevance: employability of graduates

Having discussed quality, this section turns to the relevance of education and training. By analysing labour market statistics from the KIESE database, such as the employment rate of recent graduates, employment by broad ISCO-08 sector, employment rates by educational attainment and LFS data on unemployment, the section assesses how well learning outcomes in ETF partner countries align with labour market needs.

This analysis aims to complement the discussion on quality by highlighting employability as a key measure of the relevance of learning outcomes.

Young people in the labour market

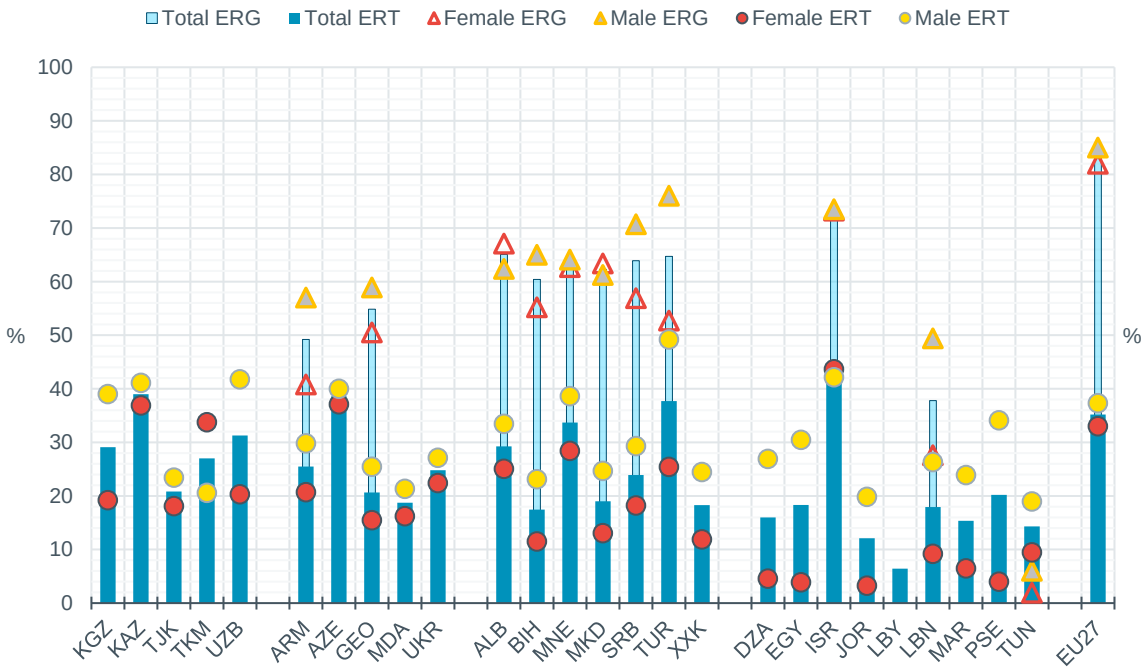
Employment rates for those aged 15-24 remain persistently low. In 2024, based on 2023 data, many ETF partner countries report youth employment rates below 20%. This compares with an EU27 average of 35.2%, highlighting the size of the gap is between the EU and ETF partners (Figure 12).

Men are still more likely to be employed after graduation in most ETF partner countries. For example, in Algeria, Egypt, Morocco and Palestine the employment rate for young women remains below 20%.

However, Tajikistan stands out with a relatively higher youth employment rate for women compared to other partner countries, just like, to a much lesser extent, Israel.

Youth employment rates do not fully capture the complexity of young people's transition from education to the labour market. The employment rate of recent graduates (aged 20-34) is a more accurate indicator. Its values for ETF partner countries reveal further gender and regional disparities. In countries such as Israel, Albania, Türkiye, recent graduates tend to have relatively high employment rates. In Tunisia, however, employment rates are much lower, and women are disproportionately affected. In Tunisia, for example, the employment rate for recent female graduates is only 1.94%, compared with 6.01% for men. This points to deeper structural challenges.

Figure 12. Employment rate of recent graduates (ERG), aged 20-34, and employment rate of youth (ERT), aged 15-24, 2023



Notes: ERT = Employment rate for age group 15-24, ERG = Employment rate of recent graduates for age group 20-34 (ISCED levels 3-8). Reference year for Egypt, Lebanon, Libya, Palestine and Morocco: 2022. Reference year for Ukraine: 2021.
Source: ETF KIESE database.

It is important to note that employment rates tend to be higher in the older age group 20-34, as fewer people are still in education, and more are actively working. This makes direct comparisons between the 15-24 and 20-34 age groups difficult. Nevertheless, the data show that while gender gaps among recent graduates persist in many ETF partner countries, they are narrowing or even disappearing in some. Albania, North Macedonia, Montenegro and Israel are examples where women's employment rates are either comparable to or slightly higher than men's.

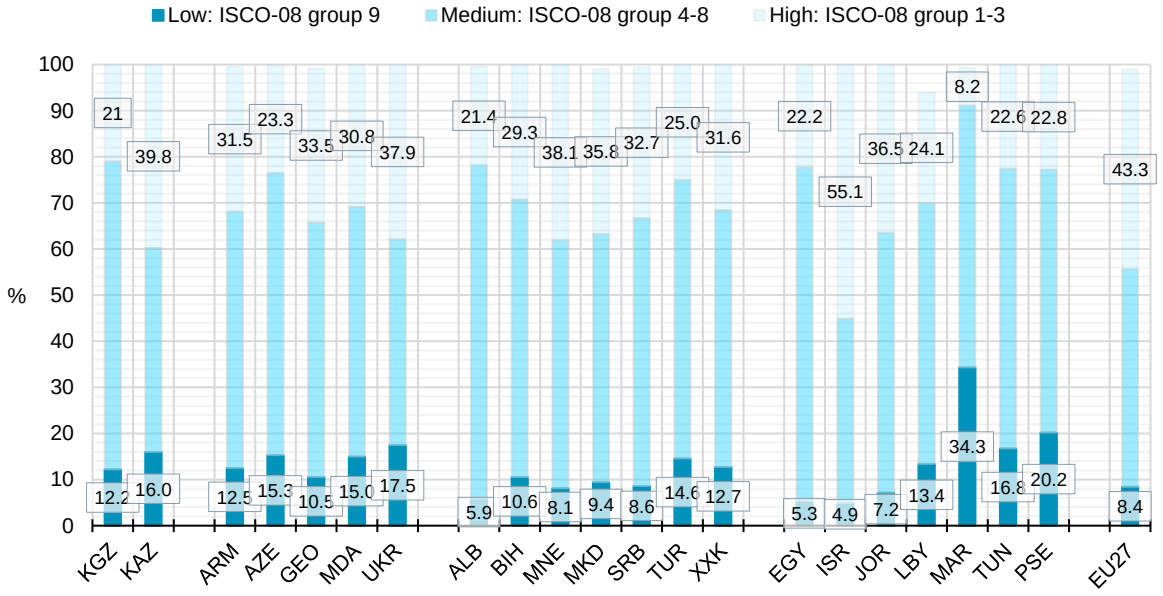
Employment by ISCO-08 sectors

As of 2024, labour markets in ETF partner countries continue to have a higher proportion of workers in 'elementary' occupations (classified under ISCO-08, Group 9) than the EU27 average (Figure 13). In the EU, this category accounts for 8.4% of total employment, on average. In contrast, countries such as Morocco (34.3%), Kazakhstan (16.0%), Palestine (20.2%), Tunisia (16.8%) and Azerbaijan (15.3%) report significantly higher proportions of workers in elementary occupations.

At the other end of the spectrum, the share of workers in 'high-skilled' occupations (ISCO-08, Groups 1-3), which typically require advanced education, remains consistently lower than the EU27 average in most ETF partner countries. While the EU27 average for high-skilled employment stands at

43.3%, countries such as Morocco (8.2%), Kyrgyzstan (21%), Albania (21.4%), and Egypt (22.2%) report much lower proportions. However, Montenegro (38.1%), Jordan (36.5%). Kazakhstan (39.8%) and Ukraine (37.9%) are closer to the EU27 average in this respect.

Figure 13. Employment by broad ISCO-08 sector[12], ETF partner countries and EU27 (2023)



Notes: Broad categories may not sum to 100% due to the category 0. Armed forces occupation not included. Reference year for Egypt, Libya, Morocco and Palestine: 2022. Reference year for Ukraine: 2021. The data for Tunisia refers to the second quarter of 2023.
Source: ETF KIESE database (from LFS data received through Eurostat, ILOSTAT, and national statistical offices).

A valuable way of understanding skills mismatches in the labour market is to compare the educational level of the workers with the qualifications required for their roles — this is referred to as vertical mismatch. According to recent ETF research on the skills mismatch,[13] there is a significant gap between the educational qualifications of workers and the skills required for their jobs. This misalignment is particularly evident among employees with tertiary education, many of whom are employed in jobs that do not fully utilise their qualifications.

Employment rate by educational attainment

In 2024, people of working age with higher education (ISCED 5-8) in ETF partner countries continue to have better access to employment (Figure 14). Employment rates for this group are consistently higher than for those with medium (ISCED 3-4) and low (ISCED 0-2) level of education.

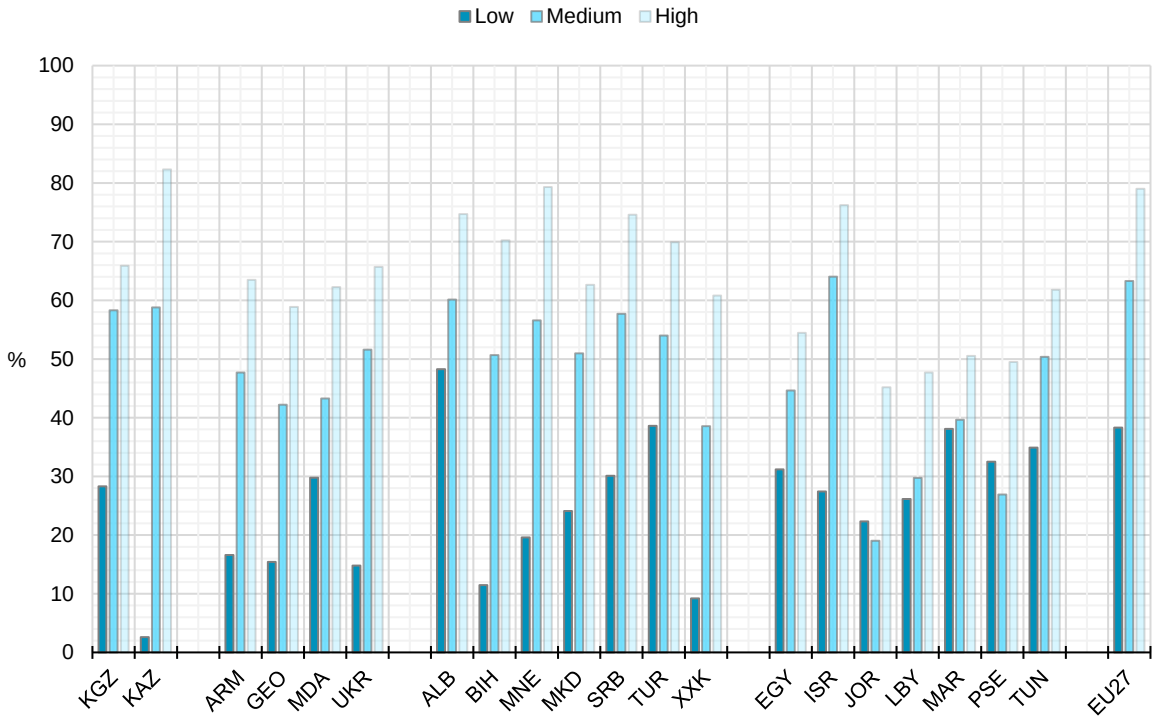
At the same time, the employment rate of higher education graduates in many ETF partner countries is still below the average for higher education graduates in EU countries. For example, while the employment rate for those with higher education in the EU stands at 79.0%, countries such as Jordan (45.2%), Palestine (49.5%) and Libya (47.7%) report much lower figures.

Figure 14 also shows that the outcomes for people with low and medium level of education vary considerably across ETF partner countries. Kazakhstan reports particularly low employment for those with low educational attainment, at only 2.6%. The employment rate in Ukraine (14.8%) and Armenia

[12] The ISCO-08 categories are as follows: 1. Managers, 2. Professionals, 3. Technicians and associate professionals, 4. Clerical support workers, 5. Service and sales workers,6. Skilled agricultural, forestry and fishery workers, 7. Craft and related trades workers, 8. Plant and machine operators, and assemblers, 9. Elementary occupations, 0. Armed forces occupations.
[13] The results can be found in *Skills mismatch in ETF partner countries: a cross country report (ETF, 2022)*, which is available here: https://bit.ly/48mwAE7

(20.2%) is higher, but still well below the EU average. In contrast, Albania (48.3%), Egypt (31.2%), Türkiye (38.6%) and Morocco (38.1%) report relatively high employment rates even for those with low levels of education. For those with medium educational attainment, employment rates vary between 19.0% in Jordan to 64.0% in Israel, illustrating considerable differences between countries.

Figure 14: Employment rate (age 15+) by educational attainment, ETF partner countries (2023)



Notes: Age range for Serbia and EU27: 15-74. Year of reference for Libya, Morocco and Palestine: 2022. Year of reference for Ukraine: 2021.
Source: ETF KIESE database (from LFS data received through Eurostat, ILOSTAT, and national statistical offices

In some cases, people with a medium level of education face greater challenges in securing employment than those with lower levels of education. In Palestine, for example, the employment rate for those with a medium level of education is 26.9%, compared to 32.5% for those with lower levels of education. In Jordan, employment rates for individuals with both low and medium educational attainment are low and similar. However, the employment rate for those with medium educational attainment remains lower not only compared to other categories of workers within Jordan but also in comparison to similarly educated individuals across ETF partner countries.

Jobseekers

In addition to Labour Force Survey datasets on the unemployed, the majority of ETF partner countries generate administrative records. These encompass registered unemployed, vacancy monitoring, Labour Market Policy (LMP) expenditure, and participation in LMP services such as job matching, career guidance and counselling, as well as in LMP and measures, namely (re)training and other skill development initiatives, employment subsidies, direct job creation, start-up support or other programmes supporting labour market insertion of jobseekers.

Typically, these data sets are managed by Public Employment Services (PES) or labour/employment ministries, with the specific institution varying by country. It is worth noting that due to its administrative origin, cross-country comparison is rather limited. This constraint arises from varying legal definitions regarding unemployment and the diverse conditions for registering with Public Employment Service across countries, the design of LMP services and measures, including eligibility criteria for participation in such programmes, or the definitions and modality of vacancy data gathering.

Taking inspiration from the efforts of the European Commission in labour market policy statistics, the ETF tried to address this challenge by compiling analogous data. This data sheds light on the count and characteristics of registered jobseekers, participants in LMP services and LMP measures, and other indicators like vacancies, employment transition rates, and LMP expenditure.

The latest ETF LMP data collection covered annual data for 2023 as reported by the Public Employment Service, employment departments of labour ministries and/or the national statistical offices. The table below summarises key trends regarding (i) number and profile of registered unemployed and their transition rates to employment, (ii) most frequent activation services and measures implemented in 2023, as well as vacancy trends by economic sectors (NACE) and occupational groups (ISCO).

In Kosovo, Moldova, North Macedonia, and Türkiye, the number of male and female jobseekers registered as unemployed is relatively balanced. Conversely, Armenia, Bosnia and Herzegovina, Georgia, Montenegro, Serbia, and Ukraine report higher unemployment rates among women compared to men. Unavailability of male workforce due to war and efforts to defend the country against Russian Federation's aggression explains significantly higher disparity between the number of female and male unemployed in Ukraine. Albania, Azerbaijan and Jordan report lower number of female unemployed, also partly explained by low activity rates among women.

When examining educational backgrounds, it becomes evident that many jobseekers in countries such as Albania, Kosovo, Moldova and North Macedonia possess only low-level qualifications (ISCED 0-2). This highlights how educational attainment can influence the duration of unemployment or, conversely, the prospects of finding employment. In contrast, countries like Armenia, Azerbaijan, Bosnia and Herzegovina, Georgia, Montenegro have a significant proportion of unemployed individuals with medium-level qualifications (ISCED 3-4), suggesting a mismatch between the skills profiles of jobseekers and labour market demands, as well as overall higher proportions of medium-level qualified in total workforce. Serbia and Türkiye reached relatively similar proportions of people with low and medium level of education in total registered unemployed. While Jordan shows same pattern but for unemployed with low and high level of education. Ukraine remains an outlier, with significant number of its jobseekers holding a tertiary education.

Table X reveals significant reliance of the Public Employment Services of countries on employment or job subsidy programmes, as well as trainings. All countries for which data is available provide various forms of information and counselling to jobseekers, be it for employment, career or orientation for labour market insertion or participation in various labour market measures. In several countries, particularly in Western Balkans, counselling sessions are provided as part of individual employment plans. Also, Western Balkans PES envisage a boost in career guidance and counselling provision and relevance in the context of Youth Guarantee implementation.

Table 9. Key trends in registered unemployment, support to jobseekers and job vacancy dynamics (2023)

Country	Registered unemployed or jobseekers (number)	Transition rate from unemployment to employment (%)	LMP services (highest participation)	LMP measures (highest participation)	Job vacancies – top three sectors (NACE)	Job vacancies – top three occupational groups (ISCO)
Albania	76 580	36.1	Counselling Job matching	Training Direct Job Creation	Manufacturing Wholesale and retail trade, repair of motor vehicles and motorcycles Accommodation and food service activities	Craft and related trade workers Elementary occupations Service and sales workers
Armenia	64 190	16.9	Counselling for jobs, vocational training and other type of counselling	Employment incentives Supported employment and rehabilitation	Industry Other services Wholesale and retail trade, repair of motor vehicles and motorcycles	Craft and related trade workers Elementary occupations Service and sales workers
Azerbaijan	217 608	29.1	Counselling Job matching	Direct job creation, including self-employment support Training Public works	Other service activities Manufacturing Arts, entertainment and recreation activities	Disaggregated data not available
Bosnia and Herzegovina	343 500	29.0	Counselling Job referral	Employment incentives Start-up incentives	Disaggregated data not available	Disaggregated data not available
Georgia	15 991	na	Counselling Job matching	Direct job creation Training	Wholesale and retail trade, repair of motor vehicles and motorcycles Accommodation and food service activities Manufacturing	Service and sales workers Craft and related trades workers Elementary occupations
Jordan	418 365	na	Job matching Counselling	Employment incentives Job creation	Wholesale and retail trade, repair of motor vehicles and motorcycles Manufacturing Accommodation and food service activities	Service and sales workers Professionals Elementary occupations
Kosovo*	41 773	14.1	Employment counselling Career counselling	Direct job creation Training Wage subsidy	Wholesale and retail trade, repair of motor vehicles and motorcycles Manufacturing	Service and sales workers Craft and related trades workers Professionals

Country	Registered unemployed or jobseekers (number)	Transition rate from unemployment to employment (%)	LMP services (highest participation)	LMP measures (highest participation)	Job vacancies – top three sectors (NACE)	Job vacancies – top three occupational groups (ISCO)
					Accommodation and food service activities	
Moldova	47 699	33.7	Information and professional counselling Job matching	Training Job subsidizing Labour mobility stimulation	Other service activities Manufacturing Wholesale and retail trade, repair of motor vehicles and motorcycles	Craft and related trades workers Service and sales workers Plant and machine operators and assemblers
Montenegro	40 966	40.4	Employment mediation Counselling	Employment subsidies Training Public Works	Education Accommodation and food service activities Wholesale and retail trade, repair of motor vehicles and motorcycles	Elementary occupations Professionals Technicians and professional associates
North Macedonia	105 452	23.3	Employment mediation Information and counselling for employment	Training Self-employment support Support for new job creation	Manufacturing Wholesale and retail trade, repair of motor vehicles and motorcycles Accommodation and food service activities	Service and sales workers Elementary occupations Professionals
Serbia	404 977	41.3	Employment counselling Mediation	Training Subsidized employment and self-employment	Information and communication Manufacturing Construction	Professionals Craft and related trades workers Elementary occupations
Türkiye	2 420 451	51.1	Job and Vocational Counselling Employment fairs	Public work programmes Training Subsidized employment	Manufacturing Wholesale and retail trade, repair of motor vehicles and motorcycles Administrative and support service activities	Elementary occupations Craft and related trades workers Service and sales workers
Ukraine	96 120	33.1	Professional orientation	Employment incentives Training Business startup grants	Manufacturing Wholesale and retail trade, repair of motor vehicles and motorcycles Education	Plant machine operators and assemblers Service and sales workers Elementary occupations

Notes: Year of reference 2022 for Jordan all data and for Azerbaijan indicator on transition rate; na – not available;
Source: ETF ALMPs data collection (from Public Employment Services/MoL/NSOs)

Transition from unemployment to employment varies across countries reflecting economic and social contexts, absorption capacity of labour market but also jobseekers' readiness to take up jobs and available opportunities to participate in active labour market programmes. Countries like Kosovo and Armenia register relatively low scores of unemployment to employment transition rates, while Türkiye, Serbia and Montenegro report higher scores for this indicator. Vacancy data confirm a labour demand pattern centred around manufacturing and service job profiles in most countries, requiring medium-level qualified workforce. An outlier is Serbia reporting significant demand in Information and Communication economic sector and higher demand for 'Professionals' an occupational group corresponding to workers with high level of education.

5. SYSTEM ORGANISATION

The final chapter of this ETF monitoring report examines the organisation of education and training systems. It complements the previous sections, which focused on access and quality, by shifting the focus to the technical and systemic conditions needed to ensure accessible and effective learning for all learners. In the context of ETF's monitoring, system organisation refers to the key components necessary for the operation and functioning of any learning environment, regardless of where the learning takes place, the age of the learners, or the type of instruction.

This chapter draws on data from the KIESE and Torino Process databases, which show the level of human and financial resources that ETF partner countries invest in creating and sustaining learning opportunities. It also looks at how well these resources support the functioning of education and training by assessing whether they are sufficient and used effectively.

In addition, the chapter reports on how VET systems are being managed in terms of capacity for informed decision-making, participatory governance, transparency and reliability of quality assurance, professional capacity of school leaders, and international cooperation in IVET and CVET. All these factors have an impact on how well the education and training systems operate.

5.1 Financial and human resources in VET and lifelong learning

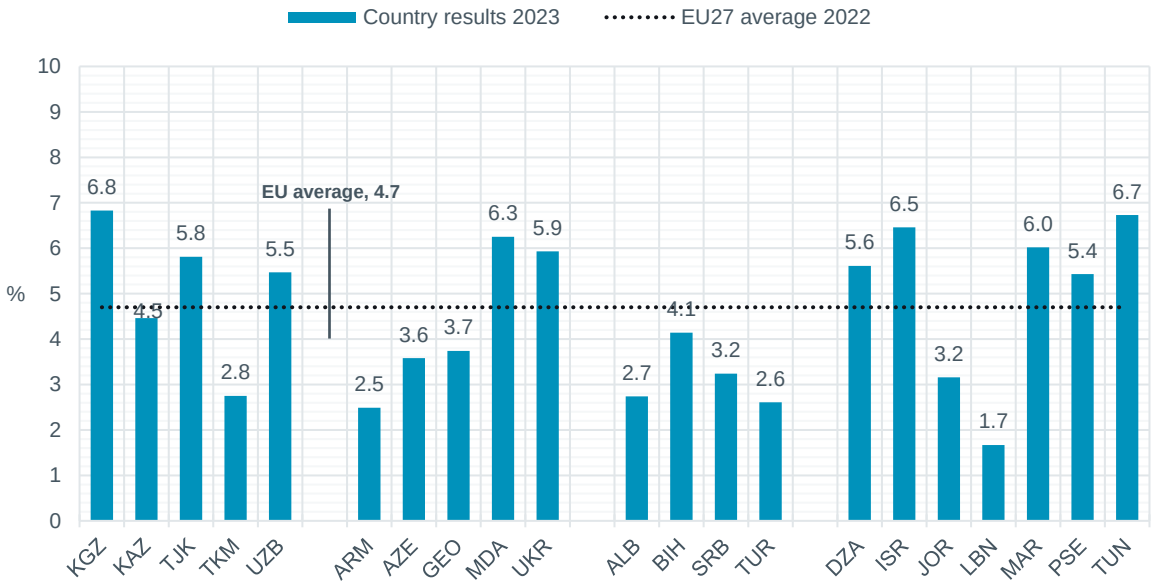
Financial resources: how much is spent on education and training?

A widely accepted approach to measuring a country's financial commitment to education is to examine the share of national wealth spent on the sector. The corresponding indicator, government expenditure on education as a percentage of GDP, measures the proportion of economic output that countries invest in educational services, including costs such as salaries, teaching materials, and infrastructure.

Although this metric is widely available and provides some insight into the priority a country places on education relative to the size of its economy, it remains highly aggregate and has limitations in explaining the quality or effectiveness of the investment. Nevertheless, it provides a useful starting point for understanding the broader commitment to developing human capital and promoting long-term economic growth.

The latest data available for this 2024 monitoring exercise is from 2023. In that year, the proportion of GDP allocated to education by ETF partner countries continued to vary significantly across regions and countries (Figure 15). The EU27 average was 4.7%, down slightly from 5.1% in the previous reporting year. Some ETF partner countries invest either above or below this average, reflecting a wide range of possibilities and approaches to funding education.

Figure 15. Expenditure on education as % of GDP, ETF partner countries and EU27 average (2022)



Notes: Reference year for Kazakhstan, Armenia, Ukraine, Albania, Serbia, Türkiye, Israel, Jordan, and EU27: 2022. Reference year for Bosnia and Herzegovina and Palestine: 2021. Reference year for Lebanon: 2020.
Source: ETF KIESE database (from UNESCO UIS SDG; Eurostat for EU27 average (General government expenditure by function (COFOG)

In the SEMED region, countries such as Tunisia (6.7%), Israel (6.5%), Morocco (6.0%), and Algeria (5.6%) continue to allocate a relatively high share of their GDP to education, in line with the trends observed in previous years. In contrast, Lebanon's relative spending on education remains at the lower end (1.7%), highlighting ongoing challenges in resource allocation. Meanwhile, the share of Jordan's national wealth spent on education remained stable at 3.2%.

In Eastern Europe, Moldova (6.3%) and Ukraine (5.9%) stand out with their above-average spending, while Armenia (2.5%), Azerbaijan (3.6%), and Georgia (3.7%), continue to invest well below the EU average.

In Central Asia, relative spending on education is relatively high for most countries in the region. Government expenditure on education in Kyrgyzstan amounts to 6.8% of GDP, which is the highest level of relative spending in the Torino Process sample of countries. Uzbekistan (5.5%) and Tajikistan (5.8%) also maintain a solid level of financial commitment to the sector, while Turkmenistan invests only 2.8% of its GDP in education and training.

In the Western Balkans, Bosnia and Herzegovina spends 4.1%, while Albania (2.7%), Serbia (3.2%), and Türkiye (2.6%) still invest well below the EU average. Israel on the other hand has one of the highest levels of relative spending on education in the Torino Process country sample. In 2023, government spending on the sector was the equivalent of 6.5% of its GDP.

How well are financial resources used?

ETF partner countries often recognise the critical role of education as a driver of long-term growth and human capital development. However, simply allocating financial resources is not enough. While the level of spending on education is important, the challenge is to ensure that resources are allocated effectively to maintain the quality of education and to drive improvements where needed.

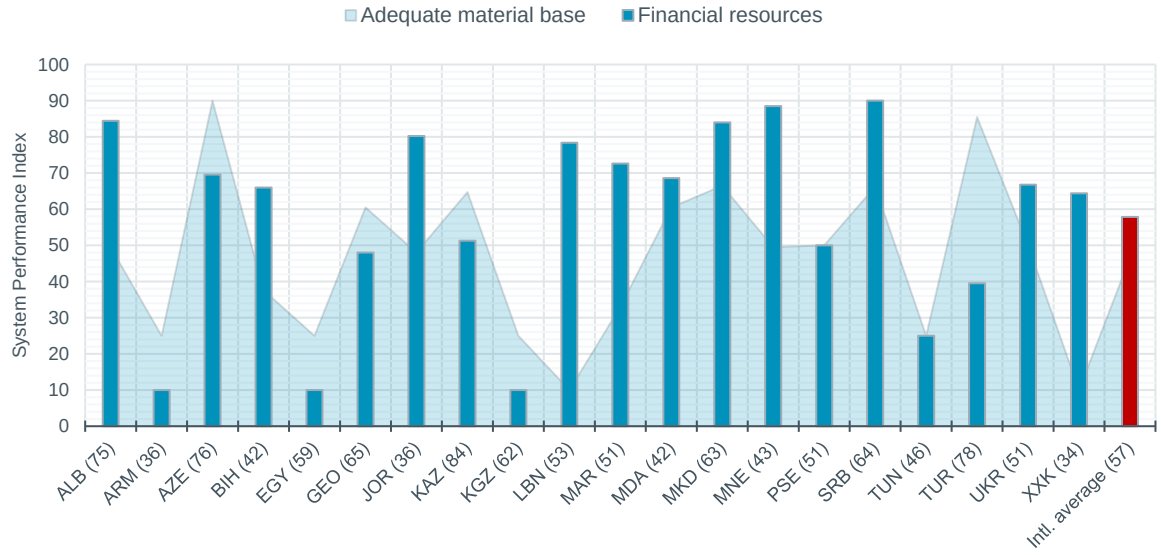
It is difficult to measure the effectiveness of spending on education and training directly because of the complex nature of educational outcomes and the many variables that influence the impact of investment in the sector. Effectiveness is therefore often assessed using proxy indicators that suggest the level of effectiveness or efficiency without measuring it directly.

A number of such indicators are included in the KIESE database and used to calculate two Torino Process system performance indices relevant in this context: system performance in the allocation of financial resources, and system performance in providing an adequate material base for teaching and learning. By assessing both the adequacy of investment in education and training and whether resources are directed towards learning environments that support good student outcomes, these combined results help to assess both the sufficiency of learning resources and the efficiency of resource allocation.

The indicators used to calculate the corresponding System Performance Indices (SPIs) for countries are derived from the responses of principals of general schools and, in many countries, vocational schools whose students were included in the OECD PISA sample. These indicators cover the availability and quality of educational materials and the presence and standard of physical infrastructure. With the release of new PISA data from the 2022 assessment round, these findings have been updated for the 2024 ETF monitoring exercise[14]. The results are shown in Figure 16.

The figure illustrates the relationship between the SPIs covering system performance in providing adequate financial resources for school education (including VET) and adult education, and system performance in ensuring the adequacy of the material base for teaching and learning. The height of the bars in the figure represents each country's performance in providing financial resources (labelled 'Financial resources' in the key), while the shaded areas correspond to system performance in ensuring an adequate material base for education and training (labelled 'Adequate material base' in the key). As with similar figures in this report, the data also include the self-perception of countries about their performance (indicated in brackets under their codes).

Figure 16. Allocation and use of financial resources in education and training — System Performance Index, ETF partner countries and international average (2024)



Theoretical index range: min/low performance=0, max/high performance=100.
Source: ETF KIESE/Torino Process database

[14] Responses to the question "Is your school's capacity to provide instruction hindered by any of the following issues: a lack of educational material, inadequate or poor quality of educational material, a lack of physical infrastructure, inadequate or poor quality physical infrastructure" (Items SC017Q05NA, SC017Q06NA, SC017Q07NA, SC017Q08NA in the school questionnaire administered to principals in 2018). The full questionnaire can be found at https://www.oecd.org/pisa/data/2018database/. The full list of proxy indicators used in the calculation of Torino Process System Performance Indices can be found here: https://drive.google.com/drive/folders/1_sY8tU96Yy_sc-dEOcVMXN0L2E_LF5tk?usp=sharing

The 2024 data continue to show a clear gap between the financial resources invested in education and the adequacy of the material base in many ETF partner countries. High levels of investment do not always translate into better learning environments or infrastructure, while some countries achieve solid results with less spending.

Morocco, Bosnia and Herzegovina, Lebanon, and Kosovo, for example, allocate above average resources to education. However, their material base scores remain low, with Lebanon (10) and Kosovo (10) among the lowest in the sample. This pattern is evident in more than half of the countries in Figure 16, showing that financial investment alone does not guarantee strong learning conditions.

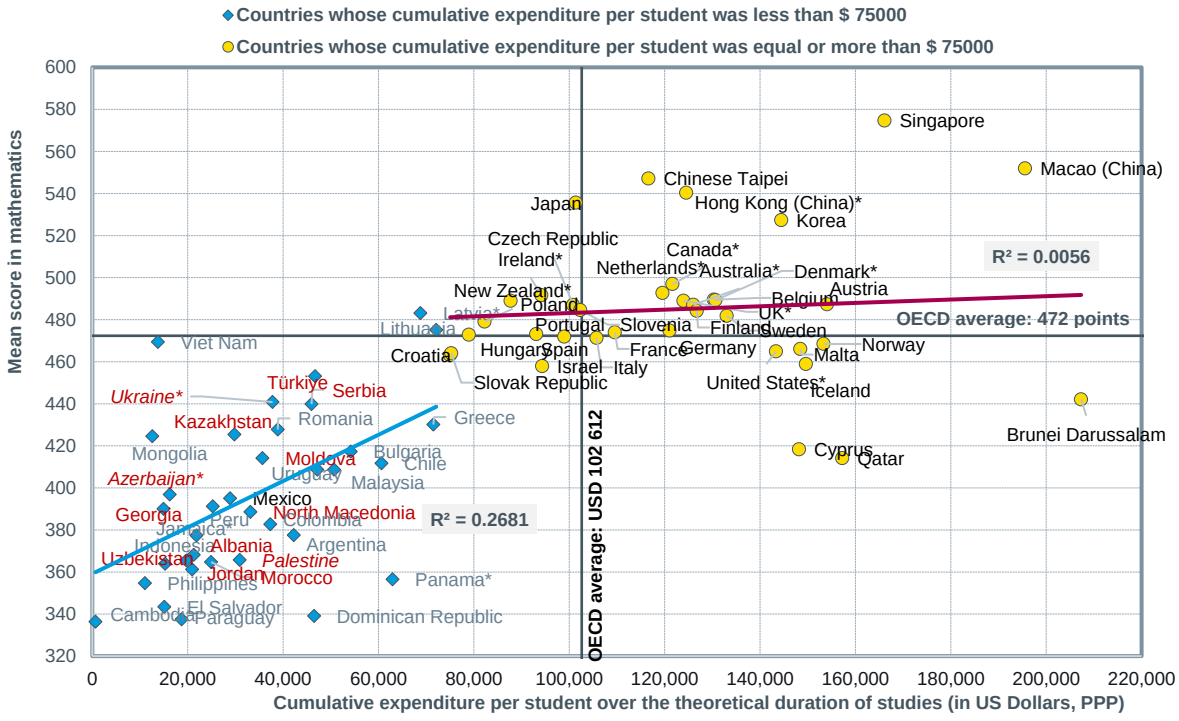
In contrast, countries such as Azerbaijan and Türkiye manage to maintain a strong material base, with scores of 90 and 86 respectively, despite more modest financial resources (70 and 40). Although this approach is less common, it demonstrates that high quality learning environments can sometimes be achieved without large financial inputs.

As noted in the previous edition of this monitoring report, these results have certain limitations. While the funding performance index includes both school and adult education, the material base index primarily reflects resources allocated to school education, including VET. This means that the results for funding may include expenditure that is not reflected in the material base index, potentially leading to discrepancies. However, as adult learning tends to represent a much smaller proportion of total education expenditure in countries, its impact on these discrepancies is likely to be minimal.

What remains clear is that the effectiveness of financial expenditure is not determined solely by the amount invested. The way funds are used within the education system is often a more decisive factor. While ETF partner countries may prioritise the allocation of financial resources to education, the strategic use of these funds plays a more critical role in achieving meaningful results.

This observation is also confirmed by the latest data harvested from the 2022 round of the OECD PISA assessment. Figure 18 shows the relationship between cumulative spending per student and student performance in mathematics.

Figure 17. Performance in mathematics and spending on education, countries participating in PISA 2022



Notes: Only countries and economies with available data are shown.
Source: OECD PISA 2022 Database.

The analysis shows a positive correlation between higher per-pupil expenditure and better PISA performance, up to a certain threshold of around USD 75 000 PPP. Beyond this level, further increases in spending lead to smaller improvements in performance, as the returns on educational investment decline. For countries spending above this threshold, the effectiveness of resource management and allocation becomes more critical than simply increasing the budget.

Table 10. PISA performance and cumulative expenditure per pupil (USD PPP) in selected countries (2022)

Country	Average PISA score in mathematics	Cumulative per student expenditure (USD PPP)
Kazakhstan	425	29,807.38
Palestine	366	30,891.36
North Macedonia	389	33,149.36
Moldova	414	35,686.34
Colombia	383	37,314.83
Serbia	440	45,963.43
Dominican Republic	339	46,517.01
Türkiye	453	46,708.92
Viet Nam	469	13,773.12
Uzbekistan	364	15,285.58
Georgia	390	14,950.48
Baku (Azerbaijan)	397	16,237.49

Source: OECD PISA 2022 Database.

Higher financial investment in education often correlates with better student outcomes, but the relationship is not always straightforward. Most ETF partner countries remain below the threshold where spending significantly improves student performance. This suggests that additional spending could lead to improvements. However, as Table 10 shows, countries with similar levels of expenditure per pupil can have significant differences in PISA results.

The data highlight the importance of striking the right balance between investment and efficiency. In many of the ETF's partner countries, where expenditure per pupil is generally lower, additional funding is likely to be a factor that can lead to better learning outcomes. However, this alone may not be enough. Countries also need to ensure that resources are managed effectively. Increasing expenditure without improving the allocation and use of resources may not lead to meaningful improvements in learning.

Human resources: allocation, use, professional capacity

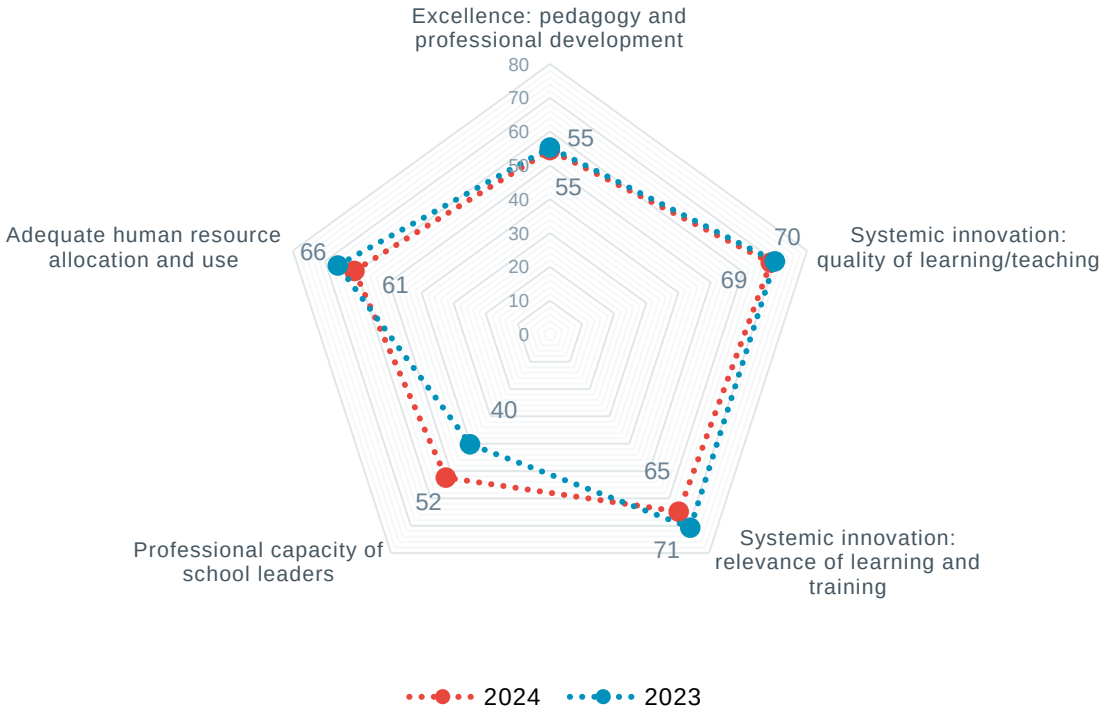
The ETF monitoring framework recognises human resources as a key aspect of the broader category of resources in education and training. Human resources in education represents the largest expenditure in most countries' education budgets. However, human resources — teachers, trainers and leaders — are not merely 'consumers' of financial investment. They are the ones who transform these resources into learning outcomes. The ETF's system performance monitoring, therefore, treats financial and human resources as interrelated components of resource management in education.

As in other sectors, direct, internationally comparable measures of the effectiveness of human resources management in education are not available. Therefore, this report relies on a set of carefully selected proxy indicators to calculate a system performance index for this area of policy and practice.

In 2023, the Torino Process monitoring examined a selection of system deliverables related to teachers, trainers and staff in leadership positions. The calculation of the corresponding indices was based on a selection of 19 KIESE indicators from international repositories[15]. In 2024, the values of these indicators were updated with new data where possible. The System Performance Indices (SPIs) calculated on this basis cover excellence in teaching and the professional development of educators, the integration of innovative practices to enhance the quality and relevance of their work in support of learning and training, the competence and professional capacity of staff in managerial positions, and the overall efficiency in the management of human resources allocated to the system, in particular the availability and appropriate use of teachers and trainers.

Figure 19 shows the average SPIs of all ETF partner countries participating in the Torino Process monitoring exercise in 2024. The visual representation illustrates how well countries perform in each domain and also facilitates a comparative assessment across domains. This comparison highlights the domains where policies and systems are delivering stronger results and those that may require further attention based on the average scores.

Figure 18. Policies in support of teachers and school leaders — System Performance Index, average for ETF partner countries (2024)



Theoretical index range: min/low performance = 0, max/high performance = 100
Source: ETF Torino Process database

System performance in supporting teachers and school leaders in 2024 remains mixed. There has been some improvement in the average results in supporting staff in leadership positions in VET, but this remains the weakest of the monitoring focus areas related to human resources.

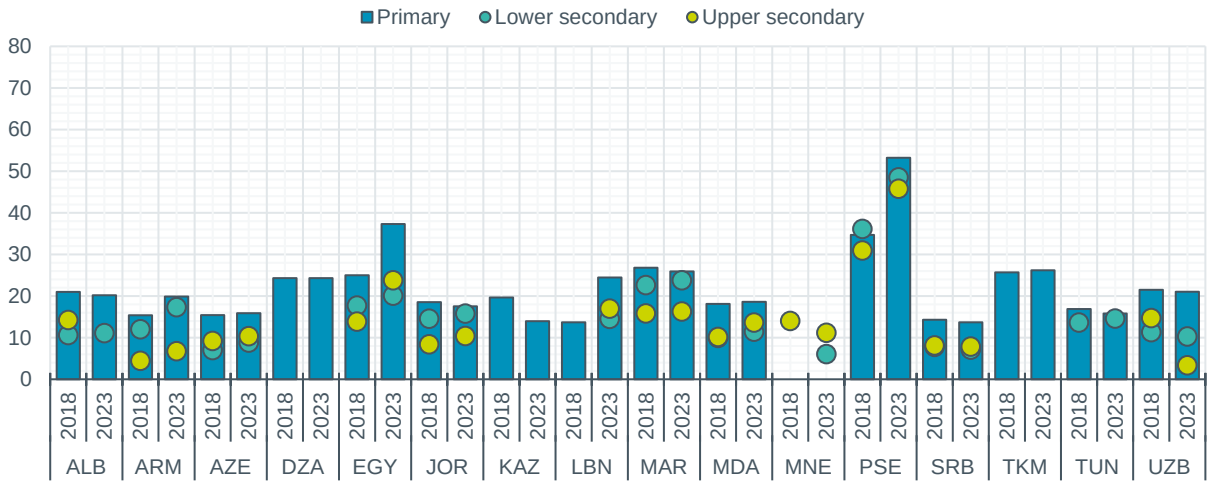
[15] These include OECD PISA, the Global Report on Adult Learning and Education (GRAPE) of the UNESCO Institute for Lifelong Learning (UNESCO UIL), Eurostat, and OECD's Teaching and Learning International Survey (TALIS). The full list of proxy indicators used in the calculation of Torino Process system performance indices in 2024 can be found here: https://bit.ly/4exAkF0

The pursuit of high quality practice (excellence) in pedagogy and professional development also remains an area with moderate results, as most ETF partner countries continue to struggle to promote excellence in the weaker segments of their education and training systems. There is a much greater openness to innovation in support of better and more relevant learning and training, but the system-wide uptake of innovative solutions remains a challenge among teachers due to resistance and inertia, structural limitations (e.g. limited autonomy or lack of incentives), and a lack of capacity often act as barriers to the full realisation of the innovative potential of education practitioners and providers.

Finally, countries have made some progress in the area of human resources management in VET, in partly due to a downward trend in metrics that are proxies for teachers' working conditions, such as student-teacher ratio, classroom climate, staff shortages. Figure 19 shows one such indicator, the student-teacher ratio (STR). The STR is a well-established indicator that provides an approximation of the potential workload and working conditions of teachers. For example, persistent disparities in this ratio across various regions or between providers may indicate systemic challenges in the deployment of teachers and trainers. From a cross-country perspective, the STR provides a quick and simplified lens through which to monitor evidence of discrepancies in the effectiveness of teacher workforce management across countries.

Of course, there is a downside to its simplicity and widespread availability. While these features make it a convenient metric, the STR provides only a general overview. It does not capture the qualitative or contextual nuances of human resource management in different countries and may mask important variations and factors at play in the distribution of their teacher workforce.

Figure 19. Student-teacher ratio by level of education, ETF partner countries (2018 and 2023)



Notes: Reference year for Serbia, Turkmenistan, Tunisia (lower secondary): 2022. Reference year for Albania and Egypt (lower secondary): 2021. Reference year for Algeria: 2020. Reference years for Egypt, Lebanon and Turkmenistan: 2019. Reference years for Albania (lower and upper secondary) and Uzbekistan (upper secondary): 2017.
Source: ETF KIESE database

The data show a general trend of decrease in student-teacher ratios at the primary level in many countries. Albania and Tunisia, for example, have reduced their ratios, which may indicate that there is an improvement in teaching and learning conditions. In Egypt, on the other hand, the ratio has increased, which may indicate difficulties in maintaining a sufficient number of teachers. Kazakhstan, on the other hand, appears to have made progress in balancing student numbers with available staff.

Secondary education presents a more mixed picture across countries. Some have seen slight increases or stabilisation in their lower secondary ratios between 2018 and 2023. Armenia and Egypt are now under greater pressure as their student-teacher ratios have increased. In Palestine and Lebanon, the sharp increase in both lower and upper secondary ratios potentially highlights growing

teacher shortages. This is also the case in primary education. In Armenia and Uzbekistan on the other hand, the ratio in upper secondary education has dropped dramatically.

Another important proxy for the conditions in teaching as a profession, and in particular the attractiveness of teaching as a career, is the average teacher salary compared to other professions requiring comparable qualifications. While factors such as working conditions, career development opportunities, and cultural perceptions also play a role in making teaching an attractive option, salary remains a key consideration in many contexts.

Table 11 shows the average teacher salary compared to other professions requiring a comparable qualifications, broken down by level of education for six countries (Albania, Armenia, Israel, Palestine, Tunisia, and Türkiye). The figures show how teachers' salaries compare with salaries in other professions with similar qualification requirements at different levels of education levels (pre-primary, primary, lower secondary and upper secondary).

Table 11. Average teacher salaries compared to other professions with comparable qualification requirements, by level of education (2022)

Country	Pre-primary	Primary	Lower secondary	Upper secondary	Primary to upper secondary (% difference)
Albania	0.80	0.84	0.88	0.93	10.7%
Armenia	m	0.91	0.91	1.10	20.9%
Israel	0.76	0.68	0.73	0.79	16.2%
Palestine	1.63	1.63	1.63	1.63	0.0%
Tunisia	1.63	1.71	1.92	1.92	12.3%
Türkiye	1.32	1.32	1.34	1.34	1.5%

Note: Reference year for pre-primary education in Tunisia: 2021
Source: ETF KIESE database

Data on this indicator remains limited in ETF partner countries. However, where available, it suggests that teacher salaries at higher levels of school education tend to be more competitive than those at lower levels. In Armenia, for example the percentage difference between primary and upper secondary teacher salaries is more than 20% in relative terms. In such contexts, primary education may be at a disadvantage as the financially less attractive option for those considering a career in teaching.

In some countries, such as Türkiye or Palestine, average teacher salary relative to other professions requiring similar levels of qualification remains relatively constant across all levels of education. In the two countries – Palestine and Türkiye - where income differentials between levels are minimal or non-existent, teachers' salaries at all levels tend to start higher than the average for occupations requiring similar qualifications. While this may support long-term retention and professional stability, it is worth noting that if other professions are poorly paid, even an above-average teacher salary may not be a strong incentive to attract people to teaching.

At the same time, it is important to note that the dataset in Table 11 reflects only basic or statutory salaries, presented as averages, and does not take into account possible additional elements such as bonuses, supplements, or tenure-related salary increases. These averages may mask important differences, as teachers in some cases may start with lower salaries but experience significant increases over time. Additional incentives may also be more readily available at higher levels of school education. The table should therefore be interpreted with caution, as teachers at higher levels may still benefit from additional incentives, even in countries where statutory salaries are comparable or equal to those at lower levels.

5.2 Performance in system steering and management

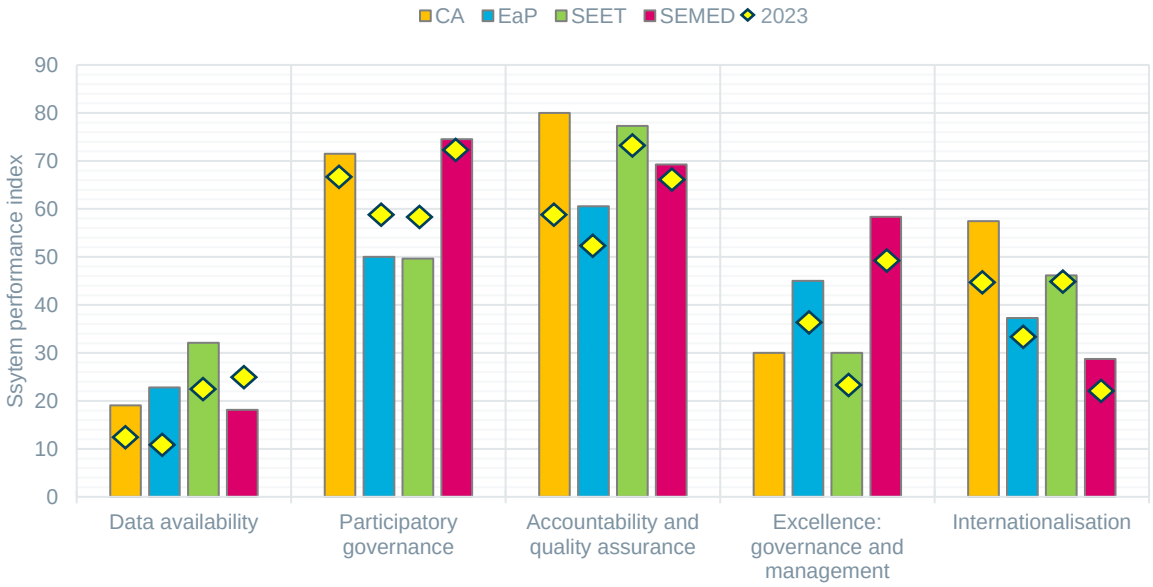
The final section of this report examines KIESE and Torino Process data on the steering and management of education and training. The analysis focuses on secondary school levels (including IVET) in ETF partner countries, and on adult education in the case of participatory governance. Key areas covered include:

- Data availability and capacity for informed decision-making
- External stakeholder involvement in steering and management
- Transparency and reliability of quality assurance mechanisms
- Degree of internationalisation among secondary education and training providers
- Existence of exemplary solutions (excellence) in the field of governance and provider management.

These areas are presented as Torino Process System Performance Indices (SPIs), one for each key area, totalling five. They are based on 21 proxy indicators from the KIESE database, with data sourced from public international repositories and updated in 2024[16].

Figure 20 shows the average system performance in 2024 for all countries participating in Torino Process monitoring, grouped by region. The SPIs for each domain and region are plotted on the vertical axis, complemented by the 2023 regional averages as diamond markers. The results indicate changes in performance across all system steering and management domains and in all ETF partner regions. As regional averages are influenced by changes in even one or two countries, these shifts may not always reflect broad, sustained trends. Nevertheless, regional patterns can be helpful in understanding broader policy shifts or shared challenges across countries.

Figure 20. System steering and management — System Performance Index, average for ETF partner regions (2024)



Note: Theoretical index range: min/low performance = 0, max/high performance = 100
Source: ETF KIESE/Torino Process database

The 2024 results show that there has been an evolution in performance across all domains of system steering and management and in all ETF partner regions. As the regional averages are based on the performance of multiple countries, a change in just one or two countries can affect the overall average

[16] The full list of proxy indicators used in the calculation of Torino Process system performance indices can be found here: https://bit.ly/4exAkF0.

for the region. Nevertheless, it can still be useful to interpret changes at a regional level, as regional trends often reflect broader policy shifts, priorities or challenges that many countries in a region may be facing together. In addition, some patterns or emerging issues may not be as apparent when looking at the performance of individual countries in isolation.

Perhaps the most apparent finding in the area of system organisation is that, while regions share certain challenges, their performance in this domain is not uniform. Some regions tend to consistently underperform or overperform in specific monitoring domains, and most have seen positive changes since 2023. Whether this marks the beginning of a trend or simply reflects short-term adjustments remains to be seen.

In more specific terms, there are several observations emerging from the 2024 data. Despite improvements compared to 2023 in all regions except SEMED, data on education and labour market outcomes remains a significant challenge for all ETF partner countries, both in terms of availability and analytical capacity for policy purposes. SEMED and Central Asia are the most affected regions.

However, gaps in evidence do not appear to prevent SEMED countries from performing well in other Torino Process monitoring domains. Like Central Asia, SEMED consistently shows strong average performance upholding quality standards in education and training.

It is important to note that good performance in quality assurance does not necessarily indicate high quality in education itself. Rather, it reflects the presence of mechanisms or processes designed to ensure quality, such as evaluation systems, standards, and accountability measures. Countries in the SEMED and Central Asia regions, as well as in SEET, have a legacy of extensive, and sometimes more rigid, quality assurance arrangements. These systems often feature structured and detailed oversight mechanisms that contribute to better outcomes in this domain over time. On the other hand, traditional models tend to focus heavily on compliance, quality checks, and institutional accountability, which can be overly bureaucratic and may limit innovation and change.

Performance in the domain of excellence varies widely across ETF partner regions, which may reflect differing views on its importance as a policy priority. Countries in SEET and Central Asia tend to perform worse on average than those in SEMED and EaP, though all regions – except Central Asia, where data are missing – have shown significant improvements since the 2023 round of the Torino Process monitoring.

In contrast, the internationalisation of VET providers and their programmes is a more established and consistently interpreted domain in the monitoring framework. Here, too, system performance varies between regions. While SEET countries appeared to be the most open to international cooperation in 2023, in 2024 their average scores were far exceeded by Kazakhstan and Kyrgyzstan, the only two participating countries from Central Asia.

REGIONAL AND COUNTRY ACRONYMS

Country acronyms

Acronym	Country name	Regional aggregation
KGZ	Kyrgyz Republic	CA
KAZ	Kazakhstan	CA
TJK	Tajikistan	CA
TKM	Turkmenistan	CA
UZB	Uzbekistan	CA
ARM	Armenia	EaP
AZE	Azerbaijan	EaP
GEO	Georgia	EaP
MDA	Moldova	EaP
UKR	Ukraine	EaP
ALB	Albania	SEET
BIH	Bosnia and Herzegovina	SEET
MKD	North Macedonia	SEET
MNE	Montenegro	SEET
SRB	Serbia	SEET
TUR	Türkiye	SEET
XXK	Kosovo*	SEET
DZA	Algeria	SEMED
EGY	Egypt	SEMED
ISR	Israel	SEMED
JOR	Jordan	SEMED
LBN	Lebanon	SEMED
MAR	Morocco	SEMED
PSE	Palestine*	SEMED
TUN	Tunisia	SEMED

Acronyms regional aggregations

Acronym	Region name
CA	Central Asia
EaP	Eastern Partnership
EU27 or EU	European Union
SEET	South Eastern Europe and Türkiye
SEMED	Southern and Eastern Mediterranean

Technical acronyms (excluding indicators)

Acronym	Description
ALMP	Active Labour Market Policy
CVET	Continuing Vocational Education and Training
ETF	European Training Foundation
EU	European Union

EUROSTAT	European Statistical Office
ISCED	International Standard Classification of Education
ISCO	International Standard Classification of Occupations
IVET	Initial Vocational Education and Training
KIESE	Key Indicators on Education, Skills, and Employment
LLL	Lifelong Learning
LMP	Labour Market Policy
NSO	National Statistical Office
OECD	Organisation for Economic Co-operation and Development
PES	Public Employment Service
PISA	Programme for International Student Assessment
SPI	System Performance Index
UIL	UNESCO Institute of Lifelong Learning
UIS	UNESCO Institute of Statistics
UNESCO	United Nations Educational, Scientific, and Cultural Organization
VET	Vocational Education and Training

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