

European Training Foundation

EDUCATION, SKILLS AND EMPLOYMENT — TRENDS AND DEVELOPMENTS

An ETF cross-country monitoring report

2023





Disclaimer

This report was prepared by Mihaylo Milovanovitch, Senior Human Capital Development Expert - Coordinator for System Change and Lifelong Learning, ETF, with contributions by Stefano Lasagni and Stylianos Karagiannis, Data Analysts and Experts in Human Capital Development, ETF, under the overall supervision of Hugues Moussy, Head of Systems Performance and Assessment Unit, ETF.

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KEY TAKEAWAYS

- Scope of reporting: This cross-country monitoring report provides a comprehensive overview of trends in education, training, and employment across 25 ETF partner countries in Central Asia, South Eastern Europe and Türkiye (SEET), the Southern and Eastern Mediterranean (SEMED), and Eastern Partnership (EaP). This year, the report integrates insights from the Torino Process and emphasises lifelong learning. It assesses the flexibility, adaptability, and equitability of learning opportunities amidst societal changes. Data is sourced from 206 indicators, covering areas like educational outcomes and labour market implications, and 82 policy performance indices. The report examines data pertaining to access, quality, relevance, and organisation of learning, focusing on the journey and needs of diverse learners.
- Lifelong learners and their features: In this edition of cross-country data reporting, the ETF has shifted its monitoring emphasis to a more learner-centric perspective, focusing on delivery to learners in diverse educational and employment settings. Learners are categorised into 'young people' (aged 0-24, further also called 'youth') and 'adults' (aged 25 and above), with particular attention given to socio-economically disadvantaged learners, including those facing gender imbalances or belonging to migrant communities. Most ETF partner countries anticipate a decline in their youth population, necessitating adaptations for ageing demographics. Significant challenges are posed by NEETs (individuals not in education, employment, or training), with many countries exceeding the EU27 average. Moreover, there is a rising trend of migrants in the youth population in certain countries, accentuating the need for enhanced monitoring solutions.
- Access and participation: There are marked differences in how well countries deliver access to education and training to different learners. Some countries prioritise youth participation and struggle with the task of engaging adults. Others present a more uniformed approach, with steady engagement rates regardless of age. Though policies vary significantly, an overarching trend is evident: many countries have made commendable strides in supporting their disadvantaged young people. Initiatives, especially those centred around vocational education and training (VET), have been pivotal in fostering access and opportunities for this demographic.

Nonetheless, the aspiration for universal lifelong learning remains elusive across ETF partner countries and regions. Participation rates in lifelong learning initiatives, though growing, are still not optimal. The presence of gender disparities is a telling challenge. Another pivotal observation is the varying emphasis on different aspects of the educational journey. Some countries allocate resources and strategies towards widening initial access, ensuring that more learners can embark on their educational paths. In contrast, others allocate their focus towards ensuring that once learners start, they can navigate the system effectively and eventually graduate.

Quality and relevance: In the majority of ETF partner countries, there is a notable distinction in the skills and competences between different age groups. The adult population, on average, outperforms the youth enrolled in or graduating from VET in terms of essential skills and competences. While this trend is prevalent, there are countries where the skill level of young people is either on a par with international averages or even surpasses that of the adult population. Females, socio-economically disadvantaged youth, and first-generation migrants have higher acquisition rates of foundational skills and key competences through VET programmes when compared to the broader youth population in the same context.

The proficiency of adults in skills and competences is more diverse. While adult females generally demonstrate foundational skills and competences, their proficiency is often lesser than the broader adult average. This discrepancy is more pronounced for adults who are economically inactive or facing potential disadvantages.

The skills and competences of graduates from secondary and higher education in ETF partner countries do not readily translate into employability. This is true in particular for females. Although



the labour market in most countries is dominated by 'elementary' occupations, holders of tertiary degrees are still more likely to secure a job, although often at the expense of agreeing to work in jobs that are not matched to their skillset. In fact, skill mismatches emerge as a crucial challenge in all countries.

System management and organisation: Investment in education across ETF partner countries varies, with differences in the percentage of GDP allocated to the sector ranging from as low as 2% to as high as 7%. However, there are inconsistencies between the allocation of resources and the effectiveness of their use. For instance, some countries, despite dedicating above-average resources, register low scores in the quality of conditions for teaching and learning. In contrast, others maintain commendable material standards despite having average or even below-average investments. The data suggests that the efficient utilisation of funds, rather than just their allocation, may play a much more pivotal role than generally assumed.

Human resource management is an area where ETF partner countries have diverse results and one in which many struggle to be efficient. Class sizes and teacher workloads vary widely, hinting at potential infrastructural challenges or teacher shortages. These disparities might also reflect inconsistent class sizes and workloads across different institutions and areas, both urban and rural. Many countries also face a gap in the professional capacity of school leadership. Although they emphasise excellence and innovative teaching, many struggle to adopt these high-quality and innovative practices system-wide.



1. INTRODUCTION

Background

This report is the 2023 edition of the annual cross-country overview of highlights from evidence that the European Training Foundation (ETF) is collecting on trends and developments in education, training and employment across its partner countries in Central Asia, South Eastern Europe and Türkiye (SEET), the Southern and Eastern Mediterranean (SEMED), and Eastern Partnership (EaP). The report represents the continuation and evolution of a series of publications which were known under the name 'Key Indicators on Education, Skills, and Employment – KIESE': a collection of statistics proposed by the European Training Foundation (ETF) to assess human capital development.

The report distinguishes itself from prior editions of similar, cross-country reports in two significant ways. Firstly, it is more comprehensive as it incorporates data and insights from the Torino Process – a hallmark initiative of the ETF that has been regularly evaluating vocational education and training (VET) in ETF partner countries since 2010¹. The second distinction is the sharpened focus on lifelong learning (LLL) and the extent to which it is available to prospective and actual learners. Lifelong learning in this context refers to all learning activity undertaken throughout life, with the aim of improving knowledge, skills/competences and/or qualifications for personal, social and/or professional reasons.

The reasoning for this shift in focus is that amidst profound societal changes, traditional boundaries in education are becoming blurred, making flexibility and adaptability of learning opportunities paramount. It is not enough anymore to report on the presence and shape of policies and systems. It is time to evaluate how well they support diverse learning pursuits across varied settings, and whether this support is distributed equitably among distinct learner groups irrespective of their background, gender, country of origin, or age.

Sources of data and evidence

The report draws on a total of 206 carefully curated, internationally comparable indicators from the KIESE 2023 database. These indicators span a range of domains, including educational outcomes, quality assurance, labour market implications, teaching dynamics, resource allocation, employment trajectories, and innovative teaching and training methods. The data for these indicators were sourced from both international and national repositories, facilitated through active collaboration with the national statistical offices and committees of ETF partner countries.

The report also draws on 82 policy and system performance indices (SPIs)² compiled and generated through the Torino Process. The SPIs can range from 0 to 100, where 100 indicates maximum or best performance. The indices describe the performance of school and adult education systems, in particular VET, in delivering a total of 30 outcomes for youth and adults, females and males, disadvantaged learners, long-term unemployed jobseekers, economically inactive populations, and first-generation migrants.

² The indices describe VET system performance in formal and non-formal learning settings for youth and adults, females and males, disadvantaged learners, long-term unemployed jobseekers, economically inactive populations, and firstgeneration migrants. "Performance" in this context describes the extent to which school and adult education systems, in particular VET, deliver against a targeted selection of national and international obligations (commitments) to these groups of learners in support of their learning through life.



¹ The Torino Process is a multiannual review of vocational education and training (VET) in South Eastern 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

The SPIs are derived from a combination of internationally comparable indicators and supplemental data sourced directly from national authorities and stakeholders. Where internationally comparable indicators were unavailable for certain system outcomes or learner groups, the ETF employed a supplementary questionnaire to bridge these gaps. This amalgamation of data provided a comprehensive evidence base, which subsequently informed the calculation of the system performance indices showcased in this report³.

The geographical scope of the present report encompasses a total of 25 ETF partner countries⁴.

About this report

The structure of this report is organised around thematic areas which capture the typical journey of learners from entry to completion. These areas not only reflect the stages learners go through, but also the overarching policy perspectives and priorities of educational institutions and stakeholders along this journey. These encompass everything from the quality of education and training the learners receive to the foundational resources and conditions of learning.

The rest of this report is divided accordingly into three chapters: on access to learning, quality and relevance of learning, and system organisation. These chapters are preceded by a chapter discussing the extent to which ETF partner countries are confronted with the challenge of catering to the different needs of different groups of learners – needs associated with their age, socio-economic disadvantages, educational attainment, and migration status.

Specifically, <u>Chapter two</u> underscores the pivot of ETF monitoring to a learner-centric approach and examines diverse lifelong learner profiles based on age, socio-economic status, educational level, and migration background, while stressing the importance of recognising and addressing the distinct needs of these learners.

<u>Chapter three</u> covers the accessibility of learning opportunities and the extent to which they are available irrespective of learner background or motivation. This chapter also examines the likelihood that learners navigate the education and training system successfully, emphasising transitions between different pathways and completion rates.

<u>Chapter four</u> focuses on the provision of essential skills to learners and discusses whether education and training in ETF partner countries aligns with employment prospects and broader societal needs, and whether learning is quality-driven and relevant.

<u>Chapter five</u> on the other hand concentrates on the organisation of the system, especially the adequacy and efficiency of both human and financial resources in education and training. It also underscores the conduciveness of the material base for effective teaching, training, and learning, ensuring the system remains robust and resilient.

The report features a narrow selection of indicators and system performance metrics. They were chosen because they capture important elements of the core dynamics between education and employment, spotlighting both developments and policy progress in these areas. For those interested in a more in-depth view, the report also includes a <u>statistical annex</u> with additional data from the KIESE and Torino Process evidence repositories.

⁴ Algeria, Morocco, Tunisia, Egypt, Lebanon, Jordan, Israel, Palestine*, Türkiye, North Macedonia, Albania, Kosovo*, Serbia, Montenegro, Bosnia and Herzegovina, Moldova, Ukraine, Georgia, Armenia, Azerbaijan, Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan, Turkmenistan. (*Throughout the report, the designation of Palestine and Kosovo is without prejudice to positions on their status).



³ The full list of monitored system outcomes, proxy indicators, system performance indices, country results and questionnaire responses of countries can be found at <u>https://drive.google.com/drive/folders/1_sY8tU96Yy_sc-dEOcVMXN0L2E_LF5tk?usp=sharing</u>

The narrative in the report refrains from speculating about the underlying reasons behind the data. Instead, the focus remains on providing a clear and balanced depiction of the evidence at hand. The intention is to allow stakeholders to draw their own conclusions and insights.

Occasionally the report may suggest what the potential implications are based on the presented evidence, it is important to keep in mind that these are interpretations. The actual reasons behind the data results might be complex and too context-specific to discuss in a cross-country perspective. Although this approach may be perceived as a limitation by some, it ensures the integrity and impartiality of the information presented, giving readers the freedom to use the data in this report as a foundation for well-informed decision-making according to their needs and expectations.



2. A FOCUS ON LEARNERS

As a sector, education and training are traditionally guided by overarching commitments to the public, such as access, quality, and equity, often articulated as strategic targets like the Sustainable Development Goals (SDGs). While these commitments provide a clear framework for tracking developments and progress, this round of ETF data collection has shifted the monitoring emphasis towards a more learner-centric perspective. Instead of solely examining policy and systemic features, the focus is now on the actual delivery to learners across all educational settings and employment contexts, as showcased through the array of indicators in the ETF KIESE repository.

This approach assesses the realisation of educational commitments through the lens of learners, emphasising the accessibility and equitable distribution of learning benefits across diverse learner demographics and labour market situations. By centring on learners, while maintaining a systemic approach to evidence tracking and progress evaluation, the monitoring can more accurately gauge the true impact of education and training on individuals.

Who are the learners in focus of ETF monitoring? Learners come with a spectrum of attributes and characteristics, each presenting its own significance in the context of education, training, and employment. The monitoring and subsequent reporting prioritise a selection of these attributes based on two key perspectives, which should be intuitive in most contexts. Firstly, attributes that might put learners at a disadvantage — be it in terms of access, quality, or resources. This could include factors like socio-economic status, gender in certain contexts, or belonging to a group of youth at disadvantage. Secondly, attributes that carry socio-economic implications for the broader society, such as adults requiring reskilling in a rapidly evolving job market.

In this sense, the ETF monitoring groups learners into two main groups: the 'youth', who are typically engaged in education – from early childhood to tertiary stages – and are transitioning to the labour market; and the "'adults," who might have completed their formal education but consistently require skill updates to stay relevant in a dynamic labour market. For clarity in this report, 'youth' pertains to those aged 0-24, while 'adults' denotes individuals aged 25 and above. In terms of enrolment in VET, 'youth' may refer to learners in initial VET, while 'adults' may refer to those enrolled in CVET programmes.

This report also prioritises socio-economic disadvantage as a learner attribute. Disadvantage in this context is defined based on labour market dynamics (for instance, learners who are inactive or facing prolonged unemployment), necessity of skill acquisition (individuals with minimal education or outdated competencies), and potential socio-cultural discrepancies and biases (individuals grappling with learning challenges, facing gender imbalances, or belonging to migrant communities).

The next sections provide a snapshot of the extent to which ETF partner countries are confronted with the challenge of catering to the different needs of different groups of learners – needs associated with their age, socio-economic disadvantages, educational attainment, and migration status.

Learners by age

Age is paramount in both education systems and labour market dynamics. In education, learners of different ages have unique needs, capacities, and challenges. Ensuring optimal learning and training outcomes may require policies tailored to age. Economically, varying age groups signify diverse stages of work-life: from youthful innovation and adaptability to the seasoned expertise of older professionals. A predominantly young population can hint at stiff competition for entry-level jobs, while an ageing demographic may signal labour shortages and higher pension burdens. In both domains, understanding age-related trends is crucial for informed policy making and future planning.

Most ETF partner countries are anticipated to experience a decline in the share of their youth population relative to the total population. While the patterns vary, the overarching trend points



towards ageing population with a diminishing percentage of young people (Figure 1). The trend may reflect not just declining numbers of youth, but also stabilizing birth rates and increasing life expectancy across ETF partner countries.





Source: ETF KIESE, calculations based on UN DESA data, accessed in September 2023.

Based on estimates and projections from the United Nations Department of Economic and Social Affairs (UN DESA), the proportion of youth relative to the total population is shrinking across all ETF partner countries. This decline is evident even in countries with historically significant youth-directed biases in the structure of their populations. For instance, in Palestine, the estimated population share of those aged 0-24 decreased from 68% in 2000 to a projected 44% by 2050. Even in countries like Serbia, where the youth population was initially smaller, there is a decline from 30% in 2000 to an expected 22% by 2050.

This shifting demographic implies that, as the relative proportion of youth in the population diminishes, countries will be increasingly confronted with pressure to adapt to the needs of ageing populations and adult learners. From an educational standpoint, this accentuates the growing need for retraining, covering both individuals in their prime working years and those approaching or in their retirement years.

Disadvantaged learners: youth at risk

NEETs, which stands for 'Not in Education, Employment, or Training', provide a valuable metric when assessing the challenges faced by young people in a country.

Although not all NEETs are socio-economically disadvantaged, a high prevalence suggests that education, training, and labour market systems may be inadequately serving youth at risk and those at a disadvantage. Specifically, gaps in these systems – be it the lack of relevant training, absence of career guidance, or limited job opportunities – hinder a seamless transition from school to work. Thus,



the proportion of NEETs can be indicative of the degree to which national mechanisms are geared to effectively cater to such vulnerable groups of learners.



60 50 40 % 30 20 9.5 10 9.6 0 KG KZ AM GE MD UA AL BA ME MK RS TR XK PS LB TN **EU27**

■Total ▲Female ●Male

Source: ETF KIESE (from LFS data received through Eurostat and the national statistical offices of ETF partner countries)

Note: Aged 15-74 for Montenegro, North Macedonia, Serbia, Türkiye and EU27; aged 25+ for Israel; year 2017 instead of 2010 for Kazakhstan and Armenia; year 2015 instead of 2010 for Georgia and Kosovo*; year 2011 instead of 2010 for Montenegro; year 2019 instead of 2020 for Albania. Disaggregation by gender is missing for Kyrgyzstan.

In most ETF partner countries, the proportion of NEETs exceeds the EU27 average of 9.6% (Figure 2). Several countries report notably high values; for instance, Tunisia stood at 41% in 2021, followed by Palestine, Lebanon, and Kosovo* at around 29-32%. Other countries such as Türkiye, Montenegro, Albania, Georgia, and Armenia hovered around the 20% mark as of 2021.

Upon analysing NEETs based on their educational attainment, certain patterns emerge. In some countries, the majority of NEETs aged 15-24 have low educational levels (ISCED 0-2) with Tunisia, Palestine*, and Moldova having figures above 40-50%. Conversely, in countries like Bosnia and Herzegovina and Serbia, the NEET segment is primarily populated by those with an upper secondary or post-secondary education, with the share going over 70-80%.

A gender disparity is also evident. In the majority of the surveyed partner countries, the proportion of female NEETs aged 15-24 is higher than their male counterparts. Notable exceptions in 2021 include Montenegro, Serbia, and Tunisia. This trend parallels the observed gender gap in employment rates (see Chapter Three), with a lower percentage of young women participating in the workforce.



Disadvantaged learners: adults with low educational attainment

Adults with a low level of education are usually a high-priority group in country policies for education, training, and human capital development.





Source: ETF KIESE (from LFS surveys and Eurostat)

Note: Aged 15-74 for Montenegro, North Macedonia, Serbia, Türkiye and EU27; aged 25+ for Israel; year 2017 instead of 2010 for Kazakhstan and Armenia; year 2015 instead of 2010 for Georgia and Kosovo*; year 2011 instead of 2010 for Montenegro; year 2019 instead of 2020 for Albania.

From an economic perspective, this demographic is at a higher risk of unemployment or underemployment. Disregarding their needs and potential could lead to broader socio-economic challenges. Ensuring they receive access to opportunities for learning in the form of targeted education and training can boost their employability, productivity, and wage potential, thereby strengthening the overall economy. Moreover, addressing the educational needs of this group can contribute to social cohesion, reducing disparities, and to fostering inclusive growth. Failing to invest in their learning can perpetuate cycles of poverty and limit national development.

In recent years, the proportion of people with only a primary or lower secondary education (ISCED 0-2) has significantly decreased in most partner countries (Figure 3). In Kazakhstan, for instance, the share of females with low educational attainment declined from 5.2% in 2010 to 2.2% in 2020, and for males from 4.8% to 2%. Albania has also witnessed an improvement, from 60.4% to 51.8% for females and from 55% to 44.6% for males. These trends are evident in other countries and in the European Union (EU) as well, where the share of low skilled members of the workforce declined from 34% to 27% for both sexes, on average.



Despite the positive trends, many partner countries continue facing challenges when it comes to adults with low educational attainment. In 2020, over 50% of both genders in Türkiye, Palestine*, Tunisia, and Jordan were in this category. Some SEMED nations have narrowed the gap. In Western Balkan countries, such as Bosnia and Herzegovina and Kosovo*, a clear gender gap is evident, with more females than males having limited educational attainment. Such gaps highlight the need to address gender-based inequalities, even as overall educational progress is made.

First-generation immigrants

While migration predominantly involves adults, a subset consists of young migrants either pursuing education or entering the labour market. Monitoring and quantifying the presence of immigrant youth demographic is essential to understanding the implications of this presence for education and the job market in ETF partner countries. However, the task is often complicated by data scarcity.

According to UN DESA estimates from "International Migrant Stock 2020", by 2020 there had been a rise in the share of immigrants within the total youth population (aged 0-24) in certain countries. For instance, in Türkiye, the rate surged to 10.3% from 1.2% in 2010 and in Lebanon, it increased to 4.2% from 1.6% in 2010, mirroring the displacement of the Syrian population displacement due to conflict. Meanwhile, nations like Armenia, Bosnia and Herzegovina, Kyrgyzstan, Montenegro, and Moldova observed a marginal impact, with the share under 0.1%.

The extent of migration varies significantly across countries and is heavily swayed by unpredictable political instabilities. Regardless of its scale, the influx of young learners and workers invariably affects all ETF partner countries, including those typically seen as "emigration countries".'. It is crucial to enhance the monitoring of this phenomenon, ideally with tailored national surveys that also catalogue the skills and qualifications of migrants.



3. ACCESS AND PARTICIPATION

Building on the thematic areas outlined earlier, which capture the journey of learners from entry to completion, this chapter of the KIESE cross-country report discusses access to learning opportunities. The objective is to present evidence on whether different learner populations enjoy equal opportunities or if disparities in access and participation are evident.

Access and participation in education and training – and from there the data and monitoring results of countries in these domains – are shaped by two main factors: the policies in place and the choices made by learners. Policies create opportunities and incentives and determine guidelines for access to learning. Conversely, the choices of learners reveal their actual preferences within those set opportunities. The KIESE data in this chapter has been curated to capture both dimensions to the extent possible: the effectiveness of policies in granting access and supporting successful participation, and the prevailing choices of learners within that framework.

Access to learning: a policy and system perspective

Through the Torino Process monitoring, the KIESE data reveals how countries fare in creating favourable conditions conducive for young people and adults to engage in learning designed to align with labour market needs, as provided through initial VET (IVET), continuing VET (CVET), and other lifelong learning opportunities for adults.



Figure 4. Access and participation in learning by country and learners' age – index of system performance, ETF partner countries and international average (2023)

Source: ETF KIESE/Torino Process database

Note: Theoretical⁵ index range: min/low performance=0, max/high performance=100

⁵ The Torino Process makes a distinction between theoretical (full) index range and index range used for reporting purposes. For reporting purposes, rare 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 upper (10) and lower (90) decile end. This means that the reporting does not discriminate SPI values below 10 and above 90. The international average, on the other hand, is calculated using the full range of the index.



The performance of education and training systems in delivering access and supporting participation varies considerably among countries included in this report (Figure 4)⁶. The figure plots three distinct system performance scores (SPIs) for each country: an average country result, a score specific to the youth population, and a score for the adult population. Overlaying these country-specific data points is a dotted line representing the international average SPI score, providing a benchmark against which the individual country performances can be compared. The figure also captures the self-perception of countries about their performance (noted in parentheses under their respective country code). A lower score implies a country is more self-critical, while a higher score (up to a maximum of 100) suggests a more complacent perspective.

Across all countries, a common observation is that adults tend to participate in learning less frequently than the youth. In countries such as Albania, Georgia, Morocco, and Kyrgyzstan, the youth participation significantly exceeds that of adults and even surpasses the average participation rate of learners in other Torino Process countries. Conversely, in countries like Algeria, Moldova, Serbia, and Türkiye, this gap is narrower. While Serbia shows a lesser discrepancy in access to learning between youth and for adults than most other countries, its overall system performance in support of access trails their average. In Ukraine, on the other hand, engagement in learning is more uniform for both groups.

These findings suggest that, despite the shared obligations and commitments to lifelong learning among these countries, there is still a palpable need to better align offerings and possibly recalibrate strategies to genuinely bolster learning throughout life for adults.

Interestingly, countries in the Torino Process sample seem to be more adept at providing access and participation in education for adults at risk of disadvantage than for the wider adult population. Figure 5 highlights the system performance supporting access and participation for socio-economically disadvantaged youth and vulnerable adult groups, juxtaposed against support for all young and adult learners. Long-term unemployed and economically inactive adults tend to benefit from better conditions and more focused engagement efforts than the typical adult learner. Similarly, adults with minimal or no education appear to be given greater emphasis than the average adult population, underscoring a potential possible gap in the general emphasis on adult education compared to targeted strategies for these at-risk groups.

Different factors might be contributing to these patterns. Many ETF partner countries have rolled out interventions specifically for vulnerable segments, like the long-term unemployed or those lacking formal education. Moreover, with the international and local focus on empowering the underprivileged, it is plausible that these groups benefit from enhanced resources or dedicated programmes. However, despite these encouraging observations, access to adult education on the whole remains largely suboptimal in the vast majority of ETF partner countries.

⁶ Since some of these results rely on self-assessments by countries, Figure 4 also captures their self-perception of performance (noted in parentheses under the country codes, with a range from 0 to 100). A score on the lower end suggests a country is more self-critical, while a higher score indicates a tendency towards complacency. The mean value for this self-criticism index across all countries in the Torino Process in 2023 is 57.





Figure 5. Access and participation to learning by learner background and type of disadvantage – index of system performance, ETF partner countries (2023)

Source: ETF KIESE/Torino Process database

Note: Theoretical index range: min/low performance=0, max/high performance=100

Countries in this report seem to be much more effective in at catering to their youth populations, especially in supporting helping disadvantaged youth -- those with limited financial, social, cultural, and human capital resources -- to access initial VET programmes. This finding suggests that most countries are committed to ensuring that socio-economic factors do not unduly prevent young learners from accessing learning.

Access to learning: a learner's perspective

While policies and systems offer various opportunities for accessing learning, the effectiveness of these opportunities ultimately depends on the choices made by learners. Up until now, the discussion on policy and system performance has leaned heavily on specially constructed performance metrics. In contrast, the actual choices learners make, such as which educational pathways they follow, can be tracked using more fundamental, administrative indicators like enrolment and participation rates.

For cross-country comparability, the vast array of learning pathway choices available to learners in ETF partner countries has been grouped according to 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 across these educational segments. Using statistics on early leavers from education and data on system performance related to progression and graduation, the final section of this chapter evaluates how well policies and systems align with and support the choices of learners.

The results reveal that, despite ongoing efforts to promote diversity of choice, certain pathways continue to appear considerably more attractive than others. Often, this attractiveness comes at the expense of learning opportunities offered through VET. Moreover, certain educational segments and countries are better at supporting the pathway choices of learners. As a result, the probability of a



learner's success can vary substantially depending on their chosen educational route and socioeconomic background.

How many learners opt for secondary education?

Figure 6 shows the enrolment rates in secondary education in ETF partner countries. In most of them, enrolment is high, with some figures touching the 90% mark. This robust participation in secondary education signifies a notable commitment to academic advancement. However, there are also exceptions to this pattern of participation. Morocco and Jordan, for example, stand out as only 70% of young people enrol in secondary education, suggesting the need for a deeper exploration of regional and country-specific challenges and barriers to access.



Figure 6. Net enrolment rate in secondary education (general and VET), ETF partner countries and EU27 average (2021 or latest available year)

Notes: Year of reference for Ukraine: 2014. Year of reference for EU27: 2018. Year of reference for Egypt and Uzbekistan: 2019. Year of reference for Israel, Kyrgyzstan, and Turkey: 2020.

Gender dynamics also play a role in these enrolment patterns. In many countries, females tend to outpace their male peers in terms of enrolment rates. Noteworthy examples include Armenia and Georgia in the EaP region; Albania and Montenegro in the SEET region; and, notably, Palestine in the SEMED region. These statistics highlight the evolving landscape of educational participation, pointing to gender-specific initiatives or cultural influences that might be boosting female enrolment.

How many learners opt for tertiary education?

The Gross Enrolment Ratio (GER) represents the total number of enrolments, irrespective of age, relative to the population of the official age group for a given educational level --- in this case, tertiary education. The data in Figure 7 show that there are considerable disparities in gross enrolment in tertiary education across ETF partner countries.



Source: ETF KIESE (from UIS UNESCO data)



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

Source: ETF KIESE (from UIS UNESCO data)

Notes: Year of reference is 2023 for Kyrgyzstan, Uzbekistan, Georgia; 2022 for Turkmenistan, Armenia, Azerbaijan, Moldova, Albania, Bosnia and Herzegovina, Montenegro, Serbia, Algeria, Egypt, Jordan, Lebanon, Morocco, Palestine*, Tunisia; 2021 for Ukraine, North Macedonia, Türkiye, Israel; 2020 for Kazakhstan; 2017 for Tajikistan.

A sizeable number of students in countries like Georgia, Moldova, and Serbia are choosing tertiary education, with enrolment rates surpassing 60%. In numerous other countries, enrolment rates remain substantial, typically ranging between 40% and 60%, notably higher when compared to the OECD and EU averages of 44.5% (2020) and 43.6% (2019), respectively. At the lower end, with rates close to or below 40%, are Tajikistan, Turkmenistan, North Macedonia, Egypt and Jordan. In these latter countries, learners often gravitate towards more viable post-secondary, non-tertiary options.

Over the past decade, almost all partner countries have witnessed a stable or upward trend in tertiary enrolment. Some have seen particularly notable growth, as in Georgia, which jumped from a 35% GER in 2011 to 73% in 2021, or Türkiye, which rose from 56% in 2010 to an impressive 126% in 2021.⁷

A notable trend is that females are consistently more likely to enrol in higher education than males in most of ETF partner countries. However, the higher participation of females in tertiary education does not necessarily lead to improved employment prospects, as discussed 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)"' serves as a straightforward metric for gauging participation in vocational education. It is in line with Targets 4.3

⁷ The Gross Enrolment Ratio can exceed 100% due to the inclusion of students who are older or younger than the official age group for a specific education level. This is the case with higher education in Türkiye.



and 4.4 of the United Nations' Sustainable Development Goal 4 (SDG 4), which emphasise ensuring access to an affordable and high-quality technical and vocational education access for everyone.

By 2021, the majority of ETF partner countries saw youth participation in VET return to pre-COVID levels. Notably, several countries experienced significant increases — Armenia's participation rate climbed from 8.2% in 2019 to 10.4% in 2021, and VET enrolment in Moldova rose from 14.4% to 16%. Conversely, a few countries observed noticeable declines, with Morocco dropping from 7.8% to 5.8% and Azerbaijan from 15.1% to 13.8% (Figure 8).



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

Source: ETF KIESE (from UIS UNESCO data)

Despite the United Nations' long-standing endorsement of this indicator for monitoring progress towards SDG 4 and the commitment to promoting VET, there remains a significant lack of enrolment data across countries. The evidence gaps shown in Figure 8 illustrate the severity of this data deficiency, making it challenging to even obtain a general overview or high-level snapshot of VET participation. In this round of monitoring reporting, only 13 partner countries provided updated (2021) figures for this indicator.

Do adults participate in lifelong learning?

In ETF partner countries, the participation of adults (aged 25-64) in training or education has remained relatively consistent over the past decade. Over the last two years, slight gender disparities are evident in almost all regions, and in the majority of countries for which data is available, women tend to participate more than men. Five countries report an overall participation rate exceeding 5% (Armenia and Azerbaijan in 2021; Serbia and Türkiye in 2022). However, no partner country achieves the EU average participation rate of 11.9%.



Figure 9. Adult participation in lifelong learning (% of population aged 25-64), ETF partner countries (2022)



Source: ETF KIESE (from LFS surveys and Eurostat)

Note: Year of reference for Armenia, Azerbaijan, North Macedonia, and Ukraine: 2021

Monitoring adult participation in education and training often proves difficult, primarily due to the absence of recent and readily accessible data, which in turn can often be traced back to difficulties in conceptualising and delineating lifelong learning as a distinct segment of education and training due to the diversity of opportunities and responsibilities which may refer to it.

This challenge is particularly pronounced for countries in Central Asia and Southern and Eastern Mediterranean regions, especially when focusing on specific sub-populations such as the inactive, unemployed, low-skilled, or first-generation migrants.

The participation and graduation prospects of learners

Policies and systems in different countries offer a range of learning opportunities. While it is important to track first-time access to these opportunities, it is also crucial to measure whether learners succeed in their chosen pathways. Once learners have chosen a pathway, do they also manage to progress and graduate in it?

Torino Process indices such as the 'system performance index' in support of successful progression and graduation gauge completion rates within these pathways. Additionally, KIESE indicators like the rate of 'early leavers from education' can provide insights into the challenges learners might encounter, leading them to depart from their studies prematurely.

System performance in support of progression and graduation in VET

Two of the key metrics which the Torino Process tracks across various ETF partner countries are 'access' and 'progression and graduation'. 'Access' measures the initial opportunity and ease for young and adult learners to enter the education and training system, while 'progression and graduation' reflect the performance of countries in terms of ensuring that learners, once they have entered the system, progress smoothly and ultimately graduate/complete their learning. Figure 10 offers a comparison of these metrics for various countries.







Source: ETF KIESE/Torino Process database

Note: Theoretical index range: min/low performance=0, max/high performance=100. The international average is designated with an "X".

The countries are represented by their individual country codes (the international average is designated with an "X"). Similar to Figure 3, the data also captures the self-perception of countries about their performance (noted in parentheses under their codes). A lower score implies a country is more self-critical, while a higher score suggests a more contented perspective. The term 'access' in this context encompasses both initial and continuing VET, along with other adult learning opportunities, such as those offered within active labour market policy frameworks.

The figure shows that some partner countries excel in providing access to learning but may face challenges in supporting the progression and graduation of learners, while others display the opposite pattern: while fewer individuals may enter education and training, a higher proportion of those who do are likely to continue and finish their studies.

More specifically, in countries like Albania or Kazakhstan, which showcase a higher emphasis on progression as compared to access, initial access might be more of a challenge, but learners who do manage to enter the system are more likely to succeed. This pattern of system performance may call for strategies to broaden first-time access.

In other countries, like for instance Azerbaijan, there is a stronger focus on access than on successful progression. While the initial entry into the education system may be seamless, learners in such contexts may benefit from better support along their educational journey. Tunisia and Ukraine stand out -- they present a relatively balanced performance in both progression and access, but their performance is only average, indicating potential room for improvement in both areas.

A set of further findings based on these metrics, not shown in Figure 10, concern youth at risk and at a socio-economic disadvantage. In most ETF partner countries, disadvantaged young people are less likely to participate and graduate successfully than their peers, on average. Furthermore, they are also less likely to progress to other, higher levels of academic education.



Early leavers from education (% aged 18-24)

The 'early leavers' metric is essential in assessing whether young individuals with limited educational attainment are exploring opportunities to improve their skills. According to Eurostat, "early leavers from education and training" are defined as individuals aged 18-24 who have completed at most a lower secondary education and were not in further education or training during the four weeks preceding a labour force survey (LFS). This metric quantifies the proportion of these young people not currently engaged in any training.

Monitoring this group is essential because early leavers from education and training can encounter difficulties in securing a place in the labour market. The significance of education in employment decisions is increasing, making it a crucial determinant for potential employers. An early exit from education can have profound implications not only for the individual but also for society in the long term.

Among ETF partner countries, there is a wide variance in this metric. In 2022, while the EU27 average stood at 9.7%, several Western Balkan countries reported figures that were either below or in line with this average. Specifically, Bosnia and Herzegovina recorded 3.6%, Montenegro 5.2%, Serbia 10%, and North Macedonia 6.2%. Georgia also reported a low percentage of 6% in 2022, and Armenia remarkably had just 0.3% in 2021.

Conversely, some countries in 2022 showed notably high percentages of young people not in education or training: Moldova at 21.5%, Türkiye at 21.4%, Palestine* at 31.2%, and Tunisia at 32.4%. Notably, a decreasing trend is evident over recent years in Tunisia and Türkiye. In the same vein, males generally outnumber females as early leavers in both EU and ETF partner countries. However, data from 2022 suggests that North Macedonia and Montenegro saw a higher percentage of female early leavers than males.



4. QUALITY AND RELEVANCE

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

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

The second criterion is 'relevance', understood as the employability of learners and graduates. This pertains to the extrinsic value or the applicability of the education or training in real-world contexts. It considers how well the learning outcomes align with external needs, such as the demands of the job market, societal challenges, or further academic pursuits.

This chapter features a selection of performance indices which evaluate the quality of provision of basic skills and key competences to learners in IVET and CVET based on their age and background. The chapter also presents a selection of basic indicators pertaining to the employability of learners as a proxy of relevance of their learning.

It is essential to recognise that these two aspects, while interconnected, are not always mutually inclusive. One can attain employment without necessarily demonstrating a well-rounded skill set, just as one can possess key competencies yet face challenges in securing suitable employment.

Quality: skills and competences of youth and adults

Overall results by country and age of learners

Drawing on the Torino Process, the KIESE data provides insights into how well formal education, including IVET, equips young people with basic skills and key competences. Additionally, the data sheds light on the level of basic skills and key competences among working-age adults.

Figure 11 shows an overview of how effectively the education and training systems in ETF partner countries are supplying learners with essential skills and competences needed at different stages of the educational and professional journey.

The figure captures policy and system performance in delivering skills to the youth cohort within formal education, especially those within or having graduated from VET (country results: youth), and the competency levels of the broader working-age adult population (country results: adults). The figure also presents an average for both youth and adults (country results: average) as a point of reference in assessing the overall performance of each country in delivering quality education and training relative to different age cohorts. This average, placed alongside the international average (dotted horizontal line), offers a frame of reference to gauge individual country performance against the group of countries included in the 2023 Torino Process monitoring sample.

As with similar figures in this report, the data also captures the self-perception of country about their performance (noted in parentheses under their codes). A lower score suggests the country is more self-critical, while a higher score indicates a less self-critical viewpoint. The mean value for this self-criticism index across all countries in the Torino Process in 2023 is 57.







Source: ETF KIESE/Torino Process database

Theoretical index range: min/low performance=0, max/high performance=100

Overall, in most countries the skills and competences of the adult population typically exceed those of youth enrolled in or graduating from VET. In a substantial number of countries, for instance in Armenia, Egypt, Jordan, and others, the adult population appears to be better equipped with the skills and competences needed for participation in the society and economy than their younger counterparts in VET. While there are a few instances where youth proficiency aligns with or slightly exceeds that of adults, such cases are exceptions rather than the norm.

At first glance, this disparity may be an indication that the adult population in many countries covered in this report has had the advantage of more effective educational experiences or other means of skill acquisition in the past. This is a plausible explanation given that adults in ETF partner countries often gain relevant skills upon entry into working life at home or abroad, rather than at school. The results may also suggest that countries could benefit from a closer examination of whether VET curricula and teaching methodologies are adequate to deliver good enough quality to young learners.

However, it is also important to note that in about 40% of the countries with large margin of difference in the skills of youth and adults, the monitoring results are based on a self-assessment of performance by national stakeholders due to lack of internationally comparable data. Like in any self-assessment, this brings an inherent probability of bias. At the same time, all such results emerged from extensive consultations with national stakeholders and reflect their consensus. This lends these results a high degree of legitimacy and a broad buy-in from the respective countries.

On a more positive note, in several countries, such as Türkiye and Ukraine, VET supplies young people with skills of quality that aligns closely with the international average. In Moldova or Kosovo, young people demonstrate a higher level of skills compared to adults, suggesting that the current VET programmes may be more aligned with contemporary needs. This disparity might also be a consequence of brain-drain which deprives these countries of their most talented and capable individuals.



Results by specific groups of learners based on age and disadvantage

To account for the diversity of learner backgrounds and needs in countries, this section examines learner performance across specific groups of learners, in particular females, youth and adults at risk of disadvantage, and first-generation migrants.

To understand how well policies and systems address the unique challenges and needs of these groups, it is important to look beyond the average figures and broad aggregations by age. As previously mentioned, factors such as socio-economic status, educational levels, or migration history can influence the educational and labour market outcomes of individuals. This section offers a closer look at these differences.

Figure 12 visualises policy and system performance concerning quality of education and training across various, strategically important groups of young people and adult learners in ETF partner countries. The data suggests that, on average, VET systems tend to be more effective in equipping females, socio-economically disadvantaged youth, and, notably, first-generation migrants with foundational skills and key competences, compared to the general youth populace.

Figure 12. Quality of skills and competences by learners' age, gender, and type of disadvantage – index of system performance, ETF partner countries and international average (2023)



Source: ETF KIESE/Torino Process database

Theoretical index range: min/low performance=0, max/high performance=100

For adults, the performance patterns are more diverse. Adult females, while more likely to have foundational skills and competences than other strategic interest groups, still fare worse than the average adult in acquiring essential skills from current training programmes. Those already grappling with potential disadvantages, especially adults who are economically inactive, find themselves facing even steeper challenges. These disparities underscore the need for tailored strategies that cater to the unique needs of these specific learner groups not only in terms of access to opportunities for learning and re-learning, but also in terms of quality and relevance of learning outcomes.



Relevance: employability of graduates

After a discussion on quality, this section shifts the attention to the 'relevance' of education and training. By using labour market statistics from the KIESE database, such as employment rate of recent graduates, employment by broad ISCO-08 sector, employment rate by educational attainment, and LFS data on unemployment, the section assesses how well learning outcomes in ETF partner countries align with labour market needs. The purpose is to supplement the discussion of quality by shedding light on the employability of learners as a measure of the relevance of their learning.

Youth in the labour market

In the age bracket of 15-24, employment rates are notably low, often around or below 20%. This contrasts with the EU27 average, which stood at 34.7% in 2022 (Figure 13).





Source: ETF KIESE (from LFS, Eurostat, ILOSTAT)

Notes: ERT=Employment rate aged 15-24, ERG=Employment rate of recent graduates aged 20-34 (ISCED levels 3-8). Year of reference for Armenia, Israel, Jordan, Kazakhstan, North Macedonia, and Ukraine: 2021. Year of reference for Palestine: 2021/2022.

Surprisingly, while females generally have higher enrolment rates in education and training, employment rates among the youth lean in favour of males. Employment patterns among ETF partner countries suggest that a higher proportion of young males are employed than females. In 2022, the gender disparity in employment was especially pronounced in some Western Balkan countries and in the SEMED region. In many of these countries, the employment rate for females aged 15-24 was around or even below 10%.

A broad overview of the youth employment rate does not give a nuanced enough understanding of the transition young people make from education to the labour market. A more apt indicator might be the employment rate of recent graduates. However, data on this is scarce in ETF partner countries. The data gaps are obvious in Figure 12, which shows the employment rates of recent graduates (ISCED 3 - 8, age 20-34).

Worth noting is that the indicators in Figure 13 are not centred on the same age groups. Naturally, one would expect a higher employment rate in the older age bracket (20-34) since there are fewer individuals still in education, and since more individuals are actively seeking, or are engaged in, work. This makes a direct comparison between the two age groups somewhat skewed. Nevertheless, the data indicates that, although the gender gap persists among recent graduates in many countries, it



narrows or even disappears in some of them. Notable examples include Tunisia, Bosnia and Herzegovina, with Montenegro and Serbia showing slightly higher values for females.

Employment by ISCO-08 sectors

In 2022, which is the latest year for which there is data, labour markets in ETF partner countries were characterised by a larger proportion of 'elementary' occupations (as per the ISCO-08 classification, Group 9) compared to the EU27 average (Figure 14).



Figure 14. Employment by broad ISCO-08 sector⁸, ETF partner countries and EU27 (2022)

Source: ETF KIESE (from LFS data received through the Eurostat, ILOSTAT, and national statistical offices)

Notes: Broad categories may not sum to 100% due to the category 0. Armed forces occupation not included. Year of reference for Armenia, Egypt, Kazakhstan, Kosovo, and Ukraine: 2021.

EU countries have 8.5% of total employment in this category, on average. In the same reference year, Azerbaijan, Türkiye, Palestine, and Tunisia all have shares exceeding 15%. Conversely, the proportion of 'high' occupations (ISCO-08, Groups 1-3), which typically necessitate higher levels of formal education, were consistently below the EU27 average in these countries.

A useful approach to understanding and quantifying the extent of skills mismatch in the labour market is by comparing the educational level of the workforce with the educational qualifications demanded by their respective roles at work. This is known as a vertical mismatch. Research by ETF on skills mismatch has highlighted a considerable disparity between the educational levels of workers and the skills demanded by their jobs. This misalignment is especially pronounced among employees with a tertiary education.

Employment rate by educational attainment

The data shows that in 2022, in all ETF partner countries, individuals with a higher education (ISCED 5-8) had better access to employment (Figure 15). The employment rate for this group consistently surpassed that of their counterparts with medium (ISCED 3-4) and low (ISCED 0-2) educational attainment. Despite these higher rates, however, the employability of graduates in many of these countries still lagged behind the EU27 average. For instance, while the 2022 employment rate for

⁸ 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.



those with high educational attainment in the EU stood at 78.7%, countries like Jordan (2021 data), Palestine, and Tunisia reported figures around or below 50%.





Source: ETF KIESE (from LFS and Eurostat)

Notes: Year of reference for Armenia, Egypt, Israel, Jordan, Kazakhstan, North Macedonia, and Ukraine: 2021.

Conversely, for those with low and medium educational levels, outcomes varied across countries. Some countries, including Georgia, Bosnia and Herzegovina, Montenegro (2022 data), and Kazakhstan, Armenia, Ukraine (2021 data) showed employment rates lower than 20% for those with low educational attainment. However, in places like Palestine, individuals with medium education had even lower employment rates than those with minimal education.

Job seekers

In addition to Labour Force Survey datasets on the unemployed, the majority of ETF partner countries generate administrative records. These encompass registered jobseekers, vacancy monitoring, ALMP expenditure, and participation in active labour market schemes such as (re)training and other skill development initiatives.

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, such data is not consistent enough to allow for reliable international comparisons. This inconsistency arises from varying legal definitions regarding unemployment and the diverse conditions for registering with a Public Employment Service across countries.

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 for inclusion in the KIESE database.⁹ This data sheds light on the count and characteristics of registered jobseekers, participants in labour

⁹ See <u>https://www.etf.europa.eu/en/publications-and-resources/publications/skills-mismatch-measurement-etf-partner-countries</u>.



market services and labour market measures (LMM), and other indicators like vacancies, employment transition rates, and ALMP expenditure.

The evidence from KIESE shows that after the surge in registered unemployed/jobseekers during 2020-2021 due to the Covid-19 crisis, nearly all countries with available data have managed to reverse this trend. However, not all of them have reached their pre-pandemic levels.

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 Bosnia and Herzegovina, Georgia, Montenegro, Serbia, and Türkiye 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. Meanwhile, Ukraine is an outlier, with nearly half of its jobseekers holding a tertiary education.

In Albania, Kosovo, Moldova, North Macedonia, and Türkiye, the number of male and female jobseekers registered as unemployed is relatively balanced. Conversely, Bosnia and Herzegovina, Georgia, Montenegro, Serbia, and Ukraine report higher unemployment rates among women compared to men.

Data on career counselling services reveals an increased participation by jobseekers from countries such as Albania, Bosnia and Herzegovina, Georgia, Serbia, and Türkiye. This trend suggests that there is a broader move towards offering jobseekers more comprehensive job mediation and career orientation services. In Albania, Georgia, Moldova, Türkiye, and Ukraine, programmes focused on training, retraining, and other skills development initiatives are the main activation methods. Such programmes also have a notable prevalence in Montenegro and Serbia. On the other hand, Bosnia and Herzegovina and Kosovo predominantly engage jobseekers through employment incentives, start-up support, and direct job creation schemes.



5. SYSTEM ORGANISATION

In line with the direction of this edition of the ETF monitoring report, the final chapter examines system organisation within education and training. While previous sections assessed the policies and systems addressing access and quality, this chapter focuses on the fundamental resources and conditions necessary for learning. System organisation encompasses the vital components essential to any learning environment, irrespective of its setting, the learners' age, or the nature of the instruction.

This chapter highlights a selection of KIESE and Torino Process data, which illustrate the level of human and financial resources that ETF partner countries invest in creating and sustaining opportunities for learning. The chapter also discusses the extent to which these resources are supportive of a well-functioning education and training system by evaluating the sufficiency and effectiveness of these resources.

The chapter also draws on Torino Process monitoring evidence to examine VET system steering, including data availability for decision-making, governance participation in VET, transparency of quality assurance mechanisms, leadership staff capacity, and the level of international involvement in IVET and CVET. These factors influence the overall effectiveness and efficiency of the education and training system.

By exploring system organisation, this chapter aims to highlight the foundational elements that constitute a robust education and training system. The chapter will further assess the system's steering mechanisms to determine their impact on maintaining and enhancing the quality and continuity of learning.

Human and financial resources in VET and lifelong learning

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

A widely recognised approach to gauging financial commitment to education in countries is to look at the share of national wealth that they spend on the sector. The corresponding indicator, expenditure on education as a percentage of GDP, measures the share of economic output that countries invest in educational services. This includes expenses such as salaries, teaching materials, and infrastructure.

Though aggregate in nature, this metric offers valuable insights into how countries prioritise education relative to the size of their economies. This in turn is indicative of their commitment to developing human capital and fostering long-term economic growth.

The share of GDP which ETF partner countries spend on education varies considerably from country to country and between geographic regions (Figure 16). Within the SEMED and EaP regions, a significant number of countries allocate funds below the EU average, which in 2020 stood at roughly 5.1% of GDP. Israel, Moldova, and Ukraine are outliers, however, with considerably higher levels of relative expenditure, which in the same year stood respectively at 7.1%, 6.4%, and 5.4% of GDP.

In the SEMED region on the other hand, there is greater variability. Morocco and Algeria allocate close to 7% of their GDP to education, while Egypt and Lebanon designate just around 2%. Meanwhile, countries in Central Asia generally earmark a more generous portion of their economic output for education, with figures ranging from 4.4% to 6.2%. Turkmenistan stands apart in this region, investing a mere 3.1% of its GDP into education.





Figure 16. Expenditure on education as % of GDP, ETF partner countries and EU27 average (2021)

Source: ETF KIESE (from World Bank Development Indicators Database)

Notes: Serbia, Palestine, and Turkmenistan values refer to 2020

Regardless of the specific GDP percentage devoted to education, there is no doubt that ETF partner countries acknowledge the importance of positioning of education as a key driver for long-term growth and human capital development. They also recognise the responsibility to allocate resources accordingly. Beyond the mere allocation of funds, however, the broader challenge is to maintain the financial commitments and ensure that such investments are used in the best possible way. The next section discusses this aspect in more detail.

How well are financial resources used?

While the allocation of financial resources to education and training is undeniably crucial, the manner in which these funds are used is often equally or even more important. Efficiently channelled resources can optimise outcomes, irrespective of the actual amount allocated. Hence, an examination of financial resources in education and training should not only focus on the quantity of investment, but also the effectiveness with which these resources impact the ecosystem of education and training in countries.

Directly measuring the effectiveness and efficiency of spending on education and training is challenging due to the complex nature of educational outcomes and the numerous variables that may influence the efficacy of investments in the sector. As a result, it is common to use proxy indicators, which are indirect measures that can suggest the level of effectiveness or efficiency but may not capture it directly.

A set of such indicators are included in the KIESE database and used in the Torino Process to gauge system performance across ETF partner countries in providing adequate material base for teaching and learning. The results help assess both the sufficiency of learning resources and the efficiency of resource distribution. The goal is to determine the effectiveness of spending on education by looking at whether the learning environments in which resources are being invested are conducive to good student outcomes.

The indicators used in the calculation of the corresponding system performance index (SPI) for countries are derived from responses given by school principals in general education schools and – in



many countries -- also vocational schools that participate in the OECD Programme for International Student Assessment (PISA). The indicators cover the availability and quality of educational material, and the presence and standard of physical infrastructure¹⁰. In cases where one or more of these indicators are missing, the SPI was calculated on the basis of self-assessment by countries. The results are captured in Figure 17.





Source: ETF KIESE/Torino Process database

Theoretical index range: min/low performance=0, max/high performance=100. The international average is designated with an 'X'.

The figure illustrates the interplay between two metrics for a broad selection of ETF partner countries: the performance of countries in providing adequate levels of funding for school education (including VET) and various forms of adult education, and the extent to which the material base for teaching and learning is adequate. As with similar figures in this report, the data also captures the self-perception of countries about their performance (noted in parentheses under their codes)¹¹. The international average is labelled with an 'X'.

For many countries, there appears to be a noticeable divergence between the financial resources invested and the perceived adequacy of the material base in education and training. For instance, some countries seem to attach high priority to school and adult education in their funding decisions, but their commitment fails to translate into better and more widely available learning materials and

¹¹ A lower score suggests the country is more self-critical, while a higher score indicates a less self-critical viewpoint. The mean value for this self-criticism index across all countries in the Torino Process in 2023 is 57.



¹⁰ 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

infrastructure. Other countries deliver a commendable material base even with relatively modest financial inputs.

For example, North Macedonia, Montenegro, Lebanon, and Kosovo all appear to allocate aboveaverage levels of financial resources towards education. However, their performance scores concerning the adequacy of the material base are disproportionately low, in fact among the lowest in the Torino Process country sample. To a somewhat lesser extent, such disparities are evident in more than half of the countries shown in Figure 17. The discrepancy accentuates the premise that the mere allocation of financial resources does not guarantee optimal conditions for teaching and learning.

Conversely, countries like Azerbaijan, Kyrgyzstan, or Türkiye, with seemingly average or below average financial resources, still manage to maintain a relatively stable and, in some cases, even very good material base. Countries with this pattern of spending and results are in the minority, however.

These results have certain limitations. One of them is that, while the funding performance index encompasses both school and adult education, the index for the adequacy of the material base primarily targets school education, including VET. This means that observed discrepancies might stem from resource allocation preferences towards adult education. However, given the substantial size of the school education sector in terms of cost, the impact of adult education spending on these discrepancies is likely minimal.

The other limitation is that some of these results are based on self-assessments by countries. Despite this, it remains evident that the effectiveness of financial spending is not solely determined by the size of the investment. Instead, it is largely about how these funds are employed within the educational ecosystem. In essence, while the allocation of financial resources to education is paramount and while many ETF partner countries seem to view this as a priority, the judicious deployment of these funds can be an even more important factor.

Human resources: allocation, use, professional capacity

Discussions concerning resources in education and training would be incomplete if limited only to financial investments. Human resources and their value, encompassing teachers, trainers, and staff in leadership positions, are an equally important aspect. They play a key role in making education and training possible, but they also represent the biggest expenditure item in the education budgets of most countries.

Utilising KIESE and Torino Process data, this section provides an overview of how ETF partner countries invest in and manage their human resources in general education and VET: the extent to which such resources are available and their professional capacity, especially of staff in leadership and key administrative roles at the provider level.

Here too, direct and internationally comparable measures of effectiveness are not available. Therefore, this report relies on another set of carefully selected proxy indicators to calculate a system performance index for this area of policy and practice. Before presenting the results, it is worthwhile to zoom in on one of the proxy indicators used in the calculation of the index – student-teacher ratio (STR) – as a well-established, convenient, and quantifiable metric that facilitates effortless comparisons across diverse educational settings.

These student-teacher ratios provide insights into the potential workloads of teachers and can also indicate the effectiveness of how the teaching workforce is managed and deployed within countries. For example, consistent disparities in this ratio across various regions or between institutions might hint at systemic challenges in the allocation and placement of teachers and trainers.

From a cross-country perspective, the STR provides a quick and simplified lens to monitor for indications of discrepancies in the effectiveness of teacher workforce management in countries. Certainly, there is also a downside to its simplicity and widespread availability. Although these features make it a convenient metric, STR provides only a generalised 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 teaching workforce.

With these limitations in mind, Figure 18 shows an overview of student-teacher ratios in upper secondary general and – where data is available – also vocational education across ETF partner countries, as well as the average ratio for the EU27.





Source: ETF KIESE (from World Bank Development Indicators Database)

Notes: Reference year for Jordan: 2019. The data for Kazakhstan, Kyrgyzstan, and Uzbekistan coves lower and upper secondary education. The data for Tunisia covers only lower secondary education.

The data shown in the figure is important not because of cross-country comparisons and rankings, but because it is suggestive of underlying systemic dynamics in the domain of human resource management which may require further exploration and – quite possibly – calibration of teacher policies in support of improvement.

The average distribution of students per teacher in a majority of countries with candidate and potential EU-candidate status, including Moldova, Serbia, and Turkey, tends to gravitate around the EU average of 12:1. This similarity might suggest comparable educational infrastructures or shared approaches in this domain of education policy. Bosnia and Herzegovina emerges as an outlier, however, with notably high ratios especially in VET, which potentially signals challenges such as infrastructural limitations, provider network disbalances, or teacher shortages.

Armenia has a notably low student-teacher ratio, which may be suggestive of large variations in class size and workload for teachers across institutions, regions, and urban and rural settings. Other countries with lower student-teacher ratios include Georgia, Jordan, Kazakhstan and Ukraine in general education. On the other hand, the contrast between VET and general education ratios in nations like Morocco underscores distinct challenges or priorities in deploying teaching resources between segments of education.

Going back to the broader discussion of system performance in support of adequate allocation and use of human resources, 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



repositories¹². In line with the monitoring methodology, in countries for which one or more of these indicators were missing, the calculations were supplemented by self-assessment responses by stakeholders and national authorities to a total of five questions.

The system performance indices (SPIs) cover excellence in teaching and the professional growth of educators, the integration of innovative practices to boost the quality and relevance of their work in support of learning and training, the competence and professional capacity of staff in leadership positions, and the overall efficiency in managing human resources allocated to the system, particularly the availability and proper deployment of teachers and trainers.





Source: ETF KIESE/Torino Process database

Theoretical index range: min/low performance=0, max/high performance=100

Figure 19 displays the average SPIs of all ETF partner countries participating in the Torino Process monitoring in 2023 for which evidence about system performance in these monitoring domains exists¹³. The visual representation illustrates how well countries perform in each of the domains and also facilitates a comparative evaluation across domains. Through such a comparison, it becomes evident in which domains the policies and systems of countries appear to deliver better results and which ones may require further attention, based on the average outcomes presented.

The 2023 monitoring delivered a mixed message in these areas. In the domain of school leadership, for example, the data suggests the presence of noticeable gaps in leadership capacity across

¹³ The averages in the figure are based on the SPI results of Albania, Algeria, Armenia, Azerbaijan, Bosnia and Herzegovina, Egypt, Georgia, Jordan, Kazakhstan, Kosovo, Kyrgyzstan, Lebanon, Moldova, Montenegro, Morocco, North Macedonia, Palestine, Serbia, Tunisia, Turkey, and Ukraine.



¹² 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 can be found here: https://drive.google.com/drive/folders/1_sY8tU96Yy_sc-dEOcVMXN0L2E_LF5tk?usp=sharing
countries, with most systems delivering sub-average performance results. In fact, this is the area of weakest performance in the selection of policy and system deliverables related to human resources.

High-quality teachers and teaching are just as important as good school leadership. Closer to the 'frontline' of education delivery, many countries in the sample chose to emphasise the pursuit of highest quality practices (excellence) in pedagogy and professional development. Yet here too, there is room for improvement. The monitoring results suggest that performance in this domain is moderate at best as countries often struggle to promote excellence across the weaker segments of their education and training systems.

ETF partner countries seem considerably more open to innovative practices in support of better and more relevant teaching and training. Yet, in many contexts the system-wide uptake of innovative solutions remains a challenge. Factors like resistance and inertia among the teaching workforce, structural limitations (e.g., limited autonomy or lack of incentives), and a lack of capacity often act as impediments to the full realisation of the innovative potential of education practitioners and providers.

Lastly, countries are only moderately efficient in managing their human resources in VET. In many, policies and practices to recruit and retain qualified teachers and trainers and ensure their effective allocation and utilisation across various institutions and courses, may need attention. This is also true for the scheduling and management of their workload and career progression so that they have better conditions and support to meet VET-specific objectives and equip students with skills.

Performance in system steering and management

The final section of this report examines KIESE and Torino Process data covering a selection of areas related to the steering and management of education and training on school level and – in the case of participatory governance – also of adult education in ETF partner countries. The focus is on availability of data and capacity for informed decision-making, the extent of external stakeholder involvement in steering and management, the transparency and reliability of quality assurance mechanisms, the degree of internationalisation of education and training providers on secondary level, and the presence of exemplary solutions in the domain of governance and provider management.

As with previous areas discussed, the data is compiled in the form of a system performance index, drawing on a total of 21 proxy indicators from the KIESE database, which stem from public international data repositories¹⁴. Country questionnaire responses were used in cases where data was missing. The results are shown in Figure 20.

Figure 20 reveals interesting patterns of performance across these domains and between regions. Probably the most striking, yet perhaps least surprising, observation, is that data availability – and from that capacity for informed decision-making – is by far the weakest area of performance for all countries. This is particularly concerning, because data scarcity has been a long-standing and persistent issue, and because decisions in education and training are usually wide-reaching, important, and costly.

Another interesting observation is the interplay between strengths and weaknesses in the depicted domains and between ETF partner regions. The countries of the SEMED region, possibly due to their tradition of consultation and dependence on multi-stakeholder consultation bodies in various key areas of education and employment, show strong results in the area of participatory governance. Yet, the systems of these countries tend to be somewhat less accountable, in part due to gaps in quality assurance (i.e., fragmentation), and in part due to deficits in capacity to collect and/or use evidence. Education and training systems in SEMED, in particular VET, also tends to have the least international exposure of all ETF partner regions.

¹⁴ The full list of proxy indicators used in the calculation of Torino Process system performance indices can be found here: <u>https://drive.google.com/drive/folders/1_sY8tU96Yy_sc-dEOcVMXN0L2E_LF5tk?usp=sharing</u>



Figure 20. System steering and management – index of system performance, average for ETF partner regions (2023)



→CA →EaP →SEET →SEMED

Source: ETF KIESE/Torino Process database

Theoretical index range: min/low performance=0, max/high performance=100

Countries in the SEET region, on the other hand, are among the most open to international cooperation. They are also the second strongest in terms of data availability and use. Their quality assurance systems, on average, appear more robust than in other regions, likely due to the need to meet various data collection and reporting obligations in the context of EU cooperation and integration. However, these countries lag in stakeholder involvement and participatory governance. Additionally, they are less adept at identifying and promoting excellence in this domain.

The overall performance of countries in the Eastern Partnership region is mid-range across the domains shown in Figure 20. On average, countries in that region seem to struggle more than countries in other regions with their quality assurance systems and with public accountability. A recurring theme in many of the country monitoring reports and questionnaires prepared through the Torino Process highlights that, while quality assurance is based on comprehensive and demanding requirements, these requirements are often of an administrative nature and geared towards compliance instead of improvement¹⁵. Furthermore, EaP countries, similar to those in Central Asia, frequently face challenges with data availability¹⁶.

In summary, despite regional discrepancies in performance, data availability consistently emerges as a challenge for all countries. While every region and country shows specific strengths in certain domains of system steering and management, they also have their distinct weaknesses. To address

¹⁶ In 2023, the data for Central Asia is limited to Kazakhstan and Kyrgyzstan only.



¹⁵ The 2023 Torino Process monitoring reports can be found here. Note that the list is updated continuously as countries complete their validations: <u>https://www.etf.europa.eu/en/what-we-do/torino-process-policy-analysis-and-progress-monitoring</u>. All country questionnaires can be found here: <u>https://drive.google.com/drive/folders/1_sY8tU96Yy_sc-dEOcVMXN0L2E_LF5tk?usp=sharing</u>

these disparities, it is imperative to design interventions that draw from international experiences but are also tailored to the unique challenges and strengths of each region and country.



STATISTICAL ANNEX

- Table A.1: Youth (ages 0-24 as % of population) NEET rate among 15-24 years old Table A.2: Table A.3: Share of population aged 15+ with low educational attainment (by sex) Migrant population share as % of total population Table A.4: Table A.5: Access to learning: IVET, CVET and other LLL opportunities Table A.6: Access and participation to learning by learner background and type of disadvantage - index of system performance, ETF partner countries (2023) Table A.7: Enrolment in secondary education (NERS) Table A.8: Tertiary gross enrolment ratio (GERT) Table A.9: Participation rate in VET, age group 15-24 (by sex) Table 10: Participation in training/lifelong learning (% aged 25-64) Access and participation in opportunities for LLL - index of system performance, ETF Table A.11: partner countries and international average (2023) Table A.12: Early leavers from education and training (aged 18-24) (%) Table A.13: Youth (VET) and adult skills and competences Table A.14: Quality of skills and competences by learners' age, gender, and type of disadvantage - index of system performance, ETF partner countries and international average (2023)Table A.15.1: Employment rate (15+) Table A.15.2: Employment rate youth (15-24) Table A.15.3: Employment recent graduates aged 20-34 (ISCED 3-8) Table A.16.1: Employment by broad ISCO-08 occupations (%, aged 15+) Table A.16.2: Employment by broad ISCO-08 occupations (% aged 15+, by sex) Table A.17: Unemployment (age 15+) Table A.18: Unemployment (age 15-24) Table A.19: Employment by educational attainment (employed, age 15+) Expenditure on education as % of GDP, ETF partner countries and EU average Table A.20: Table A.21: Allocation and use of financial resources in education and training - index of system performance, ETF partner countries and international average Table A.22: Student-teacher ratio in upper secondary education, ETF partner countries and EU average (2018) Policies in support of teachers and school leaders - index of system performance, Table A.23: average for ETF partner countries (2023) Table A.24: System steering and management - index of system performance, average for ETF partner regions (2023) Table A.25: Public expenditure on education (% of GDP) Table A.26: Government expenditure on secondary education (% of GDP) Table A.27: Student teacher ratio secondary (PISA)
- Table A.28:Lack of educational Material (2018)



Region	Country	2000	2020	2050
	Kyrgyz Republic	55.4	50.6	41.7
	Kazakhstan	45.7	41.8	40.6
CA	Tajikistan	62.5	54.7	44.3
EaP	Turkmenistan	56.7	47.2	37.4
	Uzbekistan	56.8	45.6	37.7
	Armenia	43.6	32.2	24.7
	Azerbaijan ⁽¹⁾	49.2	37.6	26.3
EaP	Georgia ⁽²⁾	38.5	32.3	29.2
	Moldova ⁽³⁾	39.7	30.8	28.5
	Ukraine (4)	32.5	24.7	21.0
	Albania46.731.0Bosnia and Herzegovina37.026.3	31.0	21.5	
	Bosnia and Herzegovina	37.0	26.3	21.1
	Montenegro	38.2	30.9	25.2
SEET	North Macedonia	38.8	28.8	21.8
	Serbia ⁽⁵⁾	30.2	24.6	22.0
	Türkiye	50.7	39.4	27.8
SEET N S	Kosovo * ⁽⁶⁾	54.7	40.7	25.5
	Algeria	55.4 50.6 4 45.7 41.8 4 62.5 54.7 4 56.7 47.2 3 56.8 45.6 3 43.6 32.2 2 49.2 37.6 2 38.5 32.3 2 39.7 30.8 2 32.5 24.7 2 37.0 26.3 2 38.2 30.9 2 38.2 30.9 2 38.8 28.8 2 30.2 24.6 2 50.7 39.4 2 50.7 39.4 2 50.7 39.4 2 50.7 44.4 3 60.0 51.7 3 60.0 51.7 3 60.0 51.7 3 51.3 44.6 3 55.1 43.1 3 67.7 59.3 4 51.3 38.5 2 30.1 25.6 <td< td=""><td>33.8</td></td<>	33.8	
	Egypt	57.4	50.3	40.6
	Israel	45.5	43.3	37.6
	Jordan	60.0	51.7	37.4
SEMED	Lebanon	51.3	44.6	30.7
	Могоссо	55.1	43.1	32.5
	Palestine *	67.7	59.3	44.4
	Tunisia	51.3	38.5	29.4
EU	EU27	30.1	25.6	22.5

Table A1: Share of Youth (ages 0-24 as % of population)

Source: ETF calculations based on UN data. UN Population Data and 2050 Forecast (medium variant). https://.population.un.org/

Notes: (1) Including Nagorno-Karabakh. (2) Including Abkhazia and South Ossetia. (3) Including Transnistria. (4) Including Crimea. (5) For statistical purposes, the data for Serbia do not include Kosovo (United Nations administered region under security council resolution 1244). (6) Refers to Kosovo (United Nations administered region under security council resolution 1244). For statistical purposes, the data for Serbia do not include this area. (7) Including East Jerusalem.



Table A2: NEET	rate among	15-24	years	old
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Region	Country	2010	2015	2020	2021	2022
СА	Kyrgyz Republic ⁽¹⁾					
	Female	25.4	29.4	24.6	22.0	22.0
	Male	11.5	13.6	11.7	9.9	9.9
	Total	18.5	21.4	18.1	15.9	15.9
	Kazakhstan					
	Female	7.1	9.7			
	Male	4.4	6.0			
	Total	5.7	7.9	4.9	5.0	4.6
	Kazakhstan (1)					
	Female	9.8	10.3	11.2	10.7	10.5
	Male	6.6	6.7	7.6	6.6	6.5
	Total	8.2	8.4	9.4	8.6	8.4
	Tajikistan (1)					
	Female	53.0	50.6	49.8	50.1	50.2
	Male	30.5	28.0	27.3	27.1	27.2
	Total	41.8	39.3	38.4	38.4	38.4
	Turkmenistan (1)					
	Female	22.7	23.5	22.7	22.6	22.7
	Male	20.4	20.1	19.3	18.5	18.7
	Total	21.5	21.8	21.0	20.5	20.6
	Uzbekistan (1)					
	Female	29.6	28.4	23.7	23.8	21.3
	Male	17.7	17.8	19.6	19.7	22.2
	Total	23.5	23.0	21.6	21.7	21.8
EaP	Armenia					(1)
	Female	47.3	34.8	28.8	24.6	22.6
	Male	41.8	20.0	17.5	16.2	29.8
	Total	44.6	27.5	23.0	20.3	26.3
	Azerbaijan					
	Female	24.9	23.6	21.6	21.3	21.2
	Male	22.2	16.4	16.1	15.3	15.1
	Total	23.6	19.9	18.7	18.2	18.0
	Georgia	(1)				
	Female	40.6	32.8	28.3	26.8	23.7
	Male	27.1	21.0	28.7	26.8	23.1
	Total	33.8	26.6	28.5	26.8	23.4
	Moldova					
	Female	19.3	25.6	19.7	20.4	20.8
	Male	20.0	29.6	15.6	14.1	13.5
	Total	19.6	27.7	17.6	17.2	17.2
	Ukraine					
	Female	20.2	19.8	18.4	18.0	
	Male	15.2	14.6	12.7	10.8	
	Total	17.6	17.2	15.5	14.3	
SEET	Albania					
	Female	33.2	31.1	26.2	26.0	25.2



Region	Country	2010	2015	2020	2021	2022
	Male	25.4	28.2	27.1	22.2	21.4
	Total	29.3	29.6	26.6	24.1	23.3
	Bosnia and Herzegovina					
	Female	28.0	26.0	23.0	20.4	18.6
	Male	28.1	29.2	20.3	19.5	17.7
	Total	28.0	27.7	21.6	19.9	18.2
	Montenegro ⁽¹⁾					
	Female	18.1	18.3	20.6	15.9	18.2
	Male	18.4	19.9	21.5	24.2	21.6
	Total	18.3	19.1	21.1	20.2	20.0
	North Macedonia					
	Female	26.0	24.9	19.8	17.6	18.4
	Male	25.0	24.5	19.4	18.3	17.6
	Total	26.0	24.7	19.6	17.9	18.0
	Serbia					
	Female	19.0	19.8	14.8	15.9	12.6
	Male	21.7	20.3	17.0	16.9	13.4
	Total	20.4	20.1	15.9	16.4	13.0
	Türkiye					
	Female	44.4	33.8	35.7	32.4	32.3
	Male	19.6	14.3	21.2	17.4	16.4
	Total	32.3	24.0	28.3	24.7	24.2
	Kosovo*					
	Female		34.9	33.2	32.7	
	Male		28.3	34.0	30.8	
	Total		31.4	33.6	31.7	
SEMED	Algeria					
	Female	39.1	32.1	30.7	31.0	31.1
	Male	10.8	10.8	13.4	11.7	11.6
	Total	24.5	21.2	21.9	21.1	21.1
	Egypt					(1)
	Female	51.4	35.8	43.9	42.2	39.1
	Male	15.6	19.8	17.2	16.8	16.3
	Total	33.1	27.6	30.2	28.7	27.4
	Israel				(1)	(1)
	Female	28.0	16.7	17.1	16.1	15.6
	Male	32.7	14.3	17.4	16.1	15.4
	Total	30.4	15.5	17.3	16.1	15.5
	Jordan	(1)	(1)			(1)
	Female	45.5	47.5	41.1	38.3	43.5
	Male	24.2	25.9	30.6	28.3	29.7
	Total	34.6	36.2	35.4	32.9	36.5
	Lebanon	(1)	(1)	(1)	(1)	
	Female	26.3	27.9	30.4	28.4	32.1
	Male	12.5	15.6	21.1	17.4	26.1
	Total	19.2	21.6	25.6	22.7	29.1
	Morocco	(1)	(1)	(1)	(1)	(1)



Region	Country	2010	2015	2020	2021	2022
	Female	40.7	45.1	39.7	38.2	38.3
	Male	17.5	11.4	13.9	18.6	18.6
	Total	29.0	27.9	26.6	28.3	28.3
	Palestine*					
	Female	34.5	49.7	54.3	52.3	49.8
	Male	24.3	26.1	33.0	29.2	26.9
	Total	29.3	37.6	43.4	40.5	38.1
	Tunisia					(1)
	Female	31.2	32.8	31.4	40.0	33.9
	Male	19.4	25.3	29.0	41.7	28.0
	Total	25.2	29.1	30.2	41.2	30.9
EU	EU27					
	Female	12.9	12.3	11.2	10.8	9.7
	Male	12.4	12.1	11.0	10.7	9.5

Source: ETF KIESE. For modelled estimates ILOSTAT.

Notes: (1) Based on ILO modelled estimates. NEET: The indicator provides information on young people aged 15–24 who meet the following two conditions: first, they are not employed (i.e., unemployed or inactive according to the ILO definition); and second, they have not received any education or training in the four weeks preceding the survey. Data are expressed as a percentage of the total population of the same age group and gender, excluding the respondents who have not answered the question on participation in education and training.

Region	Country	2010	2015	2019	2020	2021	2022
	Kyrgyz Republic						
	Femal	e 18 ⁽¹⁾	15.5	14.8			
	Mal	e 18.6 ⁽¹⁾	15.9	15.1			
	Kazakhstan						
CA	Femal	e		4.1	2.2	2.1	
	Mal	e		3.8	2.0	2.0	
	Uzbekistan						
	Femal	e			4.1		
	Mal	e			5.1		
	Armenia						
	Femal	e		7.8	8.7	8.7	
	Mal	e		11.5	11.2	10.5	
	Azerbaijan						
	Femal	e	17.4	17.5	13.0	12.9	12.8
	Mal	e	12.5	12.0	12.1	12.2	12.4
	Georgia						
EaP	Femal	e	10.4	11.8	11.1	11.3	11.1
	Mal	e	11.0	12.1	11.4	11.3	10.9
	Moldova						
	Femal	e 32.4	31.0	29.0	29.2	29.5	29.8
	Mal	e 29.7	30.2	28.9	28.4	28.6	29.1
	Ukraine						
	Femal	e		11.5	11.2	10.7	
	Mal	e		8.6	8.8	8.4	

Table A.3: Share of population aged 15+ with low educational attainment (by sex)



Region	Country	2010	2015	2019	2020	2021	2022
	Albania						
	Female	60.4	54.5	51.8	52.2	52.0	50.6
	Male	55.0	48.1	44.6	43.8	44.7	43.5
	Bosnia and Herzegovina						
	Female	52.9	49.4	46.2	39.5	38.4	38.0
	Male	31.8	29.1	26.2	21.9	20.6	20.7
	Montenegro	(0)					
	Female	29.4 (2)	26.0	21.4	21.6	23.8	21.9
	Male	21.4 (2)	17.8	16.7	17.0	16.8	14.9
	North Macedonia	40.0	40.4	00.0	07.0	00.0	20.0
SEET	Female	49.0	42.4	38.6	37.2	38.0	32.8
	Male	35.1	32.1	27.1	26.5	25.7	21.8
	Serbia	20.0	20.1	27.5	26.9	26.6	25.7
	Mala	20.0	22.2	21.0	20.0	20.0	20.0
	Türkiye	20.0	23.2	21.0	21.2	21.3	20.0
	Female	77 1	73.6	68.2	66.3	64.6	63.1
	Male	66.7	64.0	59.5	57.9	56.3	54.6
	Kosovo ^(*)	00.1	0 110	00.0	01.0	00.0	0 110
	Female		57.7	55.5	54.7		
	Male		32.6	31.2	30.7		
	Algeria						
	Female			59 3 ⁽³⁾			
	Mala			62 7 ⁽³⁾			
				03.7 (*)			
	Egypt						
	Female		57.7		52.7	53.4	
	Male		50.2		45.7	45.9	
	Israel						
	Female	22.2	18.7	16.6	15.5	15.8	15.4
	Male	22.6	18.4	16.5	15.6	15.3	15.5
	Jordan						
SEMED	Female	58.7	59.4	56.4	56.1	55.5	55.1
	Male	61.3	62.4	61.5	60.8	60.7	60.1
	Lebanon						
	Female			52.7 ⁽⁴⁾			
	Male			52.9 ⁽⁴⁾			
	Palestine ^(*)				_		
	Female	64.1	58.6	53.3	52.1	51.4	50.4
	Male	63.9	62.3	59.6	58.5	58.7	58.3
	Tunisia	50.0	-2.0		0010		
	Econolo	69.7	66.4	62.7	62 F	50.0	50.2
	Female	63.2	62.9	62.2	62.7	59.0	58.0
	IVIAIe	03.2	02.0	02.3	02.7	56.0	56.0
EU	EU27		0.5 -	0= =	0.5	0 - (7)	07.5
	Female	33.1	29.7	27.7	27.1	27.1 (5)	27.0



Region	Country	2010	2015	2019	2020	2021	2022
	Male	35.5	30.8	27.8	27.0	26.7 ⁽⁵⁾	26.4

Source: KIESE data; data received from country LFS, except DZ, EG (ETF calculations based on ILOSTAT), JO (ETF calculations on DOS data/LFS online database), EU27 (Eurostat data; 2021: break in time series).

Notes: (1) Data for 2011; (2) Date for 2011; (3) Data for 2017 (only year with available data); (4) Data for 2018; (5) Break in series in 2021.

Region	Country	1990	1995	2000	2005	2010	2015	2020
	Kyrgyz Republic	0.46	0.28	0.19	0.13	0.10	0.07	0.05
	Kazakhstan	4.62	3.63	3.01	4.03	4.33	4.17	3.91
CA	Tajikistan	0.53	0.38	0.28	0.24	0.22	0.19	0.19
	Turkmenistan	1.20	1.03	0.74	0.75	0.62	0.59	0.55
	Uzbekistan	1.85	1.58	1.30	1.18	1.01	0.89	0.87
	Armenia	0.39	0.53	0.57	0.33	0.07	0.05	0.05
	Azerbaijan	0.54	0.51	0.46	0.39	0.34	0.32	0.28
EaP	Georgia	1.43	0.41	0.29	0.31	0.33	0.54	0.56
	Moldova	0.29	0.15	0.10	0.07	0.05	0.04	0.04
	Ukraine	9.09	7.87	5.29	4.87	3.35	3.36	4.07
	Bosnia and Herzegovina	0.06	0.10	0.13	0.07	0.06	0.06	0.04
	Montenegro					0.03	0.02	0.02
OFET	North Macedonia	0.10	0.11	0.12	0.13	0.14	0.15	0.17
SEET	Serbia	0.44	2.66	2.87	2.13	1.64	1.35	0.82
	Türkiye	3.40	2.34	1.23	1.25	1.23	7.20	10.27
EaP	Kosovo *							
	Albania	0.47	0.60	0.78	0.80	0.78	0.73	0.67
	Algeria	0.57	0.49	0.45	0.35	0.36	0.35	0.30
	Egypt	0.29	0.22	0.18	0.26	0.20	0.19	0.31
	Israel	1.43	1.58	1.73	1.92	1.46	1.19	1.00
SEMED	Jordan	2.00	2.40	2.74	2.95	3.58	3.66	3.74
	Lebanon	1.95	2.06	2.05	1.86	1.60	6.13	4.24
	Morocco	0.13	0.11	0.11	0.12	0.15	0.18	0.19
	Palestine *	2.85	2.58	2.13	1.76	1.68	2.38	1.66
	Tunisia	0.26	0.23	0.21	0.20	0.27	0.34	0.36

Table A.4: Migrant population share as % of total population

Source: ETF calculations based on United Nations Department of Economic and Social Affairs, Population Division (2020). International Migrant Stock 2020.



Region	Country	Country results: average	Country results: youth	Country results: adults	International average
CA	Kazakhstan	36	75	16	37
	Kyrgyz Republic	43	75	10	37
	Tajikistan	m	m	m	37
	Uzbekistan	18	m	18	37
EaP	Armenia	23	50	10	37
	Azerbaijan	65	90	52	37
	Georgia	37	90	10	37
	Moldova	38	50	33	37
	Ukraine	50	50	50	37
SEET	Albania	38	90	12	37
	Bosnia and Herzegovina	28	55	14	37
	Kosovo (*)	23	50	10	37
	Montenegro	47	68	37	37
	North Macedonia	27	50	16	37
	Türkiye	29	46	21	37
SEMED	Algeria	58	75	50	37
	Egypt	24	50	11	37
	Jordania	53	75	43	37
	Lebanon	28	50	18	37
	Morocco	37	90	10	37
	Palestine (*)	32	75	10	37
	Tunisia	53	75	43	37

Table A.5: Access to learning: IVET, CVET and other LLL opportunities

Source: ETF KIESE/Torino Process database

Table A.6: Access and participation to learning by learner background and type of disadvantage – index of system performance, ETF partner countries (2023)

	Disadvantaged youth	Long-term unemployed adults	Economically inactive adults	Adults with low or no education	Youth on average
Access and participation	66	52	43	37	67
Average learner: youth	67	67	67	67	67
Adults on average	19	19	19	19	19

Source: ETF Torino Process



Region	Country	2010	2015	2019	2020	2021	2022
СА	Kyrgyz Republic						
	Female		80.7	85.0	86.9	88.7	
	Male		80.3	85.5	87.2	88.8	
	Total		80.5	85.2	87.0	88.7	
	Kazakhstan						
	Total	93.6	98.2	99.8	97.0		
	Uzbekistan						
	Female	87.9	88.3	93.5			
	Male	88.7	89.1	94.4			
	Total	88.3	88.7	92.6			
EaP	Armenia						
	Female			86.8	87.6	88.6	
	Male			82.6	84.1	86.2	
	Total			84.6	85.7	87.3	
	Azerbaijan						
	Female			87.1	86.4	86.8	
	Male			88.0	87.4	87.8	
	Total			87.6	86.9	87.3	
	Georgia						
	Female		92.8	96.8	96.2	97.2	
	Male		90.0	94.9	94.0	95.0	
	Total		91.3	95.8	95.0	96.1	
	Moldova						
	Female		93.8	97.6	97.9	99.0	
	Male		92.7	98.7	98.8	99.5	
	Total		93.2	98.2	98.4	99.2	
	Ukraine						
	Female	84.7	86.1				

Table A.7: Enrolment Secondary Education (NERS)



Region	Country	2010	2015	2019	2020	2021	2022
	Male	84.3	85.3				
	Total	84.5	85.7				
SEET	Albania						
	Female		87.8	88.7	88.3	90.6	
	Male		87.0	83.1	82.5	84.1	
	Total		87.4	85.7	85.2	87.1	
	Montenegro						
	Female			90.2	90.4	91.1	
	Male			88.4	88.5	89.2	
	Total			89.3	89.4	90.1	
	Serbia						
	Female	94.2	94.6	92.2	90.6	90.9	
	Male	91.6	93.0	91.1	89.3	89.4	
	Total	92.9	93.8	91.6	89.9	90.2	
	Türkiye						
	Female	79.5	85.8	86.8	87.6		
	Male	82.9	87.5	88.2	88.6		
	Total	81.2	86.6	87.5	88.1		
SEMED	Egypt						
	Female		77.4	85.0			
	Male		76.2	84.2			
	Total		76.8	84.6			
	Israel						
	Female	100.0	100.0		100.0		
	Male	97.1	98.0		97.6		
	Total	98.5	99.0	98.6	98.8		
	Jordan						
	Female		69.3	64.6	67.4	71.7	
	Male		67.2	63.9	65.6	70.5	



Region	Country	2010	2015	2019	2020	2021	2022
	Total		68.2	65.4	66.5	71.1	
	Могоссо						
	Female	56.7		66.6	69.3	72.6	
	Male	59.6		65.8	67.7	70.3	
	Total	56.7		66.2	68.5	71.4	
	Palestine*						
	Female	85.4	87.5	92.2	92.8	93.7	
	Male	78.3	80.1	84.6	84.8	86.3	
	Total	81.8	83.7	88.3	88.7	89.9	

Source: UIS UNESCO (http://uis.unesco.org/en/country)

Note: KZ, UZ, RS, TR, IL, MA, PS, UA: data refers to 2012 instead of 2010; EG, JO: data refers to 2014 instead of 2015.

NERS (NET enrolment rates in secondary education (ISCED level 2-3) (%)): This indicator covers the enrolments in a in a given level of education of children/youth belonging to the official age group corresponding to the given level of education.

Table A.8: 1	Tertiary	gross	enrolment	ratio ((GERT))
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Region	Country	2010	2015	2019	2020	2021	2022
СА	Kyrgyz Republic						
	Female	47.8	53.0	47.4	51.7	59.4	
	Male	36.6	40.6	37.4	41.4	47.7	
	Total	42.2	46.7	42.3	46.5	53.5	
	Kazakhstan						
	Female	51.7	52.1	68.4	77.6		
	Male	40.7	40.8	55.4	64.1		
	Total	46.2	46.4	61.7	70.7		
	Tajikistan						
	Female	15.8	21.3				
	Male	29.9	31.6				
	Total	22.9	26.6				
	Turkmenistan						
	Female		6.2	12.8	14.6		
	Male		9.7	15.6	16.6		



Region	Country	2010	2015	2019	2020	2021	2022
	Total		8.0	14.2	15.6		
	Uzbekistan						
	Female	7.6	6.3	11.4	14.9	19.7	
	Male	11.1	10.0	13.7	16.9	22.7	
	Total	9.4	8.2	12.6	15.9	21.2	
EaP	Armenia						
	Female	58.0	50.5	59.4	60.7	66.3	
	Male	47.6	42.4	44.4	42.2	46.0	
	Total	53.0	46.5	51.5	50.8	55.4	
	Azerbaijan						
	Female	19.2	27.5	34.0	38.5	41.9	
	Male	19.4	23.6	29.3	32.4	35.0	
	Total	19.3	25.5	31.5	35.2	38.2	
	Georgia						
	Female	37.0	51.6	68.1	72.0	78.8	
	Male	28.4	41.6	60.2	62.0	67.0	
	Total	32.6	46.5	63.9	66.7	72.5	
	Moldova						
	Female		59.0	64.5	67.5	73.9	
	Male		45.3	48.3	48.9	52.4	
	Total		52.1	56.3	58.0	62.9	
	Ukraine						
	Female	89.5	88.8				
	Male	71.3	76.8				
	Total	80.2	82.7				
SEET	Albania						
	Female	51.6	73.5	73.3	71.4	71.2	
	Male	38.0	51.6	46.9	45.1	43.3	
	Total	44.5	62.0	59.8	57.8	56.7	



Region	Country	2010	2015	2019	2020	2021	2022
	Bosnia and Herzegovina						
	Female	48.3	57.7	48.5	46.2	48.2	
	Male	36.1	43.1	32.4	30.2	30.8	
	Total	42.0	50.2	40.2	37.9	39.2	
	Montenegro						
	Female	58.3	65.7	62.4	64.4	64.9	
	Male	46.5	52.9	46.6	47.4	47.1	
	Total	52.2	59.0	54.2	55.5	55.6	
	North Macedonia						
	Female	40.4	45.9	49.0	50.6		
	Male	34.7	36.7	35.6	35.9		
	Total	37.5	41.1	42.1	43.0		
	Serbia						
	Female	55.6	66.9	79.3	79.9	81.8	
	Male	42.8	50.2	57.0	57.0	57.3	
	Total	49.1	58.3	67.8	68.1	69.2	
	Türkiye						
	Female	50.5	88.8	111.4	115.4		
	Male	62.1	101.7	118.6	118.8		
	Total	56.4	95.3	115.0	117.1		
SEMED	Algeria						
	Female	35.4	45.0	66.1	66.4	67.4	
	Male	24.5	28.8	39.7	39.2	40.6	
	Total	29.9	36.8	52.6	52.5	53.7	
	Egypt						
	Female	30.0	34.3	39.8			
	Male	32.8	35.7	38.0			
	Total	31.4	35.0	38.9			
	Israel						



Region	Country	2010	2015	2019	2020	2021	2022
	Female	74.6	76.3	72.6	73.0		
	Male	57.6	55.2	48.7	49.8		
	Total	65.9	65.5	60.3	61.1		
	Jordan						
	Female	39.6	38.2	35.8	36.9		
	Male	34.8	35.1	30.4	30.3		
	Total	37.1	36.6	33.1	33.6		
	Могоссо						
	Female	13.8	27.8	39.1	41.7	45.8	
	Male	15.3	29.0	38.1	39.6	41.2	
	Total	14.6	28.4	38.5	40.6	43.4	
	Palestine*						
	Female	54.9	55.6	53.9	53.8	53.5	
	Male	41.1	35.3	32.9	32.7	32.2	
	Total	47.8	45.3	43.2	43.1	42.7	
	Tunisia						
	Female	43.2	44.1	41.7	43.0		
	Male	27.8	26.6	22.6	23.2		
	Total	35.4	35.2	31.8	32.8		

Source: UIS UNESCO (http://uis.unesco.org/en/country and/or downloaded from World Bank database)

Note: BA: data refers to 2011 instead of 2010; UA: data refers to 2012 instead of 2010; TM, UA, ME: data refers to 2014 instead of 2015; EG: data refers to 2018 instead of 2019.GERT (Gross enrolment ratio for tertiary education): Total enrolment in tertiary education regardless of age expressed as a percentage of the population in the 5-year age group immediately following upper secondary education.



Region	Country	2010	2015	2019	2020	2021	2022
CA	Kyrgyz Republic						
	Female		4.6	4.8	5.0	5.4	
	Male		5.4	6.9	7.3	7.9	
	Total		5.0	5.9	6.2	6.7	
	Kazakhstan						
	Female			16.8	16.2		
	Male			19.2	18.8		
	Total			18.0	17.5		
	Tajikistan						
	Female	0.0					
	Male	0.0					
	Total	0.0					
	Turkmenistan						
	Female			2.1	2.3	2.5	0.0
	Male			1.5	1.5	1.5	0.0
	Total			1.8	1.9	2.0	0.0
	Uzbekistan						
	Female	25.7	24.1	26.0	5.5	5.6	8.1
	Male	26.1	23.9	24.9	5.0	5.3	7.4
	Total	25.9	24.0	25.4	5.3	5.4	7.8
EaP	Armenia						
	Female	1.7		8.3	9.1	10.0	10.6
	Male	3.0		8.9	9.8	11.8	12.1
	Total	2.3		8.6	9.4	10.9	11.3
	Azerbaijan						
	Female			16.2	14.3	13.8	10.5
	Male			14.1	14.6	13.5	12.2
	Total			15.1	14.5	13.6	11.4

Table A.9 Participation in VET, age group 15-24 (by sex)



Region	Country	2010	2015	2019	2020	2021	2022
	Georgia						
	Female		2.4	3.7	3.2	3.4	3.3
	Male		2.5	3.6	2.9	3.0	3.2
	Total		2.5	3.6	3.0	3.2	3.2
	Moldova						
	Female			13.2	13.9	14.6	15.3
	Male			15.6	16.1	16.8	17.5
	Total			14.4	15.0	15.7	16.4
	Ukraine						
	Female	2.7	3.0	4.6	4.4	4.6	
	Male	4.7	4.9	7.1	6.9	7.0	
	Total	3.7	4.0	5.9	5.7	5.8	
SEET	Bosnia and Herzegovina						
	Female		21.1	21.3	21.5	21.7	22.9
	Male		24.3	23.9	23.9	24.2	25.5
	Total		22.8	22.6	22.7	23.0	24.2
	Montenegro						
	Female		19.6	21.3	21.7	21.8	20.9
	Male		24.0	25.3	25.2	25.3	23.7
	Total		21.9	23.3	23.5	23.6	22.3
	Serbia						
	Female	23.0	23.3	23.1	22.9	23.1	22.8
	Male	24.7	25.1	25.9	25.8	25.7	25.2
	Total	23.9	24.2	24.5	24.4	24.5	24.0
	Türkiye						
	Female	8.4	24.0	23.3	21.7	21.6	
	Male	11.3	26.4	25.6	24.0	24.0	
	Total	9.9	25.2	24.5	22.9	22.9	
SEMED	Albania						



Region	Country	2010	2015	2019	2020	2021	2022
	Female		2.1	2.0	2.3	2.4	2.4
	Male		7.3	8.9	8.9	9.0	9.3
	Total		4.7	5.5	5.6	5.7	4.6
	Algeria						
	Female						0.7
	Male						0.9
	Total						0.8
	Egypt						
	Female	8.1	8.7	9.3	9.6	9.6	
	Male	9.1	11.3	12.3	13.0	13.3	
	Total	8.6	10.0	10.8	11.3	11.5	
	Israel						
	Female	10.2	16.3	16.8	16.6	17.0	
	Male	11.7	14.3	13.9	14.0	14.1	
	Total	11.0	15.3	15.3	15.3	15.5	
	Jordan						
	Female	1.4	1.3	1.0	1.1	1.2	1.3
	Male	2.1	2.1	1.3	1.3	1.5	1.5
	Total	1.8	1.7	1.2	1.2	1.3	1.4
	Могоссо						
	Female			6.5	6.5	5.0	4.9
	Male			9.1	8.6	6.5	6.6
	Total			7.8	7.5	5.8	5.8
	Palestine (*)						
	Female			2.7	2.9	2.9	3.5
	Male			3.7	3.9	3.7	4.2
	Total			3.2	3.4	3.3	3.8

Source: UNESCO Institute for Statistics (<u>http://sdg4-data.uis.unesco.org</u>)

Note: KZ, KG (2021), UZ (2010, 2015, 2019, 2020, 2021): data from UIS Dynamic Template with data from the UIS Education Survey; TJ (2010), TM (2022): Magnitude nil; TM (2019, 2020): data points are estimates produced by the UNESCOS Institute for Statistics; UZ (2022): Source country representation; AZ, MD, UA, ME (2016), RS, TR, IL: national estimates; EG: data



refers to 2011 instead of 2010, data refers to 2016 instead of 2015; AL, JO: data refers to 2014 instead of 2015; DZ: data refers to 2023 instead of 2022.

YVET (Proportion of 15-24 year-olds enrolled in vocational education): This indicator covers the enrolments in a vocational education and training as percentage of the population aged 15-24. The indicator is based on administrative data (e.g. from ministries or agencies) or data from the joint UNESCO–OECD–Eurostat (UOE) data collection.

Region	Country	2010	2015	2020	2021	2022
EaP	Armenia					
	Female			7.0	8.7	
	Male			6.4	8.5	
	Total			6.8	8.6	
	Azerbaijan (3)					
	Female		5.3		6.6	
	Male		7.6		8.1	
	Total		6.5		7.4	
	Georgia					
	Female		0.6	1.2	1.3	1.8
	Male		0.7	0.9	1.1	1.3
	Total		0.6	1.1	1.2	1.6
	Moldova					
	Female		1.2	1.4	1.2	1.4
	Male		0.7	0.8	0.9	1.1
	Total		0.9	1.1	1.1	1.3
	Ukraine					
	Female		0.9	0.4	0.4	
	Male		0.7	0.5	0.5	
	Total		0.8	0.5	0.5	
SEET	Albania					
	Female	2.2	1.1	0.7	0.8	0.6
	Male	2.1	1.0	0.6	0.8	0.6
	Total	2.1	1.0	0.8	0.8	0.7
	Bosnia and Herzegovina					

 Table 10: Participation in training/lifelong learning (% aged 25-64)



Region	Country	2010	2015	2020	2021	2022
	Female	2.6	2.4	3.3	2.1	2.0
	Male	2.9	2.1	3.2	2.0	1.6
	Total	2.8	2.3	3.3	2.1	1.8
	Montenegro ⁽¹⁾					
	Female	2.3	2.5	2.8	5.4	3.4
	Male	2.6	3.4	2.6	5.0	3.0
	Total	2.4	3.0	2.7	5.2	3.2
	North Macedonia					
	Female	3.6	2.5	2.7	2.6	
	Male	3.4	2.7	2.5	2.3	
	Total	3.5	2.6	2.6	2.5	
	Serbia ⁽²⁾					
	Female	4.2	5.1	4.0	5.4	5.9
	Male	3.9	4.5	3.3	4.2	4.4
	Total	4.0	4.8	3.7	4.8	5.9
	Türkiye					
	Female	2.8	5.3	5.5	6.4	7.1
	Male	3.1	5.5	6.0	6.6	6.4
	Total	2.9	5.4	5.7	6.5	6.7
	Kosovo*					
	Female		3.8	5.5		
	Male		5.9	5.8		
	Total		4.9	5.6		
SEMED	Israel					
	Female	7.5	8.4	6.5	6.1	6.2
	Male	8.9	11.6	10.9	10.4	10.2
	Total	8.2	10.0	8.6	8.3	8.1
	Могоссо					
	Female		0.9			



Region	Country	2010	2015	2020	2021	2022
	Male		1.0			
	Total		1.0			
	Tunisia					
	Female	1.9	1.5	1.5	3.2	1.4
	Male	1.7	1.2	0.9	1.3	1.1
	Total	1.8	1.3	1.2	1.6	1.3
EU	EU27 ⁽²⁾					
	Female	8.4	10.9	10.0	11.6	12.9
	Male	7.3	9.2	8.3	10.0	10.8
	Total	7.8	10.1	9.1	10.8	11.9

Source: KIESE data; data received from country LFS, EU27 (Eurostat data; 2021: break in time series).

Notes: (1) Data for 2010 applies to 2011; (2) Break in series in 2021, (3) Data for 2015 applies to 2014.

Participants in lifelong learning (LLL) refers to persons aged 25–64 who stated that they received education or training in the four weeks preceding the survey (numerator). The denominator is the total population of the same age group, excluding those who did not answer the question on participation in education and training. The information collected relates to all education or training, whether or not it is relevant to the respondent's current or possible future job. If a different reference period is used, this should be indicated.



Region	Country	Country results: progression and graduation	Country results: access	International average: progression and graduation in VET	International average: access
CA	Kazakhstan	90	36	71	37
	Kyrgyz Republic	75	43	71	37
	Tajikistan	m	m	71	37
	Uzbekistan	m	18	71	37
EaP	Armenia	75	23	71	37
	Azerbaijan	25	65	71	37
	Georgia	87	37	71	37
	Moldova	85	38	71	37
	Ukraine	50	50	71	37
SEET	Albania	90	38	71	37
	Bosnia and Herzegovina	88	28	71	37
	Kosovo (*)	73	23	71	37
	Montenegro	62	47	71	37
	North Macedonia	64	27	71	37
	Türkiye	57	29	71	37
SEMED	Algeria	75	58	71	37
	Egypt	50	24	71	37
	Jordania	90	53	71	37
	Lebanon	70	28	71	37
	Morocco	85	37	71	37
	Palestine (*)	50	32	71	37
	Tunisia	50	53	71	37

 Table A.11: Access and participation in opportunities for LLL – index of system performance,

 ETF partner countries and international average (2023)

ETF KIESE/Torino Process database



Region	Country	2010	2015	2020	2021	2022
EaP	Armenia					
	Female			0.1	0.3	
	Male			0.1	0.3	
	Total			0.1	0.3	
	Georgia					
	Female		4.7	7.4	7.0	5.9
	Male		6.8	8.8	7.6	6.1
	Total		5.8	8.2	7.3	6.0
	Moldova					
	Female	16.9	16.7	13.1	16.1	18.7
	Male	27.0	25.6	20.6	23.1	24.5
	Total	22.1	21.3	16.9	19.6	21.5
SEET	Albania					
	Female	33.0	19.6	15.5	16.6	14.7
	Male	31.0	22.9	15.7	17.1	16.3
	Total	31.9	21.3	15.6	16.8	15.5
	Bosnia and Herzegovina					
	Female	8.1	5.6	4.6	4.4	3.3
	Male	7.7	4.8	4.8	4.9	3.9
	Total	7.9	5.2	4.7	4.7	3.6
	Montenegro (1)					
	Female	6.6	6.6	3.7	8.7	9.3
	Male	7.6	4.9	3.6	5.4	2.7
	Total	7.2	5.7	3.6	6.7	5.2
	North Macedonia					
	Female	17.5	12.9	5.8	4.6	6.9
	Male	13.7	10.0	5.7	4.7	5.5
	Total	15.5	11.4	5.7	4.6	6.2

Table A.12: Early leavers from education and training (aged 18-24) (%)



Region	Country	2010	2015	2020	2021	2022
	Serbia (2)					
	Female	7.3	7.2	5.8	5.2	4.1
	Male	9.2	7.7	5.4	7.4	5.9
	Total	8.3	7.5	5.6	6.3	5.0
	Türkiye					
	Female	47.9	37.9	25.8	22.2	20.5
	Male	37.8	35.4	27.5	23.8	22.2
	Total	43.1	36.6	26.6	23.0	21.4
	Kosovo*					
	Female		17.5	8.4		
	Male		11.8	7.3		
SEMED	Israel					
	Female	5.6	4.8	4.0	3.4	3.7
	Male	10.9	10.2	7.2	6.8	6.9
	Total	8.3	7.6	5.6	5.1	5.3
	Palestine*					
	Female	28.1	20.8	18.4	17.9	20.4
	Male	41.4	39.6	39.4	38.2	38.9
	Total	35.4	31.4	30.3	29.5	31.2
	Tunisia					
	Female	47.7	32.5	30.4	23.9	25.4
	Male	54.9	41.2	45.0	35.2	37.6
	Total	51.3	36.9	37.8	29.7	32.4
EU	EU27					
	Female	11.6	9.4	8.0	8.0	8.0
	Male	15.9	12.5	11.8	11.5	11.1
	Total	13.8	11.0	9.9	9.8	9.6

Source: KIESE data; data received from country LFS, EU27 (Eurostat data; 2021: break in time series).

Notes: (1) Data for 2010 applies to 2011; (2) Break in series in 2021.



Early leavers from education and training (ELE) are defined as the percentage of the population aged 18–24 with at most lower secondary education who were not in further education or training during the four weeks preceding the survey. Lower secondary education refers to ISCED 1997 levels 0–2 and 3C short (i.e. programmes lasting under two years) for data up to 2013 and to ISCED 2011 levels 0–2 for data from 2014 onwards.

Region	Country	Country results: average	Country results: adults	Country results: youth	International average
СА	Kazakhstan	61	70	52	58
	Kyrgyz Republic	m	90	m	58
	Tajikistan	m	m	m	58
	Uzbekistan	m	90	m	58
EaP	Armenia	50	90	10	58
	Azerbaijan	75	75	75	58
	Georgia	58	81	36	58
	Moldova	51	50	52	58
	Ukraine	74	90	59	58
SEET	Albania	60	71	49	58
	Bosnia and Herzegovina	45	51	40	58
	Kosovo (*)	12	10	15	58
	Montenegro	65	79	51	58
	North Macedonia	50	56	45	58
	Türkiye	59	60	58	58
SEMED	Algeria	82	89	75	58
	Egypt	34	58	10	58
	Jordania	62	90	34	58
	Lebanon	36	48	24	58
	Могоссо	45	70	20	58
	Palestine (*)	83	90	75	58
	Tunisia	58	90	25	58

Table A.13: Youth (VET) and adult skills and competences

ETF KIESE/Torino Process database



Table A.14: Quality of skills and competences by learners' age, gender, and type of disadvantage – index of system performance, ETF partner countries and international average (2023)

	Specific populations of learners	Average for the population of learners
Youth: females	55	45
Youth: disadvantaged	49	45
Youth: migrants	60	45
Adults: females	66	72
Adults: long-term unemployed	46	72
Adults: economically inactive	43	72
Adults: migrants	51	72

Source: ETF KIESE/Torino Process database

Table A.15.1 Employment rate (15+)

Region	Country	2010	2015	2020	2021	2022
СА	Kyrgyz Republic					
	Female	47.2	45.4	43.1	42.8	43.1
	Male	70.9	70.6	71.0	71.0	71.4
	Total	58.7	57.7	56.5	56.4	56.7
	Kazakhstan					
	Female	61.8	60.3	60.3	60.4	59.8
	Male	73.0	72.6	72.1	72.2	71.4
	Total	67.1	66.1	65.9	66.0	65.3
	Tajikistan					
	Female	26.4	29.9	28.5	28.3	
	Male	48.5	48.4	46.3	46.2	
	Total	37.4	39.1	37.4	37.2	
	Turkmenistan					
	Female	48.9	47.1	45.4	45.8	45.8
	Male	45.5	43.6	41.9	42.1	42.0
	Total	47.2	45.4	43.7	44.0	43.9
	Uzbekistan					



Region	Country	2010	2015	2020	2021	2022
	Female	40.7	39.3	36.4	37.0	37.2
	Male	69.6	69.1	69.4	69.3	69.3
	Total	55.0	54.0	52.7	52.9	53.0
EaP	Armenia					
	Female	41.1	43.8	38.4	38.0	
	Male	59.9	59.8	53.8	56.8	
	Total	49.6	50.9	45.4	46.4	
	Azerbaijan					
	Female	59.5	59.3	57.0	57.9	58.1
	Male	66.7	74.4	70.5	71.1	71.1
	Total	63.0	66.3	63.3	64.1	64.2
	Georgia					
	Female	46.0	50.7	33.9	33.3	35.4
	Male	59.7	65.2	49.5	48.6	51.7
	Total	52.3	57.4	41.1	40.4	42.9
	Moldova					
	Female	36.4	39.8	35.0	35.4	36.8
	Male	40.9	45.3	43.1	44.7	44.7
	Total	38.5	42.4	38.8	39.8	40.5
	Ukraine					
	Female	54.4	51.7	51.2	50.4	
	Male	63.1	62.2	61.8	61.5	
	Total	58.5	56.7	56.2	55.7	
SEET	Albania					
	Female	39.5	39.2	46.1	46.4	50.1
	Male	55.9	53.3	59.2	59.5	61.2
	Total	47.5	46.2	52.5	52.9	55.5
	Bosnia and Herzegovina					
	Female	23.7	23.3	29.9	28.7	28.9



Region	Country	2010	2015	2020	2021	2022
	Male	43.2	41.0	50.9	51.1	52.1
	Total	32.5	32.0	40.1	39.6	40.2
	Montenegro					
	Female	33.2	39.4	37.9	37.3	45.4
	Male	45.1	49.4	50.0	47.8	55.3
	Total	39.0	44.3	43.8	42.4	50.3
	North Macedonia					
	Female	29.1	32.6	37.0	36.6	
	Male	46.7	49.4	54.5	54.7	
	Total	37.9	40.9	45.7	45.6	
	Serbia					
	Female	31.1	35.4	42.1	41.3	43.2
	Male	45.5	50.3	56.6	56.5	57.9
	Total	38.0	42.6	49.1	48.6	50.3
	Türkiye					
	Female	24.0	27.5	26.3	28.0	30.4
	Male	62.7	65.0	59.8	62.8	65.0
	Total	43.0	46.0	42.8	45.2	47.5
	Kosovo*					
	Female		10.2	12.2	15.1	
	Male		34.7	37.6	44.2	
	Total		22.5	24.8	29.6	
SEMED	Algeria					
	Female	11.5	13.6	12.2	12.7	13.0
	Male	63.3	60.2	56.1	57.3	58.0
	Total	37.6	37.1	34.5	35.4	35.9
	Egypt					
	Female	18.0	17.0	11.8	12.9	
	Male	71.3	63.9	63.5	65.2	



Region	Country	2010	2015	2020	2021	2022
	Total	45.1	40.8	38.3	39.8	
	Israel					
	Female	49.3	55.9	55.8	55.7	57.9
	Male	58.0	65.7	62.6	61.8	64.0
	Total	53.5	60.7	59.1	58.7	60.9
	Jordan					
	Female	11.5	10.3	9.8	9.7	9.6
	Male	56.9	53.4	42.2	41.9	42.2
	Total	34.5	31.9	26.1	25.8	25.8
	Lebanon					
	Female	20.4	22.8	22.4	23.4	15.0
	Male	63.7	63.3	57.1	58.8	47.4
	Total	41.7	42.7	38.8	40.2	30.6
	Morocco					
	Female	23.4	22.2	16.7	18.2	18.8
	Male	68.0	64.8	62.9	62.9	62.8
	Total	45.1	42.8	39.4	40.5	40.8
	Palestine*					
	Female	10.8	11.6	9.7	9.8	11.2
	Male	51.6	55.5	50.5	53.5	55.3
	Total	31.4	33.9	30.3	31.9	33.4
	Tunisia					
	Female	20.1	20.3	20.6	21.8	21.8
	Male	61.9	60.3	60.4	56.2	56.7
	Total	40.8	39.9	40.0	38.2	38.9
EU	EU27					
	Female	44.6	45.3	46.8	47.4	48.5
	Male	58.0	57.3	58.8	59.0	60.0
	Total	51.1	51.1	52.6	53.0	54.1



Source: KIESE data; data received from country LFS, except: KZ, DZ (2020, 2021, 2022), TM, UZ, MA (2021, 2022), LB (2010, 2015, 2020, 2021): ILOSTAT estimated results, MK, TR (2010), EU27: Eurostat data.

Notes: ME: data refers to 2011 instead of 2010; BA: data refers to age group 15-89; PS: 2015 break in time series; TR: 2021 break in time series; EU27: 2021 break in time series.

ERT (Employment rate): The employment rate is calculated by dividing the number of employed people by the population of the same age group. Employed people are all people who worked at least one hour for pay or profit during the reference period or were temporarily absent from such work.

Region	Country	2010	2015	2020	2021	2022
СА	Kyrgyz Republic					
	Female	28.5	26.8	30.4	29.9	21.3
	Male	50.0	46.3	50.8	50.7	45.4
	Total	39.4	36.7	40.8	40.5	33.4
	Kazakhstan					
	Female	40.6	42.9	42.7	41.5	38.0
	Male	47.2	50.5	47.8	47.4	43.4
	Total	43.9	46.7	45.3	44.5	40.7
	Tajikistan					
	Female	16.8	18.9	18.3	18.4	18.3
	Male	22.7	24.3	23.8	23.8	23.7
	Total	19.7	21.6	21.1	21.1	21.1
	Turkmenistan					
	Female	36.7	22.9	20.5	20.4	28.5
	Male	21.9	29.4	26.7	26.5	17.3
	Total	29.2	26.2	23.6	23.5	22.8
	Uzbekistan					
	Female	23.6	23.1	19.8	20.8	20.9
	Male	45.5	41.8	41.8	40.4	40.3
	Total	34.8	32.7	31.0	30.8	30.8
EaP	Armenia					
	Female	15.0	22.4	18.8	17.1	
	Male	27.1	31.5	25.2	23.4	

Table A.15.2 Employment rate: youth (15-24)



Region	Country	2010	2015	2020	2021	2022
	Total	20.9	26.9	22.1	20.3	
	Azerbaijan					
	Female	28.2	31.8	34.5	35.6	36.8
	Male	30.2	43.9	41.1	40.8	40.0
	Total	29.2	37.5	37.9	38.4	38.5
	Georgia					
	Female	15.6	18.8	16.4	15.0	14.6
	Male	30.7	33.9	25.1	21.8	23.1
	Total	23.1	26.8	21.0	18.5	19.0
	Moldova		b			
	Female	16.6	16.3	13.5	12.3	12.7
	Male	19.3	22.4	19.0	20.3	19.0
	Total	18.0	19.5	16.3	16.4	15.8
	Ukraine					
	Female	29.3	24.8	22.8	22.4	
	Male	37.4	31.3	28.6	27.1	
	Total	33.5	28.2	25.8	24.8	
SEET	Albania					
	Female	18.6	13.4	21.1	22.3	25.0
	Male	28.1	23.8	31.4	30.6	33.1
	Total	23.4	18.9	26.3	26.4	29.0
	Bosnia and Herzegovina					
	Female	9.9	8.0	15.8	13.9	12.3
	Male	17.8	15.8	26.0	25.6	24.0
	Total	14.0	12.1	21.0	19.7	18.3
	Montenegro					
	Female	11.7	17.7	15.0	16.4	24.8
	Male	17.6	19.9	24.2	20.7	29.7
	Total	14.7	18.8	19.8	18.7	27.4



Region	Country	2010	2015	2020	2021	2022
	North Macedonia					
	Female	11.2	14.2	14.3	12.3	
	Male	19.5	20.2	25.1	23.0	
	Total	15.4	17.3	19.8	17.9	
	Serbia					
	Female	11.5	11.8	14.9	17.9	19.0
	Male	18.9	21.4	26.3	30.7	30.0
	Total	15.3	16.7	20.8	24.5	24.7
	Türkiye					
	Female	20.2	23.2	19.2	21.2	23.2
	Male	40.2	45.2	38.8	42.8	46.9
	Total	30.0	34.2	29.2	32.2	35.3
	Kosovo*					
	Female		3.7	6.4	8.9	
	Male		12.9	16.1	21.6	
	Total		8.5	11.4	15.5	
SEMED	Algeria					
	Female	5.6	4.8	4.0	4.4	4.6
	Male	37.8	30.1	26.3	27.6	28.3
	Total	22.1	17.7	15.4	16.3	16.7
	Egypt					
	Female	8.7	12.7	4.2	4.7	
	Male	42.4	30.7	32.6	33.4	
	Total	26.3	21.9	18.8	19.9	
	Israel					
	Female	29.3	43.3	39.7	40.8	42.9
	Male	24.7	45.4	38.2	39.0	40.5
	Total	27.0	44.4	38.9	39.9	41.6
	Jordan					



Region	Country	2010	2015	2020	2021	2022
	Female	5.6	3.9	3.0	2.7	3.2
	Male	31.0	29.1	19.8	18.4	19.2
	Total	19.1	17.2	12.1	11.2	11.8
	Lebanon					
	Female		20.0	18.4	19.3	20.0
	Male		37.6	31.9	33.3	34.0
	Total		28.9	25.4	26.6	17.9
	Могоссо					
	Female	15.9	13.8	10.0	9.5	9.9
	Male	43.5	34.2	28.1	30.4	30.5
	Total	29.8	24.2	19.2	20.1	20.3
	Palestine*					
	Female	4.2	4.5	2.6	3.4	4.0
	Male	26.8	33.4	27.2	29.7	34.1
	Total	15.7	19.3	15.2	16.8	20.2
	Tunisia					
	Female	13.6	11.4	15.9	10.6	10.6
	Male	30.2	26.0	29.6	20.2	20.8
	Total	22.0	18.7	22.9	15.5	15.8
EU	EU27					
	Female	29.4	28.2	29.0	30.3	32.3
	Male	34.1	32.4	33.7	34.9	37.0
	Total	31.7	30.3	31.4	32.7	34.7

Source: KIESE data; data received from country LFS, except: KZ, DZ (2020, 2021, 2022), TM, UZ, MA (2021, 2022), LB (2010, 2015, 2020, 2021): ILOSTAT estimated results, MK, TR(2010), EU27: Eurostat data.

Notes: ME: data refers to 2011 instead of 2010; PS: 2015 break in time series; TR: 2021 break in time series; RS: 2021 break in time series; EU27: 2021 break in time series.

ERT (Employment rate): The employment rate is calculated by dividing the number of employed people by the population of the same age group. Employed people are all people who worked at least one hour for pay or profit during the reference period or were temporarily absent from such work.



Region	Country	2010	2015	2020	2021	2022
EaP	Georgia					
	Female			48.3	48.2	44.7
	Male			50.7	50.1	52.4
	Total			49.4	49.1	48.2
SEET	Albania					
	Female	50.2	44.1	55.1	57.4	56.6
	Male	51.1	47.3	55.5	66.3	68.7
	Total	50.6	45.7	55.3	61.7	61.9
	Bosnia and Herzegovina					
	Female	35.1	35.0	44.5	52.7	53.3
	Male	43.3	36.7	56.5	53.2	58.0
	Total	39.3	35.9	50.5	52.9	55.6
	Montenegro					
	Female	56.9	64.6	51.1	50.2	57.9
	Male	57.9	57.7	56.7	52.2	57.0
	Total	57.4	61.3	54.1	51.2	57.5
	North Macedonia					
	Female	43.6	50.8	50.2		
	Male	51.6	45.1	59.1		
	Total	47.9	48.0	54.5		
	Serbia					
	Female	44.2	47.3	60.2	61.9	72.8
	Male	44.4	53.8	64.3	68.2	71.7
	Total	44.3	50.6	62.3	65.1	72.2
	Türkiye					
	Female	52.4	52.0	44.6	45.9	50.4
	Male	67.6	73.2	62.1	67.9	73.6
	Total	59.8	61.7	53.0	56.6	62.1

Table A.15.3: Employment recent Graduates aged 20-34 (ISCED 3-8)


Region	Country	2010	2015	2020	2021	2022
SEMED	Israel					
	Female		63.0	59.4	59.2	62.0
	Male		65.8	57.3	58.2	59.8
	Total		64.4	58.3	58.7	60.9
	Palestine*					
	Female			24.0	28.9	
	Male			51.3	56.5	
	Total			36.9	42.6	
	Tunisia					
	Female	28.5	25.8	27.4	29.9	29.3
	Male	33.4	38.2	40.8	39.2	36.7
	Total	30.8	30.4	32.4	33.5	32.2
EU	EU27					
	Female	75.0	73.7	77.2	78.1	81.3
	Male	78.7	77.3	79.9	81.0	83.5
	Total	76.8	75.5	78.5	79.6	82.4

Source: KIESE data; data received from country LFS, except EU27: Eurostat data.

Notes: ME: data refers to 2011 instead of 2010; TR: 2021 break in time series; RS: 2021 break in time series; EU27: 2021 break in time series.

ERG (Employment rate of recent graduates, age group 20-34, ISCED levels 3-8): The employment rate of recent graduates is estimated for persons aged 20–34 who fulfil the following conditions: first, being employed, according to the ILO definition; second, having attained ISCED levels 3-8 as the highest level of education; third, not having received any education or training in the four weeks preceding the survey; and fourth, having successfully completed their highest educational attainment one, two or three years before the survey.



Country	2010	2015	2019	2020	2021	2022
Kyrgyz Republic (i)(10)					(i)	
High	17.4	18.3	17.1	17.9	18.1	
Medium	72.8	73.0	68.1	68.7	61.2	
Low	9.8	8.8	14.8	13.5	12.3	
NA					8.4	
Kazakhstan (1)						
High	29.3	33.3	36.9	36.9	38.4	39.0
Medium	46.7	46.8	45.1	44.7	44.0	44.0
Low	23.6	19.0	17.0	17.2	16.5	17.0
Tajikistan (i)						
High	16.1	16.4	16.2			
Medium	34.4	35.9	39.4			
Low	49.5	47.6	44.4			
Turkmenistan (i)						
High	18.5	20.3	20.5			
Medium	34.0	35.9	37.4			
Low	47.5	43.8	42.0			
Uzbekistan (i) (9)						
High	16.8	17.4	16.5			
Medium	21.4	23.2	25.9			
Low	61.8	59.4	57.7			
Armenia (11)	(i)				(i)	
High	26.9	29.7	27.2	32.3	18.7	
Medium	63.9	63.3	60.7	56.9	75.4	
Low	5.9	7.1	12.1	10.8	6.0	
NA	3.3					
Azerbaijan (2)	(i)					
High	24.2	23.4	23.1	23.1	23.3	23.1

Table A.16.1: Employment by broad ISCO-08 occupations (%, aged 15+)



Country	2010	2015	2019	2020	2021	2022
Medium	63.9	60.8	61.3	61.3	61.5	61.3
Low	11.7	15.6	15.4	15.4	15.0	15.4
NA	0.2					
Georgia						
High	24.9	26.5	25.9	33.6	34.5	33.6
Medium	69.2	66.9	66.8	57.9	57.0	56.5
Low	5.1	6.2	6.7	7.7	7.7	9.1
NA	0.8	0.4	0.6	0.8	0.9	0.9
Moldova (3)						
High	29.7	27.2	31.2	31.1	31.4	31.5
Medium	42.9	59.0	54.9	54.8	55.1	54.7
Low	27.4	13.8	13.9	14.1	13.5	13.8
Ukraine (8)						
High	33.3	37.6	37.6	37.7	37.9	
Medium	42.7	44.0	44.4	44.4	44.6	
Low	24.0	18.4	18.0	17.9	17.5	
Albania (1)						
High	15.4	17.3	18.5	19.1	18.9	20.4
Medium	80.5	76.8	76.1	75.2	74.5	72.7
Low	3.5	5.2	5.4	5.7	6.6	6.3
Bosnia and Herzegovina (1)						
High	24.6	24.2	21.9	26.2	27.3	28.4
Medium	65.7	63.6	68.1	62.7	61.3	60.2
Low	9.7	12.2	10.0	11.1	11.4	11.5
Montenegro (4) (11)						
High	36.7	37.5	36.4	36.7	38.7	38.4
Medium	55.5	54.7	55.3	55.0	52.5	52.7
Low	7.2	7.3	8.0	7.8	8.1	8.4
North Macedonia (4)						(i)



Country	2010	2015	2019	2020	2021	2022
High	26.7	27.3	27.7	29.8	31.2	33.2
Medium	46.7	51.7	59.7	58.6	57.4	56.0
Low	25.7	20.1	11.9	10.7	10.4	10.0
NA						0.9
Serbia (4)						
High	31.3	28.9	28.0	28.0	30.0	30.5
Medium	59.8	61.5	62.4	63.0	60.4	60.3
Low	8.4	8.9	9.1	8.5	9.0	8.6
Türkiye (7)						
High	21.4	20.5	22.8	24.0	24.0	24.1
Medium	63.7	64.3	63.0	61.6	60.6	60.6
Low	14.9	15.2	14.2	14.4	15.5	15.3
Kosovo* (14)						
High		32.5	30.7	32.0	32.5	
Medium		44.4	48.2	47.9	49.9	
Low		23.1	21.1	20.1	17.7	
Algeria (i), (15)	(15)	(15)	(15)			
High	17.6	17.0	17.9			
Medium	66.4	67.0	55.0			
Low	13.0	14.8	21.2			
NA	3.0	1.1	6.0			
Egypt (10)						
High	26.7	33.9	29.6	26.8	22.8	
Medium	65.7	55.8	61.5	68.4	72.0	
Low	7.4	10.3	8.8	4.7	5.1	
NA			0.2	0.1	0.1	
Israel	(i)					
High	42.0	51.4	53.2	54.8	55.9	55.6
Medium	49.1	42.2	41.0	40.2	39.1	39.5



Country	2010	2015	2019	2020	2021	2022
Low	7.6	6.4	5.7	5.0	5.0	4.9
NA	1.3					
Jordan (12)						
High			33.4	35.2	35.9	35.9
Medium			59.8	58.7	57.2	56.7
Low			6.8	6.0	6.9	7.4
Lebanon (13)						
High			32.1			29.7
Medium			52.4			56.5
Low			15.2			13.4
Могоссо						
High	6.9				8.1	
Medium	77.5				55.6	
Low	15.6				35.6	
Palestine* (5)						
High	27.8	21.9	24.1	25.7	23.8	22.8
Medium	54.3	61.0	58.5	56.3	57.3	57.0
Low	17.9	17.1	17.4	18.0	18.9	20.2
Tunisia (6)						
High	24.6	23.6	20.3	21.2	23.4	23.3
Medium	54.0	54.2	60.5	61.2	60.6	60.0
Low	21.3	22.2	18.8	17.6	16.1	16.7
EU27 (4)						
High	38.8	39.6	41.1	41.7	42.4	
Medium	50.5	50.4	49.1	48.1	47.8	
Low	9.6	9.3	8.9	8.5	8.5	

Source: ETF KIESE. For modelled estimates ILOSTAT. National LFS (see notes).

Notes: (i) Based on ILO modelled estimates. (1) Armed Forced is not included in the broaden classification though they are part of employment. Therefore, the total is less than 100% (2) excluding ISCO group 0 - therefore, sum is not 100% in case of males (3) 2010 - Data estimated using the number of the resident population. From 2015 (b) data estimated using the number of the usually resident population. From 2019 (b) LFS is carried out on a new sampling plan and according to the revised definition of employment." (4) Totals do not add to 100 due to employment not allocated by sector (5) MEDIUM: ISC08 groups 4-8 in addition to group 0; data from 2010 revised according to the results from population, housing and establishments census, 2017;



2015 (b). (6) data received, second quarter of the year, 2020 third quarter (7) In HLFS, the series is not comparable to previous years due to the adjustments in the definition, scope and design of the survey since 2021. (8) Refers to age group 15-70. (2015-2021) Data exclude the temporarily occupied territory of the Autonomous Republic of Crimea, the city of Sevastopol and a part of temporarily occupied territories in the Donetsk and Luhansk regions. (9) LOW: ISCO08 group 96= Elementary occupations and skilled agricultural, forestry and fishery workers; MEDIUM: ISC08 groups 4-8; HIGH: ISCO groups 1-3; (10) Occupations do not sum up to 100% because of "other" classifications (11) for 2010 applies to 2011 (12) Jordanian population is taken into account. (13) for 2019 applies to 2018 (14) 2021 refers to 3rd quarter of 2021, calculated. (15) Algeria's numbers are for the years 2013, 2014, and 2017.

Employment by broad occupational categories (% aged 15+): The indicator distinguishes between the following ISCO-08 broad occupational categories of the employed: Low (ISCO-08 group 9: Elementary occupations); Medium (ISCO-08 groups 4-8: Clerical support workers, Service and sales workers, Skilled agricultural, forestry and fishery workers, Craft and related trade workers, Plant and machine operators); High (ISCO-08 groups 1-3: Managers, Technicians and associate professionals).

Country	Male	Male						Female				
Country	2010	2015	2019	2020	2021	2022	2010	2015	2019	2020	20201	2022
Kyrgyz Republic (i)(10)					(i)						(i)	
High	11.2	11.7	11.6	12.6	12.8		26.0	28.2	25.1	25.2	25.5	
Medium	79.9	79.8	70.5	72.2	69.8		63.1	62.7	64.7	63.8	49.0	
Low	9.0	8.6	18.0	15.2	14.0		11.0	9.0	10.3	11.0	9.9	
NA					3.3						25.5	
Kazakhstan (1)												
High	23.3	26.7	29.6	29.6	31.2	31.4	35.5	40.4	44.7	44.8	46.1	47.2
Medium	52.2	53.3	53.8	53.3	52.5	52.3	41.0	39.8	35.9	35.5	34.9	35.0
Low	23.8	18.6	15.2	15.4	14.6	16.3	23.3	19.4	19.0	19.2	18.6	17.8
Tajikistan (i)												
High	16.1	16.1	15.5				16.1	16.9	17.5			
Medium	44.6	47.1	50.9				15.7	17.6	20.1			
Low	39.2	36.8	33.6				68.2	65.5	62.3			
Turkmenistan (i)												
High	15.6	16.8	16.8				22.6	25.4	26.2			
Medium	40.7	42.2	43.7				24.5	26.6	28.1			
Low	43.7	41.0	39.6				52.9	47.9	45.7			
Uzbekistan (i) (9)												
High	14.8	15.1	14.1				19.6	20.7	20.1			
Medium	24.8	26.5	29.4				16.6	18.5	20.6			

Table A16.2: Employment by broad ISCO-08 occupations (% aged 15+, by sex)



Country	Male						Female					
Country	2010	2015	2019	2020	2021	2022	2010	2015	2019	2020	20201	2022
Low	60.4	58.5	56.6				63.8	60.8	59.3			
Armenia (11)	(i)				(i)		(i)				(i)	
High	22.1	26.0	20.4	23.5	18.3		32.9	33.9	36.1	42.5	19.0	
Medium	66.2	66.6	65.4	63.9	72.5		61.0	59.7	54.4	48.8	77.8	
Low	6.7	7.6	14.1	12.6	9.2		4.9	6.5	9.5	8.8	3.2	
NA		5.1					1.2					
Azerbaijan (2)	(i)						(i)					
High	19.1	19.3	19.2	19.2	19.4	19.4	29.7	27.9	27.5	27.5	27.4	27.3
Medium	69.0	66.6	67.3	67.3	67.6	66.9	58.6	54.6	54.7	54.7	55.0	55.2
Low	11.7	13.8	13.2	13.2	12.7	13.4	11.7	17.5	17.8	17.8	17.6	17.5
NA	0.2						0.0					
Georgia												
High	20.7	22.5	21.0	26.1	25.4	25.0	29.4	30.8	31.5	43.2	46.0	44.3
Medium	71.2	69.8	70.7	65.7	66.7	65.7	67.0	63.7	62.4	47.8	44.8	44.9
Low	6.6	7.4	7.3	6.7	6.5	7.8	3.4	4.9	6.1	8.9	9.2	10.8
NA	1.5	0.4	1.0	1.5	1.5	1.5	0.1	0.6	0.1	0.0	0.1	0.0
Moldova (3)												
High	23.5	20.6	23.4	23.2	23.7	23.8	35.8	33.8	39.5	39.7	39.9	39.6
Medium	45.6	63.9	61.9	61.5	61.3	60.6	40.3	54.0	47.6	47.4	48.2	48.5
Low	30.9	15.5	14.7	15.2	15.0	15.6	23.9	12.2	12.9	12.9	11.9	12.0
Ukraine (8)												
High	27.1	30.5	30.4	30.6	30.7		39.7	45.3	45.3	45.4	45.9	
Medium	50.2	50.7	50.8	50.6	50.6		34.9	36.7	37.4	37.7	38.0	
Low	22.7	18.8	18.8	18.8	18.7		25.4	18.0	17.3	16.9	16.1	
Albania (1)												
High	12.8	14.2	15.1	16.0	16.2	18.6	18.9	21.5	22.4	22.9	22.2	22.6
Medium	83.1	80.1	78.8	79.0	78.4	75.6	77.0	72.5	71.7	70.5	69.8	69.3
Low	3.2	4.8	5.1	5.0	5.4	4.8	4.0	5.8	5.8	6.6	8.0	8.0



Country	Male						Female					
Country	2010	2015	2019	2020	2021	2022	2010	2015	2019	2020	20201	2022
Bosnia and Herzegovina (1)												
High	21.3	20.1	18.8	21.3	22.5	23.3	30.2	31.0	26.9	34.1	35.1	37.1
Medium	69.0	68.7	71.7	67.1	65.4	64.6	60.0	55.0	62.5	55.9	54.6	52.6
Low	9.7	11.2	9.6	11.6	12.0	12.1	9.8	13.9	10.6	10.0	10.4	10.3
Montenegro (4) (11)												
High	30.8	34.1	29.9	30.7	32.4	45.8	44.4	41.5	44.7	44.4	46.3	32.1
Medium	61.2	59.2	62.2	62.6	59.1	44.3	47.2	48.9	45.7	44.7	44.4	60.0
Low	6.8	5.8	7.3	6.0	7.3	9.8	7.5	9.2	8.9	10.1	9.2	7.2
North Macedonia (4)						(i)						(i)
High	24.1	23.8	22.8	24.6	26.1	27.8	31.0	32.6	35.0	37.2	38.6	40.8
Medium	49.1	55.7	65.6	64.4	62.7	61.2	42.9	45.7	51.0	50.1	49.6	48.6
Low	25.4	19.0	10.4	9.5	9.4	9.7	26.1	21.7	14.0	12.6	11.7	10.5
NA						1.4						
Serbia (4)												
High	25.5	23.8	23.4	23.4	25.4	25.8	39.2	35.6	33.8	33.7	35.7	36.4
Medium	66.8	67.2	67.5	68.0	65.0	65.4	50.5	53.9	56.0	56.8	54.7	53.9
Low	7.0	7.7	8.2	7.7	8.6	7.9	10.3	10.5	10.2	9.5	9.5	9.6
Türkiye (7)												
High	22.1	20.0	21.8	22.5	22.1	22.4	19.6	21.6	24.8	27.6	28.0	27.6
Medium	64.3	67.1	66.3	65.0	64.5	64.6	62.2	57.7	56.0	53.9	51.9	52.4
Low	13.6	12.9	11.9	12.5	13.4	13.1	18.3	20.7	19.2	18.5	20.1	20.1
Kosovo* (14)												
High		27.7	26.0	27.0	26.8			49.0	46.5	47.4	48.7	
Medium		46.6	50.1	50.4	54.1			36.9	41.7	40.5	37.3	
Low		25.7	23.8	22.7	18.9			14.1	11.7	12.1	14.0	
Algeria (i), (15)	2013	2014	2017				2013	2014	2017			



Country	Male						Female					
Country	2010	2015	2019	2020	2021	2022	2010	2015	2019	2020	20201	2022
High	12.8	12.5	12.9				39.7	39.3	40.3			
Medium	69.9	70.0	56.2				50.4	52.3	49.5			
Low	13.7	16.1	23.7				9.3	8.4	9.8			
NA	3.6	1.3	7.2				0.6	0.1	0.4			
Egypt (10)												
High	23.3	32.2	26.1	23.5	18.5		40.5	40.8	49.2	45.0	45.4	
Medium	68.2	58.7	64.6	71.5	76.2		55.7	44.4	44.2	50.7	49.3	
Low	8.3	9.1	9.2	4.9	5.2		3.7	14.8	6.4	3.7	4.6	
NA			0.2	0.1	0.1				0.1	0.6	0.8	
Israel	(i)						(i)					
High	41.0	47.9	49.7	51.6	52.4	52.0	43.1	55.2	57.0	58.1	58.7	59.3
Medium	49.2	45.1	44.1	43.1	42.3	42.9	49.0	39.1	37.7	37.1	36.7	36.0
Low	8.1	7.1	6.2	5.3	5.3	5.1	7.1	5.7	5.2	4.8	4.6	4.7
NA	1.7						0.8					
Jordan (12)												
High			24.5	25.9	26.8	27.2			73.3	76.0	75.6	74.0
Medium			68.5	67.9	66.2	65.2			20.3	18.6	18.4	19.8
Low			6.9	6.2	7.1	7.6			6.4	5.3	6.1	6.2
Lebanon (13)												
High			27.7			23.6			42.2			47.5
Medium			62.2			62.7			30.2			38.4
Low			9.8			13.3			27.4			13.6
Morocco												
High					6.1						15.3	
Medium					62.2						32.5	
Low					31.0						51.5	
Palestine* (5)												
High	22.4	16.0	16.8	18.1	16.5	15.6	53.9	50.8	63.1	66.6	64.6	58.7



Country	Male	Male						Female					
Country	2010	2015	2019	2020	2021	2022	2010	2015	2019	2020	20201	2022	
Medium	57.0	64.5	63.6	61.7	62.3	61.9	41.2	43.7	31.5	27.5	29.2	32.5	
Low	20.6	19.5	19.6	20.2	21.2	22.4	4.9	5.5	5.4	5.9	6.2	8.8	
Tunisia (6)													
High	29.0	20.4	16.2	16.6	18.2	18.5	25.7	32.3	32.0	34.2	35.9	35.2	
Medium	55.1	56.2	63.6	64.3	65.0	64.7	54.3	48.6	51.8	52.5	49.7	48.2	
Low	15.6	23.3	19.9	19.1	16.8	16.7	19.9	19.1	15.8	13.3	14.4	16.5	
EU27 (4)													
High	36.5	37.4	38.5	39.0	39.3		41.6	42.2	44.2	44.9	46.1		
Medium	54.0	54.0	52.8	51.7	51.7		46.3	46.0	44.7	43.9	43.3		
Low	7.9	7.4	7.4	7.2	7.4		11.6	11.5	10.7	10.0	9.8		

Source: ETF KIESE. For modelled estimates ILOSTAT. National LFS (see notes).

Notes: (i) Based on ILO modelled estimates. (1) Armed Forced is not included in the broaden classification though they are part of employment. Therefore, the total is less than 100% (2) excluding ISCO group 0 - therefore, sum is not 100% in case of males (3) 2010 - Data estimated using the number of the resident population. From 2015 (b) data estimated using the number of the usually resident population. From 2019 (b) LFS is carried out on a new sampling plan and according to the revised definition of employment." (4) Totals do not add to 100 due to employment not allocated by sector (5) MEDIUM: ISC08 groups 4-8 in addition to group 0; data from 2010 revised according to the results from population, housing and establishments census, 2017; 2015 (b). (6) data received, second quarter of the year, 2020 third quarter (7) In HLFS, the series is not comparable to previous years due to the adjustments in the definition, scope and design of the survey since 2021. (8) Refers to age group 15-70. (2015-2021) Data exclude the temporarily occupied territory of the Autonomous Republic of Crimea, the city of Sevastopol and a part of temporarily occupied territories in the Donetsk and Luhansk regions. (9) LOW: ISCO08 group 96= Elementary occupations and skilled agricultural, forestry and fishery workers; MEDIUM: ISC08 groups 4-8; HIGH: ISCO groups 1-3; (10) Occupations do not sum up to 100% because of "other" classifications (11) for 2010 applies to 2011 (12) Jordanian population is taken into account. (13) for 2019 applies to 2018 (14) 2021 refers to 3rd quarter of 2021, calculated. (15) Algeria's numbers are for the years 2013, 2014, and 2017.

Employment by broad occupational categories (% aged 15+): The indicator distinguishes between the following ISCO-08 broad occupational categories of the employed: Low (ISCO-08 group 9: Elementary occupations); Medium (ISCO-08 groups 4-8: Clerical support workers, Service and sales workers, Skilled agricultural, forestry and fishery workers, Craft and related trade workers, Plant and machine operators); High (ISCO-08 groups 1-3: Managers, Technicians and associate professionals)



A17: Unemployment (age 15+)

Region	Country	2010	2015	2020	2021	2022
СА	Kyrgyz Republic					
	SEX					
	Female	9.9	9.0	5.0	5.2	5.0
	Male	7.7	6.5	4.4	4.5	4.3
	Total	8.6	7.6	4.6	4.8	4.6
	Kazakhstan					
	SEX					
	Female	6.6	5.9	5.4	5.5	5.5
	Male	4.9	4.4	4.4	4.2	4.3
	Total	5.8	5.1	4.9	4.9	4.9
	Tajikistan					
	SEX					
	Female	9.7	6.1	5.9	6.3	6.4
	Male	11.5	8.4	8.5	8.6	8.7
	Total	10.9	7.6	7.5	7.7	7.8
	Turkmenistan					
	SEX					
	Female	2.5	2.7	3.3	3.4	3.6
	Male	5.7	5.7	6.5	6.4	6.7
	Total	4.0	4.1	4.8	4.8	5.0
	Uzbekistan					
	SEX					
	Female	6.4	4.9	3.9	7.0	7.0
	Male	4.7	5.3	7.7	5.4	5.4
	Total	5.4	5.2	5.3	6.0	6.0
EaP	Armenia					
	SEX					
	Female	21.2	19.5	17.1	15.2	



Region	Country	2010	2015	2020	2021	2022
	Male	17.0	17.6	19.0	15.6	
	Total	19.0	18.5	18.1	15.4	
	Azerbaijan					
	SEX					
	Female	6.9	5.9	8.4	7.0	6.5
	Male	4.4	4.1	6.1	5.1	4.8
	Total	5.6	5.0	7.2	6.0	5.6
	Georgia					
	SEX					
	Female	15.5	12.4	16.2	17.8	14.6
	Male	19.1	15.6	20.2	22.7	19.3
	Total	17.4	14.1	18.5	20.6	17.3
	Moldova					
	SEX					
	Female	5.7	3.4	3.2	2.5	2.6
	Male	9.1	5.9	4.3	3.8	3.5
	Total	7.4	4.7	3.8	3.2	3.1
	Ukraine					
	SEX					
	Female	6.8	8.1	9.1	10.2	
	Male	9.3	10.1	9.9	9.6	
	Total	8.1	9.1	9.5	9.9	
SEET	Albania					
	SEX					
	Female	15.9	17.1	11.9	11.8	11.4
	Male	12.6	17.1	11.5	11.3	10.6
	Total	14.0	17.1	11.7	11.5	10.9
	Bosnia and Herzegovina					
	SEX					



Region	Country	2010	2015	2020	2021	2022
	Female	29.9	30.9	18.6	22.0	19.8
	Male	25.6	25.9	14.2	14.4	12.6
	Total	27.2	27.9	15.9	17.4	15.4
	Montenegro					
	SEX					
	Female	20.1	17.3	18.4	15.9	12.8
	Male	19.3	17.8	17.5	17.0	16.2
	Total	19.7	17.6	17.9	16.6	14.7
	North Macedonia					
	SEX					
	Female	32.2	25.1	15.0	14.6	12.1
	Male	31.9	26.8	16.3	16.5	16.0
	Total	32.0	26.1	15.8	15.7	15.7
	Serbia					
	SEX					
	Female	20.4	18.8	9.5	12.1	9.9
	Male	18.5	16.9	8.8	10.2	9.1
	Total	19.3	17.8	9.1	11.1	9.4
	Türkiye					
	SEX					
	Female	11.4	12.6	15.0	14.7	13.4
	Male	10.4	9.2	12.3	10.7	8.9
	Total	10.7	10.3	13.2	12.0	10.4
	Kosovo*					
	SEX					
	Female		36.5	32.2		
	Male		31.7	23.3		
	Total		32.8	25.7		
SEMED	Algeria					



Region	Country	2010	2015	2020	2021	2022
	SEX					
	Female	19.1	16.6	20.8	20.5	20.3
	Male	8.1	9.9	10.2	9.6	9.4
	Total	10.0	11.2	12.3	11.7	11.6
	Egypt					
	SEX					
	Female	22.1	24.8	17.8	16.1	
	Male	4.8	9.4	6.0	5.6	
	Total	8.8	13.1	8.0	7.4	
	Israel					
	SEX					
	Female	6.5	5.4	4.1	4.9	3.6
	Male	6.8	5.1	4.5	5.0	3.9
	Total	6.6	5.3	4.3	5.0	3.8
	Jordan					
	SEX					
	Female	21.7	22.5	30.7	30.8	31.4
	Male	10.4	11.0	21.2	22.4	20.6
	Total	12.5	13.0	23.2	24.1	22.8
	Lebanon					
	SEX					
	Female	10.7	12.7	16.0	15.8	32.7
	Male	5.5	7.9	11.6	11.0	28.4
	Total	6.8	9.3	13.0	12.5	29.6
	Могоссо					
	SEX					
	Female	9.6	10.5	16.2	16.8	17.2
	Male	8.9	9.4	10.7	10.9	10.3
	Total	9.1	9.7	11.9	12.3	11.8



Region	Country	2010	2015	2020	2021	2022
	Palestine					
	SEX					
	Female	26.8	34.3	40.1	42.9	38.5
	Male	23.1	20.2	22.5	22.4	20.0
	Total	23.8	23.0	25.9	26.4	23.8
	Tunisia					
	SEX					
	Female	18.9	22.2	22.8	23.6	20.5
	Male	10.9	12.4	13.5	15.4	13.1
	Total	13.0	15.2	16.2	18.0	15.3
EU	EU27					
	SEX					
	Female	10.0	10.2	7.4	7.4	6.5
	Male	9.7	9.9	6.8	6.8	5.9
	Total	9.8	10.1	7.1	7.1	6.2

Source: KIESE data; data received from country LFS, except: TJ (ILOSTAT estimated results), TM (ILOSTAT estimated results), KG (2020, 2021, 2022: ILOSTAT estimated results), UZ (2010, 2015, 2021, 2022 ILOSTAT estimated results, 2020 ILOSTAT LFS), DZ (2020, 2021, 2022: ILOSTAT estimated results), LB (2010, 2015, 2020, 2021: ILOSTAT estimated results), MK (2010: ILOSTAT data, 2015, 2020, 2021, 2022 Eurostat data), EU27 (Eurostat data).

Notes: UA: data refers to age group 15-70; BA: data refers to age group 15-74, ME: data refers to age group 15-74, year 2010 refers to 2011; MK: 2010 data refers to age group 15-74, 2015, 2020, 2021, 2022 data refers to age group 15-70; RS: data refers to age group 15-74, 2021 break in time series, DZ: data refers to age group 16-59, 2020-2022 estimated, EU27: data refers to age group 15-74, 2021: break in time series.

URT (Unemployment Rate): The unemployment rate represents unemployed people as a percentage of the labour force. The labour force is the total number of people who are employed or unemployed. Unemployed people comprise who were without work during the reference week; are currently available for work (were available for paid employment or self-employment before the end of the two weeks following the reference week); are actively seeking work, i.e. had taken specific steps in the four-week period ending with the reference week to seek paid employment or self-employment, or had found a job to start later (within a period of, at most, three months).



Region	Country	2010	2015	2020	2021	2022
CA	Kyrgyz Republic					
	SEX					
	Female	20.3	19.1	10.4	11.0	10.8
	Male	14.5	12.5	7.7	8.3	8.0
	Total	16.7	15.0	8.6	9.2	8.9
	Kazakhstan					
	SEX					
	Female	5.7	4.8	4.2	4.3	4.9
	Male	4.8	3.7	3.4	3.3	2.8
	Total	5.2	4.2	3.8	3.7	3.8
	Tajikistan					
	SEX					
	Female	21.2	14.6	14.1	14.1	14.3
	Male	27.2	20.6	19.3	19.0	19.6
	Total	24.8	18.1	17.1	17.0	17.4
	Turkmenistan					
	SEX					
	Female	5.4	6.4	7.6	7.4	7.7
	Male	13.4	14.0	14.4	13.8	14.8
	Total	8.6	9.5	10.4	10.0	10.6
	Uzbekistan					
	SEX					
	Female	12.8	12.4	21.4	17.4	17.2
	Male	10.3	12.5	8.2	11.6	12.1
	Total	12.0	12.5	12.8	13.6	13.8
EaP	Armenia					
	SEX					
	Female	48.0	37.2	33.3	33.6	

Table A.18: Unemployment (age 15-24)



Region	Country	2010	2015	2020	2021	2022
	Male	31.9	28.6	31.6	28.0	
	Total	38.9	32.5	32.3	30.5	
	Azerbaijan					
	SEX					
	Female	16.0	15.8	18.0	16.6	15.3
	Male	13.9	11.4	13.0	12.9	12.1
	Total	14.9	13.4	15.2	14.6	13.6
	Georgia					
	SEX					
	Female	42.7	37.6	38.2	40.5	38.8
	Male	35.1	31.7	40.1	44.3	39.8
	Total	37.9	33.8	39.4	42.9	39.4
	Moldova					
	SEX					
	Female	15.0	12.8	12.3	9.6	12.6
	Male	20.0	12.0	9.9	9.0	9.4
	Total	17.8	12.3	10.9	9.2	10.7
	Ukraine					
	SEX					
	Female	16.7	21.9	18.5	20.3	
	Male	17.8	22.7	19.9	18.0	
	Total	17.4	22.4	19.3	19.1	
SEET	Albania					
	SEX					
	Female	31.7	40.8	25.9	29.2	25.9
	Male	29.6	39.2	27.0	25.5	24.1
	Total	30.5	39.8	26.5	27.1	24.9
	Bosnia and Herzegovina					
	SEX					



Region	Country	2010	2015	2020	2021	2022
	Female	61.3	67.3	42.8	44.5	42.1
	Male	55.1	59.5	32.5	35.0	31.2
	Total	57.5	62.3	36.6	38.3	35.1
	Montenegro					
	SEX					
	Female	38.4	34.5	39.7	32.7	22.3
	Male	35.4	39.9	33.6	40.0	34.1
	Total	36.6	37.6	36.0	37.1	29.4
	North Macedonia					
	SEX					
	Female	53.3	43.3	38.6	41.5	
	Male	53.9	49.7	34.0	33.5	
	Total	53.7	47.3	35.7	36.4	
	Serbia					
	SEX					
	Female	47.6	48.4	29.5	29.5	26.2
	Male	45.4	40.1	25.0	24.6	23.2
	Total	46.3	43.2	26.6	26.4	24.4
	Türkiye					
	SEX					
	Female	20.7	22.2	30.3	28.7	25.2
	Male	19.2	16.5	22.6	19.4	16.4
	Total	19.7	18.5	25.3	22.6	19.4
	Kosovo*					
	SEX					
	Female		67.2	57.2	41.9	
	Male		54.2	45.2	22.5	
	Total		57.7	49.1	29.0	
SEMED	Algeria					



Region	Country	2010	2015	2020	2021	2022
	SEX					
	Female	37.4	45.3	50.8	48.2	47.8
	Male	18.6	26.7	26.9	25.2	24.9
	Total	21.5	29.9	31.1	29.3	29.0
	Egypt					
	SEX					
	Female	53.4	38.3	43.6	42.5	39.0
	Male	14.3	28.5	12.5	12.9	12.4
	Total	24.3	31.6	17.4	17.6	17.1
	Israel					
	SEX					
	Female	12.9	9.7	8.2	8.0	6.6
	Male	14.5	8.9	7.6	7.5	7.2
	Total	13.7	9.3	7.9	7.8	6.9
	Jordan					
	SEX					
	Female	46.8	53.3	65.9	67.6	64.2
	Male	23.8	26.7	41.6	45.4	43.0
	Total	28.1	30.8	46.0	49.3	47.0
	Lebanon					
	SEX					
	Female	20.2	21.0	25.2	23.9	24.3
	Male	14.0	20.1	27.3	25.8	26.1
	Total	16.0	20.4	26.6	25.2	25.5
	Могоссо					
	SEX					
	Female	16.1	21.4	41.2	41.9	44.4
	Male	18.1	20.6	28.0	28.4	28.7
	Total	17.6	20.8	31.2	31.8	32.7



Region	Country	2010	2015	2020	2021	2022
	Palestine*					
	SEX					
	Female	49.8	56.6	70.0	64.5	57.5
	Male	37.1	33.7	36.6	37.2	31.7
	Total	39.1	37.4	42.1	41.7	35.3
	Tunisia					
	SEX					
	Female	32.7	35.5	36.2	40.0	36.6
	Male	27.8	33.5	35.4	42.2	37.4
	Total	29.4	34.0	35.7	41.5	37.2
EU	EU27					
	SEX					
	Female	20.9	21.3	16.7	16.8	14.5
	Male	22.1	22.2	16.9	16.6	14.5
	Total	21.5	21.8	16.8	16.7	14.5

Source: KIESE data; data received from country LFS, except: KG (2020, 2021, 2022: ILOSTAT estimated results), MK (Eurostat data), UZ (ILOSTAT estimated results), DZ (2020, 2021, 2022: ILOSTAT estimated results), LB (ILOSTAT estimated results), EU27 (Eurostat data).

Note: DZ data (2010, 2015) refers to age group 16-24, ME data refers to 2011 instead of 2010, RS: 2021 break in time series; PS: 2015 break in time series; EU27: data refers to age group 15-74, 2021: break in time series.

URT (Unemployment Rate): The unemployment rate represents unemployed people as a percentage of the labour force. The labour force is the total number of people who are employed or unemployed. Unemployed people comprise who were without work during the reference week; are currently available for work (were available for paid employment or self-employment before the end of the two weeks following the reference week); are actively seeking work, i.e. had taken specific steps in the four-week period ending with the reference week to seek paid employment or self-employment, or had found a job to start later (within a period of, at most, three months).



	Female					Male					Total				
	2010	2015	2020	2021	2022	2010	2015	2020	2021	2022	2010	2015	2020	2021	2022
Kyrgyz Republic			(ii)	(i)	(i)			(ii)	(i)	(i)				(i)	(i)
High	61.4	59.0				78.0	75.4				68.9	66.2	68.5		
Medium	51.9	48.1				77.8	76.6				64.7	62.4	59.4		
Low	16.6	16.1				39.5	40.1				27.8	27.9	29.4		
Total	47.2	45.4	50.4	42.8	43.1	70.9	70.6	73.7	71.0	71.4	58.7	57.7	61.8	56.4	56.7
Kazakhstan															
High	74.9	72.9	77.5	77.9	77.9	80.7	79.0	84.9	86.4	85.6	77.4	75.5	80.8	81.7	81.4
Medium	64.8	57.2	52.0	52.8	50.6	77.6	73.7	68.0	67.9	66.3	71.1	65.4	59.9	60.2	58.2
Low	17.1	13.3	0.3	0.5	0.9	26.8	22.7	0.6	0.4	0.9	21.4	17.6	0.5	0.5	0.9
Total	61.8	60.3	60.3	60.4	61.5	73.0	72.6	72.1	72.2	71.8	67.1	66.1	65.9	66.0	66.3
Tajikistan (i)															
Total	26.6	29.9	28.8	29.3	29.3	49.5	48.6	46.4	46.7	46.7	37.9	39.2	37.6	38.0	38.0
Turkmenistan (i)															
Total	48.9	47.1	45.4	45.8	45.8	45.5	43.6	41.9	42.1	42.0	47.2	45.4	43.7	44.0	43.9
Uzbekistan (i)															
High			76.8					64.3					71.6		
Medium			71.5					34.7					52.3		
Low			18.6					7.1					12.1		
Total	40.7	39.3	70.3	37.0	37.2	69.6	69.1	36.9	69.3	69.3	55.0	54.0	53.2	52.9	53.0
High	52.0	55.3	53.9	58.7		71.9	73.9	67.8	69.9		60.5	63.3	59.5	59.6	
Medium	40.0	40.9	35.4	47.6		60.8	58.0	54.2	61.3		49.2	48.4	44.1	45.5	
Low	29.1	31.0	11.0	17.8		40.8	39.5	22.9	26.1		35.2	35.6	17.1	16.1	
Total	41.1	43.8	38.4	38.0	51.9	59.9	59.8	53.8	56.8	58.7	49.6	50.9	45.4	46.4	54.8
Azerbaijan															
High		71.3		86.1	79.7		77.3		80.8	80.4	75.7	74.8		83.3	80.0
Medium		63.4		66.0	67.2		69.9		73.4	78.8	65.7	66.6		69.8	73.0
Low		35.2		41.1	48.2		28.3		35.9	31.8	25.5	32.3		38.8	39.8
Total	59.5	59.3	57.0	67.1	68.0	66.7	74.4	70.5	71.2	73.4	61.2	66.3	63.3	69.2	70.7

Table A.19: Employment by educational attainment (employed, age 15+)



	Female					Male					Total				
	2010	2015	2020	2021	2022	2010	2015	2020	2021	2022	2010	2015	2020	2021	2022
Georgia															
High	51.2	54.8	53.1	53.6	53.4	66.2	70.1	63.1	62.7	64.5	58.0	61.6	57.5	57.6	58.3
Medium	47.9	52.7	28.1	27.1	30.4	62.8	68.4	48.6	47.6	50.9	54.7	60.1	37.9	36.9	40.2
Low	29.4	27.5	9.1	7.9	9.3	35.4	34.6	20.9	19.0	22.3	32.1	30.9	14.7	13.1	15.3
Total	46.0	50.7	33.9	33.3	35.4	59.7	65.2	49.5	48.6	51.7	52.3	57.4	41.1	40.4	42.9
Moldova															
High	57.3	56.4	57.3	55.0	58.5	65.2	63.5	64.9	67.9	66.8	60.6	59.3	60.4	60.4	62.0
Medium	41.8	43.0	35.5	36.3	37.7	44.4	48.1	44.4	44.7	45.1	43.1	45.5	39.9	40.4	41.3
Low	17.4	24.3	18.6	20.6	20.5	23.5	31.5	28.6	31.5	31.4	20.2	27.7	23.2	25.6	25.5
Total	36.4	39.8	35.0	35.4	36.8	40.9	45.3	43.1	44.7	44.7	38.5	42.4	38.8	39.8	40.5
Ukraine (3)															
High	66.7	63.5	61.7	60.6		73.9	73.2	72.7	72.9		69.6	67.5	66.2	65.7	
Medium	49.1	43.9	43.7	43.2		62.6	60.0	59.8	59.0		56.2	52.5	52.3	51.6	
Low	29.8	14.7	14.2	13.3		37.7	18.9	16.9	16.2		33.6	16.7	15.6	14.8	
Total	54.4	51.7	51.2	50.4		63.1	62.2	61.8	61.5		58.5	56.7	56.2	55.7	
Albania															
High	67.1	56.8	66.1	65.4	68.2	66.8	62.0	67.4	71.4	71.0	66.9	59.2	66.6	68.0	69.4
Medium	38.3	35.9	42.5	42.4	47.0	60.6	57.5	62.3	64.1	66.0	50.1	47.9	54.0	54.9	57.9
Low	35.9	36.1	40.6	41.4	44.4	51.1	47.5	53.3	51.4	53.1	43.0	41.4	46.3	45.9	48.3
Total	39.5	39.2	46.1	46.4	50.1	55.9	53.3	59.2	59.5	61.2	47.5	46.2	52.5	52.9	55.5
Bosnia and Herzego	ovina														
High	62.3	61.3	66.7	64.7	65.2	59.6	57.5	66.9	67.8	69.8	60.9	59.3	66.8	66.2	67.3
Medium	33.2	31.6	36.4	35.6	36.8	49.1	46.6	56.5	56.9	58.2	42.5	40.3	47.8	47.8	48.9
Low	10.4	9.3	10.1	7.4	5.8	24.3	23.4	25.0	22.2	22.1	15.4	14.4	15.2	12.4	11.4
Total	23.7	23.3	29.9	28.7	28.9	43.2	41.0	50.9	51.1	52.1	32.5	32.0	40.1	39.6	40.2
Montenegro (1)															
High	69.6	74.4	69.7	67.3	73.0	67.1	72.4	69.8	65.8	73.7	68.4	73.5	69.7	66.6	73.3
Medium	41.3	44.6	40.2	37.8	46.0	50.7	54.3	55.0	49.6	57.3	46.2	49.8	48.1	44.0	52.1



	Female					Male					Total				
	2010	2015	2020	2021	2022	2010	2015	2020	2021	2022	2010	2015	2020	2021	2022
Low	7.6	13.2	11.3	8.8	12.3	23.6	22.9	23.3	19.9	22.2	14.3	17.1	16.5	13.3	16.2
Total	33.2	39.4	37.9	37.3	45.4	45.1	49.4	50.0	47.8	55.3	39.0	44.3	43.8	42.4	50.3
North Macedonia					(ii)					(ii)					(ii)
High	63.6	63.7	70.0	71.6	73.8	66.3	66.8	72.7	70.0	71.4	65.0	65.2	71.3	70.8	72.7
Medium	40.9	42.1	47.2	45.4	45.0	53.0	56.0	60.9	61.2	60.1	47.8	50.1	55.0	54.4	53.6
Low	14.6	16.1	14.7	12.2	12.1	35.7	38.0	39.9	35.4	35.1	23.5	25.6	25.3	21.5	21.2
Total	29.1	32.6	37.0	36.6	36.9	46.7	49.4	54.5	54.7	54.1	37.9	40.9	45.7	45.6	45.3
Serbia (2)															
High	63.6	62.0	68.5	70.2	73.2	57.8	64.5	71.1	73.3	76.4	60.8	63.2	69.6	71.5	74.6
Medium	38.0	41.1	48.4	48.2	50.1	53.0	56.5	63.8	64.2	65.4	46.1	49.3	56.6	56.8	58.2
Low	20.2	22.2	26.9	22.2	23.0	37.4	39.7	43.3	41.0	40.5	27.3	29.6	34.0	30.4	30.7
Total	31.1	35.4	42.1	41.3	43.2	45.5	50.3	56.6	56.5	57.9	38.0	42.6	49.1	48.6	50.3
Türkiye															
High	59.9	59.9	54.6	56.2	58.3	78.3	79.6	74.9	76.7	78.0	70.6	71.0	65.4	67.0	68.6
Medium	26.0	29.1	25.7	27.6	31.3	65.8	69.5	63.0	66.0	69.2	49.4	52.5	46.8	49.5	52.9
Low	21.1	22.0	19.3	20.4	22.1	61.5	60.0	53.5	56.4	58.3	39.6	39.4	35.0	37.0	38.7
Total	24.0	27.5	26.3	28.0	30.4	62.7	65.0	59.8	62.8	65.0	43.0	46.0	42.8	45.2	47.5
Kosovo*															
High		43.6	46.6				56.5	61.5				51.3	54.7		
Medium		13.1	14.7				40.5	41.9				30.1	31.5		
Low		2.8	2.9				15.8	18.2				7.5	8.3		
Total		10.2	12.2	15.1			34.7	37.6	44.2			22.5	24.8	29.6	
Algeria															
High	26.6	35.3				54.7	60.0				39.6	46.1			
Medium	14.7	15.4				64.1	58.6				40.4	37.4			
Low (2)(4)	18.6	17.7				72.9	66.0				42.7	38.9			
Low (0-1)(5)	10.0	10.4				67.0	66.3				44.4	44.7			
Total	11.5	13.6	12.2	12.7	13.0	63.3	60.2	56.1	57.3	58.0	37.6	37.1	34.5	35.4	35.9



	Female				Male					Total					
	2010	2015	2020	2021	2022	2010	2015	2020	2021	2022	2010	2015	2020	2021	2022
Egypt															
High	41.3	42.1	46.3	32.9		79.6	73.1	73.3	72.2		63.1	59.4	61.0	54.0	
Medium	18.7	18.0	29.9	13.3		74.9	67.1	66.7	69.7		49.7	44.8	50.1	44.7	
Low	13.5	11.9	24.9	7.4		66.7	59.1	58.7	59.1		38.4	34.3	41.0	32.0	
Total	18.0	17.0	11.8	12.9	12.7	71.3	63.9	63.5	65.2	64.8	45.1	40.8	38.3	39.8	38.9
Israel															
High	70.7	73.2	72.5	72.3	74.3	77.4	80.6	78.4	78.1	79.7	73.7	76.5	75.1	74.9	76.7
Medium	50.9	60.2	57.1	56.8	59.5	58.0	70.1	65.2	64.4	66.5	54.6	65.4	61.4	60.8	63.2
Low	14.8	17.3	17.8	18.8	19.3	34.7	36.2	30.2	28.9	32.2	24.8	26.7	24.0	23.8	25.8
Total	49.3	55.9	55.8	55.7	57.9	58.0	65.7	62.6	61.8	64.0	53.5	60.7	59.1	58.7	60.9
Jordan															
High	46.4	40.6	34.8	35.4	34.2	75.0	70.3	56.6	56.5	56.4	62.1	55.8	45.6	45.9	45.2
Medium	12.8	10.5	8.1	7.2	7.0	56.4	48.4	34.6	34.7	34.2	32.7	28.2	20.2	19.5	19.2
Low	3.3	2.6	2.3	2.2	2.3	52.7	51.0	40.5	40.0	40.6	28.9	27.4	22.3	21.9	22.2
Total	11.5	10.3	9.8	9.7	9.6	56.9	53.4	42.2	41.9	42.2	34.5	31.9	26.1	25.8	25.8
Lebanon (i)															
Total	20.4	22.8	22.4	23.4	15.0	63.7	63.3	57.1	58.8	47.4	41.7	42.7	42.3	40.2	30.6
Morocco				(i)	(i)				(i)	(i)					
High	39.2					64.1					53.4				
Medium	13.5					53.4					36.9				
Low	25.0					78.2					47.7				
Total	23.4	22.2	16.7	18.2	18.8	68.0	64.8	62.9	62.9	62.8	45.1	42.8	39.4	39.7	39.1
Palestine*															
High	42.9	35.5	28.5	28.4	30.9	74.4	73.6	67.5	69.6	72.6	59.8	54.5	46.5	47.2	49.5
Medium	4.9	6.2	3.8	4.2	4.7	50.4	57.4	52.9	55.1	52.1	27.1	30.6	27.6	28.2	26.9
Low	8.5	9.0	5.4	5.3	5.6	63.6	65.2	59.6	64.5	54.7	36.5	38.6	35.0	38.2	32.5
Total	10.8	11.6	9.7	9.8	11.2	51.6	55.5	50.5	35.5	55.3	31.4	33.9	30.3	31.9	33.0
Tunisia															



	Female			Male				Total							
	2010	2015	2020	2021	2022	2010	2015	2020	2021	2022	2010	2015	2020	2021	2022
High	32.4	28.2	38.1	42.6	41.5	15.9	56.3	60.8	61.9	61.5	22.9	23.2	48.0	50.9	50.3
Medium	16.6	36.7	23.8	22.2	22.0	12.8	77.1	57.9	51.2	52.2	13.7	39.6	42.3	37.7	38.1
Low	13.0	23.2	14.5	15.2	15.7	8.5	51.5	61.2	57.0	57.5	9.3	43.4	37.1	35.4	36.0
Total	20.1	20.3	20.6	21.8	21.8	61.9	60.3	60.4	56.2	56.7	40.8	39.9	40.0	38.2	38.9
EU27 (2)															
High	74.4	73.8	74.6	75.8		78.3	78.4	79.3	79.8		76.3	76.0	76.8	77.7	
Medium	56.3	56.1	55.8	56.1		67.9	67.4	67.9	67.9		62.2	61.8	62.0	62.1	
Low	29.1	27.6	27.7	27.5		45.7	42.9	44.9	44.7		37.0	35.1	36.2	36.0	

Source: ETF KIESE. For modelled estimates ILOSTAT.

Notes: (i) Based on ILO modelled estimates. (1) 2011 instead of 2010 values. (2) ages 15-74, (3) ages 15-70; (4) Data for ISCED 2 (5) Data for ISCED (0-1)The **employment rate** is calculated by dividing the number of employed persons by the population of the same age group. Employed persons are all persons who worked at least one hour for pay or profit during the reference period or were temporarily absent from such work. If a different age group is used, this should be indicated. Educational levels refer to the highest educational level successfully completed. Three levels are considered: Low (ISCED level 0–2), Medium (ISCED level 3–4) and High (ISCED 1997 level 5–6, and ISCED 2011 level 5–8).

Country	2010	2015	2018	2019	2021 (Country results)
Kazakhstan	3,5	2,8	2,6	2,9	4,4
Kyrgyz Republic	5,8	6,0	5,6	5,4	6,2
Tajikistan	4,0	5,0	5,6	5,7	5,9
Turkmenistan				3,1	3,1
Uzbekistan		5,5	5,9	7,0	4,9
Armenia	3,2	2,8	2,3	2,6	2,7
Azerbaijan	2,8	3,0	2,5	2,7	4,3
Georgia	2,8	3,2	3,5	3,8	3,9
Moldova	7,6	5,8	5,4	6,1	6,4
Ukraine	7,4	5,7	5,3	5,4	5,4
Albania	3,4	3,4	3,2	3,9	3,1
Serbia	4,3	3,8	3,6	3,6	3,6

Table A.20: Expenditure on education as % of GDP, ETF partner countries and EU average



Country	2010	2015	2018	2019	2021 (Country results)
Türkiye	3,8	4,3	4,3	4,4	3,4
Israel	5,5	5,9	6,1	6,1	7,1
Algeria		8,0	5,9	6,1	7,0
Egypt	3,5	3,9		2,6	2,5
Morocco		4,6	5,3	5,9	6,8
Tunisia	6,0	6,2			
Jordan	3,1	3,5	3,0	3,0	3,7
Lebanon	1,6	2,1	2,5	2,6	1,7
Palestine (*)	6,2	4,7	5,3	5,3	5,3
EU27	5,3	4,9	4,6	4,6	5,1

Source: ETF KIESE (from World Bank Development Indicators Database)

Table A.21: Allocation and use of financial resources in education and training – index of system performance, ETF partner countries and international average

Region	Country	Financial resources	Adequate material base
СА	Kyrgyz Republic	45	75
	Kazakhstan	58	75
	Tajikistan	m	m
	Uzbekistan	35	m
EaP	Armenia	19	25
	Azerbaijan	36	90
	Georgia	64	56
	Moldova	73	38
	Ukraine	78	38
SEET	Albania	84	56
	Bosnia and Herzegovina	66	38
	Montenegro	75	19
	North Macedonia	88	25
	Türkiye	51	75



Region	Country	Financial resources	Adequate material base
	Kosovo	64	10
SEMED	Algeria	m	m
	Egypt	19	25
	Jordania	79	75
	Lebanon	61	10
	Могоссо	72	75
	Palestine (*)	50	50
	Tunesia	25	25

Source: ETF Torino Process Database

Table A.22: Student-teacher ratio in upper secondary education, ETF partner countries and EU average (2018)

Region	Country	Upper secondary education: VET	Upper secondary education: general
СА	Kazakhstan		8 (2)
	Kyrgyz Republic		11 (2)
	Uzbekistan		8 (2)
EaP	Armenia		4
	Azerbaijan		9
	Georgia		7
	Moldova		10
	Ukraine	11	7
SEET	Albania		13
	Bosnia and Herzegovina	30	26
	Montenegro		14
	North Macedonia	11	10
	Serbia	10	13
	Türkiye	11	12
SEMED	Egypt		13
	Jordan (1)		8
	Могоссо	11	16



Region	Country	Upper secondary education: VET	Upper secondary education: general
	Tunisia		14 ⁽³⁾
EU	European Union		12

Source: Source: ETF KIESE (from World Bank Development Indicators Database)

Notes: (1) Data from 2019; (2) Data covers upper and lower secondary education; (3) Data covers only lower secondary education.

Table A.23: Policies in support of teachers and school leaders – index of system performance, average for ETF partner countries (2023)

Region	Country	Excellence: pedagogy and professional development	Systemic innovation: quality of learning/teac hing	Systemic innovation: relevance of learning and training	Professional capacity of school leaders	Adequate human resource allocation and use
CA	Kazakhstan	52	90	90	90	72
	Kyrgyz Republic	50	67	83	90	75
EaP	Armenia	10	17	42	50	64
	Azerbaijan	90	90	90	75	71
	Georgia	45	83	81	75	68
	Moldova	51	50	50	50	74
	Ukraine	50	67	58	25	73
SEET	Albania	83	90	90	75	81
	Bosnia and Herzegovina	50	50	67	50	37
	Kosovo (*)	50	50	50	25	61
	Montenegro	56	50	50	25	69
	North Macedonia	44	83	50	25	84
	Serbia	53	67	64	75	81
	Türkiye	44	67	67	75	74
SEMED	Algeria	90	50	83	75	
	Egypt	90	83	75	10	19
	Jordan	51	50	72	75	54
	Lebanon	51	50	67	50	69
	Morocco	52	83	75	10	59



Region	Country	Excellence: pedagogy and professional development	Systemic innovation: quality of learning/teac hing	Systemic innovation: relevance of learning and training	Professional capacity of school leaders	Adequate human resource allocation and use
	Palestine (*)	75	50	50	50	75
	Tunisia	10	33	67	50	25
	Average	55	70	71	40	66

Source: ETF KIESE/Torino Process database

Table A.24: System steering and management – index of system performance, average for ETF partner regions (2023)

	International average	CA	EaP	SEET	SEMED
Data availability	15	14	13	22	26
Participatory governance	63	65	59	57	71
Public accountability and reliable quality assurance	63	58	53	72	66
Excellence: governance and provider management	42		38	25	50

Source: ETF KIESE/Torino Process database



Region	Country	2010	2015	2019	2020	2021
СА	Kyrgyz Republic	5.8	6.0	5.4	6.2	
	Kazakhstan	3.5	2.8	2.9	4.4	
	Tajikistan	4.0	5.0	5.7	5.9	
	Turkmenistan ⁽¹⁾	3.0		3.1		
	Uzbekistan ⁽³⁾	6.2	5.5	7.0	4.9	
EaP	Armenia	3.2	2.8	2.6	2.7	2.8
	Azerbaijan	2.8	3.0	2.7	4.3	
	Georgia	2.8	3.2	3.8	3.9	3.6
	Moldova	7.6	5.8	6.1	6.4	
	Ukraine	7.4	5.7	5.4	5.4	
SEET	Albania	3.4	3.4	3.9	3.1	
	Bosnia and Herzegovina					
	Montenegro					
	North Macedonia					
	Serbia	4.3	3.8	3.6		
	Türkiye	3.8	4.3	4.4	3.4	
	Kosovo (*)					
SEMED	Algeria ⁽¹⁾	7.6	8.0	6.1	7.0	
	Egypt	3.5	3.9	2.6	2.5	
	Israel	5.5	5.9	6.1	7.1	
	Jordan	3.1	3.5	3.0	3.7	3.2
	Lebanon	1.6	2.1	2.6	1.7	
	Morocco ⁽¹⁾	6.0	4.6	5.9	6.8	
	Palestine (*) ⁽²⁾	6.2	4.7	5.3		
	Tunisia	6.0	6.2			
EU	EU27 Average					

 Table A.25: Public expenditure on education (% of GDP)

Source: World Bank (WDI) used UIS source.

Notes: (1) for 2010 applies to 2012; (2) for 2019 applies to 2018; (3) for 2010 applies to 2011.



Region	Country	2010	2015	2019	2020	2021	2022
СА	Kyrgyz Republic					3.6	
	Kazakhstan		1.8				
	Turkmenistan		1.7	2.0	1.8		
	Uzbekistan			3.7	3.6	2.3	2.2
EaP	Armenia				1.4	1.3	1.2
	Azerbaijan			1.6	2.3	2.0	
	Moldova	2.8	2.1	2.1	2.2	1.9	
	Ukraine			1.7	1.7		
SEET	Albania		0.7	0.9			
SEMED	Egypt			1.1			
	Israel	1.4	1.8	1.9	2.0		
	Jordan			1.3		1.5	1.5
	Могоссо	2.3					
	Tunisia		4.5				

Table A.26: Government expenditure on secondary education (% of GDP)

Source: UIS

Table A.27: Student-teacher ratio in secondary education (PISA)

Region	Country	Upper secondary education - Vocational	Upper secondary education - General
SEET	Bosnia and Herzegovina	30.3	25.6
	North Macedonia	10.5	9.9
	Serbia	9.6	12.5
	Türkiye	10.8	12.2

Source: PISA (2018)

Note: Student-teacher ratio: the number of full-time equivalent students divided by the number of full-time equivalent teachers at a given level of education and type of institution (general/vocational)



Region	Country	2018
СА	Kazakhstan	44%
EaP	Georgia	41%
	Moldova	61%
	Ukraine	74%
SEET	Albania	55%
	Bosnia and Herzegovina	69%
	Montenegro	46%
	North Macedonia	63%
	Serbia	52%
	Türkiye	15%
	Kosovo (*)	85%
SEMED	Israel	33%
	Jordan	46%
	Lebanon	36%
	Могоссо	67%

Table A.28: Lack of educational material (2018)

Source: PISA (2018)

Note: Calculated as the percentage of responses "Not at all", and "Very little" to the question "Is School's instruction hindered by a lack of educational material?" assessed by school principals, by type of school (general, VET)



ACRONYMS

Country acronyms

Acronym	Country name	Acronym of the region
KG	Kyrgyz Republic	CA
KZ	Kazakhstan	CA
TJ	Tajikistan	CA
ТМ	Turkmenistan	CA
UZ	Uzbekistan	CA
AM	Armenia	EaP
AZ	Azerbaijan	EaP
GE	Georgia	EaP
MD	Moldova	EaP
UA	Ukraine	EaP
AL	Albania	SEET
BA	Bosnia and Herzegovina	SEET
МК	North Macedonia	SEET
ME	Montenegro	SEET
RS	Serbia	SEET
TR	Türkiye	SEET
ХК	Kosovo*	SEET
DZ	Algeria	SEMED
EG	Egypt	SEMED
IL	Israel	SEMED
JO	Jordan	SEMED
LB	Lebanon	SEMED
MA	Могоссо	SEMED
PS	Palestine*	SEMED
TN	Tunisia	SEMED

Region acronyms

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









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