TORINO PROCESS SYSTEM MONITORING REPORT: SERBIA (2023)

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ACKNOWLEDGEMENTS

KEY TAKEAWAYS

- **Scope of system performance monitoring:** The Torino Process monitoring covers three major areas of commitment to lifelong learners: access to learning (Area A), quality of learning (Area B), and system organisation (Area C). These areas are divided into eight monitoring dimensions: access and participation in Area A; quality, relevance, excellence, and innovation in Area B; and system management/administration and resources in Area C.

- **Access and attractiveness:** In Serbia, a significant majority of youth opts for a vocational pathway. This, however, does not necessarily signal that VET is more attractive. Rather, it is indicative of disproportionately restrictive access to general education alternatives. Conversely, access to learning for adults, especially females, is an area of weaker performance, although policies seem relatively effective in facilitating access to learning opportunities in the framework of active labour market policies. Once enrolled, learners find themselves in an environment that supports their progression, graduation, and transition between various educational pathways, whether they are general or vocational. There is no notable discrimination in this respect based on gender, socio-economic background, at-risk status, or the country of origin of learners.

- **Quality and relevance:** The quality and relevance of skills provided through VET in Serbia vary by learner group. While the system provides young learners with quality that is slightly above the average for Torino Process countries, adults seem to fare better than young learners, with a higher likelihood of possessing essential basic skills and competences for participation in information-rich societies. National authorities report of strong links between learning and work, attributed to the integration of work-based learning into curricula and efficient career guidance. However, this has not fully translated into better employability metrics, suggesting a need for refining employability support. VET programmes are quite receptive to themes concerning the green transition, but much less so regarding the digital transition. Although the VET system generally provides consistent quality and relevance across age and gender, disadvantaged youth and migrants seem to receive comparatively lower quality education, indicating potential areas for improvement.

- **Excellence and innovation:** System performance in promoting excellence and innovation varies between policy areas and priorities. Although the commitment to excellence in pedagogy and teacher development is more or less on par with the international average, it is less clear to what extent the best practices are reaching all learners. Furthermore, although there is a dedication to supporting social inclusion and equity, a discrepancy remains between policy intents and the actual benefits received by learners. As to innovation, VET providers and decision-makers show a keen openness to innovation, particularly in support of better access to learning for youth and adults. However, there are challenges in integrating these innovations into everyday operations in VET. This underscores the need for a cohesive strategy to ensure innovative practices lead to consistent, system-wide advantages for all learners.

- **System management and organisation:** Serbia has more internationally comparable data than other countries, but there is room to strengthen capacity for the use of that data. In the same vein, the VET system in Serbia has a broad set of quality assurance and accountability measures. However, the effectiveness of these measures for all involved individuals and institutions within VET needs closer examination. National authorities report that the private sector and other stakeholders in Serbia are actively involved in VET consultations and decision-making processes. There is also a strong emphasis on placing qualified staff in leadership positions – an area where many countries in the Torino Process report of challenges, especially in maintaining a high standard of professionalism among school leaders. While Serbia shows commitment to adequate provision of staff and to financial investments in VET, enhancing the material base for VET providers presents an area for consideration, indicating opportunities for more targeted fund allocation.

- **Quality and reliability of monitoring evidence:** Serbia has the most internationally comparable results of all countries in the Torino Process sample. These results are also less susceptible to bias. However, the country tends to self-assess the performance of its VET system somewhat more positively compared to other countries involved in this round of Torino Process monitoring.

1. INTRODUCTION

1.1 Focus and scope of monitoring

This report summarises the results of monitoring VET system performance in Serbia, initiated in the context of the Torino Process in 2022 and completed in 2023.[1] "Performance" describes the extent to which the VET system delivers against a targeted selection of national and international obligations (commitments) to learners and other stakeholders in support of learning through life (lifelong learning - LLL). "VET system"[2] refers to the network of institutions, people, policies, practices, resources, and methodologies in a country and the way in which they are organised to provide individuals of any age with the practical skills, knowledge, and competencies needed for specific occupations, trades, or professions.

The focus of monitoring is on the contribution of initial and continuing VET (IVET and CVET) to the learning activities of youth and adults in any learning setting (formal and non-formal), undertaken to improve their knowledge, skills, competences, and qualifications for personal, social and/or professional reasons. The purpose of the Torino Process monitoring exercise is to provide decision-makers, practitioners, and stakeholders with a reliable basis for informed decisions about policy improvement, resource allocation, strategy design, and follow-up analysis in support of lifelong learning.

The monitoring framework which underpins this report covers three major areas of commitment to lifelong learners: access to learning (Area A), quality of learning (Area B), and system organisation (Area C). These areas are divided into eight monitoring dimensions: access and participation in Area A; quality, relevance, excellence, and innovation in Area B; and system management/administration and resources in Area C. Within these areas and their dimensions, the Torino Process tracks a total of 30 system deliverables (outcomes)[3] - the extent to which they are being delivered and how equitably they are distributed to thirteen groups of learners according to age, gender, socio-economic background, labour market and migration status, and typical learning setting.

The monitoring provides information in the form of a system performance index (SPI) for each of these outcomes and learner groups they serve, to a total of 82 indices per country.[4] The SPIs can range from 0 to 100, where 100 indicates maximum or best performance. 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 first-generation migrants.

This report showcases a selection of key monitoring results based on those indices, as follows: overall performance by broad monitoring dimension (Section 2.1), performance by specific area and system deliverable (Section 2.2 and subsections), and performance in support of specific groups of learners (Section 2.3). The report also provides an international average score[5] for these results for

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[1] The Torino Process is a multiannual review of vocational education and training (VET) in countries in East and South-East Europe (including Turkey), Central Asia, and the South and East Mediterranean 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

[2] This report may use "VET", "VET system", and "system" interchangeably.

[3] Further in the report "outcomes" and "deliverables" are used interchangeably.

[4] In rare cases where evidence is missing, the number of SPIs for a country can be lower.

[5] "International average" refers to the average for countries participating in the Torino Process. At the time of preparation of this monitoring report, the evidence collection for some countries was still ongoing. As additional countries complete the monitoring exercise, the international averages shown in this report may change.
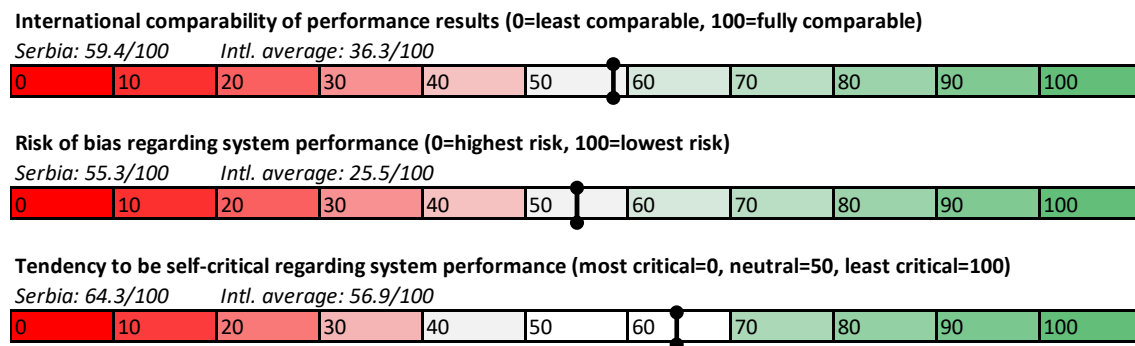
reference purposes, and, where relevant, it showcases disaggregated data used to calculate the system performance indices and information provided by national authorities through the monitoring questionnaire. Links to the full dataset for Serbia, the questionnaire, the Torino Process monitoring framework, and methodology can be found in the third and final section of this document.

1.2 Comparability and reliability of monitoring data

The evidence for this monitoring report was collected and analysed in several steps from September 2022 until April 2023. After an initial round of collecting internationally comparable indicators for each of the system outcomes and learner groups covered by the monitoring framework, the ETF compiled a supplementary questionnaire for national authorities and stakeholders in Serbia to gather information about outcomes and groups of learners for which such indicators were missing. The responses to the questionnaire were quantified and integrated with the rest of the monitoring data into a repository of mixed evidence, which was then used to calculate the system performance indices presented in this report.

In addition to messages about system performance, the monitoring delivers information also about the international comparability of results of each country, the extent to which these results may be susceptible to bias, and how self-critical a country is when it reports about its policy and system performance for external monitoring purposes. This is possible because the monitoring methodology foresees keeping accurate records about the availability, origin and type of evidence used to calculate the 82 performance indices and corresponding results for each country, including Serbia.

FIGURE 1. COMPARABILITY AND CONSISTENCY OF MONITORING RESULTS: SERBIA (2023)

International comparability of performance results (0=least comparable, 100=fully comparable)
Serbia: 59.4/100   Intl. average: 36.3/100

0	10	20	30	40	50	60	70	80	90	100

Risk of bias regarding system performance (0=highest risk, 100=lowest risk)
Serbia: 55.3/100   Intl. average: 25.5/100

0	10	20	30	40	50	60	70	80	90	100

Tendency to be self-critical regarding system performance (most critical=0, neutral=50, least critical=100)
Serbia: 64.3/100   Intl. average: 56.9/100

0	10	20	30	40	50	60	70	80	90	100

Of all the countries participating in the Torino Process, Serbia has the most internationally comparable results, on average. These results are also less susceptible to bias. However, the country tends to self-assess the performance of its VET system somewhat more positively compared to other countries involved in this round of Torino Process monitoring, as illustrated in Figure 1.

2. MONITORING RESULTS: SERBIA

2.1 Policy and system performance in 2023: overall results

The Torino Process monitoring draws on multiple, often disparate, information sources and data. To facilitate a quick, efficient, and focused communication of key messages despite the diversity of

information collected, the reporting of monitoring results aggregates the evidence in ways which facilitate a quick overview of system performance without sacrificing too much detail.

The eight monitoring dimensions mentioned in the previous section are the top layer of reporting in this respect. They capture VET system performance in various domains, the selection of which is aligned with national and international country commitments and reform and development priorities concerning learning. These eight dimensions are described as follows:

TABLE 1. DIMENSIONS OF POLICY AND SYSTEM PERFORMANCE MONITORING THROUGH THE TORINO PROCESS

No.	Dimension	Description
A.1	Access to learning	This dimension captures the degree to which initial VET (IVET), continuing VET (CVET), and other adult learning opportunities to which VET could contribute, are accessible and attractive for learners irrespective of who they are and why they wish to engage in learning.
A.2	Participation in learning	This dimension captures the likelihood of VET learners to survive and thrive in the education and training system by looking at its vertical and horizontal permeability, that is whether learners can switch between general and vocational pathways and between formal and non-formal learning, as well as whether they complete their learning.
B.1	Quality and relevance	This dimension captures the extent to which learners in IVET and CVET are provided with basic skills and key competences, whether their learning has exposure to, and is relevant for, employment, and also whether they are provided with adequate career guidance.
B.2	Excellence	This dimension captures the presence of system-wide policies and measures to promote highest quality practices and results in teaching and training, content design and provision, governance and VET provider management, and equity and social inclusion.
B.3	Innovation	This dimension captures the presence of innovative practices and priorities on system level in the areas of access to learning, support for successful completion of learning, and quality of learning and training outcomes.
B.4	VET system responsiveness	This dimension captures the extent to which curricula for youth and adults consider themes of significance for sustainability, climate change awareness, and digitalisation, as well as whether the IVET and CVET systems are responsive to labour market needs, demographic changes, and socio-economic developments.
C.1	Steering and management	This dimension captures the availability of evidence for informed decision-making, the degree to which governance of VET is participatory, the presence and transparency of quality assurance arrangements, the quality and capacity of staff in leadership positions, and the degree of internationalisation of IVET and CVET.
C.2	Resourcing	This dimension captures the adequacy and efficiency of human and financial resources in IVET and CVET, and the extent to which the material base for learning and training is adequate, that is – conducive to effective teaching, training, and learning.

The monitoring results depict a VET system that generally surpasses international benchmarks, especially in areas such as participation in learning, quality and relevance, system steering and resourcing. There are, however, areas where Serbia slightly lags behind the international average, notably in providing access to learning.

Going into detail, the data indicates that VET in Serbia has limited appeal to young and adult learners (Dimension A.1, SPI of 30). Yet, once enrolled, learners can expect a supportive environment that facilitates their progress and successful graduation, and the ability to switch or

advance between vocational and academic programmes with relative ease (Dimension A.2, SPI of 78).

VET learners in Serbia are also likely to receive slightly higher-quality education and training than their counterparts in other countries, on average, even though performance in this domain is in the mid-range. (Dimension B.1, SPI of 79). While system-wide policies exist to maintain high standards in teaching, training, content design, and governance, many of these policies still need to gain significant traction "on the ground" (Dimension B.2, SPI of 62).

FIGURE 2. INDEX OF SYSTEM PERFORMANCE BY MONITORING DIMENSION, SERBIA AND INTERNATIONAL AVERAGE (2023)
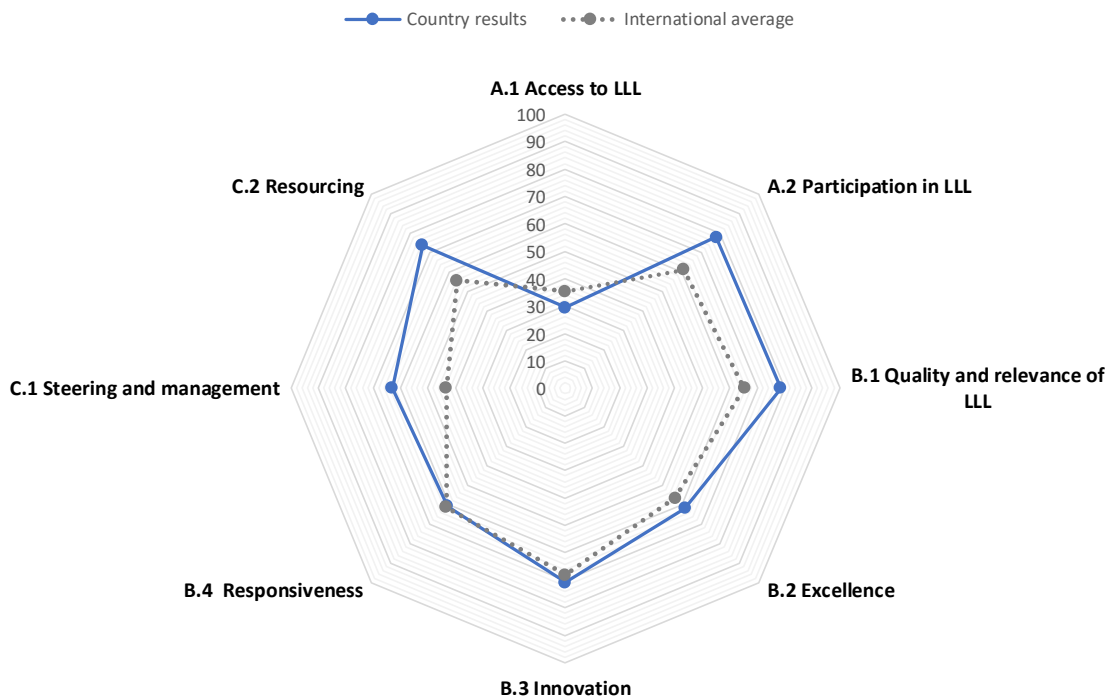
Theoretical[6] index range: min/low performance=0, max/high performance=100

Source: Torino Process monitoring database

Furthermore, Serbia emphasizes innovation within its VET system, particularly focusing on access to learning, support for successful completion of studies, and enhancing the quality of learning outcomes, as will be explored in subsequent chapters (Dimension B.3, SPI of 71). VET programmes are not only attuned to overarching strategic concerns like sustainability, climate change, and digitalisation but also to immediate needs such as those emerging from the labour market (Dimension B.4, SPI of 61).

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[6] 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.

Lastly, the data indicates the presence of a solid foundation for the robust steering and management of the VET system (Dimension C.1, SPI of 63), accompanied by a strong commitment to provisioning the necessary human and financial resources for a positive change (Dimension C.2, SPI of 74).

2.2 Policy and system performance in specific areas of monitoring and against specific outcomes

VET performance in Serbia in the eight monitoring dimensions presented above is driven by 30 policy and system outcomes. It is through these outcomes that the IVET and CVET subsystems work to meet the needs and expectations of stakeholders, particularly of youth and adult learners. This section of the monitoring report presents findings about system performance on the level of these deliverables. To facilitate reading and the navigation of content, the section groups the presentation of the 30 outcomes by the three major areas of commitment to learners, which were introduced in the first section of this report: access to learning (Area A), quality of learning (Area B), and system organisation (Area C). Reporting in Area B, the largest by the number of outcomes, is divided into B (1) and B (2).

2.2.1 Area A. Opportunities for lifelong learning: access and participation

In Area A (Access and participation in opportunities for LLL), the Torino Process tracks the first two monitoring dimensions presented in Section 2.1 – access/attractiveness and participation, with six system outcomes (Table 2).

These outcomes include access to IVET, CVET, and other opportunities for lifelong learning, the vertical and horizontal permeability of the VET system, as well as the prospects of learners in IVET and CVET to graduate and - where relevant – progress to subsequent levels of education and training. The outcomes included under Area A are defined as follows:

TABLE 2. POLICY AND SYSTEM OUTCOMES INCLUDED UNDER MONITORING AREA A: ACCESS AND PARTICIPATION

Code	Deliverable (outcome)	Description
A.1.1	**Access and attractiveness: initial VET**	This outcome captures the degree to which initial VET is an attractive educational choice in comparison with other learning alternatives, and whether that choice is accessible to various target groups of learners.
A.1.2	**Access and attractiveness: continuing VET**	This outcome captures the degree to which continuing VET is an attractive choice in comparison with other skills development alternatives, as well as whether that choice is accessible to various target groups
A.1.3	**Access to other opportunities for LLL**	This outcome captures access to other opportunities for lifelong learning not covered by outcomes A.1.1 and A.1.2 and VET, such as active labour market policies (ALMPs)
A.2.1	**Flexible pathways: vertical permeability**	This outcome strives to capture the vertical permeability of the education and training system vis-à-vis initial and continuing VET, understood as possibility for transition between consecutive tracks of education and training (general and vocational).
A.2.2	**Flexible pathways: horizontal permeability**	This outcome strives to capture the horizontal permeability of the education and training system vis-à-vis initial and continuing VET, understood as the possibility for transition between parallel tracks of education and training (general and vocational), and between formal and non-formal learning settings
A.2.3	**Progression and graduation of learners**	This outcome refers to the degree of success (graduation, progression) of learners in VET, for instance in comparison with other education and training alternatives

Prospective young learners in Serbia are more likely to opt for a VET programme than their peers in other Torino Process countries, on average. System performance in support of access to initial VET

is high both compared to other domains of monitoring and in international comparison (Outcome A.1.1, SPI of 73). According to national data, the majority of fifteen-year-olds attend secondary vocational school (74%), while every fourth fifteen-year-old (23%) attends general education school. This high rate of participation in VET, however, does not necessarily indicate that VET is inherently more attractive but rather underscores that access to other general education pathways on the secondary level is quite restrictive.

Adult learning is an area of considerably weaker performance, but here Serbia is doing somewhat better than the international average (Outcome A.1.2, SPI of 22), especially in supporting access to learning in the framework of active labour market policies (ALMPs) (Outcome A.1.3, SPI of 30).

FIGURE 3. PROMOTING ACCESS AND PARTICIPATION IN OPPORTUNITIES FOR LLL - INDEX OF SYSTEM PERFORMANCE, SERBIA AND INTERNATIONAL AVERAGE (2023)
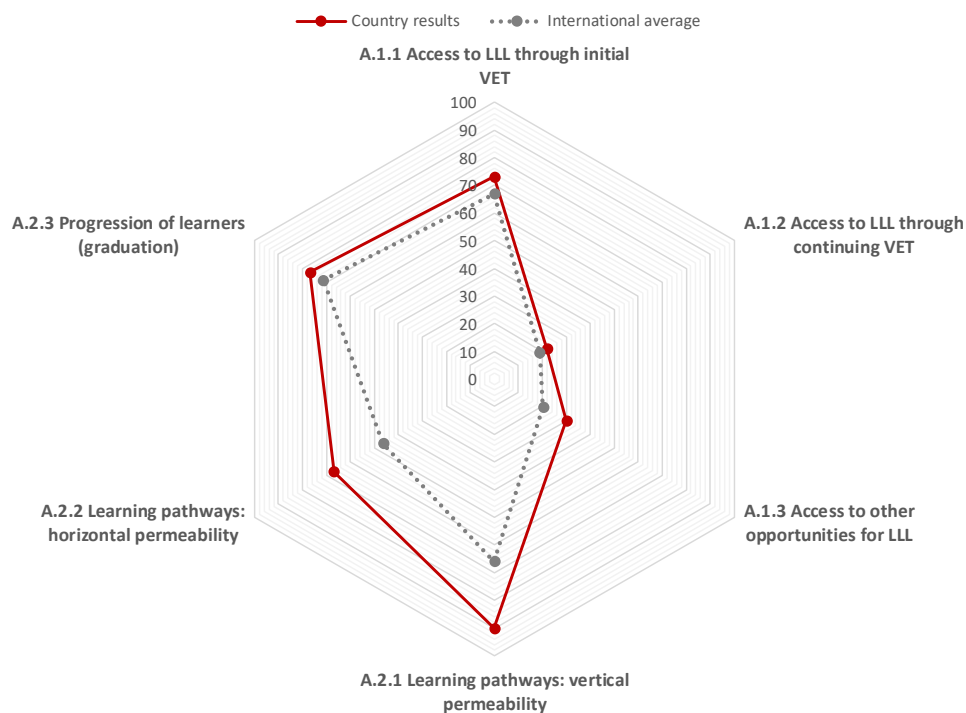
Theoretical index range: min/low performance=0, max/high performance=100

Source: Torino Process monitoring database

The data also indicates that irrespective of age, learners find themselves in an environment which is supportive of their progression and successful graduation (Outcome A.2.3, SPI of 77). The system is also reported to be accommodating to student choices post-enrolment, allowing students to transition between consecutive and (to a lesser extent) parallel educational pathways, be they general or vocational, with relative ease should they wish to (Outcomes A.2.1 and A.2.2, SPI of 90 and 67 respectively).

2.2.2 Area B (1). Lifelong learning outcomes: quality and relevance

In the first part of Area B (Quality and relevance of LLL outcomes), the Torino Process follows another two of the dimensions presented in Section 2.1, namely quality/relevance and responsiveness of VET, with a total of eight policy and system outcomes.

These outcomes cover the quality of learning of youth and adults in VET in terms of key skills and competences, the exposure of learners in VET to the world of work, the employability of graduates from IVET and CVET, the availability of career guidance for them, as well as the relevance of learning and training content in VET. Under relevance, the monitoring records the responsiveness of the VET programme offering to demographic, labour market, and socio-economic developments, as well as the inclusion in VET curricula of themes pertaining to the green and digital transition. The outcomes included under Area B (1) are defined in Table 3.

TABLE 3. POLICY AND SYSTEM OUTCOMES INCLUDED UNDER MONITORING AREA B (1): QUALITY AND RELEVANCE

Code	Deliverable (outcome)	Description
B.1.1	Key competences for LLL, quality of learning outcomes	This outcome captures the extent to which the education and training system succeeds in the provision of basic skills and key competences for learners in formal education (including IVET), as defined in regular international surveys and international assessments
B.1.2	Adult skills and competences	This outcome captures the extent to which adults in working age dispose of basic skills and key competences, as captured by regular international surveys.
B.1.3	Links between learning and the world of work	This outcome reflects the pragmatic relevance of IVET and CVET programmes through the lens of participation in work-based learning (WBL) and the share of programmes with outcomes/objectives that include a WBL component
B.1.4	Employability of learners	This outcome refers to the labour market relevance of opportunities for LLL as captured through evidence of labour market outcomes of graduates from IVET, CVET, and other forms of LLL with a VET component
B.1.5	Opportunities for career guidance	This outcome strives to capture the timely availability of up-to-date information about professions and education programmes, which information allows prospective and current students in VET to take informed decisions concerning their education and employment paths
B.4.1	Relevance of learning content: green transition	This outcome captures the extent to which curricula for youth and adults consider themes of significance for sustainability and climate change awareness, including "green skills" for sustainable economies
B.4.2	Relevance of learning content: digital transition	This outcome tracks the extent to which curricula for youth and adults incorporate themes concerning digitalisation, and the extent to which learners are provided with basic digital skills as a result
B.4.3	Responsiveness of programme offering	This outcome captures the degree and speed of responsiveness of initial and continuing VET systems to the needs of the labour market and to other changes concerning demography and socio-economic developments

The quality of basic skills and key competences delivered through VET in Serbia varies depending on the learner group. System performance in providing competences to youth is in the mid-range, albeit still above the average for other countries in the Torino Process (Outcome B.1.1, SPI of 54). According to data from OECD's Programme for International Student Assessment (PISA),[7] which in Serbia sampled students in vocational programmes as well, the average achievement in Serbia on mathematical literacy scale is 448 points, which is notably below the OECD average of around 500 points. This is mirrored in the findings that the learning outcomes of youth in VET in Serbia are notably inferior to those of adults and adult learners (Outcome B.1.2, SPI of 84). The PISA data breaks down this performance further by curriculum type, highlighting the superior performance of Grammar school students and the concerning underperformance of three-year vocational schools.

National authorities in Serbia report strong links between learning and the world of work due to a high degree of integration of work-based learning components into the curricula (Outcome B.1.3, SPI of 90). The commitment of Serbia to dual education is notable, with the system covering over 10 000 students, and with 65 dual educational profiles being implemented across over 150 secondary vocational schools. Additionally, dual education has been extended to higher education in an effort to

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[7] At the time of preparation of this monitoring report, the latest available OECD PISA data was from 2018.

build and strengthen a bridge between academia and industry. Similarly, as observed in other countries in the Torino Process, career guidance is perceived as highly efficient in providing professional and educational orientation to learners (Outcome B.1.5, SPI of 90).

Still, these results do not yet translate into performance metrics which are similarly high regarding the employability of learners. While the performance of Serbia in learner employability is commendable (Outcome B.1.4, SPI of 76), the results from the National Employment Service and the Chamber of Commerce of Serbia suggest that employers still face challenges in hiring due to deficiencies in occupation, lack of knowledge and skills, and insufficient work experience. This discrepancy invites a reflection on how a range of otherwise promising inputs in support of employability can be translated into even better labour market outcomes for learners.

FIGURE 4. SUPPORTING QUALITY AND RELEVANCE OF LLL - INDEX OF SYSTEM PERFORMANCE, SERBIA AND INTERNATIONAL AVERAGE (2023)
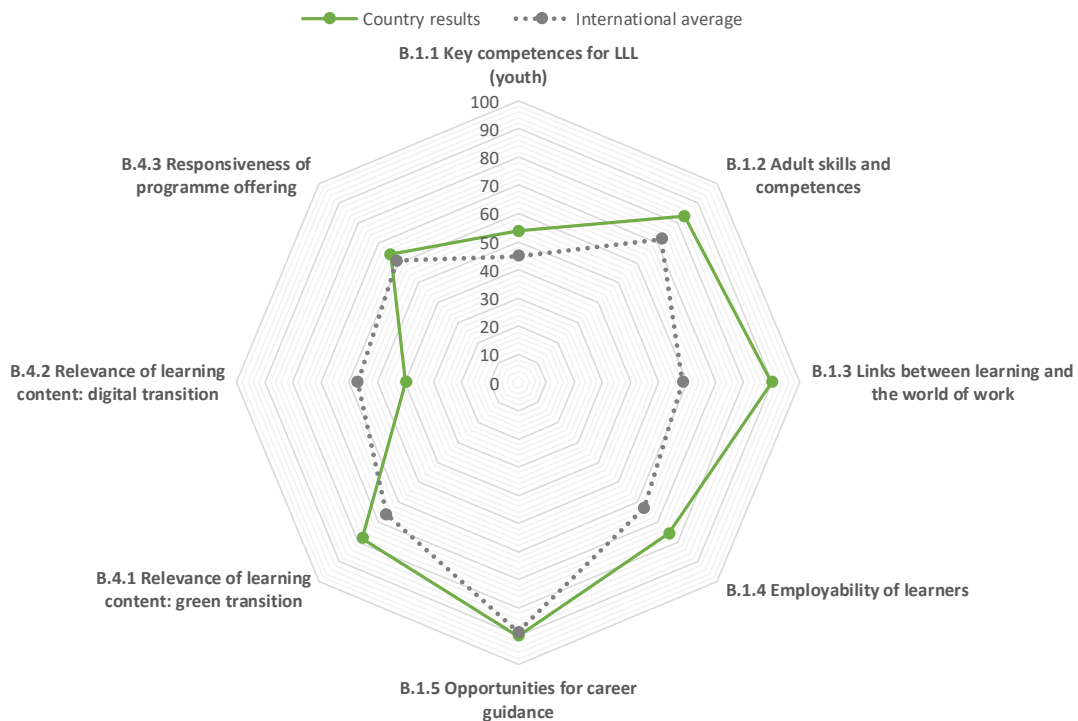
Theoretical index range: min/low performance=0, max/high performance=100
Source: Torino Process monitoring database

Beyond immediate employability, the Torino Process monitoring framework examines the relevance of learning content also from a long-term perspective, focusing on how curricula incorporate forward-looking themes such as the digital and green transitions (Outcomes B.4.1 and B.4.2). This includes elements such as digital skills, green skills, sustainability, and climate change awareness for both youth and adults.

In this dimension of performance, the VET system in Serbia offers a nuanced picture. Its responsiveness to current labour market and economic needs is slightly above average (Outcome B.4.3, SPI of 64). However, there is a disparity in how VET addresses forward-looking themes and priorities like the green and digital transitions. While the green transition is a topic of prominence,

more so than in other countries on average (Outcome B.4.1, SPI of 78), the incorporation of learning content related to the digital transition remains a challenge (Outcome B.4.2, SPI of 40), both in terms of Serbia's performance in other monitoring areas and in comparison to the average performance of other countries. This is consistent with the findings shared by national authorities which point out the challenges faced in the area of digital skills.

2.2.3 Area B (2). Lifelong learning outcomes: excellence and innovation

In the second part of Area B (Excellence and innovation in support of lifelong learning), the Torino Process monitors two performance dimensions – excellence and innovation, which accommodate a total of eight system outcomes. These outcomes include excellence in pedagogy, learning content, governance, and inclusion into learning, as well as systemic innovation supporting access, participation, quality, and relevance of learning and training. The outcomes included under Area B (2) are defined in Table 4.

TABLE 4. POLICY AND SYSTEM OUTCOMES INCLUDED UNDER MONITORING AREA B (2): EXCELLENCE AND INNOVATION

| Code	Deliverable (outcome)	Description
B.2.1	Excellence in pedagogy and professional development	This outcome captures the extent to which excellence in teaching and training is an acknowledged policy priority, as well as the extent to which its implementation is bearing fruit across the education and training system, including in the domain of professional development of teachers
B.2.2	Excellence in programme content and implementation	This outcome captures the results of efforts to promote excellence in the content and implementation of VET programmes, with a specific focus on bringing them closer to the world of work (i.e. through work-based learning), on prioritising greening in curricula and teaching, as well as on promoting excellence in learning.
B.2.3	Excellence in governance and provider management	This outcome captures the results of efforts to promote excellence in the domains of financing, leadership, and governance, as well as the extent to which these examples are systemic or not
B.2.4	Excellence in social inclusion and equity	This outcome captures the results of efforts to promote excellence in the domain of equity and social inclusion in education and training, as well as the extent to which these examples are systemic or not
B.3.1	Systemic innovation: access to opportunities for LLL	This outcome captures the presence of innovative practices and policy solutions in the domain of access to opportunities for lifelong learning.
B.3.2	Systemic innovation: participation and graduation	This outcome captures the presence of innovative practices and policy solutions in the provision of support for participation in (and graduation from) opportunities for lifelong learning, and the extent to which they are systemic (or not)
B.3.3	Systemic innovation: quality of learning and training outcomes	This outcome captures the presence of innovative practices and policy solutions for raising the quality of learning and training in terms of the knowledge, skills, and abilities acquired by learners
B.3.4	Systemic innovation: relevance of learning and training	This outcome captures the presence of innovative practices and policy solutions for raising the labour market relevance of knowledge, skills, and abilities acquired by learners

The report defines excellence as the presence of policies and measures designed to ensure high-quality practices in various domains of policy and system delivery.

In the context of promoting high-quality practices, one key area evaluated is the policies and measures related to pedagogy and the continuous development of teachers and trainers (Outcome B.2.1). The VET system of Serbia has an SPI of 53 in this specific area, indicating that its commitment to and implementation of such policies and measures are nearly in line with the international average of 55. An example of action in support of the commitment of Serbia to pedagogical excellence, which was shared by national authorities, is the Teacher training programme for the delivery of teaching oriented towards learning outcomes. The programme is organised by the Institute for the Improvement of Education and since 2019 has ensured the participation of some 7 282 teachers of vocational subjects and 5 136 teachers of general education subjects in vocational schools.

Another key domain under review is excellence in programme content and implementation (Outcome B.2.2). Here too, national authorities document a high level of commitment, although it remains somewhat less clear to what extent the potential benefits of best practices are accessible to all learners irrespective of background. Still, Serbia is making strides in this domain, for instance through the development and implementation of dual education, which has seen substantial growth over the past years. The National Dual Education Model, for instance, has matured with the collaboration between schools and companies, resulting in a significant employment rate of 68.92% among its graduates, according to official information.

Excellence in support of social inclusion and equity is a domain of sub-average performance (Outcome B.2.4, SPU of 42). Although this does not suggest that the VET system of Serbia is not striving to be inclusive and equitable, it does show that there might be some discrepancy between the intent behind policies to promote best practices for all learners, and the execution of these policies to the benefit of all learners. On this front, Serbia has made attempts to bridge the gap with the model of Career Guidance and Counselling (KViS), aimed at providing essential career guidance from primary school level onwards.

FIGURE 5. EXCELLENCE AND INNOVATION FOR BETTER LLL - INDEX OF SYSTEM PERFORMANCE, SERBIA AND INTERNATIONAL AVERAGE (2023)
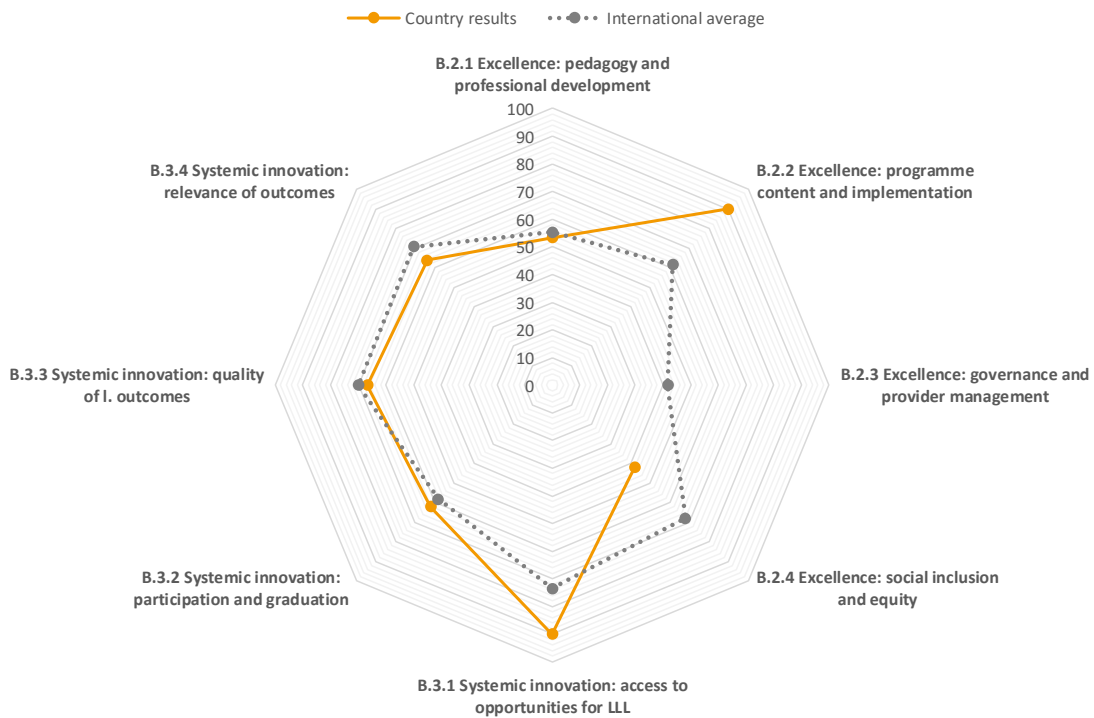
Theoretical index range: min/low performance=0, max/high performance=100

Source: Torino Process monitoring database

In the context of system performance monitoring within the Torino Process, excellence and innovation represent distinct yet interconnected domains. While excellence refers to the pursuit of highest quality practices and outcomes in various key domains of vocational education and training policy and delivery, innovation focuses on the presence of pioneering practices and policy solutions within these domains. In the context of monitoring, innovation is a proxy for the adaptability, creativity,

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and forward-looking orientation in the VET system in response to the evolving needs of learners and labour markets.

VET in Serbia is open to innovation in all domains tracked by the Torino Process, particularly in facilitating access to learning opportunities for youth and adults, as reported by national authorities (Outcome B.3.1, SPI of 90). This is evident in the establishment of regional training centres aiming at lifelong learning and enhancing dual education both at secondary and higher levels. However, there is a strong contrast between this commendable degree of openness to innovation and the performance results in supporting access to learning on a day-to-day basis, which were discussed in Section 2.2.1. This suggests possible difficulties with the translation and/or mainstreaming of promising innovative practices into routine operational processes across the VET system.

Many countries participating in the Torino Process face challenges transitioning from novel initiatives to comprehensive system enhancements. In Serbia, as in other countries, there are domains with a pronounced innovation drive but comparatively weaker system-wide adoption. These include enhancing the quality of learning outcomes (Outcome B.3.3, SPI of 67 for Serbia), supporting participation and graduation through innovation (Outcome B.3.2, SPI of 62), and being receptive to innovative concepts that make the VET system more attuned to current and emerging labour market needs (Outcome B.3.4, SPI of 64).

2.2.4 Area C. System organisation

In Area C (System organisation), the monitoring framework accommodates the last two dimensions presented in Section 2.1 – steering/management and resourcing, in which the Torino Process tracks a total of eight system outcomes. These outcomes include the availability and use of data for informed decision-making, the involvement of stakeholders in VET policy, provider management, and resourcing, quality assurance and accountability, the internationalisation of VET providers, as well as the availability and use of human and financial resources in VET. The outcomes included under Area C are defined in Table 5.

Serbia performs or reports of performance above the international average in all domains included in Area C. For instance, reliable data is more widely available in Serbia than in most other countries in the Torino Process (Outcome C.1.1, SPI of 26). This data includes internationally comparable sources such as the EUROPASS platform, the International Standard Classification of Education ISCED 2013-F, and the classification of European Skills, among others. Moreover, national data that is considered reliable and easily accessible is primarily obtained from the Qualifications Agency, the Unified Education Information System of the Republic of Serbia (JISP), and the Statistical Office of the Republic of Serbia.

Nevertheless, data and capacity for evidence-informed decision-making remains the domain of weakest performance overall. More could be done to strengthen the mechanisms for collecting, managing, and utilising administrative and large-scale data for monitoring and improvement purposes, especially in relation to the registers of qualifications in Europe.

The private sector and other external stakeholders in Serbia appear to be somewhat more involved in consultations and decision-making processes in VET than is the case in other countries, on average (Outcome C.1.2, SPI of 73). This involvement is facilitated through various levels and institutions, particularly the Council for Vocational Education and Adult Education and the establishment of twelve sectoral councils. These councils play a crucial role in connecting the realms of work and education, ensuring that qualifications meet sector-specific demands and are comparable to those in other European Union countries.

TABLE 5. POLICY AND SYSTEM OUTCOMES INCLUDED UNDER MONITORING AREA C: SYSTEM ORGANISATION

Code	Deliverable (outcome)	Description
C.1.1	**Data availability and use**	This outcome refers to the availability of administrative and big data as covered by Level 1 of the monitoring framework, participation in large scale international assessments, as well as technical capacity to generate/manage evidence to support monitoring and improvement
C.1.2	**Participatory governance**	This outcome captures the degree of involvement of the private sector and other external stakeholders in consultations and decisions concerning opportunities for LLL through initial and continuing VET
C.1.3	**Public accountability and reliable quality assurance**	This outcome tracks the extent to which reliable and trustworthy quality assurance (QA) mechanisms and accountability arrangements are in place which cover learners, teachers, and providers, as well as the extent to which the QA results are publicly available
C.1.4	**Professional capacity of staff in leadership positions**	This outcome monitors the availability and professional capacity of qualified staff in leadership roles and in other key administrative roles on provider level
C.1.5	**Internationalisation**	This outcome monitors the degree of internationalisation in IVET and CVET, such as internationalisation of QA arrangements, curricular content, qualifications (i.e. recognition of international credentials, awarding bodies being active beyond their country of origin, etc.)
C.2.1	**Adequate financial resource allocations and use**	This outcome captures the adequacy of financial resources invested in IVET and CVET in terms of level of investment and allocation, as well as the degree of diversification of funding between public and private sources
C.2.2	**Adequate human resource allocation and use**	This outcome captures the efficiency of human resource management in terms of availability of teachers and trainers, and the adequacy of their deployment and career management
C.2.3	**Adequate material base**	This outcome captures the extent to which the material base for learning and training is adequate, including learning and training materials which are supportive of and promote effective teaching, training, and learning

The VET system in Serbia is also equipped with a wide range of quality assurance mechanisms and accountability arrangements (Outcome C.1.3, SPI of 83). An essential digital tool supporting this area is the National Qualifications Framework of the Republic of Serbia (NOKS portal), which provides transparency and comparability of qualifications. However, quality assurance may not be equally well suited to cover all groups of participants (learners, teachers) and providers in VET.

Serbia reports that its VET system prioritizes the placement of qualified staff in leadership and key administrative roles (Outcome C.1.4, SPI of 75). Training is organized for principals, with a total of 1 630 having been trained under the Institute for the Improvement of Education. While all countries in the Torino Process sample are dedicated to professionalism among their school leaders, many describe difficulties to sustain the same level of dedication across their network of providers. When benchmarked against many other countries in the Torino Process sample, the reporting of Serbia stands out due to relative lack of reported challenges in this respect.

Serbia has also a long-standing tradition of promoting the internationalisation in its VET system, for instance by integrating good quality assurance practice from abroad, incorporating international perspectives into its curricular content, recognising international credentials, and being an active member in initiative supporting the EU integration process of the country. This is evident in its integration of good quality assurance practices from abroad, the recognition of international credentials, and active participation in initiatives supporting the EU integration process. In recent developments, Erasmus+ has facilitated various opportunities for schools and organizations in Serbia in the VET sector. From 2020 onwards, vocational schools in Serbia can apply for Erasmus+ accreditations, promoting long-term internationalization planning. The National Team for Supporting Mobility Projects in Vocational Education is another initiative that aids in the internationalization efforts, organizing seminars, round tables, and conferences to bolster the VET system's global standing.

As a result, internationalisation is an area of above average performance in international comparison (Outcome C.1.5, SPI of 58). However, it is worth noting that the general benchmark of ETF partner countries in this domain is quite modest (average SPI of only 35).

Unlike many other countries in the Torino Process, Serbia demonstrates an equal commitment to investing in VET (Outcome C.2.1, SPI of 84) as it does to providing learners with the teachers and trainers they need (Outcome C.2.2, SPI of 81). It is also noteworthy that in both of these domains - financial and human resource allocation and use - the performance of VET in Serbia is higher than in other countries in the Torino Process, on average. This makes Serbia somewhat of an outlier in this domain of monitoring.

FIGURE 6. GOVERNANCE, PARTICIPATION, ACCOUNTABILITY, AND RESOURCES - INDEX OF SYSTEM PERFORMANCE, SERBIA AND INTERNATIONAL AVERAGE (2023)
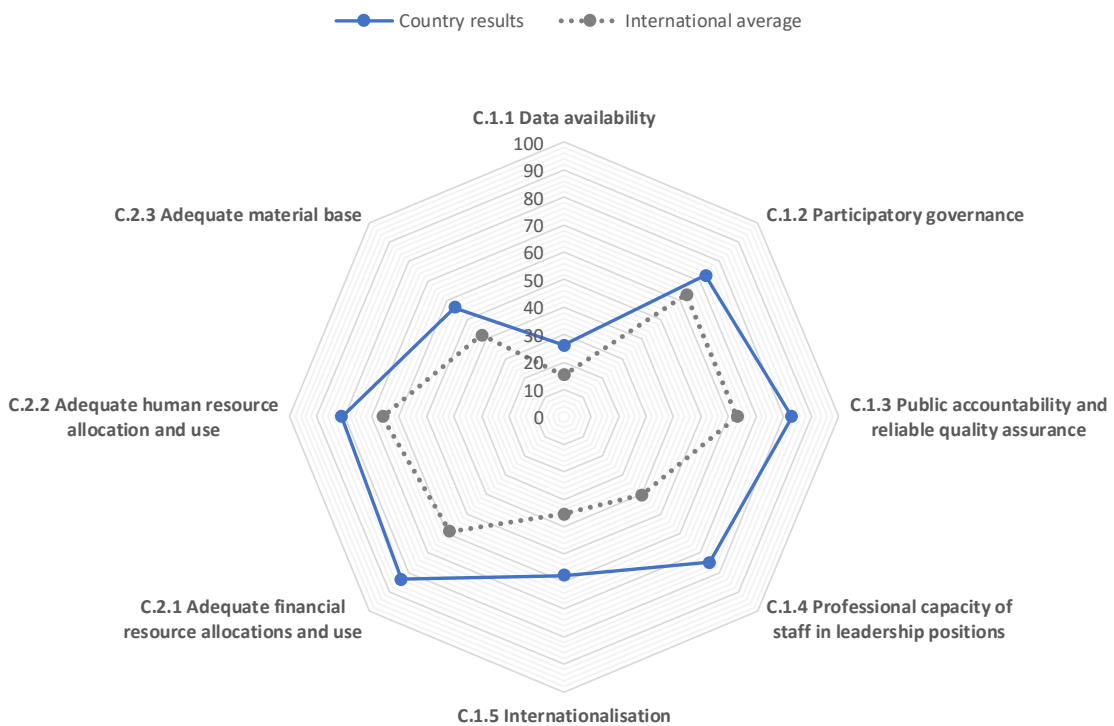
Theoretical index range: min/low performance=0, max/high performance=100

Source: Torino Process monitoring database

The capacity of the VET system in Serbia to establish and sustain a material base for VET providers, supportive of effective teaching, training, and learning, is the most challenged outcome in the domain of resources (Outcome C.2.3, SPI of 56). While Serbia outperforms other countries in this specific domain, the results here are in pronounced contrast to its commendable performance regarding financial resources invested in the system. This disparity might indicate that, despite ample financial investment, funds may not always be channelled to areas of greatest need.

National authorities are reporting of efforts to address the challenges, which are meant to ensure that students have access to high-quality educational materials, enhanced digital competence

infrastructure, and broadband Internet access in vocational schools. On the regulatory front, new teaching programs are now backed by strict regulations on space and equipment to guarantee that schools are adequately equipped. There is also a verification process to ensure that both equipment and personnel meet the set standards.

## 2.3 HOW DID POLICIES AND SYSTEMS BENEFIT SPECIFIC GROUPS OF LEARNERS?

In this round, the Torino Process monitoring looks not only into the deliverables of national VET policies and systems in general but also into the degree to which they address the needs and expectations of present and prospective lifelong learners. The monitoring framework traces how well and equitably system outcomes are distributed to these learners depending on their age and gender, and by features which can be influenced by policy, such as socio-economic disadvantage, labour market status, migration status and learning setting/pathway.

The next sections provide an overview of how the IVET and CVET subsystems in Serbia perform in a key selection of monitoring dimensions for the following key selection of learner groups: female learners (Section 2.3.1), disadvantaged learners (Section 2.3.2), populations who are long term unemployed, economically inactive, and have a low level of educational attainment (Section 2.3.3), as well as by their country of origin (Section 2.3.4).

2.3.1 Female learners

This section describes findings about VET system performance regarding access, participation, quality and relevance, and innovation to the benefit of female youth and adult learners in VET in Serbia.

FIGURE 7. SYSTEM PERFORMANCE IN SUPPORT OF FEMALE LEARNERS IN SELECTED MONITORING DIMENSIONS, SERBIA (2023)
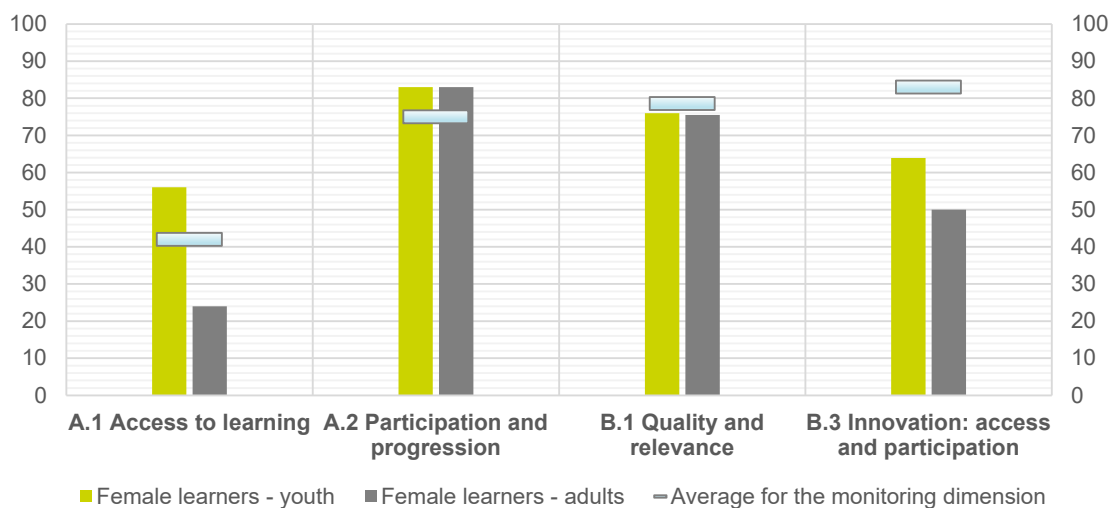
Theoretical index range: min/low performance=0, max/high performance=100

Source: Torino Process monitoring database

In Serbia, young females are much more likely to participate in learning than adult females (Dimension A.1). System performance in support of access for young females stands at an SPI of 56, while for adult females, it is at 24. However, female learners enrol in a programme or a course, there is no discernible, aged-based disadvantage. In fact, the VET system seems to be more supportive of female learners overall, who are more likely to finish their studies than any other learner group, on average (Dimension A.2, SPI of 83).

Within age groups on the other hand, the VET system of Serbia shows minimal gender disparity in providing quality and relevance. Both male and female learners can expect quality and relevance of learning which is consistent regardless of their age or gender (Dimension B.1).

While the quality and relevance of learning remain consistent for different groups, female learners are less in focus of innovative practices to boost access and participation (Dimension B.3). Perhaps the reason is that mainstream, day-to-day performance is already without gender bias in many dimensions of system monitoring. However, the overall performance in the access domain remains significantly low. This presents an opportunity to integrate innovation in support of better access for everyone: by initiating innovative strategies with female learners at the forefront, it could set a precedent for enhancing access for all, ensuring a more inclusive VET system in Serbia.

2.3.2 Disadvantaged learners

This section describes how well the VET system caters for the needs of socioeconomically disadvantaged youth when it comes to access, participation, and quality/relevance of opportunities for lifelong learning through VET. The section also examines whether efforts to promote innovation in VET access and participation benefit this specific group of learners in Serbia.

FIGURE 8. SYSTEM PERFORMANCE IN SUPPORT OF SOCIO-ECONOMICALLY DISADVANTAGED YOUTH IN SELECTED MONITORING DIMENSIONS, SERBIA (2023)
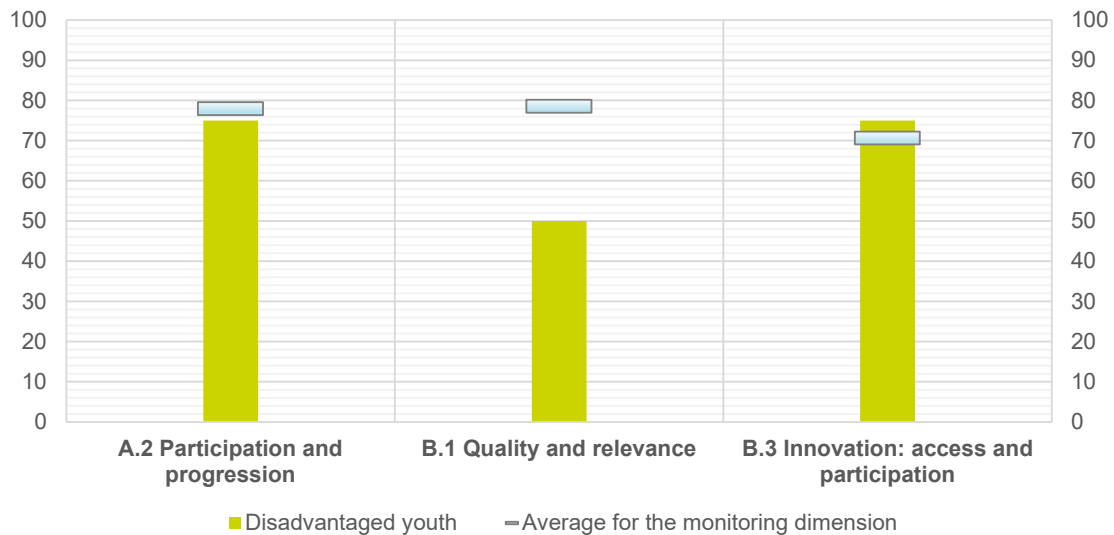
Theoretical index range: min/low performance=0, max/high performance=100

Source: Torino Process monitoring database

In terms of participation and progression, the VET system in Serbia equally supports both the socio-economically disadvantaged youth and the average learner (Dimension A.2, SPI of 75 versus SPI of 78 on average). While the socio-economic background does not hinder their graduation prospects, it does seem to play a role in the quality and relevance of the education they receive.

According to PISA data, the socio-economic impact on student achievement in Serbia is lower than in OECD countries, on average, suggesting that disadvantaged students in Serbia have a comparatively higher chance of attaining satisfactory results than their counterparts in many other countries. Nonetheless, the overall chances of disadvantaged students in Serbia to achieve basic levels of proficiency in subjects like reading and mathematics, are lower than for students who are not disadvantaged.

According to national authorities, a quarter 25% of the most disadvantaged students, the vast majority of whom are enrolled in VET programmes, are twice as likely to score below the basic level across all fields. This is also confirmed by the Torino Process monitoring results: disadvantaged youth attain a level of basic skills and key competences that is notably below that of the average VET participant (Dimension B.1, SPI of 50 versus 79 for the average learner).

Serbia does not prioritise this group of learners substantially more than others when it comes to innovative practices in support of access and participation (Dimension B.3, SPI of 75 versus 71 on average). Given the observed difference in quality and relevance of education for disadvantaged youth, targeted measures are needed to close the skills gap with other learners. Implementing specific teaching strategies and appropriate learning resources can address this issue. Additionally, innovation in the VET system should focus on improving both access and the overall quality of education for all participants, irrespective of their socio-economic status.

2.3.3 Populations who are long-term unemployed, economically inactive, and have low educational attainment

Section 2.3.3 presents findings about VET system performance from the perspective of three strategically important groups of adults: the long-term unemployed, the economically inactive adults, and those with low or no educational attainment.

The data from the Torino Process reveals that adults in Serbia who are at risk of disadvantage face varying degrees of accessibility when it comes to learning opportunities. For instance, while long-term unemployed adults and those with little to no educational attainment generally have moderate chances to engage in learning (Dimension A.1, SPI of 50 for both groups), the economically inactive encounter more significant obstacles (Dimension A.1, SPI of 36).

Despite the challenges they face, these demographic groups have a higher likelihood to access learning opportunities than the average working-age adult, likely a result of targeted measures addressing these very groups. Indeed, in the last decade, the Ministry of Education of has developed an adult education system specifically targeting those lacking primary or secondary education. The initiative, especially the Functional Elementary Education for Adults (FOOO) program, integrates primary education with job-specific training, including Digital Literacy components. Annually, around 6 000 adults aged 15 and above participate in this program.

Although recent data is not specifically available for economically inactive adults in CVET, the broader picture from the National Employment Service, quoted in information provided by national authorities, illustrates the labour market situation and the efforts to integrate and reintegrate individuals with limited or no qualifications. As of late 2022, a considerable portion of the

unemployed, 35.1%, consisted of individuals without qualifications or with low qualification levels. This demographic makeup is significant since a vast majority, 68.1%, of the unemployed have been job-seeking for over a year, emphasizing the challenges long-term unemployed individuals face in their attempts to re-enter the job market.

To mitigate these challenges, Serbia has put forth a range of ALMP measures. Official data shows that in the first three quarters of 2022, these measures catered to 4 568 individuals registered as unemployed. Interestingly, a portion of these initiatives specifically targets individuals without qualifications or with low qualification levels. For example, the already mentioned FOOO program, in which 911 individuals participated in the January-November 2022 period, seeks to furnish adults with essential skills related to employability and specific occupations in demand in the labour market.

FIGURE 9. SYSTEM PERFORMANCE IN SUPPORT OF ADULTS WHO ARE LONG-TERM UNEMPLOYED, ECONOMICALLY INACTIVE, OR HAVE LOW EDUCATIONAL ATTAINMENT, SERBIA (2023)
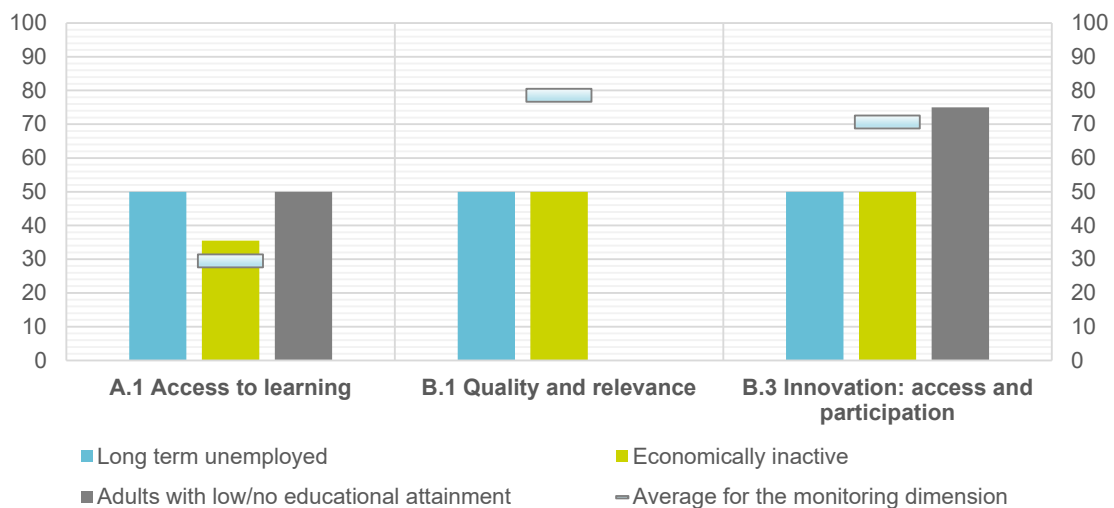
Theoretical index range: min/low performance=0, max/high performance=100

Source: Torino Process monitoring database

While these groups might enjoy broader and diversified opportunities, the quality of learning they receive is not at par with the general adult population. Both the long-term unemployed and economically inactive adults receive education and training of a similar level of quality and relevance (Dimension B.1, SPI of 50), which is much lower than what the education and training system delivers to the average adult learner in terms of quality (SPI of 79). This suggests that despite the increased access, the content and applicability of the learning might not be as robust or in line with the needs of the labour market. According to data from a survey of the National Employment Service from late 2021, employers continue facing difficulties in finding the people they need: due to the lack of certain occupations (27.4%), deficiency in knowledge and skills (25.7%), and insufficient work experience (25.2%). These data points further emphasize the necessity for robust and targeted training and educational initiatives.

When it comes to innovation in VET, adults with low or no educational attainment are exposed to more innovative practices in teaching and learning than the average adult learner (Dimension B.3,

SPI of 75). In the other hand, both the long-term unemployed and economically inactive adults have similar levels of exposure to innovations, with an SPI of 50 for Dimension B.3.

2.3.4 Learners by country of origin

The final section with monitoring findings discusses performance in the domains of access, participation, quality and relevance, and innovation in Serbia for learners who are first-generation migrants.

The data suggest that, while the VET system in Serbia displays an inclination to support first generation migrants, especially in access and innovation, there is a need to ensure consistent quality across all dimensions of the educational experience

Specifically, Serbia appears to prioritize accessibility to learning opportunities for first generation migrants (Dimension A.1, SPI of 75). Compared to the general learner population, migrants seem to benefit from more open access to both initial and continuing VET opportunities, in line with the Law on the Fundamentals of the Education System, which guarantees equal educational access for all, including migrants and asylum seekers. Affirmative measures, such as enrolling students without certain documentation, enhance accessibility.

FIGURE 10. SYSTEM PERFORMANCE IN SUPPORT OF FIRST-GENERATION MIGRANTS IN SELECTED MONITORING DIMENSIONS, SERBIA (2023)
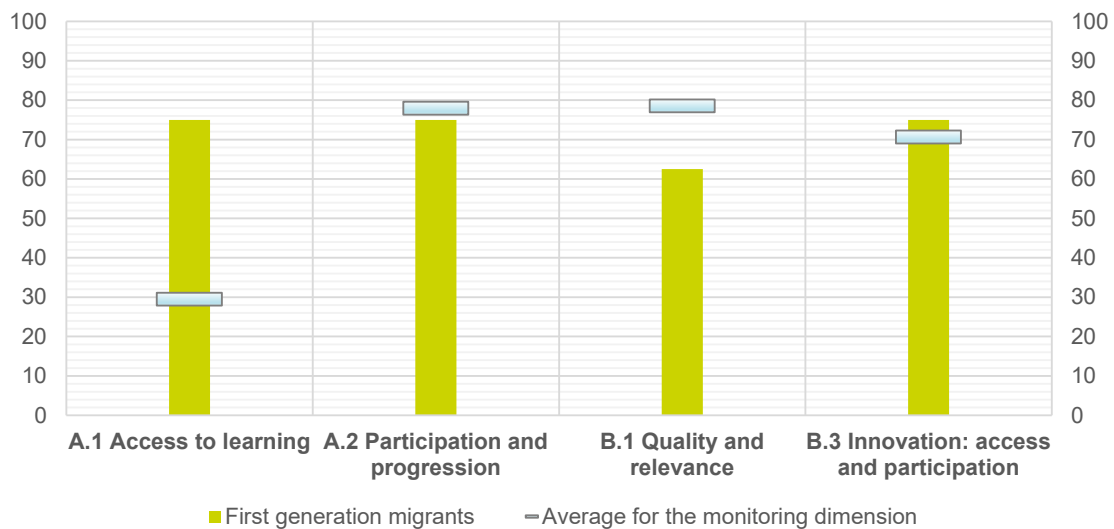
Theoretical index range: min/low performance=0, max/high performance=100

Source: Torino Process monitoring database

Regarding participation and progression in the VET system, learners with migrant background in Serbia experience a level of support that is comparable to the general learner population (Dimension A.2, SPI of 75). They can navigate between various educational pathways with the same degree of ease or difficulty like any other learner. In the school year 2021/22, primary school education was accessible for some 85% to 87% of migrant/asylum-seeking children. National authorities report of significant efforts to mitigate language barriers, with translated educational material provided in languages such as Arabic and Farsi.

However, when considering the quality and relevance of VET, there might be room for improvement in catering to the needs of migrants (Dimension B.1, SPI of 63), as the VET system appears to be somewhat less effective in delivering high-quality, relevant education and training to this group as it is for the rest of the population of learners. While the VET system might not be as effective in this respect, the Ministry of Education informs of steps, including providing digital resources like tablets and translated content, to bridge the gap. Furthermore, 95% of migrant students received additional educational support in 2021.

In terms of systemic innovation for lifelong learning access, the VET system in Serbia gives slightly more emphasis to the migrant demographic (Dimension B.3, SPI of 75). Various supportive measures, such as the program by IKEA and UNHCR, help migrants integrate into the Serbian labour market. It is worth noting that the largest migrant groups in Serbia often come with existing skills, and for those granted asylum, Serbian language classes and vocational courses like computer literacy are provided to ease their transition into society.

3. SUPPLEMENTARY SOURCES AND INFORMATION

3.1 Links to background information and data

The system performance indices presented in this report were calculated based on a selection of international quantitative indicators for Serbia and the qualitative responses of stakeholders where such indicators were missing.

The full collection of quantitative indicators collected for Serbia for this 2023 round of monitoring can be found here:

https://docs.google.com/spreadsheets/d/1mc9tFliVPFgPQ7f_KYLegXHWrsGGThAO/edit?usp=sharing&ouid=110154518834912853011&rtpof=true&sd=true

The full collection of qualitative responses to the country-specific questionnaire for Serbia can be found here:

https://docs.google.com/document/d/1mZGAoH9oh_TMXiIJEsjLezR86jW71lT1/edit?usp=sharing&ouid=110154518834912853011&rtpof=true&sd=true

A full technical report about the monitoring framework and process in 2023 can be found here:[8] https://drive.google.com/file/d/1FNwIKtlhp4y-Hx02AiFtwJLM8ubQQ7PK/view

General information for the Torino Process as well as the reports and data of other participating countries, can be found here: https://www.etf.europa.eu/en/what-we-do/torino-process-policy-analysis-and-progress-monitoring.[9]

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[8] Release date for the report is 1 July 2023 upon completion of monitoring for all participating countries.

[9] The Torino Process monitoring reports and data will be released gradually in the period March-May 2023 in the order in which countries submit their evidence and the reports are being finalised with them.

3.2 Definitions, terminological clarifications, methodological limitations

3.2.1 Definitions and terminological clarifications

This section provides an overview and definition of key terms in the Torino Process monitoring framework.

- **Youth:** Population in the official age of entrance and participation in initial VET programmes.
- **Adults:** Population of working age (15+ years of age) not enrolled in initial VET programmes.
- **Disadvantaged youth:** This refers to socio-economic disadvantage and describes youth with access to below-average levels of financial, social, cultural, and human capital resources.
- **Long-term unemployed:** Long-term unemployment refers to the number of people who are out of work and have been actively seeking employment for at least one year.
- **Inactive populations:** Adults of working age who are outside of the labour force, meaning that they are neither employed nor registered as unemployed (that is, seeking employment)
- **Lifelong learning:** any learning activity undertaken throughout life, to improve knowledge, skills/competences and/or qualifications for personal, social and/or professional reasons.
- **System performance:** describes the extent to which the VET system delivers against a targeted selection of national and international obligations (commitments) to learners and other stakeholders in support of learning through life (lifelong learning - LLL).
- **Initial VET:** Vocational education and training carried out in the formal system of initial education (usually upper or post-secondary) before entering working life.
- **Continuing VET:** Formal or non-formal vocational education and training carried out after initial VET and usually after the beginning of working life.
- **Adult education:** Adult education or learning may refer to any formal, non-formal, or informal learning activity, both general and vocational, undertaken by adults after leaving initial education and training.

3.2.2 Methodological limitations

The system performance indices developed in the framework of the Torino Process, are based on a rich methodological framework. This framework relies on various principles and theoretical underpinnings to ensure that the design, implementation, and evaluation of the indices is plausible in terms of theoretical foundations, technical reproducibility, and statistical fitness. The primary aim of these indices is to offer insights that can guide the monitoring of countries and inform their policy planning, not to promote their comparative ranking.

While various options were available during the different phases of the construction of the indices, the final choices represent a series of decisions which were deemed adequate and appropriate to promote reliability and avoid bias, in full awareness that by their very nature, indices like those require constant refinement. Therefore, the construction and calculation of the performance indices will remain an ongoing process to address the following limitations:

1. Refinement of aggregations and analysis: the current version of the indices represents a sub-set of the national systems under analysis. While these are sufficient for the formulation of initial findings, future cross-country analysis will include a larger number of countries with possible alternative (dis)aggregations i.e., at regional or development level, which may also affect the formulas using in the calculation of the indices as well as their values. The methodological framework of the Torino

Process monitoring allows for such extensions and refinement without jeopardizing the validity of results which have been released already.

2. Choice of evidence: while the goal of this exercise is to monitor equally the different areas of interest, their dimensions and related outcomes, different countries may rely on a different, country-specific mix of qualitative and quantitative indicators from a predefined list for all countries. This also applies to the last available (reference) year for the quantitative indicators, which may vary between indicators and countries within a five-year limit.