





Contents

INTRODUCTION	2
1. CONTEXT AND OVERVIEW OF VET SYSTEMS	4
1.1 Economic context	
1.2 Labour market context	5
1.3 Overview of VET systems in the region	9
2. MAIN FINDINGS	12
A. Vision for VET – Progress and challenges	12
B. Effectiveness and efficiency in addressing economic and labour market demand	13
C. Effectiveness and efficiency in addressing demographic, social and inclusion demand	16
D. Internal efficiency of the VET system – Common trends, achievements and challenges	19
E. Governance and policy practices in the VET system – Common trends	23
3. CONCLUSIONS AND KEY MESSAGES	25
ANNEXES	29
Annex 1. Labour market, education and contextual indicators	29
Annex 2. Benchmarking Kazakhstan 2016–17 Torino Process and	
EU 2020 targets in education and employment	31
ACRONYMS	32
REFERENCES	33



INTRODUCTION

This regional report on the 2016–17 Torino Process in Central Asia examines developments in vocational education and training (VET) in Kazakhstan, the Kyrgyz Republic, Tajikistan and Uzbekistan¹ from a dual perspective. It considers both the period 2014–16, the timeframe covered by the 2016–17 round of the Torino Process, as well as the period starting in 2010, when the first round of the Torino Process took place.

The regional report is largely based upon material submitted in the national reports², but does not aim at summarising these. An important aspect to be considered in this context is the decision taken by all four participating countries to prepare their Torino Process reports as self-assessment documents³. This means that, for the first time, all national reports were prepared by national experts or national working groups⁴. The regional report also considers the outcomes of discussions that took place during a regional meeting of Torino Process working group members and national experts (Bishkek, September 2016). The regional meeting was an opportunity to share experiences on ongoing VET reform in the four countries and to reflect on regional trends.

The aim of the Torino Process is to provide an evidence-based analysis. It is difficult to achieve this aim to the desired extent at regional level. While some countries have made considerable efforts in recent years to improve data collection, use and accessibility, other countries continue to lack basic statistical data. Some countries are also very cautious to make statistical or administrative data available. Wherever possible, this regional report therefore uses comparable statistical and/or administrative data, where this is available for at least three out of the four participating countries. In case data

for a country is not provided, it is due to lack of comparable data.

Since the first round of the Torino Process in 2010, the four Central Asian countries have had to cope with multiple and overlapping challenges of a political, economic and demographic nature. Some countries have experienced changes in their political leadership and nearly all the countries have reviewed ministerial responsibilities and governance arrangements at national and sometimes sub-national level. These changes have affected the employment and labour market sphere in all cases and therefore have also affected VET. The four Central Asian countries continue to have high levels of self-employment and most of the countries have large informal economies. All the economies are undergoing profound structural changes. The service sector is gaining in importance, while the agricultural sector struggles to provide adequate opportunities to the large rural populations. Consequently, regional disparities and significant internal migration are a feature of all the countries. Although the relative size of the youth population has declined over the years, it is still large and continues to put considerable pressure on education systems and labour markets in most countries. For many young people, international migration represents an important opportunity to find employment.

The economic and demographic challenges in particular have helped to highlight the role of VET on the policy agenda. VET is expected to contribute to economic development, competitiveness and social cohesion.

Central Asian countries have made significant progress since 2010 in formulating their medium- to long-term vision for VET and in translating this vision into policies. However, these policies continue to focus on young learners, while issues such as lifelong learning or pathways to other education levels are only starting to attract attention. The shift towards a lifelong learning perspective is difficult to achieve, due to limited inter-ministerial cooperation. However, this would be a prerequisite to being able to deal with cross-cutting issues.

The importance of the role that VET can play in meeting economic and social demand has also evolved considerably since 2010. All the countries have taken action to improve their labour market information. There is, however, still a long way to go

Turkmenistan took part in the meeting of Torino Process coordinators (Torino, February 2016) and the international conference (Changing skills for a changing world) that marked the closure of the 2016–17 round of the Torino Process.

Last accessed 2 October 2017 at: www.torinoprocess.eu/hub/

The first self-assessment was carried out by Kazakhstan for the 2014 round.

The Kyrgyz Republic opted for a mixed approach, and carried out a self-assessment for Section D of the report. The rest of the report was prepared by the European Training Foundation (ETF), based on information and evidence provided by the national working group members.

before Central Asian countries will have developed comprehensive labour market information systems. All the countries have made significant progress in involving employers in a skills definition process. However, several countries have severe financial and capacity constraints, with the result that pilot approaches cannot be mainstreamed.

Access to VET has improved in most countries since 2010, and the development of new training formats, especially of short courses, has opened up VET to new participant groups. Inclusive approaches that make VET accessible to special needs students are being piloted in most countries. Gender equality and equity are considered in VET strategies, but are not actively supported by measures.

The internal efficiency of VET systems has been at the centre of VET reform in all countries. This is also the area on which most donor support, including EU support⁵, has focused. While it takes time for results to become apparent, an important shift has taken place from isolated, single issues to a broader perspective. Countries are making an effort to mainstream developments initiated via pilot projects. Many countries have started to see developments in their qualifications systems.

Since 2010, Central Asian countries have made efforts to improve the coordination of public institutions responsible for human capital development at national, sectoral and sub-national level. At the same time, efforts have also been made to increase the involvement of employers in VET governance. While initial developments focused on the setting up of new governing bodies, the focus of attention since 2016 has been on the operationalisation of these bodies.

The EU supports the education sector, including VET, via budget support in the Kyrgyz Republic, and via projects in Tajikistan and Turkmenistan. In Uzbekistan, the EU supports a project on Skills Development for Employability in Rural Areas. At regional level, the EU funds the Central Asian Education Platform.

1. CONTEXT AND OVERVIEW OF VET SYSTEMS



The four Central Asian countries that took part in the 2016–17 round of the Torino Process face a number of similar socio-economic challenges as well as specific national ones. Within a regional and global context, the development of national identity, reform, institution building and socio-economic development interact with each country's specific context and history. This includes the fall in global energy prices, especially in the energy-rich Kazakh and Uzbek economies, and the need for sustainable and resilient economic growth, including diversification and employment of relatively young populations. High levels of self-employment, including 'unproductive self-employment' (often representing subsistence economic activities) and urban/rural/regional migration in combination with disparate regional economic development represent key dynamics for all Central Asian states.

1.1 Economic context

The four Central Asian countries are undergoing a profound structural transformation. The service sector in all countries has developed into the most important sector in terms of gross domestic product (GDP) (value added). Typically, the service sector also accounts for a large share of employment. At the same time, the agricultural sector in the four countries is the least important in terms of GDP (value added). Although the importance of agriculture has been decreasing in terms of its importance for GDP, the sector continues to account for the employment of a relatively large share of the population, ranging from 18% in Kazakhstan to 53% in Tajikistan. Consequently, a lot of agricultural activity in all Central Asian countries can only support

a subsistence level of farming. The agricultural sector is also typically associated with the highest levels of informality and contributes to the considerable urban-rural disparities that exist in the four countries. Many internal and external migrants come from rural environments.

Overall, the economic situation in the four countries remained positive after 2014. Despite the unfavourable global economic context and the decline in oil prices, which particularly affected the Russian Federation and Kazakhstan (both being important export destinations for Central Asian countries and key destinations for working migrants), all the countries managed to maintain economic growth. In 2015, Uzbekistan and Tajikistan demonstrated very impressive growth rates of 8% and 6% respectively, while growth rates in the Kyrgyz Republic (3.5%) and Kazakhstan (1.2%) were more moderate. Despite this overall positive situation, growth rates in 2015 were lower for all countries than they were in 2014.

This performance can be considered as especially remarkable in the Kyrgyz Republic and Tajikistan, and to a lesser extent also Uzbekistan, when the importance of remittances in these economies is taken into consideration⁶. Although remittances have declined considerably since 2013, mostly due to the economic slowdown in the Russian Federation and Kazakhstan, GDP growth has not been affected in a proportional manner.

Table 1.1 GDP growth (annual %)

	2010	2011	2012	2013	2014	2015
Kazakhstan	7.3	7.4	4.8	6.0	4.2	1.2
Kyrgyz Republic	-0.5	6.0	-0.1	10.9	4.0	3.5
Tajikistan	6.5	7.4	7.5	7.4	6.7	6.0
Uzbekistan	8.5	8.3	8.2	8.0	8.1	8.0

Source: World Bank (last accessed 20 March 2017).

Although remittances play such an important role, no evidence is available on the employment situation of migrants in their host countries. It is thus impossible to say whether education and training received in the home country translates into adequate employment opportunities abroad.

Table 1.2 Personal remittances received (% of GDP)

	2010	2011	2012	2013	2014	2015
Kazakhstan	0.2	0.1	0.1	0.1	0.1	0.1
Kyrgyz Republic	26.4	27.6	30.8	31.1	30.0	25.7
Tajikistan	35.8	41.7	42.2	43.5	36.6	28.8
Uzbekistan	7.3	9.3	11.0	11.6	9.3	4.7

Source: World Bank (last accessed 24 March 2017).

1.2 Labour market context

Demand for labour

The labour markets in the four Central Asian countries are characterised by relatively low activity and employment rates. Typically, women fare worse on the labour markets in all the countries.

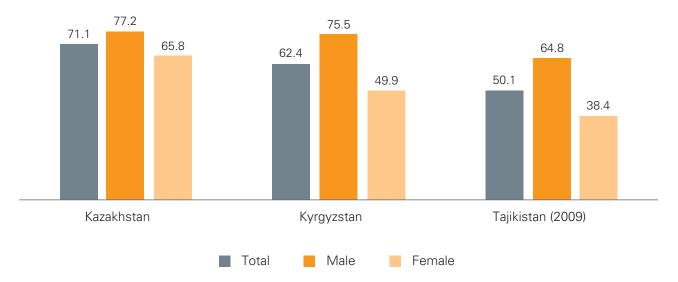
The activity rate of those aged 15 and older in the four countries has remained relatively stable since 2010. The activity rate is slightly lower in 2015 compared to 2010 in the Kyrgyz Republic (-1.9%) and Kazakhstan (-0.1%). In both countries, the decrease is particularly noticeable for female labour market participants. However, the activity rate has remained

stable or increased slightly in all countries since the last round of the Torino Process.

The medium-term trend (since 2010) in the employment rate for those aged 20 to 64 shows a decreasing pattern in Kazakhstan (-0.4%) and the Kyrgyz Republic (-2.4%). The decrease in employment rates can be seen in both sexes. The decrease in female employment in the Kyrgyz Republic (-3.5%), however, is considerably more marked than the decrease for men (-1%).

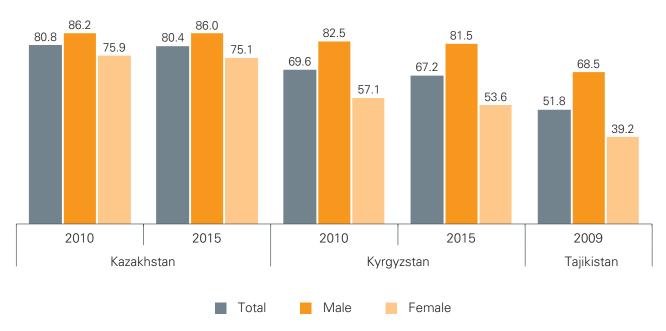
Unemployment rates for those aged 15+ declined slightly in Kazakhstan and the Kyrgyz Republic between 2010 and 2015. The unemployment rates for female labour market participants are higher than the rates for male participants in all cases.

Figure 1.1 Activity rates by sex (age group: 15+), 2015 (%)



Note: Tajikistan data refers to 15 to 75-year-olds. Sources: National statistical offices and ILO.

Figure 1.2 Employment rate by sex (age group: 20-64) (%)



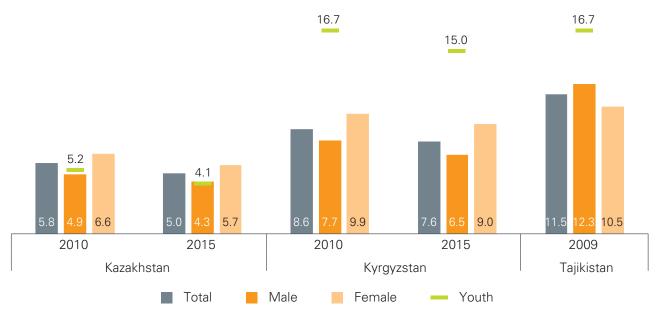
Note: ETF calculations.

Sources: National statistical offices.

Although unemployment rates may seem low or in line with European Union (EU) 28 averages, ranging from 5.8% in Kazakhstan (lowest rate) to 11.5% in Tajikistan (highest rate), they mostly occur in

contexts where large parts of the population (27% in Kazakhstan, 39.2% in the Kyrgyz Republic, 47.8% in Tajikistan in 2015) are self-employed. People who are self-employed may not be actively looking for

Figure 1.3 Unemployment rates by sex (age group: 15+) and youth unemployment rates (15-24) (%)



Note: Tajikistan data refers to 15 to 75-year-olds. *Sources:* National statistical offices and ILO.

a job and consequently are unlikely to be classified as unemployed in the statistics in the national labour force survey. In addition, some barriers exist to registering as unemployed. People who are engaged in subsistence agriculture may not be eligible to register because they own land; unemployment benefits may be so low that those who are eligible choose not to register; or employment services may have only very limited opportunities to support training, so that, again, potentially eligible people do not register.

Due to strong demographic pressure and insufficient job creation, youth unemployment rates (among 15 to 24-year-olds) in the Kyrgyz Republic and Tajikistan have been considerably higher than the rates for the total population. However, the medium-term trend since 2010 has been a positive one. The slight decrease in youth unemployment could have been influenced by a number of factors, such as decreasing youth populations (see Fig. 4 below for the relative size of the youth population in the various countries), outward migration (Kyrgyz Republic, Tajikistan and Uzbekistan) and overall economic growth.

The situation in Kazakhstan is an exceptional one, compared to the other countries. In Kazakhstan, continuous strong economic growth, consistent job creation and structured transition measures for young people have coincided with a demographic slump.

Consequently, the country has an exceptionally low youth unemployment rate: at 4.1% in 2015, it was even lower than the already low unemployment rate of the total population (5%). The youth population will, however, increase as of 2025.

While the youth unemployment rate shows a positive trend, the percentage of young people aged between 15 and 24 who are not in employment, education or training (NEET), has increased slightly in Kazakhstan and the Kyrgyz Republic (the two countries for which evidence on this indicator is available). Furthermore, the NEET rate in both countries continues to be considerably higher than the youth unemployment rate. In Kazakhstan, the NEET rate was 8.5% in 2015, while in the Kyrgyz Republic it was 21.4% for the same year (see Annex 1).

Skills supply

No fully comparable data on skills supply is available for the region and, in fact, the countries have been pursuing very different skills policies. For example, in 1998, Uzbekistan extended compulsory education from 9 to 12 years. Within the compulsory upper secondary segment (grades 10 to 12), the vast majority of students (93%) are directed into a VET stream. At the same time, the country has strongly regulated and limited access to higher education.

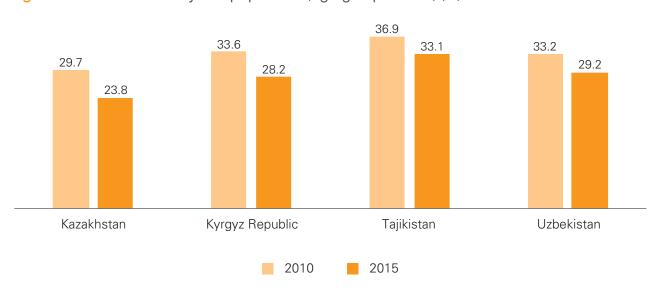


Figure 1.4 Relative size of youth population (age group: 15-24) (%)

Note: Uzbekistan data refers to 2014; Kyrgyz Republic data refers to 2016. Sources: National statistical offices and OECD.

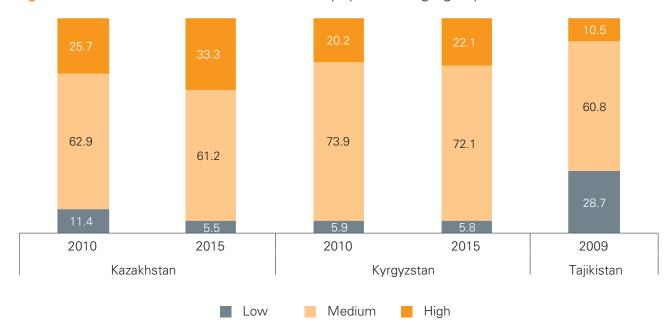


Figure 1.5 Educational attainment of the adult population (age group: 25-64) (%)

Notes: Low = basic education and less; Medium = secondary general, initial and secondary VET; High = (incomplete) higher education. Kazakhstan data refers to individuals aged 15+; Tajikistan data refers to individuals aged 15–75.

Sources: National statistical offices (ETF calculations).

Although no statistical data on the educational attainment of the adult population is accessible for Uzbekistan, the 1998 education reform can be expected to have led to a decrease in the share of the adult population with a low level of education and an increase in the share of the population with a medium level of attainment.

While the share of people with a low education level in Kazakhstan and the Kyrgyz Republic has decreased since 2010 (by nearly 6% in Kazakhstan; by only 0.1% in the Kyrgyz Republic), there is also a small decrease (1.5 to 2%) in the share of people with a medium education level. At the same time, the share of people with a high level of education has been increasing (by 8 percentage points in Kazakhstan and by 2 percentage points in the Kyrgyz Republic).

A higher level of education and especially of skills does not represent a safeguard against unemployment in all the countries. In Kazakhstan and the Kyrgyz Republic, the unemployment rate of those with a medium to high level of education is consistently lower than for people with a low level of education (2015 data). In addition, in Kazakhstan, the unemployment rate for people with VET is lower than for those with a similar level of general education, i.e. individuals who have a comparable level of education but lack labour market specific skills. The situation is quite different in Tajikistan (2009 data), where the unemployment rate among people with a medium level of education is higher than among those with a low or high level of education. At the same time, people with VET fare better in terms of unemployment than those with a similar level of general education. In all three countries, the unemployment level is lowest for those with a high level of education.

This data illustrates the interplay between the demand for and supply of skills. For a specific education and skills level to translate into better employment opportunities, the education and skills must match the expectations and structure of the labour market and the economy.

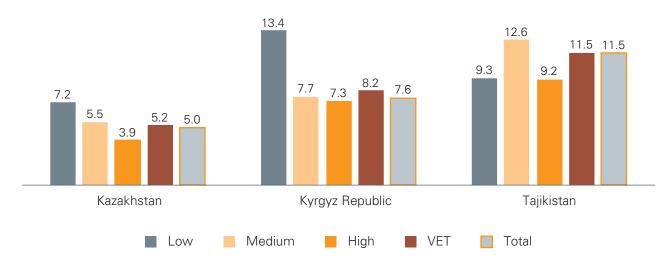


Figure 1.6 Unemployment rate by education level, 2015 (%)

Notes: ETF calculations for Tajikistan are based on 2009 data, for those aged 15–75. The unemployment rate in the Kyrgyz Republic is by education level and the ETF calculations are based on 2014 data. Low: basic education and less; Medium: secondary general, initial and secondary VET; High: (incomplete) higher education; VET: initial and secondary VET.

Sources: National statistical offices and ILO.

1.3 Overview of VET systems in the region

The VET systems in the four Central Asian countries have developed very differently. Kazakhstan, the Kyrgyz Republic and Tajikistan still require nine years of compulsory education. These three countries also have two levels of VET (known as initial VET (IVET) and secondary VET in the Kyrgyz Republic and Tajikistan) corresponding to different qualification levels. Two possible entry points for VET exist: after grade 9 or grade 11. Finally, only some VET students benefit from state funding in the three countries, a sizeable proportion have to pay for their own studies.

In 1998, Uzbekistan transitioned to a system that requires 12 years of compulsory education. After class 9, students enrol either in an academic lyceum or a VET college, with the vast majority (93%) of students being directed towards VET. As VET is part of the compulsory education system, all study places are state financed.

As a result of these two distinct approaches, the size of the formal VET system in the four Central Asian countries varies enormously in terms of participation in VET programmes (as a percentage of the total student population in upper secondary education), ranging from 93% in Uzbekistan (2015) to 40.5% in Kazakhstan (2015), 37.2% in the Kyrgyz Republic (2014) and 6.4% in Tajikistan (2013). While participation in VET programmes has increased since 2010 in Kazakhstan, the Kyrgyz Republic and Uzbekistan, it has decreased considerably in Tajikistan.

The same applies for the overall VET student population and number of VET providers.

The structure of the economic and education system is also reflected to some extent in the public expenditure on education (% of GDP), which in 2015 was highest in Uzbekistan (8.6%) and lowest in Kazakhstan (3.6%).

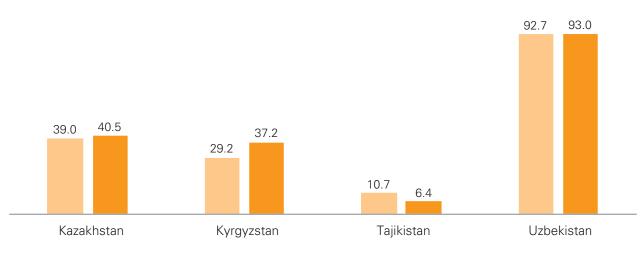


Figure 1.7 Students in vocational programmes, % of total upper secondary students

Note: Kyrgyz Republic data is from 2010 and 2014; Tajikistan data is from 2010 and 2013; Uzbekistan data is from 2012 and 2015. *Source:* UNESCO Institute for Statistics (last accessed 24 April 2017).

2015

2010

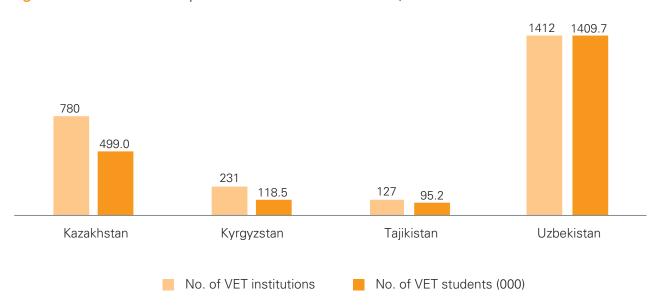


Figure 1.8 Number of VET providers and enrolled students, 2015

Note: Uzbekistan: Number of VET students is estimated, and is based on the number of students enrolled in the past three years. *Sources:* National statistical offices and ISSPO.

Table 1.3 Expenditure on education as % of GDP

	2010	2011	2012	2013	2014	2015
Kazakhstan	4.1	3.8	4.0	3.8	3.5	3.6
Kyrgyz Republic	5.8	6.8	7.4	6.8	5.2	5.6
Tajikistan	4.0	4.8	4.3	5.2	5.2	5.1
Uzbekistan	missing data	missing data	8.4	8.6	8.7	8.6

Note: Kyrgyz Republic: break in series.

Sources: Ministry of Education (Kazakhstan), UNESCO Institute for Statistics and Ministry of Finance (Kyrgyz Republic), National Statistical Office (Tajikistan), Centre for Secondary Specialised Vocational Education (Uzbekistan).



2. MAIN FINDINGS

This chapter provides an overview of the key findings from the 2016–17 Torino Process country reports in the four participating Central Asian countries. While the focus lies on progress made since the 2014 round of the Torino Process, the overall progress made since 2010 is also considered.

The chapter is organised around the five building blocks of the Torino Process analytical framework and highlights common trends and achievements but also challenges. It also provides more detailed information on some cases of good practice that represent an important achievement in the specific context of the country concerned.

A. Vision for VET – Progress and challenges

National Torino Process reports show that all the countries have adopted policy documents that spell out their vision for the medium- to long-term development of their VET systems. However, these VET policy documents and/or strategies tend to focus on VET for first-time learners, and rarely refer to adult learners. Although VET policy documents and/or strategies are mostly integrated into wider education policy documents and/or strategies, they rarely consider the links that VET has to other parts of the education system.

National reports also demonstrate that most countries have developed action plans for the implementation of their strategies and have gained experience in adapting and updating these plans on a regular basis. Action plans typically outline the responsibilities, timetable, targets and resources needed. Resources for strategy and action plan implementation are composed of national resources, as well as donor-supported resources, particularly in the Kyrgyz Republic and Tajikistan.

National reports point to a situation where both strategic documents and action plans are developed mainly by the responsible ministries or state agencies, in consultation with other state bodies and donor organisations (where these are active). At the same time, limited reference is made to the structured involvement or consultation of other national stakeholders, such as employer or civil society organisations.

The development of the Kyrgyz Republic's Education Development Strategy 2020 represents an important exception, as the finalisation stage involved extensive state and non-state stakeholder consultations at national and sub-national level. However, stakeholder consultations were not conducted systematically in the development of the medium-term action plans. In Kazakhstan, the Roadmap for the Implementation of a Dual Education System was developed as a joint project of the Ministry of Education and Science, the Ministry of Labour and the National Chamber of Entrepreneurs (Atameken). The chamber plays a crucial role in implementing the roadmap.

The four Central Asian countries are following up on the implementation of their strategies and action plans. In the majority of cases, the focus is on verification, and thus does not yet represent a fully developed monitoring approach, whereby data is systematically gathered, analysed and used to inform policy. None of the countries refer to the evaluation of developments achieved in policy priority areas in their national reports.

There is growing awareness among the countries of the importance of this issue and key developments have already taken place. In Kazakhstan, an extensive report on the implementation of the education strategy (including VET) is prepared and published on an annual basis. In addition, the country uses the Torino Process report as a tool to assess how VET has developed. To support systematic evidence gathering, Kazakhstan developed an internet-based National Education Database (operational since 2014). The Kyrgyz Republic is developing a similar tool for VET.

Significant progress has been made in terms of vision development since 2010, although the initial vision of VET was a rather narrow one. The 2016–17 Torino Process reports show, however, that countries are gradually gaining a better understanding of the role of VET, and many expect to formalise this aspect in the next generation of strategy and policy documents. In recent years, Central Asian countries have started to pay more attention to the implementation of policies and are developing monitoring systems to assist them with tracking progress.

Table 2.1 Examples of key policy documents relating to the development of the vision for VET in the national systems of the four Central Asian countries

Country	Policy document
	Kazakhstan 2050 Strategy (2012)
	State Programme for the Industrial-Innovative Development of the Republic of Kazakhstan (2014)
	Plan for the Nation – 100 Concrete Steps (2015)
Kazakhstan	Roadmap for Employment 2020 (2015)
	State Programme for the Development of Education in the Republic of Kazakhstan 2011–20 (2010) and corresponding action plans
	Roadmap for the Implementation of a Dual Education System (2014)
	Concept for the Development of Education in the Kyrgyz Republic (2012)
Kyrgyz Republic	Education Development Strategy 2012–20 (2012) and corresponding medium-term action plans (2012–15, 2016–17)
	National Sustainable Development Strategy for the Kyrgyz Republic 2013–17 (2013)
	National Strategy for the Development of Education of the Republic of Tajikistan to 2020 (2012)
Tajikistan	National Development Strategy of the Republic of Tajikistan for the period up to 2030 (2016 draft)
	National Programme for Personnel Training (1997)
Uzbekistan	Uzbekistan Education Sector Plan 2013–17 (2013) and corresponding action plans
OZDEKISTALI	Welfare Improvement Strategy 2013–15 (2013)
	Development Strategy 2017–20 (2017)

Sources: Torino Process national reports.

B. Effectiveness and efficiency in addressing economic and labour market demand

The 2016–17 Torino Process reports of the four Central Asian countries confirm that the service sector in all countries has developed into the most important sector in terms of GDP (value added). Typically, the service sector also accounts for a large share of employment. At the same time, the agricultural sector in the four countries is the least important sector in terms of GDP (value added), although considerable differences can be noted. For example, agriculture accounted for only 5% of GDP in Kazakhstan, while in Tajikistan, where the service sector has developed in a more moderate way,

agriculture still accounts for 25% of GDP. Although the importance of agriculture has been decreasing in terms of its importance for GDP, the sector continues to account for the employment of a relatively large share of the population, ranging from 18% in Kazakhstan to 53% in Tajikistan. Consequently, a lot of the agricultural activity in all Central Asian countries is only at subsistence level. The agricultural sector is also typically associated with the highest levels of informality and contributes to the significant urban-rural disparities that exist in the four countries.

Small and micro enterprises are common throughout all four countries, while large and medium-sized enterprises tend to be confined to Kazakhstan and Uzbekistan. Small and micro enterprises in the four countries can be associated with low competitiveness and productivity. Sectors in which

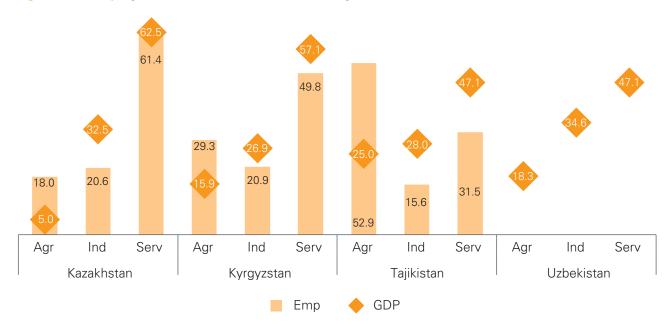


Figure 2.1 Employment and GDP (value added) by sector, 2015 (%)

Note: Tajikistan employment data refers to 2009 and to the population aged 15 to 75. *Sources:* World Bank and national statistical offices.

small and micro enterprises prevail typically have limited capacity to set up professional employer organisations and to initiate skills-related policies.

The collection and availability of labour market information differs considerably among the four countries, although all the countries carry out an annual review of labour market needs. This review typically involves line ministries and/or employers, and serves to define the 'state education order' in VET and higher education, i.e. the number of state-funded study places made available for specific professions and study fields. The 2016-17 report for Uzbekistan illustrates that the supply of VET for different economic sectors is regularly adjusted. In Kazakhstan and especially Uzbekistan, the two biggest countries, the annual review also has an important regional component, as VET provision is seen as a tool that supports the regional economy. However, all four countries recognise that this approach has drawbacks, as employers are rarely able to define their skills needs in an accurate and forward-looking manner. Furthermore, this approach focuses on existing professions and thus covers only quantitative aspects. No attention is paid to the specific skills demanded by employers or the new skills requirements that arise due to the development of economic sectors.

Kazakhstan and the Kyrgyz Republic conduct labour force surveys and publish their results on an annual basis. Due to extremely limited resources, Tajikistan conducts a labour force survey every four to five years. To date, only Kazakhstan and the Kyrgyz Republic have reported medium-term (five to ten years) projections for labour market needs in their Torino Process reports. Finally, so far only Kazakhstan has reported the establishment of an internet-based information system for the public. This system covers vacancies as well as key information, such as salary levels by sector and region.

The four countries have limited experience in collecting qualitative sectoral information on skills requirements (small-scale sector analysis and functional mapping) and this work is typically initiated with donor support. Such experiences are reported by the Kyrgyz Republic, but also Tajikistan and Uzbekistan.

Graduate employment in the four countries is recognised as a key indicator for the labour market relevance of VET. Kazakhstan, the Kyrgyz Republic and Uzbekistan track graduate employment using very different methods. Uzbekistan uses administrative methods that include a number of basic matching

issues. Kazakhstan uses pension fund data. National authorities have started to recognise that this approach provides a schematic understanding and excludes graduates in informal employment. The most substantial progress has been made in the Kyrgyz Republic, which adopted a tracer study approach for VET in 2016. VET providers, the VET Agency and the Ministry of Education and Science jointly initiated a sustainable tracer study methodology to be used by all VET providers. The methodology was developed with the participation of VET providers and was extensively tested and improved over three years. It was adopted nationally in 2016 and is expected to be rolled out to all providers by 2018. In 2016, 30% of IVET providers were using this approach. The tracer study involves VET providers collecting feedback from graduates on their teaching and learning experience, their transition to the labour market and their employment situation. The data is used by VET providers and the national authorities.

While all the countries report on the piloting of new tools to better understand labour market requirements, reference is also frequently made to the lack of financial or human capacity needed to adopt these tools at system or national level. Furthermore, although more evidence is becoming available overall, it may not be used systematically for the purposes of policy making, as 'ownership' is fragmented and typically involves a number of ministries and/or state agencies.

Small and medium-sized enterprises and entrepreneurship

In their national development strategies, the four Central Asian countries refer to the importance of small and medium-sized enterprises (SMEs) in overall economic development and in job creation. Uzbekistan and Kazakhstan also aim to support a shift from subsistence level self-employment to productive self-employment. Entrepreneurship and entrepreneurial learning in all countries are therefore supported via several channels, such as special SME programmes (Kazakhstan and Uzbekistan), training opportunities that focus on business creation for unemployed people (ongoing or planned in all countries) and programmes within education, including VET. However, approaches to entrepreneurial learning within VET differ among the countries.

Both the Kyrgyz Republic and Uzbekistan have already been using entrepreneurial learning modules developed by the International Labour Organisation (ILO) in their VET curricula for a number of years now. As a result, all students take part in some training. In the Kyrgyz Republic, the modules, which are used in IVET only, were updated in 2016 and a new cohort of teaching staff was trained. However, evidence from tracer studies carried out in the Kyrgyz Republic suggests that training alone is insufficient to support business creation by VET graduates, as many graduates lack the necessary financial resources and do not have access to credit facilities. This aspect has been addressed successfully in Uzbekistan, where a special credit facility was established for VET graduates. The facility is part of a wider system, which also includes information and training seminars for VET graduates to prepare them to formulate business plans and apply for credit.

Tajikistan is still at an early stage of development. It is integrating entrepreneurial learning into new curricula that are currently being developed. Furthermore, aspects of entrepreneurial learning, based upon an approach developed by the ILO, are expected to be introduced in training courses for unemployed people.

Kazakhstan has put into place a major programme to support SMEs. The programme includes a youth component, which also covers entrepreneurial learning. However, this component is not integrated into the education system. Based on findings arising from the 2014 Torino Process, the Ministry of Education and Science included the provision of optional courses at VET colleges in the Education Programme 2016–19. Furthermore, with the support of the regional chambers of entrepreneurs, a number of VET colleges have set up so-called business schools, which provide additional entrepreneurial learning opportunities for VET students.

Transition process and guidance

Kazakhstan, the Kyrgyz Republic and Uzbekistan report on specific measures that have been implemented to support the transition of VET students into employment. The key policy development in Kazakhstan is the introduction of the dual approach, which is expected to improve the transition (see also Section D). A high retention rate is also expected as students develop closer links with

the enterprises in which they train. However, as part of its employment programme, Kazakhstan has also introduced special measures for enterprises that hire young VET or higher education graduates. The Kyrgyz Republic has adopted a career guidance strategy, which covers a number of measures, including advising final-year students on the transition process. In 2015, Uzbekistan introduced a 'four-party contract', which is signed by the student, the enterprise where the work practice takes place, the college and the local or regional authority. The retention rate of students within the enterprise is expected to rise from 50% to 80% with the introduction of this contract

Since 2010, Central Asian countries have considerably enhanced their understanding of the complexity of the labour market and of the role the different stakeholders play in it. While all the countries have developed a number of new labour market information tools, none of them has a comprehensive labour market information system. This continues to represent a major bottleneck that prevents further developments in all the countries. Further developments in this area are outlined as a priority in all 2016–17 Torino Process reports. Countries recognise that this requires both resources as well as better inter-ministerial and inter-institutional cooperation at national level.

C. Effectiveness and efficiency in addressing demographic, social and inclusion demand

Central Asian countries have large youth populations (relative size), ranging from 23.8% of the total population in Kazakhstan to 33.1% in Tajikistan (2015 data). While this share has been decreasing steadily, it still puts considerable pressure on the education systems and labour markets of the four countries. All Central Asian countries are affected by major regional and urban-rural disparities, often in combination with considerably higher poverty levels in the less developed locations. Consequently, they all need to cope with significant internal migration flows, and, in the case of the Kyrgyz Republic, Tajikistan and Uzbekistan, also outward migration, mainly to Kazakhstan and the Russian Federation.

Access

Accessibility to VET varies widely between the four countries. Kazakhstan, the Kyrgyz Republic and Tajikistan still require nine years of compulsory education, which means that young people leave the education system every year without having acquired the skills required by the labour market. While all three countries provide free access to upper secondary education, state funding is not fully extended to VET. Thus, the three countries fund only a certain (varying) percentage of VET students from the education budget, and a large share of VET students have to pay for their education. This means that in all three countries there are potential participants who do not take part in VET because they lack the necessary resources.

Furthermore, although VET is provided in rural and remote areas in all four countries, it is often less well developed where there are strong urban-rural disparities. The Torino Process reports for Tajikistan and the Kyrgyz Republic stress that, over the years, VET providers in rural and remote areas have attracted less national and donor support than providers in urban settings. Many rural VET providers struggle to adapt to the new conditions in rural settings (small family farms) and rarely provide skills development approaches that support their local communities. As a consequence, they attract fewer students over time.

Torino Process reports show that all the countries have taken some action to improve access, especially since 2014.

In the Kyrgyz Republic and Tajikistan, new opportunities focus mainly on making short-term courses more accessible. This choice is based on a reality in which extreme poverty affects large segments of the population (18% in the Kyrgyz Republic, 57% in Tajikistan in 2014) and where many cannot afford the opportunity cost of attending regular VET courses, which can last up to three years, even when these are provided free of charge.

In 2016, the Kyrgyz Republic established, therefore, a Skills Development Fund. The fund, which was set up with donor support, provides funding for short-term courses, delivered by VET providers. Courses target individuals aged 16 to 65, including those from vulnerable backgrounds, those with low qualification

levels, people with special needs and potential migrants. Prior to the establishment of the fund, state funding was only available to people supported by the employment offices. In addition, donor support means that resources have been made available for the refurbishment of a number of rural VET schools.

Since 2014, Tajikistan has supported an impressive expansion of its adult education system. The system has been under development since 2008 and focuses on the provision of short courses for adults, including potential migrants. Participation in the system doubled between 2014 and 2016. Tajikistan adopted the Law on Adult Education in 2016.

In Kazakhstan, where extreme poverty affected less than 1% of the population in 2013 and employers have to search for skilled labour, better access is provided via the VET for All programme, which provides free access to VET for the working professions (the lower qualification level within the VET system). The programme will become fully operational as of 2017, so that over the coming years this type of VET will become mainly state-funded.

A completely different approach has been adopted in Uzbekistan. In 1998, it extended compulsory education from 9 to 12 years. Within the Uzbek system, the vast majority (93%) of upper secondary students are directed towards VET, while 7% attend schools with a more academic profile. Given the size of its VET system, which catered for over 1.4 million students in 2015, Uzbekistan has focused on supporting VET provision of comparable quality in terms of teaching and infrastructure (including information and communications technology access) in urban and rural settings, so that students can study close to their homes. In its Torino Process report, Uzbekistan also refers to an attempt to link VET provision in rural areas to rural development programmes and development plans for the agricultural and agri-food sector.

Vulnerable groups

All four countries provide preferential access and additional support to students from specific vulnerable groups. In all four countries, these include orphans and young people without parental supervision. In the case of Kazakhstan, quotas and hostel places facilitate access for students from rural

areas. Uzbekistan has made a particular effort to ensure that VET provision of comparable quality is available throughout the country.

In recent years, VET policies in the four countries have paid more attention to special needs students. Since 2014, progress has been made in the Kyrgyz Republic in improving physical access to VET schools and initial experience has been gained in developing curricula that support the integration of special needs students in mainstream VET schools. Kazakhstan has also opted for an inclusive approach and has initiated a major campaign to improve physical access to VET colleges. Uzbekistan was the first country to address the issue in 2005. It remains the country with the greatest experience in this area and provides the greatest choice of professions for special needs students. In 2015, about 5 000 special needs students were enrolled in upper secondary education, including VET. Uzbekistan maintains a small number of specialised schools in which 1 500 students requiring specialised and intensive support are enrolled; the remaining special needs students study in mainstream schools. All three countries recognise, however, that teaching staff need to be adequately prepared to make inclusion a success.

All Central Asian countries report on active labour market measures (see Section B) for unemployed people. These typically also cover training, which is provided mainly by VET schools and colleges.

VET and adults

Although education policy documents in the four countries typically refer to a continuum of learning or lifelong learning, this is not yet reflected in structured policy measures in VET. VET policies address mainly young, first-time learners, enrolling in long-term IVET and secondary VET programmes. VET-related learning for adults is covered by both public and private providers in all countries and is funded by multiple sources. Typically, no overview of providers exists, nor is evidence on adult participation in training collected in a systematic manner.

VET providers cater for both first-time learners and adults. They are usually the main providers of training for unemployed people, and are funded by the employment services. In addition, VET providers may also offer short courses that support progression to

a higher professional category within a qualification level or additional qualifications for individuals who are already working. In such cases, the cost of training will typically be covered by the individuals taking part in it or by their employer.

With the adoption of the Law on Adult Education (October 2016), Tajikistan has made considerable progress in the systematic development of adult education. The law also regulates the validation of non-formal learning. In the Kyrgyz Republic, the VET Agency and the Republican Scientific Methodological Centre have also developed a proposal to introduce the validation of non-formal learning. This was the subject of an inter-ministerial consultation at the end of 2016. The agency has also piloted this approach with donor support in the light industry (garment) sector.

Gender

Gender continues to play an important role in VET. Kazakhstan, the Kyrgyz Republic and Tajikistan report a lower enrolment of female than male students. Furthermore, there can be marked differences between VET levels. Thus, in the Kyrgyz Republic only 30% of IVET students are female, while in secondary VET about two in three students are female. In Tajikistan female participation in VET declined markedly and continuously between 2010 and 2013.

Furthermore, all countries demonstrate a strong gender bias in the choice of profession or specialisation made by female or male students, with female students prevailing in the education, healthcare, and textile and garment sectors. These sectors are also characterised by low salaries.

Table 2.2 Percentage of students in upper secondary education enrolled in vocational programmes, by sex (%)

		2010	2011	2012	2013	2014	2015	2016
	Total	39.0	35.3	35.3	34.8	39.0	40.5	40.1
Kazakhstan	Female	37.0	32.8	33.0	32.9	37.0	38.2	37.8
	Male	41.0	37.8	37.6	36.7	41.0	42.8	42.5
	Total	29.2	30.7	33.5	36.3	37.2	35.0	missing data
Kyrgyz Republic	Female	24.6	26.8	30.0	33.6	34.1	31.6	missing data
	Male	33.8	34.5	37.0	38.9	40.3	38.4	missing data
	Total	10.7	10.3	6.5	6.4	missing data	missing data	missing data
Tajikistan	Female	6.5	5.7	5.0	1.3	missing data	missing data	missing data
	Male	13.4	13.5	7.5	10.0	missing data	missing data	missing data
	Total	missing data	missing data	92.7	93.1	93.1	93.0	93.1
Uzbekistan	Female	missing data	missing data	93.7	94.1	94.0	93.8	93.8
	Male	missing data	missing data	91.7	92.2	92.3	92.3	92.4

Source: UNESCO Institute for Statistics (last accessed 25 September 2017)

Between 2012 and 2014, only the Kyrgyz Republic considered gender equality, both in terms of participation and in terms of attracting male and female students into 'atypical' professions, as an action area within VET. However, this area has been discontinued in the VET action programme for 2016–17. Uzbekistan has made an active effort to establish gender parity by making more places in 'female professions' (mainly in the textile sector) available in 2015 and 2016.

Since 2010, Central Asian countries have made considerable progress in improving access to VET for a number of vulnerable groups, which previously had either no or only limited access to VET. However, gender has only been addressed to a very limited extent. Nearly all the countries point to further planned actions to make VET provision more flexible in their 2016–17 Torino Process reports.

D. Internal efficiency of the VET system – Common trends, achievements and challenges

VET staff

Due to only moderate-to-low salary levels in the education sector and limited career development opportunities, the four countries face difficulties in attracting and retaining VET teaching staff with sufficient practical experience. This shortage takes on different forms, with high levels of vacant posts (up to 25%) for masters reported in Tajikistan, while the Kyrgyz Republic has hardly any vacant posts but instead reports that many masters lack practical experience. With the exception of Uzbekistan, Central Asian countries also report that they have an ageing teaching force.

In-service training and continuing professional development

All four Central Asian countries have specialised, in-service training providers in the VET sector and formally maintain a traditional approach to inservice training that entails face-to face training for a specific duration, for all staff, every five years. This is recognised as a challenge, both in

terms of cost (too high for countries with limited resources and providers in remote areas, as in Tajikistan and the Kyrgyz Republic) but also flexibility and adaptability to new conditions. All countries therefore refer to a review of in-service training content and, in some cases also, a review of the format. The most substantial developments in this respect have taken place in the Kyrgyz Republic, where a new qualification structure for VET staff has been developed, and VET staff competences were assessed in 2016. As of 2017, VET staff development opportunities are expected to be aligned with staff development needs and to follow a more flexible approach.

Work-based learning

Work-based learning represents a challenge in contexts where a lot of practical training typically still takes place in VET provider workshops, although all four countries also provide for mandatory enterprise-based practice for all VET students. For some time now, all four countries have stepped up their efforts to expand this mandatory enterprise-based practice and/or learning. However, only two countries (Kazakhstan and the Kyrgyz Republic) report systematic developments on this aspect.

Kazakhstan is something of a forerunner in this respect. It has made considerable progress with the introduction of the dual approach, which became a policy priority as of 2013/2014. By 2016, about 60% of VET colleges applied the approach fully or applied key elements of it (in particular more enterprise-based learning). 2016 was also a year of legislative change, as the dual approach was introduced into the Law on Education and the labour code. Furthermore, a new education standard was adopted to give flexibility to providers working with the dual approach.

A key factor in the success of developments in Kazakhstan has been the development of the Roadmap for the Implementation of a Dual Education System (2014), under the leadership of the National Chamber of Entrepreneurs. The chamber plays an important role in convincing enterprises to take part and supporting partnerships with colleges at local level. It also develops training for in-company trainers working with VET students. In the Kyrgyz Republic, the possibility of relocating most practical training to enterprises has been explored for the light industry

(garment) sector and will be piloted with updated curricula as of autumn 2016.

A key challenge with regard to the further expansion of work-based learning in the four countries lies in the interaction with micro enterprises and SMEs. Micro and small enterprises in particular are typically less well represented by employer organisations (which could negotiate new approaches with the relevant education authorities). These enterprises also usually lack the necessary staff and equipment to engage in work-based learning.

Multilingual teaching

All Central Asian countries have multilingual education systems. VET is offered in two languages in all cases: the state language and Russian. The development and production of textbooks and teaching materials, especially in the state language, has been identified as a challenge in a number of national reports since 2010. There are several reasons for this. In most countries, very limited resources are available for textbook development and production. In addition, there is an insufficient pool of experienced textbook authors who combine a knowledge of VET with a knowledge of the state language. VET providers teaching in Russian can overcome this bottleneck to some extent by purchasing existing textbooks and materials, often with parental support. VET providers teaching in the state language do not have this opportunity.

The different levels of opportunities (as well as the achievement level reached by pupils) offered in accordance with the language in which courses are taught have been pointed out by PISA⁷ studies conducted for the Kyrgyz Republic (2006, 2009) and Kazakhstan (2009, 2012). Kazakhstan and the Kyrgyz Republic in particular report positive developments on the availability of teaching materials in their state languages in the 2016–17 reports.

Quality of general education

Among the Central Asian countries, only Kazakhstan and the Kyrgyz Republic have taken part in PISA. As a result, data is only available for these two countries on the share of 15-year-olds who performed poorly in

reading, mathematics and science. In the case of the Kyrgyz Republic (2006 and 2009 rounds), over 80% of participants scored at level 1 or below, and only very slight improvements were apparent between the two rounds. As no nationwide assessment has taken place since 2009, it is impossible to assess whether reforms implemented since then have had a positive impact.

In the case of Kazakhstan (2009, 2012 and 2015 rounds), continuous improvements in the three areas covered can be noted. Despite this positive trend, 41.3% of participating 15-year-olds performed poorly in reading in the 2015 round; poor performances were also reported in maths in the case of 32.2% of participants and in science in the case of 28.1% of participants. The scores of PISA participants enrolled in VET colleges were lower than the scores of students enrolled in general secondary education. This is not a sign of poor performance on the part of VET, as the results illustrate the outcomes of general education. Instead, it is an indication that VET attracts students who do less well in general education.

Quality assurance

Policy documents prepared by the four Central Asian countries focus in particular on labour market relevance as proof of the quality of VET. Consequently, there is a heightened focus on the employment rate of graduates and the involvement of employers in the certification of VET student and graduate skills.

In 2015, both Kazakhstan and the Kyrgyz Republic introduced independent accreditation of education providers and programmes in higher education and VET. Over time, this approach is expected to replace the existing quality-related processes. In Tajikistan, a centre for methodological support and quality monitoring of VET was set up in 2014.

The new independent accreditation introduced in Kazakhstan and the Kyrgyz Republic was largely influenced by developments in higher education and thus was developed for institutions that have little in common with VET providers (size, level of autonomy, level of regulation). It remains to be seen in both countries how VET providers should cover the cost of the process.

⁷ Programme for International Student Assessment.

At the same time, limited attention has been paid to alternative or complementary quality assurance procedures. Some key issues for VET provision, such as teacher and trainer or master training and the use of key competences, are given little consideration in the quality control or assurance procedures in all the countries. The existing formal quality assurance mechanisms continue to be mostly focused on input.

National qualifications frameworks

In all the Central Asian countries, the influence of the Soviet 'tariff qualification system', which regulated the labour market and education provision through classifiers of occupations and qualification characteristics, state educational standards, labour registration and remuneration, is still noticeable. There is still a tendency to consider qualifications as a licence to practise, rather than a passport to multiple careers and lifelong learning.

The four Central Asian countries have been engaging to varying degrees with the concept of a national qualifications framework (NQF), based on the principles of lifelong learning and learning outcomes, for several years. The countries are at different stages of implementation. Kazakhstan has started to implement the NQF; the Kyrgyz Republic has legislated for and tested aspects of the NQF; Tajikistan is conceptualising its NQF and has legislated for some aspects; and Uzbekistan is amending its tariff qualification system to integrate some features of the NQF. The differences are due to differences in economic structure and development, institutional landscape and capacity in terms of human and financial resources and international exposure.

Since the 2014 round of the Torino Process, the four Central Asian countries have all engaged in actions relating to their qualification systems.

Kazakhstan adopted its NQF in 2012. Since then, it has systematically started to develop occupational standards (450 by 2016) with employer involvement. It has also translated these standards into education programmes (150 by 2016). The approach to developing occupational standards has been revised a number of times, showing that the NQF is a living system. Feedback loops ensure that improvements are made. The approach taken to the VET education

standard has gradually become more flexible (the standard was last revised in 2016) to allow providers to adapt their teaching plans and content in line with employer requirements. In 2016, important changes were made to the definitions and descriptors of qualification levels (e.g. an 'applied bachelor level' was introduced) and to the methods used to develop sectoral frameworks. A key development in 2016, supported by legislative changes in the Law on Education and the labour code, was in governance: the National Chamber of Entrepreneurs became formally responsible for occupational standards (development, introduction of changes or updates, approval). While line ministries had previously been in control of the sectoral frameworks, there is now better coordination and closer links with the private

The focus is still very much on formal education and on developing standards. Little attention has been paid to the validation of non-formal learning and the introduction of a credit system for VET, but this is expected to be addressed in 2017. Approaches to student assessment are also under revision in order to provide a stronger role for employers.

The **Kyrgyz Republic** adopted an NQF in 2016 by joint order of the Ministry of Education and the Ministry of Labour. It is unclear, however, how work on implementation of the NQF will progress systematically over the coming years. Some key developments have taken place in recent years and these can be expected to support the development of the NQF.

Since 2014, the VET Agency and the Republican Scientific Methodological Centre have gained experience in small-scale sector analysis and functional mapping. This experience was used to develop or validate occupational standards and corresponding training programmes in conjunction with employers. The VET Agency was allocated state budget funding for this purpose for the first time in 2015 (supported by EU budget support in the education sector) and performed these tasks without donor support.

Over the last several years, donor support has allowed the VET Agency to explore the possibility of introducing independent, employer-led certification of VET students and participants on short courses.

Extensive experience was gained and methodological developments were made as a result. Large-scale independent certification remains impossible at this stage due to a lack of financial resources. However, some important aspects were introduced in an updated regulation on final examinations.

The VET Agency, together with the Republican Scientific Methodological Centre, also developed a proposal for the validation of non-formal learning. This was the subject of an inter-ministerial consultation at the end of 2016. With donor support, the validation of non-formal and informal learning in the light industry (garment) sector was piloted.

Tajikistan developed a concept for an NQF and methodological support to develop it in 2015. Both documents were in a consultation phase by the end of 2016.

International project work has provided the country with its initial experience in developing occupational standards with the involvement of employers. So far, no methodological basis for this kind of work seems to have been established.

The validation of non-formal learning is also being regulated through the new Law on Adult Education, which was adopted in October 2016.

Uzbekistan has initiated work on an NQF with the involvement of various stakeholders (Chamber of Commerce, Ministry of Education and Ministry of Labour). Key questions under consideration are the involvement of employers in the development of occupational standards as well as in student assessment and/or certification. Uzbekistan's draft concept for the NQF still borrows many features from the tariff qualification system.

Difficult transition towards learning outcomes

Consistent work is ongoing in the four countries to make curricula more relevant to labour market requirements. All countries report varying degrees of employer or employer organisation involvement in standard and/or curriculum development and/or validation. National reports also refer to a gradual shift towards competence-based approaches and learning outcomes. The four countries have traditionally used a heavily regulated approach in which education

standards were translated into centrally approved detailed teaching plans. These teaching plans contain a large number of different subjects and indications on the number of hours to be devoted to each subject. Different categories of teaching staff are involved, depending on the subject to be covered: general subject teachers, special subject teachers and masters, who are in charge of practical training. These two aspects mean that the shift towards learning outcomes represents a particular challenge, as it entails not only a rethinking of content, but also of new ways to engage teaching staff. The extent to which the shift towards learning outcomes has taken place at system level remains unclear in the 2016–17 Torino Process national reports.

Numerous challenges related to NQF implementation remain

- Involvement of the world of work. The concept of employer involvement in the development of professional standards tends to be considered the first and most important step. Priority tends to be given to the production of many occupational standards, rather than to progress from a limited number of professional standards to corresponding, outcome-based education content or provision and (employer-supported) student assessment.
- Ensuring that changes reach end users. As a result, new occupational standards are not immediately translated into new programmes and new approaches to assessment. The impact is therefore not yet visible for providers or for end users (employers and individuals). The countries that have progressed to education content (Kazakhstan, the Kyrgyz Republic) have not yet progressed to the monitoring and evaluation of the final outcome of their new approach.
- Getting organised for systemic implementation. The NQF approach is a complex one. It has many components that are closely interlinked. It requires the cooperation of different actors and stakeholders and the breaking down of silos. To ensure that this long-term venture is worked on in a structured way, it is advisable for countries to have an agreed strategy for the new qualifications system that explains the objectives and key concepts. A roadmap that outlines the

sequencing of priorities, supports a holistic view and avoids fragmentation must be agreed by the actors and stakeholders. Coordination and extensive communication are required to reach actors and stakeholders, and to keep people informed of progress. In its toolkit for organising qualifications systems, the ETF points to four key elements for success: empowering legislation, active stakeholder engagement, service-oriented institutions and quality assurance rather than control.

Beyond those directly involved in initial NQF developments, it is important to consider that systematic change implies the active understanding of the concepts by the VET community at large. This requires a major, well-structured capacity building effort (to support sufficient expertise) and a well-developed information campaign, targeting different audiences (employers and in-company trainers, expert community, VET provider managers and teachers, students).

Making better use of existing experience.

The Central Asian countries have been relatively isolated from developments in the EU and partner countries in Southeast and Eastern Europe for many years. An exchange at regional (Central Asian) level and with EU Member States was initiated during the second phase of the Central Asian Education Platform as of 2016. All Central Asian countries have identified NQFs as a priority area for this exchange.

The opportunities available as part of the Platform are limited, however, compared to the wealth of existing tools and approaches that have been developed at EU level, such as the European credit system for VET (ECVET), which is based on learning outcomes; the guidelines for validation of non-formal learning and quality assurance approaches; and the practical experience gained by EU Member States in applying these approaches. It would be highly relevant for Central Asian VET stakeholders to engage in regular dialogue with their EU Member State counterparts and to familiarise themselves with these tools and with the practical experience of their application in different contexts. The development of standards is a priority in many

countries, which often advances rather slowly due to a lack of resources and capacity. While standards developed for other contexts should not be copied, information about them can help national development processes.

The focus of VET reform efforts in all Central Asian countries has been on internal efficiency. The 2016-17 Torino Process reports show greater attention paid by countries to mainstream developments that were often initiated as (pilot) projects. Since 2014, Central Asian countries have paid more attention to VET staff development and have changed their outlook on continuing professional development (CPD). Countries note in their reports that staff development opportunities should support VET reform and should be demand oriented. Countries expect to transform their CPD systems along these lines over the coming years. The attention paid by all countries to improving their qualifications systems has led to a number of key developments, including a shift from a subject-based approach to a competence-based one. This shift, however, is still at a very early stage and will require considerable financial and human resources.

E. Governance and policy practices in the VET system – Common trends

Central Asian countries demonstrate awareness of the necessity to ensure coordination between public institutions that hold responsibility for VET and human capital development. At the same time, all the countries continue to explore ways to enhance employer involvement in VET.

Coordination of VET-related issues is reported to be organised via inter-ministerial working groups (Tajikistan) and national skills-related councils. These usually involve high-level representatives from key ministries and employer organisations. National councils were set up several years ago in Kazakhstan and the Kyrgyz Republic. Tajikistan was considering setting up a similar body by the end of 2016. In order to cater for regional development needs, Kazakhstan and Uzbekistan also set up coordination mechanisms at regional (sub-national) level.

All four countries have set up sector councils. The expectation is that these can express sectoral skills requirements and VET can then translate these requirements into better VET provision, which matches employer expectations. The national reports show that sector councils face a number of challenges and cannot always meet these high expectations within the first years of their existence. This can be explained to some extent by the limited capacity of employer organisations in those economic sectors that are represented by small and micro enterprises. Typically, in such contexts, there are numerous employer organisations, none of which represent a very large share of the sector. These organisations only have limited experience in skills-related issues and have few or no dedicated staff that could take part in sector council work on a regular basis. At the same time, countries that have extremely limited resources, like the Kyrgyz Republic and Tajikistan, are not able to provide public funding to support council activity. In such contexts, sector councils require some external or donor support to become (and stay) operational. This can represent a challenge for the overall sustainability of some sector councils. Nevertheless, in the Kyrgyz Republic, where sector councils have been operational over the last three to four years and have been engaged in joint projects with VET, the overall cooperation level between VET and the private sector is reported to have improved.

The limited capacity of many employer organisations to engage sustainably in skills-related issues remains a major bottleneck. The case of the National Chamber of Entrepreneurs of Kazakhstan deserves special attention. Membership of the chamber, which was set up in 2013, is mandatory for all economic actors, including SMEs. This means that the chamber is well resourced, and able to offer professional support and services to its members. At regional level, the human capital development units of the regional chambers support cooperation between VET colleges and enterprises in a hands-on manner.

The chamber has a clearly defined role in VET policy development and implementation. It is leading the implementation of the roadmap for dual education and since 2016 it has been responsible for occupational standards (developing the standards, introducing changes or updates, approving the standards). While line ministries were previously in control of the sectoral qualifications frameworks, there is now better coordination and closer links with the private sector.

The four countries also refer to attempts to improve VET provider governance. In the case of Kazakhstan and the Kyrgyz Republic, school or college boards have been set up with the participation of local enterprises and administrations. In the case of Uzbekistan and Tajikistan, attempts focus mainly on giving employers a bigger role. It remains unclear whether the new approaches have led to improvements. So far, it seems that these new structures have merely been added to the existing structures.

None of the reports mention developments in provider autonomy in terms of financial management. Kazakhstan introduced a new education standard for VET in 2016. This gives VET colleges more flexibility to work with the dual approach, so that they can respond better to enterprise requirements.

The 2016–17 Torino Process reports indicate a heightened awareness of the importance of governance processes to support VET reform. While previous reports mainly reported on the setting up of new structures, the 2016–17 reports show that countries are now exploring means to ensure the efficient and effective functioning of the new bodies.

3. CONCLUSIONS AND KEY MESSAGES



When considering developments in VET in the four Central Asian countries since 2010, progress can be seen in all five building blocks explored by the Torino Process analytical framework. However, the pace of development is different for all the countries and all the building blocks.

Over the last seven years, Central Asian countries have expanded their vision on the role and format of VET. They have started to move away from a standardised, uniform type of provision for young people to multiple forms that cater for a diversity of needs. This development is still at an early stage and far from being system-wide. However, the 2016–17 Torino Process reports show that the countries are starting to consider the lifelong learning perspective.

A particular challenge in this area is the limited interministerial cooperation. However, this is also an area in which countries have started to look for solutions. The emphasis in the 2016–17 Torino Process reports on finding ways to improve the functioning of governance bodies that have been set up for coordination purposes illustrates this development.

Over the last seven years, Central Asian countries have also started to explore the complexity of labour markets that involve multiple players and are no longer state-controlled. They have started to look for means to engage employers in the governance of VET, understanding that this development cannot be brought about by 'orders from the top', but instead can only happen if employers can be convinced to cooperate on an ongoing basis.

Understandably, the main focus of VET reform since 2010 has been on aspects of internal efficiency of the system. Since 2014, countries have stepped up their efforts to mainstream new developments in accordance with their potential. However, the financial and human resources that can be allocated for this purpose differ considerably among the four countries.

Most countries have started to organise their new developments from the perspective of their qualifications systems. This not only provides a wider rationale, but also builds closer links between VET and the labour market. While developments in this area are at an early stage for most countries, they represent a new way of working.

The availability, use and accessibility of evidence for policy development, monitoring and evaluation

remains a key challenge, especially in relation to labour market information but also to VET outcomes (as opposed to inputs). While new methods have often been piloted in recent years – thanks to donor support – or carried out as ad hoc research to support project actions, this has rarely translated into better systematic collection at national level.

Key messages on vision

VET has conquered a prominent role in the policy debate, but it is not holistic enough to cater for the needs of the society.

Since the first round of the Torino Process in 2010, the importance of VET on the policy agenda has increased in all Central Asian countries. Between 2010 and 2012, this resulted in the adoption of VET policy documents that spell out a national vision for the medium- to long-term development of VET systems. VET is expected to play a role in supporting economic development in the labour market. It also has a social mandate. In subsequent years, VET was included in strategic developments in other domains, such as employment and overall (sustainable) development, in many of the countries.

VET policy documents continue to focus on first-time learners and long courses. In most countries, VET policies are insufficiently connected to the overall education system and only limited attention is paid to education pathways. The 2014 and 2016–17 rounds of the Torino Process indicate an increasing awareness that lifelong learning and adult learners require specific policy measures and that education pathways are critical to the attractiveness of VET.

In order to support the implementation of their strategies, most countries have developed action plans and defined targets. Central Asian countries are aware of the importance of monitoring the progress of reform, but have not yet developed robust systems to do this. Most countries have stepped up data collection for monitoring purposes, but still consider that insufficient evidence is produced and used for monitoring and decision making.

While the importance of monitoring is widely recognised, no country has as yet formulated plans to evaluate developments achieved in policy priority areas.

Key messages on external economic efficiency

While actions have been put in place to shape a higher-quality and diversified VET provision on the basis of needs, countries in the region call for a better use of evidence and system change.

Since 2010, Central Asian countries have identified the availability of labour market information as a key priority for ensuring quality VET. Since 2012, this has evolved into a need to better understand current and medium-term skills needs and improve interaction with employers.

The 2016–17 round of the Torino Process shows that varying degrees of progress have been made in both areas. For example, new developments include improvements in labour force surveys, regional labour market analysis and projections of medium-term labour market needs. All countries report employer involvement in defining skills requirements, either on a sector basis or with regard to the development of standards. In most countries, these developments are not yet system-wide. None of the countries have evaluated the results of this work on the employability of VET graduates.

VET graduate employment is recognised as a key indicator of the labour market relevance of VET. Since 2014, countries have developed a better understanding of the importance of matching and have therefore started to review their graduate tracing approaches.

Although all countries report on the piloting of new tools and measures, there is also increasing concern that there is insufficient financial or human capacity to mainstream these at system or national level. While more evidence is becoming available, it is not used systematically for policy making, as 'ownership' is fragmented and typically involves a number of ministries and/or state agencies.

Business creation and entrepreneurship appear on the policy agendas of most Central Asian countries. VET systems have been slow to take up the issue and are only starting to gain experience with entrepreneurial learning.

Key messages on external social efficiency

Short courses have allowed for more opportunities offered to more people.

During the 2010 round of the Torino Process, most Central Asian countries defined the social mandate of VET in terms of access for clearly specified groups and training for unemployed people. Overall participation in VET and its accessibility were rarely considered. In most countries, state-funded VET provision was not available to all. The 2016–17 round of the Torino Process shows that there is a greater understanding of the accessibility of VET compared to 2010 and that all countries have undertaken a number of measures to open up VET. This has resulted in greater participation in VET, although not necessarily in IVET.

Many countries have gradually made VET more accessible by expanding short-term training. Although this type of training is not always state-funded, it has proved relevant in contexts where there is widespread poverty and where many people cannot afford to attend long VET courses. Short courses have also increased the participation in VET of people with very low levels of education, who for formal reasons cannot enrol in long courses. Some countries have also started to use short VET courses to support enterprise development.

In 2010, only one country had initiated actions on the inclusion of students with special needs. By 2016, most countries had taken their first steps towards inclusive approaches, covering physical access and new teaching methods. However, all countries note that considerable efforts in teacher training and stakeholder cooperation would be required for large-scale implementation.

Key messages on internal efficiency

Make all pieces of the jigsaw fall into place: countries are moving towards an integrated action approach to address quality of VET provision.

Since the 2010 Torino Process, the area of internal efficiency has been addressed on a continuous basis by all countries. While actions initially focused on relatively narrow issues, such as the updating of specific curricula or the introduction of specific new teaching methods, the 2016-17 round of the Torino Process shows that countries are attempting to introduce these experiences into existing systemwide approaches or even to completely review an existing approach. Many countries have also started to consider and plan developments from the perspective of their qualifications systems. As a result, issues that were previously dealt with in isolation (e.g. content development and student assessment) are now considered part of a wider development.

Central Asian countries recognise that teachers and trainers are a key factor in the successful development of their systems. Some countries were able to reform staff salaries and increased them from 2011/2012. Nevertheless, all the countries continue to report difficulties in attracting and retaining staff with sufficient practical (enterprise-related) skills. All countries have taken action to improve their inservice training. By 2016, several countries had taken the initial steps to reorganise their systems to make them more flexible and responsive to demand.

While enterprise-based practice is already a mandatory element of VET in all Central Asian countries, the 2016–17 Torino Process illustrates that Central Asian countries are now aware of the importance of extending the duration of practice and improving its quality. Most countries report difficulties in scaling up new approaches that they have piloted in recent years. This occurs in sectors where micro and small enterprises predominate.

All the countries recognise the importance of quality in VET, and acknowledge that traditional approaches are formal and control oriented. Yet

there is little development in this area. Only two countries have started to implement independent accreditation. At the same time, no country has yet defined comprehensive new quality criteria or quality assurance approaches that can be implemented on a large scale at VET provider level.

Central Asian countries have shown an interest in developing their qualifications systems; the level of progress achieved varies significantly. Some countries have only just approved the design of an NQF, while others are already at an advanced stage of implementation or are even reviewing initial developments. Progress is generally slow, owing to the nature of NQFs, which affect all parts of the VET and education system and require intensive stakeholder involvement. In most countries, reviewing the qualifications system has entailed a gradual shift from a subject-based to an outcome-or competence-based approach to teaching and learning. Most countries recognise that this shift is still at a very early stage.

Key messages on governance

The challenge is with implementation: clarity of roles and responsibilities to increase accountability in delivery mechanisms.

In 2010, Central Asian countries referred to a general need to improve social partnership. From 2012, many countries noted the need for better coordination among the public institutions responsible for human capital development. All the countries subsequently set up new bodies at national level (national skills councils) and sector level (sector skills councils). However, in 2016, most countries report challenges in operationalising their work in a sustainable manner.

This applies in particular to sector skills councils. These were set up in all the countries to formulate skills requirements, so that VET can then match employer expectations by providing training for the relevant skills that are needed. Countries that have been able to support active council work report improved provision and cooperation between VET and the private sector. However, countries also refer to the very limited capacity of employer organisations to engage in council work on a regular basis. This

is especially true in sectors where small and micro enterprises predominate.

Since 2012, all four countries report that they have taken measures to improve governance of VET providers. They have all introduced school or college boards that involve local enterprises and public administration. However, by 2016, countries were not certain whether the new bodies were actually helping to improve the situation, as their mandate often remained unclear or overlapped with existing management structures.

The 2016–17 round of the Torino Process demonstrates, therefore, a heightened awareness that new governance structures may fail to deliver the expected results if working processes and responsibilities have not been clearly defined.

Since 2010, the limited financial and academic autonomy of VET providers has been repeatedly noted. So far, no significant changes in this area have been reported by any of the countries.



ANNEXES

Annex 1. Labour market, education and contextual indicators

0.0 -7.8 D13 D10 ZN 93.0 2.3 1 450.730 **D13** -31.7 -40.4 D10 2 51.8 12.6 9.2 50.1 16.7 5.9 47.8 15.3 6.4 15.038 -0.8 က္ 9.0 -9.0 -11.8 -28.8 -32.9 5.5 15.8 21.9 -0.4 -20.2 3.1 -27.7 17.4 16.4 5.1 D13 D10 -0.1 -0.5 -16.6 -18.9 -45.6 -29.5 -13.9 -16.5 0.1 -49.3 -35.7 -6.4 -21.2 -13.4 3.2 80.00 190.238 42.9 80.4 27.0 25.4 32.2 41.3 40.5 71.1 5.0 5.2 4.1 13.1 28.1 -0.9 15.5 11.9 -9.5 19.0 -0.2 0.9 -8.4 -10.4 0.9 2.5 2.6 -7.3 3.2 **D13** -3.0 54.6 -3.3 -11.6 -0.2 39.5 -10.2 -16.6 18.7 -11.7 8.0 27.4 28.1 D10 62.4 67.2 13.4 8.2 15.0 6.5 39.2 33.5 28.9 86.6 83.3 21.4 7.7 7.3 66.393 7.6 37.2 2015 Maths High VET Reading LowMedium Science Tertiary educational attainment (30-34) (%) Participation in lifelong learning (25-64) (%) Employment rate of recent graduates (%) education or training (NEETs) (15-24) (%) Early leavers from education (18-24) (%) Youth unemployment ratio (15–24) (%) Youth unemployment rate (15-24) (%) Incidence of self-employment (%) Students in combined work-and total upper secondary students Underachievement in PISA (%) school-based training as % of Unemployment rate (15+) (%) Students in VET programmes Employment rate (20-64) (%) Students in VET programmes People not in employment, Unemployment rate (15+) by education (%) in upper secondary ('000) in upper secondary (%) Activity rate (15+) (%) Skill gaps (%)

			KG			4			ㄹ			ZO	
		2015	D10	D13	2015	D10	D13	2015	D10	D13	2015	D10	D13
	Low	5.8	-2.7	3.6	5.2	-51.5	-22.5	28.7					
Educational attainment of	Medium	72.1	-2.3	-2.1	61.2	-2.7	-2.5	8.09					
	High	22.1	9.3	6.7	33.3	29.5	10.5	10.5					
Public expenditure on education as % of GDP		5.6	رن 8.	-17.4	3.6	-12.2	-5.3	5.1	27.5	-1.9	8.6		0.0
Public expenditure on education as % of total public expenditure		21.8	39.0	22.7	16.6	1.8	-7.8	15.7	6.8	-13.7			
Proportion of teachers who have followed CPD in the last 12 months (%)	(%)	17.6		9.0	32.5								
Total population ('000)		6 019.48	11.1	6.3	17 417.67	7.5	3.0	8 551.20	13.6	7.1	30 700.00	7.3	1.7
Relative size of youth population (15–24) (%)	5–24) (%)	28.2	-16.3	-9.4	23.8	-19.9	-11.9	33.1	-10.3	-4.6	29.5	-11.9	-3.5

Sources: National statistical offices, Ministry of Education, Ministry of Finance, ILOSTAT (ILO database of labour statistics), OECD (World Indicators of Skills for Employment database), UNESCO Institute for Statistics

Legend:

D13: Percentage change from 2013 – [lay-2013]/(2013)*100 D10: Percentage change from 2010 – [lay-2010]/(2010)*100

Yellow cells: positive value of change; Purple cells: negative value of change

Low: basic education and less; Medium: secondary general, initial and secondary VET; High: (incomplete) higher education

Notes:

Activity rate - TJ: 15-75, ETF calculations; TJ lay: 2009

Employment rate – KG: ETF calculations; KZ: ETF calculations; TJ: 15–75, ETF calculations; TJ lay: 2009

Unemployment rate – TJ: 15–75, ETF calculations; TJ lay: 2009

Unemployment rate by education – KG lay: 2014; KG: ETF calculations; KZ: ETF calculations; TJ: 15–75, ETF calculations; TJ lay: 2009

Youth unemployment rate - TJ: ETF calculations; TJ lay: 2009

Youth unemployment ratio – KG: ETF calculations; KZ: ETF calculations; TJ: ETF calculations; TJ lay: 2009 Incidence of self-employment – KG: ETF calculations; KZ: ETF calculations; TJ lay: 2009

Skill gaps - lay: 2013

Tertiary educational attainment (30-34) - KG: ETF calculations; KZ lay: 2009

Underachievement in PISA - KG lay: 2009; KZ: coverage too small to ensure comparability, not comparable with previous rounds

Persons not in employment, education or training (NEETs) - KG: participation in education in the week prior to the survey considered; KZ: participation in education in the week prior to the survey considered; KZ: age group 15-28

Students in VET programme in upper secondary – KG lay: 2014; TJ lay: 2013

Students in combined work-and school-based training – KZ: data refers to the share of VET students who have had work experience in an enterprise (out of the total number of VET students)

Educational attainment of adult population – KG: ETF calculations; KZ: 15+, ETF calculations; TJ: 15–75, ETF calculations; TJ lay: 2009 Public expenditure on education - KG: break in series

Proportion of teachers who have participated in CPD in the last 12 months – KZ: data refers to the formal CPD in IVET, ETF estimates – values to be treated with caution –

Total population - KG lay: 2016; TJ lay: 2016, UZ lay: 2014

Relative size of youth population – KG: ETF calculations; KG lay: 2016; UZ lay: 2014

Annex 2. Benchmarking Kazakhstan 2016–17 Torino Process and EU 2020 targets in education and employment

			K	Z	E	U	EU 2020
			2015	2013	2015	2013	objectives
ne ts	Early leavers from education (18–24) (%)	m	m	11.0	11.9	< 10%
Headline targets	Tertiary educational attainment (30–34	1) (%)	m	m	38.7	37.1	≥ 40%
He	Employment rate (20–64) (%)		80.4c	80.7c	70.1	68.4	≥ 75%
S	Participation in lifelong learning (25–64) (%)		m	m	10.7	10.7	≥ 15%
targets		Reading	41.3u	57.1*	19.7	17.8*	
r ta	Underachievement in PISA (%)	Maths	32.2u	45.2*	22.2	22.1*	< 15%
Other		Science	28.1u	41.9*	20.6	16.6*	
O	Employment rate of recent graduates	(20–34) (%)	m	m	76.9	75.4	≥ 82%

Notes: c: ETF calculation; m: missing data; u: unreliable/coverage too small to ensure comparability; * reference year: 2012. Sources: Committee of Statistics of Kazakhstan, Eurostat, OECD.



ACRONYMS

CPD Continuing professional development

ETF European Training Foundation

EU European Union

ILO International Labour Organisation

IVET Initial vocational education and training

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

NQF National qualifications framework

OECD Organisation for Economic Cooperation and Development

PISA Programme for International Student Assessment

SME Small and medium-sized enterprise

UNESCO United Nations Educational, Scientific and Cultural Organisation

VET Vocational education and training

COUNTRY CODES

KG Kyrgyz Republic

KZ Kazakhstan

TJ Tajikistan

UZ Uzbekistan



REFERENCES

2016-17 TORINO PROCESS COUNTRY REPORTS

European Training Foundation, National experts, *Torino Process* 2016–17: Kazakhstan, Kyrgyz Republic, Tajikistan and Uzbekistan, ETF, Turin, 2017. Last accessed 2 October 2017 at: www.torinoprocess.eu/hub/

Central Asian Education Platform, *National qualifications frameworks in Central Asia: Stock-taking report*, 2016. Last accessed March 2017 at: www.caep-project.org/wp-content/uploads/2014/09/CAEP_NQF_Report_prel_ver.pdf

European Training Foundation, *Torino Process 2016–17*, ETF, Turin, 2016. Last accessed March 2017 at: www.etf.europa.eu/web.nsf/pages/Torino_Process_2016-17

European Training Foundation, *Torino Process 2014: Central Asia*, ETF, Turin, 2015.





The ETF is an EU agency that helps transition and developing countries to harness the potential of their human capital through the reform of education, training and labour market systems in the context of the EU's external relations policy.

www.etf.europa.eu www.twitter.com/etfeuropa www.youtube.com/user/etfeuropa www.facebook.com/etfeuropa

www.torinoprocess.eu #ETFTRP