

# POLICIES FOR HUMAN CAPITAL DEVELOPMENT

## KAZAKHSTAN

AN ETF **TORINO PROCESS**  
ASSESSMENT

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# PREAMBLE

The European Training Foundation (ETF) assessment provides an external, forward-looking analysis of the country's human capital development issues and VET policy responses in a lifelong learning perspective. It identifies challenges related to education and training policy and practice that hinder the development and use of human capital. It takes stock of these challenges and puts forward recommendations on possible solutions to address them.

These assessments are a key deliverable of the Torino Process, an initiative launched by the ETF in 2010 aimed at providing a periodic review of vocational education and training (VET) systems in the wider context of human capital development and inclusive economic growth. In providing a high-quality assessment of VET policy from a lifelong learning perspective, the process builds on four key principles: ownership, participation, holistic and evidence-based analysis.

Human capital, in this context, is understood as knowledge, skills, talents and abilities that further people's economic, social and personal development. The purpose of the assessments is to provide a reliable source of information for planning and monitoring national education and training policies for human capital development, as well as for programming and policy dialogue in support of these policies by the European Union and other donors.

The ETF assessments rely on evidence from the countries collected through a standardised reporting template (national reporting framework – NRF) through a participatory process involving a wide variety of actors with a high degree of ownership by the country. The findings and recommendations of the ETF assessment have been shared and discussed with national authorities and beneficiaries.

The assessment report starts with a brief description of Kazakhstan's strategic plans and national policy priorities (Chapter 1). It then presents an overview of issues related to the development and use of human capital in the country (Chapter 2), before moving on to an in-depth discussion of problems in this area, which in the view of the ETF require immediate attention (Chapter 3). Chapter 4 provides the overall conclusions of the analysis.

The annexes provide additional information: a summary of the recommendations in the report (Annex 1), an overview of the education and training system of Kazakhstan (Annex 2).

The National Torino Process Report compiled by the country itself can be found here:  
<https://openspace.etf.europa.eu/trp/torino-process-2018-2020-kazakhstan-national-report>.



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# EXECUTIVE SUMMARY

This European Training Foundation (ETF) assessment was prepared in 2019 on behalf of national authorities in the Republic of Kazakhstan (hereinafter: Kazakhstan) using a standardised framework questionnaire for national reporting (national reporting framework).

The assessment process included an extensive phase of desk research based on information provided by Kazakhstan in its national Torino Process report (hereinafter: national report)<sup>1</sup> and the preparation of an Issues Paper with an overview of themes to be discussed in the present report. These were then finalised in consultation with the ETF country and thematic teams responsible for Kazakhstan at the ETF. An advanced draft of the ETF assessment was circulated to national stakeholders and international partners and discussed at a consultation meeting in Nur-Sultan on 10 December 2019 to verify the findings and recommendations.

At the time of this assessment, the overarching, long-term strategic framework for the development of Kazakhstan is Development Strategy 2050, which envisages the realisation of seven long-term priorities. One of them refers to knowledge and skills as the main anchors of the modern system of education and human capital development (HCD) to which the country aspires. Some of the more ambitious goals in the strategy are to double the share of highly skilled graduates and to increase the educational attainment of the adult population.

At an education and VET sector level, the strategic actions and aspirations that guided the policies focused on in this report were described in the State Programme of Education Development 2016–2019<sup>2</sup>. This programme was replaced by State Programme 2020–2025 at the end of 2019, when this report was finalised for review<sup>3</sup>. Both the old and the new state programmes retain a focus on teachers, quality and equity, the elimination of regional and urban-rural disparities, the development of quality assurance systems, ICT and digitalisation and a transition from a system of formal education to a system of lifelong learning and research. Furthermore, Kazakhstan is an active participant and partner in a number of international initiatives and projects.

In this strategic context, the main question at the heart of this ETF assessment is whether the long-standing, considerable financial and political investment made by Kazakhstan in the area of human capital development and VET, as well as its achievements in relation to reform in this area, are wide-reaching and deep enough to bring the country closer to its long-term goal of becoming one of the most competitive economies in the world by 2050.

While there is ample evidence to suggest that Kazakhstan is on track to achieve this, the report also draws attention to three major challenges and numerous policy-related gaps around each challenge, which may create risks further down the road by slowing down the pace of positive change and undermining its sustainability and impact. These challenges include the ineffective distribution and use of state-sponsored opportunities for human capital development as a result of the unsatisfactory quality and limited relevance of teaching and learning in VET, which hampers the anticipated

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<sup>1</sup> National report of Kazakhstan, prepared within the framework of the Torino Process, 2020. Available at <https://openspace.etf.europa.eu/trp/torino-process-2018-2020-kazakhstan-national-report>.

<sup>2</sup> Government Decision No. 460 of 24 July 2018: State Programme for Education Development 2016–2019.

<sup>3</sup> Government Decision No. 988 of 27 December 2019: State Programme for Education Development 2020–2025.

contribution of VET to the strategic development of the country, and deficiencies in workforce development caused by a lack of adult education.

## Human capital: overview of developments and challenges

### Depletion of human capital due to gaps in migration and employment policies

The national report of Kazakhstan describes in great detail a situation of accelerating brain drain. This brain drain occurs as qualified, prime-age individuals with the skills needed in the domestic labour market leave Kazakhstan. In many cases, the country has paid a premium for the development of these skills. Economists, teachers and technicians account for the three biggest professional groups of emigrants.

Some of the reasons behind the exodus of qualified people can be found in labour market problems. Although they may not be obvious in the official statistics, these problems concern the quality of jobs on offer and the working conditions. Informality and self-employment are widespread, and young people constitute one of the population groups most likely to find employment in such jobs, which are also poorly paid, offer limited or no prospects for development and provide weak labour protection.

The workers who leave the country are replaced by a stock of considerably lower qualified workers with only basic or lower secondary education. The number of incoming migrants with higher education is particularly small compared to the number of higher education graduates who leave. These trends pose a veritable risk to the national plans for human capital development in Kazakhstan for two major reasons.

The first is that the country does not seem to have yet developed any policies to promote circular migration. Circular migration is known to provide benefits for both the sending and receiving country, and for the migrants themselves, by generating and helping to distribute the financial, human and social capital generated by employment abroad. The second is the absence of a mechanism for the proper acknowledgement of immigrants, the identification and recognition of their professional skills (including recognition of informal and non-formal learning) and their proper and legal integration into the national labour market. This leads to wastage of their human capital.

### Cultivation of ICT talent through VET: a priority area at risk

Both the national report and the digitalisation strategy acknowledge that Kazakhstan is only at the beginning of its digitalisation trajectory. Much remains to be done if the good practices and innovation capacity seen in the dedicated hubs in Nur-Sultan and elsewhere are to become a driving force for the national economy. The development of human capital is thereby one of the priority areas in this respect.

To a large extent, the human capital development strand of the digitalisation strategy involves cultivating a new generation of information and communications technology (ICT) specialists, specifically in areas that are in the domain of vocational training, such as information systems and information security system designers, database management system developers and software developers.

To prepare the education and training sector for this responsibility, the digitalisation plans call for a revision of content and priorities in secondary general education and VET by adding new subjects to

the curricula, developing new professional standards and, as already mentioned, allocating a sizeable share of the state order<sup>4</sup> to promote participation in the new ICT-related courses.

However, at the time of preparing this assessment, the national report suggests that the VET system is not yet fully ready for these tasks due to systemic shortcomings that may risk the slowing down or even failure of the digitalisation plans. One such risk is the acute shortage of teaching staff with enough knowledge of foreign languages (English) and ICT. Another is the gap that exists between the education and training system and the ICT sector as a potential employer of graduate talent. There are problems in relation to communication and ICT employer participation in VET. This prevents the VET system from adjusting adequately and in a timely manner to the new, ICT-related demand in the economy and to the expectations associated with the digitalisation strategy.

### Shortage of VET specialists as an impediment to human capital development

For some years now, national authorities, stakeholders and the donor community in Kazakhstan have been prioritising teacher-related policies as an area of significance for better and more equitable education (OECD, 2014). Such policies have also recently been prioritised as a key area for human capital development through VET. Despite remarkable progress in improving employment conditions, professional development opportunities and remuneration for teachers, challenges in this area still remain. These challenges relate particularly to teachers and trainers in VET, who have been largely excluded from many of these improvements.

Unlike teachers in general education, teachers in VET do not receive financial incentives to engage in professional development and the conditions of their employment have remained largely unchanged. Furthermore, the salary scheme for trainers and masters in blue collar disciplines (in Russian *рабочие профессии* or working class jobs) still does not take into consideration their professional category and prior work experience.

These shortcomings lead to several problems. The most significant of these appears to be the shortage of teachers and trainers – especially in specialised subjects, which also happen to be the ones providing qualifications in high demand in the labour market.

### Assessment of key issues and policy responses

This section discusses three more problems related to human capital in Kazakhstan: the ineffectiveness of state-sponsored opportunities for human capital development through VET; the low quality of these opportunities; and deficiencies in the area of adult education as a means of workforce development. These challenges are assessed in greater detail because, in the view of the ETF, they require immediate attention as major human capital-related constraints to growth. They also concern policy areas that Kazakhstan has declared to be of strategic importance.

#### Limited effectiveness of state-sponsored opportunities for HCD through VET

In 2012, Kazakhstan launched its long-term strategy for national development, in which it committed to becoming one of the 30 most advanced countries in the world by 2050. VET, and more specifically the

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<sup>4</sup> The state order refers to study places funded through the state budget, usually in specialties which deliver qualifications that are projected to be in demand on the labour market.

labour market relevance of its outcomes, is seen as essential in the realisation of this strategy and other plans for economic and social progress through human capital development.

VET enrolment capacity and spending on VET have grown in line with the strategic significance of the sector, driven in part by a sizeable increase in the number of state-funded places. However, there are also indications that these state-sponsored opportunities are not being used effectively enough. This may prevent the VET sector from realising its full potential in the area of human capital development.

Specifically, the VET system continues to struggle to reach its main beneficiaries – students and their prospective employers – and address their needs and expectations. Employers too continue to experience difficulties in filling vacancies that require VET-related skills. Year after year, well over half of the jobs posted with the labour market services are for staff in occupations requiring vocational qualifications and remain unfilled.

Kazakhstan has embarked on a number of policy actions to remedy these shortcomings. Prominent examples include boosting the number of study grants (state order places or *Goszakaz*) allocated to VET programmes that lead to qualifications in high demand in the labour market, introducing a nationwide ‘VET for free’ initiative and focusing more closely on career guidance services.

The national report provides some evidence on the effectiveness and impact of these policies, which suggests that the policy responses are not as effective as anticipated. One of the reasons is that the planning and allocation of places and state grants for VET relies on an outdated methodology that does not capture the regional labour markets’ need for human capital. Another reason is that the majority of public VET schools still depend on the state order for most of their funding needs<sup>5</sup> and thus have an interest in retaining their historic enrolment capacity even if that means continuing to teach subjects that are no longer in demand. In turn, this leads to considerable misalignment between demand for places in VET and their supply, and to unmet labour market demand for skills. Finally, the system of career guidance is fragmented and lacks proper coordination.

### Low quality of VET as an impediment to human capital development

Vocational schools in Kazakhstan face difficulties in delivering the relevant outcomes for the labour market and consequently in performing their role in contributing to economic and social prosperity through human capital development. According to some sources<sup>6</sup>, some 70% of employers in Kazakhstan are dissatisfied with the skills of VET graduates, and VET graduates themselves feel that they struggle to find a job because their education and training are disconnected from the world of work. The transition time to first-time employment for VET graduates is 21 months, which is very long when compared internationally. Even after finding a job, close to half of all VET graduates do not find employment in their field of specialisation.

One of the major reasons for this situation is the limited relevance of the skills of VET graduates. In 2015, for example, the performance of VET students in science as measured by the Organisation for Economic Co-operation and Development’s (OECD) Programme for International Student Assessment (PISA) was 32 score points lower than that of students in general education. This is the equivalent of one year of schooling. The latest round of the OECD’s Programme for International Assessment of Adult Competences (PIAAC) in 2018 suggests that secondary education (including VET) in

<sup>5</sup> National report of Kazakhstan, 2020: E.5.1.

<sup>6</sup> See, for instance, Álvarez-Galván, 2014.

Kazakhstan is also not particularly effective. In terms of mean literacy proficiency, for example, young people (aged between 16 and 24) with secondary general education or VET in Kazakhstan perform almost as poorly as young people who have no secondary education or are not in education. The difference between both groups is 14.73 score points, which is the second lowest of all countries participating in PIAAC.

The national report of Kazakhstan describes a number of policy measures that are being taken in response to the second key challenge. These measures are at different stages of implementation. The majority of these responses strive to improve the labour market relevance of human capital development through VET, but a number of actions also aim to improve the quality of teaching and learning in VET more broadly.

To address the low quality of VET in the country, Kazakhstan is planning to implement a gradual change in the methods of instruction in VET to make them more student-centred and competence-based. On the other hand, measures designed to boost the labour market relevance of VET include highly diversified actions such as the independent certification of VET graduates by professionals employed in the graduate's respective field; the modularisation of programmes; the forecasting of skills needs; and the provision of entrepreneurship learning.

At the same time, there are a number of shortcomings at technical level in these policies, which prevent them from having a proper impact. These include an inadequate and outdated quality assurance and progress monitoring system, weak links between VET providers and employers (despite substantial progress in the area of dual education) and persistent deficits in the area of infrastructure investment and the availability of teaching and learning materials.

### **Underutilisation of adult education for workforce development purposes**

The third key challenge concerns the area of lifelong learning and adult education. In Kazakhstan, the educational attainment of the active, working age population is well above the average for countries in the EU and the OECD, which the authorities have chosen as a benchmark of development. Despite this long-standing achievement in terms of formal education, however, the working age population of both genders in Kazakhstan is, on average, significantly less proficient in literacy, numeracy and problem solving than the populations of other countries and the OECD. In fact, the 2018 PIAAC results suggest that, of all the 39 countries that participated in the assessment, Kazakhstan has the highest proportion of low-achieving adults in literacy and the seventh-lowest level of adult performance in numeracy.

This situation reinforces the importance of promoting opportunities for adult education and lifelong learning, as described in the national strategies. However, it also suggests that the implementation of strategic commitments in this area may not be as effective as planned and needed. The education and employment authorities in Kazakhstan promote adult education policies to support people who already have a job as well as those who need remedial training in order to find work. However, major shortcomings remain unaddressed, in particular the continuing absence of adult education data, the lack of incentives for employers who wish to participate in workforce development through adult education and the absence of mechanisms for the recognition of informal and non-formal learning.

## Recommendations

The recommendations in the report are grouped into three clusters, one for each key issue discussed in the assessment.

### First cluster of recommendations: effectiveness of HCD opportunities through VET

In the first cluster of recommendations (recommendations 1 to 3), the ETF proposes actions that aim to increase the effectiveness of state-sponsored opportunities for human capital development through VET. These actions are intended to address the policy-related shortcomings in the funding for VET, the methodological limitations in the allocation of state grants in VET and the limitations in career guidance which prevent students from taking informed choices about their education and training careers.

#### R.1 Diversify the streams of VET funding according to purpose

The ETF recommends that the national authorities (Ministry of Education and Science) initiate a consultation about changes in the system of public funding for VET with a view to diversifying the funding according to purpose and need ‘on the ground’. This could include the introduction of core funding for the institutional needs of VET providers in order to free the discussions and decisions about state grant allocations from concerns regarding the survival of Vet institutions, and refocus them on the original purpose of state grants: addressing the economic and labour market needs of the country and its regions.

In the present system, the state order serves multiple, and at times contradictory, purposes for which it was not designed. Such purposes include the funding needs of VET institutions, labour market needs at central and local level, student demand for places, as well as the implementation of national and education sector development strategies. This can easily lead to an overstretch and, as shown in this section, it limits the effectiveness of policies that promote opportunities for human capital development through VET.

#### R.2 Revise the mechanism for planning and allocating state order places to VET providers

The ETF recommends revising the mechanism of allocation used by the state order for priority programmes (blue collar professions) in VET, so that it leads to a more balanced distribution of opportunities for participation in VET in line with regional needs and conditions.

This will require a more thorough revision of the methodologies used to anticipate labour market demand at regional level and much greater involvement of stakeholders in the regions, in particular employers, in the planning of the state order than is the case now.

#### R.3 Revise the career guidance services with a view to improving their effectiveness

The ETF recommends recalibrating the focus of career guidance services so that they consider not only labour market demand, but also the needs, expectations and aptitudes of students. There is also a need for better coordination of career guidance provision. Prior research suggests that parents can also benefit from such changes as they help to ensure that their influence on their children’s career choices is well informed.

Initial steps in this direction could be to strengthen the coordination between career guidance providers and to consolidate a strategy for developing career guidance as an essential element in the promotion of better and more relevant VET.

## **Second cluster of recommendations: low quality of VET**

The second cluster of recommendations (recommendations 4 to 6) targets some of the underlying reasons for the persistent problem of low quality and relevance of human capital development. These reasons include the inadequate quality assurance and progress monitoring system, the (still) weak links between VET providers and employers, shortcomings in infrastructure and shortages in the availability of teaching and learning materials.

### **R.4 Upgrade the quality assurance system in VET in line with priorities for human capital development**

The ETF recommends bringing the quality assurance system in VET colleges 'up to speed' with the range of changes taking place in the rest of the VET system. The present system focuses heavily on compliance with norms and standards and on ensuring that providers can be held accountable by education authorities, stakeholders and the broader public.

Without doubt, this is an important aspect of quality assurance, but the multitude of reforms in education and training also call for a more flexible and open approach in which the focus shifts from mere compliance with norms to promoting the performance of VET providers and guiding their improvement. This should happen in parallel with the continuation of efforts already underway to develop robust internal quality assurance mechanisms in VET.

### **R.5 Stimulate the involvement of employers by creating incentives and favourable conditions for their participation in the advancement of VET**

The ETF recommends providing employers with a diversified set of incentives – financial or otherwise – to get involved in consultations around the design and delivery of VET programmes. These incentives should be robust and ambitious enough to boost the currently modest level of involvement of small and medium-sized enterprises (SMEs) in work-based learning schemes and partnerships. Examples could include tax breaks, the prospect of short-term adjustments in training content in order to address immediate employer needs and access to business development loans with more favourable conditions.

### **R.6 Revisit and calibrate the financial allocations for VET to increase capital investment**

The ETF recommends revisiting the financial allocations for VET with a view to increasing capital spending in areas of significance that affect the contribution of VET to human capital development. Examples of such areas include up-to-date teaching and learning materials, including materials in priority languages for integrated learning; high-speed internet connectivity and e-learning content; and improvements in the physical infrastructure of all VET colleges to ensure that they can provide decent, up-to-date teaching and learning environments. In circumstances that may not allow for spending increases of this kind, the ETF recommends intensifying the ongoing work on promoting public-private partnerships.

## **Third cluster of recommendations: adult education for workforce development**

The third and final cluster of recommendations (recommendations 7 to 9) are intended to help remedy some of the challenges concerning the use of adult education for workforce development purposes. At the time of this assessment, such use was hampered by a lack of proper data; the absence of incentives for employers to participate in the provision of adult education opportunities and support the professional development of their employees; and the lack of progress in developing mechanisms for the recognition of non-formal and informal learning.

#### **R.7 Close the data gap in the area of adult education and lifelong learning**

The national report and this assessment noted that there is a lack of tools for analysing and evaluating the effectiveness of reform in education and training, and that this problem is particularly pronounced with respect to adult education.

The ETF recommends the speedy closure of the gap in the availability of evidence on adult education and lifelong learning. A first step in that direction would be to analyse the OECD's national PIAAC data with a view to preparing policy briefs and analytical reports for the purpose of policy planning and implementation. The national PIAAC data is a rich repository of information on the skills of the adult population that can be used for monitoring and policy planning purposes.

#### **R.8 Incentivise employers to participate in the creation of opportunities for lifelong learning**

The ETF recommends creating flexible schemes to encourage the participation of employers in the creation of lifelong learning opportunities, for instance co-financing schemes for the professional training of adults in employment and those looking for employment, based on training programmes and curricula in the VET sector.

#### **R.9 Establish mechanisms for the recognition of non-formal and informal learning**

The ETF also recommends establishing a mechanism for the recognition and validation of informal and non-formal learning in order to capitalise on the skills obtained in this way. It also recommends expanding the coverage and impact of adult education as a policy priority. This may require the development of robust and novel procedures and criteria, especially where recognition leads to qualifications that are the same or comparable to those delivered by formal education and training. Reforms in this area may also call for revisiting the quality assurance system.

# 1. INTRODUCTION

## 1.1 About this assessment

This ETF assessment was prepared in 2019 on behalf of national authorities in Kazakhstan using a standardised framework questionnaire for national reporting (national reporting framework).

The assessment process included an extensive phase of desk research based on information provided by Kazakhstan in its national Torino Process report, and the preparation of an Issues Paper with an overview of themes to be discussed in the present report. These were then finalised in consultation with the ETF country and thematic teams responsible for Kazakhstan at the ETF. An advanced draft of the ETF assessment was circulated to national stakeholders and international partners and discussed at a consultation meeting in Nur-Sultan on 10 December 2019 to verify the findings and recommendations.

Like other ETF assessments, this paper is not meant to be exhaustive. The national Torino Process report of Kazakhstan covers a broad selection of problems around human capital development and use, while the focus here is on challenges which the ETF recommends addressing as a matter of priority.

The main question this report intends to answer is whether the long-standing, considerable financial and political investment made by Kazakhstan in the area of human capital development and VET, as well as its achievements in relation to reform in this area, are wide-reaching and deep enough to bring the country closer to its ambitious, long-term goal of becoming one of the most competitive economies in the world by 2050. While there is ample evidence to suggest that Kazakhstan is on track to achieve this, this assessment also draws attention to three major challenges and numerous policy-related gaps around each challenge, which may create risks further down the road by slowing down the pace of positive change and undermining its sustainability and impact.

These challenges include the ineffective distribution and use of state-sponsored opportunities for human capital development through VET (discussed in Section 3.1<sup>7</sup>); the unsatisfactory quality and limited relevance of teaching and learning in VET, which hampers the anticipated contribution of VET to the strategic development of the country (Section 3.2); and deficiencies in workforce development caused by a lack of adult education (Section 3.3).

Before that, in Section 2, the ETF assessment provides an overview of basic human capital development indicators (Section 2.1) and highlights three more, closely associated challenges. These include gaps in migration and labour market policy leading to brain drain (Section 2.2); risks in the cultivation of ICT talent due to human resource shortages (Section 2.3); and a shortage of VET specialists as an impediment to human capital development (Section 2.4).

Section 4 concludes the assessment and is followed by annexes summarising the policy recommendations (Annex 1) and offering a short overview of the education and training system (Annex 2).

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<sup>7</sup> The report may use “Section” and “Chapter” interchangeably.

## 1.2 Country overview

Kazakhstan is located in Central Asia. With a territory covering 2 724 900 square kilometres it is the ninth-largest country in the world by land surface. Kazakhstan is neighboured by Russia, China, Kyrgyzstan, Uzbekistan and Turkmenistan, and has access to the Caspian Sea.

The country declared independence in 1991 and today its constitution describes it as a democratic, secular republic with a separation of powers between the legislative, judiciary and executive branches of government. Kazakhstan's political landscape is dominated by the ruling Nur-Otan party, which is also the largest and strongest political force in the country.

Kazakhstan is divided into 14 regions (Kazakh: *облыстар*, *oblystar*) and 177 districts (Kazakh: *аудандар*, *awdandar*)<sup>8</sup>. The provinces vary considerably in population size and level of economic development, and most of the job opportunities are concentrated in the two major cities, Almaty and the capital Nur-Sultan. These two cities, as well as the city of Shymkent, do not belong to any region. At the beginning of 2019, some 58% of the population of Kazakhstan lived in urban areas.

Until recently, the extraction of natural resources fuelled a rapid expansion of the economy, with gross domestic product (GDP) growth of well over 7% in some years. Between 2015 and 2018 there was also a steady increase in per capita GDP (9.7%). With GDP per capita of USD 27 873 in 2018 (Table 1)<sup>9</sup>, Kazakhstan today is an upper-middle-income country. However, despite the continuing efforts of authorities to diversify the economy and reduce its dependence on natural resources, the socio-economic development of the country is still vulnerable to shifts in global commodity prices. Table 1 shows that the economy has slowed down in the past few years, and GDP has been growing by about 4% per year. The net inflow of foreign direct investment dropped considerably as well. This also led to a slowdown in efforts to reduce poverty and to a weakening of labour market outcomes (World Bank, 2020). Gaps in income and standard of living between urban and rural areas persist as well. In 2015, poverty – as measured by the proportion of people living below the national poverty line – was more than three times higher in rural than in urban areas<sup>10</sup>.

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<sup>8</sup> The city of Almaty and the capital Nur-Sultan have a special status and do not belong to any province.

<sup>9</sup> Adjusted for purchasing power parity; current international USD.

<sup>10</sup> See indicators SI.POV.RUHC and SI.POV.URHC in the World Bank's Open DataBank at <https://databank.worldbank.org/home.aspx>

**TABLE 1. SELECTED COUNTRY CONTEXT INDICATORS, KAZAKHSTAN**

Indicator	2015	2016	2017	2018
GDP per capita, PPP (current international \$)	25 123	25 315	26 491	27 831
GDP, real growth rate (%)	1.2	1.1	4.1	4.1
Foreign direct investment, net inflows (% of GDP)	3.6	12.5	2.9	0.1
Population	17 415 715	17 669 896	17 918 214	18 157 337
Youth population (15 - 24), as a % of the population in working age	23.0	22.0	21.1	m
Unemployment rate (in % of those aged 15+)	5.1	5.0	4.9	4.9
Activity rate (in % of those aged 20 - 64)	83.0	83.6	83.3	84.1
Enrolment in VET, as a % of total upper secondary enrolment (ISCED 3)	40.5	40.1	39.7	40.3
Share of young people (15 - 24) not in employment, education or training	7.9	7.2	6.4	6.0

Source: ETF database.

Despite these challenges, the unemployment rate has remained low (4.9% in 2018), the share of young people not in employment, education or training (NEET) is by far the lowest in the region (6%), and per capita income has continued to increase despite the setbacks caused by various economic challenges and the global context (Table 1). Kazakhstan has also maintained its level of financial commitment to education and training in line with its prioritisation of the sector, although at 2.8% of GDP (2017), government spending on education is low when compared internationally.

Natural and man-made conditions have an influence on both the provision and cost of education and training in the country (OECD, 2015). Extreme weather conditions, a school network which is spread over vast areas that are difficult to access and which includes many ungraded (incomplete) schools (*malokomplektnie shkoli*) and schools in areas affected by environmental risks all create challenges for the planning, implementation and funding of education and training policies. Another significant factor in this respect is the rich diversity of the school population in terms of ethnicity, religion and language: this population comprises students from 23 different ethnicities (OECD, 2014).

### 1.3 Strategic context

The overarching, long-term strategic framework for the development of Kazakhstan is Development Strategy 2050<sup>11</sup>, which envisages the realisation of seven long-term priorities. One of them refers to knowledge and skills as the main anchors of the modern system of education and human capital development to which the country aspires. Some of the more ambitious goals therein are to double the share of highly skilled graduates and to increase the educational attainment of the adult population.

The realisation of this long-term vision is described in the medium-term Strategic Plan for the Development of Kazakhstan until 2025<sup>12</sup>, which aims at promoting economic development and prosperity for the population to levels that are on a par with those of OECD member countries and in

<sup>11</sup> See <https://kfm.gov.kz/ru/activity/strategy-and-program/strategy-kazakhstan-2050/>.

<sup>12</sup> Presidential Decision No. 636 of 15 February 2018: Strategic Plan for the Development of the Republic of Kazakhstan until 2025.

line with the Sustainable Development Goals (SDGs). Developing human capital and boosting 21st century skills in the population is thereby one of only seven top priorities.

At an education and VET sector level, the strategic actions and aspirations are described in the State Programme of Education Development 2016–2019<sup>13</sup>. At the time of finalising this ETF assessment, this state programme was replaced by another one that is scheduled to run until 2025<sup>14</sup>. Both the old and the new state programmes retain their focus on teachers, quality and equity; the elimination of regional and urban-rural disparities; the development of quality assurance systems, ICT and digitalisation; a transition from a system of formal education to a system of lifelong learning; and research. Some of the measures and goals are more specific to VET and include the further development of dual education, the digitalisation of VET, the revision of curricula and study content and the specialisation of VET colleges. The strategic documents also attribute to VET a strong remedial role for the socio-economic integration of young people and young people at risk<sup>15</sup>.

All strategic plans for education and VET include a set of key performance indicators, which are tracked and reported on at regular intervals. Many of them are aligned with or based on the results and areas covered in large-scale international studies such as TIMSS, PIRLS and the OECD's PISA, TALIS and PIAAC programmes. Overall, the OECD's and EU's insights regarding performance and policy in education continue to be a major orientation point for designing reforms and monitoring progress of their implementation.

Furthermore, Kazakhstan is an active participant and partner in a number of international initiatives and projects. In the area of VET, the national Torino Process report describes partnerships with the ETF, the World Bank, the EU, GIZ (a German development agency) and the OECD<sup>16</sup>. It also refers to the country's active engagement in the World Skills franchise and competition. A major EU initiative in support of informed decision making in education and in the area of regional cooperation is also the Central Asian Education Platform.

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<sup>13</sup> Government Decision No. 460 of 24 July 2018: State Programme for Education Development 2016–2019.

<sup>14</sup> Government Decision No. 988 of 27 December 2019: State Programme for Education Development 2020–2025.

<sup>15</sup> National report of Kazakhstan, 2020: A.3.4.

<sup>16</sup> National report of Kazakhstan, 2020: A.3.5.

## 2. HUMAN CAPITAL: DEVELOPMENT AND CHALLENGES

### 2.1 Overview and key data

This report previously noted that human capital is an aggregate of the knowledge, skills, talents and abilities of individuals, which they can use for economic, social and personal benefit. The value of human capital depends on how well it is developed, and on the extent to which it is then available and used. Table 2 presents a selection of human capital development indicators, which provide a basic overview of how Kazakhstan is doing in this respect.

**TABLE 2. SELECTED INDICATORS ON HUMAN CAPITAL, KAZAKHSTAN**

	Year	Value
(1) Population structure (% of total)		
0-24	2015	41.7%
25-64	2015	51.6%
65+	2015	6.8%
0-24	2025 (1)	41.7%
25-64	2025 (1)	49.6%
65+	2025 (1)	8.7%
(2) Average years of schooling	2017	11.8
(3) Expected years of schooling	2017	15.1
(4) Learning-adjusted years of schooling	2017	11.5
(5) Adult literacy	2015	99.8%
(6) Global Innovation Index Rank (x/126)	2018	74
(7) Global Competitiveness Index Rank (x/137)	2017-18	57
(8) Digital Readiness Index Rank (x/118)	2018	26

Notes: 1: Projection.

Sources: (1) UN Population Division, World Population Prospects, 2017 revision; (2) UNESCO UIS database (3) and (4) World Bank, 2018, Human Capital Index; (5) UNESCO, UIS database; (6) World Economic Forum, The Global Innovation Index, 2018; (7) World Economic Forum, Global Competitiveness Index 4.0, 2018; (8) Cisco, Country Digital Readiness, 2018; (9) ETF, skills mismatch measurement in the ETF partner countries.

Young people under the age of 25 account for close to 42% of the population of Kazakhstan, which is considerable when compared internationally. In 2016, according to Eurostat data, the average share of people under the age of 30 in the EU was 17.4%, while those over the age of 65 are projected to account for a quarter of the population by 2025, almost three times more than in Kazakhstan by the same year.

It is a commendable achievement that the country manages to maintain access to education for its sizeable youth population. Young people can expect close to 12 years of schooling on average. In that time, based on the relatively strong performance of Kazakhstan in the TIMSS and PIRLS assessments which influence that indicator, they can also count on a similar number of learning-adjusted years of schooling (11.5). Kazakhstan also scores relatively high on the Digital Readiness Index in regional and

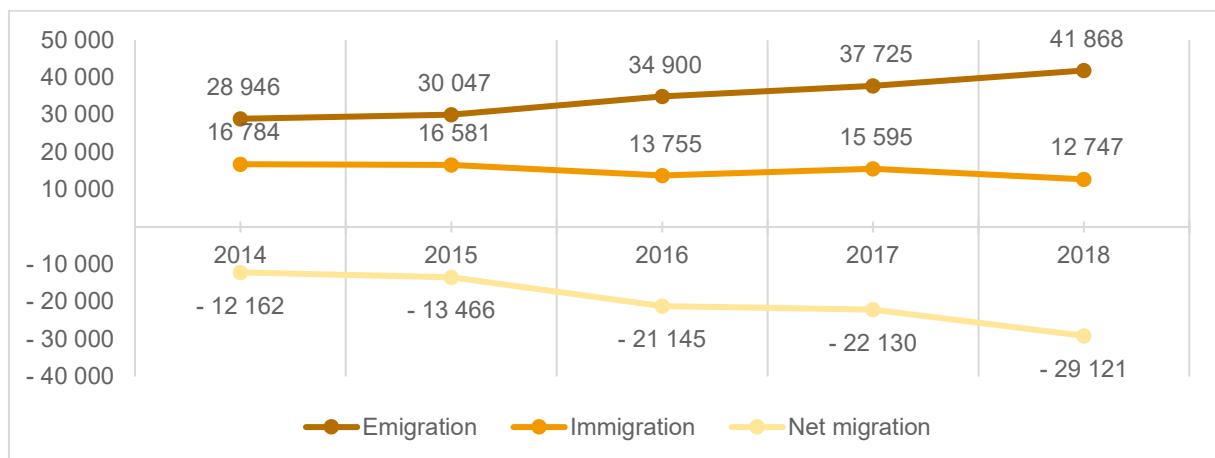
global comparisons (ranked 18th out of 118 countries); it is in the median quartile of countries in the Global Competitiveness Index (ranked 57th out of 137 countries); and its adult literacy rates are among the highest in the world.

## 2.2 Depletion of human capital due to gaps in migration and employment policies

Until the early 1990s, much of the literature on brain drain through migration focused on describing the phenomenon as a loss with unfavourable economic and social repercussions, and as a problem that countries need to mitigate. However, more recent research suggests that brain drain can also be a situation of gain for the home country, provided it succeeds in creating the opportunities and incentives required for circular migration (Stark, Helmenstein, & Prskawetz, 1997).

The national report of Kazakhstan describes in great detail a situation of accelerating brain drain. This brain drain occurs as qualified, prime-age individuals with the skills needed in the domestic labour market leave Kazakhstan. In many cases, the country has paid a premium for the development of these skills. Economists, teachers and technicians account for the three biggest professional groups of emigrants<sup>17</sup>. Between 2014 and 2018, some 173 486 people left Kazakhstan, while only 75 436 came to the country (Figure 1).

**FIGURE 1. EMIGRATION, IMMIGRATION AND NET MIGRATION (2014–2018)**



Source: Ministry of National Economy of Kazakhstan as quoted in the national report of Kazakhstan, 2020: A.3.2.

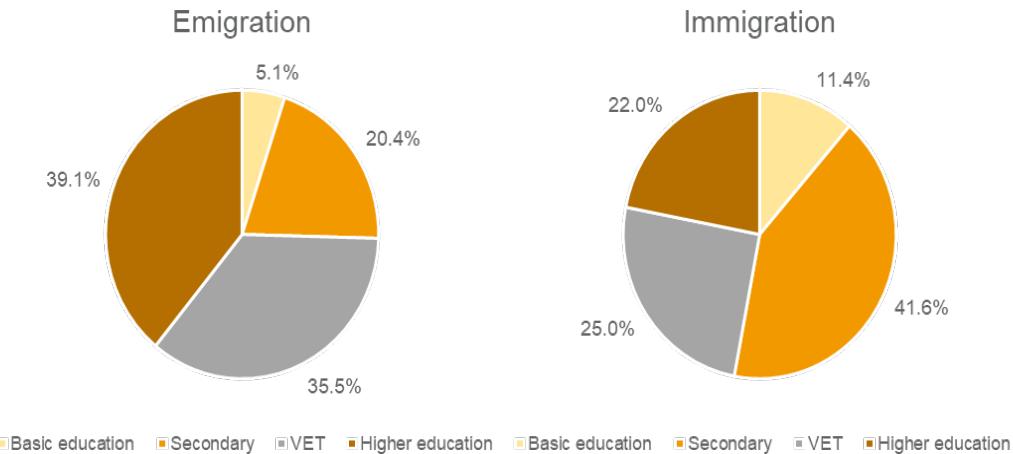
Some of the reasons behind the exodus of qualified people can be found in labour market problems. Although they may not be obvious in the official statistics, these problems concern the quality of jobs on offer and the working conditions. Informality and self-employment are widespread, and young people constitute one of the population groups most likely to find employment in such jobs, which are also poorly paid, offer limited or no prospects for development and provide weak labour protection (OECD, 2017b).

The workers who leave the country are replaced by a stock of considerably lower qualified workers with only basic or lower secondary education. The number of incoming migrants with higher education

<sup>17</sup> National report of Kazakhstan, 2020: B.1.3.

is particularly small compared to the number of higher education graduates who leave (Figure 2) and this appears to be a continuing trend.

**FIGURE 2. MIGRATION BY EDUCATIONAL ATTAINMENT (2017)**



Source: Ministry of National Economy of Kazakhstan as quoted in the national report of Kazakhstan, 2020: A.3.2.

The trends in migration lead to a depletion of human capital in rural areas and regions in which job opportunities are scarcer to start with. Such areas and regions include Karaganda (164% increase in the rate of workforce depletion over a four-year period), Kostanay (162%), North Kazakhstan (161%), Aktobe (152%) and Pavlodar (152%)<sup>18</sup>. The depletion of human capital exacerbates the economic and labour market woes of these regions even further.

One could argue that internal and external migration are a challenge, but also a fact of life in many countries. While this is also true for Kazakhstan, the phenomenon here poses a veritable risk to the national plans for human capital development in the country for two additional reasons.

The first is that the country does not seem to have yet developed any policies to promote circular migration. Circular migration is known to provide benefits for both the sending and receiving country, and for the migrants themselves, by generating and helping to distribute the financial, human and social capital generated by employment abroad (Skeldon, 2012). This implies the need to create various opportunities, including bi- and multilateral agreements and to recognise professional qualifications, including those obtained informally or non-formally. The second challenge is the absence of a mechanism for the proper acknowledgement of immigrants, the identification and recognition of their professional skills (including the recognition of informal and non-formal learning), and their proper and legal integration into the national labour market<sup>19</sup>. This leads to wastage of their human capital and prevents their proper mobilisation in the workforce.

## 2.3 Cultivation of ICT talent through VET: a priority area at risk

Kazakhstan has declared the digitalisation of its economy and society as a top development priority. The country has advanced to a stage where it is among the world's top ecosystems for digital start-up

<sup>18</sup> National report of Kazakhstan, 2020: A.3.2.

<sup>19</sup> See also national report of Kazakhstan, 2020: C.1.6.

investment and development, its particular advantages being affordable IT talent and a start-up-friendly investment environment, especially in the capital Nur-Sultan (Startup Genome, 2019).

Both the national report and the digitalisation strategy acknowledge that Kazakhstan is only at the beginning of its digitalisation trajectory and that much remains to be done if the good practices and innovation capacity seen in the dedicated hubs in Nur-Sultan and elsewhere are to become a driving force for the national economy. The development of human capital is thereby one of the priority areas in this respect, next to the transformation of traditional sectors in the economy, the stimulation of digital entrepreneurship, the digitalisation of the government and the expansion of the IT infrastructure<sup>20</sup>.

To a large extent, the human capital development strand of the digitalisation strategy involves cultivating a new generation of ICT specialists, specifically in areas that are in the domain of vocational training, such as information systems and information security system designers, database management system developers and software developers. In recognition of the significance of human capital development through VET in this respect, the authorities have increased the state educational order for ICT with the aim of supplying the labour market with at least 25 000 ICT specialists annually, starting in 2020 (Karatayeva, 2017).

To prepare the education and training sector for this responsibility, the digitalisation plans call for a revision of content and priorities in secondary general education and VET<sup>21</sup> by adding new subjects to the curricula, developing new professional standards and, as already mentioned, allocating a sizeable share of the state order to promote participation in the new ICT-related courses.

However, at the time of preparing this assessment, the national report suggests that the VET system is not yet fully ready for these tasks due to systemic shortcomings that may risk the slowing down or even failure of the digitalisation plans. One such risk is the acute shortage of teaching staff with enough knowledge of foreign languages (English) and ICT. In fact, the national report refers to a critical mass of teachers who don't even have a basic level of education in these two fields<sup>22</sup>. A possible reason for this situation is that the digitalisation plans neglect the need to upgrade the content and focus of initial and continuing teacher training, especially for teachers and trainers in VET.

Another risk is the gap that exists between the education and training system and the ICT sector as a potential employer of graduate talent. There are problems in relation to communication and ICT employer participation in VET. This prevents the VET system from adjusting adequately and in a timely manner to the new, ICT-related demand in the economy and to the expectations associated with the digitalisation strategy<sup>23</sup>. Some observers suggest that the lack of high-quality specialists in this field is at least partly a consequence of the lack of involvement of the ICT sector in the process of preparing the specialists it needs (Karatayeva, 2017).

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<sup>20</sup> See Government Decision No. 827 of 12 December 2017 establishing the Digital Kazakhstan state programme (Section 3); see also national report of Kazakhstan, 2020: A.3.1.

<sup>21</sup> Ibid.

<sup>22</sup> National report of Kazakhstan, 2020: D.3.6.

<sup>23</sup> See Section 3.4 of the digitalisation strategy, for example.

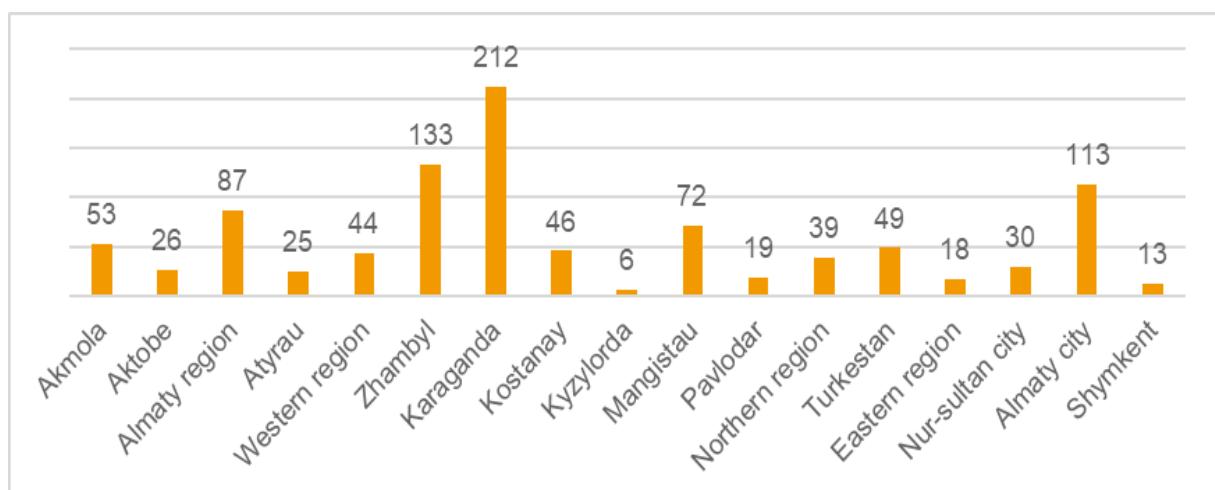
## 2.4 Shortage of VET specialists as an impediment to human capital development

For some years now, national authorities, stakeholders and the donor community in Kazakhstan have been prioritising teacher-related policies as an area of significance for better and more equitable education (OECD, 2014). Such policies have also recently been prioritised as a key area for human capital development through VET<sup>24</sup>. Despite remarkable progress in improving employment conditions, professional development opportunities and remuneration for teachers, challenges in this area still remain. These challenges relate particularly to teachers and trainers in VET, who have been largely excluded from some of these improvements.

Unlike teachers in general education, teachers in VET do not receive financial incentives to engage in professional development and the conditions of their employment have remained largely unchanged<sup>25</sup>. Furthermore, the salary scheme for trainers and masters in work-related disciplines still does not take into consideration their professional category and prior work experience.

These shortcomings lead to several problems. The most significant of these appears to be the shortage of teachers and trainers – especially in specialised subjects, which also happen to be the ones providing qualifications in high demand in the labour market (Figure 3).

**FIGURE 3. SHORTAGE OF TEACHERS AND TRAINERS IN VET (2018)**



Source: Ministry of National Economy of Kazakhstan as quoted in the national report of Kazakhstan, 2020: D.2.1.

According to the national report, engineering specialties are particularly affected by the shortages<sup>26</sup>. Part of the challenge is also that young teachers do not receive sufficient induction support. Most VET providers operate an initiative called 'Young teacher's school' (*Школа молодого педагога*), but the quality and intensity of support offered to young teachers within the framework of this initiative varies greatly between schools as there is no unified approach, guidance or standard<sup>27</sup>.

<sup>24</sup> See Presidential Decision No. 636 of 15 February 2018: Strategic Plan for the Development of the Republic of Kazakhstan until 2025; see also national report of Kazakhstan, 2020: D.

<sup>25</sup> National report of Kazakhstan, 2020: D.2.1 and D.2.3.

<sup>26</sup> National report of Kazakhstan, 2020: D.2.3.

<sup>27</sup> National report of Kazakhstan, 2020: D.1.3.



### **3. ASSESSMENT OF KEY ISSUES AND POLICY RESPONSES**

This section discusses three more problems related to human capital in Kazakhstan: the ineffectiveness of state-sponsored opportunities for human capital development through VET; the low quality of these opportunities; and deficiencies in the area of adult education as a means of workforce development. These challenges are assessed in greater detail because, in the view of the ETF, they require immediate attention as major human capital-related constraints to growth. They also concern policy areas that Kazakhstan has declared to be of strategic importance.

The problems that require attention include the ineffective allocation of state grants for VET; gaps in career guidance arrangements and practice; the lack of a proper quality assurance system that is fit for monitoring system change; persisting difficulties in engaging employers; and a shortage of capital investment in VET, which has a negative effect on teaching and learning conditions in priority subjects. Finally, progress in the area of workforce development through adult education is hampered by a lack of incentives for employers to provide professional development opportunities for their workers; by missing data; and by the absence of mechanisms for the recognition of informal and non-formal learning.

#### **3.1 Limited effectiveness of state-sponsored opportunities for HCD through VET**

##### **3.1.1 Description of the problem**

In 2012, Kazakhstan launched its long-term strategy for national development in which it committed to becoming one of the 30 most advanced countries in the world by 2050. Human capital development is one of the seven priorities in this long-term vision and also a top policy priority in the medium term until 2025.

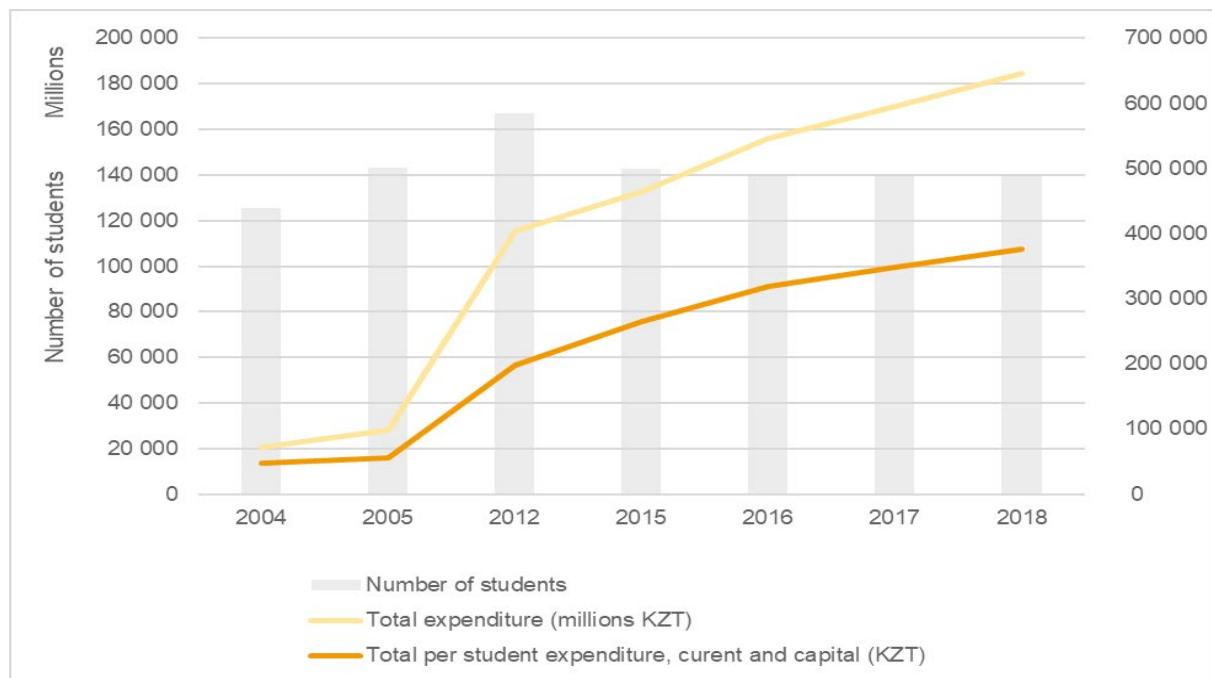
The prominence of human capital in these strategic aspirations signals that Kazakhstan's government, citizens and international partners have high expectations regarding the effectiveness of national policies for human capital development. Most of these policies target the education and training sector and have a strong focus on VET. In fact, VET, and more specifically the labour market relevance of its outcomes, is seen as essential in the realisation of all plans for economic and social progress, and also because a considerable share of young Kazakhs (below the age of 20) have opted for VET as their study choice. In 2018, public and private VET providers catered for the needs of over 43% of the 15 to 19-year-olds in the country, which is close to the 2016 EU average of 49.3% (the latest year for which there is comparable data)<sup>28</sup>.

VET enrolment capacity and spending on VET have grown in line with the strategic significance of the sector, which is creating new opportunities for students and employers. Spending has increased by an average of 13% year-on-year since 2012 (Figure 4), while the number of places in VET has multiplied in recent years, driven in part by a sizeable increase in the number of state-funded places.

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<sup>28</sup> (EUROSTAT, 2019), (Statistics Committee, 2018) and demographic data from the National Statistical Office of Kazakhstan.

**FIGURE 4. TRENDS IN PUBLIC SPENDING ON VET, 2004–2018**



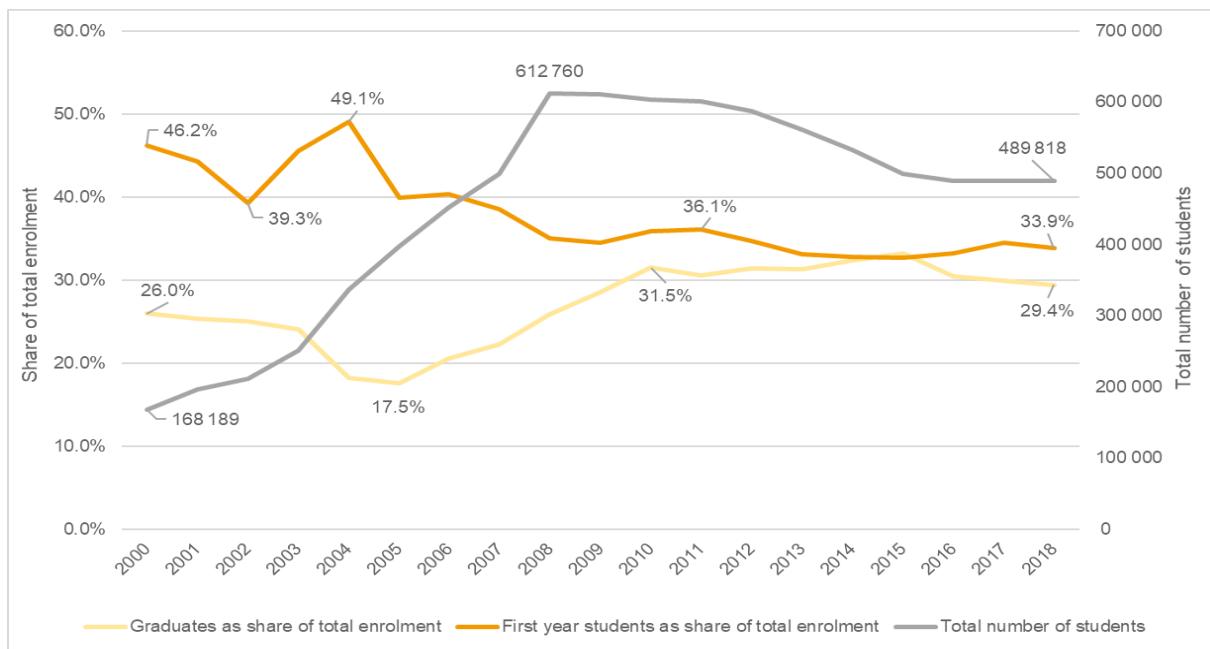
Source: Calculations based on data provided by the Statistics Committee of Kazakhstan ([stat.gov.kz](http://stat.gov.kz)).

However, there are also indications that these state-sponsored opportunities are not being used effectively enough. This may prevent the VET sector from realising its full potential in the area of human capital development and in turn diminish the prospect of Kazakhstan achieving its medium- and long-term development goals.

Data suggests that the VET system is still struggling to reach its main beneficiaries – students and their prospective employers – and address their needs and expectations. For some years now, the number of VET students has been stagnating, first-time VET enrolment has been on the decline (Figure 5). According to the national report, the majority of those who opt for VET are students who struggle academically<sup>29</sup>.

<sup>29</sup> National report of Kazakhstan, 2020: C.1.1.

**FIGURE 5. FIRST YEAR STUDENTS IN VET AS A SHARE OF TOTAL ENROLMENT IN VET**



Source: Statistics Committee of Kazakhstan ([stat.gov.kz](http://stat.gov.kz)).

Employers too continue to experience difficulties in filling vacancies that require VET-related skills. Year after year, well over half of the jobs posted with the labour market services are for staff in occupations requiring vocational qualifications and remain unfilled. In 2019, that share was 60.1% (Table 3).

Part of the problem is that only a fraction of VET students are graduating in fields that prepare them for blue collar professions, which are the professions in demand in the labour market. In 2018, only 25% of VET students graduated in such professions<sup>30</sup>. Another part of the problem, which is beyond the remit of education and training but still requires attention, is that the quality of many of these jobs is unsatisfactory in terms of working conditions, remuneration and job security (OECD, 2017b). While Kazakhstan is doing relatively well when compared internationally in terms of job numbers and unemployment rate (Figure 6), it also faces a persistent challenge with regard to the attractiveness of jobs on offer for prospective workers, especially young people and VET graduates, many of whom opt for informal employment solutions.

**TABLE 3. VACANCIES BY MINIMUM EDUCATIONAL ATTAINMENT (2013–2019)**

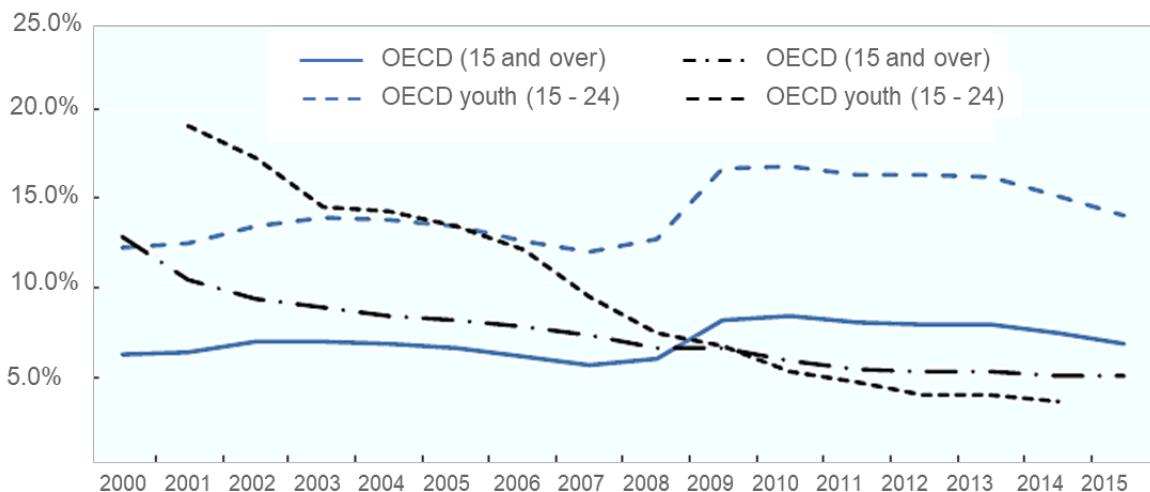
	Higher education	VET	No requirements
2013	30.0%	44.7%	10.2%
2015	27.7%	60.2%	12.2%
2017	32.1%	52.3%	15.5%
2018	28.3%	61.2%	10.5%
2019	29.0%	60.1%	10.9%

Note: Data applies to large and medium-sized enterprises only.

Source: Calculations based on data provided by the Statistics Committee of Kazakhstan ([stat.gov.kz](http://stat.gov.kz)).

<sup>30</sup> National report of Kazakhstan, 2020: C.1.1.

**FIGURE 6. UNEMPLOYMENT RATES, KAZAKHSTAN AND OECD COUNTRIES (2000–2015)**



Source: (OECD, 2017b).

The national report cites possible explanations for the discrepancies between the high strategic importance of VET and the limitations in the effectiveness of available VET opportunities in terms of participation and labour market relevance. These include problems with its attractiveness as a study choice, the low attractiveness of vocational occupations, but also persistent problems faced by young people from rural areas and vulnerable socio-economic backgrounds in accessing VET opportunities<sup>31</sup>.

The discussion in the next section of this assessment looks at the policies that Kazakhstan has put in place to increase the effectiveness and value of its VET offering for students and employers. It also discusses the strengths and shortcomings of these policies.

### 3.1.2 Policy responses

#### Overview of policy responses

Kazakhstan has embarked on a number of policy actions in support of human capital development through VET as a means of raising the overall attractiveness of the sector and promoting participation. National and regional authorities are trying to steer the choices of prospective students in favour of VET through a range of more specific measures and opportunities involving financial and in-kind support.

One of these measures is to increase the number of study grants (state order places or *Goszakaz*) allocated to VET programmes that lead to qualifications in high demand in the labour market. Another closely connected measure is the nationwide 'VET for free' initiative (*Бесплатное ТуПО*), which is financed by state and local budgets and envisages free training in all state-owned colleges for the first professional education of students. It also envisages free training in all colleges (public and private) if students are admitted to one of the programmes funded specifically through the state order. This is combined with the provision of career guidance services through career centres established in the colleges, regional chambers of entrepreneurs, youth policy institutes, labour market services and elsewhere.

<sup>31</sup> See, for instance, national report of Kazakhstan, 2020: Summary of Section C.

The local authorities also fund free meals and transportation for students from vulnerable socio-economic backgrounds and rural areas and plan to considerably expand the capacity of dormitories serving VET schools. The 'VET for free' initiative also provides jobseekers with access to short-term, free VET courses in addition to scholarships, free meals and transportation.

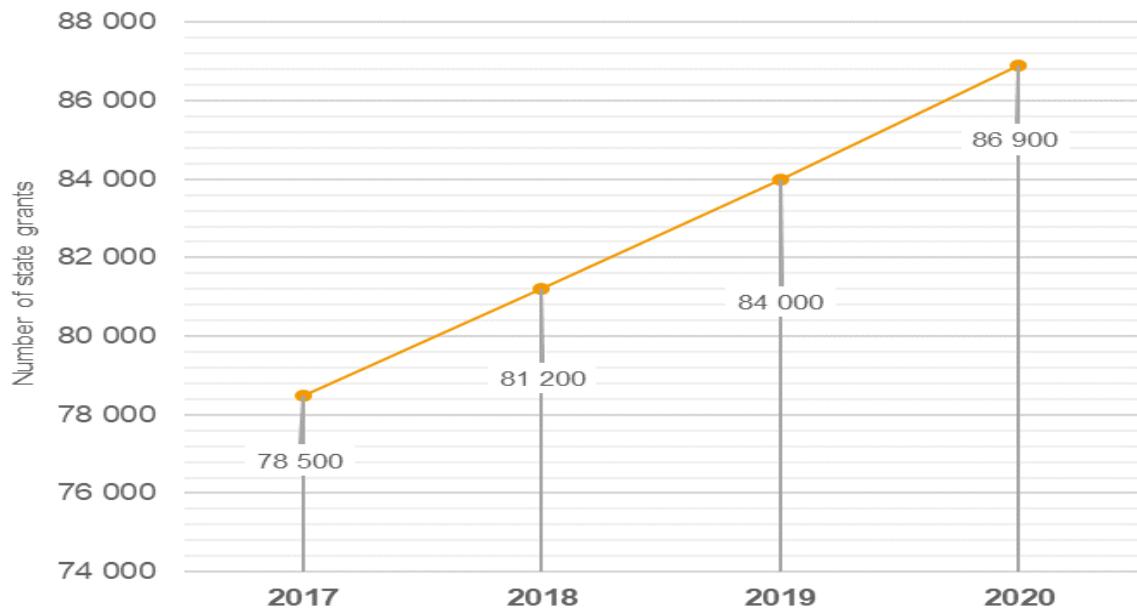
Finally, within the framework of the Serpin 2050 (*Серпин-2050*) state programme, the central authorities are also mobilising the enrolment capacity of higher education and VET providers to train young people of working age from regions where employment opportunities are more limited (e.g. Southern Kazakhstan) and support their relocation to parts of the country where there are skills shortages and labour market demand is stronger.

### Effectiveness of policy responses

#### Implementation of policies from the perspective of inputs

The national report provides ample evidence of positive changes on the input side of policies promoting participation in human capital development through VET. Spending on the study grants authorised by the state order has been on the rise for some years now, driven by an increase of over 10% since 2015 in the number of grants for working professions (Figure 7).

**FIGURE 7. TOTAL NUMBER OF STATE GRANTS ALLOCATED TO VET COURSES IN WORKING PROFESSIONS BETWEEN 2017 AND 2020**



Source: Data provided by regional authorities as quoted in the national report of Kazakhstan, 2020: Section C.1.1.

In terms of absolute numbers, the 'VET for free' initiative paid the tuition expenses of a total of 94 810 VET students in 2018. Overall, the share of students in VET whose tuition is paid through the state order has grown continuously since 2014. Table 4 shows enrolments for the 2017/2018 school year.

**TABLE 4. ENROLMENT IN VET FUNDED BY THE STATE AND BY VET STUDENTS, BY NUMBER AND SHARE OF TOTAL ENROLMENT (2017/2018)**

2017	State order		Self-payers	
	Number	%	Number	%
First year students	102 380	60.6%	66 576	39.4%
Total number of students	265 234	54.2%	224 103	45.8%
Number of graduates	75 103	51.2%	71 459	48.8%

Source: (Statistics Committee, 2018).

The Serpin 2050 programme has also helped to cover the training costs of almost 17 000 beneficiaries, of whom almost a quarter (23.8%) were trained in the 22 colleges belonging to the public VET system. In 2018, the education authorities also secured land for the construction of 134 new dormitories in the vicinity of VET providers with the aim of expanding capacity in the network of dormitories to a total of 75 000 places by 2022<sup>32</sup>.

#### Implementation of policies from the perspective of impact

The evidence of policy-related impact on participation in human capital development through VET is rather scarce and, where available, leaves room for interpretation. For example, the national report suggests that both the 'VET for free' initiative and the Serpin 2050 programme have had a positive impact on a range of VET participation-related challenges by boosting enrolment and graduation among specific groups. Such groups include students in need of special educational support, whose enrolment rates grew by 10.4% since the introduction of the initiative; graduates at risk of precarious employment, whose number went down by 13.2% in the same period; and the share of unemployed young people, which dropped by almost 12% over the three years up to 2018<sup>33</sup>. However, it is not clear how and to what extent the two initiatives have contributed to these positive developments, and whether other factors may have played a role as well.

This question is important because the same sources of evidence suggest that, in some instances, the very same policy responses have not been as effective as anticipated. One such instance is the non-participation in VET of a substantial number of students. According to the national report, between 20 000 and 30 000 young people do not continue their education and training after grades 9 and 11 every year despite the free opportunities offered to them. The national report indicates that this is a reason why some 16 000 of them (or 9% of the youth population in the relevant age group) become NEETs. In addition, a recent rating of VET colleges carried out by Kasipkor<sup>34</sup> showed that around 12% of students drop out even before graduating from their VET programme<sup>35</sup>.

Another example of a policy setback is the underutilisation of study opportunities for priority professions in the labour market (working professions). In 2018, for example, only a quarter of VET graduates entered these professions<sup>36</sup>. Among the reasons for this is that students and their families were not informed about the study opportunities or that they were in professional areas considered

<sup>32</sup> National report of Kazakhstan, 2020: C.1.3.

<sup>33</sup> National report of Kazakhstan, 2020: B.1.5; C.1.2; C.1.3.

<sup>34</sup> Kasipkor is a publicly owned holding company set up to modernise VET and develop new educational programmes.

<sup>35</sup> National report of Kazakhstan, 2020: C.1.2 and C.2.1.

<sup>36</sup> National report of Kazakhstan, 2020: C.1.1.

unattractive<sup>37</sup>. Another reason is that VET study choices were driven by personal and family expectations and convictions, and not by information on labour market prospects.

The national report suggests that, in many cases, the aspirations of families and students are often catered for by private VET providers (which at the time of this assessment accounted for 41.6% of all VET providers) – their study programmes are shaped by demand from students and profit considerations, and not by labour market needs. This contributes to a considerable oversupply of graduates in fields for which there is no demand<sup>38</sup>. ETF calculations based on data provided in the national report show that, in 2017–2018, almost a quarter of VET students (23.7%) were enrolled in VET programmes for which there was little or no demand, while programmes providing skills in high demand enrolled less than a fifth (19.2%) of the VET population<sup>39</sup>.

### Policy shortcomings

#### Planning and allocation of places and state grants for VET as a factor impeding participation

A common phenomenon and a challenge in many countries is the fact that the educational choices of students may not always be aligned with the needs of labour markets (Cedefop, 1998). In Kazakhstan, however, the problem is exacerbated by shortcomings in the planning and provision of opportunities for participation in VET and specifically in courses that are important to employers. These shortcomings concern in particular the planning of VET provider capacity and the allocation of state grants to VET. Decisions appear to be driven more by the funding needs of regions and their public VET providers, and less by actual student demand for VET or the skills needs of regional economies.

One aspect of the problem is that the majority of public VET schools still depend on the state order for most of their funding needs<sup>40</sup> and thus have an interest in retaining their historic enrolment capacity. However, this also leads to considerable misalignment between demand for places in VET and their supply. In 2018, for example, there was a shortage of places in 7 out of the 16 regions in Kazakhstan, the biggest deficits being in Almaty (6 176 places) and Shymkent (3 981 places). At the same time, there was a considerable surplus in other regions, in some cases a surplus of up to 5 989 places (Pavlodar) (Figure 8). The mismatch is particularly pronounced in rural areas, where VET providers operate at only 40% of their enrolment capacity and most of the vacant places are for VET programmes for which there is no student demand.

<sup>37</sup> National report of Kazakhstan, 2020: C.1.1.

<sup>38</sup> National report of Kazakhstan, 2020: C.3.2.

<sup>39</sup> National report of Kazakhstan, 2020: A.2.3 and C.3.1.

<sup>40</sup> National report of Kazakhstan, 2020: E.5.1.

## RECOMMENDATIONS

### 1. Diversify VET funding

 Discuss changes to the system of public funding for VET

Consider introducing core funding for the institutional needs of VET providers



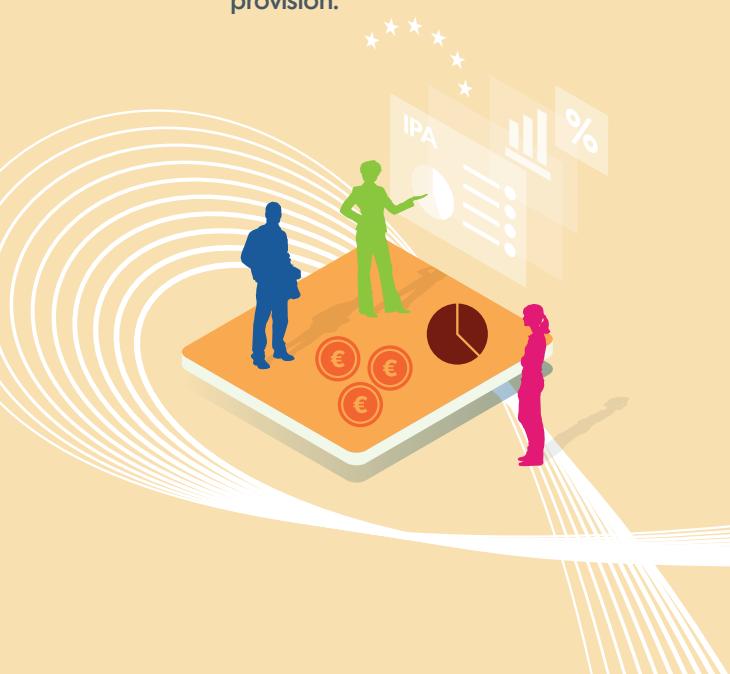
### 2. Revise state allocation of places in VET

 Balance the distribution of opportunities for participation in VET in line with regional needs and conditions

### 3. Improve career guidance services

 Include the needs and expectations of students as well as labour market demand.

Better coordinate career guidance provision.



### 5. Involve employers in developing VET

 Create incentives and conditions for the involvement of employers

Boost the involvement of work-based learning partnerships

### 4. Upgrade the quality assurance system in VET

 Update the quality assurance system in VET colleges

Shift the focus of quality assurance from compliance to performance

Investing in the development of robust internal quality assurance mechanisms



# KHSTAN

## S FOR POLICY MAKERS

### 7. Close the data gap in the area of adult education and lifelong learning



Improve the evidence on adult education and lifelong learning

Analyse and make use of national OECD PIAAC data as a rich repository of information on the skills of the adult population



### 8. Incentivise employers to improve lifelong learning



Create flexible schemes to encourage the participation of employers in the creation of lifelong learning opportunities

Consider co-financing schemes for the professional training of adults

yers in

and favourable participation of

ment of SMEs in training schemes and

### Revisit financial allocations for VET to increase capital investment



Update teaching and learning materials for integrated learning

Improve internet connectivity and e-learning content

Improve the physical infrastructure of VET colleges

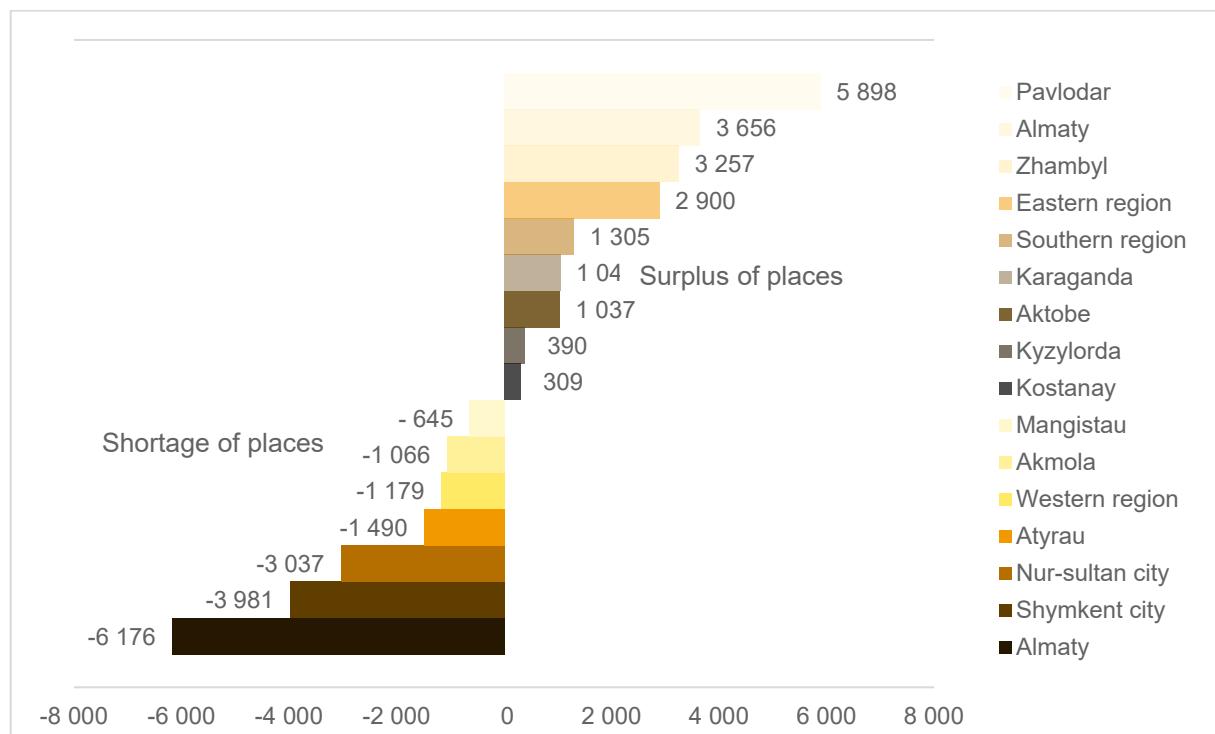
### 9. Establish mechanisms for the recognition of non-formal and informal learning



Capitalise on the skills obtained through non-formal and informal learning

Expand the coverage and impact of adult education

**FIGURE 8. SHORTAGES AND SURPLUSES OF PLACES IN VET COLLEGES IN KAZAKHSTAN, BY REGION (2018)**



Source: Ministry of Education and Science as quoted in the national report of Kazakhstan, 2020: Section C.1.1.

Another aspect of the same challenge is that the mechanism of planning and distributing the state order (state grants) fails to take into consideration skills needs at local level, although it is the main channel of public funding for VET at that level<sup>41</sup>. On the one hand, Kazakhstan coordinates policy efforts well across various levels of governance (ETF, 2019). On the other hand, the national report notes that, despite recent improvements<sup>42</sup>, the methodology used to allocate state grants still suffers from shortcomings. These shortcomings prevent it from capturing important details about regional labour market demand and the skills needs of SMEs at regional level.

Taken together with the tendency to perpetuate mismatch in supply and demand in terms of study places, these shortcomings are contributing to a problematic situation in which the distribution and funding of study opportunities in VET apparently depend on formal and informal criteria such as funding needs and historic budget allocations that are not as reliable as they should be, given the declared importance of the VET sector for human capital development.

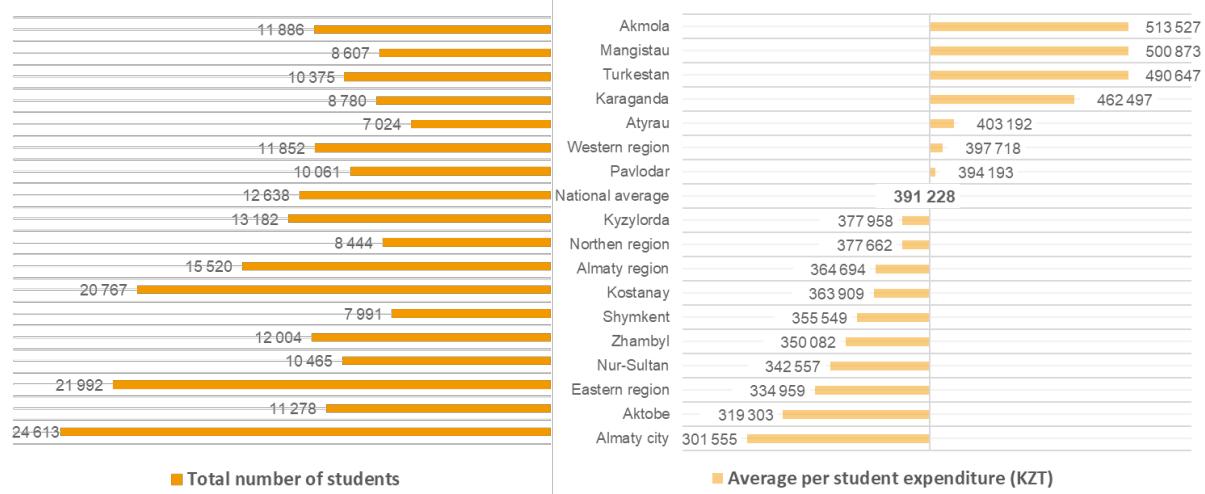
This problem may have various consequences for the effective and efficient use of VET resources and opportunities. One of these consequences appears to be the wide variation in the amount of funding provided through the state order for VET between regions in terms of average expenditure per student. A difference of almost 60% exists between the region with the lowest (Almaty) and the region with the highest (Akmola) levels of expenditure per student; the levels do not seem to depend on the number of students in the particular region (Figure 9). Nor do the allocated resources seem to depend on the number of providers per region (Figure 10). The Turkestan region, for example, has the highest

<sup>41</sup> National report of Kazakhstan, 2020: Summary of Section C.

<sup>42</sup> National report of Kazakhstan, 2020: A.2.4.

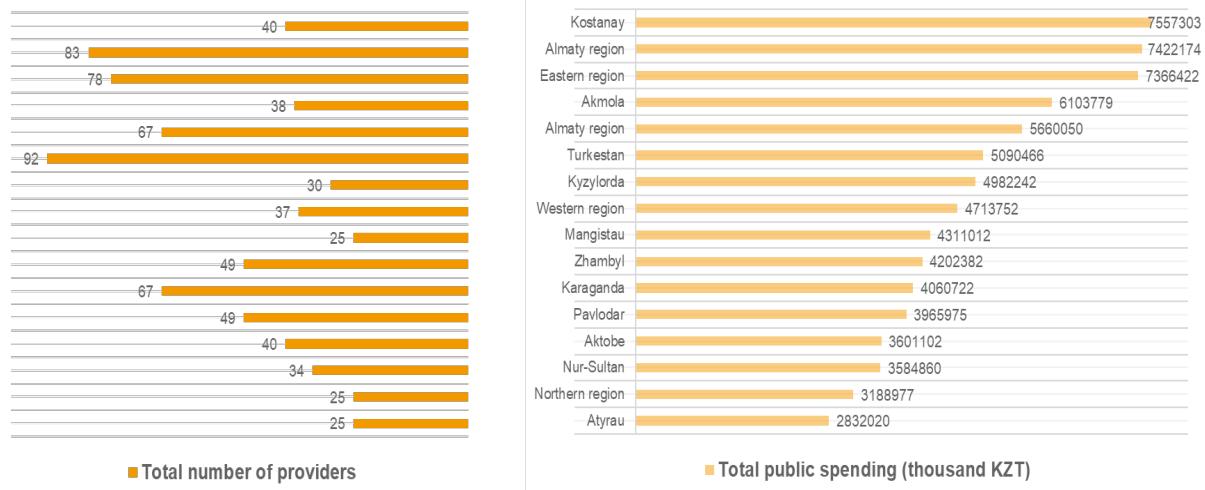
number of providers, but only the sixth-highest level of funding, while the regions of North Kazakhstan, Mangistau and Atyrau have a comparable number of providers and students, but very different amounts of public resources per provider and student.

**FIGURE 9. NUMBER OF STUDENTS AND PUBLIC SPENDING ON STATE GRANTS IN VET PER STUDENT AND VET PROVIDER, BY REGION (2018)**



Source: Calculations based on data provided by the Ministry of Education and Science as quoted in the national report of Kazakhstan, 2020: E.5.1.

**FIGURE 10. NUMBER OF PROVIDERS AND TOTAL PUBLIC SPENDING ON VET, BY REGION (2018)**



Source: Calculations based on data provided by the Ministry of Education and Science as quoted in the national report of Kazakhstan, 2020: E.5.1.

In addition to the risk of inadequate grant allocations, a final point of concern is that the state order system may be disadvantaging students from weaker socio-economic backgrounds. In Kazakhstan, students in this group are the most likely to struggle academically (OECD, 2018), but they are also the ones who are most likely to opt for VET. At the same time, the sole criterion for admission to state-funded places in VET is a successful performance in admission exams, which requires academic knowledge gained from general education. According to the national report, the socio-economic status of VET candidates is currently not taken into consideration<sup>43</sup>.

#### Deficiencies in the career guidance system as a factor hindering participation

If individuals are well informed and can reflect on what they will learn and how it links to their interests, capacities and aspirations, investment in education and training is likely to be considerably more effective (Watts, 2009). According to cross-country policy research, this is one of the main goals and contributions of career guidance in VET in most OECD countries, provided that attention is paid not only to the needs of employers, but also to the demands and expectations of students, who usually have a clearer idea of their skills and preferences (OECD, 2010).

In Kazakhstan, there are a number of institutions involved in career guidance in VET. However, the national report notes that coordination among them is weak as there is no unified career guidance strategy and no entity in charge of coordination. Also, career guidance does not start early enough. An even bigger problem is the one-sidedness of its focus and recommendations. The career guidance system draws on information about opportunities and needs in the labour market, but does not take into consideration the interests, aptitudes and convictions of students. Nor does it ensure that parents and students have adequate updates regarding that information. As a result, there seems to be a contradiction between student choices and state policy that promotes participation in VET.

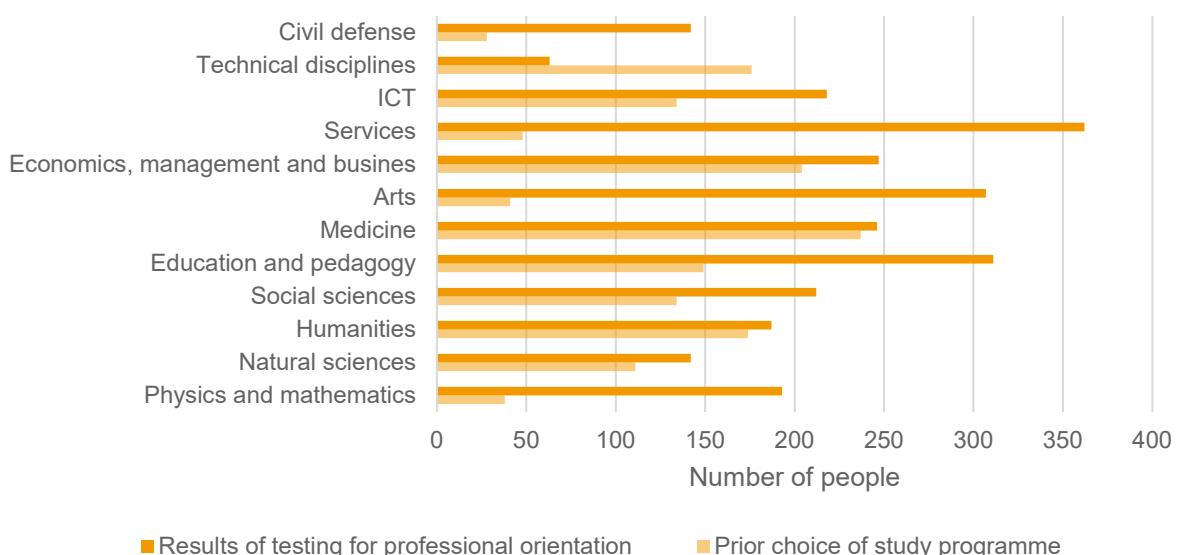
Research was recently conducted on data obtained from the vocational guidance tests of 1 474 recent graduates and jobseekers carried out by one of the major career guidance portals in Kazakhstan<sup>44</sup>. The results show that their study choices are widely misaligned not only with labour market needs (as discussed earlier in this section), but also with their skills and aptitudes as students (Zukibaeva & Barabanova, forthcoming) (Figure 11).

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<sup>43</sup> See summary section, national report of Kazakhstan, 2020: C.3.

<sup>44</sup> See Bagdar.kz at <http://proftecs.com/>.

**FIGURE 11. STUDY CHOICES AND VOCATIONAL GUIDANCE TEST RESULTS – COMPARISON BY CHOICE OF SUBJECT AND TEST OUTCOME (2019)**



Source: (Zukibaeva & Barabanova, forthcoming).

The problem of inefficiency in relation to student choices is reinforced even further by the growing significance of commercial private providers; by a lack of policy focus on factors that influence the largely unfavourable perceptions that students and their families have about the VET professions that are in high demand in the labour market; and by a lack of adequate career information for students and their families.

### 3.1.3 Recommendations

#### R.1 Diversify the streams of VET funding according to purpose

The ETF recommends that the national authorities (Ministry of Education and Science) initiate a consultation about changes in the system of public funding for VET with a view to diversifying the funding according to purpose and need ‘on the ground’. This could include the introduction of core funding for the institutional needs of VET providers in order to ‘unburden’ the discussions and decisions about state grant allocations and to focus these discussions on the original purpose of state grants: addressing the economic and labour market needs of the country and its regions.

In the present system, the state order serves multiple, and at times contradictory, purposes for which it was not designed. Such purposes include the funding needs of VET institutions, labour market needs at central and local level, student demand for places, as well as the implementation of national and education sector development strategies. This can easily lead to an overstretch and, as shown in this section, it limits the effectiveness of policies that promote opportunities for human capital development through VET.

In OECD and EU countries, for example, it is not uncommon for some of the central funding for education and training to be earmarked at regional level for specific expenses such as salaries, professional development of teachers and/or school maintenance. Other expenses, such as capital investment, may be covered by block grants or lump sum payments, which give regional authorities and providers a degree of freedom in the use of resources (OECD, 2017a). Applied to Kazakhstan,

such a diversification would mean earmarking some of the funding as core funding, as described above.

### **R.2 Revise the mechanism for planning and allocating state order places to VET providers**

The ETF recommends revising the mechanism of allocation used by the state order for priority programmes (working professions) in VET, so that it leads to a more balanced distribution of opportunities for participation in VET in line with regional needs and conditions.

This will require a more thorough revision of the methodologies used to anticipate labour market demand at regional level and much greater involvement of stakeholders in the regions, in particular employers, in the planning of the state order than is the case now.

### **R.3 Revise the career guidance services with a view to improving their effectiveness**

The ETF recommends recalibrating the focus of career guidance services so that they consider not only labour market demand, but also the needs, expectations and aptitudes of students. There is also a need for better coordination of career guidance provision. Prior research suggests that parents can also benefit from such changes as they help to ensure that their influence on their children's career choices is well informed.

Initial steps in this direction could be to strengthen the coordination between career guidance providers and to consolidate a strategy for developing career guidance as an essential element in the promotion of better and more relevant VET.

## **3.2 Low quality of VET as an impediment to human capital development**

### **3.2.1 Description of the problem**

In recent years, it has become quite common to see VET as a key tool in addressing the human capital needs of countries and developing their national systems for lifelong learning (European Commission, 2019). In parallel, the employability of higher education graduates and the professional relevance of their study programmes are gaining in importance as policy priorities. This provides an impetus for a 'vocational drift'<sup>45</sup> in the governance and strategic orientation of higher education institutions across Europe (CEDEFOP, 2019). More than ever before, these developments bring to the fore questions about expectations and quality: what is expected from VET in terms of quality from the perspective of broader lifelong learning and human capital development and how can that quality be best assured?

Most international agencies active in the field of VET policy consider that key measures of good VET quality are the effectiveness of teaching and learning, as well as the labour market relevance of learning outcomes (IAG-TVET, 2014). Unfortunately, the national report and external data sources suggest that secondary education and VET in Kazakhstan are still struggling, both with a low quality of instruction and learning and limited relevance of learning outcomes. In 2018, some 64% of 15-year-olds in Kazakhstan failed to reach proficiency level 2 in mathematics as measured by the OECD's

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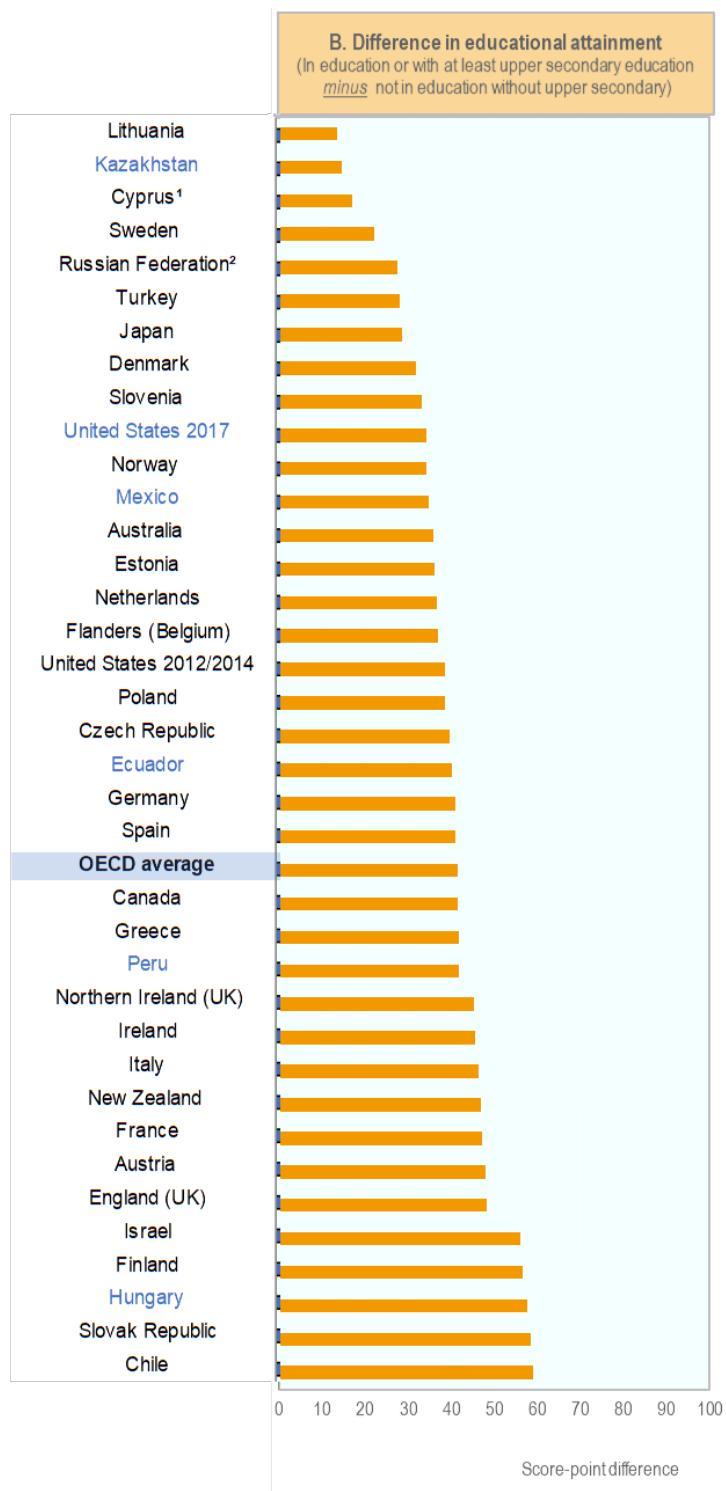
<sup>45</sup> In analogy with "academic drift", which according to UNESCO describes the influence of the attractiveness of university status on non-university institutions, vocational drift describes the influence on higher education institutions of considerations regarding employability of graduates and labour market relevance of programmes, which are considerations typical of vocational institutions.

PISA, while the share of underachievers in science and reading was even higher (60.3% and 64.2%, respectively).

VET is particularly affected by the challenge of low quality. The average results mask substantial gaps in performance for various groups of students. Those in vocational schools are well behind their peers in general secondary education in all domains tested by PISA (OECD, 2018).

In 2015, for example, the performance of VET students in science was 32 score points lower than that of students in general education – the equivalent of one year of schooling. The latest round of OECD's PIAAC suggests that secondary education (including VET) in Kazakhstan is also not particularly effective. In terms of mean literacy proficiency, for example, young people (aged between 16 and 24) with secondary general education or VET in Kazakhstan perform almost as poorly as young people who have no secondary education or are not in education. The difference between both groups is 14.73 score points, which is the second lowest of all countries participating in PIAAC (Figure 12).

**FIGURE 12. DIFFERENCE IN LITERACY SCORE BETWEEN 16 TO 24-YEAR-OLDS IN EDUCATION/WITH UPPER SECONDARY EDUCATION AND THOSE NOT IN EDUCATION/WITHOUT UPPER SECONDARY EDUCATION**



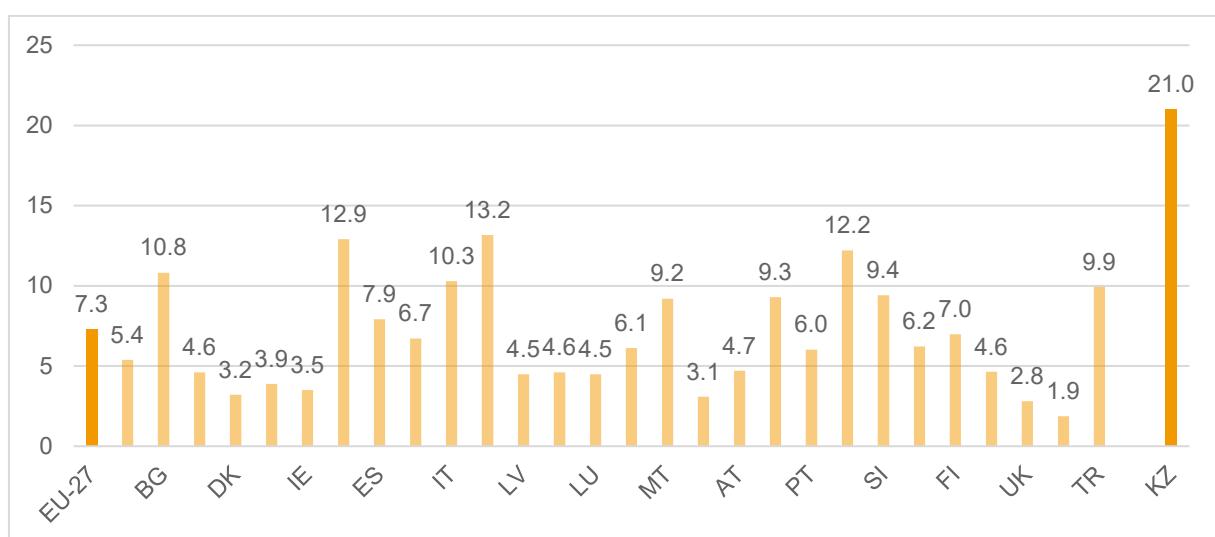
Source: (OECD, 2019).

In VET, the problem with quality is not only bigger, but also more complex, as vocational schools are also struggling to deliver relevant outcomes for the labour market and consequently to perform their

role in contributing to economic and social prosperity through human capital development. According to some sources, some 70% of employers in Kazakhstan are dissatisfied with the skills of VET graduates, and VET graduates themselves feel that they struggle to find a job because their education and training are disconnected from the world of work (Álvarez-Galván, 2014). The transition times to first-time employment for VET graduates is 21 months, which is very long when compared internationally. Even after finding a job, close to half of all VET graduates do not find employment in their field of specialisation (Figure 13).

According to the national report, the main reasons for this include the limited relevance of graduates' skills; their choice of VET programmes, which are not in demand in the labour market; and problems with the methods used to collect evidence about the labour market, which disregard developments in the informal sector.

**FIGURE 13. AVERAGE LENGTH OF TRANSITION FROM VET SCHOOL (ISCED 3) TO WORK, EU AND KAZAKHSTAN**



Note: EU results are based on people who left formal education in the last five years. Data for Bulgaria, Lithuania and Slovenia may lack reliability due to the low sample size for some categories of graduates. Year of reference for EU countries: 2009.

Sources: EU labour force survey 2018; national report of Kazakhstan, 2020: C.3.1.

### 3.2.2 Policy responses

#### Overview of policy responses

The national report of Kazakhstan describes a number of policy measures that are being taken in response to the second key challenge. These measures are at different stages of implementation. The majority of these responses strive to improve the labour market relevance of human capital development through VET, but a number of actions also aim to improve the quality of teaching and learning in VET more broadly. For the sake of clarity, the ETF assessment describes these two policy 'packages' separately.

#### Policies for better quality

To address the low quality of VET in the country, Kazakhstan is planning to implement a gradual change in the methods of instruction in VET to make them more student-centred and competence-

based<sup>46</sup>. This is in line with international experience, which suggests that the quality of learning and the learning outcomes of students can improve with the help of individualised teaching (Thomas, 1992).

One aspect of that effort in Kazakhstan is a commitment to active teaching methods, which will allow teachers to differentiate students by level of development and achievement and adapt their work accordingly. Another aspect is the wider use of ICT, which the Kazakh authorities see as the main instrument in the transition to individualised teaching. They intend to invest in this area by equipping 90% of all schools, including vocational schools, with broadband access by 2020. The national report also describes the implementation of plans for the gradual introduction of content and language integrated learning (CLIL), where students learn a subject and a foreign language (e.g. English) at the same time. Finally, some of the policy measures aim at creating professional conditions that stimulate the professional development of teachers and trainers in VET.

To monitor the impact of these changes, inform stakeholders about reform progress and gather information for policy planning purposes, the national and regional education authorities rely on a National Quality Assessment System in Education (*Национальная система оценки качества образования – НСОКО*). At the time of this assessment, this system was not subject to reform. To fulfil its monitoring functions, it relies on school inspections and on the licensing, accreditation and rating of VET providers. Some colleges are also introducing a new quality management system on a pilot basis, but this seems to be more of an administrative improvement.

#### Policies in support of labour market relevance

The policy measures designed to boost the labour market relevance of VET seem to be more diversified than those targeting the effectiveness of teaching and learning in VET schools. The measures include the independent certification of VET graduates by professionals employed in the graduate's respective field; the use of certification results by VET colleges when improving their learning content; the modularisation of programmes and their re-development with employers so that they become competence-based and more flexible; the forecasting of skills needs based on the ILO/SKOLKOVO Skills Technology Foresight approach, the results of which are presented in the form of an Atlas of New Professions that is intended to inform VET career guidance activities; the provision of entrepreneurship learning; the promotion of various forms of work-based learning, such as internships and dual education; and the increasing of the autonomy of VET providers to change a certain part of the study content and the timetable for its teaching.

#### Effectiveness of policy responses

##### Effectiveness of policies for better quality

The latest round of PISA suggests that the performance gap between general and vocational schools has not diminished, and that the overall quality of learning outcomes continues to be considerably lower than desired and lower than the OECD average. Although most policies targeting the low quality in VET were already described in strategic documents back in 2011 (Table 5), their systematic, nationwide implementation appears to have commenced only in the past few years. It would be therefore inaccurate to judge their effectiveness only by the recent results in international assessments such as PISA and PIAAC. In addition, there is insufficient capacity to monitor implementation, as, at the time of this ETF assessment, the VET quality assurance system was not designed for that purpose. It was designed only to track a basic set of indicators concerning the

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<sup>46</sup> See, for instance, national report of Kazakhstan, 2020: D.1.1 and D.3.1.

routine operation of the VET system, such as students' grades and VET providers' compliance with rules and regulations.

**TABLE 5. POLICIES FOR QUALITY AND RELEVANCE IN VET, BY FOCUS AND YEAR OF INITIATION**

Policy	Year of initiation	Availability of evidence on progress to date
<b>Quality-related</b>		
Student-centred instruction	2011	N
Active teaching	2011	N
ICT in VET	2012	Y
Integrated learning (CLIL)	2015/2016	Y
Professionalisation of teaching	2013	Y
<b>Relevance-related</b>		
Independent certification of graduates	2016	Y
Modular, competence-based programmes	2018	Y
Forecasting of skills needs	2018	N
Entrepreneurship learning	2017	N
Work-based learning: internships	2016	Y
Work-based learning: dual education	2016	Y
VET provider autonomy	2018	N

Source: ETF compilation based on information provided in the national report of Kazakhstan, 2020: A to E.

There is no conclusive evidence of the progress that has been made or the impact of most of the measures, for example those concerning student-centred instruction and active teaching (see the section on shortcomings). In terms of ICT, Kazakhstan has attached great importance to the use of digital technologies in education and VET. After equipping the majority of schools with computer hardware and software, multimedia equipment and interactive smart boards in 2010, the authorities have now expanded internet access to 98.8% of urban and 99.2% of rural schools (IAC, 2014). Progress has been more modest in the area of content and language integrated language learning (CLIL): in 2018, only 0.9% of teachers of professional subjects were providing instruction in English<sup>47</sup>.

#### **Effectiveness of policies for labour market relevance**

Evidence of the impact of policies that support the labour market relevance of VET is patchy as well. In areas where it was available at the time of this ETF assessment, it suggested that there is progress, but there was insufficient information to draw any conclusions about the impact.

In 2018, Kazakhstan increased the number of independent centres that certify graduates by 33. However, around the same time, the certification itself ceased to be obligatory. This is sure to have a negative impact on the effectiveness of this policy measure. Indeed, between 2017 and 2018, the

<sup>47</sup> National report of Kazakhstan, 2020: D.1.1.

share of graduates who underwent independent certification dropped by 9%, to 35% of all graduates<sup>48</sup>.

Another area of substantial progress for which there is evidence of effectiveness is the modularisation of programmes. Between 2016 and 2018, the standard education plans of over 92% of all VET programmes were updated (246 plans). Since 2012, Kasipkor has developed a total of 74 new programmes covering 185 qualifications<sup>49</sup>.

Finally, by 2018, some 486 colleges had introduced dual education, which accounts for 47% of the VET provider network<sup>50</sup>. However, the choice of colleges was such that it covered only 19.8% of the VET student population<sup>51</sup>.

### **Policy shortcomings**

#### **Monitoring and quality assurance deficits prevent the tracking of progress**

The Kazakh authorities have committed to a range of commendable actions to improve the effectiveness of teaching and learning in VET. However, the main instrument used for the monitoring of policy progress and impact – the quality assurance system – seems to have remained largely the same since before the inception of reforms in 2011. That system was designed primarily to ensure that the education sector at large was accountable to the responsible state bodies and that the compliance of education providers with norms and state standards was monitored.

This purpose is as important as ever, but is no longer sufficient given the current environment of change and aspirations for improvement, specifically in VET. As partially acknowledged also in the national report, it is not possible to monitor the impact of reform due to a number of missing elements. Specifically, the quality assurance system still focuses predominantly on school and higher education; there is no VET-specific expertise in the inspectorates that would allow them to track progress on the transition to novel forms of VET instruction; some of the quality assurance tools are either too expensive for VET colleges (accreditation) or they are not compulsory anymore (e.g. the professional certification of graduates); the focus on compliance is much stronger than the focus on the education and training performance of providers; and the area of internal quality assurance (ongoing assessment of student achievement) is neglected.

#### **The relevance of VET outcomes is hampered by weak links to the world of work**

All policy measures supporting the labour market relevance of VET outlined in the national report rely on the regular, formalised involvement of employers to achieve the desired results. However, there is evidence that, despite being designed in line with international good practice, some of the more prominent measures, such as work-based learning and the modularisation of VET programmes, are not reaching their full potential due to weak links to the world of work.

Part of the problem is the lack of incentives – financial and non-financial – for employers to be involved in consultations around the design and delivery of VET programmes. This limits the choice and diversity of private sector partners involved in the process and in this way jeopardises the labour market relevance of the newly designed VET content. Another part of the challenge is the lack of places in enterprises for interns. Where places are available, companies are reluctant to slow down

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<sup>48</sup> National report of Kazakhstan, 2020: B.1.2.

<sup>49</sup> National report of Kazakhstan, 2020: A.1.1.

<sup>50</sup> National report of Kazakhstan, 2020: D.1.1.

<sup>51</sup> National report of Kazakhstan, 2020: Annex 1, Indicator 17.

their business and production processes to accommodate the pedagogical and/or induction needs of prospective trainees coming from VET.

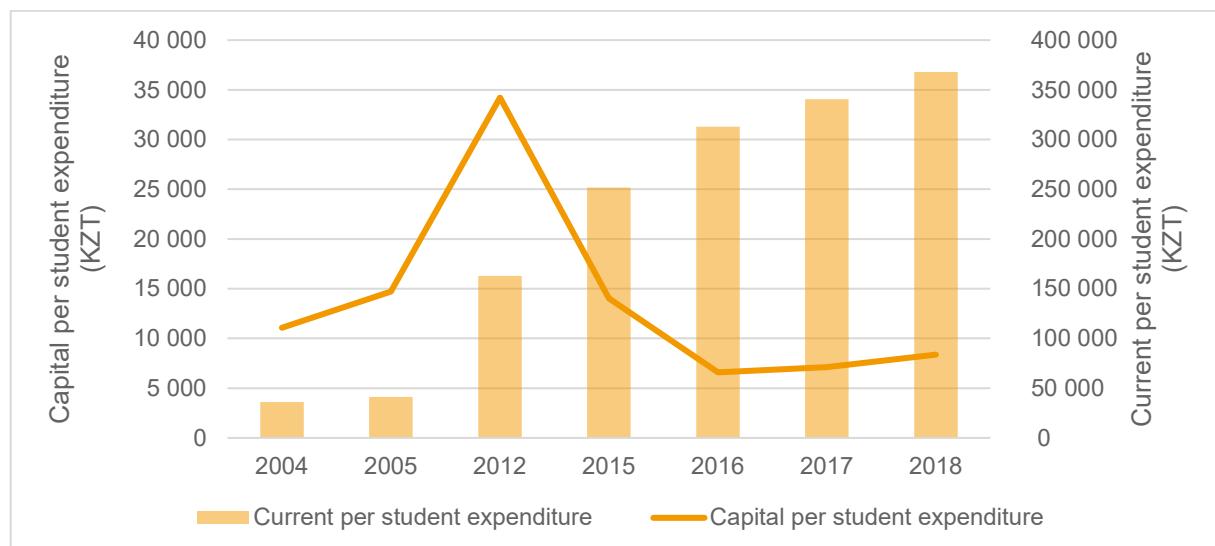
A cumulative side effect of this situation is that it also makes it difficult for SMEs to become involved in shaping VET content, although many of the employment opportunities for VET graduates are provided by these very SMEs.

#### **There are deficits in the area of infrastructure and learning/teaching materials**

Despite a considerable investment of time, financial and human resources in the improvement of quality and labour market relevance in VET, some of the most visible obstacles to progress seem to be related to infrastructure deficits and shortages in learning and teaching materials. A lack of textbooks and electronic resources hampers the wider use of ICT in VET, including the use of ICT for individualising instructional methods. Even if such resources are available, there may be no broadband access to the internet. A shortage of learning materials, in particular textbooks, is also impeding the implementation of integrated language learning and, according to focus group discussions carried out in the course of preparing the national report, also impeding entrepreneurship education.

These shortages reflect a long-standing pattern of spending on VET: spending has been on the rise for a number of years, albeit at the expense of declining capital investment in infrastructure and maintenance (Figure 14). It has also been at the expense of the creation of the material base required by most of the reforms that support quality and relevance, which are described in the national report.

**FIGURE 14. TRENDS IN SPENDING ON VET, TOTAL AND CAPITAL EXPENDITURE (2004–2018)**



Source: Calculations based on data provided by the Statistics Committee of Kazakhstan ([stat.gov.kz](http://stat.gov.kz)).

### **3.2.3 Recommendations**

**R.4 Upgrade the quality assurance system in VET in line with priorities for human capital development**  
The ETF recommends bringing the quality assurance system in VET colleges ‘up to speed’ with the range of changes taking place in the rest of the VET system. The present system focuses heavily on compliance with norms and standards and on ensuring that providers can be held accountable by education authorities, stakeholders and the broader public.

Without doubt, this is an important aspect of quality assurance, but the multitude of reforms in education and training also call for a more flexible and open approach in which the focus shifts from mere compliance with norms to promoting the performance of VET providers and guiding their improvement. This should go in parallel with the continuation of efforts already underway to develop robust internal quality assurance mechanisms in VET.

#### **R.5 Stimulate the involvement of employers by creating incentives and favourable conditions for their participation in the advancement of VET**

The ETF recommends providing employers with a diversified set of incentives – financial or otherwise – to get involved in consultations around the design and delivery of VET programmes. These incentives should be robust and ambitious enough to boost the currently modest level of involvement of SMEs in work-based learning schemes and partnerships.

Examples could include tax breaks, the prospect of short-term adjustments in training content in order to address immediate employer needs and access to business development loans with more favourable conditions.

#### **R.6 Revisit and calibrate the financial allocations for VET to increase capital investment**

The ETF recommends revisiting the financial allocations for VET with a view to increasing capital spending in areas of significance that affect the contribution of VET to human capital development. Examples of such areas include up-to-date teaching and learning materials, including materials in priority languages for integrated learning; high-speed internet connectivity and e-learning content; and improvements in the physical infrastructure of all VET colleges to ensure that they can provide decent, up-to-date teaching and learning environments.

In circumstances that may not allow for spending increases of this kind, the ETF recommends intensifying the ongoing work on promoting public-private partnerships. This includes activities within the framework of the investor roadmap for the improvement of VET and the new initiative for transferring operational ownership of colleges to private businesses<sup>52</sup>. Should the latter initiative enter the implementation stage, it would be important to make sure that there are clear guidelines and obligations defined concerning responsibilities for maintaining and expanding the material and technical base of VET providers.

### **3.3 Underutilisation of adult education for workforce development purposes**

#### **3.3.1 Description of the problem**

People's skills and their social outcomes depend on a number of factors beyond formal education. A major factor is the availability of opportunities for learning and development throughout the life of an individual. This is because the skills that matter most for their social outcomes and professional success tend to deteriorate the fastest and/or become obsolete over time as the context of life and work changes (Arthur, Benett, Stanush, & McNelly, 1998; Vera-Toscano, Rodrigues, & Costa, 2017). Adults may engage in learning for a variety of reasons, such as enhancing their employment prospects or simply for personal development. However, more and more people are engaging in adult education to offset the growing uncertainty in their domestic labour markets and to remain competitive

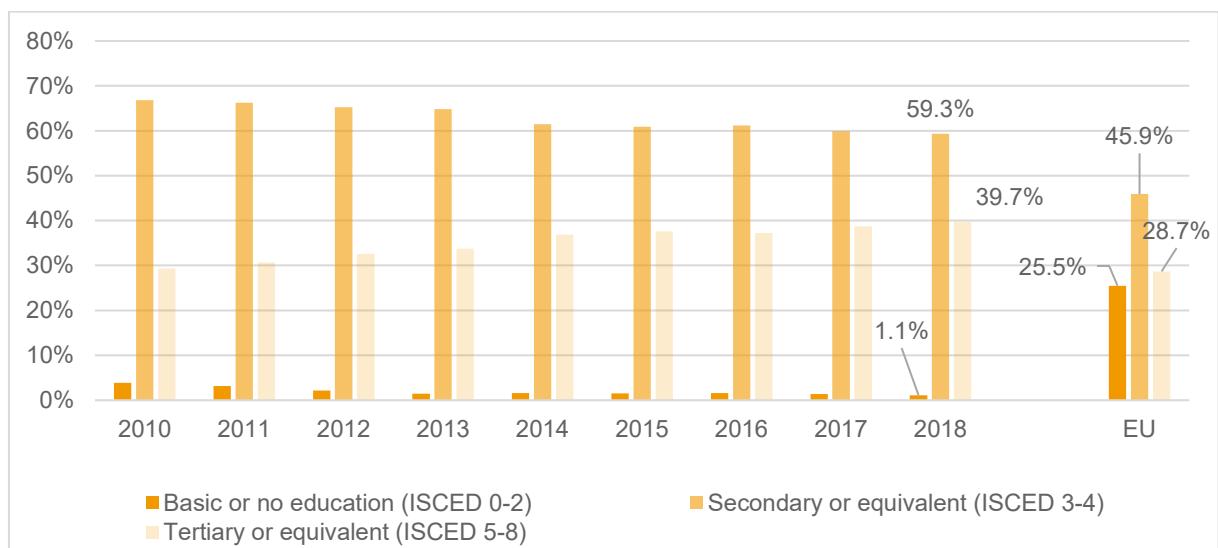
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<sup>52</sup> See also the national report of Kazakhstan, 2020: E.2.2.

by investing in their own human capital. This applies in particular to low-skilled and low-qualified adults.

In Kazakhstan, the educational attainment of the active, working age population is well above the average for countries in the EU and the OECD, which the authorities have chosen as a benchmark of development. A mere 1.1% of the workforce in Kazakhstan has little or no education; in OECD countries, on average, more than a fifth of adults fall into that category (Figure 15). Kazakhstan also has a higher share of secondary education graduates than the OECD (59.3% versus 42.4%), and more of its prospective workers hold a tertiary degree (39.7% versus 36.9% for the OECD).

**FIGURE 15. EDUCATIONAL ATTAINMENT OF THE ACTIVE POPULATION (% AGED 15+)**



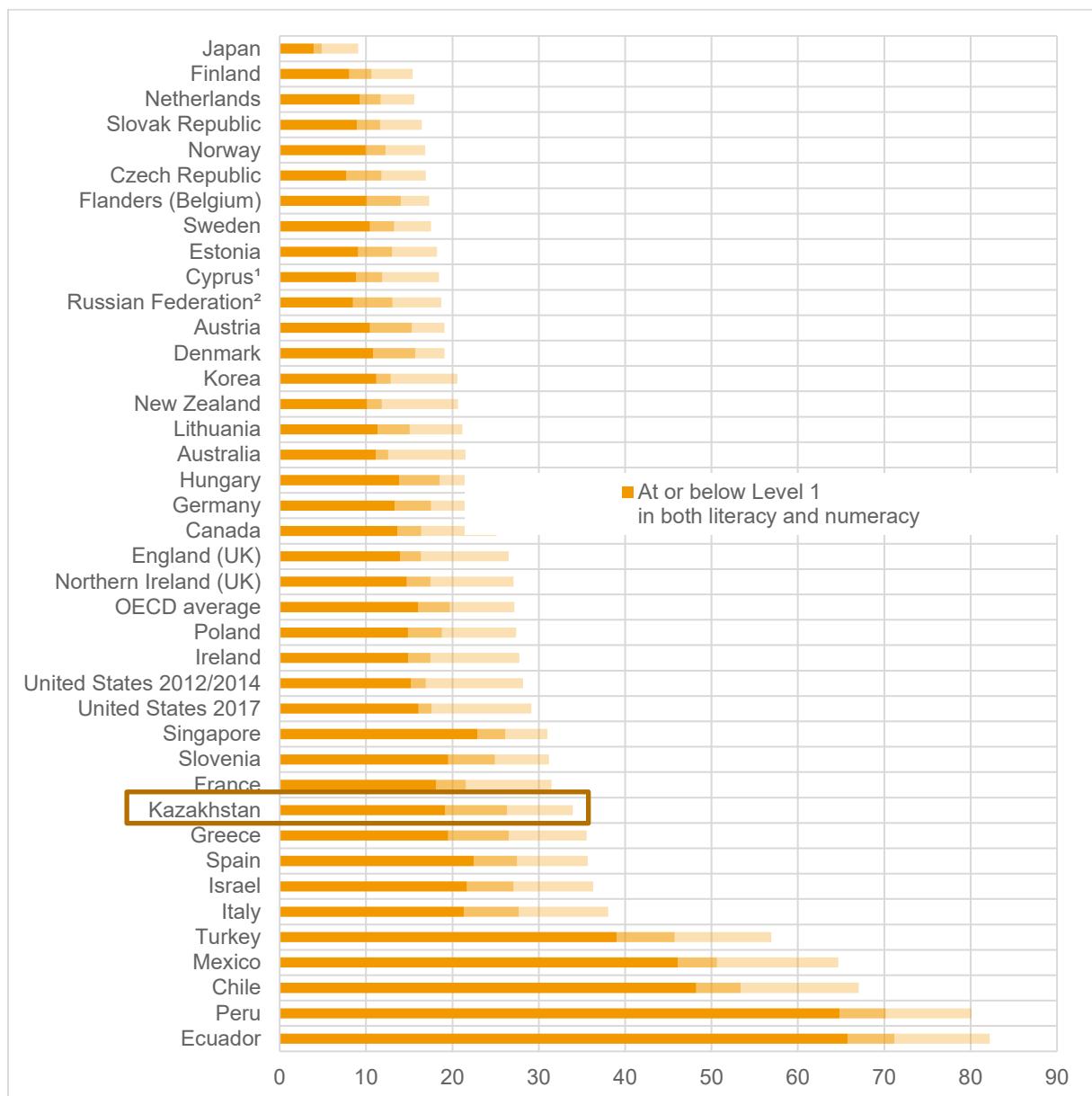
Note: EU-28 data, age range is 15 to 64.

Source: ETF and Eurostat databases.

Despite this long-standing achievement in terms of formal education, the working age population of both genders in Kazakhstan is, on average, significantly less proficient in literacy, numeracy and problem solving than the populations of other countries and the OECD. In fact, the recent PIAAC results suggest that, of all the 39 countries that participated in the assessment, Kazakhstan has the highest proportion of low-achieving adults in literacy and the seventh-lowest level of adult performance in numeracy (Figure 16). Only 16% of working age adults performed at levels 2 or 3 in the area of problem solving in technology-rich environments, compared to an average of 30% in the OECD.

This situation reinforces the importance of promoting opportunities for adult education and lifelong learning, as described in the national strategies. However, it also suggests that the implementation of strategic commitments in this area may not be as effective as planned and needed.

**FIGURE 16. PROPORTION OF LOW-PERFORMING ADULTS IN NUMERACY AND LITERACY, OECD AND KAZAKHSTAN**



Source: (OECD, 2019).

### 3.3.2 Policy responses

#### Overview of policy responses

The creation of lifelong learning opportunities for adults is among the key directions of change for the education and training sector in Kazakhstan. The sector is expected to transition from a system of formal provision to a flexible system of lifelong learning and skills development by 2025<sup>53</sup>. The Ministry

<sup>53</sup> National report of Kazakhstan, 2020: C.1.5. See also Strategic Plan for the Development of Kazakhstan until 2025, available at [https://economy.gov.kz/sites/default/files/pages/sp\\_2025\\_posl.docx](https://economy.gov.kz/sites/default/files/pages/sp_2025_posl.docx) (last accessed 18 November 2018).

of Education and Science has primary responsibility for this policy area<sup>54</sup>. It coordinates with the Ministry of Labour for matters concerning active labour market measures.

Judging by the information provided, the commitment to lifelong learning is bound to follow two strands of implementation.

The first policy strand aims to sustain and upgrade work-related skills by creating opportunities for adults to engage in lifelong learning with a view to upgrading their expertise, improving their efficiency in terms of work and staying competitive in the labour market. Examples include professional development in the workplace, the modularisation of programmes at all VET levels, a focus on competences and the introduction of a credit system<sup>55</sup>. All of this is to be completed by 2022 to ensure the relevance of the VET offering and the flexibility of its provision.

The second policy strand in support of adult education is more remedial in nature and aims to provide second chance education and training to working age people who are unemployed, without qualifications and/or in precarious employment due to a lack of alternatives. The policy initiatives consist of the Roadmap for Employment 2020 (*Дорожная карта занятости-2020*), which was recently transformed into the Enbek programme 2017–2021 to promote productive employment and entrepreneurship, and the ‘VET for free’ initiative (*Бесплатное ТиПО для всех*), one aspect of which focuses on short-term VET courses for jobseekers, people without professional qualifications and those from vulnerable socio-economic backgrounds. In the same vein, the network of VET providers is also involved in the delivery of training within the framework of active labour market measures for registered jobseekers<sup>56</sup>.

### **Effectiveness of policy responses**

#### **First strand of adult education policy: sustaining and upgrading work-related skills**

Information about activities in this first strand is still modest. There is also limited data that could help discuss the effectiveness of policies that support job holders in sustaining and upgrading their skills. One of the reasons for this limitation may be the relative scarcity of activities supporting this priority. Another is the fact that the priority itself does not seem to have been fully endorsed by its primary beneficiaries – the adults and their employers – which in turn puts at risk the effectiveness of current and future actions in this area. In 2017, households in Kazakhstan spent only 1.3% of their education budgets on adult education (Figure 17) (IAC, 2018). While the low level of private investment in some areas such as VET or student accommodation can be explained by an increase in public spending, this is not the case with adult education.

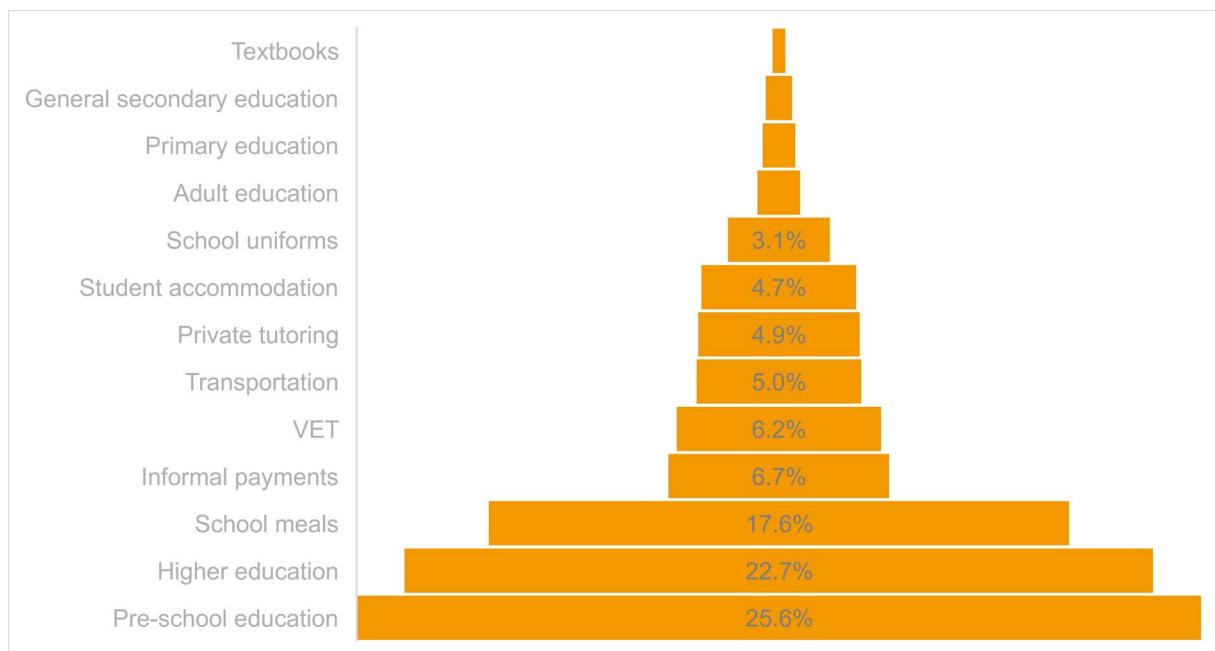
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<sup>54</sup> See Order of the Minister of Education and Science No. 508 of 28 September 2018.

<sup>55</sup> National report of Kazakhstan, 2020: A.3.4.

<sup>56</sup> National report of Kazakhstan, 2020: B.1.5 and B.1.6.

**FIGURE 17. HOUSEHOLD EXPENDITURE ON EDUCATION, BY ITEM AND LEVEL OF EDUCATION, 2017**



Source: (IAC, 2018).

Employers in Kazakhstan also seem reluctant to follow the strategic aspirations of national authorities and provide opportunities for adult education and training to their staff. In 2017, which is the last year for which there is data, less than a third (28%) managed to do so. This is considerably lower than the OECD average (45%) and covered only 3.4% of all employees in the country.

#### **Second strand of adult education policy: remedial actions in support of labour market participation**

According to information in the national report, adult education policies that support jobseekers and people with no qualifications have been rather effective. For instance, the Roadmap programme has engaged in significant outreach activity in recent years. Participation in adult education has grown more than threefold since 2014, to a total of 703 000 people in 2018, of whom 96% found a job after their training<sup>57</sup>. The Enbek programme is just starting. So far, it has only assisted 9% of those who are officially unemployed, but graduation rates are high (93%)<sup>58</sup>. Enbek is also effective in terms of mobilising the potential of VET providers, which in 2018 catered for the adult education needs of 87% of all participants in the programme<sup>59</sup>.

#### **Policy shortcomings**

##### **Lack of data on adult education**

The national report provides quantitative and qualitative evidence for most challenges and policy responses concerning VET and human capital development, and refers to internal and external sources of analysis. Against a backdrop of the wealth of information on the various challenges covered in the national report, the evidence base on adult education, and more broadly on lifelong

<sup>57</sup> National report of Kazakhstan, 2020: B.1.5.

<sup>58</sup> National report of Kazakhstan, 2020: B.1.6.

<sup>59</sup> Ibid.

learning, is limited. This gap complicates the tracking of progress following the implementation of actions in this strategic area and it also impedes the calibration of policies based on lessons learned.

This can be detrimental, particularly in areas in which Kazakhstan is still struggling to create opportunities for adult education, such as sustaining and upgrading the skills of job holders (Strand 1, as described in this assessment). The national report notes that the lack of evidence is part of a broader problem of a lack of tools for analysing and evaluating policy effectiveness concerning education and training reforms.

#### **Weak support and lack of incentives for employers who wish to participate in workforce development through adult education**

In the Programme for Education Development 2011–2020, the national authorities underline that lifelong learning depends on the extent to which employers can be involved in the co-financing of educational programmes and the creation of flexible schemes to encourage employees to participate in lifelong learning. The policy plans implied double responsibility for the creation of adult education opportunities – both employers and the state must take responsibility.

At the time the current strategy commenced in 2011, close to a third of all companies in the country felt that the support they received from the government for developing the skills of their workforce was inadequate. According to surveys and the national report, the situation had not changed much at the time of this assessment. Most companies acknowledge the potential benefits of up-to-date skills, but they also report the difficulties they have in allocating the financial resources necessary for the professional development of their staff (this is particularly true for SMEs). The current regulations also do not envisage any incentives for involvement, for instance in the form of tax breaks.

#### **No recognition of informal and non-formal learning**

In many countries, informal and non-formal learning is a widespread form of adult learning, especially for those with few qualifications and/or low educational attainment. In Kazakhstan also, several institutions and civil society organisations provide non-formal training. The Law on Education also acknowledges the existence and potential of informal and non-formal learning. However, at the time of this assessment, there were no mechanisms in place to recognise and validate informal and non-formal learning. This is a missed opportunity to capitalise on the skills obtained in this way and to expand the coverage and impact of adult education as a policy priority.

### **3.3.3 Recommendations**

#### **R.7 Close the data gap in the area of adult education and lifelong learning**

The national report and this assessment noted that there is a lack of tools for analysing and evaluating the effectiveness of reform in education and training, and that this problem is particularly pronounced with respect to adult education.

The ETF recommends the speedy closure of the gap between the availability of evidence on adult education and lifelong learning. A first step in that direction would be to analyse the OECD's national PIAAC data with a view to preparing policy briefs and analytical reports. The national PIAAC data is a rich repository of information on the skills of the adult population that can be used for monitoring and policy planning purposes.

#### **R.8 Incentivise employers to participate in the creation of opportunities for lifelong learning**

The ETF recommends creating flexible schemes to encourage the participation of employers in the creation of lifelong learning opportunities, for instance through co-financing schemes for the

professional training of adults in employment and those looking for employment, based on training and curricula in the VET sector.

#### R.9 Establish mechanisms for the recognition of non-formal and informal learning

The ETF recommends establishing a mechanism for the recognition and validation of informal and non-formal learning in order to capitalise on the skills obtained in this way. It also recommends expanding the coverage and impact of adult education as a policy priority. This may require the development of robust and novel procedures and criteria, especially where the recognition leads to qualifications which are the same or comparable to those delivered by formal education and training (CEDEFOP, 2009). Reforms in this area may also call for revisiting the quality assurance system (see also Recommendation No. 4)

## 4. CONCLUSIONS

This ETF assessment discussed the strategic context and recent developments with regard to human capital in Kazakhstan. Like previous ETF assessments, the report described the strategic context in which education and training are expected to contribute to human capital development, and it presented data that is relevant to the interpretation of this context. The assessment outlined a selection of challenges that require attention, including the absence of policies to tackle the challenges and harvest the opportunities of internal and external migration, shortages in the area of digital skills development and a shortage of VET specialists in the area of human capital development.

The main message this report wanted to send is not one about gaps, but one about achievements. Kazakhstan has achieved a lot, and its remarkable level of commitment to education and training and to its improvement for the benefit of young people and adults in recent years has already become an example of good practice in its own right – an example which other countries are starting to learn from and follow. Thus, the recommendations in this report are not meant as criticism but as constructive proposals on how Kazakhstan could capitalise on its experience, potential and ideas to make tangible progress on its policy commitments.

As noted earlier, the main question that this report intended to answer was whether the undoubtedly achievements in this respect are wide-reaching and deep enough to bring the country closer to its ambitious, long-term goal of becoming one of the most competitive economies in the world by 2050. While the overall conclusion is that Kazakhstan is on track to achieve this, this report also analysed three major challenges and numerous policy-related gaps around each challenge, which may create risks further down the road by slowing down the pace of positive change and undermining its sustainability and impact.

These challenges include the ineffective distribution and use of state-sponsored opportunities for human capital development through VET; the unsatisfactory quality and limited relevance of teaching and learning in the sector; and the deficiencies in workforce development caused by a lack of adult education. The assessment established that Kazakhstan has created most of the conditions required to resolve these challenges and that much has been achieved. However, it also established that more remains to be done in order for the reforms to gain proper traction and become more effective.

None of these challenges and gaps is new or insurmountable, but they have been persistent due to structural, regulatory and planning problems, which this report summarises and highlights as a basis for its recommendations. The hope is that the analysis and proposals in this ETF assessment will prove helpful in the mobilisation of stakeholders, the planning of adjustments to the reforms, and the implementation of the otherwise commendable intentions of authorities for a creating a better VET and lifelong learning system in Kazakhstan.



# ANNEX 1. SUMMARY OF RECOMMENDATIONS

Key HCD issue	Recommendations		
	No.	Action	Description
Ineffective distribution and use of opportunities for human capital development through VET	R.1	Diversify the streams of VET funding according to purpose	The ETF recommends that the national authorities (Ministry of Education and Science) initiate a consultation about changes in the system of public funding for VET with a view to diversifying the funding according to purpose and need 'on the ground'. This could include the introduction of core funding for the institutional needs of VET providers.
	R.2	Revise the mechanism for planning and allocating state order places to VET providers	The ETF recommends revising the mechanism of allocation used by the state order for priority programmes in VET, so that it leads to a more balanced distribution of opportunities for participation in VET in line with regional needs and conditions.
	R.3	Revise the career guidance services with a view to improving their effectiveness	The ETF recommends recalibrating the focus of career guidance services to include the needs and expectations of students in addition to considering labour market demand. There is also a need for better coordination of career guidance provision.
Unsatisfactory quality and limited relevance of human capital development through VET	R.4	Upgrade the quality assurance system in VET in line with priorities for human capital development	The ETF recommends bringing the quality assurance system in VET colleges 'up to speed' with the range of changes taking place in the rest of the VET system. This includes shifting the focus of quality assurance from mere compliance with norms to promoting the performance of VET providers and guiding their improvement, as well as investing in the development of robust internal quality assurance mechanisms in VET.
	R.5	Stimulate the involvement of employers by creating incentives and favourable conditions for their participation in the advancement of VET	The ETF recommends providing employers with incentives – financial or otherwise – to get involved in consultations around the design of VET programmes. These incentives should be robust and ambitious enough to boost the currently modest level of involvement of SMEs in work-based learning schemes and partnerships.
	R.6	Revisit and calibrate the financial allocations for VET to increase capital investment	The ETF recommends rebalancing the financial allocations for VET to increase capital investment in areas of significance that affect the contribution of VET to human capital development. Examples of such areas are up-to-date teaching and learning materials, including materials in priority languages for integrated learning; high-speed internet connectivity and e-learning content; and improvements in the physical infrastructure of all VET colleges to ensure that they can provide decent, up-to-date teaching and learning environments.

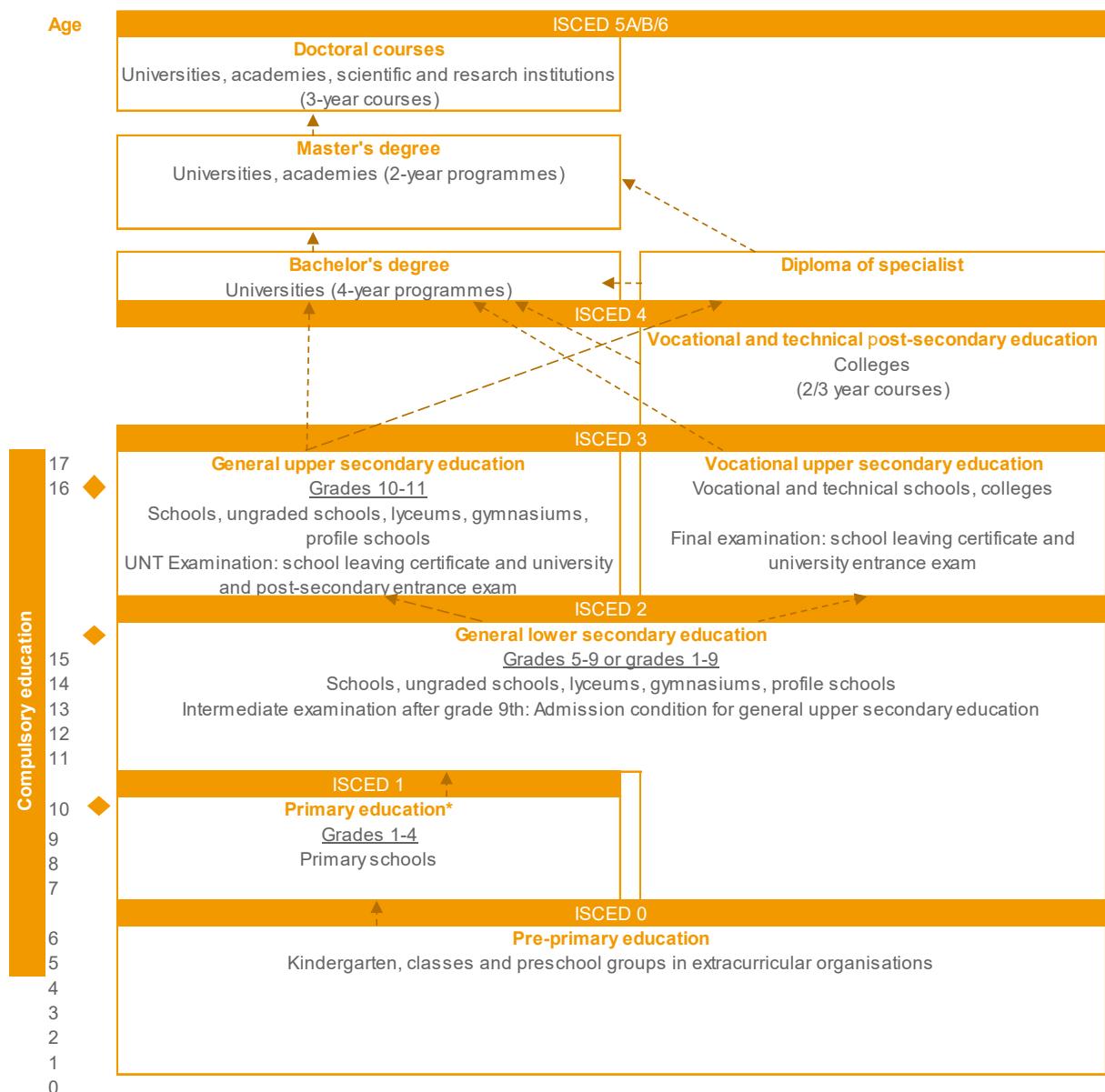
<b>Deficiencies in workforce development caused by a lack of adult education</b>	R.7	Close the data gap in the area of adult education and lifelong learning	The ETF recommends addressing the gap between the availability of evidence on adult education and lifelong learning. A first step in that direction would be to analyse the OECD's national PIAAC data, which is a rich repository of information on the skills of the adult population that can be used for monitoring and policy planning purposes.
	R.8	Incentivise employers to participate in the creation of opportunities for lifelong learning	The ETF recommends creating flexible schemes to encourage the participation of employers in the creation of lifelong learning opportunities, for instance through co-financing schemes for the professional training of adults in employment and those looking for employment, based on training and curricula in the VET sector.
	R.9	Establish mechanisms for the recognition of non-formal and informal learning	The ETF recommends establishing a mechanism for the recognition and validation of informal and non-formal learning in order to capitalise on the skills obtained in this way. It also recommends expanding the coverage and impact of adult education as a policy priority.

## ANNEX 2. KAZAKHSTAN'S EDUCATION AND TRAINING SYSTEM

### Structure, pathways, basic data

Education in Kazakhstan encompasses preschool, primary, lower and upper (general and vocational) secondary education, as well as post-secondary and higher education (see Figure A.2.1). All education, except for post-secondary and higher education, is compulsory and the state is obliged to provide it free of charge.

**FIGURE A.2.1 KAZAKHSTAN'S EDUCATION SYSTEM**



Source: Author, based on (UNESCO IBE, 2007).



## ACRONYMS

Cedefop	European Centre for the Development of Vocational Training
ETF	European Training Foundation
EU	European Union
HCD	Human Capital Development
ISCED	International Standard Classification of Education
NEET	Young people not in education, employment or training
OECD	Organisation for Economic Co-operation and Development
PIAAC	Programme for International Assessment of Adult Competences
PIRLS	Progress in International Reading Literacy Study
PISA	Programme for International Student Assessment
SDG	Sustainability Development Goal
SME	Small and medium-sized enterprise
TALIS	Teaching and Learning International Survey
TIMSS	Trends in International Mathematics and Science Study
VET	Vocational education and training



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