



PRIVATE SECTOR DEVELOPMENT

Policy Handbook



Developing Skills in Central Asia through Better Vocational Education and Training Systems

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PRIVATE SECTOR DEVELOPMENT POLICY HANDBOOK

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- INVESTMENTS AND COMPETITIVENESS IN CENTRAL ASIA -

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Launched in November 2008, the OECD Central Asia Initiative is part of the OECD Eurasia Competitiveness Programme, which aims to contribute to economic growth in Afghanistan, Kazakhstan, Kyrgyz Republic, Mongolia, Tajikistan, Turkmenistan and Uzbekistan. Its objective is to share with the governments of the region the knowledge, experience and good practices of OECD countries to create a sound business climate for investment, enhance productivity and support entrepreneurship, develop the private sector, and build knowledge-based economies to render its sectors more competitive and attractive to foreign investment. Its approach comprises both a regional policy dimension, which entails peer dialogue and capacity building, and a country-specific aspect supporting the implementation of a number of prioritised reforms. A sector analysis is also included, covering the formulation of targeted policies and strategies requested at the industry level. Within the framework of the programme, public authorities, the private sector and civil society within these countries have been engaged in a dialogue and collaborative process to support policy actions and identify key barriers to competitiveness.

The participation of all stakeholders in the reform process, including foreign investors, is considered to be crucial for guaranteeing the effectiveness and transparency of the recommended policies.

FOREWORD

Since 2009, the OECD Eurasia Competitiveness Programme has worked with the governments of the Central Asia region to create a sound business climate for investment, enhance productivity, support entrepreneurship, develop the private sector, and build knowledge-based economies to render this region more competitive and attractive to foreign investment.

In a first step, this work has led to the development of a Competitiveness Outlook for Central Asia which was launched in January 2011 in Davos, Switzerland. The Competitiveness Outlook identified barriers that need to be dismantled for Central Asian economies to reach their full potential. It highlighted three major challenges to improving competitiveness: a deteriorating education system which is undermining the future of the region's human capital; a lack of access to finance for small- and medium-sized enterprises; and a need for better investment policy and promotion.

In a second step, building on these findings, the OECD in close collaboration with the economies of the region developed potential strategies to overcome these obstacles by focusing on one specific policy tool within each of these three areas. This handbook contains the conclusions related to human capital development and provides guidance for policy makers on implementing vocational education and training (VET) systems in order to better equip graduates with skills they need to get jobs. While VET systems in Central Asia differ in their respective levels of development, all suffer from a misalignment between worker skills and job market requirements. Overcoming these challenges would result in significant progress for all countries in the Central Asia region.

Unless otherwise specified, this policy handbook is based on the proceedings of the OECD Working Group meeting on Human Capital Development in Central Asia, held on 14-15 December 2011 in Paris, France, and the preparatory questionnaire "Tools to Support

Vocational Education and Training” self-assessment questionnaire, completed in 2011 by all participants, except Turkmenistan. Given that no official information has been provided by Turkmenistan, this handbook contains an assessment of the specific situation in Turkmenistan based on secondary information, but no policy recommendations are given.

The project was conducted in close collaboration with policy makers from the Central Asia region and was financially supported by the European Union.

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Acronyms and abbreviations

ADB	Asian Development Bank
AQF	Australian Qualifications Framework
AQTF	Australian Quality Training Framework
ASQA	Australian Skills Quality Agency
AVET	Agency for Vocational Education and Training, Mongolia
CBTA	Competency-Based Training & Assessment
CEACR	Committee of Experts on the Application of Conventions and Recommendations
COAG	Council of Australian Governments
CVET	Continuing vocational education and training
ETF	European Training Foundation, Turin
EU	European Union
GDP	Gross domestic product
GIZ	German International Cooperation Agency (Deutsche Gesellschaft für Internationale Zusammenarbeit)
HE	Higher education
IBW	Institute for Research on Qualifications & Training, Austria Institut für Bildungsforschung der Wirtschaft)
ILO	International Labour Organization

ISCED	International Standard Classification of Education
IV	Federation of Austrian Industry (Industriellenvereinigung)
KEEP	Korean Educational and Employment Panel
KRIVET	Korean Research Institute for Vocational Education and Training
MCVTE	Ministerial Council for Vocational and Technical Education, Australia
MECS	Ministry of Education, Culture and Science, Mongolia
MEST	Ministry of Education, Science and Technology, Korea
MOE	Ministry of Education
MOEL	Ministry of Employment and Labor, Korea
MOLASS	Ministry of Labour and Social Security, Tajikistan
MoLSAMD	Ministry of Labor, Social Affairs, martyrs and Disabled, Afghanistan
MONEF	Mongolian Employers' Federation
MSWL	Ministry of Social Welfare and Labour, Mongolia
NABVET	National Board for Vocational Education and Training
NCVER	National Centre for Vocational Education Research, Australia
NCVET	National Council for Technical and Vocational Education and Training, Mongolia
NEIS	National Education Information System, Korea

NGO	non-governmental organisation
NOS	National Occupational Standards, UK
NQF	national qualification framework
OKEhD	General Classification of Types of Economic Activity, Kyrgyz Republic
QA	quality assurance
SCHRD	Sector Councils Human Resource Development
SMEs	small and medium-sized enterprises
SSPO	Center for Secondary Specialized Vocational Education, Uzbekistan
TVEM	Technical & Vocational Education Modernization
TVET	Technical and Vocational Education and Training
UNESCO	United Nations Educational, Scientific and Cultural Organization
USI	unique student identifier
VET	vocational education and training
VETA	Vocational Education and Training Agency, Kyrgyz Republic
voc ed	vocational education
WKÖ	Austrian Federal Economic Chamber (Wirtschaftskammer Österreich)

Executive summary

A well-educated workforce is one of the cornerstones of competitiveness in an increasingly knowledge-driven global economy. To individual employers however, what matters is the relevance of education and training to the requirements of jobs. Mismatches between employers' needs and what the education and training system provides lead to skills gaps, over over-reliance on imported labour, domestic unemployment and a less competitive economy. This handbook offers country-specific recommendations on how to improve human capital and close the skills gap by supporting vocational education and training (VET) systems and make them relevant to the labour markets.

Central Asian economies can boost their competitiveness by building on the strengths of their education systems

This policy handbook builds on the key findings with regards to Human Capital Development in Central Asia of the *Central Asia Competitiveness Outlook*, which was published by the OECD in July 2011. The Outlook notes that Central Asian economies can boost their competitiveness by building on the strengths of their education systems, which in most parts of the region include high literacy rates, high primary and secondary enrolment for both sexes and an above-average enrolment in tertiary education.

However, there are a number of challenges to be addressed, notably in terms of highly centralised control and low public spending per student. Policy makers in the region need to collect and report educational data, to develop strategies for raising the quality of tertiary education, improve graduation rates, and reduce state control. International experience also suggests that policy makers should create strategies for making VET more relevant for

the labour market, for instance, by consulting with employers' representatives. This handbook focuses on one specific recommendation of the *Central Asia Competitiveness Outlook*, namely on how to build VET systems that are responsive to labour market requirements.

Central Asia countries can leverage good practices in VET systems from OECD countries

In 2010, OECD published guidelines on the tools necessary to support vocational education and training based on an analysis of international experience in VET policy making across 17 countries worldwide (OECD, 2010). This analysis indicates that two broad categories of tools need to be put in place: mechanisms to engage key stakeholders (employers and trade unions) and tools to assess the effectiveness of training and education. The participation of social partners in developing VET systems is important if the systems are to equip graduates with the skills they need to get jobs. The tools necessary to assess the effectiveness of training and education include qualification frameworks, a standardised assessment for VET qualifications, better data – particularly on the labour market outcomes of VET – and a more systematic approach to evidence-based policy making. Good evidence about VET policies and their effects is important for policy appraisal.

Australia, Austria and Korea were chosen as OECD country exemplars to demonstrate different approaches to VET, relevant for Central Asia. Australia was selected as it performs well in VET research and uses evidence to inform VET policy making. Australia also has a relatively young VET system, boasts a strong qualifications framework, and is among the first OECD countries to implement one. The Austrian example was chosen as it demonstrates a tradition of co-operation with social partners (representative bodies of employees and employers) where the social partners have a real “co-ownership” of VET processes. Austria also uses key research and analyses to influence VET policy development and to align it with labour market requirements. The Korean example highlights the importance of collecting data and conducting analysis, as data and research constitute the “social infrastructure” of VET systems.

VET systems in Central Asia need to be further improved

VET systems in Central Asia are generally far less developed than in OECD countries, but most economies of the region are in the process of strengthening the involvement of social partners, including employers, in the design and delivery of VET. Most countries have also started to develop the information tools to support VET systems, such as national qualification frameworks (NQF).

Although many countries have made a start on developing VET systems, the challenges remain considerable. In most Central Asian countries, officially employers and trade unions enjoy equal rights of participation in the VET system, although employers tend to be better represented. In addition, small businesses and the self-employed remain under-represented in comparison to large enterprises. NQFs are regarded as a priority issue in most countries of the region, but in practice only Afghanistan, Kazakhstan and Mongolia have concrete working plans in place to develop an NQF. Other countries plan to develop information tools in due course, but planning is still in its very early stages. Moreover, some basic data on VET are collected by the statistical agencies of all Central Asian countries, but most governments lack the capacity for sophisticated data analysis to support evidence-based policy making.

The results of this handbook highlight a number of areas which need to be addressed by governments from the Central Asia region:

- Greater involvement of SMEs and employers in general could be facilitated by using incentives to participation – for example, tax exemptions for contributions to education, such as those granted in Mongolia.
- Strengthening the database, for example, in the form of tracer studies of VET graduates and employer surveys, would enhance feedback to the VET and better match the respective needs of employers and students.

- The development of binding NQFs linked with assessment tools would further enhance the ability of policy makers to develop tailor-made VET policies.

Based on the individual situation in each Central Asia economy, countries could consider the following guidance to revise their VET systems:

Afghanistan

- The development of a national curriculum for technical and vocational education should be a priority for the government. Equally important is the development of the NQF which may help to address the question on what minimum qualification is needed for VET graduates to progress to higher education.
- The VET system could be improved by the creation of a VET agency under the umbrella of the Ministry of Higher Education in close collaboration with the Ministry of Education, with input from all stakeholders in the government and in NGOs. At present, VET is overseen by the ministries of education, higher education, labour, communication, energy, transport, and many NGOs, with little co-ordination among them.
- The Afghan government should continue to collaborate closely with various donor agencies, international organisations, and bilateral donors with regard to the lack of resources in the VET system in order to promote student and staff exchanges, and to solicit foreign aid.

Kazakhstan

- Kazakhstan involves employers and trade unions at both the national and sub-national levels with a focus on the sub-national level to ensure that local needs are met. Inequalities that may arise through this practice due to different amounts of resources that regions and municipalities can dedicate to VET must be counterbalanced, so that regional disparities are not reinforced.

- The government should ensure that the position of trade unions is not weakened in the VET policy development and delivery. Despite equal status, employers have a higher standing and more influence compared to trade unions due to their position as providers of employment. Also, the involvement of small and medium-sized enterprises (SMEs) must be increased, as they tend to be less involved than larger firms.
- To facilitate policy planning, additional data should be collected and more sophisticated research should be carried out. This might include leaver surveys, longitudinal or career surveys, information on mobility of students after graduation, and employers' satisfaction with newly hired employees.

Kyrgyz Republic

- To adjust the VET system to the requirements of a market economy the VET stakeholders should be encouraged to get participate in its governance, by improving the mechanisms for the involvement of under-represented actors, such as SMEs. In most cases, SMEs are not members of employers' associations and are under-represented in VET governance. Also, relevant stakeholders, such as trade unions, do not always actively participate in formulating VET policies.
- To ensure the quality of the training and aligning it with formal qualifications, it would be important to establish an independent assessment and certification exam which will cover not only VET graduates, but also those who acquired skills without formal training and thus do not benefit from any formal recognition of their qualification.
- To enable more targeted policy development, a wide array of data on VET schools, programmes and graduates are needed. Administrative data on school enrolment exist, but survey data and long-term analysis of VET are lacking. Data analysis and collection is entirely funded by international donors, as no funds from the state budget are available. However, to allow for more targeted policy-making, capacity building with regard to data collection and analysis is necessary.

Mongolia

- The involvement of trade unions in VET development should be further strengthened. In Mongolia, the National Council for VET includes representatives of both employers and trade unions. However, despite its potential for enhancing involvement of employers in VET development, trade unions remain under-represented, both in the development of VET, and in the delivery of training.
- Capacity-building is a long-term issue to be considered, specifically in terms of data collection and analysis. Mongolia has a good set of administrative data on VET, but could further develop its analytical capacity so that a wider set of data could be used for policy making. Collection of more comprehensive data such as tracer studies of VET graduates is currently taking place in the form of pilot studies. A key challenge is to develop these pilot projects into a wider strategy.

Tajikistan

- Mechanisms to involve the stakeholders in VET are in place, but in practice, the participation of stakeholders is limited. The authorities should consider an information campaign aimed at employers to motivate them to participate in developing curricula and syllabuses, specifically targeting the needs of their industries. Creating incentives such as tax-deductions for training expenses could further contribute.
- The improvement of data collection tools should be considered for a more sophisticated detailed analysis of the sector. Currently, data availability on VET is limited and analysis is carried out manually.

Turkmenistan

- Turkmenistan has vocational and higher VET schools, but for the moment does not have an overall agency responsible for VET. Each institution is considered self sufficient. The government is paying increased attention to VET, but

challenges are considerable and, at present, Turkmenistan lacks the basic framework for a VET system. Given that no official information has been provided by Turkmenistan, the current data is not sufficient to provide policy recommendations.

Uzbekistan

- Greater participation by small businesses in policy making in Uzbekistan would help to develop programmes that are more in line with the needs of the labour market. Currently the mechanism for policy making provides for equal involvement of employers and trade unions, but in practice this applies only to larger employers, while smaller, private businesses are often not involved.
- For more coherent VET policies, the information database should be strengthened by regular use of analytical tools such as tracer studies with graduates and employer surveys to better match their respective needs. Evidence-based policy making is taking place to some extent, but the collection of data through tracer studies and employer surveys would provide data for more sophisticated planning.
- There are occupational standards for all VET professions, but there is no national qualifications framework (NQF). Development of such a framework, ideally linked with assessment tools, could enhance the ability of the Ministry of Education to develop tailor-made VET policies.

Chapter 1

Baseline situation in Central Asia: Need to further develop human capital across the region

A well-educated workforce is one of the cornerstones of competitiveness in an increasingly knowledge-driven global economy. This chapter provides an overview of the level of human capital development in Central Asian countries based on the *Central Asia Competitiveness Outlook* (OECD, 2011), published by the OECD in July 2011.

Despite a strong human capital base, there are many challenges to a better educational system

The existing human capital base in Central Asia economies has a number of strengths, such as high literacy rates, high primary and secondary enrolment for both sexes and an above average enrolment in tertiary education. Nevertheless, even in the most advanced of the Central Asian countries, human capital is less well-developed than it should and could be. This stems from a number of factors from which the systems suffer: excessive central control over educational curricula, low public spending per student, and low completion rates of advanced study, all of which lead to a misalignment between worker skills and job market requirements. This acts as a brake on the country's national economy and limits its potential for competitiveness.

Limited investments in human capital hamper the improvement in education quality

Investment in the improvement of the human capital stock is low, limiting the creation of a more productive workforce in the region. In all Central Asian countries, with some exceptions such as the Kyrgyz Republic, there is low spending on students as a share of per capita income, at secondary and tertiary levels, relative to international averages. Moreover, increasing young populations in five of the

seven Central Asian countries (except Kazakhstan and Turkmenistan) compared to the developed countries of Western Europe and North America means that in the foreseeable future they would need to invest more in education, in PPP terms, than most OECD countries to maintain competitive standards of education.

As a result, the education in the schools and tertiary institutions of Central Asian countries remains over-theoretical and of poor-quality, leading to a low level of performance and inability to apply what has been learnt in work and later life. Moreover, for most Central Asian countries there is a serious lack of reliable, internationally comparable information on the quality and value of education and skills training.

There is a mismatch between what national education systems supply and what employers need, particularly in the area of vocational education and training

To individual employers, what matters is the relevance of education and training at the level at which they are recruiting. This may be from upper secondary schools, from post-secondary colleges or from higher education institutions. Mismatches between employers' needs and what the education and training system provides lead to skills gaps and over-reliance on imported labour.

Practical experience is provided to a certain extent within the educational systems of Central Asia countries. Internships, or work experience, with an employer appears to be fairly standard Central Asian practice, at least in some subject fields. Provision of practical knowledge and skills by the university courses themselves however is less common in the region.

Comprehensive OECD reviews of the VET systems in Kazakhstan and Kyrgyz Republic found large mismatches between the needs of the labour market and the graduates' skills. In the OECD's Kazakhstan review of 2006/07, both employers and students complained of insufficient practical experience during training, particularly in medicine, health and teaching (OECD, 2007). Employers in the Kyrgyz Republic made similar points. The employers in the Kyrgyz Republic wanted to see much more national

investment to produce well-trained specialists, particularly technical specialists and human resources personnel. Studies were not conducted in other countries of the region.

Skills gap is particularly severe in the vocational education and training (VET) system:

- In Kazakhstan, the OECD review of higher education found in 2006/07 that employers were not discontented with graduate standards but felt that the system was producing too few graduates with scientific and technical qualifications. However, a far bigger labour market issue for employers was the inadequate number of graduates from technical and vocational colleges with lower tertiary qualifications, who could be recruited as technicians or middle managers. The OECD review found that Kazakhstan's vocational colleges suffered from low status, underfunding and not perceived as being part of the higher education system. The lack of ladders and bridges between the two systems made it unnecessarily difficult for students to progress from one to the other.
- Similarly, in the Kyrgyz Republic the OECD review noted that the VET system was weak and growing weaker, in sharp contrast to the rising demand of the economy of the Kyrgyz Republic for VET services and the acute need of young people to obtain marketable qualifications. The review report notes that half of those aged 15 to 29 are unemployed, following the decline of state-owned enterprises and the loss of traditional jobs. The percentage of those funded by the government dropped from half to one third between 2002/03 and 2007/08. Many of them are in VET because they could not afford the fees for higher education and think that they may be able to progress to higher education on graduation. However their chances both of graduating, and of being accepted into universities if they do, appear to be diminishing.

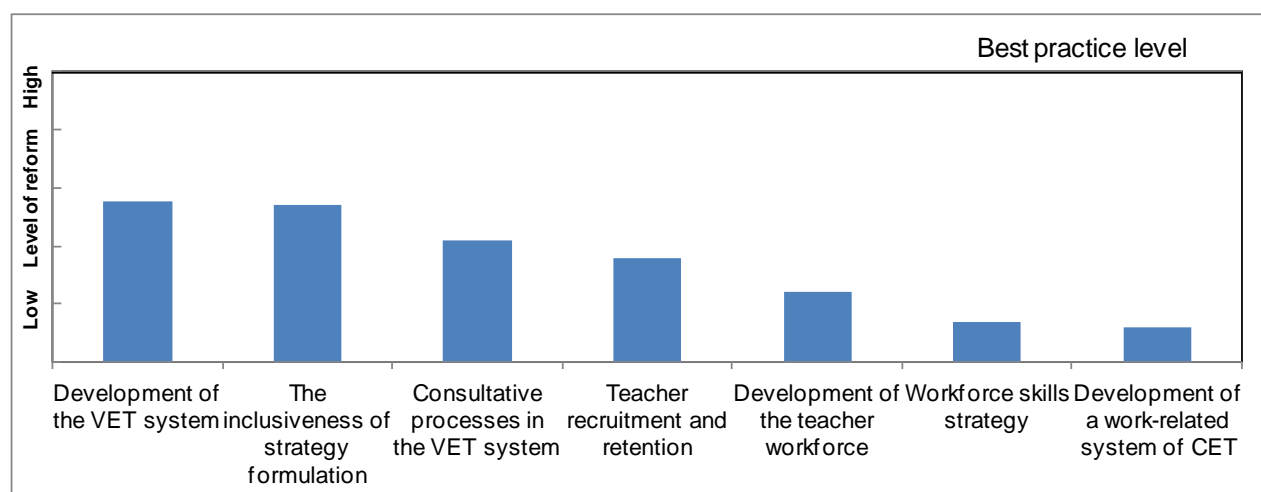
All seven Central Asian countries provide VET both in separate in separate vocational schools or streams in upper secondary

education, and in post-secondary institutions. Previous research provides limited information on the VET systems of the other Central Asian countries, but there is little reason to believe that they are free of the problems found in Kazakhstan and the Kyrgyz Republic.

VET systems should be made more relevant for the labour market

In the first *Central Asia Competitiveness Outlook* (OECD, 2011), the OECD conducted a policy assessment on the level of reforms in human capital development policies according to government and private sector perception in all seven countries. The results highlight that both government and private sector perceive the policy reform in this area far below the best practice level (Figure 1.1). The report recommends policy makers in the region to collect and report educational data, develop strategies for raising the quality of tertiary education, improve graduation rates, and reduce state control. It also advises policy makers to create strategies for making VET more relevant for the labour market.

Figure 1.1. Perceived level of reform of human capital development policy area in Central Asia



Note: “Best practice” represents the benchmark used in the Policies for Competitiveness surveys which corresponds to the OECD best practice. High represents a level of reform that meets best practice, low a lack of reform.

Source: OECD (2011), *Competitiveness and Private Sector Development: Central Asia 2011 Competitiveness Outlook*, OECD Publishing. doi: [10.1787/9789264097285-en](https://doi.org/10.1787/9789264097285-en)

This handbook focuses on one specific recommendation of the *Central Asia Competitiveness Outlook*, namely on how to build VET systems that are more responsive to labour market requirements. The OECD developed a questionnaire on VET divided into two parts. The first part focuses on social partner involvements, i.e. mechanisms to involve stakeholders, employers and trade unions. The second part focuses on information tools: i.e. qualifications frameworks, systems of assessment, data and research. The questionnaire was sent to VET policy makers in Central Asia, and all countries, with the exception of Turkmenistan, provided responses and comments which served as the starting point for country-specific analyses.

Chapter 2

Tools and good practices to support vocational education and training in OECD countries

Early VET can have a major impact on economic competitiveness, by helping to produce qualified workers whose skills are relevant to the labour market, preparing the younger generation for work and developing the skills of older workers. OECD countries are increasingly recognising this contribution to the development of technical and professional skills (OECD, 2012). However, VET systems face a number of challenges. Frequently rooted in academic institutions, they tend to be removed from the fast-changing needs of the labour market, in effect, disconnecting the supply and demand of skills.

OECD Guidelines on tools to support vocational education and training (VET)

In order to address these challenges, the OECD started a thematic review of VET in 2007 which resulted in the publication of *Learning for Jobs, OECD Reviews of Vocational Education and Training* (OECD, 2010). In it, the OECD presents a diversity of international experience in VET policy making across 17 countries worldwide, and proposes a set of generic recommendations to help countries develop their policies. Chapter 6 of the publication highlights tools which need to be in place to ensure VET systems are functioning well and responsive to labour market needs. Two specific areas play an important role:

- mechanisms to engage key stakeholders (employers and trade unions)
- tools to assess the effectiveness of training and education

Employers and trade unions are key stakeholders which should be engaged in VET policy and provision, as employers are in the best position to articulate the skills needs of the labour market. Trade

unions play an important role in representing the voice of students and employees' interests. It is thus essential that these stakeholders are genuinely involved in VET policy making. Tools to assess the effectiveness of training and education are required so that the value of vocational programmes can be identified, recognised and analysed. These tools include qualification frameworks, systems of assessment, and data and research.

Mechanisms to involve stakeholders in VET

The participation of social partners in developing VET systems is important if the systems are to equip graduates with the skills they need to get jobs. The main stakeholders in VET are the students, employers and the trade unions. The responsibility for representing students' interests generally remains with the government. Within OECD countries, the engagement of stakeholders in VET policy varies and can involve both decision-making and advisory roles. Institutional arrangement to involve stakeholders can also be at different levels: within institutions such as schools, within industrial sectors, within regions, or nationally (OECD, 2010). In some countries, the role of employers and trade unions in VET design and delivery is stipulated by law. Case studies of Australia, Austria and Korea (see Sections 1.3., 1.4. and 1.5. below); demonstrate the different methods OECD countries have used to involve stakeholders in VET.

Employers are in a good position to guide VET studies toward what is needed in the labour market. Without the participation of employers, VET schools and institutions risk training students in outdated professions or providing them with skills that are not relevant for future jobs. Employers' engagement in VET is mutually beneficial as their participation helps them to better understand schools and training systems. While employers have an interest in general skills amongst their workers, such as literacy and numeracy, they tend to focus narrowly on their particular field of specialty, with less consideration for the wider interests of students, workers, and society, in the form of general and transferable skills (OECD, 2010).

Trade unions can play a useful role in balancing the influence of employers by representing both student and employee interest. For

instance, many workers move between posts and change employers during their career. These workers have an interest in wider professional skills and training. Trade unions may therefore represent a more general interest in transferable skills, which employers do not worry about. However, trade unions may also have an interest in protecting jobs and keeping wages high through a limited supply of qualified workers. In light of these potentially conflicting sets of interests, it is the role of the government to balance their influence (OECD, 2010).

Information tools to support VET systems

A number of useful tools can be put in place as part of a wider approach to make VET systems more transparent and coherent. These include qualification frameworks, a standardised assessment for VET qualifications, better data – particularly on the labour market outcomes of VET – and a more systematic approach to evidence-based policy making.

1. Using qualification frameworks

A national qualification framework (NQF) is a classification system that ranks all the different educational qualifications awarded in a country and in this way makes them comparable. It incorporates the qualifications from each education and training sector into a single comprehensive framework. Occupational standards, describing the skills that a person with a certain qualification should have and the tasks the person should be able to perform, are often used as a basis to develop a NQF in order to make education levels comparable across different sectors. Introducing a qualifications framework is important as it:

- clarifies how different qualifications relate to each other and shows how to advance through the system
- increases quality assurance, as the framework demonstrates at what level each qualification is compared to other qualifications in the system
- shows the competences associated with each qualification

- involves the different stakeholders in the VET system (OECD, 2010)

Currently, many OECD countries are introducing qualifications frameworks or have already done so (OECD, 2010), for example, in 1995; Australia introduced their qualification framework (AQF, 2012). In Europe, the creation of a European qualifications framework in 2008 encouraged the development of national frameworks, consistent with the Europe-wide framework (OECD, 2010). All new European qualifications issued from 2012 should carry a reference to an appropriate European qualifications framework level (European Commission, 2012).

A qualifications framework should be developed and based on co-operation between various government agencies in order to avoid duplication between different sectors. Implementing qualifications frameworks can be associated with administrative difficulties, such as tension between agencies, an increasing number of qualifications, bureaucracy, and slow progress; these problems can be partly avoided by gradual implementation of frameworks across sectors (OECD, 2010).

2. Tools for the assessment of practical skills

Assessing what students have learned is important, both to know how well individual students master the subject, and to demonstrate if the teaching has been successful. Most OECD countries use tests regularly, and tests can be both designed to help students learn and to directly test knowledge. When testing in the fields of VET, written tests are often less relevant than in academic institutions. Practical tests or experience, dependent upon the length of study, can therefore also be taken into account. Countries must aim at some sort of a standardised assessment framework to be able to compare different levels of knowledge gained in different educational institutions or during apprenticeships. This can be done either through national guidelines on tests, with a standardised test for all students, or through a periodic review of VET institutions and practices (OECD, 2010).

The development of occupational standards is important in comparing skills across sectors. Occupational standards are a detailed description of the standard tasks that any individual that holds a certain qualification should fulfil at their workplace. These standards should also include “specifications of the underpinning knowledge and understanding” that these tasks require (UK Commission for Employment and Skills, 2012).

Using a standardised national assessment framework, which establishes the education quality assurance framework of a whole country, is useful and can assure quality of training by making the results for all schools and children comparable. It can also prevent students from learning and being tested according to locally developed standards that may be higher or lower than the national average. It may also improve the “signalling” value of qualifications, as it makes it easier for prospective employers to know what knowledge and skills level their potential employees have. It therefore makes mobility easier as the requirement for a new employer to know the institution the prospective employee came from becomes less important. It can be more cost effective than locally developed tests as it may reduce duplication of efforts. Lastly, it may facilitate recognition of informal learning where students who have a certain experience, but have spent less time in an educational institution, can prove their skills by taking an exam (OECD, 2010).

3. Strengthening data on labour market outcomes

Data on students and what happens to them after graduation is valuable as it shows if the students were posted in an occupation relevant to their training – and the reverse. It also shows if the training is relevant to the labour market. Data can be collected through surveys, censuses, and national registers. A survey can target former VET students at a certain length of time after graduation – a graduate destinations survey for instance may be administered to those leaving vocational programmes around one year after completion. It will then reveal how many graduates are working in their profession, how many are unemployed, if they find that their training was relevant, and if there are potential dissatisfactions with some programmes or institutions. Surveys can

also include national censuses. Longitudinal surveys are also useful in following the career path of former VET students, although such surveys can be limited by the fact that sample sizes are commonly quite small (OECD, 2010). National registers usually have unique identifiers of citizens, that is, national numbers or social security numbers. Using such data raises issues about privacy that must be balanced against the potential benefits (OECD, 2010).

Improving the evidence base

Good evidence about VET policies and their effects is important for policy appraisal. It shows how effective the VET policies are and what needs to be adjusted. The principles of VET policy appraisal follow other policy appraisal methods: (1) define the goals and objectives, (2) identify the factors, (3) evaluate the influence of the different factors, (4) consider alternative options, (5) add economics and study the cost-benefits, and (6) select the most viable option and implement it. The application of this method to VET can be difficult because of the number of institutions involved; these can include the ministry of education, ministry of labour, various sub-agencies, employers' organisations, trade unions, research institutes or even universities' research departments. To overcome these problems, some countries have established special VET research institutes with the aim of collecting and analysing data and information on VET (OECD, 2010).

In the following three sections, OECD good practices in developing tools to support VET systems will be demonstrated through case studies from Australia, Austria and Korea. These three OECD member countries demonstrate different approaches that underline flexibility in how to best implement VET policies.

VET in Australia

Australia was chosen as an example of OECD good practices in VET because the country carries out in-depth research and uses this evidence to inform VET policy making. Independent research institutions such as the National Centre for Vocational Education Research (NCVER) have an important role to play in the dissemination of data, which are used extensively to assist in the

formulation of educational policies and in the regulation of the quality of the training system. Moreover, Australia was a pioneer in introducing qualifications frameworks with the Australian Qualifications Framework (AQF) introduced as early as 1995. The Australian example showcases the importance of good data and research for conducting effective VET policy making, and the importance of establishing a national qualifications framework which may facilitate movement between sectors of education, particularly between VET and university.

A well-established national system with strong employer involvement

VET is an integral element of the Australian education system. The system is overseen at the national level by the Ministerial Council for Vocational and Technical Education (MCVTE), with representation at the state level via the Council of Australian Governments (COAG), composed of the Prime Minister, the premiers of the six states, and chief ministers from the two territories. Various other bodies operate at national level, including the National Quality Council, the National Industry Skills Committee, TVET Australia, providing a national framework for the VET system. Employers are represented in several of these bodies, thus their engagement is strong, in particular in the development of guidelines for the designing of training programmes.

VET operates within a national qualifications framework which covers all levels of education from primary school to doctoral degrees. Qualifications issued by a registered provider are recognised across all states and territories. Table 2.1. below shows how different levels of educational attainment in Australia (VET and higher education) translate into the levels of the International Standard Classification of Education (ISCED).¹ Australia is also pursuing the implementation of consistent national standards through the Australian Quality Training Framework (AQTF) and a national regulator, the Australian Skills Quality Agency (ASQA).

¹ The International Standard Classification of Education (ISCED) is the classification structure designed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) for organising information on education and training. It was designed in the early 1970s.

The VET system aims to assist in the attainment of several objectives and focuses on different target groups: the young preparing for a first career, those seeking additional skills to assist in their work, and those pursuing learning outside of the immediate needs of their work or catching up on educational attainment. It has played an important role in helping the workforce acquire the necessary skills to adapt to Australia's increasingly globalised economy. For example, VET has helped train employees in the finance sector and in the creative and service industries. Today, VET competencies and qualifications cover around 80% of occupations in Australia. People of all ages may participate. According to the OECD's latest *OECD Reviews of Vocational Education and Training – A Learning for Jobs Review of Australia 2008*, in 2007, 11.3% of the population between the ages of 15 and 64 participated in some form of VET; 88% of VET students study part-time. The range of age groups participating was also wide.

The Australian Qualification Framework (AQF) divides VET into eight levels: Certificates I-IV, VET diplomas and advanced diplomas, VET graduate certificate, and VET graduate diploma.

Table 2.1. Australian Qualification Framework categories by sector, and ISCED equivalents

Post-compulsory secondary education accreditation	VET accreditation	Higher education (HE) accreditation	International standard classification of education (ISCED) equivalent (a)
Statement of attainment (for partial completion of a full qualification)			None
Senior secondary certificate	Certificate I		2C
	Certificate II		2C
	Certificate III		3C
	Certificate IV		4B
	VET diploma	HE diploma	5B
	VET advanced diploma	HE advanced diploma or Associate degree	5B
		Bachelor degree	5A
	VET graduate certificate	HE graduate certificate	5A
	VET graduate diploma	HE graduate diploma	5A
		Masters degree	5A
		Doctoral degree	6

Source: NCVER (2007), *Did you know? A Guide to Vocational Education and Training in Australia*, NCVER, Adelaide.

A strong research and information base: the National Centre for Vocational Education Research (NCVER)

Australia draws on data, research and analysis when formulating VET policy. To this end, Australia has a National Centre for Vocational Education Research (NCVER), an independent and not-for-profit body responsible for collecting, analysing and distributing statistics and research about VET. NCVER is owned by the Commonwealth, State, and Territory Ministries responsible for training. It is funded through an annual grant from its governmental owners, as well as from several contracts with the federal department overseeing tertiary education and *ad hoc* consultancy contracts, some of which are of a commercial nature. Despite its official ownership, there is no direct government intervention into NCVER activities, although government representatives participate on various advisory and selection panels and are given advanced notice about NCVER publications. The advantage of this independence is that data, research and policy advice cannot be seen as promoting some interests above other.

A long-term vision for education is important and, in addition to collecting and analysing national VET statistics and survey data, NCVER has a strategic programme of research on tertiary education, training and youth transitions. NCVER also builds international links by collecting and publishing research findings on VET around the world through the UNESCO-endorsed VOCED Plus research database (<http://www.voced.edu.au/>). National research priorities are determined through consultations with stakeholders and signed off by the ministers responsible for training. They prioritise education and training in the broader context of labour market and social outcomes (well-being, social participation and inter-generational benefits) and are thus not limited to training. NCVER also runs programmes to build researcher capacity, with an overall aim to improve the evidence base through better data collection and analysis. It also recognises the need for high-level evaluations aimed at assessing the impact of policy interventions.

To establish some parameters around research conducted on tertiary education and training, NCVER conducts three-yearly consultations with officials, researchers, training providers and

employers to find out what issues require investigation. These consultations result in recommendations to the commonwealth and state ministers of training on a set of national research priorities. NCVER uses these to guide its decisions on commissioning and conducting research. For example, at the time of writing of this report the priorities span the period 2011 to 2013 and cover the following fields: skills and productivity and how skills contribute to economic growth; structures in tertiary education and training systems to examine the impact of policy, funding and market frameworks on provision of education and training; the contribution of education and training to social inclusion in order to explore reduction of disadvantage through education and training; learning and teaching, with a focus on understanding how, why, where and when people learn; and the place and role of VET in the tertiary education sector, the working world and the community.

In order to build capacity and awareness, NCVER publishes reports and sponsors events and educational workshops. NCVER also supports professionals in the VET sector to undertake research, makes an effort to attract researchers from outside the field of education – for example from the discipline of economics. They also encourage early career researchers (researchers who are within five years of the start of their research careers), and encourage greater use of their data collections by both researchers and practitioners. The aim is to produce accurate, high-quality data and rigorous, independent research. Much of this information is available online and free-of-charge, through a simple identification and login procedure on *www.ncver.edu.au*.

Information, data, surveys and analysis are of use as long as they are published. To disseminate information, NCVER publishes several administrative collections such as data about apprentices and trainees, VET in schools, VET financial information, VET providers (but only those who receive public funds) and their students, their courses and achievements. Regular surveys published by NCVER include the Student Outcomes Survey, which focuses on students' employment outcomes and satisfaction with VET approximately six months after the completion of training, and Employers' Views of VET which looks at how this training met their skill needs. NCVER also conducts other surveys from time to time, such as two surveys

about apprentice and trainee destinations, and on the future plans of students soon after they commence their study. These last two surveys were devised in response to the strong interest in improving completion rates, especially for Australian apprentices.

Practical issues in Australian policy making: collecting information on the private provision of training and implementation costs

Data can be used extensively to assist in the formulation of educational policies and in the regulation of the quality of the training system. For this reason, Australia is striving to fill gaps in its data collections, in particular those relating to the private provision of training, which represents an important element in the overall system. In Australia, the majority of workplace training and continuing education is funded entirely by employers or individuals and therefore is not picked up in the national data collections.

Moreover, very little information is available on the medium- and longer-term outcomes of VET. This is a serious weakness. Australia does not have a complete system to follow all students who undertake VET or university study, although work is underway on developing a unique student identifier for the VET sector. Introducing such a tracking system will provide a wealth of information for students as well as policy makers but must be built in a way that addresses questions about data security and privacy. Australia's training ministers have recently endorsed the introduction of a unique student identifier (USI), which will record an individual's VET over his or her lifetime. This will assist governments to better operate a national student-centred training model and provide individuals with a single authenticated record of their VET history.

Lessons from the Australian case study: the benefits of an independent body overseeing data collection and research, a national qualifications framework and possibly a USI

The Australian case study shows how a national independent research institution can help support an effective VET system by

collecting, managing and disseminating data and research. For example, the collection of surveys from both employers and graduate students can help reduce the mismatch between the skills demanded and skills supplied. Research may also help individuals, educational institutions and employers to understand the benefits of different approaches to learning and the return on their investments. In terms of VET, such evidence is also needed to counter less positive attitudes towards vocational as opposed to university qualifications. The advantage of having an independent body to collect this data is that data, research and policy advice are seen as impartial. Moreover, collecting and making data accessible is expensive. It is therefore important to establish clear standards about minimum data requirements which remain constant in order to allow researchers and policy makers to investigate trends in education over time.

Central Asian countries can also learn from Australia's well-established national qualifications system, which is clear and consistent across all states and territories. In particular, in creating such a framework, it is important to pay attention to establishing the parity of qualifications obtained in different parts of the system and to ensure the mobility of those qualifications between sectors of education, particularly between VET and university studies. In practice, this means having robust systems of assessment in place, which invites the involvement of employers.

Lastly, as previously mentioned, Australia is presently considering the introduction of a USI for VET. For countries wishing to build a strong evidence base for their education policy, introducing a student identifier is recommended. For governments, this can help by tracking the funding allocated to an individual. For learners, having a unique identifier will make it easier to compile a full record of their training achievements.

VET in Austria

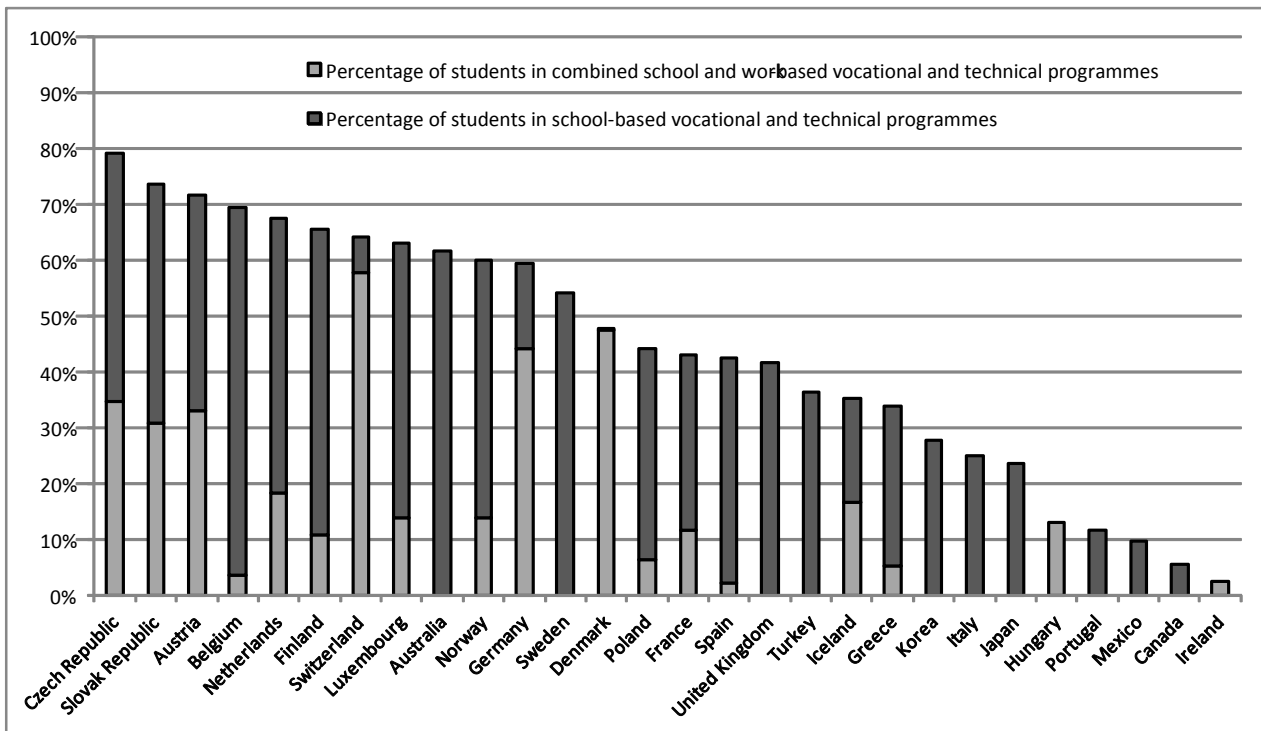
Austria has a long tradition of promoting vocational education and training, with three quarters of students at the upper secondary level participating in VET. The success of the Austrian VET system is also reflected in the low youth unemployment rate and the

international recognition of Austrian skilled workers. At the core of the Austrian model is a high level of involvement and informal co-ownership of VET by social partners (representative bodies of employees and employers). For instance, the Institute for Research on Qualifications & Training (IBW), which carries out extensive research and analysis on skill trends, prospects and regional needs, was founded by the Austrian Federal Economic Chamber (WKO) and the Federation of Austrian Industry (IV). The Austrian VET system is a good example of a “bottom-up” approach to VET policy making, where the process is driven by the social partners as much as it is by government.

A dual VET structure

Austria has two types of VET programmes: a full time school-based programme and an apprenticeship training programme, where trainees attend two places of learning, the part-time vocational school and the training company. Both systems are equally popular and each trains about 40% of over-16 year olds. The full-time school-based programme, on the one hand, combines general education and vocational education. Duration varies between programmes and there are different types of education. VET colleges give a double qualification, preparing graduates for access to professional areas and for access to higher education. Nearly all teachers of occupation-related and practice-oriented subjects boast practical experience in the private sector. The dual apprenticeship training system, on the other hand, differs from the school-based system in that students spend only about 20% of their time in school and about 80% of their time training in an enterprise (Figure 2.1.). In this way, apprentices make useful contacts in the working world and train directly in what is needed in the work market. Apprentices sign a contract for a period between two to four years and earn a salary that increases each year reaching roughly 80% of a starting wage in the final year. Wage costs are borne by enterprises for the most part. The well-developed dual VET system ensures that in Austria the transition from education to first employment is smooth compared to international standards.

Figure 2.1. Attractiveness of VET worldwide



Note: In Hungary, the Ministry of Education assesses the share of students participating in vocational training schools as 23% in 2007/8.

Source: OECD (2008), Education at a Glance 2008: OECD Indicators, Table C1.1, OECD, Paris.

Social partner involvement at all levels is strong, with effective co-operation between different stakeholders

Involvement of social partnerships in VET policy is embedded in the Austrian system with a tradition of strong corporatism. The social partners are represented on commissions and advisory councils of the Federal Ministry of Education, Science and Culture. They play an important role as they influence the general education and training policy, participate in governance and administration of apprenticeship training, run VET and Continuing vocational education and training (CVET) institutions that target people who want to improve or update their skills after initial education, award professional qualifications, and provide accompanying support measures. In the field of school-based education, the social partners are involved in legislation and the adoption of ordinances for new curricula, for example.

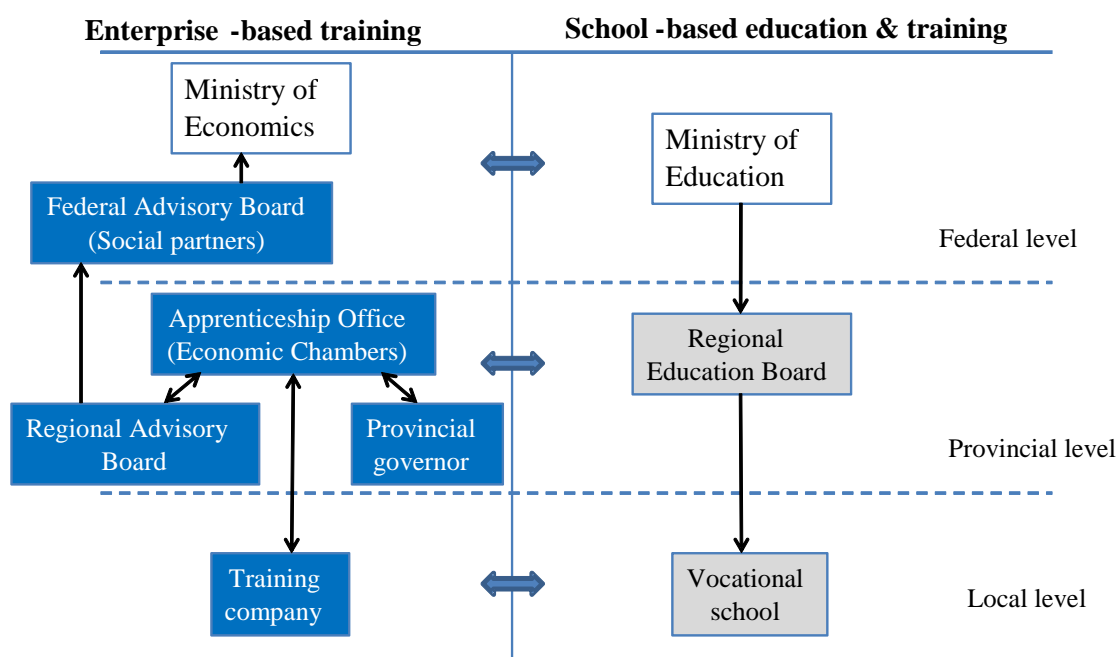
Senior representatives of the social partners hold regular high-level meetings with ministers, which form a part of the social partners' influence on general education and training policy. The social partners also evaluate proposed legislation on VET. The social partners are also represented in a number of committees and working groups in different ministries, for example, the Steering Group of the Austrian National Qualification Framework and the Committee on the Development of Lifelong Learning Strategy. The social partners set joint initiatives and prepare common position papers such as on the development of education and training in a life-long learning perspective, and on the effects of demography on the labour market and the social systems. Together with the government they form the administrative board of the Public Employment Service and thus are charged with the design and organisation of all training measures under active labour market policy.

The social partners participate in governance and the administration of apprenticeship training. To achieve this, the social partners make up the Federal Advisory Board on Apprenticeships, an advisory body to the Ministry of Economic Affairs (Figure 2.2.). This body advises the ministry on trades to be established – social partners negotiate on the content of a trade and subsequently on the curriculum of the training; for example, what is the knowledge required to be able to do to be a cook, a baker or a car engineer – on updating of ordinances, and on other administrative matters. Research institutes affiliated with the social partners prepare drafts for new or updated training ordinances and carry out evaluations and other research, and support examination boards in ensuring common standards in apprenticeship training (for example, in ensuring the validity of the final examination). They also prepare manuals and study material for companies and apprentices requiring information or advice on apprenticeships. The regional economic chambers act on a legal basis and on delegated authority from the Ministry of Economic Affairs as competent authorities in apprenticeship training. They are involved in the accreditation of training companies, approval and registration of apprenticeship contracts, organisation of examinations with examination boards – consisting of representatives of the Economic Chamber and

Chamber of Labour – award qualifications and administer financial incentives to companies. The incentive to accept apprentices, however, rests more on tradition than on financial support as these supports do not cover more than 10-15% of the overall cost of apprenticeship training borne by companies.

The Austrian Economic Chambers, *Wirtschaftskammern Österreich* (WKÖ), the Austrian Chamber of Labour, and the Austrian Chamber of Agriculture, all run institutions of the formal education and training system, that is, VET schools, universities of applied sciences (*Fachhochschulen*) and accredited private universities. These chambers also run CVET providers, which provide qualifications outside the formal system. The WKÖ also has professional bodies that award formal qualifications such as *Meister* (master of crafts) and other professional qualifications.

Figure 2.2. The involvement of social partners in apprenticeship training in Austria



Source: Institute for Research on Qualifications and Training, Austria, 2012

The Social partners are involved in apprenticeship training both at VET institutions and in enterprises.

- **In enterprise-based training:** within the Federal Advisory Board, and the Apprenticeship Office (Economic Chambers). The federal advisory board is the body where the co-operation between social partners is “institutionalised”. The legal mandate of this body is to “advise” the minister of economic affairs. In practice however, the minister very rarely issues any decrees without involving this body. Outcomes negotiated within this advisory board in the form of curricula updates or new profiles are typically transposed by the Ministry into an ordinance without any further changes.
- **In the school-based track:** the curriculum of the *part-time* vocational school (in apprenticeship training) is designed on the basis of profile agreed by the social partners and decreed by the Ministry of Economic Affairs. Concerning the *full-time* school-based track, social partners are only consulted on the curricula.

Lessons from the Austrian case study: the benefits of strong social partner engagement

The VET sector plays a major role in the Austrian educational landscape. VET is highly regarded in society and can indeed be a platform for higher positions in the business world. The Austrian case suggests that a national culture of social co-operation can be beneficial in the long run, notably in making the VET system more responsive to the needs of the labour market in a “bottom-up” manner. Austrian VET students, who choose the dual apprenticeship training system, rather than the full-time school-based system, must try to find a business that will accept them for an apprenticeship. Moreover, what seems to be particularly important from an institutional point of view is the important role played by the social partners and notably by the WKÖ (*Wirtschaftskammern Österreich*) representing the voice of Austrian business in the governance and administration of the dual system. There is a sense of “co-ownership” especially by the different entities of WKÖ at the level of the Economic Chambers, which are organised by sectors. This appears to be the basis of a general “training culture” and a readiness by companies to engage in formal training arrangements. Since agreements on VET are negotiated among all

the players (the social partners as well as public administrations), proposals, wherever they come from, tend to be scrutinised extensively, which helps expose possible consequences for all the parties involved. While this process can be lengthy, it may also help to avoid errors in the future. And perhaps the most important consequence is that once agreements have been reached, they tend to be endorsed by all the stakeholders. To achieve the same results, governments in Central Asia should aim to strengthen the role of the social partners and grant them both advisory and decision-making roles.

VET in Korea

The Korean VET system is part of a system of education which has made major advances in a very short time; educational achievement and attainment levels are now among the highest of all the OECD countries. The country stands out with a very sophisticated system of data collection used to research VET and to develop VET policies. It also relies on a highly-functioning information technology system. The Korean example also presents an interesting contrast to the Austrian model, as Korean authorities play a significant role in formulating Korean VET policy and in shaping the data and research components of VET, in effect more top-down and led by the state, while the Austrian model is heavily reliant on the involvement of many social partners to advise on VET policy, on curricula, or on the size and mix of VET provision in high school at tertiary level – in effect more bottom-up.

A successful example of rapid VET expansion

Korea has two VET systems. One comes under the responsibility of the Ministry of Education, Science and Technology (MEST), with focus on pre-employment education, medium-level technician training, and technical training. This is a part of the formal education system with vocational high schools and junior colleges. The other part is under the responsibility of the Ministry of Employment and Labor (MOEL) with a focus on adults and employed persons in diverse occupational fields. This includes several vocational training centres, both private and public.

Korean VET policy tries to link VET institutions with industries through the qualification system and through sector councils for human resources development.

VET has expanded very rapidly in modern Korea, with a 25-fold increase in participants since 1965. In addition to training new students, a substantial number of students are individuals already in employment, underlining the importance attributed to life-long learning to increase the skills of the workforce and in adjusting to new work requirements. Data show that VET in Korea has changed qualitatively over the last decades. It has made the transition from secondary vocational education to post-secondary vocational education and workers' vocational training. The number of schools and colleges has grown by 15% during the last 30 years. In this period, the number of students in vocational high schools has fallen by one-third, while those at vocational college level have grown almost five-fold. The drop-out rates vary between 2.6% and 8.3%, depending on schools or years. Colleges have slightly higher drop-out rates than high schools. Institutions providing training for the unemployed have a completion rate of 75%, whereas the remaining participants either drop out or find work during their training. Generally, the demand for VET high schools has been decreasing. Currently, vocational high schools are being reformed in order to diversify the curriculum or to improve the overall quality of education.

A strong reliance on data and research

Korea uses data and research extensively to formulate and adjust VET policies to current labour market requirements. The data collection and analysis is based on both administrative data collection and on surveys, as detailed below.

- Administrative data collection

Data are obtained from individual schools, colleges, individual training centres and from labour employment offices. The data are then used to study enrolment rates, dropout rates and employment rates of graduates, as well as training and employment numbers.

Data statistics cover the National Education Information System (NEIS), which connects provinces, municipalities and schools electronically. The system collects all education-related data such as school affairs, student records, human resources, budgeting and accounting, via the Internet. A nation-wide network with modern technology and infrastructure has now replaced the previous internal school networks. However, collecting data through NEIS is expensive and more than USD 150 million have been invested in the building and managing of the data system and infrastructure. NEIS is linked to the Korean e-government system. It provides information on statistics, index and administrative databases, including data on teachers, staff, salaries, facilities, academic affairs, entrance requirements and graduates. It also provides a customer service through the Internet. This customer service includes information for parents on their children's school activities, information for ministries and regional educational offices on designing and evaluating educational policy, and for schools and universities on how to keep and use student records.

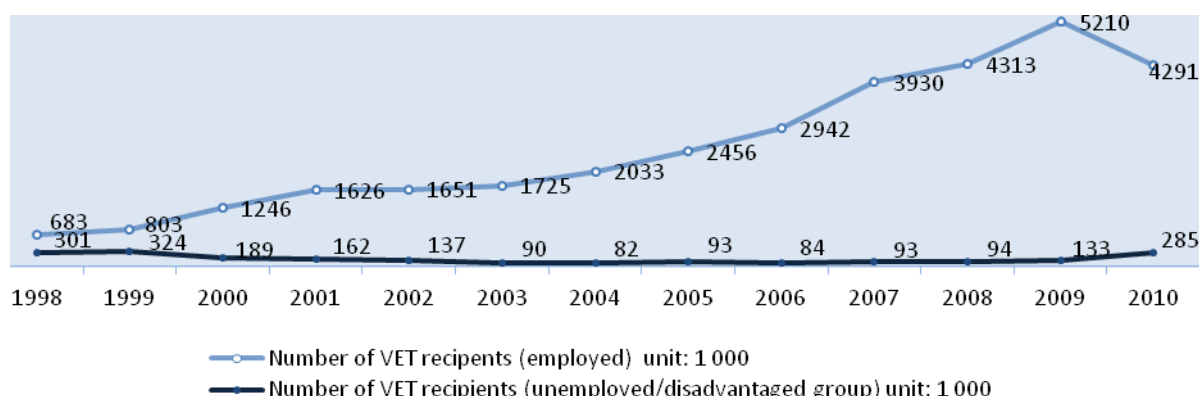
Within MEST institutions, the Educational Information and Statistics Bureau (with sub-divisions in educational information planning, educational information management, education statistics, and e-learning) provides VET statistics, while the Lifelong and Vocational Education Bureau (with sub-divisions in life-long learning policy, career and guidance education and vocational high school policy) is the user of the statistics. Within MOEL, the Labour Market Policy Bureau (with the labour market analysis division) and the Manpower Policy Bureau (with the manpower policy division) produce VET statistics, while the Skills Development Policy Bureau (with sub-divisions in skill development policy, skill development assessment, and human resources development policy) uses these statistics to develop policies.

Nation-wide statistics are mostly collected at the level of institutions such as schools or training institutions through administrative process. That is, central statistics agents collect data from schools or training centres and produce national statistics. One of the main surveys for the collection of national statistics is the Annual Education Basic Statistics Survey. It includes information on vocational schools and junior colleges, students' employment and

study fields, dropout rates, scholarships, tuition fees, employment status, occupation by type and industry, and so on. The Education Basic Statistics Survey uses censuses and records from individual schools and regional offices. It tracks students' career activities and annually publishes the Education Statistic Yearbook.

The Human Resources Development Net is an online database with training records for workers and the unemployed, including employment status after a period of training for the unemployed. During the last decade VET training has increased sharply; this may be because employment insurance funds cover employees' training costs. The Employment Insurance Fund was introduced in 1994. The composition of the Employment Insurance Fund was changed in 1998 when the proportion of funding allotted for vocational training was considerably increased. For example, until 1998, a large-size company with more than 1 000 employees had to pay 0.05% of the salary of its employees for their vocational training. After 1998, they had to pay 0.7% of the employee's salary. Since then, the number of VET recipients, especially employees, has increased sharply (Figure 2.3.).

Figure 2.3. Number of VET students in Korea (1998-2010)



Source: South Korean Employment Insurance database

The national databases on education and employment produced by different ministries can work together through the use of citizen identification numbers (social security numbers). For example, data

on graduates of vocational schools or vocational training centres in the national education information system (NEIS) or HRD-NET can be compared to data on their employment status in national employment insurance data. By linking different data systems, it is possible to generate information on graduates' labour market performance without conducting an expensive survey of graduates. The database includes data on employment insurance, health insurance, employment status, occupation, income and so on. Although having systems that can work together increases the reliability of data, it can also raise questions about data security and leakage of personal information.

- Main surveys

Surveys directly collect data directly from individual workers or companies and include variables on change processes. They can also provide more detailed information and qualitative data which cannot be obtained through administrative data.

There are two types of survey, the cross-sectional survey and the longitudinal survey.

- Cross-sectional surveys aim to study issues related to VET in terms of vocational training institutions, trainees, companies, and so on. Some surveys, such as the Economically Active Population Survey, the Regional Employment Survey and the Household survey collect data from individuals or households. Some surveys such as the Corporate Training Survey, collect data from companies.
- The main statistical indicators at individual level are the participation rate in education and training of workers and unemployed, the participation rate in job-related non-formal education, VET participation rates among the older generation, total annual training hours, average learning time and household expenditures for professional development. Among businesses, the main statistical indicators are training rates, length and frequency of training periods and expenses related to the training of employees. Surveys are normally funded by the government, managed by public research institutions such as the Korean

Research Institute for Vocational Education and Training (KRIVET), and are carried out primarily by private survey companies through e-mail, by telephone or in face-to-face interviews.

Recently, various panel (longitudinal) surveys have been conducted in order to help track VET students after their graduation, and thus to produce some evidence on the impact of VET policy. For example, Korean Educational and Employment Panel (KEEP) data can track the career path of vocational high school students after their graduation by following the sampled students. Skills identification surveys on the other hand, are a valuable tool to help steer VET. The Industrial-technician Workforce Survey, for instance, managed by the Korean Institute for Advancement of Technology, shows that there is a skills shortage in electronics and machinery, but less so in the textile, shipping and steel industries. Further surveys show that there is a big mismatch in training needs amongst businesses, the unemployed and training institutions.

The National Skills Needs Outlook, managed by KRIVET, is a 10-year project aimed at defining current skills shortages and future skills needs. Its current findings (2010) are that skills shortages vary across industries. For example, there is a significant shortage of job-specific and technical skills in the electronics industry, whereas in the food processing industry, there is a lack of generic skills.

Manpower supply-demand forecasts take place nationally every two years. These forecasts provide general indications for future education and training, such as the increased need for manpower need in the IT area; they also provide information on manpower requirements in different industrial fields. The manpower supply-demand forecasts are limited, however, by fluctuating economic conditions and weak databases on industry and occupation; they provide only limited information to VET institutions about the type and level of skills required for specific occupations.

Lessons from the Korean case study

The Korean case has confirmed the importance of data collection and analysis for VET policy in general. It suggests that in designing effective VET policy it is important to build robust basic statistics systems around VET; these should populate national administrative databases for VET policy. At the same time, they should have the capacity to work with other national databases, such as education and employment insurance databases, health insurance databases and the national tax certification database. By linking administrative databases, it is possible to have more reliable data on the impact of VET than data taken from sporadic and independent surveys. As in the case of Australia, the process of linking data could be facilitated by establishing individual unique identifiers. It is also helpful to train staff dealing with administrative data through regular seminars. In Korea, the data collection and analysis aspect of VET relies upon sophisticated IT systems. However, low levels of technical infrastructure and development in parts of Central Asia should not be seen as a hindrance. The principles of data collection remain the same with or without high tech systems.

The Korean case also demonstrates how to use public research institutes for VET policy development and the importance of understanding industry training needs by encouraging the participation of industry. For instance, the Korean government financially supports the establishment of Sector Councils Human Resource Development (SCHRD) within industry associations, which serve to identify and monitor the changes in skill and VET needs in selected industries.

Chapter 3

Assessment of tools to support vocational education and training in Central Asia

The following assessment is based on a questionnaire on VET carried out among policy makers in Central Asia to which all countries, with the exception of Turkmenistan, responded. The survey is structured into two parts. The first part focuses on social partner involvements, i.e. mechanisms to involve stakeholders, employers and trade unions. The second part focuses on information tools: i.e. qualifications frameworks, systems of assessment, data and research.

Afghanistan

The Afghan general educational system should be viewed in the light of the three decades of conflict in the country. Literacy rates have been on the rise but still remain low compared to the near universal literacy of other Central Asian countries, and female participation in education is low. Infrastructure for VET, as for education in general, is weak. Teaching methods are often outdated, yet Afghanistan is making progress with an increasing number of both students and educational institutions that must meet the current demand for rapid reconstruction. Afghanistan has mechanisms in place to involve stakeholders in VET and a national qualifications framework is being developed. The Afghan Ministry of Labor, Social Affairs, Martyrs and Disabled collects various administrative data on VET and has plans to increase the number of labour market surveys conducted.

VET in Afghanistan: between basic training and specialist skills

Afghanistan faces numerous security issues due to armed conflict, which has an impact on the educational system. General education and training have suffered hugely from the unrest, leading to literacy rates far below the other countries analysed in this report. Although figures on adult literacy remain difficult to obtain,

according to some estimates adult literacy is as low as 28% (OECD, 2011). Many teachers do not yet meet minimum educational qualifications and, since the curriculum for primary schools has been a priority, a curriculum for secondary schools has not been fully implemented. In VET, teachers have been cut off from technical developments and innovations in their field (Ministry of Education of Afghanistan, 2007). Despite these difficulties, Afghanistan has had some recent success. Ten years ago, at the end of the now ousted Taliban regime, Afghanistan had only around one million students, almost all male. Today, Afghanistan has close to eight million students, and approximately one third are female. The educational capacity has also increased dramatically during the last decade, with a seven-fold increase in the number of teachers and the construction of 3 500 school buildings (Ministry of Education of Afghanistan, 2007; OECD Working Group on Human Capital Development in Central Asia, 2011; World Bank, 2007).

VET in Afghanistan shares some general education challenges. Despite the high demand for labour due to the rapid pace of reconstruction and the high unemployment rate, there is a shortage of skilled and semi-skilled workers in the labour market (Ministry of Education of the Islamic Republic of Afghanistan, 2007). The central question that has to be addressed by Afghanistan's policy makers is how to build a strong VET system that can supply the skills to the labour force that are needed to rebuild the country. The task is to find a balance between supplying basic skills for the unemployed and educating specialists. Afghanistan's National Skills Development Program aims to facilitate and fund training for wage earners and the self-employed. To build capacity in the VET system, private training providers, public training providers and non-governmental organisations (NGOs) are involved in developing market-driven skills. The development of TVET is an essential cornerstone for the Afghan recovery process and poverty alleviation. Like general education, VET has been affected by years of war and requires significant investment in human and fixed capital. The current TVET physical infrastructure is virtually destroyed and teaching methods are outdated. The existing curriculum offered in VET institutes is not focused on the needs of the labour market and often has little relevance to modern, highly-skilled trades. VET teachers are very few

in number, often poorly qualified, and many have had little exposure to changes in technology or other advances in their respective fields. The low participation of the female population also raises issues related to social constraints and the relevance of training opportunities offered to females. (Ministry of Education of Afghanistan, 2007; OECD Working Group on Human Capital Development in Central Asia, 2011; World Bank, 2007).

The following two sections assess specific issues in the Afghan VET system – mechanisms to involve the stakeholders and existing information tools. They are based on direct communications between the OECD and the Islamic Republic of Afghanistan in 2011, unless otherwise specified.

Strong tripartite mechanisms involve employers and trade unions

The Ministry of Labor, Social Affairs, Martyrs and Disabled (MoLSAMD) is the government body responsible for the VET system in Afghanistan. MoLSAMD has a directorate general for Skills Development and a National Skills Development Program. In order to achieve anticipated targets, MoLSAMD is responsible for providing demand-driven VET for 240 000 unemployed people by the end of 2013.

Afghanistan has been a member of the International Labour Organization (ILO) since 1947. As a part of the ILO mandate, MoLSAMD chairs tripartite consultation meetings that include the government (represented by the ministry itself), the employers (including training providers) and the workers (represented by trade unions). The tripartite meetings, held four times a year, provide a forum for discussion of issues related to employment, the provision of training, wages and the working conditions of labourers. Part of the consultations focus on a review of labour market information and other issues related to labour and employment. This social partner mechanism supports MoLSAMD in many areas, including the quality-training process, fundraising, and finding the right skills for the right geographical area. MoLSAMD involves employers and trade unions in all government policy and decision-making processes. The most important mechanisms are the TVET working

group meetings held at least four times annually, chaired by the Deputy Minister of Labour Affairs, and the tripartite meetings with the participation of government advisors, the trade unions and employers.

The involvement of employers' associations and trade unions in VET policy making is mandatory. MoLSAMD is in the process of developing its three-year strategic plan on education through the Directorate of Planning, Policy and External Relations. MoLSAMD is also working on developing a TVET strategy. In both cases, employer associations and trade unions have a direct role in strengthening key policy through inputs and participation in TVET working groups, related consultative stakeholder meetings and analysis. In TVET working group meetings, the stakeholders have equal voting rights in almost all decisions. MoLSAMD is currently working to further strengthen public-private partnerships and is carrying out a number of stakeholder analyses involving almost all training providers, trade unions and other key public and private stakeholders.

MoLSAMD consults with employers and trade unions when designing the VET system, VET programmes and other standards. Consultations took place when the National Skills Development Program was designed and are currently continuing in the development of the VET strategy. Both employers and trade unions provide significant inputs. However, since MoLSAMD has only started the process of registering training providers and providers are not all yet registered, it is a challenge to involve all their representatives in the strategic planning process. MoLSAMD is designing curricula with the help of all trade unions and employers through a public-private partnership, but certified qualifications in terms of ranks and credibility still need to be adopted.

MoLSAMD is responsible for fundraising and overseeing the implementation of VET systems, including close monitoring and evaluation of projects. Once a VET project is approved, MoLSAMD subcontracts the project to the most qualified employers. These employers become the training providers and are directly involved in the overall implementation process, including the selection of trainers and trainees, selection of location and the final exams. The Department of Skills Development and the Department of Planning

and Policy are responsible for timely monitoring and evaluation of training in order to ensure quality and proper participation of trainees throughout training sessions. Trade unions are fundamentally involved in the policy-making process, including the identification of skills, assessing the quality of training and drafting progress reports. However, they are not yet involved in the delivery aspect of VET. In the near future MoLSAMD is planning to involve the trade unions in monitoring and implementation as well.

Existing information tools: qualifications frameworks, systems of assessment, data and research

- Development of an Afghan National Qualifications Framework (NQF)

The MoLSAMD has not established a qualification framework for VET as yet. However, MoLSAMD has started developing an Afghan NQF and is also in the process of establishing an Afghan National Qualification Authority. The key stakeholders involved in this process are MoLSAMD itself, the Ministry of Education, the Ministry of Higher Education, the Ministry of Women's Affairs, the Ministry of Justice, all training providers, employers, NGOs and the trade unions. According to the plan, the proposed project will be submitted for funding in 2012 to the Ministry of Finance and to other donors. Once approved, a department will be established in either MoLSAMD or in the Ministry of Higher Education and the staff will be recruited accordingly.

During the preparatory process of the Afghan NQF, consultation meetings took place with employers, training providers, employee organisations, the Ministry of Education, the Ministry of Higher Education and the Ministry of Women's Affairs. In the feedback provided was the suggestion to have six levels of qualifications –from basic education to the PhD level – that was included in the methodology of the Afghan NQF. The rankings will be based on measures of inputs, such as time spent in education and the qualifications attained. The Afghan NQF will be a part of the National Skills Development Program in order to link quality assurance in the VET systems to accreditation of VET courses and training providers. Despite these achievements, there are still further

steps that need to be taken in order to link the VET system with the proposed Afghan NQF structure. The National Skills Development Program is responsible for designing occupational standards in four sectors, that is, services, construction, trade and agriculture. MoLSAMD's mandate is to design a total of 755 occupational standards by 2013. A total of 85 individual standards had been designed by the end of 2011.

- Tracer studies on graduates of VET institutions

MoLSAMD always initiates baseline assessments and feasibility studies before starting any VET projects. These assessments are conducted mainly on the basis of the National Skills Development Program, through the employers, and sometimes via trade unions. The assessments aim is to identify the beneficiaries of training, select trainers and identify locations for training.

A final evaluation of trainees' competences is carried out at the end of each VET programme. Job placements of trainees are evaluated as well through tracer studies, undertaken with the help of a third party at least three months after the project has ended. This method of follow-up of recent graduates of VET institutions can be used to adjust programmes based on their experience. Employers are directly involved in the final evaluations of trainees. Employers also facilitate tracer studies once projects are finished.

VET projects undergo a final evaluation in order to ensure the quality of training. Once a project is finished, the quality of training will be assessed based on job placements through the tracer studies. Recent tracer studies show that there are between 80 and 85% of VET graduates are place in jobs. There are also mid-term and final evaluations of projects to assess lessons, project quality and project progress, based on indicators outlined in the original project proposal.

- Pilot studies to improve data and research

MoLSAMD has a Skills Development Department and a database that is used to collect all records of training sessions, the number of trained people for each skill category and the percentage of graduates who find employment. The Labor Force and Employment

Department also has a data unit. However, because of the lack of capacity, MoLSAMD is planning to recruit outside expertise to implement VET-related surveys.

Box 3.1. Available data on VET in Afghanistan

- Enrolment numbers in different VET programmes: Available. Based on government funded VET projects in 2011, MoLSAMD provides training for 15 000 unemployed people. The total number is limited by available funds.
- Dropout rates: Estimation available. Estimated to be between 2 and 4%.
- National register data to monitor labour market outcomes of former VET students: Not available, but under development. There is a unit in the MoLSAMD responsible for registration of all trainees who have graduated. However, the registration of training providers has only recently started and is not completed.
- Leavers' surveys to monitor labour market outcomes of former VET students: Partial availability. MoLSAMD is constantly launching tracer studies of former VET students three months after project closures. The data is analysed at the national level.
- Data on upward mobility after VET: Not available. Upward mobility of VET graduates has recently been discussed. The question is to what extent VET students' previous qualifications allow them to enrol in higher education. Based on the proposed criteria, a VET graduate from a one-year programme, who has previously completed secondary school (8th grade/year), will proceed to a higher technical education college.
- Labour force survey to enquire about earnings and employment of former VET students: Not yet available, but underway. MoLSAMD is planning to implement a labour force survey and labour market survey in order to collect data on labour market outcomes. These surveys will not only cover former VET students, but also the unemployed and under employed. The data will be analysed at the national level and the project is scheduled for completion in 2012.
- Employers' surveys to enquire about employer satisfaction with former VET students recruited: Partially available. MoLSAMD implemented a pilot survey of labour market information analysis in 2008. MoLSAMD has also drafted a proposal for the main phase of the labour market information analysis survey that should be implemented in 2012.

MoLSAMD is continuously using data collected from labour markets to inform proposed new strategies and projects. There are many skills for which market demand is significantly increasing. In order to respond to this demand, MoLSAMD is expanding provision of those skills in locations where the market demands it. If MoLSAMD realises that a particular skill is not required by the labour market, then more research is carried out to find the causes.

Challenges and policy recommendations

The VET system in Afghanistan suffers from a severe shortage of qualified academic staff, the poor state of most VET buildings, outdated curricula, a lack of suitable learning resources such as textbooks, computers and laboratory equipment and low salaries for academic staff.

The development of a national curriculum for technical and vocational education should be a priority for the government. Equally important is the development of the NQF which may help to address the question on what minimum qualification is needed for VET graduates to progress to higher education. The continuing development of occupational standards currently undertaken by MoLSAMD, contributes to the transparency of this strategy. This will eventually lead to the integration of the VET system into the fully-fledged national qualifications framework.

At present, VET is overseen by the ministries of education, higher education, labour, communication, energy, transport, and many NGOs, with little co-ordination among them. A VET agency under the umbrella of the Ministry of Higher Education in close collaboration with the Ministry of Education could be created, with input from all stakeholders in the government and in NGOs. The Ministry of Labour, Social Affairs, Martyrs and Disabled, which currently collects a variety of administrative data on VET and has plans to increase the number of labour market surveys conducted, should collaborate closely with this VET agency.

Regarding the lack of resources, the Afghan government should continue to collaborate closely with various donor agencies, international organisations, and bilateral donors such as the World

Bank, USAID, the European Union and Korea, both to promote student and staff exchanges, and to solicit foreign aid. In addition, the registration of VET providers should continue until a comprehensive database has been established in order to make better use of under-utilised training facilities.

Kazakhstan

The obstacles that Kazakhstan faces in establishing a well-functioning VET system are similar to those of other former Soviet countries. Many years of under-investment have resulted in outdated learning schemes, materials and infrastructure. Centralised state control and weak links between general and vocational education have exacerbated these problems. Recently, however, the government has made the modernisation of its educational system a national priority. In 2010, it launched two programmes to promote education and economic development: the “State Program of Education Development in the Republic of Kazakhstan for 2011 – 2020”, and the “2010-2014 State Program of accelerated and innovative development of the Republic of Kazakhstan”. The core problem within VET is that most of the qualifications being offered are not relevant to the job market. Currently, the government is seeking to increase the involvement of its social partners in order to develop policies better aligned with the requirements of labour market.

A decentralised model

The VET system in Kazakhstan falls under the Ministry of Education and Science. A department within the ministry is responsible for developing VET policy. In addition to determining the national VET policy, it also approves model rules for admissions in VET organisations, develops and approves procedures confirming the level of skills, and awards professional qualifications in technical and service specialties. Direct financing and development of most VET organisations is usually carried out by local executive bodies in the regions and in the two cities with republican status, Astana and Almaty, as opposed to via the national budget. This local approach distinguishes Kazakhstan’s VET governance from that of most of its neighbouring countries, where governance is more centralised. It

allows for flexibility in adapting to local conditions, as responsibility lies with authorities that are closer to the places where teaching and training take place. However, as the regions have different resources at their disposal to invest in the VET system, this governance structure could reinforce regional disparities and disadvantage students from economically less successful regions.

A shortage of skilled workers in the work force

The old Kazakhstan VET system provided good access to VET to a large number of students. Vocational schools were present in every region, specialised technical schools in every administrative province (oblast), and enrolment plans were sufficient to meet the demand for education. However, while the economy has been growing at double digits for years, the country's VET system has not been sufficiently flexible to adapt to the growing demand for qualified expert staff. Despite a consistently high unemployment rate in the country, notably, there is often a need to employ foreign experts. One of the reasons behind this gap is that VET schools suffer from underfunding and low status, therefore students do not consider them as a first choice for their education. In the past few years, bridges between VET and tertiary education have been established to make it easier for graduates to progress to tertiary education after completion of their studies. However, these links between VET and tertiary education are not yet well developed, constituting a major obstacle for students willing to progress from one system to the other.

Mechanisms to involve social partners in the Kazakhstan VET system are assessed in more detail in the next section.

Mechanisms to involve the social partners: an inclusive approach

The involvement of social partners in VET has been growing since the early 2000s. The State Program of Education Development in the Republic of Kazakhstan for 2011- 2020 is the current framework outlining the education policy of Kazakhstan. The first piece of legislation to establish an institutional mechanism for social dialogue between the partners was the law of the Republic of

Kazakhstan “Social Partnership in the Republic of Kazakhstan”, which was adopted in 2000. It states (clause 4, article 17) that the issues of vocational training and retraining of skilled workers should be included in agreements between the social partners. More recently, the Ministry of Education and Science adopted the Strategic Plan of the Kazakh Ministry of Education and Science for 2011-2015. This document relates to the “State Programme 2011-2012”, outlining measures for the first five years of the programme. It states that “one of the main tasks of the vocational and technical education system is establishment of partnership with employers, business structures.”² Today, social partners are granted equal voting rights on VET policy under joint decision-making procedures. They are involved in aspects of the VET system, such as the training of teachers, the provision of vocational practice for students and of a practical component in the final exam, the interaction between schools and enterprises and through participation on school boards.

For instance the Ministry of Education and Science is currently carrying out joint work with the National Economic Chamber and KazEnergy to develop a vocational standards system. With the support of employers and international organisations, the government is developing modular programmes for specialist fields, state obligatory educational standards, educational programmes and curricula. The 2011-2020 State Programme also provides for contractual relationships between educational institutions and enterprises, on the basis that enterprises offer practical training and internships to VET students.

Social partnership development takes place mostly on a sub-national level. Kazakhstan has national, regional and sector boards for the training of vocational staff. These boards are made up of representatives of employers and trade unions. In addition, regional VET forums on specialist training, seminars and panel discussions, are regularly held with business representatives. In these forums, agreements have been signed between regions and major companies on bilateral co-operation on staff training.

² <http://www.pm.kz/page/iz-strategicheskogo-plana-ministerstva-obrazovaniya-i-nauki-respubliki-kazahstan-na-2011-2015-gody>

Information tools: qualifications frameworks, systems of assessment, data and research

- Plans to develop a national qualifications framework are well underway

Kazakhstan does not yet have a NQF in place. The existing government programme for educational development notes that the absence of a NQF is a key weakness of the education system. The foundations for a NQF are planned for completion by 2015, on the basis of the already existing index of occupations and specialities of vocational post-secondary education which comprises a general list of qualifications for every speciality. The 2011-2020 Strategic Plan assumes the full implementation of a NQF that is recognised by domestic and foreign labour markets by 2020.

The Ministry of Education and Science co-ordinates the development of the NQF. Its creation is overseen by the National Board on Training of Vocational Staff, created in 2011. The task of the board is to secure the participation of employers, educational organisations, educational programmes, and other national and international stakeholders. It is composed of members of government, parliamentarians, heads of state, institutes for development, employer associations, educational bodies, trade unions and heads of regional boards on VET development. One of its tasks is to introduce proposals and recommendations on the development of the staff training system. In parallel, the task of regional boards is to issue recommendations on the development of the VET system in a specific region, including an analysis of the local labour market, the need for specialists, and the development of a network enhancing the influence of VET organisations. Sectoral boards also

exist, which serve to facilitate the update of vocational standards, the development of sectoral qualification frameworks, and to ensure that vocational standards comply with employers' requirements. The sectoral boards are composed of representatives of sectoral ministries, employer associations, sectoral vocational associations, small and medium-sized businesses, trade unions and educational institutions in VET.

At present, vocational standards are being developed with the participation of employers is underway. Kazakhstan receives technical assistance for this from a number of international organisations. The development of vocational standards is one of the components of the World Bank project, Modernisation of Vocational Education and Training (World Bank, 2012). Current vocational standards, which lay the foundations for the future NQF, rank qualifications according to the professional skills needed by employers. The students must sit an exam in order to be recognised as having the qualification under consideration. As a result of the forthcoming implementation of a NQF, VET programmes will be designed to comply with occupational standards. Final certification of students and the official conferral of qualifications will also be integrated into the NQF.

- A new system of assessment is in place

Kazakhstan has started to implement an independent assessment of the quality of professional qualifications and conferral of qualifications on students, in accordance with international standards. The conferral of qualifications is separate from the educational process and takes place in the form of state examinations held at the end of each VET programme. In the academic year 2009-2010, a

qualification and appellate commission was formed. In 2010, Kazakhstan held qualification exams in 125 specialities in 850 educational institutions that were able to hold practical exams.

Kazakhstan conducts a state examination to assess the results of training in the VET programmes. Employers participate in the examination board. In accordance with the Regulations on Confirming the Level of Professional Qualification and Conferral of Qualifications According to Professions (specialities) of Technical and Service Work, students must take written qualification exams in the courses of their study as well as a practical examination. In order to be admitted to the tests, students must have completed a full course of study in VET syllabuses.

A qualification commission has been established in the fields of technical and service work to determine the level of knowledge in general vocational subjects and in special courses of study. It assesses the competencies and skills in VET and compliance with obligatory standards in education. The chairman of the qualification commission is chosen from the heads of enterprises and organisations or their respective structural subdivisions. The qualification commission includes representatives of the authorities on safety and labour protection, production line supervisors, deputy directors for educational and production work, teachers of special disciplines and masters of vocational training.

- Data analysis is not sufficient for evidence-based policy making

A number of databases are made available by the Ministry of Education and Science (Box 3.2.); however the Ministry's analytical capacity to use detailed surveys and

data to design more targeted VET policies could be increased. At present, the authorities' analysis of the labour market in terms of VET specialities is not developed enough to inform corresponding VET policies.

Box 3.2. Available data on VET in Kazakhstan

- data on placement of students according to industry groups and specialties;
- age and ethnic composition of students;
- results of state evaluation of the knowledge of graduates;
- data on special category students (disabled persons, students from rural areas, immigrants of Kazakh nationality);
- data on the composition of employees in teaching;
- data on material and technology in VET organisations.

Challenges and policy recommendations

Kazakhstan inherited its educational system from the Soviet Union, a system that was designed to meet the needs of a centrally-planned economy. Fully adapting the system to a free market economy requires continuous reform of educational institutions which must also be equipped with updated information technologies and systems. In the past few years, Kazakhstan has dedicated considerable resources to the modernisation of its education system, including VET. The government's primary goal is to align the VET system with international standards in order to meet the demand for a modern and qualified work force. To this end, it has been co-operating actively with the World Bank, the European Union (through various Tacis projects), the European Training Foundation (through the Torino Process), the German International Cooperation Agency (GIZ), as well as various other donors such as the governments of South Korea and Norway in recent years.

Central to the effort of tailoring vocational education programmes to employers' needs is the involvement of stakeholders in programme development. Kazakhstan involves employers and trade unions at

both the national and sub-national levels. The focus on the sub-national level ensures that local needs are met in VET developments. Inequalities that may arise through this practice due to different amounts of resources that regions and municipalities can dedicate to VET must be counterbalanced, so that regional disparities are not reinforced.

Even though employer associations and trade unions officially have equal status in VET policy development and delivery, in reality employers have a higher standing and more influence due to their position as providers of employment. The government should ensure that the position of trade unions is not weakened as a result of the unequal distribution of tasks. Also, the involvement of small and medium-sized enterprises (SMEs) must be increased, as they tend to be less involved than larger firms.

Kazakhstan authorities use a wide array of information tools to manage the VET system. The development of occupational standards and a NQF based on these standards is central to the efforts of improving the governance of the VET system. However, the current practice of developing a large number of curricula and occupational standards should not take place at the expense of their coherence and comparability.

To facilitate policy planning, additional data have to be collected and sophisticated research to be carried out, such as leaver surveys, longitudinal or career surveys, information on mobility of students after graduation, and employers' satisfaction with newly hired employees. In addition to currently available administrative data, the above mentioned survey data would be helpful in developing targeted VET policies.

The Kyrgyz Republic

The Kyrgyz Republic spends a considerable portion of the government budget on education; however financial resources are scarce and the outdated institutions are in need of considerable reform. The stakeholders in VET do not always actively participate in formulating VET policies and the Kyrgyz Republic is at a very early stage in considering the VET qualifications framework. The scope of

the necessary reforms and a lack of funds are considerable challenges to the Kyrgyz policy makers for VET development.

Mismatches in the labour market

The overall Kyrgyz education system is still in transition after the dissolution of the Soviet Union two decades ago. The entire business infrastructure of the country should be upgraded. At the same time, those employers who do purchase high technology equipment often face the difficulty of finding workers who know how to operate this equipment. VET could play an important role in this respect. However, while there is a growing need for skilled workers, graduates from VET schools have difficulty finding jobs because they lack employable skills. The current vocational education system is not sufficiently responsive to labour markets.

As a part of the consultations between the Kyrgyz Republic and the OECD on good practices in VET policy, the following two sections assess specific issues in the Kyrgyz VET system – mechanisms to involve the stakeholders and existing information tools.

The involvement of employers could be improved; SME participation lags behind

The responsibility for VET in the Kyrgyz Republic is divided between the Ministry of Education and Science and the Ministry for Labor, Employment and Migration. The Ministry of Education provides the general outline for education development in the Kyrgyz Republic; the actual governance and delivery of VET resides with the Agency for Vocational Education and Training (AVET) under the Ministry for Labor, Employment and Migration. Key responsibility for policy development lies with AVET. However, policy making is co-ordinated with other relevant actors, including key ministries, employers and the public at large. Consultations take place in the form of special working groups made up of employers, educational institutions and representatives of AVET. Their task is the drafting of occupational standards and the development of curricula. Curricula are subject to the written approval of employers and formal approval by the government before they are implemented.

An advisory forum, made up of representatives of employers associations, trade unions, partners, educational institutions and AVET, debates medium and long-term VET strategy at a national level. Outside this institutionalised mechanism of stakeholder involvement, AVET closely co-operates with individual companies and employers associations on a contractual basis. Currently, more than 20 co-operation agreements are in place with organisations that have an interest in the provision of training; among them are large industrial and professional organisations. AVET has created resource centres jointly with the stakeholders for trades as diverse as light industry (seamstresses, tailors, cutters), construction (electric and gas welders, bricklayers, concreters, steel fixers), the service sector (cooks, waiters, confectioners, hairdressers) and tourism (guides, hotel workers). Bilateral agreements are not only concluded between AVET and employers; individual educational institutions sign co-operation agreements with employers in order to enhance the employment opportunities of their graduates with the enterprise in question. Examples of this practice include: the Kyzyl-Kiya Vocational School No. 7, which trains personnel for the Kadamjay Antimony Plant, providing it with specialists such as electric welders, and electricians, and the Bishkek Vocation School No. 18, which has signed an agreement with the associations of garment and textile factories, Legprom and Soyuztextile, on the training and job placement of graduates. For other successful examples of co-operation between VET institutions and employers see Box 3.3.

Box 3.3. Partnerships between VET schools and the private sector, Kyrgyz Republic

- Bishkek Trolley Yard has a strong partnership with Bishkek Vocational School no. 20, which trains 45 trolley-bus drivers every year.
- Bishkek Vocational School No. 98 has been preparing personnel for Kyrgyz-Pochtasy and Kyrgyz Telecom public enterprises for over 20 years. Its graduates occupy positions such as postal service operator, domestic long distance and cable communication operator and computer operator.
- Kumtor Operating Company employs car repairmen, truck repairmen and automotive electricians graduating from Vocational School no. 27.
- Vocational School no. 93 trains IT specialists for OSoo Continent, and refrigeration technicians for Ozone Center of Kyrgyzstan and OSoo Eco Kholod.

Institutional mechanisms are in place at different levels of policy making for the involvement of both employers and trade unions. However in practice, this involvement is hampered by the lack of coordination between employers at the sectoral level. Trade unions concentrate on working in the field of employer relations and have not yet established themselves as important actors in the VET system. Employers do not perceive VET as a priority issue and often question the allocation of time to this. Due to relatively high migration levels in the country, they often are reluctant to continuously invest in training staff that may leave for better opportunities. Incentives for employers to be involved in shaping the VET system are therefore low. Only the largest and most important employers are sufficiently involved. They sit on school boards, offer teacher training, provide workplace training for VET students, develop and supervise the practical elements of final exams, while company representatives from the respective industries chair examination boards.

SMEs especially are not adequately represented, as employer representation takes part via employers' associations; SMEs are rarely members of these associations. Their low level of participation in industry associations is a challenge and a prerequisite for enhancing their involvement in VET. Increasing the inclusion within associations could be a means of representing more fully the interests of all employers in VET policy making. At present, trade unions are also not participating in the delivery of VET.

Information tools: Qualifications frameworks, systems of assessment, data and research

- First steps towards a national qualifications framework (NQF)

There is no NQF in the Kyrgyz Republic, a VET qualifications framework is planned for development in the near future. Employers, employers' associations and ministries will be involved in its development, with the Asian Development Bank (ADB) and the European Union (EU) as external partners and donors. Currently, the Kyrgyz Republic has a "List of Occupations, Specialities and

Basic Vocational Education Specialities” approved in 2003; a “General Classifier of Types of Economic Activities”; and a “General Classifier of Non-professional Occupations” developed by the Ministry of Labour, Employment and Migration.

Working groups to discuss policy development are created regularly at various levels and involve employers and educational institutions. Feedback is provided through roundtable discussions and meetings.

The Kyrgyz Republic has more than 60 occupational standards, developed in partnership with employers. Occupational standards for 36 occupations were developed using a competence-based approach and reflecting occupational requirements. Currently, the development of educational standards for 20 occupations is in progress, assisted by the ADB. The ranking of qualifications is established in accordance with the “List of Occupations”, where qualification levels are specified on the basis of terms of training, level of knowledge, competences and skills of students.

Education in basic vocational educational institutions of the Kyrgyz Republic is conducted (1) on the basis of general secondary education (nine years) – two years without a certificate of secondary education and three years with a certificate of secondary education; (2) on the basis of secondary education (11 years) – two years, ten months; and (3) short-term training for the adult unemployed and for those who are employed yet would like to get retraining or skills upgrading, from two to six months.

Quality assurance in the Kyrgyz VET system is through (1) certification (accreditation) of educational institutions, granting them the right to provide occupational training, certifying their compliance with material and technical standards and the skills of the engineering and teaching staff, (2) implementation of curricula and academic programmes in compliance with standard requirements, and (3) final qualification exams.

- Compulsory national final exam for graduates of VET institutions

Assessment tools include certifications, annual exams, oral and written tests and a final qualification exam. Assessment of the quality of education of students in VET institutions is in compliance with the law “On Basic Vocational Education” and regulations “On Final Qualification Exams in Basic Vocational Education Institutions”; and “On Certification of Basic Vocational Education Institutions”. The indicators used are:

- test results of applicants prior to admitting the students to basic vocational education institutions;
- controlled practical tests during the entire term of training;
- using the module educational system with intermediate and final testing of skills and competence of students;
- phased certification of the right to assign qualification ranks for various specialities;
- written annual exams in general education courses;
- academic competitions in general education courses and contests in professional skills for various occupations;
- topical and complex inspections by AVET to determine the level of knowledge, competence and practical skill of students;
- certification of basic vocational education institutions authorising them to implement educational activities for occupations;
- inspections of competences and practical skills of students during practical training; and
- final qualification exams for the right to assign occupational qualifications with mandatory involvement of employers.

All students of VET institutions must sit a national final exam. To ensure quality standards after a semester or an academic year, random evaluation of student performance and phased certification based on preliminary evaluation of a qualification level is carried out. AVET also carries out inspections of educational institutions, including implementation of curricula, academic programmes and compliance with standards. During the certification and accreditation of an educational institution, the institution also carries out a self-evaluation.

- Need for increased funding for data and research

Internal data on VET is analysed by AVET employees and third-party experts. External consultants are involved within the framework of specific projects (for the data available see Box 3.4.).

No separate funds from the state budget are allocated to the ministries involved or to AVET for carrying out additional research. However, donors fund some research in the field of VET. Currently, two endowment-funded research projects are planned, one on “Transition from school to work” sponsored by the ETF, and one on “Employment of graduates” sponsored by the ADB (ADB, 2012). Other research and analyses by international organisations is carried out within the scope of specific projects.

The data collected on VET in the Kyrgyz Republic are used for basic analysis that allows for the adaptation of programmes to the demands of the labour market, for example. However, as no budget is allocated for data collection, the amount of data that can be gathered is limited. This insufficient data basis does not allow for evidence-based policy making at present.

Box 3.4. Available data on the Kyrgyz VET system

- Enrolment numbers in different VET programmes: Available.
- Dropout rates: Available.
- National register data to monitor labour market outcomes of former VET students: Data from the Ministry of Labor, Employment and Migration, on employment and unemployment based on education levels is available.

- Leavers' surveys to monitor labour market outcomes of former VET students: A tracer study was conducted within the ADB project in 2012. Within the A-STAR project (Helvetas), regular tracer studies of their graduates are conducted. However, these practices are not mainstreamed in the whole VET system.
- Data on upward mobility after VET: Limited availability. VET educational institutions submit data on admission of their graduates to higher educational institutions.
- Labour force survey to enquire about earnings and employment of former VET students: the National Statistics Committee conducts labour force surveys, however it is not clear how this data is used for the purpose of making VET policy decisions.
- Employers' surveys to enquire about employer satisfaction level with former VET students recruited: Not available.

Challenges and policy recommendations

In the Kyrgyz Republic, the main obstacle to the development of the VET system is financial, inhibiting necessary reforms and the modernisation of infrastructure. The adaptation of the system inherited from the Soviet Union has not yet been completed. One tool to adjust the VET system to the requirements of a market economy is the involvement of stakeholders in its governance. Although there are formal mechanisms for involving stakeholders, they tend to involve some actors more fully than others.

Employers' associations now participate in all aspects of VET policy making, curriculum development and the provision of training. However, trade unions are not participating in policy development or the delivery of VET, and, in addition, are not known to be active defenders of students' and graduates' rights. Also, consultation with stakeholders takes place at a national and regional level, but not by sector. The interests of enterprises are often represented in these forums through employers' associations. In most cases, SMEs are not members and are under-represented in VET governance. The authorities should improve the mechanisms for the involvement of these under-represented actors. The stimulation of employers associations specifically for SMEs could support this process. Many employers in the Kyrgyz Republic train students on the basis of individual apprenticeship agreements,

without the involvement of VET institutions. To ensure the quality of the training and aligning it with formal qualifications is another challenge facing the Kyrgyz authorities. Another step towards ensuring equal qualifications would be to establish an independent assessment and certification exam which will cover not only VET graduates, but also those who acquired skills without formal training and thus do not benefit from any formal recognition of their qualification. This would also increase the transparency of the system. The independent certification of graduates is currently being explored and at a piloting stage for short and long-term courses. At present, plans to develop a national qualifications framework are in the very early stages of development.

To enable more targeted policy development, a wide array of data on VET schools, programmes and graduates are needed. Administrative data on school enrolment exist, but survey data and long-term analysis of VET are lacking. Data analysis and collection is entirely funded by international donors, as no funds from the state budget are available. However, to allow for more targeted policy-making, capacity building with regard to data collection and analysis is necessary.

Mongolia

The Mongolian VET system has made a partial transition from a planned economy to one based on market-driven demand, with a focus on emerging economic sectors and competency-based training. Mongolia involves its stakeholders in VET and the National Council for VET includes representatives of both employers and trade unions. The development of the forthcoming Mongolian National Vocational Qualification Framework is well advanced. Mongolia has a good set of administrative data on VET, but survey data and administrative capacity for analysis could be improved.

The ongoing transformation to a system of market-driven VET

The Mongolian VET system was similar to the Soviet system until 1990. After the end of the Communist regime, the VET system was gradually adapted to the requirements of the market economy. In

2001 the first law on VET was enacted, with amendments in 2006 and in 2009. The new VET system is labour-market driven and focused on emerging economic sectors such as heavy industries, mining, construction and agriculture. The goal is to shift to competency-based training. The Mongolian National Government Agency for Vocational Education and Training (AVET) works closely with foreign and international agencies, such as Australia, Canada, Korea, Singapore and the EU, for example. Teacher training, both in theory and practice, is a priority issue. Developing the curriculum with the participation of experts from the industry in order to minimise the skills gap is currently underway and the preparation of learning materials is being carried out by industry experts. The private sector has also invested considerably in developing a modern curriculum in Mongolia (OECD Working Group on Human Capital Development in Central Asia, 2011).

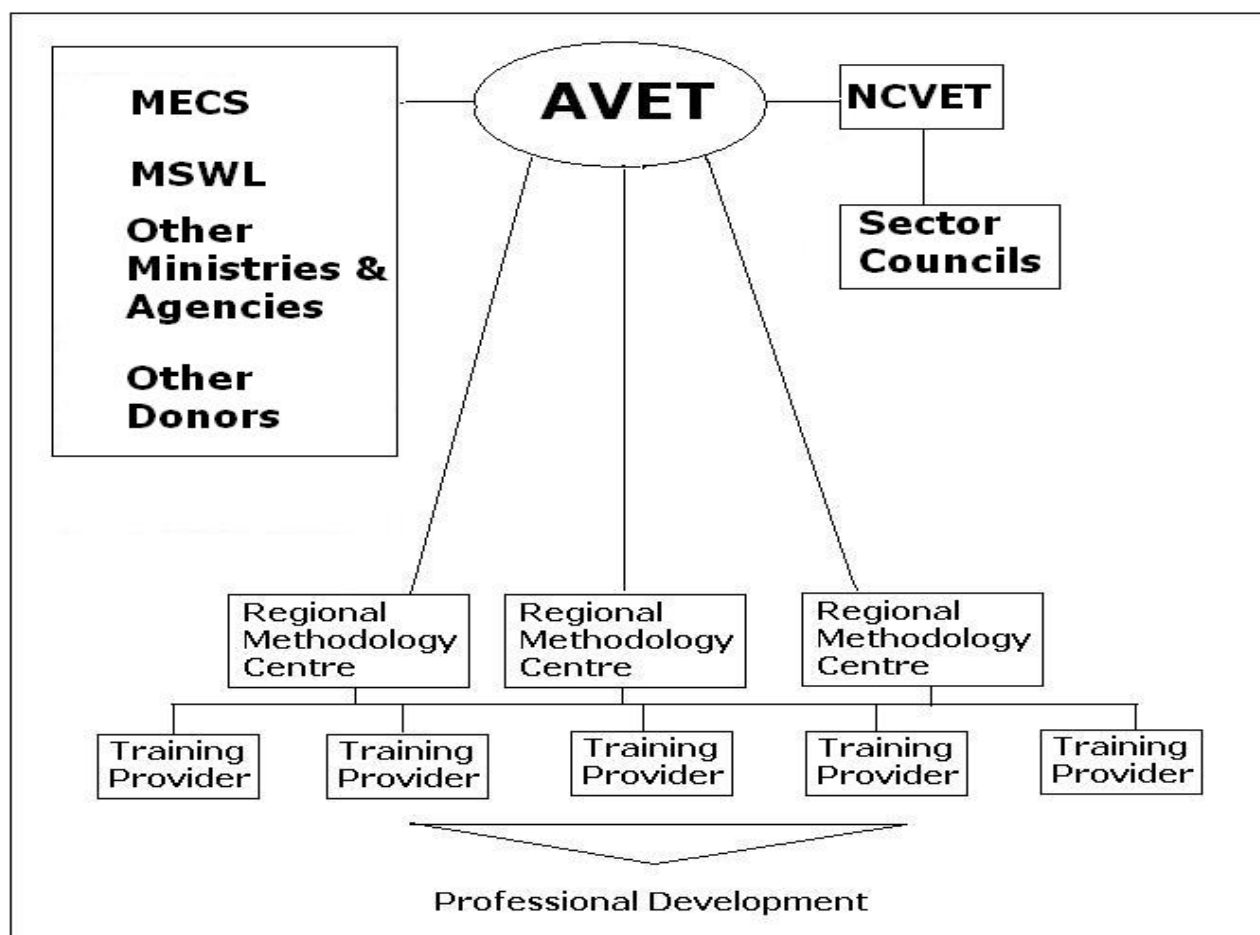
A Mongolian National Vocational Qualification Framework will be in place from 2012. Currently, Mongolia aims to decentralise school management to encourage closer engagement with industries. However, modernising the system is expensive. The cost the recent renovation and extension of 18 existing vocational schools is estimated to be around USD 30 million, out of which USD 8 million was donated by the private sector. In 2013, two new vocational schools will be opened at AN estimated cost of about USD 10 million (OECD Working Group on Human Capital Development in Central Asia, 2011), and one of it will be functioning as pre-service and in-service teacher training centre.

Incentives to encourage stakeholder participation

In February 2009, the Parliament of Mongolia passed a law on Technical and Vocational Education and Training (TVET). This new law established the National Council for VET (NCVET) as the highest authority for TVET, with AVET acting as its secretariat. AVET develops policy recommendations and submits them to NCVET. Based on NCVET recommendations, the Minister of Education approves the policy. NCVET schedules quarterly meetings in addition to *ad hoc* meetings as required. In order to plan VET and TVET, AVET co-ordinates efforts across ministries in order to determine nationwide labour market demands. The Ministry of

Education, Culture and Science (MECS) and the Ministry of Social Welfare and Labor (MSWL)¹ are the key government organs for the co-ordination of the activities of AVET. The role of AVET is shown in Figure 3.1.

Figure 3.1. The role of the Agency for VET (AVET) in Mongolia



Source: The Government Agency for TVET

NCVET has 18 members, half from the private sector and half from the public sector. This includes representatives of (1) the Mongolian Employers' Federation (MONEF), (2) the trade unions, (3) the Mongolian National Chamber of Commerce and Industry, (4) NGOs and VET providers in the mining, construction and hospitality sectors; (5) the Ministry of Education, Culture and Science, the Ministry of Social Welfare and Labour, the Ministry of Food, Agriculture and Light Industry, the Ministry of Roads, Transportation, Construction and Urban Development, the Ministry of Mineral Resources and Energy, the Ministry of Infrastructure, the

Ministry of Nature, Environment and Tourism and the Ministry of Finance; and (6) the National Development and Innovation Committee.²

The responsibility of chairing NCVET is rotated between the government and non-government sector representatives every two years. For the first two years the chairman is a government representative. The following two years, the chairperson is chosen from the non-government sector (such as MONEF, a trade union, or an NGO). Presently, three industrial councils are operational under NCVET: one on agriculture, one on mining and one on construction. The institutional structures of the industrial councils are similar to NCVET, except for the fact that they have only eight members. Their main functions are to determine and survey the number of jobs to be created in the future, including their associated competencies and skills requirements. A trade union representative from the respective sector participates in every industrial council. Mongolia applies the same institutional mechanism for engaging employers and trade unions at the national, regional and industry levels. Each province (administrative unit) has a council chaired by the governor of the province and the local employers' association.

The main goal of the new TVET law is to create basic requirements for Competency-Based Training & Assessment (CBTA) by establishing public-private partnerships. In 2010, AVET, with the support of Singapore Polytechnic International, launched a three-year programme to develop a CBT curriculum. This programme involves 54 teachers who develop CBT standards and curricula with both employees and employers. So far, five trade standards and curricula are being developed, involving on average 15-20 experts from each trade. This includes welders, heavy equipment technicians, plumbers, electricians and automotive mechanics. Dedicated working groups are developing assessment methods that have yet to be finalised. However, trade unions are not involved in the CBT curriculum development.

Employers' engagement in the VET system is in its initial phase and is expected to increase in the future. In order to achieve higher involvement rates, the Government of Mongolia has initiated a policy to encourage enterprises to collaborate with VET providers through

tax reform. Companies are now exempted from any kind of tax on donations to VET providers. Companies' contributions to VET provision that are tax deductible include donations to student tuition fees, allowing VET teachers to practice at their facilities, teacher training, supplying equipment, and so on.

Information tools: qualifications frameworks, systems of assessment, data and research

- Ongoing work on developing a national qualifications framework (NQF)

Mongolia does not yet have a NQF, but AVET is working on it. AVET has submitted an initial concept paper to NCVET and held two meetings on the subject in 2011. Broader discussions on a NQF are ongoing amongst VET stakeholders – MONEF, trade unions and the industry councils. At this stage the focus of AVET focus is on VET levels and MONEF is playing a leading role in developing a concept paper for the NQF. The initial work is focussed on welders, heavy equipment technicians, plumbers, electricians and automotive mechanics. Other sectors will follow later. Mongolia is also exploring the experiences of other countries with qualification frameworks, such as Australia and Canada, countries with similar economies and a booming mining sector.

Mongolia has developed its own CBT curriculum template as a result of the series of workshops held with the support of Singapore Polytechnic International. The process to develop a CBT assessment template and concept is ongoing. In the future, Mongolia also plans to link the VET qualification framework with quality assurance in the VET system.

- Systems of assessment: capacity must be improved

Graduates of VET in Mongolia must all pass a state examination at the end of their training and the exams depend on each VET school's capacity. Some schools have co-operated with employers, involving them in the theoretical and practical contents of final exams, but employers are not involved in designing the exams.

One of the main functions of AVET is to control the quality of VET delivery, including periodic inspections of VET institutions, inspection of examination bodies and random evaluation of student performance. However, VET experts from Mongolia find that capacity building could be improved.

- A wide range of data is available for more sophisticated analysis

AVET collects data on the VET system and carries out data analysis in-house (for the available indicators see Box 3.5.). It adjusts VET policy and the opening or closing of programmes based on forecasts for demand in the labour market. However, Mongolia does not have sufficient capacity to analyse VET data and outside assistance would be welcomed.

Box 3.5. Available data on the Mongolian VET system

- Enrolment numbers in different VET programmes: Available.
- Dropout rates: Available.
- National register data to monitor labour market outcomes of former VET students: Currently available at the Labour Exchange Information Centre.
- Leavers' surveys to monitor labour market outcomes of former VET students: Conducted at school level. AVET conducted a first tracer study last year in the Ulaanbaatar area in the construction sector, covering graduates of the past five academic years. A total of 260 graduates were involved in the survey. Surveys need to be organised more regularly.
- Data on upward mobility after VET: About 15% continue their study in a higher education institute.
- Labour force survey to enquire about earnings and employment of former VET students: Not available.
- Employers' surveys to enquire about the employer satisfaction level with former VET students recruited: Not available. Very occasionally conducted within donor-financed projects.

The Mongolian VET system provides a well-developed institutionalised set-up for consultation of employers and trade unions. Despite having institutional mechanisms in place, the actual level of involvement is unsatisfactory. In order to increase participation of employers, the Mongolian government has implemented tax incentives in 2009 that establish tax deductions of donations to VET. Pilot projects for curriculum development in the form of public-private partnerships have been established and serve as a further mechanism to involve stakeholders more fully. However, despite its potential for enhancing involvement of employers in VET development, trade unions remain under-represented, both in the development of VET, and in the delivery of training. Their involvement should be further strengthened.

AVET is developing a NQF in addition to curricula templates and occupational standards. The framework will eventually be linked to an assessment mechanism, which, when in place, could strengthen transparency and quality assurance within the programmes. Capacity-building is another long-term issue to consider, specifically in terms of data collection and analysis. AVET collects and analyses certain data, but could further develop its analytical capacity so that a wider set of data could be used for policy making. Collection of more comprehensive data such as tracer studies of VET graduates is currently taking place in the form of pilot studies. A key challenge is to develop these pilot projects into a wider strategy. The data collected could then provide the basis for evidence-based policy making.

Tajikistan

The Tajik VET system has been deteriorating since the end of the Soviet era and is only able to offer outdated skills. Tajikistan is currently modernising its educational system with the assistance of donors. Mechanisms to involve the stakeholders in VET are in place, but in practice, the participation of stakeholders is limited. A national qualifications framework (NQF) for Tajikistan is in an early stage of development, with tourism being the first priority. Data availability on VET is limited and analysis is carried out manually.

VET: pressure from demography and migration

Tajikistan faces high unemployment and poverty, a large informal economic sector, and widespread internal and external migration. The education system has been deteriorating over time, damaging the infrastructures a whole. VET has not been in a position to respond to the changing environment and continues to offer obsolete knowledge and skills (ETF, 2005). Due to a lack of funding and the current low prestige of the profession, pursuing a teaching career is not considered attractive to graduates. This leads to a lack of qualified teaching personnel.

After the collapse of the Soviet Union, civil war broke out; Tajikistan is only slowly recovering from these events. Three-quarters of the Tajik population has limited skills and up to 10% of the total population migrates in search of work, mostly to Russia. The jobs Tajik migrants seek in Russia tend to be low-skilled jobs (OECD Working Group on Human Capital Development in Central Asia, 2011). This poses several challenges to the VET system. First, many graduates or potential graduates do not intend to become part of the Tajik labour force. Due to a lack of employment prospects, they have little incentive to complete a training course. Second, some stakeholders have pushed to offer shorter VET schemes that will enable the graduates to obtain basic skills to ensure higher quality employment in Russia. This adjustment to the needs of labour migrants could undermine attempts to revive the Tajik economy.

In 2008, adult training centres were established by the State Agency for Social Protection, Employment and Migration of the Ministry of Labour and Social Protection. These centres provide training to unemployed adults without a profession. In 2009, more than 2 300 citizens were trained in the centre (International Labour Organisation, 2012). A special feature to counter unemployment is teaching unemployed females/housewives occupations such as confectionery, sewing, housekeeping, and so on, in order to help them start a small business themselves.

Tajikistan is addressing the challenges in its VET system through multiple programmes, drawing upon the expertise of donors such as the World Bank and the EU. The World Bank is contributing to the development of an evidence-based plan on skills required in the Tajik market as well as an adult-training programme. The EU funds the development of an educational strategy. Data collection and the use of sophisticated tools of data analysis to enable targeted development of VET policies is not yet well developed in Tajikistan. However, according to VET experts from Tajikistan, the government plans to improve database development. The German International Cooperation Agency (GIZ) is supporting the Tajik VET system within the framework of the project “Support for basic vocational education and training reform” (OECD Working Group on Human Capital Development in Central Asia, 2011).

Formal mechanisms exist, but a low level of involvement from social partners

The Ministry of Education (MOE) and the Ministry of Labour and Social Security (MOLASS) are the two bodies responsible for the VET system in Tajikistan. MOE is responsible for basic vocational education and MOLASS for vocational education and training of adults. The two ministries co-ordinate and execute their activity as a part of the state’s general policy on education and training, but Tajikistan has no independent institute on VET. The government is in the process of establishing a National Board for Vocational Education and Training (NABVET) that will be chaired by the deputy prime minister in charge of social affairs.

Institutional mechanisms for engaging employers and trade unions do exist in the form of trilateral agreements between the government of the republic, the confederation of trade unions and the association of employers. When developing and implementing state programmes and strategies, documents are developed with the participation of employers and trade unions at all administrative levels, with regulatory acts on VET made in agreement with the employers' association. However, the results depend on the active participation of employers and trade unions, which can be a problem as not all organisations and institutions are represented in the association of employers. In line with existing procedures, trade unions must take part in the discussion and decision making, but in practice this is rather limited. Furthermore, the trade unions are not involved in the delivery of VET.

Employers are involved in determining VET curricula and syllabuses. They draft professional standards to carry out the projects of donor organisations, that is, new methods or technologies for occupational standards. At present, the process of involving employers in training potential employees in Tajikistan has just started. The involvement of employers is not yet a customary procedure and employers still do not fully understand their role in training potential employees. On the whole, Tajik VET experts feel that employers do not see the benefits of participating in this process and lack motivation. Teacher training is currently undertaken with government and donor funding; as yet, employers do not participate in the provision of teacher training.

Information tools: qualifications frameworks, systems of assessment, data and research

- Plans to develop a national qualifications framework (NQF)

In 2005 the Scientific Research Institute of Labour and Social Security, under MOLASS, published a collection of courses in Tajikistan. However, the material is not always in line with the current needs of the labour market and is sometimes out of date. After 2006, with the support of the ETF, Tajikistan established an inter-agency task force to develop a NQF in tourism. Taking into account the needs of the labour market, occupational standards for

eight other professions have also been developed as parts of other projects. Tajikistan reportedly intends to develop occupational standards and to create a separate structure to carry out the development professionally.

The future development and implementation of occupational standards will allow a systematic assessment of skills and knowledge through the new qualification system. The ranking of qualifications is carried out by a commission at final exams, taking into account the results of intermediate examinations that are graded by teachers in accordance with the skills and knowledge acquired by the student. According to regulatory acts in Tajikistan, chairmen of qualification examination boards can be representatives of employers.

- Systems of assessment

During intermediate and final exams, both theoretical and practical proficiency is determined on the basis of the qualification to be conferred. The government has plans to establish a National Testing Centre that will support wider attempts to modernise and reform the VET system, as laid out in the National Strategy for Education Development to 2012. Currently, the focus of VET reform, especially with regard to the development of occupational standards, is on adult education. In the adult training centres, the main pillar of adult training, students' skills are tested by means of entry tests and intermediate and final exams (ETF, 2012).

- The need for training of qualified personnel for data collection and analysis

As a part of official statistical reports, Tajikistan conducts analysis of a select number of students trained through the basic vocational education system (MOE) and through the adult training system (MOLASS). Training of personnel engaged in preparing and processing data for analysis and decision making is required to respond to the needs of the labour market with better policy making. To this end, MOLASS conducts data collection and descriptive analysis of the current situation. Teaching ministry personnel methods of data processing and analysis is essential. Tajikistan has

no modern information technology, and data processing is carried out at the local level, usually manually.

Data and evidence that is collected is used for policy making. In the Adult Training Centre, with its main facility in Dushanbe and branches in the major Tajik cities, training is determined in accordance with the curriculum provided by MOLASS. Given the limited data available and the lack of information technology, data is not widely used for policy making. Tajik statistical agencies have not published data on VET until recently, however the need for transparency is recognised by policy makers and data will continue to be published to develop better VET policies in the future.

Challenges and policy recommendations

The education system in Tajikistan is heavily affected by the difficult economic conditions in the country that lead to few employment opportunities for graduates of VET institutions. Creating jobs and opportunities for recent graduates poses a challenge. The lack of opportunities in turn de-motivates prospective students and affects the reputation of the VET system. Moreover, VET schools suffer from a lack of funding that inhibits their modernisation. Stakeholder involvement in VET remains unsatisfactory, despite a formal mechanism for involvement being in place. Stakeholder representation in VET system governance could be improved by motivating more employers to participate in associations, for example, or by informing them about the benefits of a VET policy aligned with labour market needs. Creating incentives like such as tax-deduction of training expenses could further contribute. The authorities should consider an information campaign aimed at employers to motivate them to participate in developing curricula and syllabuses, specifically targeting the needs of their industries. Employers should understand that VET exists to serve them and that their participation is for their own benefit.

The work on developing occupational standards, which started with a pilot project in the tourism sector, should continue and eventually lead to the development of a comprehensive NQF. Once in place, this framework could contribute to transparency of qualifications and improving the quality of the VET programmes. To

improve the capacity of MOLASS to target policies more effectively, better data analysis tools should be developed.

Turkmenistan

Turkmenistan has vocational and higher VET schools. However, for the moment the country does not have an overall agency responsible for VET. Each institution is considered self sufficient, but they also receive some private sector funding. The government is paying increased attention to VET, but the challenges are considerable (OECD Working Group on Human Capital Development in Central Asia, 2011).

Turkmenistan actively participated in the roundtable discussions at the OECD Paris working group on Human Capital Development, Vocational Education and Training, on 14-15 December 2011. Turkmenistan was, however, not in a position to provide replies to the OECD specific questionnaire on VET sent out during the autumn of 2011 and Turkmenistan wishes to avail itself some additional time to better study the mechanisms to involve the stakeholders and the existing information tools.

Uzbekistan

Uzbekistan began transforming its educational system in 1998 but progress has been slow. VET stakeholders are involved in policy making, but in practice this applies only to larger employers, while smaller, private businesses are often not involved. There are occupational standards for all VET professions, but there is no national qualifications framework (NQF). Uzbekistan possesses considerable administrative data, yet surveys are less common. Uzbekistan analyses and uses the available data to formulate VET policy and adjust VET programmes according to demand.

VET has a high standing in Uzbekistan

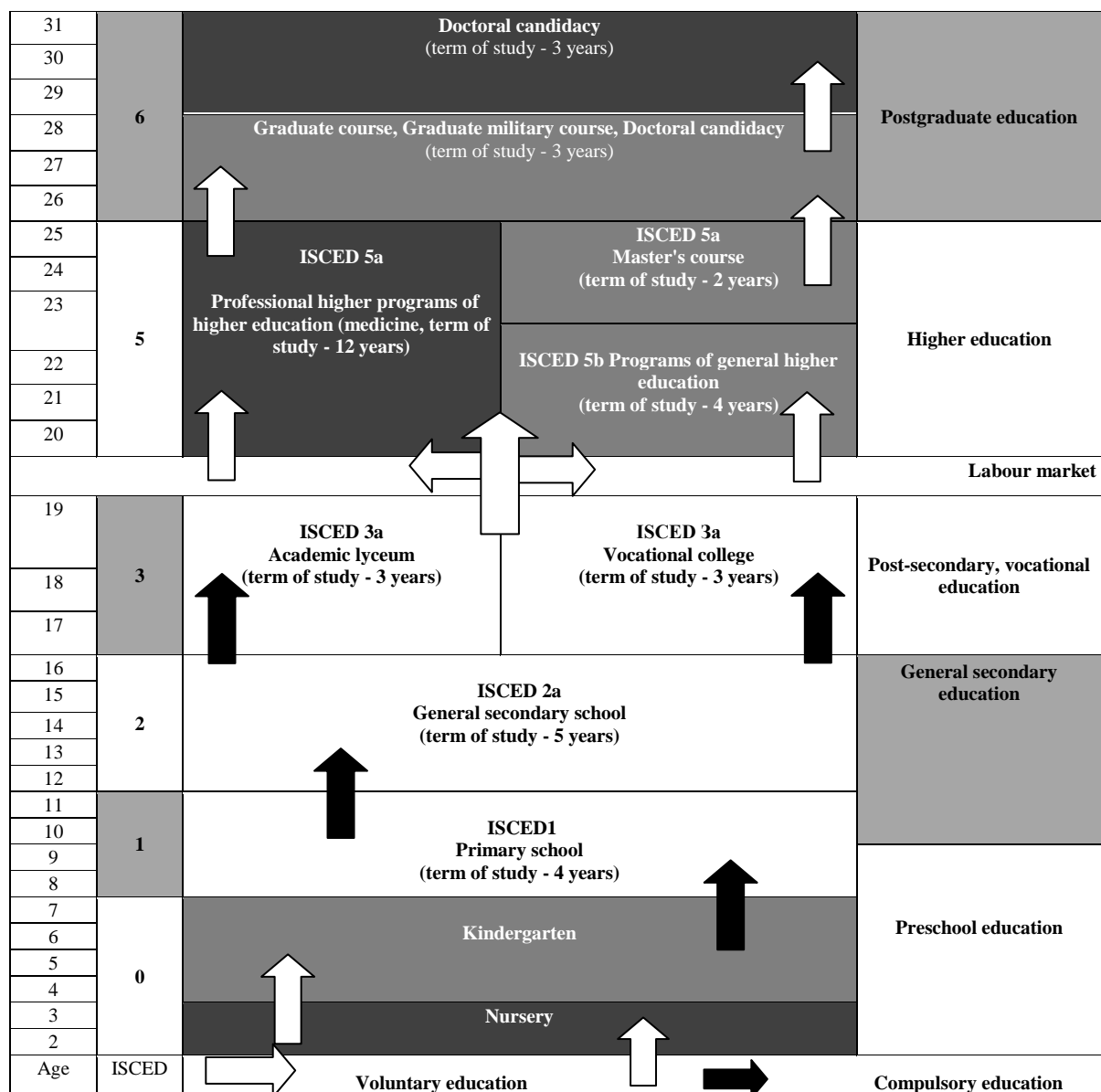
After independence from the Soviet Union, in 1997 Uzbekistan revised its laws on education to begin the transition towards a system that would be more responsive to a demand-driven economy. As shown in Figure 3.2, students in post-secondary education must choose between either an academic lyceum (secondary school) or a

vocational college. Students are free to select their specialty and educational programmes are oriented and developed according to demand. Uzbekistan has made a major effort to rebuild the education system in the period after 1998. The period of compulsory education was extended to 12 years (ETF, 2010).

Although there has been progress in educational system reform, the process is far from finished. Vocational institutions are often small and widely dispersed, and not all are equipped with modern equipment. The quality of education remains a major concern and training programmes are not co-ordinated (ETF, 2010, OECD Working Group on Human Capital Development in Central Asia, 2011, ETF, 2010).

The government of Uzbekistan makes an effort to secure jobs for VET graduates. In the 2010-2011 academic year almost 90% of graduates were employed in industries, farming, small business and in private enterprise, while about 3% continued their education in institutions of higher education. In 2011, graduates of vocational colleges were granted targeted preferential loans to start their own businesses. To support employment of graduates of vocational colleges in all regions, job fairs are held where representatives of enterprises provide information about available positions.

Figure 3.2. The education system in Uzbekistan



Source: Author's calculations based on OECD Working Group on Human Capital Development in Central Asia, (2011)

Note: ISCED: International Standard Classification of Education

The fundamental changes taking place in the labour market and employment in Uzbekistan – including development of new production technologies – requires the recruitment of qualified professionals. Vocational training is becoming a strategy that can aid economic recovery and contribute to sustainable development of

the state and society. Taking into account the increasing role of small private business in the development of the economy, all curricula of vocational colleges and academic secondary schools now have an 80-hour course on “Fundamentals of Business and Entrepreneurship”. This course was introduced on the basis of the syllabus developed by the ILO. Several short-term courses of vocational training of adults have also been undertaken in co-operation with the Ministry of Labour and Social Protection (OECD Working Group on Human Capital Development in Central Asia, 2011).

Uzbekistan has identified four important areas for the development of its VET systems (OECD Working Group on Human Capital Development in Central Asia, 2011):

- a) developing and implementing (with employers) an efficient mechanism for social partnerships in VET and to actively involve employers in developing sectoral educational standards, curricula and syllabuses, in accordance with the real needs of the labour market;
- b) further strengthening infrastructure in educational institutions through modern educational and laboratory equipment and educational media;
- c) implementing and maintaining staff training in innovative forms and methods of education, advanced information and educational technologies; and
- d) studying international practices in staff training and adapting them to the VET system in Uzbekistan.

Involvement by the most important stakeholders: SMEs

The VET system in Uzbekistan is under the responsibility of the Centre for Vocational Secondary Occupational Education of the Ministry of Higher and Secondary Special Education. Co-ordination councils for VET from professional colleges have been created at both state and regional levels. The councils focus both on content of educational programmes and issues regarding labour-market entry of graduates. Participation of employers' associations and trade unions in developing VET policy is obligatory and they an equal

voice in decision making. Representatives of employers and trade unions are members of the co-ordination councils which address all questions concerning systems of vocational secondary occupational education. The input of employers and trade unions is considered by the Uzbek Government when developing educational standards in different branches, for training programmes, when organising educational and industrial practices for students in enterprises, and during students' employment.

Large enterprises and trade unions in the larger enterprises are generally consulted at the national level and participate in determining VET programmes, designing professional standards, and drawing up curricula, selecting questions and formatting final examinations. However, representatives of private business and small-scale enterprises do not participate much in the occupational education system, neither in the design nor in the delivery. All professional colleges are attached to corresponding enterprises, companies and organisations. This structure dates back to the era of the Soviet Union and ensures that the VET system responds to employers' needs. However, as the enterprise associated with a respective school is well-represented in all aspects of VET, other enterprises needs are under-represented. Large employers participate in the provision of workplace training for students and in the final examinations. The employers are also members of "guardian boards" created in each professional college.

Information tools: qualifications frameworks, systems of assessment, data and research

- Qualifications frameworks not in place

The Uzbek system of vocational secondary occupational education has no obligatory system to rank different qualifications. Upon completion of a three-year training programme, graduates of professional colleges receive a state diploma in vocational secondary occupational education, with a matching qualification in their chosen profession.

Occupational standards for all professions included in the "State Qualifier of Directions, Professions and Specialities of Vocational

Secondary Occupational Education of the Republic of Uzbekistan” have now been developed and representatives of employers have participated in developing them.

- Final exams: a theoretical and a practical component

According to professional training standards, the college training term is set at three years. The process of assessment includes graduation exams in humanitarian, social and economic subjects, and practical exams in the professions, including the final qualifying (or degree) work. During the state certification process, the participation of employers as members of the certifying commission is obligatory.

Besides state certification, in order to ensure quality, special government organisations carry out a regular random examination of students' knowledge. They carry out planned and periodic certifications of educational institutions and monitor students' knowledge by means of tests in general educational and professional subjects. The responsibility for assessment is with the Ministry of Higher and Specialised Vocational Education of Uzbekistan and its division on Secondary and Specialised Vocational Education. The territorial management branches of the divisions carry out assessments on the ground. Another organisation responsible for quality assessment is the Centre of Testing that reports directly back to the Cabinet of Ministers. Moreover, its main task is to assess students' knowledge in the accreditation process that VET schools undergo every five years.

- Data analysis is conducted by two recently established divisions

Uzbekistan collects data on school enrolment, as well as data on further activity of graduates of vocational (professional) colleges and academic secondary schools. The Center for Secondary Specialized Vocational Education (SSPO) has two new divisions, one for management of enrolment in professional colleges and academic high schools, and the other for management of employment of graduates of SSPO organisations. These divisions collect data that are then analysed in the SSPO Center. The Ministry of Labor and

Social Security and the Department of Economic Affairs have wide experience in conducting research and analysing data on VET.

In order to develop VET policy and to shape the enrolment plan for students in SSPO educational institutions, careful labour market research is conducted annually, using forecasts for regions or economic development of industries, as well as government development programmes to be carried out in certain regions of the country. If the analytical results show a high demand or unemployment in certain professions, professional development stops, begins, or is otherwise adjusted accordingly. As an example of the analysis of actual demand in the labour market, during 2009-2011 a restructuring of almost 80 professional colleges took place. However, to allow for more targeted policy making, the database needs to be improved. Leaver's surveys, for example, could be used to complement existing data.

Challenges and policy recommendations

Within the education system of Uzbekistan, vocational education has a dominant position leading to enrolment rates that are considerably higher than in neighbouring countries. Social partner involvement is well developed, with a mechanism in place that provides for equal involvement of employers and trade unions. Despite these mechanisms, the involvement of small enterprises lags behind that of the other social partners. Their participation would contribute to the creation of programmes that are more applicable to the labour market's needs, as the transition of the VET system in Uzbekistan remains incomplete and some outdated training schemes persist.

Strengthening the database is another step towards the development of coherent VET policies. This includes regularly using analytical tools such as tracer studies with graduates and employer surveys to better match their respective needs. Evidence-based policy making is taking place to some extent. However, the collection of data through tracer studies and employer surveys would provide data for more sophisticated planning.

At present, the Uzbek government has no plans to develop a binding NQF that could make the existing occupational standards more coherent. However, the development of such a framework and linking it with assessment tools would moreover enhance the ability of the Ministry of Education to develop tailor-made VET policies.

Conclusion

For this publication, VET systems in Central Asia were assessed according to two fundamental dimensions: (i) the level of involvement of social partners (employers and trade unions) in the design and delivery of VET, and (ii) the existence of information tools needed to support the effectiveness of the system; for example, by making it more reflective of labour market needs. VET systems in Central Asia have undergone substantive reforms in recent years and indeed have become a central concern for policy makers in the region. In particular, progress has been made in engaging social partners in the design and delivery of VET, while information tools to support VET systems such as NQFs are being developed in almost all Central Asian countries (Table 3.1.).

However, important challenges remain. In most Central Asian countries, officially employers and trade unions enjoy equal rights of participation in the VET system. However, in practice employers are seen as the more valuable party and are therefore better represented in VET policy making. Furthermore, small businesses and the self-employed remain under-represented in comparison to large enterprises. National qualification frameworks (NQFs) are regarded as a priority issue in most countries of the region, but in practice only Afghanistan, Kazakhstan and Mongolia have concrete working plans in place. Some basic data on VET are collected by the statistical agencies of all Central Asian countries, but most governments lack the capacity for sophisticated data analysis to support evidence-based policy making.

A number of recommendations were highlighted to help governments in the region address these challenges. For instance, better involvement of SMEs and employers in general could be facilitated by using incentives to participation – for example, tax exemptions for contributions to education, such as those granted in

Mongolia. Strengthening the database, for example, in the form of tracer studies of VET graduates and employer surveys, would enhance feedback to the VET and better match their respective needs. The development of binding NQFs linked with assessment tools would further enhance the ability of policy makers to develop tailor-made VET policies.

In the next phase of the OECD Central Asia Initiative (2013-2014), the OECD Secretariat will build on the recommendations issued in this report in the area of VET, focusing on two pilot countries, the Kyrgyz Republic and Tajikistan. Concrete sectoral cases will be used to demonstrate the implementation of VET reforms. For each country under review, priority sectors will be identified based on their strong reliance on this policy area for good performance.

Table 3.1. Comparative overview of tools to support VET in Central Asia

	Stakeholder involvement	Information tools
Afghanistan	<ul style="list-style-type: none"> • Involvement of employers and trade unions in most aspects of VET system • Trade unions not involved in VET delivery • Equal voting rights • Emphasis on on-the-job training 	<ul style="list-style-type: none"> • NQF to be completed by 2012 • Stakeholders involved in development • Linkage between NQF and quality assurance mechanism planned • Evidence-based policy making
Kazakhstan	<ul style="list-style-type: none"> • Involvement of employers and trade unions on all levels • Strong role of sub-national level • In practice trade unions have lower standing 	<ul style="list-style-type: none"> • NQF to be developed by 2020 • Involvement of stakeholders • Integration of NQF and occupational standards • Linkages between labour market data and policy making to be strengthened
Kyrgyz Republic	<ul style="list-style-type: none"> • Involvement of employers on all levels, of trade unions only on policy making • SMEs under-represented 	<ul style="list-style-type: none"> • Plans to develop NQF at early stage • Involvement of employers in final exams • Capacity building necessary
Mongolia	<ul style="list-style-type: none"> • Employers not involved in VET delivery • Tax incentives • Trade unions participate in policy making 	<ul style="list-style-type: none"> • NQF currently under development • Plans to link NQF with quality assurance mechanism • Evidence-based policy making
Tajikistan	<ul style="list-style-type: none"> • Involvement of employers in VET policy making and curriculum design • Trade union involvement in policy making • <i>Ad hoc</i> involvement for most issues 	<ul style="list-style-type: none"> • NQF at early stage of development • Plans to link qualifications framework with skills assessment • Capacity for data analysis at national level needs to be strengthened
Uzbekistan	<ul style="list-style-type: none"> • Employers represented in all parts of VET system • Participation of trade unions in all aspects of VET system • SMEs under-represented 	<ul style="list-style-type: none"> • No binding NQF planned • State examinations with employer participation • Evidence-based policy making

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¹ As a result of the Parliamentary election, the structure changed from September of 2012: Ministry of Education and Science and Ministry of Labor.

² The structure of the Ministries was changed in September 2012