



# POLICIES FOR HUMAN CAPITAL DEVELOPMENT UKRAINE

AN ETF **TORINO PROCESS**  
ASSESSMENT

## Disclaimer

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# PREAMBLE

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

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

For the ETF, human capital development is the provision of support to countries for the creation of lifelong learning systems that provide opportunities and incentives for people to develop their skills, competences, knowledge and attitudes throughout their lives for the sake of employment and realisation of their potential, and as a contribution to prosperous, innovative and inclusive societies.

The purpose of the assessments is to provide a reliable source of information for planning and monitoring national education and training policies for human capital development, as well as for programming and policy dialogue in support of these policies by the European Union and other donors.

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

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

The annexes provide additional information: a summary of the recommendations in the report (Annex 1), an overview of the education and training system of the Country (Annex 2). The ETF would like to thank to all members of the Torino Process working group in Ukraine who worked for the preparation of the Torino Process National Report. Particular thanks should be sent to the Ministry of Education and Science which provided valuable support through the whole process. The National Torino Process Report compiled by the country itself can be found here: <https://openspace.etf.europa.eu/trp/torino-process-2018-2020-ukraine-national-report>.



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# EXECUTIVE SUMMARY

## Context

The European Training Foundation's (ETF) Torino Process assessment provides an external, forward-looking analysis of the country's human capital development issues and VET policy responses from a lifelong learning perspective. It is based on evidence provided in Ukraine's national Torino Process report, which was compiled in 2019 using a standardised questionnaire (national reporting framework) and additional information sources where relevant<sup>1</sup>.

Ukraine's economy has stabilised following a deep recession after the Maidan revolution in 2014 and 2015. It has gradually returned to growth in the last three years. Household consumption continues to grow, supported by strong remittances from labour migration to European Union (EU) countries and a resumption of consumer lending. At the same time, manufacturing and investment growth remains weak, which hampers strong and sustained economic growth.

The population of Ukraine shrank from 50 million in 1999 to 42 million in 2019. Like many other European countries, Ukraine faces depopulation. However, Ukraine's population is falling on an unparalleled scale and at an unparalleled rate compared to its neighbours and is expected to decline by more than 15% by 2050. The relative size of the young population (aged 15 to 24) decreased from 16.7% in 2013 to 13.2% in 2018 and its share is the smallest among the Eastern Partnership countries.

Ukraine began to actively reform its education system in 2014 when the new Law on Higher Education was adopted. This was followed by the Law on Education in 2017, which provides the strategic framework for the implementation of reforms. Great attention has been paid to modernising primary and secondary general education in which the concept of the New Ukrainian School guides the reform actions and sets the timetable for them. A new Law on Complete General Secondary Education was adopted in January 2020 which underpins the implementation of the New Ukrainian School. A new VET law has been drafted and awaits submission to the parliament at the time of drafting this assessment. The new Concept for Modern VET adopted in June 2019 includes the main strategic elements of VET reform, which Ukraine plans to implement in the years to come. Moreover, in 2019 the country also adopted a Law on Professional Pre-Higher Education which regulates education and training provision in colleges and *technikums*, which were previously part of the higher education system.

The EU provides considerable support to Ukraine to ensure a stable, prosperous and democratic future for all its citizens, and has pledged a EUR 12.8 billion package for the next few years to support the reform process. The EU strategy aimed at supporting Ukraine between 2018 and 2020 identifies human capital development as a priority for cooperation under the objective of economic development and market opportunities. Ukraine has embarked on a comprehensive reform of its education sector. The EU is providing support, notably in the area of VET and minority languages.

In spite of the tremendous progress and achievements of renewed legal and strategic frameworks throughout the entire education sector, this report looks at issues that need to be addressed to align

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<sup>1</sup> All data sources and references are available in the list of references included in this report.

the ongoing secondary VET reforms with other sub-systems of the education system to enhance lifelong learning.

## Summary of findings on human capital

Historically, Ukraine has benefited from a strong education system that has boosted the country's economic and social development. Since independence, Ukraine has been able to sustain many of its comparative advantages in education. This has contributed to high levels of educational attainment and human capital development. However, the skills demanded by the growing economic sectors are different to those supplied by the education system, and, over time, reforms have been slow or delayed. Human capital has therefore been a weak factor in driving economic growth.

### The large supply of tertiary education graduates has switched the focus from skills and qualifications to credentials

Ukraine's level of educational attainment is high. In 2017, only 2% of the active population had primary education or lower, 45.1% had secondary education and 52.9% had completed or were in tertiary education. Gross enrolment rates in primary education are close to 100% (99.88%), and they are also high in secondary education (96.79%). Between 1980 and 2010, the average number of years of schooling for the population aged 15+ increased nearly threefold and amounted to 11.3 years in 2017. The proportion of 30 to 35-year-olds who completed tertiary education reached 63% in Ukraine; the EU average is 40%.

Higher education enrolment rates are among the highest in Europe. This raises concerns about the sustainability and quality of the system, and the employability of graduates. Ukrainians have a strong preference for tertiary education in order to be successful and competitive in the labour market and to satisfy their aspirations to obtain a higher education diploma at any cost. The disconnection between Ukraine's education sector and the needs of the labour market creates the wrong incentives both for students and educational institutions.

While higher education grew rapidly after Ukraine's independence, VET enrolments and enrolments in colleges and *technikums* continued to decline. This gradually led to an imbalance between the supply of skills and labour market demand. The expanded higher education system has produced an increasing number of graduates who have ended up in jobs that do not require a university-level education. Thus, the large supply of tertiary education graduates has inflated the relevance of credentials. Limited labour market relevance and poor governance have reduced public confidence in skills and qualifications and diverted the population's focus towards credentials, which threatens Ukraine's human capital. Low participation and declining enrolment in VET are a consequence of this phenomenon as well as other factors that have led to a deterioration in the quality and attractiveness of VET over the last two decades.

### High spending on education gets lost in operational inefficiencies

Ukraine spends more of its gross domestic product (GDP) on education than most EU and OECD countries: public spending on education amounts to 6.0% of GDP. Between 2013 and 2018 the size of the young population continued decreasing resulting in a shrinking number of students at all levels of education. However, over the same period, the number of schools declined by only 11% and the number of teachers fell by just 5%. This has decreased the student-teacher ratio and resulted in one of the smallest average class sizes in the world.



Although the number of secondary general and vocational schools has been declining in recent years, the school networks require serious optimisation and restructuring in line with demographic developments and student demand to ensure better value for high spending.

### Ageing workforce, emigration and low participation in VET will aggravate skills shortages in the years to come

Ukraine's labour market faces multiple challenges, including an ageing labour force, low internal labour mobility, a high level of informal employment and particularly high levels of over-qualification. The rapidly ageing population, together with a recent trend of growing external labour migration, will result in a shrinking working-age population and will put pressure on economic development and sustained growth.

Vocational education remains undervalued. The International Labour Organization (ILO 2016) transition survey showed that, despite evidence demonstrating that VET graduates earned equal or higher wages, 73.2% of young people who planned to complete higher education were unwilling to enrol in VET. Only as few as 13.7% of the young people surveyed considered VET as a study option, while 84.6% planned to pursue higher education.

There has been an increase in the migration of labour to other countries in recent years, the main destinations being Poland, Russia and Italy. Evidence suggests that migrants are less likely to have tertiary education, but more likely to have vocational or upper secondary education. Many migrants end up in low-skilled jobs. According to national statistics, 36.1% of labour migrants work in jobs that do not require any qualification and only 26.8% of migrant workers work in a job requiring their level of qualification. Ukrainian employers have argued that one-third of enterprises are affected by labour migration. Even higher salaries offered by export-oriented industries have not stopped the migration of skilled workers from the country due to the deteriorating quality of life.

### Harmonisation of provision and restructuring of VET institutions

In developing the Law on Education, a few issues arose, which impede the advancement of change in the education system and policy implementation, e.g. ambiguity on what is considered to be vocational education and what is considered to be tertiary education. Although the law stipulates a new structure for the education system, it is still resolutely aligned with old institutional structures and their vested interests. One example of how the reforms have been compromised is the establishment of a sub-system between higher education and VET, which is known as 'professional pre-higher education'.

Until the adoption of the Law on Higher Education, colleges and *technikums* were part of the Ukrainian higher education system although the majority of programmes provided by them led to vocational qualifications such as junior specialists. Over 70% of students in colleges and *technikums* enrolled in non-tertiary vocational programmes after 9th grade and only around 3 to 4% were enrolled in bachelor programmes. Consequently, most programmes provided by these institutions lead to VET qualifications, which are offered in parallel by secondary VET institutions for the same age cohort.

In our view, it would be vital to review the rationale for these institutions and their qualification programmes in the context of the ongoing VET reform process. Such a review is also essential to achieve the ambitious target of increasing participation in VET to 45% (the target set by the new government) and to improve the overall matching of skills supply with labour market demand.

## Targeting adult learners is increasingly important for VET providers

With a shrinking workforce and a declining youth population, the upskilling and requalifying of the Ukrainian working-age population becomes increasingly important. VET institutions could play an important role in attracting adult learners to participate in lifelong learning courses. The participation rate of the adult population (aged 25 to 64) in lifelong learning is very low (0.8% in 2019). It is even lower than in Romania, the EU country with the lowest level of adult participation in lifelong learning (0.9% in 2018). Given the institutional capacity and potential of the large network of both secondary VET and professional pre-higher education institutions and resources to be freed up as a result of the restructuring of the networks, VET provision should increasingly target adult learners in addition to secondary school graduates, who are their main clients at the moment. This would require more flexibility and autonomy for providers, new funding schemes and reinforcement of the validation of non-formal and informal learning.

## Fragmentation of provision and segregation of young people have diminished the quality and attractiveness of VET

Enrolment in secondary VET has been rapidly declining in the last five years. The drop has been sharper in students who have completed full secondary general education (after 11th grade). This can be explained not only by a decreasing age cohort but also by increasing opportunities to enrol in higher education whereby higher education institutions are competing for a lower number of applicants and trying to fulfil the government-financed enrolment plans.

The current structure of upper secondary education in Ukraine is fragmented, with upper secondary general education offered in general secondary schools as well as in vocational schools, colleges and *technikums*. Students in upper secondary education, including those in various types of VET institutions, are obliged to sit the External Independent Test (EIT) in order to obtain a secondary education diploma. EIT results vary considerably in different types of institutions, leaving the students enrolled in various types of VET institutions in the most disadvantaged position. Their scores are lowest among all students participating in the EIT, with many failing to achieve a pass mark and only around 7% of VET graduates continuing their studies in higher education institutions.

Due to the academically biased EIT (which most VET students fail), selective admission of high and low performers at 9th grade and the generally poor image of VET, the current secondary VET system is practically a dead-end in Ukraine. This reduces the opportunities of VET graduates to continue their studies in higher education and participate in lifelong learning, and further diminishes the attractiveness of VET. The transition to a student-centred and competence-based approach to learning in line with the New Ukrainian School vision will be challenging at the upper secondary level unless resources such as teachers, schools and funding are concentrated and consolidated.

Although the target year for the implementation of a three-year upper secondary education programme is set for 2027, Ukraine should start seriously considering and finding ways to merge and consolidate learning resources and facilities, in both upper secondary general education and secondary vocational education, to combat the segregation of young people's career and study opportunities at an early age.

The horizontal integration of schools at upper secondary level with VET providers and their learning resources could increase operational efficiencies; improve the quality of teaching and learning, particularly in general education subjects; and, more importantly, abolish the stigma attached to VET, which is deeply rooted in Ukrainian mindsets.

## Modernising the VET teaching profession could attract professionals from industry

Ukraine needs to develop the skills and competences of VET teachers and trainers and use them more efficiently to improve the quality of learning and attractiveness of VET and to make the teaching profession appealing. A decline in the enrolment of VET students, the low social status of VET instructors and the lower salaries paid to VET teachers relative to their peers in industry have led to an ageing and declining teacher workforce, low professional mobility and a lack of motivation to master modern technologies. All of this makes the VET teaching profession unattractive to skilled professionals. VET teacher education and requirements need to be revisited. The focus should be on teachers' professional competence and practical work experience and less on pedagogical aspects.

Ukraine continues to follow the old Soviet model, which separates theoretical teaching from work practice. Teachers who teach theory have a higher status and pay while instructors of practical training who are required to have work experience are paid less than teachers who teach theory and their peers working in industry. Regulations for VET teachers should be modernised and a new type of VET teaching profile, combining theory and practice, should be developed which rewards and incentivises teachers who gain practical work experience.

## Skills governance and declining VET participation require immediate actions

The report discusses in-depth two issues related to human capital development in Ukraine:

1. VET and skills governance
2. declining participation and attractiveness of vocational education and training.

These two issues require immediate attention and concrete actions to balance human resource development in Ukraine to make sure that public policies enhance the quality of VET and reverse the declining enrolments in VET as well as the aspirations of young people and the population as a whole.

There is an opportunity now to make a difference regarding VET, given the ongoing reforms and attention to systemic changes in education. With this in mind, the New Ukrainian School aims to profile both the academic and vocational pathways in upper secondary education, which provides an occasion to guide and influence the preferences of students and their parents. The other opportunity is to rethink the role, content and function of the professional pre-higher education and its training provision with a view to embedding the goals of ongoing secondary VET and higher education reforms. To do this, the government can benefit from the continuing support provided by development partners such as the EU and the World Bank to accelerate the progress.

In order to advance education sector reform, Ukraine needs to take a holistic view and develop a new lifelong learning system. Different sectors of the education system need to be well integrated with fair and, wherever possible, harmonised rules and principles to guide policy implementation for the benefit of learners, the economy and society.

In this context, the ETF assessment has made an attempt to identify a number of priority actions which Ukraine should undertake to restructure VET institutions, their training provision and programmes in the context of ongoing education reform.

## Recommendations for action

### 1. Harmonise VET provision at upper secondary level after 9<sup>th</sup> grade

- Connect and harmonise VET provision and programmes and merge institutions (VET schools, colleges and *technikums*) within upper secondary VET, particularly in the fields of studies in which the majority of students enrol after 9th grade.

### 2. Differentiate education provision at professional pre-tertiary level to distinguish it from secondary VET

- Differentiate between more complex programmes, such as in healthcare and technical fields by developing new post-secondary and/or short-cycle qualifications, for example at level 5 in the national qualifications framework (NQF) where there is evidence of clear demand in the labour market and among learners.
- Actively engage employers and the National Agency for Qualifications to define and accredit new post-secondary and/or short-cycle qualifications to ensure their labour market relevance.
- Allow admission to pre-tertiary level programmes only after completion of upper secondary education (11th/12th grade).

### 3. Manage the optimisation of school networks in a fair and transparent way

- Set national guidelines for the optimisation and restructuring of institutional networks using clear criteria to ensure a) the labour market relevance of qualifications awarded by institutions; b) efficiency in the use of teaching and learning resources; c) access of learners in line with their residential distribution across the country and the regions.
- Carry out an organisational audit to appraise all secondary VET and professional pre-higher education institutions in relation to their capacity, provision and resources. Prepare restructuring plans in all regions based on the institutional appraisals and stakeholder consultations and empower regional VET councils to endorse them.
- Amend the current and upcoming legislation on VET and professional pre-higher education to harmonise provision and institutional networks.

### 4. Diversify VET provision to increasingly target adult learners

- Increase the autonomy of providers and incentivise them to provide lifelong learning courses. Build on and enhance the existing capacity of teachers and providers as a whole to train and attract adult learners.
- Integrate VET provision gradually for young people and adults by recognising prior learning, creating individual learning trajectories and modularising new VET qualifications while allowing partial qualifications.

### 5. Integrate the provision of VET and general education at upper secondary level

- Harmonise education and training provision at upper secondary level after 9th grade by horizontally amalgamating secondary VET and general secondary (academic) education with a view to ensuring attractive pathways to both academic and vocational tracks without institutional barriers in line with the New Ukrainian School concept.
- Rename the providers, particularly the VET providers, to get rid of the negative connotations of old-fashioned names and types of VET schools and institutions. For example, many countries

have renamed all providers as (vocational) colleges that can combine VET programmes at different levels.

- Develop an alternative matriculation exam or admission route to replace the academically biased EIT as an obligation for VET graduates to attain full secondary education and allow them to enrol in higher education.
- Develop a roadmap for the harmonisation of VET and general education reform at upper secondary level with the support of the development partners, namely the EU and the World Bank.

## 6. Reform the VET teaching profession

- Integrate general and vocational education at upper secondary level by deploying qualified teachers who work in general education to also teach learners in VET trajectories.
- Abolish the Soviet legacy of separating the teaching of theory by VET teachers (in the case of special subjects) and the provision of instruction by practical trainers or instructors. Integrate theory and practice within the teaching profession as it is increasingly essential in competence-based skills development.
- Review the competence requirements of modern VET teachers by rewarding their work and practical experience in the workplace or in industry (at least three years) and making it compulsory.
- Develop a (short-cycle) pedagogical programme that will enable professionals to qualify as VET teachers with attractive remuneration, career prospects and social status. Facilitate skilled professionals in obtaining their VET teacher qualification through distance and on-the-job training schemes while working in VET institutions.



# 1. INTRODUCTION

## 1.1 About this assessment

Ukraine is committed to deepening its political association and economic integration with the EU and to enhancing its cooperation with NATO. Membership of the two organisations is the ultimate goal, an objective that is enshrined in the Constitution. The reform process began in the aftermath of the 2013/2014 Maidan revolution. It has resulted in important reform progress in a number of key areas, including macro-financial stability, banking, decentralisation, energy, education and healthcare. The newly elected president and government are expected to continue with the reform agenda by implementing concrete actions that are in line with democratic practices and respect the rule of law. Ukrainian civil society has played a key role in the reform process and will continue to play a crucial role in sustaining its momentum. The improvement of the country's socio-economic structure depends on stronger and more equitable economic growth. To this end, an improvement in the overall business environment and the level of foreign direct investment (FDI) attractiveness is essential and remains dependent on a strengthening of the rule of law and the availability of skilled labour. Increased labour migration from Ukraine, especially among young people, and decreased enrolment in VET will put significant pressure on skills availability in the country in the years to come.

This ETF assessment comes at an important moment when Ukraine has made remarkable progress in renewing its legal and strategic framework for the entire education system. In recent years, the ETF has been closely accompanying and advising the Ukrainian government and stakeholders on how to modernise the country's VET system. The European Union (EU) and its Member States recognised the need for action and agreed to finance a large EUR 58 million EU4Skills programme to support VET reform in Ukraine. While the strategic direction and legal framework of Ukraine are in line with the EU practices and policies, the ETF assessment makes an attempt to identify critical issues to be addressed in the course of implementing the ongoing VET reform. The assessment looks particularly at issues of human capital development and education reform which could support the alignment of reforms in Ukraine's secondary VET system with other sub-systems of education such as general secondary education and professional pre-higher education and so enhance lifelong learning. It draws lessons from the recent decentralisation process in VET and how national policies and actions could facilitate the reform process by taking into account the diversity of the regions. The assessment also contributes to the preparation of the next Eastern Partnership multiannual programme which will be launched in 2020.

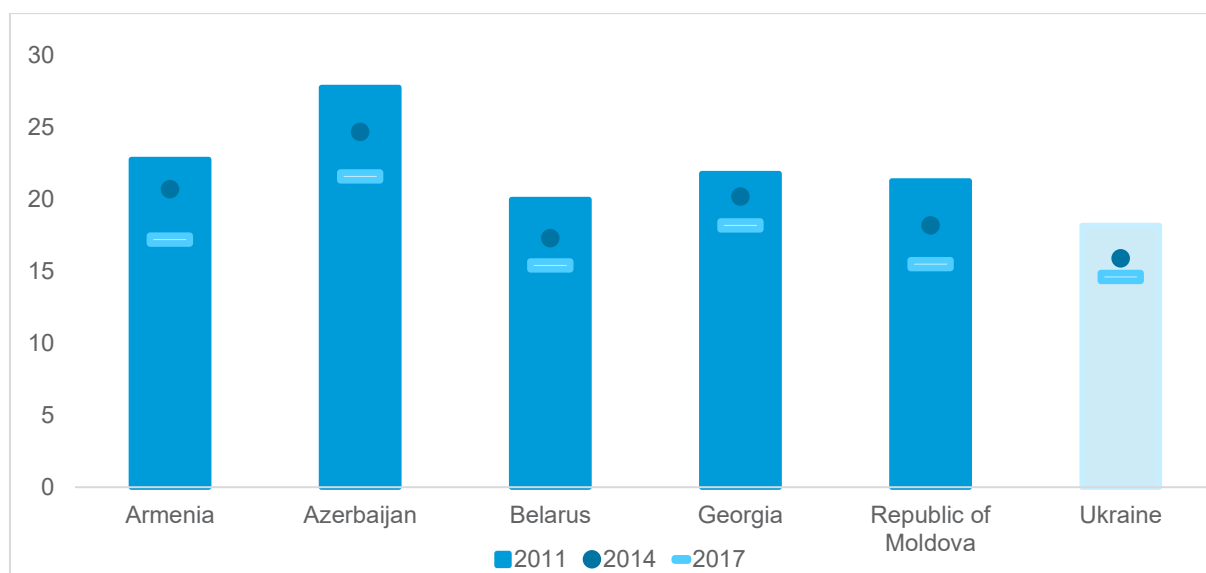
The assessment process included an extensive phase of desk research based on responses to a standardised questionnaire, the national reporting framework (NRF), and the preparation of an Issues Paper with an overview of themes to be discussed in this report, which were then finalised in consultation with the ETF country and thematic teams responsible for Ukraine. In addition to the NRF, all 25 regions of the Ukraine carried out a self-assessment of their VET systems using the Torino Process guidelines. A wealth of experience, practice and progress at sub-national level has been reflected in the NRF. The author carried out a fact-finding mission to Kyiv in Ukraine and interviewed a number of key stakeholders and experts who provided invaluable insight and evidence for the preparation of this assessment. The findings and recommendations of the ETF assessment were shared and discussed with national and regional authorities and other stakeholders at an event which took place in Lviv in 2019.

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

## 1.2 Country overview

The population of Ukraine shrank from 50 million in 1999 to 42 million in 2019. Like many other European countries, Ukraine faces depopulation. However, Ukraine's population is falling on an unparalleled scale and at an unparalleled rate compared to its neighbours<sup>2</sup>. According to the UN World Population Prospects, the population will decline by more than 15% by 2050 (United Nations Department of Economic and Social Affairs, 2017). Ukraine ranks among the 30 'oldest' countries in the world in terms of the share of the population aged 60 and above. This share was 23% in 2018 and is projected to grow to 25% by 2025. Ukraine is also among the top five countries whose populations are shrinking most rapidly<sup>3</sup>. The relative size of the young population (aged 15 to 24) decreased from 16.7% in 2013 to 13.2% in 2018, and its share is the smallest among the Eastern Partnership countries (Figure 1). According to UN Population Division data, international migrant stock reached 4.9 million Ukrainians in 2017, a similar figure to 2010.

**FIGURE 1 SHARE OF YOUNG PEOPLE (0 TO 24 YEARS OLD) IN THE POPULATION**



Ukraine's economy has stabilised following a deep recession after the Maidan revolution in 2014 and 2015 and has grown gradually over the last three years (GDP grew by 2.4% in 2016, by 2.5% in 2017 and by 3.3% in 2018)<sup>4</sup>. The key factor in economic growth has been the increase in household consumption. The currency market has also stabilised following its liberalisation. At the same time, socio-economic development is affected by external debt payments in 2018 and 2019, a low level of labour productivity and social standards, and a high level of poverty<sup>5</sup>.

<sup>2</sup> See <https://www.msp.gov.ua/news/14711.html>.

<sup>3</sup> See <https://www.msp.gov.ua/news/14711.html>.

<sup>4</sup> National reporting framework: A 1.1.

<sup>5</sup> National reporting framework: A 1.1.



**TABLE 1 SELECTED COUNTRY INDICATORS, UKRAINE**

Indicator		2013	2017	2018
Total population (000)		45 372.7	42 414.9	42 216.8
Relative size of youth population (age group 15–24, %)		16.7	13.7	13.2
GDP growth rate (%)		0.0	2.5	3.3
Public expenditure on education (as % of GDP)		6.7	6.0	N/A
Share of VET students in upper secondary education (ISCED level 3) (%)		31.0	30.3	N/A
Participation in training/lifelong learning (age group 25–64) by sex (%)	Total	N/A	0.8	0.8
Activity rate (aged 15+) (%)	Total	65.0	62.0	62.6
Employment rate (aged 15+) (%)	Total	60.3	56.1	57.1
Unemployment rate (aged 15+) (%)		7.2	9.5	8.8
Youth unemployment rate (aged 15–24) (%)	Total	17.4	18.9	17.9
Proportion of people aged 15–24 not in employment, education or training (NEET) (%)	Total	16.2	16.5	14.5

Source: ETF database

Between 1999 and 2017, the period during which Ukraine's private sector emerged, the average rate of growth of per capita income was 3.3% per year, lower than the average rate in post-Soviet countries (World Bank, 2019b). At the same time, Ukraine's population continues to age and decline due to declining birth rates and emigration. The population of Ukraine has shrunk by around 15% since 1999, and the youth population has declined by nearly 25%.

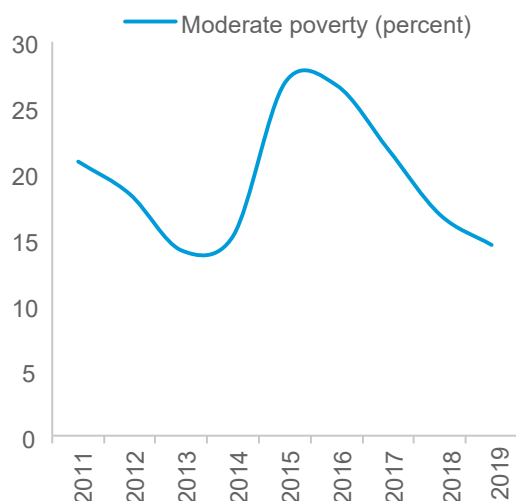
GDP growth has been solid and reached an estimated 3.6% in 2019, driven by agriculture and sectors dependent on domestic consumption. Growth in the first three quarters of 2019 was driven by a strong harvest, and sectors such as wholesale and retail, transport, as well as financial services. The agriculture sector grew by 6% in the first half of 2019. Household consumption continued to grow, supported by one-off social transfers during the election cycle, continued strong remittances from labour migration to EU countries and a resumption of consumer lending (World Bank, 2019c). At the same time, manufacturing and investment growth remained weak. At only 20% of GDP, the level of fixed investment remains too low for strong and sustained economic growth. According to World Bank estimates, economic growth is projected at 3.6% in 2019, 3.7% in 2020 and 4.2% in 2021 if key reforms move forward expeditiously.

The restructuring of the economy has had implications for the distribution of employed people by economic sector. The share of agriculture and industry in total employment has decreased, while employment in the service sector has increased. In 2018, the majority of the labour force (60.8%) worked in services, followed by industry (24.3%) and agriculture (14.9%). The self-employment rate is relatively low and decreased from 18.1% in 2013 to 15.8% in 2018 (ETF, 2019, unpublished).

Poverty has continued to decline, supported by higher wages and consumption. Real wages grew by 9.5% between January and September 2019, driven mostly by salary increases in the private sector

due to pressure from outward labour migration. Remittances also continued to grow by 12% between January and September 2019. As a result, moderate poverty (World Bank's national methodology for Ukraine) is projected to decline by around 4% in 2019 compared to 2018 and return back to the pre-crisis level seen in 2013.

**FIGURE 2 POVERTY RATE**



Source: World Bank, 2019c.

A recent analysis by the World Bank indicates that the growth rate of Ukraine's economy has been too slow to absorb the excess supply of employees released by the old economy and the new entrants to the labour force (2019a). Therefore, many young Ukrainians have opted to emigrate, attracted by higher expected earnings in other countries. At the same time, the human capital skills demanded by expanding sectors are different to those supplied by workers in old disappearing industries.

The improvement in the country's socio-economic structure is dependent on stronger and more equitable economic growth. To this end, an improvement in the overall business environment and the level of FDI attractiveness is essential. This in turn is dependent on strengthening the rule of law and the availability of skilled labour. The socio-economic situation is also affected by the ongoing conflict in Eastern Ukraine. Around 3.5 million people on both sides of the contact line remain in need of humanitarian assistance and protection. Increased labour migration from Ukraine, especially among young people, and decreased enrolment in VET will put significant pressure on skills availability in the country in the years to come.

## 1.2 Strategic context

The Association Agreement (AA) with the EU provides the agenda for the reform process in Ukraine. The agreement, including its Deep and Comprehensive Free Trade Area (DCFTA), entered fully into force in September 2017. The government has introduced significant measures to establish the institutional and coordination framework necessary to implement the Association Agreement. Presidential and parliamentary elections in 2019 brought about major changes in the executive and legislative authorities, which is likely to have an effect in the short term on the pace of implementation of the agreement. However, President Volodymyr Zelensky, whose party Servant of the People won the parliamentary elections, is expected to proceed with the reform agenda according to democratic

practices and with respect for the rule of law. Ukrainian civil society has played a key role in the reform process and will remain crucial to sustaining its momentum. In recent years, Ukraine has been strengthening integration processes with Europe, which have significantly influenced social, political and economic developments in the country. The EU is now Ukraine's biggest trading partner with both exports and imports exceeding 40%.

Significant progress in education reform was one of the most important achievements for human capital development in Ukraine between 2016 and 2019. The Law on Education, adopted in 2017, provides an overall policy and legal framework and introduces a new structure for the education system, which includes:

- preschool education
- complete general secondary education (four years of primary education, five years of basic secondary education and three years of field-specific secondary education)
- out-of-school education
- specialised education
- VET
- professional pre-higher education
- higher education
- adult education, including postgraduate education

The Law on Education also defines the NQF and stipulates the setting up of a National Agency for Qualifications, which was established in 2019<sup>6</sup>.

The Law on Education paved the way for the modernisation of general secondary education. This is articulated in the New Ukrainian School concept<sup>7</sup>. Complete secondary education will be compulsory for everybody in Ukraine. A new schooling structure introduced in the law will extend the duration of complete secondary education to 12 years. It has four main components: i) developing new, modern standards in secondary education with a competence-based approach; ii) revising the national curriculum according to new education standards; iii) introducing the teacher certification procedure and new programmes to enhance professional qualifications; and iv) reducing bureaucracy in the education system while introducing a transparent and effective system of governance. The New Ukrainian School concept is to be implemented in three phases. Since 2018, it has been piloted in primary education in around 100 schools. It will be scaled up for basic secondary education in 2022, and from 2027 onwards will also cover upper secondary education. The last phase of the reform includes profiling provision at upper secondary level. This will include both academically and vocationally oriented pathways for learners. A new Law on Complete Secondary General Education<sup>8</sup>, adopted in January 2020, provides practical guidance and tools for the implementation of the New Ukrainian School concept and includes clarification on the disputed issue of the language of instruction for national minorities in secondary education.

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<sup>6</sup> See <https://zakon.rada.gov.ua/laws/show/693-2019-%D0%BF>.

<sup>7</sup> See <https://www.kmu.gov.ua/npas/249613934>.

<sup>8</sup> See <https://zakon.rada.gov.ua/laws/show/463-20>

In June 2019, the government adopted a Concept<sup>9</sup> for Modern VET for the period up to 2027 to support the implementation of VET reforms. The concept identifies the following three priority tasks:

1. further decentralisation of VET by increasing school autonomy, optimising VET provider networks and ensuring the acquisition of vocational qualifications in a lifelong learning context;
2. aligning VET provision with regional labour market needs;
3. improving the quality of VET, e.g. through competence-based and flexible provision; by improving the status of VET teachers and trainers and attracting professionals from industry to teach in VET institutions; and developing cooperation and different forms of interaction and partnerships with employers and the private sector to increase the relevance of VET.

A new draft Law on VET has been prepared but its submission to the parliament has been delayed due to the change in government in September 2019.

The Law on Professional Pre-Higher Education was adopted in June 2019. This law governs the provision, funding and institutional governance of colleges and *technikums*, which were previously associated with higher education as institutions of 1st and 2nd level accreditation. These institutions are expected to introduce a new qualification known as a 'professional junior bachelor' from 2020 onwards. They may also be licensed to provide short-cycle higher education programmes or bachelor-level qualifications. Junior specialist qualifications will be provided in the secondary VET system. The role and future developments of this level of education are discussed later in the report.

The EU provides considerable support to Ukraine to ensure a stable, prosperous and democratic future for all its citizens, and has pledged a EUR 12.8 billion package for the next few years to support the reform process. The EU strategy aimed at supporting Ukraine between 2018 and 2020 identifies human capital development as a priority for cooperation under the objective of economic development and market opportunities. Ukraine has embarked on a comprehensive reform of the education sector. The EU is providing support, notably in the area of VET and minority languages.

The largest intervention financed by the EU and its Member States – Germany, Finland and Poland – is the EU4Skills: Better Skills for Modern Ukraine programme, which will provide EUR 58 million to support VET reform in Ukraine. The project will support the modernisation of the VET system in Ukraine through better governance and funding, improved quality and attractiveness of provision, investment in infrastructure and optimisation of VET provider networks. The intervention is planned to be complemented by infrastructure loans from the European Investment Bank to establish and enlarge the network of vocational centres of excellence in the years to come.

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<sup>9</sup> See <https://www.kmu.gov.ua/ua/npas/pro-shvalennya-koncepciyi-realizaciyi-derzhavnoyi-politiki-u-sferi-profesijnovi-profesijno-tehnichnoyi-osviti-suchasna-profesijna-profesijno-tehnichna-osvita-na-period-do-2027-roku-i120619>.

## 2. HUMAN CAPITAL: DEVELOPMENT AND CHALLENGES

### Overview

Human capital in this report is understood as an aggregate of the knowledge, skills, talents and abilities possessed and used by individuals for their economic, social and personal benefit. The value of human capital for people, economies and societies depends on how well it is developed, and on the extent to which it is then available and used.

Historically, Ukraine has benefited from a strong education system that has propelled the country's economic and social development. Since independence, Ukraine has been able to sustain many of its comparative advantages in education, contributing to high levels of educational attainment and human capital development as shown in Table 2. However, the skills demanded by the growing economic sectors are different to those supplied by the education system, and over time reforms have been slowed down or delayed. According to recent estimates of wealth in 141 countries, human capital comprises only 34% of total national wealth in Ukraine, compared to 51% in lower middle-income countries and 62% in Europe and Central Asia (World Bank, 2019a). Human capital has therefore been a relatively weak factor of production in driving economic growth.

**TABLE 2 SELECTED HUMAN CAPITAL DEVELOPMENT INDICATORS, UKRAINE**

	Year	Value
(1) Population structure (%)		
0–24	2015	25.9
25–64		58.2
65+		15.9
0–24	2025	26.0
25–64		55.1
65+		18.8
(2) Average years of schooling	2017	11.3
(3) Expected years of schooling	2017	15
(4) Learning-adjusted years of schooling	2017	10.2
(5) Adult literacy	2015	99.8
(6) Global Innovation Index Rank (x/126)	2018	43.0
(7) Global Competitiveness Index Rank (x/137)	2017-18	81.0
(8) Digital Readiness Index Rank (x/118)	2018	54 accelerate

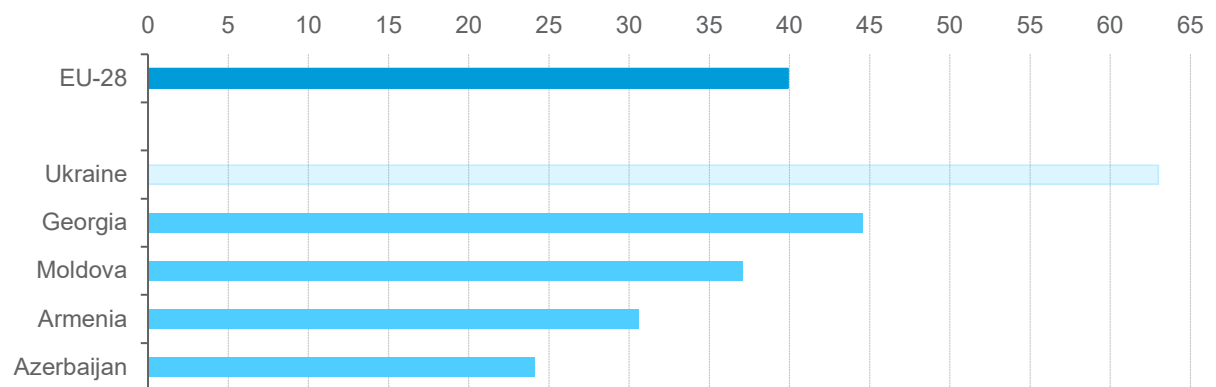
Sources: (1) UN Population Division, World Population Prospects, 2017 Revision; (2) UNESCO, UIS database (3) and (4) World Bank (2018), Human Capital Index; (5) UNESCO, UIS database; (6) World Economic Forum, The Global Innovation Index, 2018; (7) World Economic Forum, Global Competitiveness Index 4.0, 2018; (8) Cisco, Country Digital Readiness, 2018.

## 2.1. Ukraine's educational attainment -and the prominence of credentials rather than skills

Ukraine's educational attainment level is high. In 2017, only 2% of the active population had primary education or lower, 45.1% had secondary education and 52.9% had completed or were in tertiary education. Gross enrolment rates in primary education are almost 100% (99.88%). They are also high in secondary education – 96.79% (2014 data)<sup>10</sup>. Between 1980 and 2010, the average years of schooling for the population aged 15+ increased nearly threefold to 11.3 years (Table 2). Educational attainment for the average Ukrainian now exceeds that of other high-income countries in Europe.

Ukraine has also become one of the top countries in terms of the proportion of the population that participates in higher education, a trend that accelerated rapidly after independence. One of the reasons for this was that, prior to the adoption of the new Law on Higher Education in 2014, colleges and *technikums* were associated with the higher education system as higher education institutions of 1st and 2nd level accreditation. This new law stipulates that higher education must adhere to the Bologna principles, which moves these institutions away from higher education from 2020. Nevertheless, as of the 2017/2018 academic year, the higher education coverage rate was 82%. As Figure 3 shows, the proportion of 30 to 35-year-olds who had completed tertiary education reached 63% in Ukraine in 2018 while the EU average was 40%.

**FIGURE 3 PROPORTION OF 30 TO 35-YEAR-OLDS WHO HAD COMPLETED TERTIARY EDUCATION, 2018 (%)**

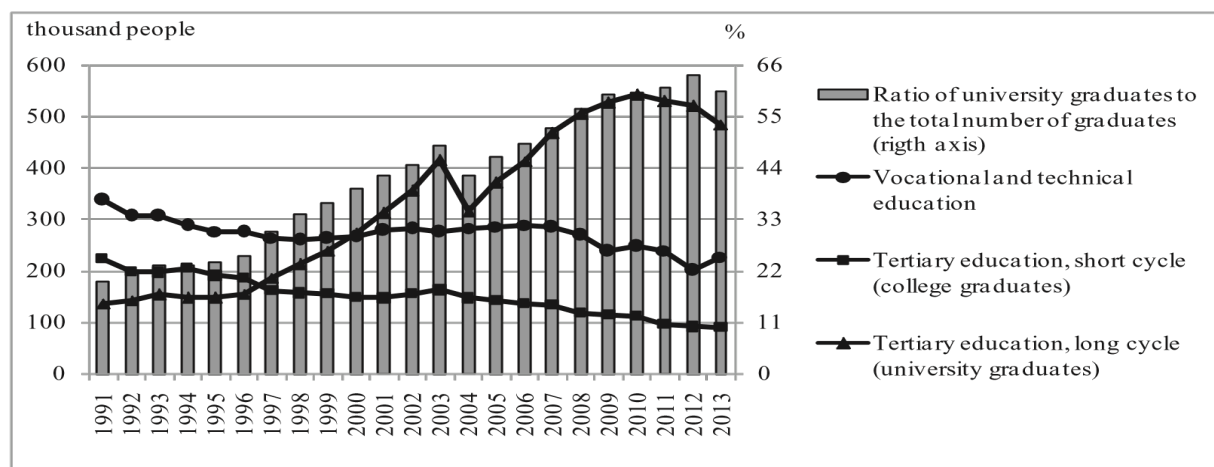


Source: Eurostat

The expansion of higher education started soon after Ukraine's independence when the higher education institutions were allowed to start charging tuition fees, in addition to publicly financed enrolment. The private higher education sector began to grow. At the same time, VET enrolments and enrolments in colleges and *technikums* continued to decline, as shown in Figure 4.

<sup>10</sup> See <http://uis.unesco.org/country/UA>.

**FIGURE 4 NUMBER OF GRADUATES OF VOCATIONAL AND TECHNICAL SCHOOLS, COLLEGES AND UNIVERSITIES, 1990–2013**



SOURCE: Kupets, 2016, based on State Statistics Service of Ukraine enrolment data.

This trend has led to over-education whereby higher education graduates are employed in jobs requiring lower levels of education. According to a school-to-work transition study conducted by the ILO, the share of young workers in mismatched occupations totalled 37.2%, with the majority in jobs for which they were over-educated (31.7%) while 40.2% of young people employed in elementary occupations had a tertiary degree (Libanova et al, 2016). The highest mismatch was observed among college graduates – 55% were in mismatched occupations (Kupets, 2016).

Ukraine's educational attainment highlights the prominence of credentials rather than skills and qualifications. The rapid expansion of the higher education system has produced an increasing number of graduates, who have ended up in jobs that do not require a university-level education. Thus, a large supply of tertiary education graduates has inflated the relevance of credentials. This has contributed to a mismatch between education level and job requirements, particularly among young university graduates. Consequently, the share of tertiary-educated workers among the unemployed population increased from 32% in 2004 to 47% in 2013 (Kupets, 2016). Moreover, as of 2013, 40% of young university graduates were working in lower-level jobs that did not require university-level education, compared to 29% of prime-age and older workers. A skills mismatch is also identified at company level, as close to 40% of employers reported significant skills gaps that harm their businesses<sup>11</sup>.

Thus, limited labour market relevance and poor governance have reduced public confidence in skills and qualifications and diverted the population's focus towards credentials, which threatens Ukraine's human capital. Low participation and declining enrolment in VET are a consequence of this phenomenon.

The share of VET enrolment in upper secondary education in Ukraine is 30.5% (UNESCO, UIS database, 2018). The new government programme<sup>12</sup> adopted in September 2019 has an ambitious target: to increase this level of enrolment to 45% by 2024 and to cut the time needed by VET graduates to find employment that matches their qualifications. The government programme aims to divert enrolments away from higher education and more towards vocational education (covering both

<sup>11</sup> National reporting framework: B 1.1.

<sup>12</sup> See <https://program.kmu.gov.ua/ministry/ministerstvo-osviti-i-nauki-ukraini>.



secondary VET and professional pre-higher education) by improving the quality and relevance of provision and destigmatising VET among learners and the population as a whole.

In order to obtain a diploma proving that they have undertaken a complete secondary education (currently 11 years of education, which will be extended to 12 years of schooling as per the New Ukrainian School concept), learners need to sit the EIT, which is also required for admission to higher education institutions. The EIT is equivalent to the matriculation exam in other countries and is run by the Ukrainian Centre for Education Quality Assessment. According to the Ministry of Education and Science, the EIT results are used as a proxy to monitor the overall quality of secondary general education.

## 2.2. Inefficiencies come with a high price tag for education in Ukraine

Ukraine spends more of its GDP on education than most EU and OECD countries. After a steep devaluation of the hryvnia in 2013, public education spending declined by 35% in real terms over two years. Between 2013 and 2017, budget financing shrank from 7.2% to 6.0% of GDP. The decline brought Ukraine closer to international benchmarks but spending still remains high: with public spending on education at 6.0% of GDP and with private spending adding another percentage point of GDP, Ukraine's spending on education is among the highest in the world<sup>13</sup>. This is driven partly by the law which requires the state to allocate at least 7% of GDP to education. Since independence, the overall number of students in school has declined by 41% from 7.1 to 4.2 million. However, over the same period, the number of schools declined by only 11% and the number of teachers fell by just 5%. This has decreased the student-teacher ratio to 1:9<sup>14</sup> and resulted in one of the smallest average class sizes in the world. This in turn has a considerable impact on the level of current expenditure on education. Out of the 6% of GDP spent on education, 2.8% of GDP went to general secondary schools, 1.3% to higher education institutions, 0.9% to preschools and early childhood education and 0.3% to VET.

The Law on Education promises to quadruple the starting salary of teachers by 2023. The World Bank (World Bank, 2018) estimates that such an increase (and without a change to the various bonuses and top-ups that amount to nearly half the remuneration received by a teacher) would result in spending on education escalating from 6% to 8.8% of GDP by 2023, which would be worrying for Ukraine from a fiscal point of view. Although the number of secondary general and vocational schools has been declining in recent years, the school networks require serious optimisation and restructuring in line with demographic developments and student demand to ensure better value for high spending.

Like secondary general education, VET institutions are financed by public sources. Almost the entire budget is spent on current expenditure, including staff costs, while other types of spending, such as capital investment, are crowded out. VET institutions' own earnings from income-generating activities remain underdeveloped, and range on average from 2% to 12% of total funding, depending on the region. While capital expenditure on VET increased in absolute terms over the last three years, it accounted for only 1 to 2% of total public spending<sup>15</sup>.

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<sup>13</sup> See <https://www.worldbank.org/en/news/opinion/2018/09/12/why-ukraines-education-system-is-not-sustainable>.

<sup>14</sup> According to the UNESCO database, the pupil/teacher ratio in 2018 was 13 in primary education and 7.3 in secondary education.

<sup>15</sup> National reporting framework: E 4.1.



According to the World Bank Human Capital Index, learning-adjusted years of schooling totalled 10.2 in 2017 compared to average years of schooling of 11.3 in the same year. This indicates a need to reduce the gap and improve the quality of education and learning outcomes.

Ukraine participated in the OECD Programme for International Student Assessment (PISA) for the first time in 2018. Ukraine's overall results are optimistic. With an average score of 462.7 for mathematics, science and reading, it outperforms many EU countries (Malta, Greece, Cyprus, Bulgaria and Romania). However, the share of low performing students remains higher than the EU average (Table 3), which needs to be addressed in the New Ukrainian School reform.

**TABLE 3 SHARE OF 15-YEAR-OLD LOW ACHIEVERS IN PISA**

		2009	2012	2015	2018
Ukraine	Reading	-	-	-	25.9
	Mathematics	-	-	-	35.9
	Science	-	-	-	26.4
EU average	Reading	19.7	17.8	19.7	21.7
	Mathematics	22.3	22.1	22.2	22.4
	Science	17.8	16.6	20.6	21.6

Source: OECD PISA 2018 database.

## 2.3. Labour market trends vs sustained economic development and growth

Ukraine's labour market faces multiple challenges, including an ageing labour force, low internal labour mobility, high informal employment and different types of skills mismatch, particularly high levels of over-qualification. The rapidly ageing population exacerbates employment challenges by reducing the number of people in the labour force. With the recent trend of growing external labour migration, a third of which consists of young Ukrainians under the age of 35, the diminishing working-age population pool puts pressure on economic development and sustained growth.

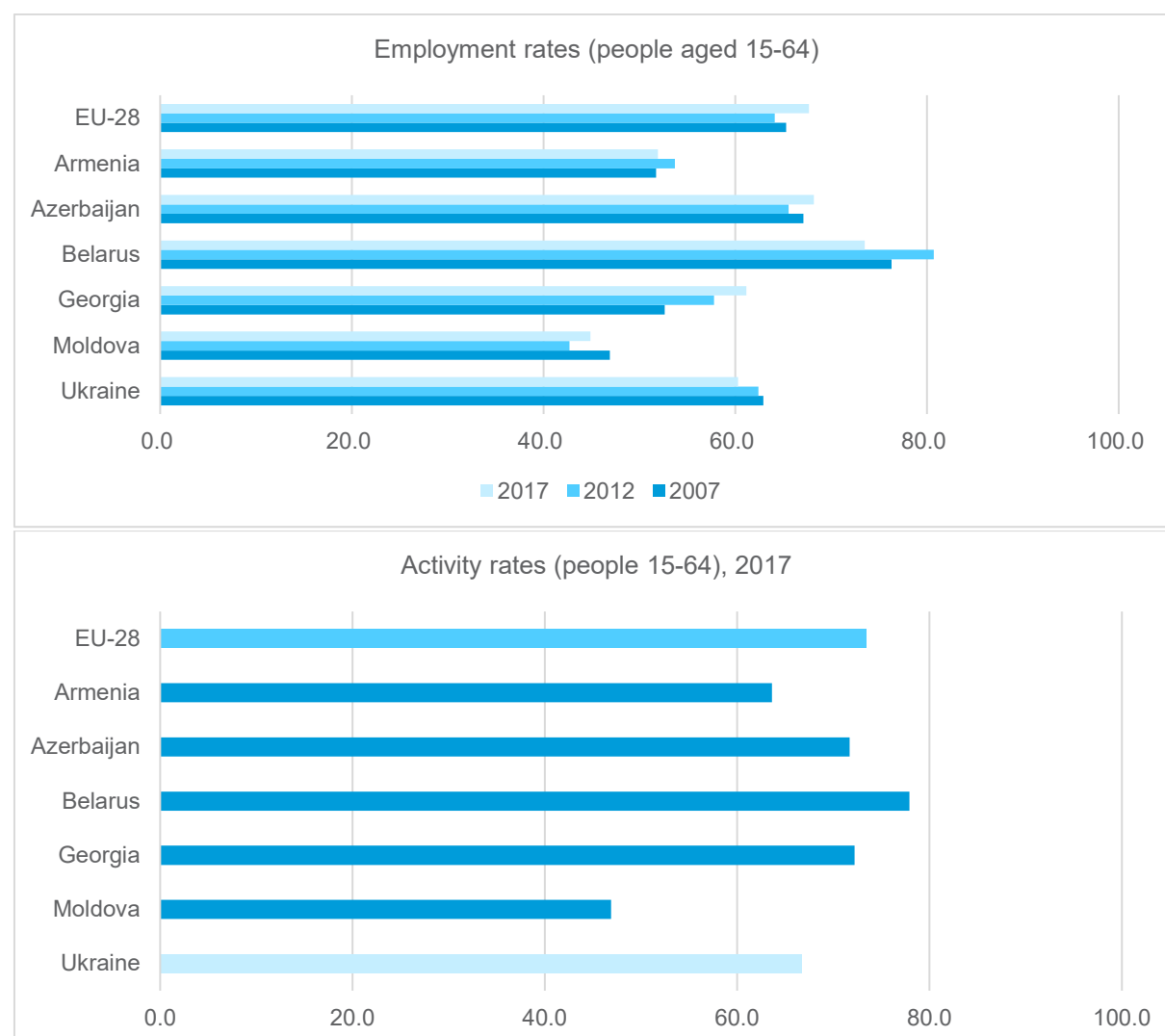
The activity rate fell from 65% in 2013 to 62.6% in 2018 (69% for males and 56.8% for females) (Figure 5). Activity rates for women in Ukraine are traditionally lower than male activity rates. This is due to the overall longer duration of women's education, the fact that they manage household and childcare burdens, and the limited support services available for working mothers. The employment rate has also been decreasing: from 60.3% in 2013 to 57.1% in 2018 (62.1% for males and 52.5% for females). The overall unemployment rate increased from 7.2% in 2013 to 9.5% in 2017, but declined slightly to 8.8% in 2018. The long-term unemployment rate is low and increased only slightly from 1.5% in 2013 to 1.9% in 2018 (ETF, 2019, unpublished).

The youth unemployment rate (among 15 to 24-year-olds) fell from 23% in 2016 to 18.19% in 2017 and then to 17.9% in 2018. The NEET rate decreased from 16.2% in 2013 to 14.5% in 2018, which is in line with the EU average of 14.9% in 2018. These moderate labour market indicators would suggest that the majority of this age group is still in education in Ukraine.

In 2018, 44% of the people registered as unemployed with the State Employment Service (SES) had higher education, 37% had vocational education and 19% had general secondary education. In terms of the occupational groups of those who were registered as unemployed, equipment and machinery

operators and maintenance workers were in the lead (19.9%), followed by trade and service sector occupations (15.1%), elementary occupations (14.1%), and top public officials and managers (13.2%)<sup>16</sup>.

**FIGURE 5 EMPLOYMENT AND ACTIVITY RATES IN UKRAINE**



Source: Eurostat.

Ukraine's labour productivity level (the value added per input) is among the lowest of all the transition economies. This reduces the country's competitiveness, making it difficult to attract investment and develop economic opportunities. Informal employment is also a serious challenge for the Ukrainian economy. According to national data, about 3.5 million people were informally employed in 2018.

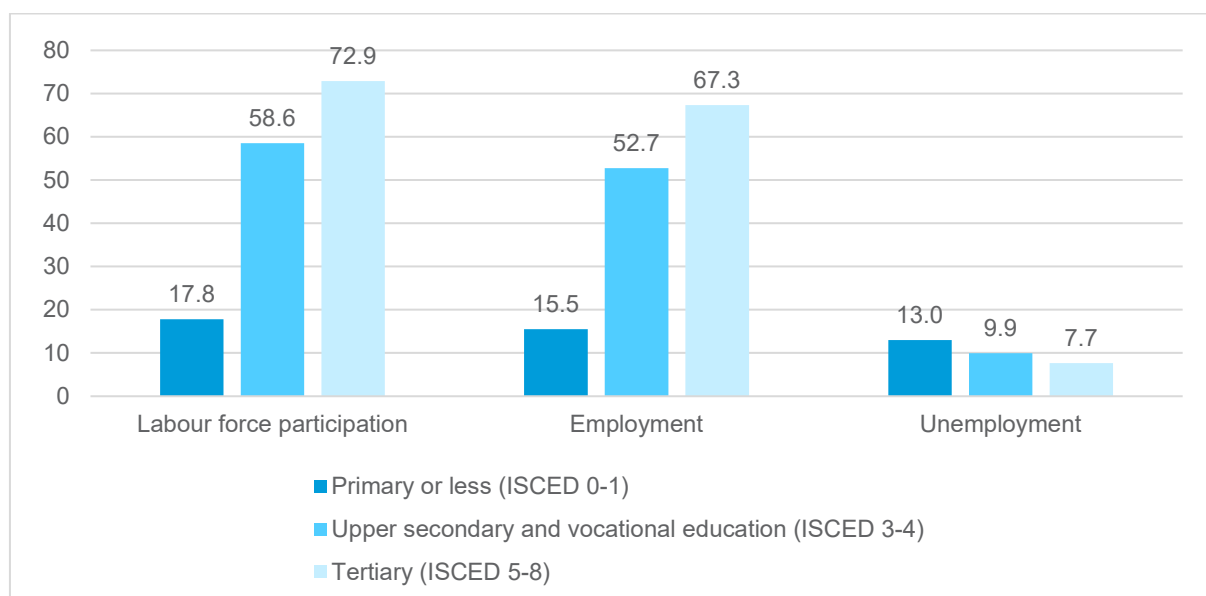
<sup>16</sup> Data provided by the State Employment Service of Ukraine. This consists of analytical and statistical information on supply and demand in the labour market by profession and activity type. Available at: <https://www.dcz.gov.ua/analytics/68>.

Informality is high in agriculture (42.9%), but also in the wholesale and retail trade (18.2%) and construction (15.9%). Informal employment is most widespread in the 40 to 49 age group<sup>17</sup>.

## 2.4. Higher education pays off for individuals

A highly educated workforce does not produce wealth or increase productivity in the economy but it provides better job opportunities for individuals and reduces poverty incidence. Although there is limited international comparative data on learning outcomes (World Bank Human Capital Index 2018), there is clear evidence of the importance of education for labour market outcomes in Ukraine. Evidence suggests that tertiary education provides much better employment prospects and economic returns, which clearly drives the high demand for tertiary education – it is the top priority for most young Ukrainians (World Bank, 2019a). The disconnection between Ukraine’s education sector and the needs of the labour market creates the wrong incentives both for students and educational institutions. However, many young Ukrainians appear to be increasingly over-educated relative to the types of jobs that are available in the labour market.

**FIGURE 6 LABOUR MARKET OUTCOMES BY LEVEL OF EDUCATION, 2018 (%)**



Source: Own calculations based on State Statistics Service of Ukraine labour force survey data

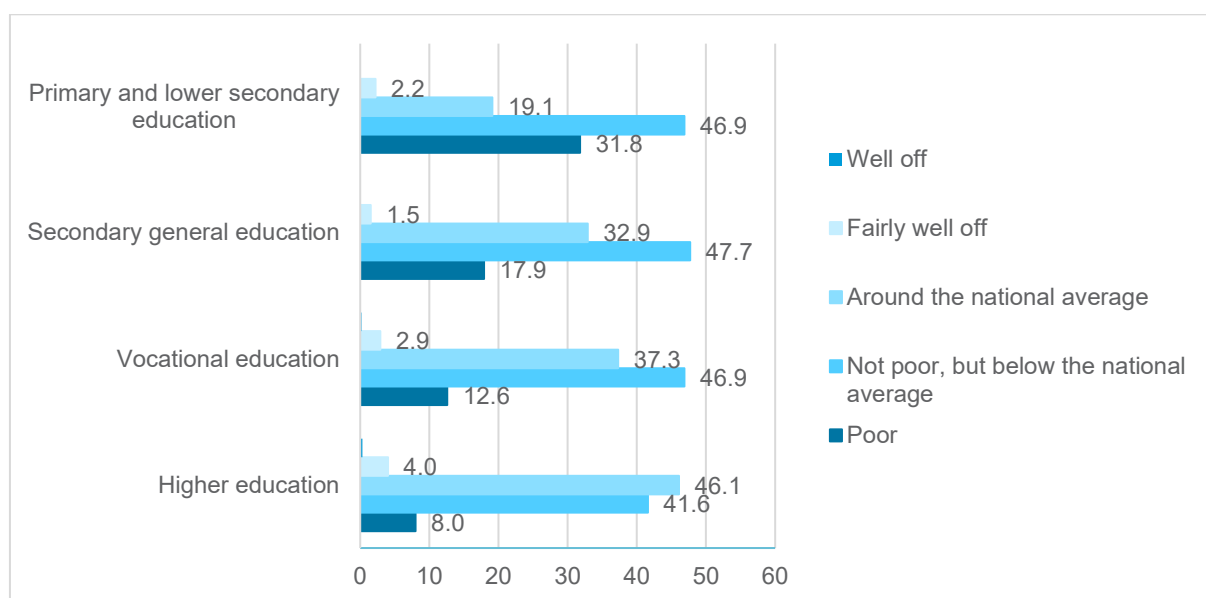
Although economic returns vary by field of study, all forms of tertiary education provide better outcomes than general secondary or vocational education. Therefore, students pursue tertiary education at any cost, regardless of field, quality or relevance of the programme. On average, over 67% of 15 to 70-year-old Ukrainians who have a college or a university degree were employed in 2018, compared to 52,7% of people with an upper secondary or post-secondary, non-tertiary (vocational) qualification and 15,5% of people with incomplete upper secondary education. Although higher educated workers are less likely to be unemployed, unemployment rates decrease only slightly with education (Figure 6).

<sup>17</sup> Informal employment by types of economic activity. Data available from State Statistics Service of Ukraine. Available at: [http://www.ukrstat.gov.ua/operativ/operativ2018/rp/eans/nzn\\_ved\\_2018\\_u.xls](http://www.ukrstat.gov.ua/operativ/operativ2018/rp/eans/nzn_ved_2018_u.xls).

Students therefore make their career and education choices without considering employment prospects or the needs of the labour market. At the same time, employers find that educational credentials do not accurately signal workers' underlying skills and competences. This leads to skills mismatches, over-education in the labour market and reliance on social connections and capital as well as alternate forms of skills assessments (World Bank, 2019a).

Higher education is also perceived as a way to succeed in life and combat poverty, as evidenced by the youth transition surveys conducted in 2013 and 2015 in Ukraine (Libanova et al, 2016). The results are illustrated in Figure 7. The higher the level of education of respondents, the better off they feel in society. Among employed young people, the proportion of young people with higher education is notably higher than the corresponding proportion among unemployed and economically inactive youth. Vocational education, on the other hand, remains undervalued. Despite evidence of an equal or higher wage premium among VET graduates, 73.2% of young people who planned to complete higher education expressed an unwillingness to enrol in VET even if they had a better chance of finding a stable job at a higher wage. The survey shows that, in 2015, only 13.7% considered participating in VET, while 84.6% planned to attain higher education.

**FIGURE 7 POVERTY BY EDUCATION LEVEL**



Source: School-to-work transition study, 2016

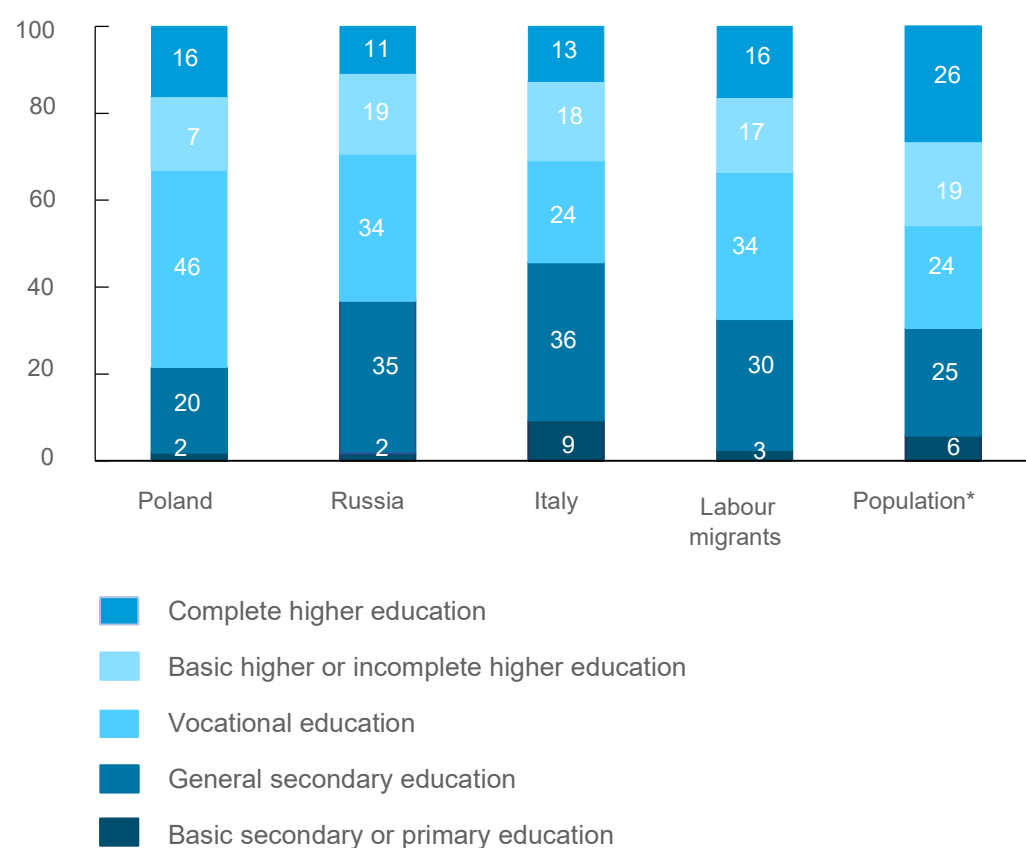
When asked why they would reject vocational education as an option, nearly half (48.2%) claimed that higher education was necessary for their desired future employment and 42.5% believed that higher education would bring them greater earnings in the future. One-quarter (25.2%) discarded vocational education due to its low social status, while the families of 14.7% of young people would object to them enrolling in VET.

Thus, changing the mindset and attitude of the population on VET will not be an easy task but it needs to be the focus of the government in the years to come. Low participation in VET and its lack of attractiveness will not allow the education system to supply sufficient number of skilled workers to meet future demand in the economy if serious long-term commitments are not made and actions are not taken today.

## 2.5. Skilled workers migrate for better earnings and quality of life

Recent migration studies suggest that, relative to the working-age population, migrants are less likely to be tertiary-educated, but more likely to have vocational or upper secondary education (Luecke and Saha, 2019). The main destinations for migrants are Poland, Russia and Italy. In addition to permanent and temporary residence permits and work visas, Poland has given 1.7 million short-term work authorisations to Ukrainians, increasing the total number of migrants to nearly 2 million in 2017. As regards the migrants' educational background, Poland attracts workers with vocational education, mainly in elementary occupations, while Russia receives the highest share of professionals. Labour force survey statistics report on the over-education of migrants in jobs that do not require any education: 46% of migrants in Poland and 56% in Italy but only 21% in Russia. With rising emigration to Poland, the reported shortages of industrial workers in Ukraine could become more pertinent in coming years (Figure 8).

**FIGURE 8 MIGRANTS' EDUCATION LEVEL BY DESTINATION COUNTRY<sup>18</sup>, 2017 (IN %)**



According to the National Bank of Poland and the National Bank of Ukraine, around 1.4 million Ukrainians migrated to Poland for work in 2016; this number increased to almost 2 million in 2017. However, labour migration tends to be short term and cyclical. Working abroad sustains the livelihoods of at least 2 million Ukrainian migrants and their dependents. Many migrants are members of a household in Ukraine. Remittances have been increasing in recent years and amounted to 8.5% of

<sup>18</sup> State Statistics Service of Ukraine, labour force survey, 2018.

## RECOMMENDATIONS

### 1. Harmonise vocational training provision at upper secondary level



Connect and harmonise provision in vocational schools, colleges and technikums (particularly after 9th grade)

Make better use of human and institutional capacity as well as resources for the benefit of learners.



### 2. Differentiate provision at professional, pre-tertiary level to distinguish it from secondary vocational education



Develop new post-secondary and/or short-cycle qualifications in line with the needs of the labour market and learners.

Actively engage employers and the National Agency for Qualifications to define and accredit new post-secondary and/or short-cycle qualifications.

Allow admission to pre-tertiary level programmes only after completion of upper secondary education (11th/12th grade)

### 3. Optimise school networks fairly and transparently



Set national guidelines for restructuring institutional networks using clear criteria to ensure relevance, efficiency and access

Carry out an organisational audit to appraise all secondary vocational and professional pre-higher education institutions

Prepare restructuring plans in all regions and empower regional VET councils to endorse them.

Amend the legislation on vocational and professional pre-higher education to harmonise provision and institutional networks

### 4. Diversify provision to increase access





## 5. Integrate the provision of vocational and general education at upper secondary level

- Amalgamate secondary vocational education and general secondary (academic) education.

Ensure attractive pathways to both academic and vocational tracks without institutional barriers in line with the New Ukrainian School concept.

Eliminate the negative connotations around old-fashioned types and names of vocational schools and institutions.

Develop an exam or admission route to allow vocational graduates to attain full secondary education and allow them to enrol in higher education

Develop a roadmap for the harmonisation of vocational and general education at upper secondary level



## Diversify vocational training provision Increasingly target adult learners

Increase the autonomy of providers and incentivise them to provide lifelong learning

Enhance the existing capacity of teachers and providers to train and attract adult learners.

Integrate vocational training provision for young people and adults by recognising prior learning, creating individual learning trajectories and modularising new vocational qualifications

## 6. Reform the teaching profession



Deploy qualified general education teachers to also teach learners in vocational trajectories

Integrate theory and practice into the teaching profession for better competence-based skills development

Review the competence requirements of modern vocational teachers by rewarding their work and practical experience in the workplace

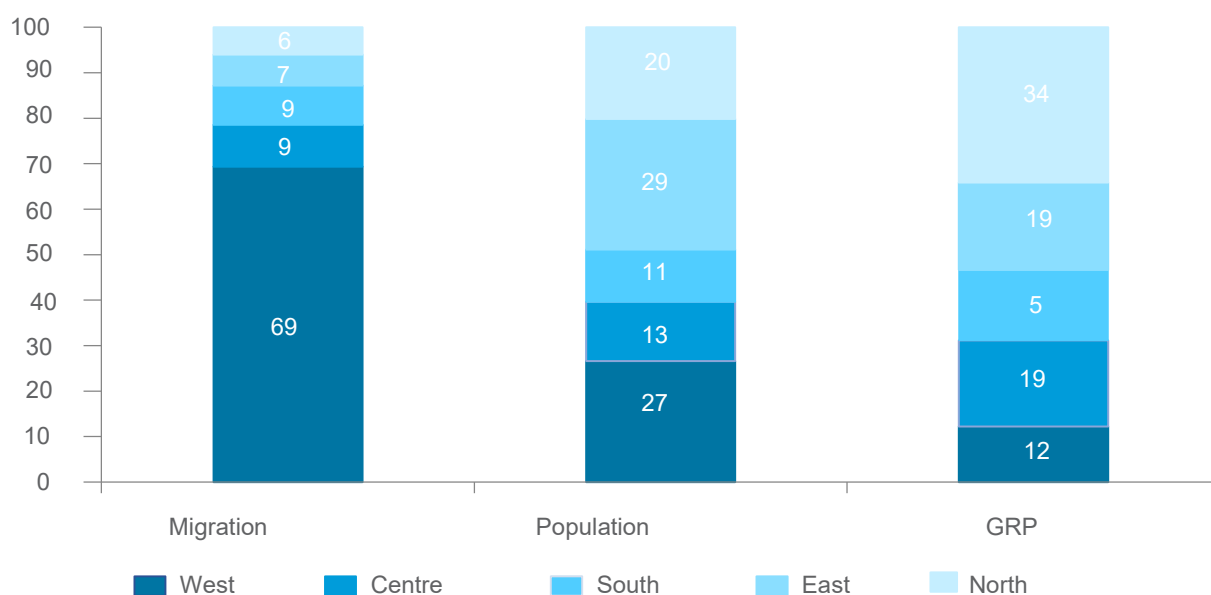
Develop a (short-cycle) pedagogical programme to enable professionals to qualify as vocational teachers



GDP in 2018<sup>19</sup>. The remittances sent by migrants in Poland alone contributed USD 3.1 billion to Ukraine's economy in 2017. However, some of the remittances come from IT specialists who physically reside in Ukraine and receive their income by working for foreign companies<sup>20</sup>. Wages have grown somewhat faster in the economic regions where there has been a greater increase in migration. However, real wage growth since 2015 represents mostly a recovery from the 2014 economic crisis.

Other risks to the development of the Ukrainian labour market are the increase in the migration of labour to other countries and the gradual loss of professional skills by those who could not find jobs corresponding to their occupation and qualification level. According to the State Statistics Service of Ukraine, almost 36.1% of labour migrants worked in jobs that did not require any qualifications. Only 26.8% of migrant workers worked in accordance with their qualifications (State Statistics Service, 2017). Prevalence of emigration (migrants/working-age population) is highest in Western Ukraine, where the employment rate, gross output and wages are also the lowest (Figure 9). Relative to the working-age population, migrants are less likely to be tertiary-educated, but more likely to have a vocational education: 34% of migrants have VET versus 24% of the working-age population, while only 16% of migrants have higher education versus 26% of the working-age population (Luecke and Saha, 2019).

**FIGURE 9 MIGRANTS, POPULATION AND GROSS REGIONAL PRODUCT, BY ECONOMIC REGION<sup>21</sup>, 2017 (IN %)**



Another significant phenomenon is a growing trend of educational migration among young people<sup>22</sup>. Ukrainian employers have argued that one-third of enterprises are affected by labour migration<sup>23</sup>. Even higher salaries offered by export-oriented industries have not stopped the migration flows of skilled workers who leave the country due to the deteriorating quality of life.

<sup>19</sup> National Bank of Ukraine, remittances data 2018.

<sup>20</sup> National reporting framework: B 1.3.

<sup>21</sup> State Statistics Service of Ukraine, labour force survey for 2017

<sup>22</sup> National reporting framework: A 3.1.

<sup>23</sup> National reporting framework: B 1.3.



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

This section discusses two issues related to human capital development in Ukraine: (i) VET and skills governance and (ii) declining participation in VET and its lack of attractiveness. These two issues are assessed in the context of ongoing reforms in the education sector. In the ETF's view, these issues require immediate attention and concrete actions to balance human capital development in Ukraine. The aim must be to make sure that public policies enhance the quality of VET and avert the decline in VET enrolment and the aspirations of both young people and the population as a whole. This is needed for a new start in skills development with a view to contributing to modern Ukrainian society and the economy.

Low participation in VET and the sector's lack of attractiveness is not a novelty for Ukraine. Improving guidance and counselling services is often considered a way to engage young people's interest in enrolling in VET programmes that are relevant to the labour market. Yet VET remains an unpopular choice in Ukraine, even though some guidance information is available to young people. Vocational guidance and counselling have been identified as an objective of inter-agency government policy. The government's action plan includes a number of steps aimed at introducing modern mechanisms for youth employment and disseminating information among young people about employment opportunities available in Ukraine. It has also been identified as a critical area in the new VET concept.

However, career guidance and counselling, which should start when students are in lower secondary education, cannot do miracles for VET. It is important, therefore, that guidance and counselling services help students in secondary education to be more aware of the labour market implications of their choices. A lot of work is already going on in Ukraine in this area<sup>24</sup>. Such work includes cooperation activities between general education schools and VET providers. The aim is to inform young people about different occupations and to involve employers in providing career guidance, which may help to change attitudes towards VET. It is equally important that adequate guidance and counselling services are available for students opting for upper secondary general or higher education.

There is an opportunity now to make a difference regarding VET, given the ongoing reforms and attention to systemic changes in education. One of them is the objective of the New Ukrainian School: to profile upper secondary education in both academic and vocational pathways. This offers an opportunity to guide and influence the preferences of students and their parents.

#### 3.1. VET and skills governance

##### 3.1.1. No holistic, integrated education strategy

Ukraine started to actively reform its education system in 2014 when a new Law on Higher Education was adopted. This was followed by the Law on Education in 2017. It provides the strategic framework for the implementation of reforms. The greatest attention has been given to modernising primary and secondary general education in which the concept of the New Ukrainian School guides the reform actions and sets the timetable for them.

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<sup>24</sup> National reporting framework: C 3.4.

A new law on VET has been drafted and is due to be submitted to the parliament once the new government has approved it. The new concept on modern VET includes the main elements on VET reform, which Ukraine plans to implement in the years to come.

The Law on Higher Education adopted in 2014 underpinned the move by the Ukrainian higher education system to align with the Bologna reforms. It also introduced the National Agency for Higher Education Quality Assurance, which has started its operations. The law also removed the institutions that provided level 1 and 2 accreditation – colleges and *technikums* – from the higher education system. Initially, the intention was to unite these institutions under the VET system. However, institutional reforms were compromised based on the legacy of the past and the lack of political will to proceed with the unpopular and painful process of restructuring institutional networks.

In developing the Law on Education, given the urgent need to introduce modern principles for the entire education system, a number of compromises were made, e.g. ambiguity about what is considered to be vocational education and what is considered to be tertiary education. In our view, these impede the advancement of changes in the system and policy implementation. Although the law stipulates a new structure for the education system, it has been resolutely aligned with old institutional structures and their vested interests. Although a new legal and strategic framework has been developed and adopted, various education sub-systems are still poorly or vaguely connected and focus on resolving their own specific problems in terms of governance, provision and funding.

In order to advance education sector reform, Ukraine needs to take a holistic view and develop a new lifelong learning system where different parts of the education system are well integrated with fair and, if possible, harmonised rules and principles that guide policy implementation for the benefit of learners, the economy and society.

The Law on Education (2017) assigned an important role to the national qualifications framework, lifelong learning and competence-based education. The law distinguishes between educational qualifications, delivered through formal education, and professional qualifications, focused on use in the labour market. It introduces the National Qualifications System, sector qualifications frameworks and partial qualifications. It also establishes the responsibilities of the National Agency for Qualifications, which is a collegial body supported by the government and social partners. The agency's statutes were adopted in December 2018 and the establishment of the functional agency is under way. It will have a number of tasks to perform, e.g. coordinating and informing stakeholders; supporting legislative developments; developing and maintaining a registry of qualifications; coordinating the development of occupational standards; supporting the development of educational standards; accrediting qualification centres; overseeing the recognition and validation of non-formal and informal learning; and establishing the criteria for recognising foreign qualifications.

In 2019, the implementation of the New Ukrainian School reform process continued. The strategic document – Competence Potential (Foundations of the State Standard) – was adopted. It is a competence-based framework for the final, compulsory learning outcomes at the end of each education cycle (2nd, 4th, 6th, 9th and 12th grade) and by each subject area. The framework will guide the development of the state standard for each cycle of education beyond primary school (basic secondary, upper secondary education and VET (ISCED 2 and 3)).

Decentralisation of the education system, including VET, began in 2014 and is still under way. Allocation of state budget subventions for VET for each region is approved annually in the Law on State Budget<sup>25</sup>. In 2018, the largest subventions for the modernisation of VET institutions were transferred to the Kyiv region (UAH 12.9 million) and to the Vinnytsia, Dnipropetrovsk, Lviv, Mykolaiv and Kharkiv regions (UAH 5.4 million for each region). The shift of VET funding to the local level caused a problem in many regions. Although financial decentralisation aimed to expand the resource base, local funds cover only about 60% of needs in the regions. Local funding covers even less in the case of VET institutions located outside regional centres – only 45% of their needs (Financial and Economic Analysis Office in the VRU, 2019).

As part of the decentralisation process, regional VET councils were established in all regions. They are advisory and consultative bodies in the regional state administrations, and they are responsible for the preparation and oversight of regional VET policy. The ETF has advised the government on the modus operandi and international practices of such councils (ETF, 2018). With a view to activating the work of the councils, the Cabinet of Ministers approved a new statute for the councils<sup>26</sup> on 4 December 2019. This statute defines the main tasks and responsibilities of the councils' operations. The inter-agency councils need to have at least 21 members, representing the regional authorities, social partners, VET providers and relevant professional organisations. The councils can potentially become the main vehicles to consolidate the vision and strategic priorities of VET reform implementation at regional level.

On 12 June 2019, the Cabinet of Ministers adopted the concept on Modern Vocational Education, which is scheduled to run until 2027<sup>27</sup>. The objective is to implement systemic VET reform, which involves the implementation of three main priorities: decentralising VET governance and financing, improving quality assurance and developing public-private partnerships.

## REGULATORY AND LEGAL FRAMEWORK FOR VOCATIONAL EDUCATION



1. **Modern vocational education concept, which is to run until 2027** (Cabinet of Ministers of Ukraine Decree No. 419-p dated 12 June 2019)



2. **Concept for the dual training of workers and the action plan for its implementation** (Cabinet of Ministers of Ukraine Decree No. 660-p dated 19 September 2018 and No. 214-p dated 3 April 2019)



3. **Draft law of Ukraine on vocational (technical and vocational) education** (approved by the government on 10 July 2019 – awaiting adoption by the parliament)

4. **Subvention for the modernisation and upgrading of the equipment and facilities of VET institutions** (Cabinet of Ministers of Ukraine Resolution No. 302 dated 10 April 2019)

<sup>25</sup> See <https://zakon.rada.gov.ua/laws/show/2696-19>.

<sup>26</sup> See <https://www.kmu.gov.ua/npas/pro-zatverdzhennya-tipovogo-polozhennm1002ya-pro-regionalnu-radu-profesijnoyi-profesijno-tehnichnoyi-osviti>.

<sup>27</sup> See <https://www.kmu.gov.ua/ua/npas/pro-shvalennya-koncepciyi-realizaciyi-derzhavnoyi-politiki-u-sferi-profesijnoyi-profesijno-tehnichnoyi-osviti-suchasna-profesijna-profesijno-tehnichna-osvita-na-period-do-2027-roku-i120619>.

Policy measures are proposed to be implemented in three stages. During the first stage (2019–2021) the plan is to adopt the Law on Vocational (Vocational & Technical) Education and the Action Plan (which is scheduled to run until 2027); continue decentralisation; and launch a network of qualification centres. During the second stage (2022–2024) the plan is to complete a transition to regional budget financing for VET institutions located in regionally significant cities; implement the NQF and the national qualifications system; move to competence-based education programmes and standards; and finalise the internal quality assurance system. During the third stage (2025–2027), a number of results are expected: the VET schools network should be optimised; preparatory work on the introduction of vocational trajectories in upper secondary education should be completed; and a network of regional VET centres of excellence and a comprehensive internal and external quality assurance system should be created. Responsibility for the implementation of VET reform is shared by the government and regional administrations. The new EU4Skills programme aims at supporting the government and regions in implementing these measures.

Another strategic document for VET development is the Concept of Dual Training adopted by the Cabinet of Ministers in September 2018. It aims at combining work and learning in VET and higher education and increasing the youth employment rate. Its implementation is planned in three phases: phase I – legislation and regulatory framework development (2018–2019); phase II – design of dual training modes and delivery of pilot projects (2019–2020); and phase III – creation of dual training clusters (2020–2023).

### 3.1.2 Professional pre-higher education is disconnected from secondary VET

One example of an unfortunate result of the compromised reforms is the establishment of the sub-system which now falls between higher education and VET and is known as professional pre-higher education. The new Law on Professional Pre-Higher Education was adopted at an unprecedented speed in June 2019<sup>28</sup>. It sets out the institutional and legal framework in which colleges and *technikums* may define their specific place and role in the education system. The law introduces new qualifications and degrees, which are a new feature of the Ukrainian education system: junior bachelor and professional junior bachelor. They are defined as new short-cycle programmes; neither learners nor employers are yet familiar with them. The 2019 academic year was the last year in which junior specialists were admitted to colleges and *technikums*; as of 2020, new enrolments should be aligned with new programmes.

As the data in Table 4 shows, the majority of programmes provided by colleges and *technikums* in recent years led to qualifications for junior specialists, which have now been moved to secondary VET. Almost 74% of students in colleges and *technikums* have enrolled in programmes after 9th grade. The majority of students (95.7%) are enrolled in non-tertiary vocational programmes (junior specialists) while only around 4% are enrolled in bachelor programmes. New enrolments followed the same trend in 2018/2019 with nearly 97% studying in non-tertiary vocational programmes versus 3% in bachelor programmes. This means that the overwhelming majority of programmes provided by these institutions lead to VET qualifications, which are offered in parallel for the same age cohort by secondary VET institutions.

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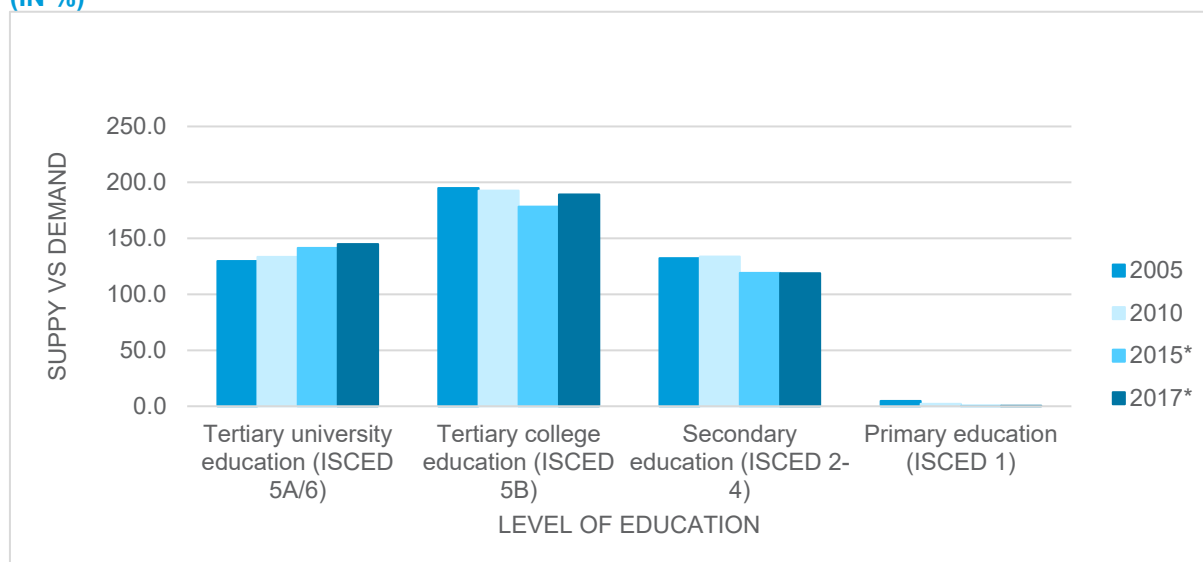
<sup>28</sup> See <https://zakon.rada.gov.ua/laws/show/2745-19>.

**TABLE 4 SELECTED DATA ON PROFESSIONAL PRE-HIGHER EDUCATION**

	2010/2011	2015/2016	2018/2019	Percentage
<b>Number of institutions</b>	483	387	370	
<b>Number of students</b>	351 444	230 110	199 926	
Enrolled after 9th grade			147 069	73.60%
Enrolled after 11th grade			52 857	26.44%
<b>New enrolments</b>			35 101	
Enrolled in junior specialist programmes			33 963	96.76%
Enrolled in bachelor programmes			1 138	3.24%
<b>Source of funding per number of students (%)</b>				
National budget	36.3	36.0	13.5	
Local budget	21.8	28.1	52.6	
Private tuition fees	41.8	35.6	33.9	
Enterprises	0.1	0.3	0.0	

Source: Ministry of Education and Science and own calculations

Moreover, as seen in Figure 10, analyses of the labour market outcomes of workers who completed short-cycle tertiary education programmes (college and technikum graduates) show the highest incidence of education level-occupation mismatch by comparing supply of labour force by education versus demand (employed by level of occupation). This segment of the Ukrainian education system therefore calls for a serious rethinking of the relevance of training programmes to labour market needs.

**FIGURE 10 EXCESS LABOUR SUPPLY RELATIVE TO DEMAND, BY EDUCATION, 2005–2017 (IN %)**


Data source: State Statistics Service of Ukraine, labour force survey data<sup>29</sup> based on Olga Kupets's calculations

<sup>29</sup> Data of 2015 and 2017 exclude Crimea and occupied territories of Donetsk and Luhansk regions

As in the case of secondary VET, enrolments in colleges and *technikums* have been decreasing. Enrolments dropped by 57% in 2018 compared to 2010 and the number of institutions declined from 482 to 370 over the same period (Table 4). Local governments have taken over most of the funding due to the decentralisation of institutions to the regions. In our view, it would be vital to review the rationale of these institutions and their qualification programmes in the context of the ongoing VET reform. This would also be essential to achieve the ambitious target of increasing participation in VET to 45% as per the new government programme<sup>30</sup> and improving the overall matching of supply with labour market demand. As the programme includes both secondary VET and professional pre-higher education in this target, we assume that it is in the interest of the government that these levels are integrated and harmonised in terms of governance, provision and funding.

### 3.1.2 Lifelong learning needs to be integrated into overall VET reform

With a shrinking workforce and a declining youth population, the importance of upskilling and requalifying the Ukrainian working-age population becomes increasingly important. VET institutions could play an important role in attracting more adult learners to participate in lifelong learning courses. As the table below shows, the participation rate of the adult population (aged between 25 and 64) in lifelong learning is very low. It is even lower than in Romania, the EU country with the lowest level of adult participation in lifelong learning (0.9% in 2018). Given the institutional capacity and potential of the large network of both secondary VET and professional pre-higher education institutions and resources to be freed up as a result of the restructuring of the networks, VET provision should increasingly target adult learners in addition to secondary school graduates, who are their clients at the moment.

**TABLE 5 PARTICIPATION IN LIFELONG LEARNING**

Indicator		2017	2018
Participation in training/lifelong learning (age group 25–64) by sex (%)	Total	0.8	0.8
	Male	0.8	0.9
	Female	0.8	0.7

Source: State Statistics Service of Ukraine, labour force survey data

Continuing vocational training (CVT) as a form of adult learning in the formal education and training system is also undergoing transformation and needs some clarity in the legal framework. The expected adoption of the relevant Law on Adult Education, which is based on the framework Law on Education, will allow the expansion of existing opportunities in this area. CVT is mostly implemented as postgraduate education in higher or vocational education institutions. It includes the training and retraining of employees or unemployed people, further education or courses to upgrade existing qualifications or an opportunity to acquire a second higher education degree<sup>31</sup>.

According to a study carried out by the Institute of Professional Qualifications, 93% of the employers surveyed were satisfied with the professional competences of adult VET graduates. This is an indication of the promising capacity of VET providers to train adult learners<sup>32</sup>. Ukraine's overall institutional coverage and capacity to provide VET for adults is strong. This is because, in addition to secondary VET and professional pre-higher education institutions, the State Employment Service has

<sup>30</sup> See <https://www.kmu.gov.ua/diyalnist/programa-diyalnosti-uryadu>.

<sup>31</sup> National reporting framework: A.3.3.

<sup>32</sup> See [http://www.ipq.org.ua/upload/files/files/03\\_Novyny/2019.05.15\\_Zvit/IPQ\\_Report\\_09.05.19.pdf](http://www.ipq.org.ua/upload/files/files/03_Novyny/2019.05.15_Zvit/IPQ_Report_09.05.19.pdf).



a network of 11 VET centres which offer CVT courses annually to almost 40 000 people. In addition, more than 2 000 licensed private VET providers operate as structural divisions of big industrial companies<sup>33</sup>. As Table 4 shows, the share of private tuition fees for programmes offered by professional pre-higher education providers amounts to one-third of their total funding, which means that they are able to attract learners for fee-based programmes. This is an important prerequisite for developing demand-driven courses in the absence of government funding for adult learning.

It is also important to include in the legislation a clear procedure for recognising full and partial qualifications (currently, only occupations can be recognised) and reinforce validation of informal and non-formal learning practices, which are critical aspects in enhancing lifelong learning.

## Recommendations

It would be crucially important to avoid a situation in which the previous junior specialist qualifications would be artificially upgraded to comply with the new 'degrees' stipulated by the Law on Professional Pre-Higher Education without clearly differentiating between the two and ensuring that the content of the new qualifications was relevant to the labour market. Such a situation would only confuse employers who would have difficulties in understanding the new degree programmes and the skills that they cover and it would also continue to harm the employability of learners in the labour market. Ukraine could consider the following scenarios to reform these institutions and their programmes in the context of the ongoing VET reform:

1. **Harmonise VET provision at upper secondary level after 9th grade**
  - Connect and harmonise provision and programmes and merge institutions (VET schools, colleges and *technikums*) within upper secondary VET, particularly in the fields of studies in which the majority of students enrol after 9th grade. The current trajectories risk overlapping and having duplication of provision in at least some programmes. This would help to optimise provision and make better use of both human and institutional capacity and the resources of colleges and *technikums* for the benefit of learners.
2. **Differentiate provision at professional pre-tertiary level to distinguish it from secondary VET**
  - Differentiate between more complex programmes, for example in healthcare and technical fields by developing new post-secondary and/or short-cycle qualifications, for example at level 5 in the NQF where there is evidence of clear demand in the labour market and among learners.
  - Actively engage employers and the National Agency for Qualifications to define and accredit new post-secondary and/or short-cycle qualifications.
  - Allow admission to pre-tertiary level programmes only after completion of upper secondary education (11th/12th grade).
3. **Manage optimisation of school networks in a fair and transparent way**
  - Set national guidelines for the optimisation and restructuring of institutional networks using clear criteria to ensure a) the labour market relevance of qualifications awarded by institutions; b) efficiency in the use of teaching and learning resources; c) access of learners in line with their residential distribution across the country and the regions.
  - Carry out an organisational audit to appraise all secondary VET and professional pre-higher education institutions in relation to their capacity, provision and resources.

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<sup>33</sup> National reporting framework: A.2.3.

- Prepare restructuring plans in all regions based on institutional appraisals and stakeholder consultations and empower regional VET councils to endorse them.
- Amend the current and upcoming legislation on VET and professional pre-higher education to harmonise provision of VET and institutional networks.
- 4. **Diversify VET provision to increasingly target adult learners**
  - Increase the autonomy of providers and incentivise them to provide lifelong learning courses.
  - Build on and enhance the existing capacity of teachers and providers as a whole to train and attract adult learners.
  - Integrate VET provision for young people and adults gradually by recognising prior learning, creating individual learning trajectories and modularising new VET qualifications while allowing partial qualifications. For example, the State Employment Service has already gained experience of individual learning trajectories by delivering retraining programmes for adult learners and these can be further analysed and scaled up. Another reference worth exploring, is Finland's experience in combining young and adult learners in the same programmes.

### 3.2. Low participation and attractiveness of VET

As discussed earlier, higher education has become considerably more important in Ukraine's education system. Participation levels are the highest in Europe. This has raised concerns about the sustainability and quality of the system, and the employability of graduates. Ukrainians have a strong preference for tertiary education in order to be successful and competitive in the labour market and to satisfy their aspirations to have a higher education diploma at any cost. This has created a high level of credentialism in the labour market, where both jobseekers and employers put an emphasis on educational credentials. Although the labour market analyses show the highest returns to education for tertiary education graduates, particularly at master's level, it would be important to look into other elements and policies that could raise the profile of VET and improve the quality of VET provision. This section discusses a number of issues linked to low participation in VET and its lack of attractiveness, which is a complex and multi-faceted, societal and institutional issue and must be addressed via a holistic and comprehensive set of actions and policies.

As Figure 11 shows, enrolments in secondary VET have been rapidly declining in the last five years. The drop has been sharper among students who have completed secondary general education in full (after 11th grade). This can be explained not only by a decreasing age cohort but also by the increasing number of opportunities offered to young learners by higher education institutions. Educational institutions are currently fighting for a lower number of applicants and trying to fulfil the government-financed enrolment plans.

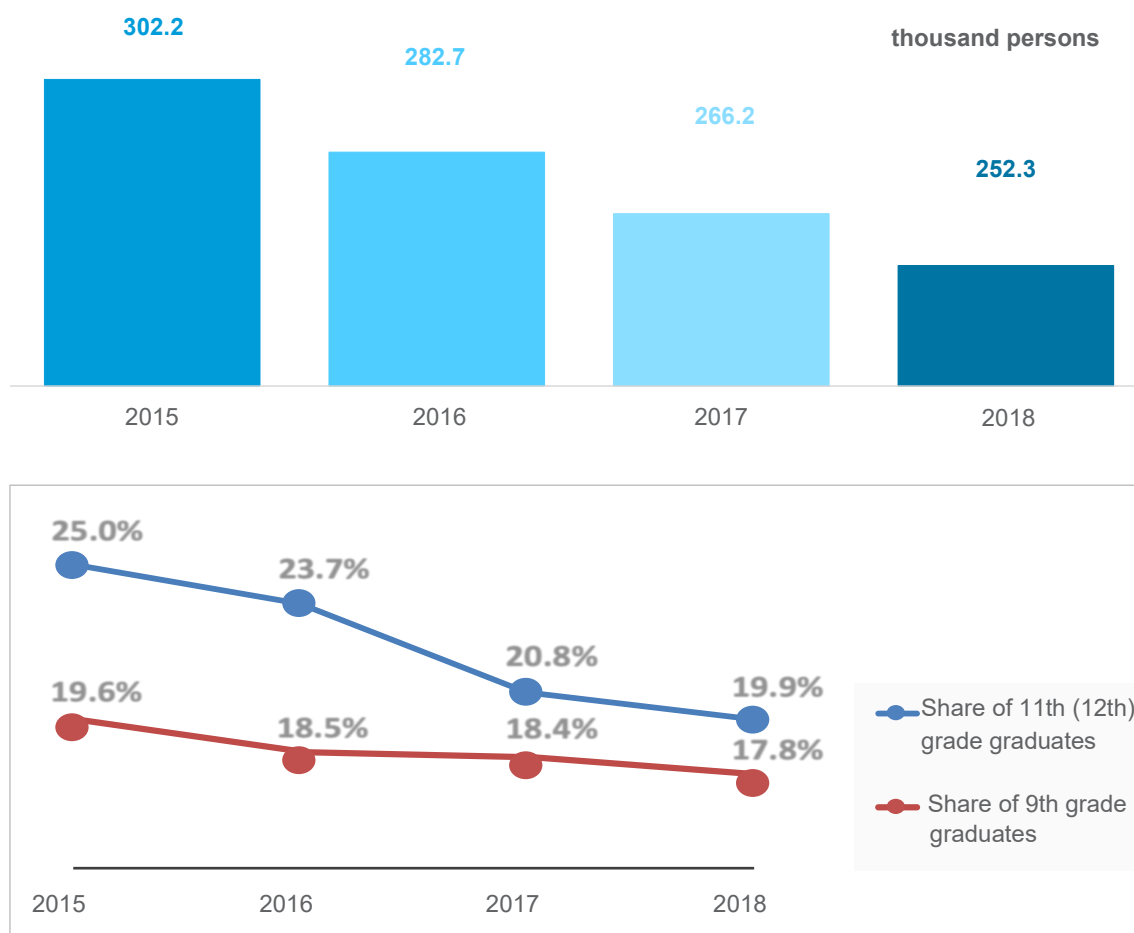
In 2018, the following professions were the most popular among students and learners in secondary VET institutions: drivers of motor vehicles, chefs, tractor drivers and mechanics, car mechanics, welders, confectioners, hairdressers and manicurists, tailors, computer operators, agricultural machinery and equipment mechanics, electricians and bricklayers. These occupations have been in high demand among learners since 2011 and over 86% of students who enrolled in VET between 2011 and 2017 studied these professions<sup>34</sup>.

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<sup>34</sup> National reporting framework: A.2.3.



**FIGURE 11 VET ENROLMENT SINCE 2015**



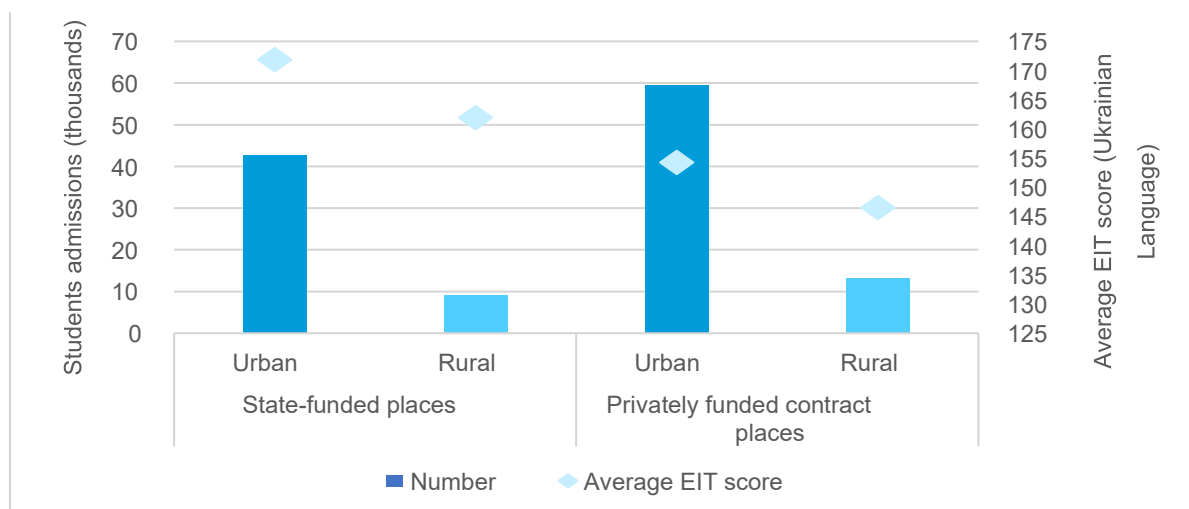
Source: Ministry of Education and Science.

### 3.2.1 Segregation of students at an early age has turned the current VET system into a dead-end

About 60% of 9th grade students choose to continue their education in general secondary schools in which the quality of education varies between urban and rural areas. Inequality and access to quality education becomes an issue at this stage of young people's lives and this has consequences for their later career choices and opportunities. Those who enter elite urban schools with specialised curricula are more likely to secure top scores in the EIT. The results of the EIT are used for higher education admission. These schools use competitive admissions procedures, which ensure that their students perform well in the EIT: 55% of these students choose to take the mathematics EIT, considered to be one of the most difficult subjects, and it is required for admission to many fields in demand in higher education.

Students in ordinary urban schools are less likely to choose the mathematics EIT (45%), and only 40% of students in ordinary rural schools do so (World Bank, 2019a). Rural students are less likely than urban students to exceed the EIT cut-off thresholds and are considerably less likely to apply to and enrol in higher education. A total of 70% of urban students pass the EIT and ultimately enrol in higher education; this compares with 40% of rural students (Figure 12). Only 17% of state-funded places for bachelor programmes in 2018 were given to students from rural areas.

**FIGURE 12 HIGHER EDUCATION ADMISSIONS BY STUDENT ORIGIN AND EIT PERFORMANCE (2018)**



Source: World Bank calculations based on EDEBO (Unified State Electronic Education Database). database

The situation is aggravated for students in secondary VET institutions, who are obliged to sit the EIT in order to obtain a secondary education diploma. Their scores are lowest among all students participating in the EIT, with many failing to pass the exam thresholds. Only around 7% of VET graduates continue their studies in higher education institutions<sup>35</sup>. Due to the academically biased EIT (which most VET students fail), selective admission of high and poor performers at 9th grade and the generally poor image of VET, the current secondary VET system is practically a dead-end in Ukraine. This limits the access and capability of VET graduates to continue their studies in higher education and participate in lifelong learning. It would be important to consider the development of an alternative matriculation test for students graduating in the VET track with a combination of admission exams that would encourage them and enable them to progress to further studies, e.g. in the same fields of study in higher education institutions.

#### 1. Fragmentation of upper secondary general education provision DIMINISHES the quality

It will be critical for Ukraine to accelerate the expected reform of upper secondary education, to introduce the new three-year curriculum structure and to streamline educational pathways from secondary to tertiary education in line with the New Ukrainian School concept. The current structure of upper secondary education in Ukraine is fragmented: as discussed previously in this assessment, upper secondary general education is offered in general secondary schools as well as in vocational schools, colleges and technical schools. At the same time, the quality of education outcomes as evidenced by the EIT results varies substantially in different types of institutions, leaving the students enrolled in various types of VET institutions in the most disadvantaged position.

The transition towards a student-centred and competence-based approach to learning in line with the New Ukrainian School vision will be challenging at the upper secondary level unless reforms are implemented to concentrate and consolidate resources such as schools, teachers, funding and instructional time (World Bank, 2019a). Such reforms will increase the duration of upper secondary

<sup>35</sup> National reporting framework, table 8.

education from two to three years. This is an advantage for students, giving them more time to decide on their future studies and careers and equipping them better with important key competences for lifelong learning.

## 2. A large network of small providers at all levels leads to the inefficient use of learning resources and diminishes quality

The Law on Education and the New Ukrainian School stipulate that upper secondary education will have both academic and vocational trajectories. Although the target year for the implementation of a three-year upper secondary programme is set for 2027, Ukraine should start seriously considering and finding ways to merge and consolidate the learning resources and facilities in both upper secondary general education and secondary vocational education to combat the segregation of young people's career and study opportunities at an early age.

**TABLE 6 EVOLUTION OF VET INSTITUTIONS AND PARTICIPATION IN VET**

Year	Number of institutions	Number of students	Share related to 1990	Students per institution	Share related to 1990
1990	1 246	643 400	100%	516	100%
2000	970	524 600	82%	541	105%
2010	976	433 500	67%	444	86%
2013	968	391 200	61%	404	78%
2017	756	269 400	42%	356	69%
2018	736	255 000	39.6%	347	67%

Source: [http://www.ukrstat.gov.ua/operativ/operativ2005/osv\\_rik/osv\\_u/ptu\\_u.html](http://www.ukrstat.gov.ua/operativ/operativ2005/osv_rik/osv_u/ptu_u.html).

A large network of VET providers has been decreasing in size over time (Table 6) but there is still a high number of providers throughout the country. Due to the decentralisation of institutions to regional and municipal level, the number of providers has shrunk more rapidly since 2013 as a result of mergers and closures. At the same time, the average size of providers is declining due to the low level of enrolments, which reduces their potential and flexibility as well as their attractiveness. The report on the national reporting framework shows that in the period between 2016 and 2018 there had been no significant optimisation of provider networks at regional level except in Kharkiv, Lviv and Zaporozhia<sup>36</sup>.

While VET providers in larger cities are usually better equipped and staffed, the situation is most difficult in rural areas for both VET and general education. Due to the small size and limited capacity of providers, rural providers are often not able to form study groups for different occupational profiles, but instead end up training all students in the same profession. This leads to a surplus of supply and, in particular, qualifications that do not necessarily reflect labour market demand (ETF, 2019, unpublished).

Article 18 of the current Law on VET (adopted in 1998) defines 16 different types of VET providers. Article 32 of the new draft Law on VET suggests reducing the number of provider types to four, namely professional *lyceum* (a specialised secondary school), centre of vocational education, centre of professional development of employees and professional college. Article 31 of the Law on Pre-Higher Education defines three types of providers: professional college, military college and

<sup>36</sup> National reporting framework: Table 2.

professional college with specific learning conditions (e.g. for the needs of police, border control and law enforcement authorities).

The Law on Education requires a 12th grade to be introduced by 2027. However, by accelerating reform, Ukraine could speed up the restructuring of school networks and ensure a quicker transition to three-year upper secondary education. Moreover, integrating the reform agendas driven by the New Ukrainian School and secondary VET would also avoid further fragmentation of academic and vocational learning pathways.

The horizontal integration of schools at upper secondary level with VET providers and their learning resources could increase operational efficiencies; improve the quality of teaching and learning, particularly in general education subjects; and, more importantly, abolish the stigma associated with VET, which is deeply rooted in Ukrainian mindsets.

School optimisation and restructuring at upper secondary level, including VET, could be piloted first in a number of regions or large cities or municipalities. Thus, the same large education provider would offer both academic and vocational pathways for students who have completed 9th grade. Former independent schools would become new units or departments within the new education provider with subject-, occupation- or location-specific learning centres. Underutilised schools, vocational *lyceums* and colleges would be merged or closed.

### 3. Low status of the teaching profession

In 2019, a total of 33 900 people were involved in teaching in VET. This figure included 14 800 senior instructors and vocational training instructors. There are more than 3 000 open vacancies for teaching staff. Key factors in the decrease in the number of teaching staff are a decline in the number of enrolments of VET students and the low social status of VET instructors<sup>37</sup>. Lower salaries for VET teachers relative to their peers in industry is another contributing factor. This has led to an ageing teacher workforce, low professional mobility and poor motivation to master modern technologies.

The existing legislation determines requirements for VET teachers<sup>38</sup>. In order to become a VET teacher, a student/candidate needs to have a full higher education (master's or specialist degree) with vocational education as their main subject or another full higher education degree with psychological and pedagogical training. Practical instructors are required to have a college level or higher education in their specialism and their qualification level (grade) should not be lower than the standard set for the specific occupation or field of study which the instructor is hired to work on. The above requirements do not yet guarantee the expected results.

VET teacher education and requirements would need to be revisited. The focus in VET teacher education should be on teachers' professional competence and practical work experience and less on pedagogical aspects. Ukraine continues to follow the old Soviet model, which separates theoretical teaching from work practice. Teachers who teach theory have a higher status and pay while instructors of practical training who are expected to have practical work experience are paid less than theory teachers and their peers working in industry, making this job unattractive to professionals. Moreover, moving towards a competence-based approach and modular programmes requires better integration of theory and practice. Regulations for VET teachers should be modernised and a new

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<sup>37</sup> National reporting framework: D 2.5.

<sup>38</sup> National reporting framework: D 2.1., D 2.2., D 2.3.

type of VET teaching profile, combining theory and practice, could be developed and piloted which rewards and incentivises teachers who gain practical work experience.

Requirements for VET teachers could be harmonised with those of the New Ukrainian School concept. Efforts should be made to attract more competent specialists from industry by giving them the option of gaining a pedagogical qualification to qualify as a VET teacher. A specific modular course on vocational pedagogy could be developed, which the candidates could undertake while working in a VET institution. The role of teachers and trainers is rapidly changing internationally; teachers and trainers are less involved in teaching and concentrate more on supporting individuals to learn, often in different locations. This means that teachers will have to learn new skills, including digital skills, and unlearn some existing habits.

## Recommendations

In order to combat the declining enrolments in VET programmes and increase the overall attractiveness of VET, we recommend implementing actions that will help to reduce the stigma associated with current VET institutions and provision and cease the segregation of young learners at an early age. The aim would be to increase VET participation as envisaged in the new government programme.

1. **INTEGRATE the provision of VET and general education at upper secondary level**
  - Harmonise provision at upper secondary level after 9th grade by horizontally amalgamating secondary VET and general secondary (academic) education.
  - Ensure attractive pathways to both academic and vocational tracks without institutional barriers in line with the New Ukrainian School concept.
  - Rename the providers, particularly the VET providers, to get rid of the negative connotations of old-fashioned names and types of VET schools and institutions. For example, several post-Soviet countries have renamed or plan to rename all providers as (vocational) colleges that can combine VET programmes at different levels.
  - Develop an alternative matriculation exam or admission route to replace the academically biased EIT as an obligation for VET graduates to attain full secondary education and allow them to enrol in higher education.
  - Develop a roadmap for the harmonisation of VET and general education reform at upper secondary level with the support of the development partners, namely the EU and the World Bank.
2. **Reform the teaching profession**

Ukraine needs to develop the skills and competences of VET teachers and trainers and use them more efficiently to improve the quality of learning and the attractiveness of VET and to make the teaching profession appealing. In our view, this could be achieved by the following measures:

- Integrate general and vocational education at upper secondary level by deploying qualified teachers who work in general education to also teach learners in VET trajectories;
- Abolish the Soviet legacy of separating the teaching of theory by VET teachers (in the case of special subjects) and the provision of instruction by practical trainers or instructors. Integrate theory and practice into the teaching profession as it is increasingly essential in competence-based skills development.
- Review the competence requirements of modern VET teachers by rewarding their work and practical experience in the workplace or in industry (at least three years) and making it compulsory.

- Develop a (short-cycle) pedagogical programme that will enable professionals to qualify as VET teachers with attractive remuneration, career prospects and associated social status. Facilitate skilled professionals in obtaining their VET teacher qualification through distance and on-the-job training schemes while working in VET institutions.

## 4. CONCLUSIONS

This ETF assessment provided an overview of human capital development issues in Ukraine, and analysed the challenges affecting policy implementation in relation to reforms that were recently launched in education and the VET sector. Following a review of the policy responses to the main challenges, the analysis identified key features of the human capital development system in Ukraine.

The report established that the country has made significant progress in launching much-needed reforms over the last five years, notably in the education sector. However, it noted that economic growth is not yet on a sustainable path and investments are badly needed to create new jobs and increase the productivity of the economy. High educational attainment benefits individuals more than it benefits the economy as a whole. While a significant proportion of the tertiary-educated population has to work in semi-skilled occupations, low demand for VET raises concerns about having a sufficient supply of skills to replace an ageing workforce. The government is strongly focused on addressing declining enrolments and the lack of attractiveness of VET. Brave decisions and long-term commitments will be needed to align the education system with the needs of the labour market. Restructuring institutional networks is an essential task to increase operational efficiencies and get better value for high spending on education.

The results of the analysis point to the ills of the current VET system and suggest potential solutions to address the above-mentioned issues. The report discussed how well VET fits with the overall context of education reform in Ukraine and what needs to be done to make it part of an integrated lifelong learning system. The analysis identified two issues that require immediate action: rethinking VET governance in general and declining participation in VET and its lack of attractiveness. The Ukrainian government is well aware of the challenges and has put in place an ambitious reform agenda to modernise VET. Key policy responses are going in the right direction but better connections between VET and other levels of education are required to achieve sustainable and meaningful results.





# ANNEX 1. SUMMARY OF RECOMMENDATIONS

Key HCD issue	Recommendations		
	No.	Action	Description
VET and skills governance	R.1	Harmonise VET provision at upper secondary level after 9 <sup>th</sup> grade	Connect and harmonise provision and programmes and merge institutions (VET schools, colleges and <i>technikums</i> ) with secondary VET, particularly in the fields of studies in which the majority of students enrol after 9 <sup>th</sup> grade. NB: The current trajectories risk overlapping and having duplication of provision in at least some programmes. This would help to optimise provision and make better use of both human and institutional capacity and the resources of colleges and <i>technikums</i> for the benefit of learners.
	R.2	Differentiate provision at professional pre-tertiary level to distinguish from	Differentiate between more complex programmes, for example in healthcare and technical fields. Develop new post-secondary and/or short-cycle qualifications, for example at level 5 in the NQF where there is evidence of clear demand in the labour market and among learners. Actively engage employers and the National Agency for Qualifications to define and accredit new post-secondary and/or short-cycle qualifications. Allow admission to pre-tertiary level programmes only after completion of upper secondary education (11 <sup>th</sup> /12 <sup>th</sup> grade).
	R.3	Manage optimisation of school networks in a fair and transparent way	Set national guidelines for the optimisation and restructuring of institutional networks using clear criteria to ensure a) the labour market relevance of qualifications awarded by institutions; b) efficiency in the use of teaching and learning resources; c) access of learners in line with their residential distribution across the country and the regions. Carry out an organisational audit to appraise all secondary VET and professional pre-higher education institutions in relation to their capacity, provision and resources. Prepare restructuring plans in all regions based on the institutional appraisals and stakeholder consultations and empower regional VET councils to endorse them. Amend the current and upcoming legislation on VET and professional pre-higher education to harmonise provision and institutional networks.
	R.4	Diversify VET provision to increasingly target adult learners	Increase the autonomy of providers and incentivise them to provide lifelong learning courses. Build on and enhance the existing capacity of teachers and providers as a whole to train and attract adult learners. Integrate VET provision gradually for young people and adults by recognising prior learning, creating individual learning trajectories and modularising new VET qualifications while allowing partial qualifications.
Low participation in VET and its lack of attractiveness	R.5	Integrate the provision of VET and general education at upper secondary level	Harmonise provision at upper secondary level after 9 <sup>th</sup> grade by horizontally amalgamating secondary VET and general secondary (academic) education. Ensure attractive pathways to both academic and vocational tracks without institutional barriers in line with the New Ukrainian School concept. Rename the providers, particularly the VET providers, to get rid of the negative connotations of old-fashioned types and names of VET schools and institutions. For example, several post-Soviet countries have renamed or plan to name providers as (vocational) colleges that can combine VET programmes at different levels. Develop an alternative matriculation exam or admission route to replace the academically biased EIT as an obligation for VET graduates to attain full secondary education and allow them to enrol in higher education. Develop a roadmap for the harmonisation of VET and general education reform at upper secondary level with the support of the development partners, namely the EU and the World Bank.
	R.6	Reform the teaching profession	Integrate general and vocational education at upper secondary level by deploying qualified teachers who work in general education to also teach learners in VET trajectories. Abolish the Soviet legacy of separating the teaching of theory by VET teachers (in the case of special subjects) and the provision of instruction by practical trainers or instructors. Integrate theory and



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

Education system structure in Ukraine based on the Law on Education, 2017

Level of Education	Cycle	Degree	Period of study	Ages	Access to next level	ISCED Level	NQF Level
Higher Education	Postdoctoral	Doctor of Sciences, Diploma	Usually 2 years				10
	III cycle	Doctor of Philosophy, PhD Diploma	4 years			8	9
	III cycle	Doctor of Arts	3 years (30-60 credits)			8	9
	II cycle	Master, Diploma	1.5-2 years (90-120 ECTS)*	Age 21-22/23		7	8
	I cycle	Bachelor, Diploma	3-4 years (180-240 ECTS)	Age 17-21		6	7
	Short-cycle	Junior Bachelor, Diploma	1.5-2 years (120-150 ECTS)	Age 17-18/19		5	6
Professional Pre-Higher Education		Junior Specialist Diploma	2-3 years (based on 11 years of complete secondary education) 3-4 years (based on 9 years of basic secondary education)	Age 18-20/21 Age 15-17/18	Higher education	4	5
Vocational Education and Training (VET)	Third (upper) level	Certificate			Higher education	4	4
	Second (basic) level	Certificate	1-1.5 years (based on 11 years of complete secondary education)	Age 18-19	Higher education		
			3 years (based on 9 years of basic secondary education)	Age 15-17		3	3
	First (initial) level	Certificate					2
Complete General Secondary Education	Field-specific (profile) (Level III)	Certificate	2 years, moving to 3 years in 2027	Age 15-17	Higher education	3	3
	Basic secondary (Level II)	Certificate	5 years	Age 10-14	VET	2	2
	Primary (Level I)		4 years	Age 6-9		1	1
Preschool education				Age 3-6/7		0	0

\* 300-360 ECTS for programs in Medicine, Veterinary, Pharmacy

Source: World Bank, 2019a.

**Preschool education** is mandatory and guaranteed free of charge. It can be obtained within the family setting, until the child reaches the age of five, and from qualified providers. When children reach five years of age, parents can choose a form of preschool education from among full-time preschool institutions, part-time groups or special pre-primary groups within primary schools. The Law on Preschool Education defines preschool age as ranging from three years to six or seven years.

**General secondary education** is divided into three levels: primary (level I: 1st to 4th grade), basic general secondary (level II: 5th to 9th grade), and field-specific secondary education, or high school

(level III: currently 10th and 11th grade, with 12th grade to be introduced in 2027). The new Law on Education extends complete general secondary education from 11 to 12 years in total. A certificate of completion of lower secondary education is issued after level II, and a certificate of completion of upper secondary general education is issued after level III. General secondary education is provided through a network of institutions of various types, including primary schools (offering only level I), *gymnasiums* (level II), *lyceums* (level III), specialised boarding schools, vocational schools and higher education institutions.

**Secondary vocational education and training (VET).** Students can enrol in secondary VET after completing basic secondary education (after 9th grade) or upper secondary general education (after 11th grade). Those enrolling in VET after 9th grade can receive an upper secondary education certificate together with a 'skilled worker certificate' after two years of study. Those enrolling after grade 11 receive a 'skilled worker certificate' after one year of study.

**Short-cycle professional tertiary education or professional pre-higher education.** Short-cycle professional tertiary education is provided in colleges and technical colleges (*technikums*). Junior specialist diplomas are awarded by colleges and technical colleges after two to three or three to four years of education, depending on whether the student enters with a basic or complete secondary education. However, the Law on Higher Education eliminates the 'junior specialist' educational level after 2019 and moves them under secondary VET. Going forward, this level of short-cycle professional tertiary education will result in junior bachelor and professional junior bachelor degrees. Former junior specialist degrees will be considered equivalent to junior bachelor degrees.

**Higher education** is provided in universities, institutes and academies, which offer junior bachelor (short-cycle) and bachelor (long-cycle) academic degrees, as well as master and doctoral degrees.

## ACRONYMS

CVT	Continuing Vocational Education
EU	European Union
EIT	External Independent Assessment
ETF	European Training Foundation
FDI	Foreign direct investment
GDP	Gross domestic product
ILO	International Labour Organization
ISCED	International Standard Classification of Education
NEET	Young people not in employment, education or training
NQF	National Qualifications Framework
OECD	Organisation for Economic Co-operation and Development
PISA	Programme for International Student Assessment
VET	Vocational education and training



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