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# Vocational education and training in Slovakia

## Short description

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# Foreword

The first Presidency of the Slovak Republic in the Council of the European Union takes place at challenging times. It coincides with reinforced efforts to increase employment and growth and reverse the trend of growing social inequalities.

Demographic change, digitalisation, migration and the need to create new and decent jobs generate challenges for Europe's economy, labour market and citizens. 'Talent promotion and development' – the Presidency's motto for education and training – could not be more apt, as many citizens have poor basic skills, while the competences of others are not well used or do not meet employers' needs.

The motto also reflects the goals of European Commission's *New skills agenda for Europe*, which aims to help improve the quality, relevance and recognition of people's skills and to link education and training better to labour market needs. In line with the 2015 Riga conclusions, the agenda highlights the need to modernise vocational education and training (VET) and make it a first choice, with a call for more work-based learning.

Slovakia has a strong VET tradition, with about 70% of all upper secondary learners participating in VET programmes. Being among the most open in the EU and with a high employment share in manufacturing cars and electronics, its economy relies heavily on vocationally skilled people. Nevertheless, employers signal the need for reform: to move from school-based VET to combining school- and company-based learning and to ensure a better match between the type of VET programmes people choose and the skills employers need.

The government has recently introduced a 'dual' VET scheme. It is inspired by apprenticeship in German-speaking countries, but Slovakia's approach has unique features. Companies take responsibility for attracting young people and for the on-the-job part of the scheme based on contracts with individual learners and their VET schools. This shows that policy learning is not a simple copy/paste exercise: developing effective policies and measures requires taking account of the unique country context. It is too early to evaluate the reform but early signals are promising.

The quality of training offered by companies will be crucial to success. It will require reliable quality assurance procedures and monitoring of learning outcomes. Another key ingredient for effective feedback between VET and the labour market is skill needs anticipation, an issue that is high on the Slovak government's education agenda. Current discussions about shortages in science, technology and mathematics and the need for more medium- and high-skilled

technicians for the booming IT sector highlight the importance of reliable labour market intelligence and high-quality career guidance.

While adapting VET to sectoral needs is essential, it is also crucial to promote transversal skills to help people adapt to new realities in the workplace and prepare them for newly emerging occupations. Opportunities to complement, update and upgrade skills improve people's chances in life and help ensure a skilled labour force. From this perspective, the government's intention to expand progression opportunities and tertiary level VET is an interesting initiative.

We will follow up and report on these and other VET policy developments in Slovakia and hope that this short description will contribute to better understanding of the country's VET system.

Joachim James Calleja
Director

# Acknowledgements

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# Slovakia


| | |
|---|---|
| Area | 49 035 km$^2$ |
| Capital | Bratislava |
| System of government | Parliamentary representative democratic republic |
| Population: | 5 426 252 (2016) |
| Per capita gross domestic product (GDP) (nominal): | EUR 14 000 (2015) |
| Legislative power: | Exercised by the parliament (National Council) |

Secondary VET is mainly school-based and can include in-company training provided through a school-company or learner-company contract (complemented by school-company agreement on provision of theory/training). The latter was introduced in 2015/16 and is called ‘dual’ VET despite learners being formally VET school students and not employees of the training company.

CHAPTER 1.

# External factors influencing VET

## 1.1. Demographics

Slovakia has 5 426 252 inhabitants ([1]) and a territory of 49 035 km$^2$. It comprises eight regions and 2 890 municipalities, including 140 towns and cities. Almost 54% of the population lives in urban areas. The natural population increase is forecast to become negative from 2020 (Bleha et al., 2013). The population is composed of ethnic Slovaks (80.7%), Hungarians (8.5%), Roma (2%) and other minorities (less than 1% each) ([2]). The share of foreign passport holders is below 1.5%. Almost two-thirds of immigrants are EU citizens (Bureau of Border and Alien Police of the Presidium of the Police Force, 2014). Approximately 300 000 people or 5.5% of the population work abroad (Kremský, 2015), half of them being short-term (12 months or less) labour migrants (Statistical Office of the Slovak Republic, 2015).

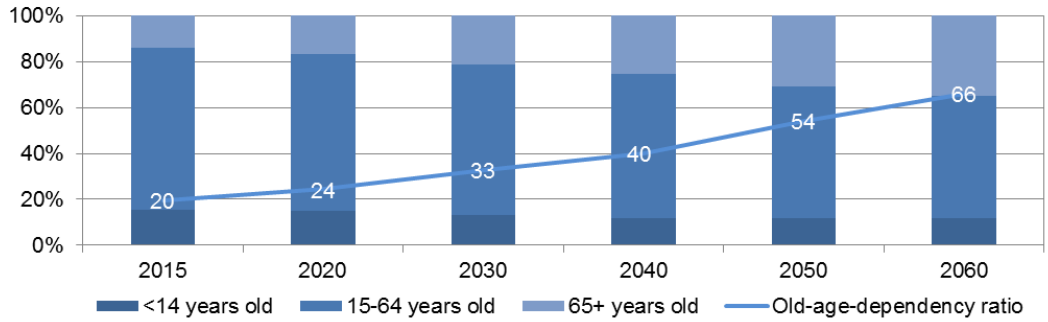
With the share of the population over 65 projected to be more than double over the next 35 years, the age-structure of the population is rapidly changing (Figure 1). With the number of young people (aged 0 to 24) declining by more than a third, there will be also fewer people of school age. The old-age-dependency ratio is expected to be more than triple: from 19.6% in 2015 (the lowest in the EU) to 65.9% in 2060 (the highest in the EU) ([3]).

([1]) Eurostat, table tps00001, extracted on 14.7.2016.

([2]) Statistical Office of the Slovak Republic (2011). Collecting statistical data based on ethnicity is forbidden. According to estimations by experts, only 25% of ethnic Roma declared themselves as belonging to the Roma nationality.

([3]) Eurostat, table tsdde511, extracted on 10.6.2016.

Figure 1. **Population forecast by age group and old-age-dependency ratio**



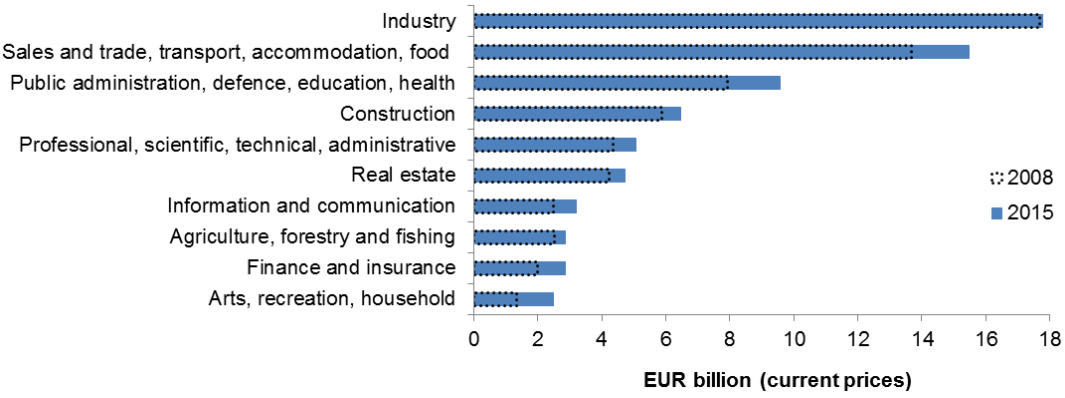

*Source*: Eurostat, tables proj_13ndbims and tsdde511, data extracted on 25.3.2016.

## 1.2. Economy and labour market trends

### 1.2.1. Developments in the economy

The Slovak economy is among the most open in the EU ([4]). Its main sector is industry (Figure 2) with a fast-growing automotive industry.

Figure 2. **GDP by economic sector in 2008 and 2015**



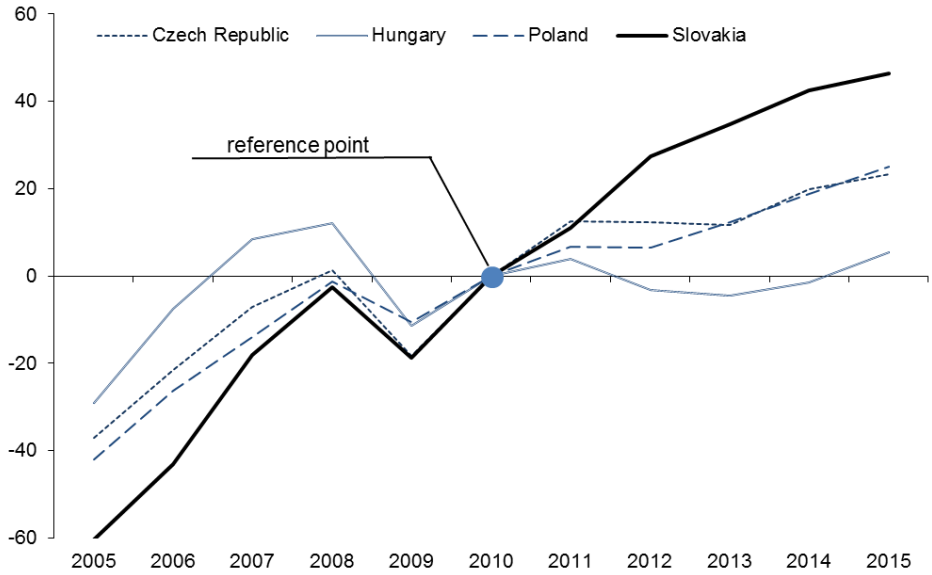

*Source:* Slovstat database; extracted on 1.4.2016.

The country is a world leader in manufacturing of cars per capita ([5]). Figure 3 demonstrates dynamic growth in machinery and transport equipment exports supported by foreign investments in the automotive industry.

([4]) Ministry of Economy (2015); measured by international trade compared to GDP (179.7% in 2014).

([5]) 190 cars per 1 000 inhabitants. Source: Automotive Industry Association of Slovakia, available at www.zapsr.sk/audiencia-zastupcov-automobiloveho-priemyslu-u-prezidenta-sr

Figure 3. **Machinery and transport equipment export in 2005-15 (export volume index)**




*Source*: Eurostat, table ext_lt_intertrd, extracted on 14.4.2016.

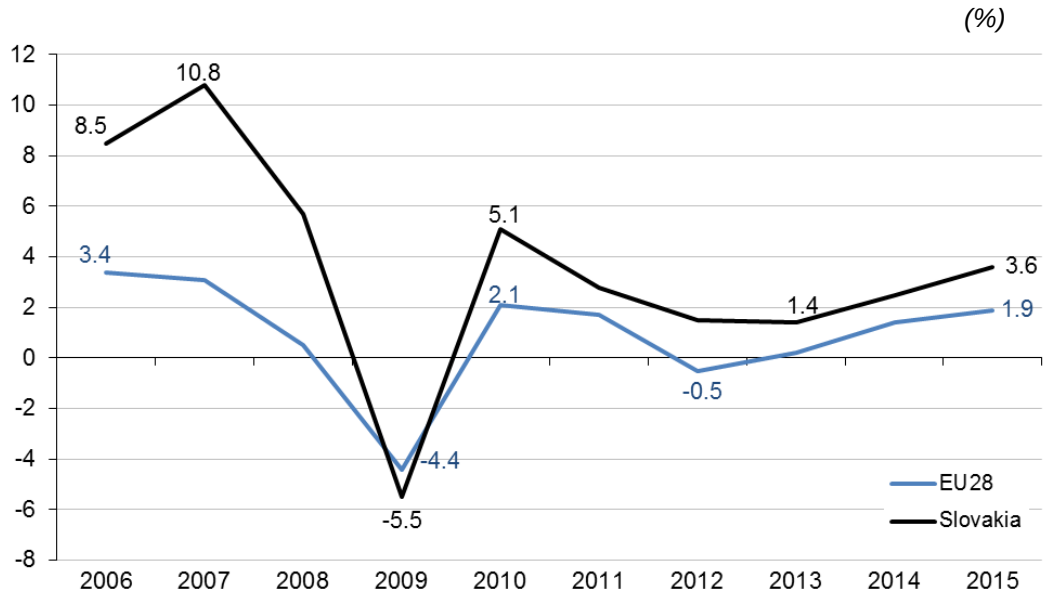
The automotive industry amounts to around 44% of industrial production and 40.2% of exports ([6]), although the production of cars, other vehicles and transport equipment only contributed 4% to GDP in 2014 ([7]). The construction of a new (the fourth) car manufacturing plant has started in 2016. This is expected to increase GDP by 1.8 percentage points and create 9 000 new jobs by 2020 (Makúch, 2016).

With higher growth than in the EU on average, the economy recovered faster, but the specialised nature of the economy also makes it vulnerable to downward shocks (Figure 4).

([6]) Automotive Industry Association, available at www.zapsr.sk/audiencia-zastupcov-automobiloveho-priemyslu-u-prezidenta-sr

([7]) Eurostat, table nama_10_a64, extracted on 10.6.2016. The share refers to manufacture of motor vehicles, trailers, semi-trailers and of other transport equipment (NACE rev.2 C29 and C30). It does not include automotive wholesale and retail trade and transportation and storage.

Figure 4. **Real GDP growth compared to the previous year**



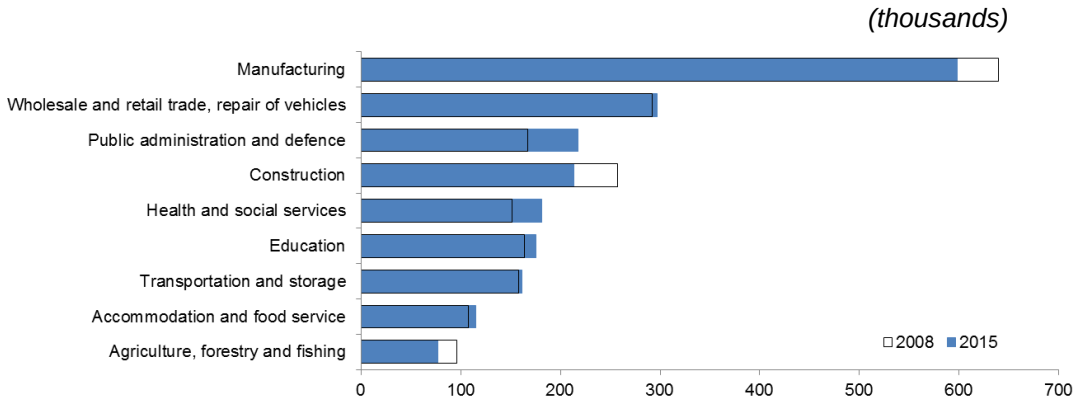

*Source*: Eurostat, table tec00115, extracted on 14.4.2016.

In 2009, the reduction in GDP was more pronounced than the EU average as the economy depends heavily on the export of cars, machinery and electronics: sectors more sensitive to business cycle ups and downs. It is important to diversify the sources of economic growth as the economy is overly specialised in assembly (notably of cars and consumer electronics) (OECD, 2013). A positive example of diversification is the growing IT sector in the Košice region accounting for 12% of its GDP and attracting specialists from neighbouring countries as labour market demand is more than twice the supply of graduates ([8]).

It is forecast that GDP will increase by more than 3% in both 2016 and 2017 (European Commission, 2016a) with further economic convergence (GDP per capita growth from 75% of the EU average in 2014 to 85% in 2020 (Government of the Slovak Republic, 2016a)).

([8]) See more at kosiceitvalley.sk

Figure 5. **Employment by economic sector in 2008 and 2015**




*Source*: Slovstat database; extracted on 1.4.2016.

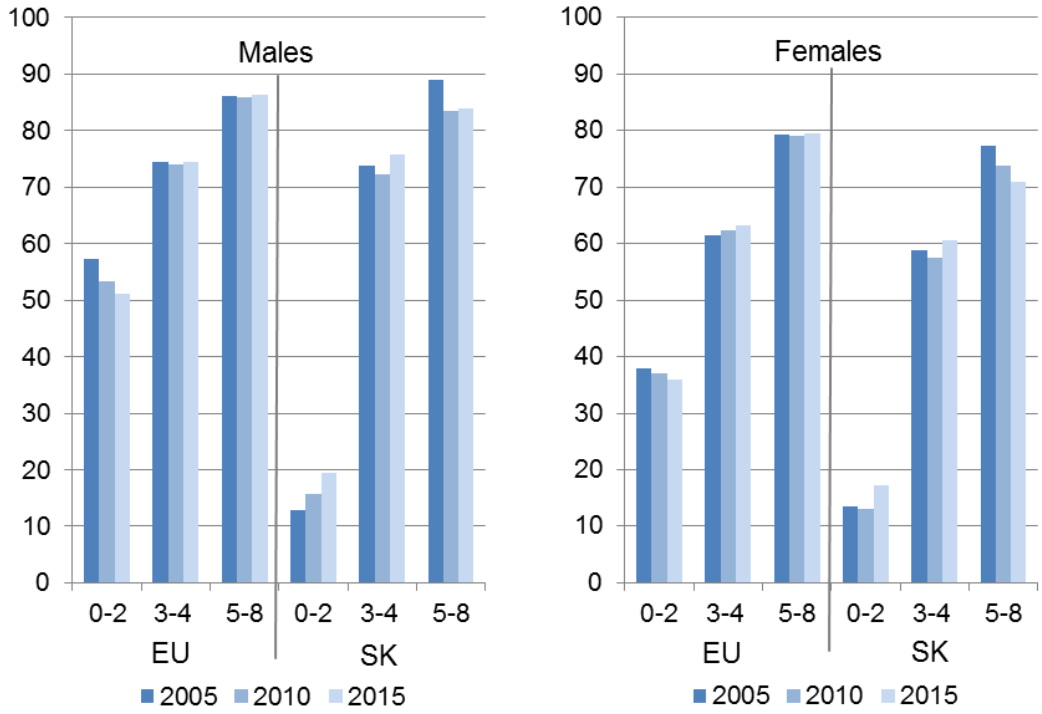
As demonstrated in Figure 5, more than 37% of all employees work in manufacturing (industry), wholesale/retail trade and vehicle repair sectors. Industry, construction and agriculture did not fully recover from the crisis in 2015. In contrast, more people were employed in 2015 in public administration and health and social services than in 2008. Employment in the education sector has also increased but is expected to decrease in the coming years due to the decline of the school-age population ([9]).

### 1.2.2. Labour market participation and unemployment

Education levels and labour market participation are correlated: the higher the education level, the higher the employment (Figure 6).

([9]) See also Section 3.1.

Figure 6. **Employment rate by gender and education attainment level**



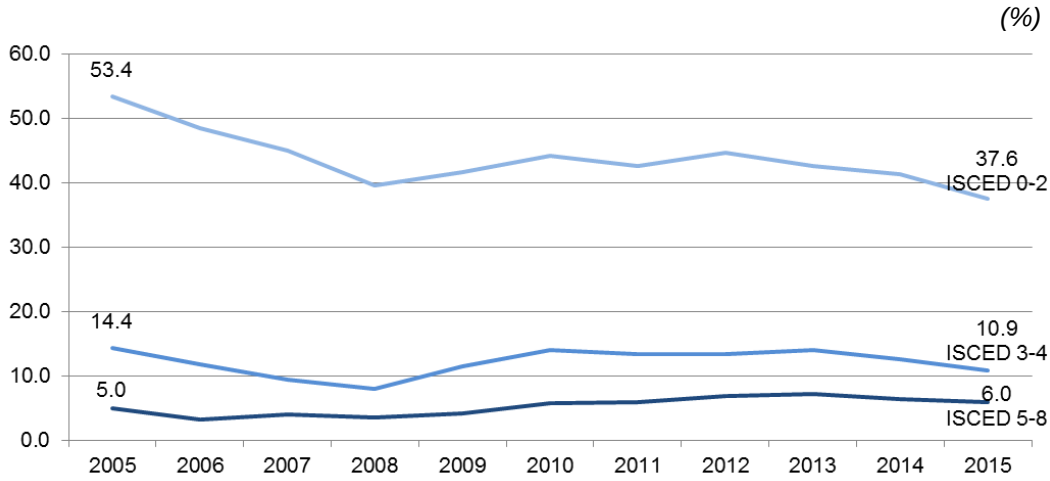

NB: ISCED 2011 levels: 0-2: lower than primary, primary and lower secondary education; 3-4: upper secondary and post-secondary non-tertiary education; 5-8: tertiary education.

*Source:* Eurostat, table lfsa_ergaed; extracted on 24.5.2016.

It is much less likely to be employed with a low qualification in Slovakia compared to the EU average. Only 19.5% (51.2% in EU) of men and 17.3% (36% in EU) of women at the age 15-64 were employed at ISCED levels 0-2 in 2015. Employment of people with high-level qualifications (ISCED 5-8) in Slovakia is still below the 2005 level in contrast to that of the low- and medium-qualified.

Education attainment also impacts unemployment (Figure 7).

Figure 7. **Unemployment rate of 15 to 64 year-olds by education attainment level in 2005-15**



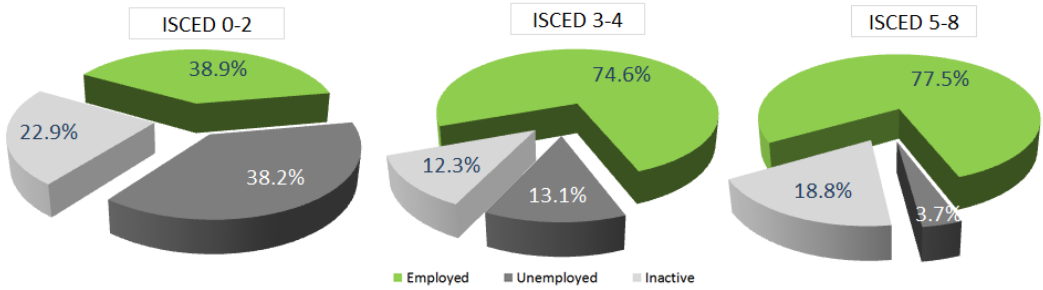

NB: ISCED 2011 levels: 0-2: lower than primary; primary and lower secondary education; 3-4: upper secondary and post-secondary non-tertiary education; 5-8: tertiary education.

*Source*: Eurostat, table lfsa_urgaed, extracted on 24.5.2016.

Unemployment was lowest among higher education graduates and highest (37.6% in 2015) for people without upper secondary education. Unemployment had been decreasing for all education levels until 2008. After the economic crisis, despite some progress, unemployment of medium level and highly educated was above the pre-crisis level, while the corresponding unemployment rate for people without upper secondary education was lower than in 2008.

Figure 8 presents the employment situation of people age 30 to 34. At this age, people have usually completed their studies (regardless of level) and are available for the labour market.

Figure 8. **Employment of 30 to 34 year-olds by education level in 2015**



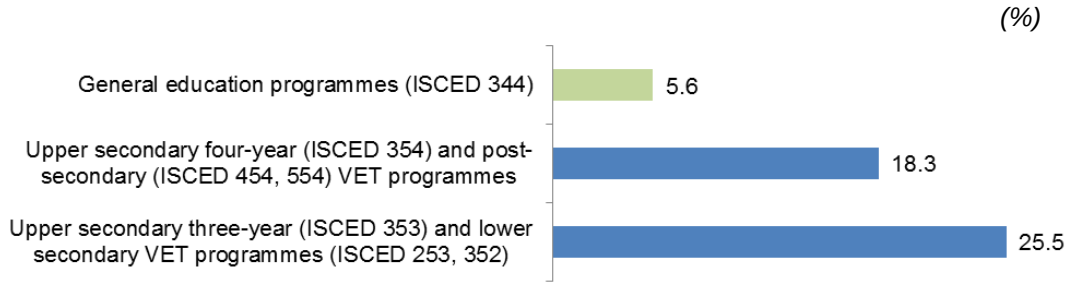

NB: ISCED 2011 levels: 0-2: lower than primary; primary and lower secondary education; 3-4: upper secondary and post-secondary non-tertiary education; 5-8: tertiary education.

*Source*: Eurostat, tables lfsa_ergaed, lfsa_urgaed, extracted on 24.5.2016.

The extremely low employment rate of young people without at least upper secondary education is alarming. The share of unemployed and inactive low-qualified people at their most productive age reaches 61.1%. In absolute numbers, this is around 2.5 times the number of new-born per year in Slovakia. The inactivity rate of people with upper secondary and higher education is also relatively high. Creating more part time jobs, currently not common in Slovakia, and stimulating job growth for the low-qualified in agriculture could help reduce inactivity and unemployment.

There are no detailed employment data available on VET graduates. As graduate tracking data are not available, authorities use unemployment data to analyse labour market transitions. Unemployment data on 2015 graduates show that those from VET programmes are more likely to be unemployed than graduates from general education programmes (Figure 9). But low unemployment of general education graduates does not necessarily indicate a smooth labour market transition, as many do not enter the labour market on graduation but continue their studies in higher education. Relatively high unemployment among VET graduates signals a mismatch in supply and demand on the labour market and points towards a need for reform.

Figure 9. **Unemployment of 2015 secondary programme graduates**



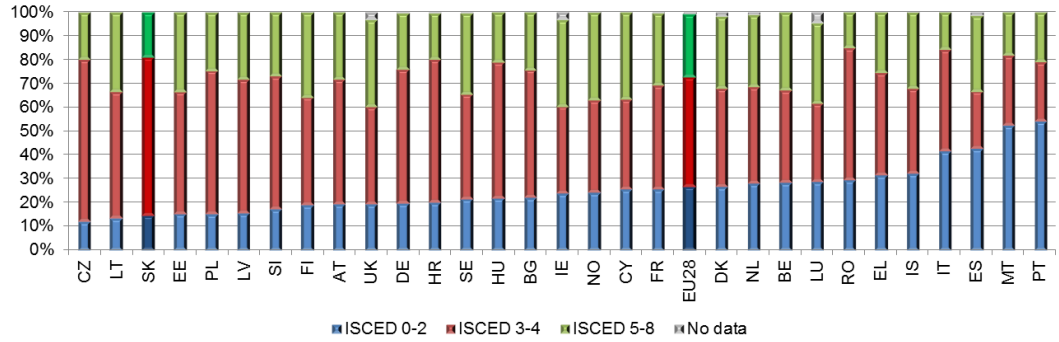

NB: Due to seasonal differences in unemployment, the median of monthly data between June 2014 and May 2015 was used.

*Source*: Herich, 2015

## 1.3. Education attainment

Eurostat data show that seven of 10 people between 15 and 64 have a medium-level qualification (ISCED 3-4) in Slovakia. This is well above the EU-28 average and, after the Czech Republic, the second highest in the European Union. The country has one of the lowest shares of low- or unqualified (14.6%; 26.8% in EU-28), but also of high-skilled (18.9%; 26.5% in EU-28) (Figure 10).

Figure 10. **Population (15 to 64) by highest education level attained in 2015**



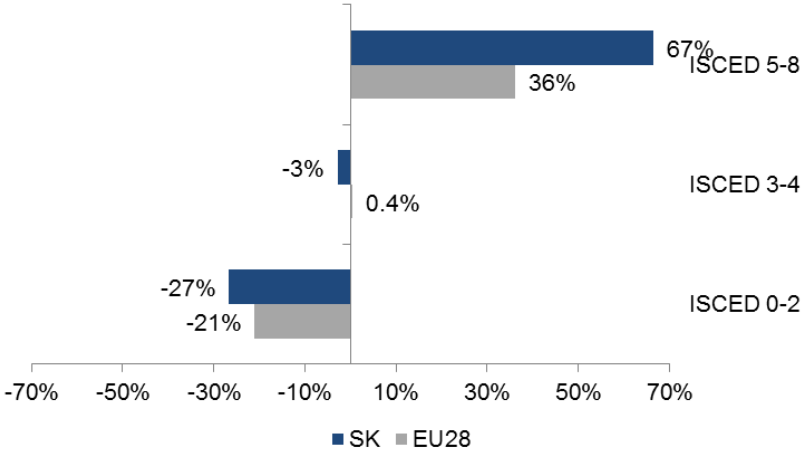

NB: ISCED 2011 levels: 0-2: lower than primary; primary and lower secondary education; 3-4: upper secondary and post-secondary non-tertiary education; 5-8: tertiary education.

*Source:* Eurostat, table lfsa_pgaed; extracted on 24.5.2016.

### 1.3.1. Changes in education attainment

Since 2005, education attainment has accelerated. The share of population with higher education (ISCED 5-8 level) increased by 67%, much more than the 36% increase in the EU-28 on average. The share of the low- or unskilled population has decreased by 27% compared to 21% in the EU-28 (Figure 11).

Figure 11. **Changes in education attainment of 15 to 64 year-olds in 2005-15**

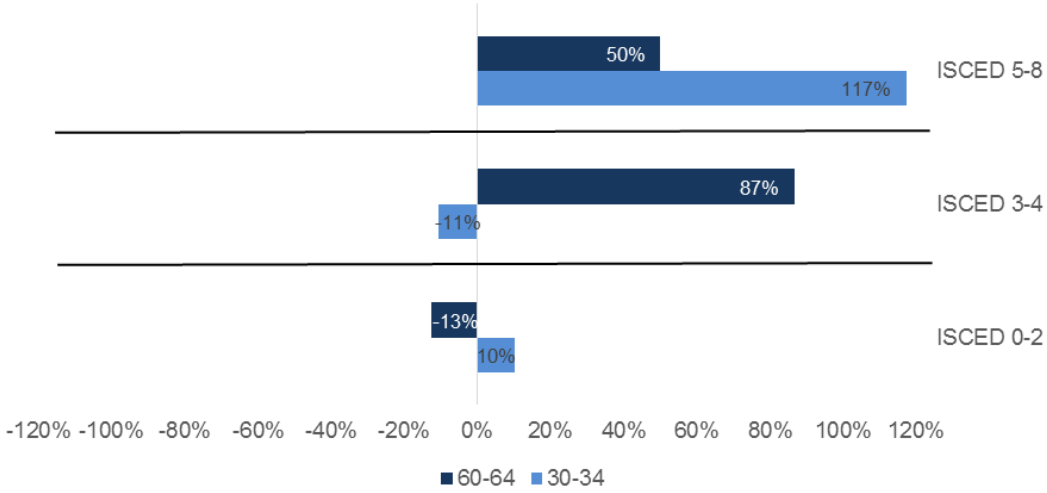



NB: ISCED 2011 levels: 0-2: lower than primary; primary and lower secondary education; 3-4: upper secondary and post-secondary non-tertiary education; 5-8: tertiary education.

*Source*: Eurostat, table lfsa_pgaed, extracted on 24.5.2016.

The increase in attainment is driven by population decline, leading to a surplus of available places at schools, free of charge higher education, and the culture of entering the labour market at a relatively high age. However, the general trends hide negative developments for particular segments of the population. There is a strong difference between the young (30 to 34) and older (60 to 64) population age cohorts (Figure 12).

Figure 12. **Comparison of change in education attainment of 30 to 34 and 60 to 64 year-olds in 2005-15**




NB: ISCED 2011 levels: 0-2: lower than primary; primary and lower secondary education; 3-4: upper secondary and post-secondary non-tertiary education; 5-8: tertiary education.

*Source:* Eurostat, table lfsa_pgaed, extracted on 24.5.2016.

The share of young people with higher education has more than doubled in the past 10 years. At the same time, the share of those with a medium-level qualification has decreased and there are now 10% more young people with no or a low qualification than a decade ago, a trend that should be a concern for policy-makers ([10]). Meanwhile, the share of older people with a low or without a qualification has decreased. More people that are currently aged 60-64 have acquired medium or tertiary qualifications than was the case in the past.

The increased share of highly educated people may face difficulties finding suitable jobs in an economy that currently demands mostly medium-level qualifications. Mismatch between labour supply and demand can increase if no action is taken on several fronts.

Another area of concern is the recent increase in early leaving from education and training. It was 6.9% in 2015 ([11]) and the eighth lowest in the EU-28 but increased by 2.2 percentage points since 2010.

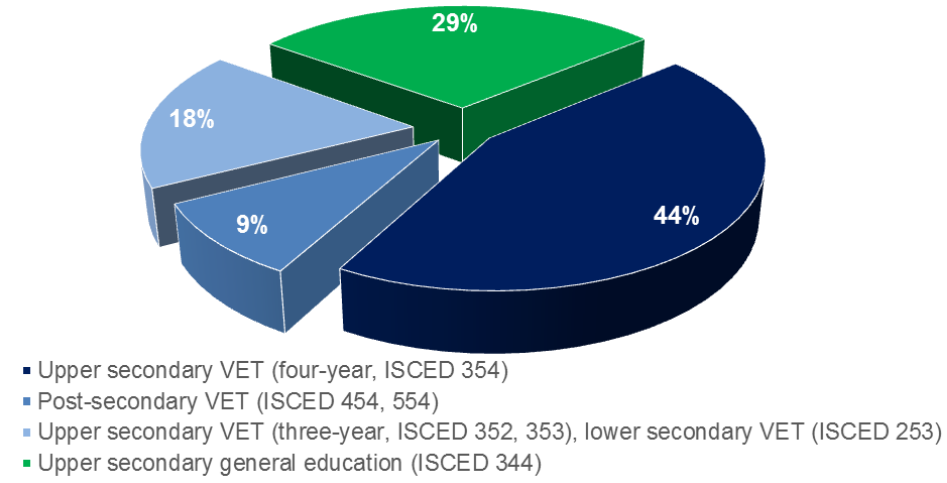
([10]) This is attributed predominantly to learning challenges of ethnic Roma. However, collecting statistical data based on ethnicity is forbidden and therefore only limited data are available.

([11]) Eurostat, table t2020_40, extracted on 28.7.2016.

### 1.3.2. Participation in VET

Participation in, and the share of graduates from, VET are high. More than 70% of all pupils at secondary and post-secondary level graduate from VET (Figure 13).

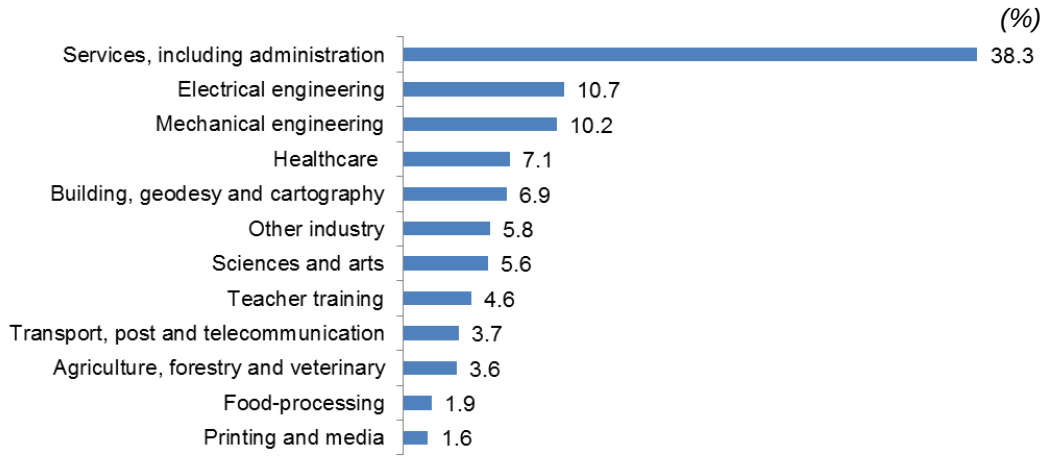
Figure 13. **Upper and post-secondary graduates in 2014/15**




NB: Includes special education needs programmes.
*Source*: Slovak Centre of Scientific and Technical Information.

Figure 13 illustrates a sufficient share of VET learners but employers' representatives often signal a need to change the distribution of graduates by fields of study. Currently, learners' choices correspond more to their and their parents' preferences rather than to labour market needs.

Figure 14. **Upper and post-secondary VET graduates in 2014/15 by field of study**




*Source:* Slovak Centre of Scientific and Technical Information.

Fields of study that attract most learners at upper secondary level are services and administration (Figure 14). They are less expensive to provide and less demanding for learners compared to technical fields. The economy, however, requires more graduates from mechanical and electrical engineering and does not need all the graduates from VET programmes for services.

## 1.4. Employment policies influencing VET

Employment policies are developed by the labour ministry and managed by public employment services (labour offices). In December 2014, the national employment strategy 2020 (Ministry of Labour, Social Affairs and Family, 2014) was approved by the government, followed by the action plan 2015-16. The labour ministry annually prepares and submits to the government and the parliamentary committee a report ([12]) assessing the state and the development of social affairs based on socioeconomic indicators. Active labour market policies are stipulated by the Act on employment services (5/2004) and are supported by the European Social Fund (ESF). Assessment of these policies ([13]) also takes place each year. VET has a role in implementing active labour market policy tools, including training of the unemployed, training of employees, and graduate practice (work experience for graduates).

In 2014, the national youth guarantee implementation plan was adopted by the government to address young (up to 29 years) people not in employment, education or training (NEET). An amendment (2015) of the Act on employment services (5/2004) stipulates the right to access employment and provision of 'second chance' education (completion of primary school, acquiring qualification), and training for self-employment (Ministry of Labour, Social Affairs and Family, 2014) (Section 2.6.2).

([12]) www.employment.gov.sk/sk/ministerstvo/vyskum-oblasti-prace-socialnych-veci-analyticke-centrum/spravy-socialnej-situacii-obyvatelstva-slovenskej-republiky.html

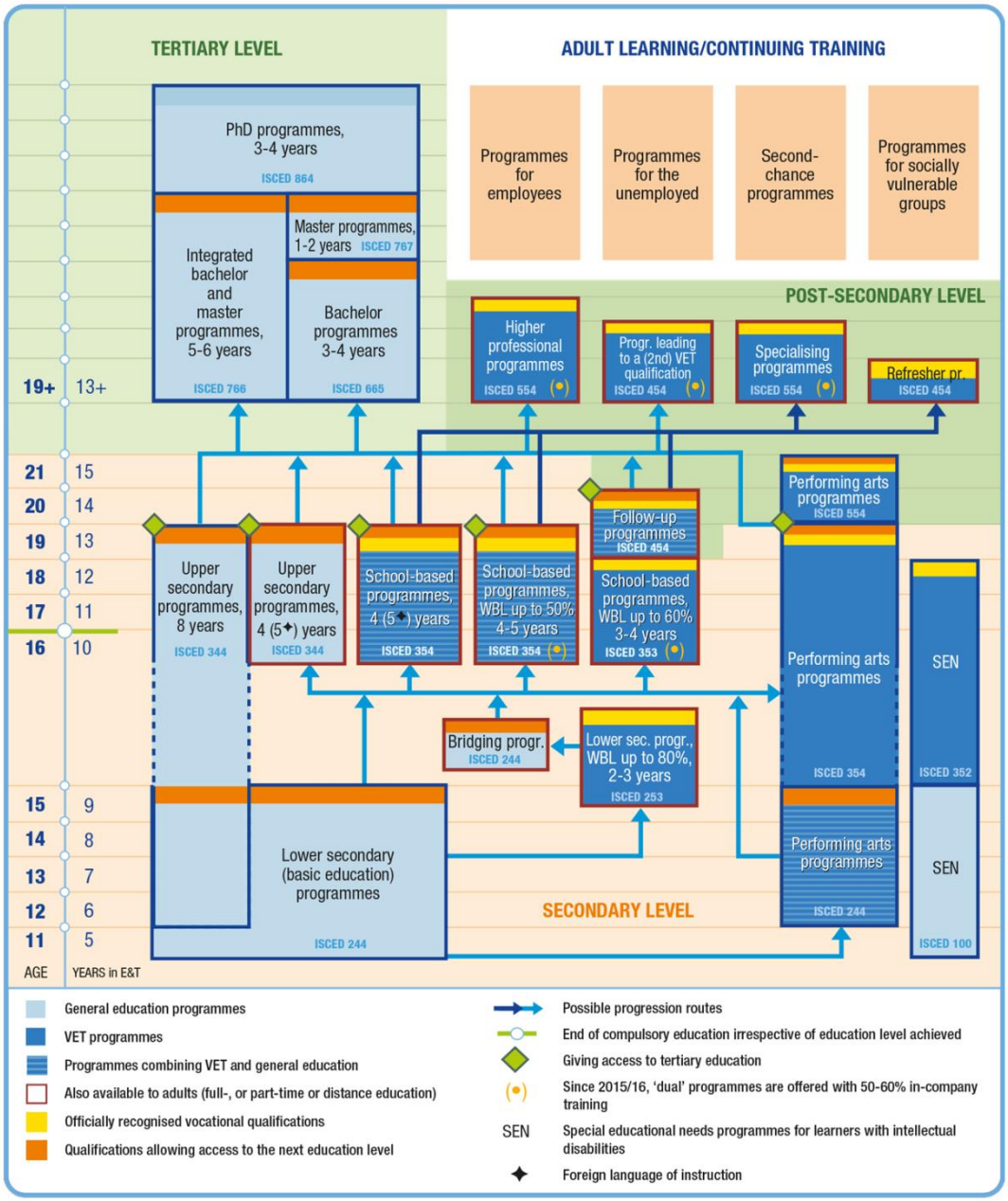
([13]) http://www.upsvar.sk/statistiky/aktivne-opatrenia-tp-statistiky.html?page_id=1248

CHAPTER 2.

# Provision of VET

## 2.1. VET in the Slovak education and training system

Figure 15. **VET in the Slovak education and training system in 2016**




NB: ISCED-P 2011.
*Source*: Cedefop and ReferNet Slovakia.

The Slovak education and training system is based on the 1970s model, aimed at providing all learners with at least upper secondary education, mainly through school-based VET. The 2015 reform has recently introduced the so-called dual VET ([14]) providing work-based learning in companies based on contracts with individual learners.

The education and training system comprises:

(a) pre-school education;
(b) integrated primary (four years, ISCED 100) and lower secondary general education (five years, ISCED 244) (hereafter basic education);
(c) lower secondary VET (ISCED 253);
(d) upper secondary general education (ISCED 344);
(e) upper secondary VET (ISCED 353 and ISCED 354);
(f) post-secondary non-tertiary VET (ISCED 454, 554);
(g) academic higher (tertiary) education.

Pre-school education is not compulsory and offered by kindergartens as part of the education system, usually starting at age three. Compulsory education starts at age six and includes nine years of basic education and at least one year of upper secondary education ([15]). This mechanism was intended to prevent leaving education early, as learners usually stay at upper secondary education after the mandatory first year. Upper secondary general education can be acquired either in an eight-year programme starting after completing grade five of basic education or in a four-year programme after completing basic education (bilingual programmes are five years). Graduates from both upper secondary general education programmes receive *maturita* school-leaving certificates allowing access to higher education. Higher (tertiary) education is academic and comprises bachelor, master (or integrated bachelor and master) and PhD programmes. Special general and vocational programmes (schools) cater for learners with special educational needs.

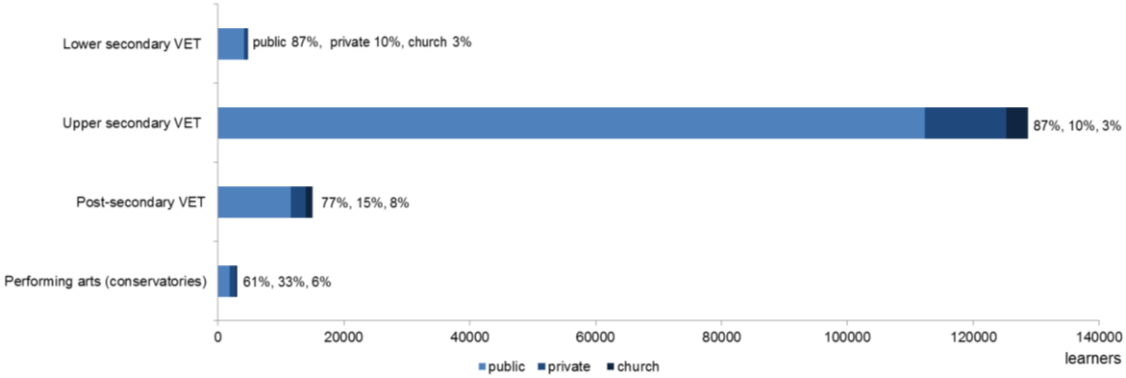
Most VET programmes are provided at upper secondary level. Participation in lower secondary VET, post-secondary and performing arts programmes is marginal. An overview of participation by programme in 2015/16 is presented in Annex 1.

([14]) See box on page 7 for explanation of the term ‘dual’ VET.
([15]) Compulsory pre-school education and or expanding compulsory education until age 18 is being discussed.

## 2.2. Government-regulated VET

VET at all levels – lower secondary, upper secondary and post-secondary – is delivered by secondary VET schools (*SOŠ, stredná odborná škola*) and is highly regulated through legislation and detailed curricula. Most VET providers are public – 87% of learners in upper secondary VET are in public schools (see Figure 16) – but the number of private and church-affiliated schools that emerged in the 1990s is gradually increasing (Annex 2).

Figure 16. **Participation in VET by school ownership in 2015/16**




*Source*: Slovak Centre of Scientific and Technical Information, September 2015; data exclude learners in special schools.

### 2.2.1. Lower secondary VET

Learners without completed lower secondary education can enrol in two-to-three-year programmes provided by secondary VET schools (ISCED 253). These programmes offer qualifications to perform simple and auxiliary tasks. Only 0.5% of all learners in formal education enrol in them, mostly students that have had learning difficulties in general education. These learners can also enrol in a one-year bridging programme (ISCED 244) allowing access to upper secondary education.

VET programmes catering for intellectually or mentally challenged learners offer qualifications corresponding to their individual abilities.

Performing arts programmes are provided by conservatories (*konzervatórium*). Learners can enrol in dance programmes from age 11, acquire lower secondary education in four years and continue for four more years. Conservatories are an education stream in their own right according to the Education Act (245/2008).

### 2.2.2. Upper secondary VET

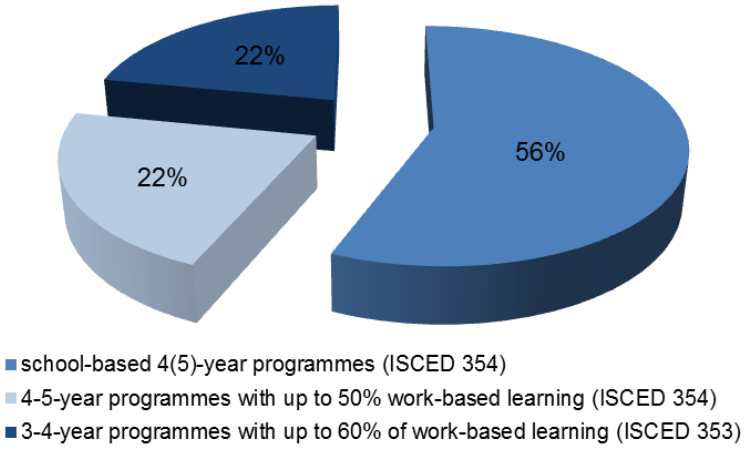
Upper secondary VET is mainly school-based and offered to basic education graduates as:

(a) school-based four-year (rarely five-year) programmes (ISCED 354) with a focus on VET theory and a lower share of work-based learning, for example, in school labs, workshops and short-term internships ([16]); they award *maturita* school-leaving certificates (*študijný odbor s praktickým vyučovaním formou odbornej praxe alebo umeleckej praxe*);

(b) four-year (rarely five-year) programmes (ISCED 354) with up to 50% work-based learning; they can be school-based or offered as dual VET and completed with both *maturita* school-leaving certificate and the so-called certificate of apprenticeship (*študijný odbor s praktickým vyučovaním formou odborného výcviku*);

(c) three-year (rarely four-year) programmes (ISCED 353) with up to 60% of work-based learning; they can be school-based or also be offered as dual VET; they lead to a certificate of apprenticeship (*učebný odbor*).

Figure 17. **Upper secondary VET graduates by programme type in 2015/16**




NB: % of the total VET graduates at upper secondary level.
Data exclude 420 graduates of performing arts programmes, 743 graduates of special educational needs programmes and 1 432 graduates from part-time upper secondary VET programmes (such as evening classes).

*Source*: Slovak Centre of Scientific and Technical Information.

VET programmes comprise general and vocational components defined by the national curriculum (Annex 3).

([16]) Healthcare, social care and kindergarten teacher programmes include extended practice/internship.

Study programmes offering a *maturita* school-leaving certificate and access to higher education are more popular than VET programmes offering only a certificate of apprenticeship.

Training in school-based programmes is offered in school workshops/labs or combined with in-company training based on school-company contract. Dual VET requires learner-company contracts for in-company training complemented by school-company contracts (Section 2.2.5.1).

#### 2.2.2.1. *School-based four-year (five-year bilingual) programmes*

These theory-focused school-based programmes (ISCED 354) offer graduates the *maturita* school-leaving certificate, allowing access to higher education. They also provide VET qualifications in studies that require firm theoretical knowledge (for example, mechanical and electrical engineering) allowing access to the labour market. Nevertheless, many graduates prefer to apply for higher education rather than entering the labour market directly.

Programmes are currently offered in 20 major study fields. Economics and services, electrical engineering, health and mechanical engineering attract more learners than other programmes.

Internships (two-to-three-week in-company practice) are a compulsory part of curricula. Organisation of internships varies by field of study and school.

#### 2.2.2.2. *School-based four-to-five-year programmes with up to 50% of work-based learning (ISCED 354) that can also be offered as dual VET*

These programmes are practice-oriented and provide graduates with a *maturita* school-leaving certificate and – provided that school curricula comprise at least 1 400 hours of training (*odborný výcvik*) – also the VET qualification nationally referred as to certificate of apprenticeship. It is within the schools' remit to decide on the actual share of work-based learning (whether at school or in a company). Since 2015/16, school-based four-year programmes are complemented by the newly introduced dual programmes (Section 2.2.5.1) with 50% in-company training. From 2016/17, programmes based on agreement between a large car producer and a self-governing region are to be delivered by a new private VET school, offering 70% of work-based learning to comply with company requirements.

Programmes are offered in 14 major study fields. Economics and services, electrical and mechanical engineering attract more learners than other programmes.

#### 2.2.2.3. *School-based three-to-four-year programmes with up to 60% of work-based learning (ISCED 353) that can also be offered as dual VET*

This type of programme offers graduates the VET qualification certificate of apprenticeship but not the *maturita* school-leaving certificate. The actual share of work-based learning (whether at school or in a company) is decided by schools.

Initially, these VET programmes provided qualifications mainly for crafts and blue collar workers in schools affiliated to companies. Self-governing regions became responsible for managing most of these schools after the transformation of the economy (privatisation of State companies) and the governance reforms initiated in 1989.

Currently learners can choose among 16 major study fields. Economics and services, mechanical engineering and construction attract more learners than other programmes.

Since 2015/16, these programmes can also be offered as dual VET (Section 2.2.5.1 and Annex 3).

The trend towards programmes that provide access to higher education has affected the share of graduates from these three-to-four-year programmes: it decreased from 29.6% in 1999 to 16.4% in 2014 ([17]).

Some qualifications offered by these programmes are in demand on the labour market but there is insufficient supply, as not enough learners graduate or because graduates register as unemployed (their competences are unsatisfactory or jobs offered not attractive enough). Many graduates prefer to continue in follow-up programmes that offer the *maturita* school-leaving certificate.

### 2.2.3. Post-secondary VET

Post-secondary programmes are offered by secondary VET schools. There are five types of post-secondary non-tertiary programme:

(a) follow-up programmes (ISCED 454);
(b) programmes leading to a (second) VET qualification (ISCED 454);
(c) refresher programmes (ISCED 454);
(d) specialising programmes (ISCED 554);
(e) 'higher' professional programmes (ISCED 554).

([17]) Eurostat (UOE data), table educ_uoe_grad01; data prior to 2013 are no longer published.

Table 1. **Learners in post-secondary VET by programme type in 2015/16**

| Programme | % of total VET population at post-secondary level | | | |
|---|---|---|---|---|
| | full-time | | part-time (evening classes, etc.) | |
| | learners | % | learners | % |
| Follow-up programmes (ISCED 454) | 6 683 | 75.5 | 1 872 | 30.4 |
| Programmes leading to a (second) VET qualification (ISCED 454) | 513 | 5.8 | 4 000 | 65.1 |
| 'Higher' professional programmes and specialising programmes (ISCED 554) | 1 661 | 18.7 | 278 | 4.5 |

NB: Data on 'higher' professional programmes exclude performing arts programmes; no statistics are available on refresher programmes (ISCED 454)

*Source*: Slovak Centre of Scientific and Technical Information.

Follow-up programmes (ISCED 454) are designed for graduates of school-based three-year VET programmes (ISCED 353) in relevant study fields. This two-year programme offers learners (including adults) the *maturita* school-leaving certificate and access to higher (tertiary) education.

Programmes leading to a (second) VET qualification (ISCED 454) (also called qualifying programmes) last typically two years and are completed by a *maturita*, in some cases also with a certificate of apprenticeship. These programmes offer additional qualifications, increasing graduates' employability prospects.

Refresher programmes (ISCED 454) last at least six months and are completed by a final exam. These programmes aim to update learners' knowledge and skills and ensure their competitiveness in the labour market.

Two-year specialising programmes update learners' knowledge and skills for their (or similar) occupations. In contrast to programmes leading to a (second) VET qualification, these studies provide a non-university diploma ([18]). Graduates attain higher professional education (ISCED 554) and the title DiS (*diplomovaný špecialista*).

'Higher' professional three-year programmes (ISCED 554) also lead to a non-university diploma. Graduates attain 'higher' professional education (ISCED 554) and the title DiS (*diplomovaný špecialista*). In contrast to specialising programmes, they can be in a different field from those studied before.

([18]) At national level, these programmes completed by the *absolutorium* exams mark more demanding programmes than those offering *maturita*.

Performing arts programmes (ISCED 554) offered by conservatories lead to a non-university diploma. Graduates attain 'higher' professional education (ISCED 554) and the title DiS.art (*diplomovaný špecialista umenia*) ([19]).

All these ISCED 554 programmes are offered by secondary schools and are not regulated by higher education legislation.

### 2.2.4. Higher (tertiary) VET

In 2015/16, there were 35 higher education institutions, including 12 private. The Higher Education Act (131/2002) distinguishes between:

(a) universities offering bachelor, master and PhD studies, and basic and applied research;
(b) higher education institutions offering mainly bachelor and master studies, and basic and applied research;
(c) higher professional education institutions offering mainly bachelor studies and applied research; they do not offer PhD studies.

Almost all higher education institutions were originally classified as universities. Tertiary education is in the process of change, supported by the current ex-post accreditation (*komplexná akreditácia*). In May 2016, the education ministry declared support for introducing the new form of higher education institution, a university of applied sciences ([20]).

### 2.2.5. Apprenticeships

There is no genuine apprenticeship in Slovakia although learners in school-based three-year programmes comprising high share of work-based learning were sometimes called apprentices. This term, however, disappeared from legislation which denotes all initial VET learners as students and not employees of companies where the training takes place. This also applies to the newly introduced dual VET.

#### 2.2.5.1. *Towards dual VET*

Employers are dissatisfied with VET graduates' competences: this is a result of VET being underfinanced and funding mechanisms based on number of learners,

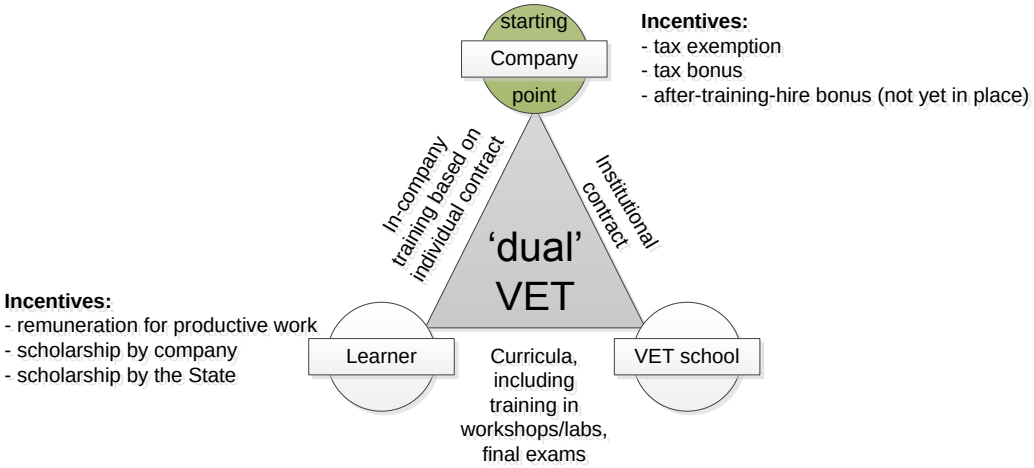
([19]) Performing arts studies are offered within integrated programmes offering higher professional level of education (ISCED 544) after completion of integrated six-year music or arts programmes, or integrated eight-year programmes in dance. The former is entered after completion of basic education, the latter after completion of grade five of basic education.

([20]) During a stakeholder round table on the 2016 government manifesto measures; information provided by ReferNet Slovakia.

not the quality of learning outcomes. Changing young people's education preferences and broken links between the worlds of work and education also play a role.

In 2015, a new VET Act (61/2015) was adopted. It was initiated by employer representatives, particularly from the automotive industry. The act supports closer school-company partnerships and encourages the shift to labour market demand-driven VET. Although the reform has been inspired by German-speaking countries, Slovak dual VET is different (Figure 18).

Figure 18. **Slovak dual VET**




*Source*: Cedefop.

In the new approach, companies take responsibility for training provision. They find learners and sign individual training contracts that must be complemented by an institutional contract between the company and a VET school.

This contract describes the partners' roles and responsibilities. Companies are not obliged to offer future employment to contracted learners. In contrast to traditional apprentices, learners in dual VET in Slovakia are students and not employees of a company that provides training. Companies can even partly (up to 40%) delegate the training back to schools.

It is now in the companies' interest to attract learners to VET and to deliver job-relevant training. Financial incentives for companies and learners stimulate development of dual VET (Sections 4.1 and 4.3).

For 2015/16, 117 companies were certified to offer training in 37 dual VET programmes and 1 438 training places; 469 students have signed learning contracts with companies, complemented by 78 school-company contracts (Table 2).

Table 2. **Training places offered by companies and accepted by learners in 2015/16**

| Field of study | Training places offered | Contracts signed | % |
|---|---|---|---|
| Engineering and other metal-processing | 900* | 316*** | 35.1 |
| Electrical engineering | 251** | 100**** | 39.8 |
| Textile and clothing | 24 | 0 | 0 |
| Wood-processing | 69 | 27 | 39.1 |
| Printing and media | 30 | 0 | 0 |
| Building, geodesy and cartography | 58 | 5 | 8.6 |
| Agriculture and forestry and rural development | 7 | 0 | 0 |
| Economics and organisation, retail and services | 99 | 21 | 21.2 |
| **Total** | **1 438** | **469** | **32.6** |

NB: *377 for mechanics-machine setters and 295 for car mechanics; ** 90 for IT systems and 126 for mechanics-mechatronic technicians; *** out of which 177 places for mechanics – machine setters, 46 programmers of machine tools and welding equipment and 41 places for car mechanics; **** 30 for IT systems and 70 for mechanics-mechatronic technicians.

*Source*: State Institute of Vocational Education and Slovak Chamber of Commerce and Industry; data from 15 September 2015.

There are 19 programmes delivered as dual VET, of which 10 lead to a certificate of apprenticeship, eight offer a *maturita* certificate together with a certificate of apprenticeship and one leads to *absolutorium*. Those qualifications most in demand by companies are mechanics-machine setters, car mechanics, mechanics-mechatronic technicians and computing systems specialists. In total, 32.6% of the available training places were filled in 2015/16.

#### 2.2.5.2. *Challenges*

Dual VET in Slovakia differs from dual systems in other countries. It takes time to implement and organising the learning process may create tension. Curricula for company-based training are being developed predominantly by public authorities (Section 3.2) as the business community lacks expertise. There is a need to strengthen capacity of 'sectoral assignees' (Section 2.4) to assist companies, particularly small and medium-sized enterprises interested in providing training. Direct cooperation between VET schools and companies may need to be strengthened, as there are no fiscal incentives for schools implementing dual VET.

Higher remuneration of learners in dual VET and clear career perspectives for the best performers could help overcome young people's and parents' mistrust of VET caused by turbulences in the labour market in the 1990s. Slovakia still lacks a flexible qualifications system that would allow learners trained for blue-collar occupations to progress to higher status. Institutionalisation

of not yet existing licensed master craftsperson and non-university tertiary qualifications could offer them a clear upward qualification trajectory.

The quality of training offered by companies will be crucial to the success of dual VET. Creating reliable quality assurance procedures to certify companies for dual VET and monitoring learning outcomes is also necessary. There is a need to ensure effective VET-labour market feedback loops within a well-balanced quality assurance model for provision of training by companies.

## 2.3. VET funding

In relative terms, total public expenditure on education in Slovakia (Table 3) is lower than in the EU-28. Several policy documents, for example an education ministry policy paper (Ministry of Education, Science, Research and Sport, 2013) and the national reform programmes, as well as initiatives have proposed increasing investment in education and training up to the OECD (Organisation for Economic Cooperation and Development) average, i.e. by more than one percentage point by 2020.

Table 3. **Public expenditure on education in Slovakia compared to EU-28**

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015* | 2016* |
|---|---|---|---|---|---|---|---|---|---|
| **SK, % of GDP** | 3.5 | 4.2 | 4.2 | 4.1 | 4.1 | 4.0 | 4.1 | 4.1 | 3.8 |
| **SK, EUR million** | 2 320.3 | 2 687.9 | 2 812.8 | 2 912.4 | 2 941.0 | 2 928.5 | 3 121.3 | - | - |
| **EU-28, % of GDP** | 5.0 | 5.3 | 5.3 | 5.1 | 5.0 | 5.0 | 4.9 | - | - |

NB: *Data for 2015 and 2016 are forecasts.

*Source*: Education ministry, finance ministry; Eurostat, table gov_10a_exp; extracted on 4.7.2016

Initial VET, regardless of ownership, is subsidised from the State budget through per capita financing (EUR 1 502 – 3 344 depending on school category) according to the Act on financing basic and secondary schools (597/2003). This type of financing often forces VET schools to attract learners regardless of their capabilities and personal aspirations. Capital expenditures are covered by the bodies that establish the schools (and by the State in case of emergency). Schools also attract additional funding to complement per capita subsidy. Private schools collect fees. Church-affiliated VET schools can benefit from parish community donations. In 2009, the VET Act established a VET fund. Based on voluntary contributions only, it has not yet been able to offer financial means.

Until 2014/15, companies could cover the costs of meals, accommodation, travel, and had to provide protective equipment and medical check-ups for the VET learners they trained. These costs were recognised as tax deductible only if companies concluded an employment contract for the post-training period with a learner. Any other training-related company contributions were not deductible unless a company could prove that the State had not already covered them, so only profitable companies could have afforded investing in initial VET.

Since 2015, the new VET Act (61/2015) has introduced corporate tax reliefs stimulating enterprise involvement in dual VET (Sections 2.2.5.1 and 4.3).

For information about continuing VET funding see Section 2.6.3.

## 2.4. VET governance

Self-governing regions are responsible for maintaining public secondary VET schools and for regulating inflow of learners in their territory. The education ministry supports schools by providing regulations for content, pedagogy, and staff qualifications. Some VET schools are under the responsibility of the interior and health ministries.

VET governance (established in 2009 and revised in 2015) comprises the following coordinating and advisory bodies:

(a) the National VET Council ([21]) is the coordinating body affiliated to the government that discusses VET policy (such as regional and sectoral strategies). A total of 17 working groups covering selected study fields support adjustments in VET programmes to match them better to labour market needs;

(b) regional VET councils (eight) composed of representatives of State, self-government, employers and employees prepare regional policy documents related to VET, such as regional VET strategies;

(c) sectoral (skills) councils established originally as part of an ESF project provide expertise to policy-makers and support the creation of a national occupations system according to the Act on employment services (5/2004) since 2013;

(d) institutions of the world of work, selected from chambers and employer associations (‘sectoral assignees’), are set by legislation (64/2015) to represent employer interests by VET study field as professional counterparts to education authorities and experts. Sectoral assignees are to play a

([21]) www.radavladyovp.sk

prominent role in adjusting VET to labour market needs and in assuring its quality;

(e) an umbrella organisation, Employer council for dual VET, encompassing seven 'sectoral assignees' will coordinate their activities when established. The process of institutionalisation started in February 2016.

Since 2009, the influence of employers on VET policy implementation has increased. Within school-based VET employers can participate in the development of:

(a) VET programmes: design of national curricula and provision of VET in the regions is coordinated by social partners to adjust them better to labour market needs. They can participate in setting graduate profiles, educational, qualification and occupational standards (Section 3.2); they can also support the State Institute of Vocational Education in designing curricula for practical training by companies in dual VET, and setting personal, material, spatial and equipment-related requirements for VET providers;
(b) individual school curricula: curricula are developed autonomously by VET schools based on national curricula and must be discussed with employers to comply with labour market requirements;
(c) final examinations: the participation of employer representatives in examination design and implementation was strengthened.

## 2.5. Teachers and trainers

### 2.5.1. Initial VET teachers and trainers

In initial VET, there are:

(a) teachers of general subjects;
(b) teachers of vocational subjects ([22]);
(c) trainers in school (nationally referred to as 'masters of practical training');
(d) in-company trainers (nationally referred to as 'instructors'; they are company employees).

Table 4. **Teachers and trainers in VET schools in 2010/11 and 2015/16**

| | 2010/11 | 2015/16 | Change, % |
|---|---|---|---|
| Teachers | 13 247 | 10 874 | -17.9% |
| Trainers in school | 3 470 | 2 840 | -18.2% |

NB: Full time teachers only, including (deputy) directors. Data on in-company trainers are not available.
*Source*: Slovak Centre of Scientific and Technical Information.

([22]) May also provide practical training in school workshops/labs.

Even school-based VET may provide training in companies by their employees (in-company trainers) based on school-company agreements and under the supervision of the school. Trainers working in schools support/supervise training provided by in-company trainers. In-company trainers work with up to three learners; those who supervise in-company training look after a maximum of 40 learners. Group sizes for work-based learning in schools are regulated according to programme type, study fields and years of training.

Analyses indicate that teaching staff is ageing in schools, particularly in VET, due to low attractiveness of the teaching profession ([23]) and the increase in retirement age. Among other factors this suggests that teaching in VET schools is less attractive than career opportunities in business.

### 2.5.2. Training of teachers/trainers

#### 2.5.2.1. *Initial training*

Initial teacher training is offered by universities. University graduates from non-pedagogic programmes need to complement these with pedagogic studies to obtain a full VET teacher qualification. The Bologna process reform led to development of bachelor programmes for VET trainers. Although formal requirements for trainers in secondary VET schools remained unchanged and tertiary education is not required (in contrast to teachers), many seek a bachelor degree providing better remuneration. The traditional option to acquire pedagogical competence through non-tertiary complementary pedagogical studies is becoming less attractive for trainers.

#### 2.5.2.2. *Continuing training*

The Act on pedagogical and professional staff (317/2009) specified four career levels for teachers/trainers: beginner, independent teacher and attested teacher (first and second (advanced) level attestation). It also envisaged creation of professional standards for each level and introduced credits in continuing training. Continuing training programmes offering credits must be approved by the accreditation board, an advisory body to the education ministry.

Since its introduction in 2009, weaknesses in the credit-based approach have become visible: hunting for credits, such as participation in accredited activities, regardless of whether they substantially contribute to continuing

([23]) See the 2016 recommendation of the European Commission to Slovakia to 'improve educational outcomes by making the teaching profession more attractive' (European Commission, 2016b).

professional development, and non-recognition of competences acquired outside accredited training, for example by self-learning.

Pedagogic 'professional standards' envisaged by the 2009 legislation are still pending. A revision of the current in-service training model required by practitioners and experts is suggested also in the education ministry paper (Galáš and Rehúš, 2016).

### 2.5.3. Training of in-company trainers (instructors)

Instructors are employees of companies that provide training for VET learners. They are not considered pedagogic staff according to the definition of the Pedagogic Staff Act (317/2009). They can train up to three learners in cooperation with the supervising trainer of VET school. Since the introduction of dual VET in 2015, in-company trainers are required to have at least a certificate of apprenticeship in the respective study field. In contrast to trainers in VET schools, they do not need to have a *maturita* school-leaving certificate or completed pedagogic studies. Instead, three years of practice as fully qualified worker in the respective occupation and instructor training offered by sectoral assignees (Section 2.4) completed within one year of their first appointment are required.

For more information about VET teachers and trainers in Slovakia see ReferNet thematic perspective *Supporting teachers and trainers for successful reforms and quality of VET: mapping their professional development in the EU* (Vantuch and Jelínková, 2016).

## 2.6. Other forms of VET

### 2.6.1. Learning opportunities for vulnerable groups

Slovakia used to be among the EU countries with the lowest share of early leavers from education and training, so other forms of VET were marginal. The gradual increase in early leavers (from 4.7% in 2010 to 6.9% in 2015) ([24]) indicates that Slovakia may miss its 2020 target (6%). These data, however, are insufficiently sensitive to the underperformance of some ethnic groups, particularly the socially disadvantaged ethnic Roma living in segregated settlements ([25]). An alarming situation is reported from primary schools by

([24]) Eurostat, table t2020_40, data extracted on 1.6.2016.

([25]) Eurostat's data based on labour force survey sample reflects declared nationality as collection of data based on (attributed) ethnicity is forbidden by legislation. Only a

practitioners and from field surveys offering more precise data than national labour force survey statistics.

Table 5. **Early school-leaving rate of young (non-)Roma living in proximity**

| | Non-Roma | | | Roma | | |
|---|---|---|---|---|---|---|
| | male | female | total | male | female | total |
| Early leavers from education (aged 20 to 24) | 11% | 29% | 21% | 78% | 82% | 80% |

NB: Sample of about 750 Roma and 350 non-Roma households living in proximity.
*Source*: ReferNet Slovakia based on UNDP- WB-EC (2011) data. See also Vantuch and Jelínková, 2014.

As shown in Table 5, four-fifths of Roma have not attained at least ISCED level 3, four times more than the non-Roma population living in the same area.

Public employment services (labour offices) address early leavers from education more or less successfully through labour market training provision. Second chance school projects in the early 2000s did not prove very efficient ([26]). While VET schools branches have been established closer to areas where Roma reside, and despite the motivation of socially disadvantaged students (predominantly Roma) to complete secondary education and acquire a (VET) qualification, crucial obstacles remain. Low achievement in pre-school and primary education is considered a major factor; improved general education adjusted to their learning needs is seen as a precondition for helping socially disadvantaged Roma acquire an initial VET qualification.

Retraining of adults who left school early allows them to acquire qualifications for auxiliary or assistant jobs only. Collecting qualification units described in the national qualifications standards and national system of occupations (Section 3.3) should offer more effective future alternatives.

### 2.6.2. Continuing training for employment and lifelong learning

Besides post-secondary VET (Section 2.2.3), continuing VET as part of adult education supports lifelong learning and is traditionally linked to the labour market. Learners upgrade qualifications to gain promotion and to increase their competitiveness. Most of continuing VET is provided by companies and is not strictly regulated; also, monitoring of continuing VET is fragmented.

quarter of ethnic Roma declare themselves as belonging to Roma nationality, according to estimations, while others declare themselves other nationality.

([26]) A new generation of ESF second chance projects is being planned.

#### 2.6.2.1. *Training for employment*

Active labour market policies are regulated by the Employment Act (5/2004) comprising labour market training for the unemployed, employees and work experience for graduates that are considered an integral part of VET. Table 6 provides an overview of participation in these active labour market measures from 2004 onwards.

Table 6. **Participation in VET-related training within the active labour market policy in 2004-15**

| | 2004 | 2007 | 2009 | 2014 | 2015 |
|---|---|---|---|---|---|
| Training for the unemployed | 27 208 | 8 890 | 17 924 | 6 659 | 1 473 |
| Training for employees | - | 12 537 | 29 921 | 1 609 | 103 |
| Work experience for graduates | 14 462 | 8 937 | 11 764 | 9 482 | 7 398 |

*Source*: Central Office of Labour and Social Affairs.

In 2004 ([27]), 27 208 people participated in training for the unemployed. Participation then fell sharply but increased again for a period of crisis. It is also very sensitive to the availability of the ESF. Expenditure on training within active labour market policies decreased from EUR 7 286 million in 2009 (0.011% of GDP; 0.218% in EU-28) to EUR 0.281 million in 2013 (less than 0.0005% of GDP) ([28]).

Training for employees also increased during the crisis to support employees at risk of dismissal. With the financial consolidation in 2011 the provision of this type of training has stopped. It restarted on a smaller scale in 2014 with ESF support.

The new ESF *Re-pas* project (2014) supports free training for the unemployed through (re)training 'vouchers'. Training is offered by public and private providers, including VET, and is chosen by the unemployed. Until March 2016, 32 868 applications were received by public employment services (labour offices) and 26 180 were accepted. The most attractive courses are for social care service (31%). Over 80% of the courses can be considered VET. Some 50% of graduates were subsequently placed on the labour market ([29]). Despite this improvement, the provision of training for unemployed is still moderate.

By March 2016, two additional ESF VET-relevant projects were in progress:

([27]) The year Slovakia became part of the EU.

([28]) The most recent data available. Source: Eurostat, table lmp_expsumm, extracted on 30.5.2016.

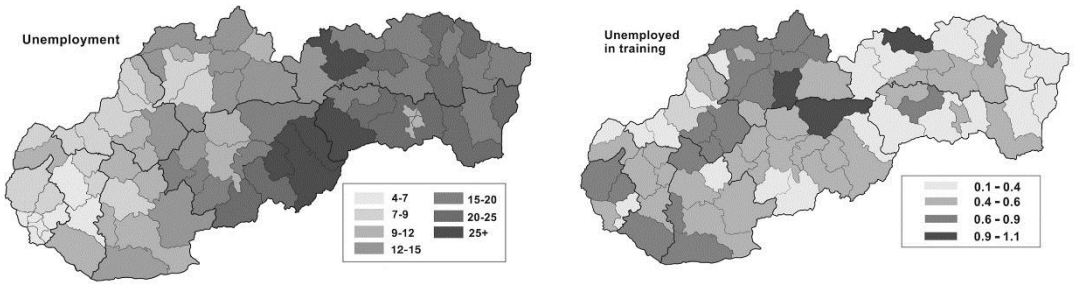
([29]) Information provided to ReferNet Slovakia by the labour ministry press service.

(a) *Practice for employment* aimed at enhancing professional competences of young people up to 29 years of age in the workplace of future employers;
(b) *Graduate practice starts up employment*, offering work experience for graduates lasting three to six month (20 hours per week) and fiscal incentives to companies that create jobs for NEETs who complete their graduate practice. This replaces a scheme that was considered inefficient, as only about 35% of participants found a job (Páleník et al., 2014).

Figure 19 compares unemployment and intensity of retraining of the unemployed. It varies by district, influenced by the success of respective public employment service (labour office) activities and learners' interest in retraining.

Figure 19. **Registered unemployment and training by district in 2015**

*(%)*




*Source:* Central Office of Labour, Social Affairs and Family, and Employment Institute: www.iz.sk/en/projects/education-and-labour-market/education-of-unemployed

As shown in Figure 19, unemployment is the highest in the eastern and south-central districts, while the highest intensity of training of unemployed is in the central and western parts of the country.

To address districts with the highest unemployment more effectively, five-year action plans for the 12 most vulnerable districts are being developed according to the Act on the support of the least developed districts (336/2015). Changes in legislation and labour market policies are an important part of comprehensive interventions, as seen in the first action plan for north east Kežmarok district, where almost 60% of the registered unemployed have an ISCED 2 or lower level of education.

#### 2.6.2.2. *Lifelong learning*

The participation of adults in lifelong learning is low (3.1% against 10.7% in EU-28 in 2015) ([30]). The reasons are manifold: high participation in initial education (including VET), relatively little investment in training for the unemployed, and lack of financial and non-financial incentives for adults to participate in learning. Table 7 presents data collected annually as per the Lifelong Learning Act (568/2009).

Table 7. **Training programmes, trainees and graduates, by type of training in 2014**

| Type of training | Courses | % | Learners | % | Graduates | % |
|---|---|---|---|---|---|---|
| Continuing professional training | 2 686 | 58.58 | 163 585 | 63.71 | 126 701 | 64.71 |
| Training for partial qualifications | 547 | 11.93 | 25 023 | 9.75 | 21 990 | 11.23 |
| Interest and cultural education | 636 | 13.87 | 39 296 | 15.30 | 28 627 | 14.62 |
| Citizenship education | 2 | 0.04 | 99 | 0.04 | 20 | 0.01 |
| Education for older people | 117 | 2.55 | 6 646 | 2.59 | 2 516 | 1.28 |
| Other or lacking data | 597 | 13.03 | 22 110 | 8.61 | 15 946 | 8.15 |
| **Total** | **4 585** | **100** | **256 759** | **100** | **195 800** | **100** |

NB: Data from providers of 'further education'. A total of 601 declared provision of education (out of which 258 offered programmes accredited by the education ministry); data also cover provision of training for the unemployed but not part-time studies in formal education offered to adult learners.

*Source*: Slovak Centre of Scientific and Technical Information.

### 2.6.3. Continuing VET funding

Continuing VET is funded by learners, employers and public finances (Table 8).

([30]) Eurostat, table tsdsc_440, extracted on 1.6.2016.

Table 8. **Sources of financing of continuing VET / lifelong learning 2013-14**

| Source of financing | 2013 | | 2014 | |
|---|---|---|---|---|
| | EUR | % | EUR | % |
| Learners | 11 455 326 | 20.90 | 11 105 059 | 18.35 |
| Private companies | 10 064 830 | 18.36 | 8 080 851 | 13.35 |
| Public sector, including: | 2 553 743 | 4.66 | 3 332 348 | 5.51 |
| labour offices | 132 778 | 0.24 | 628 270 | 1.04 |
| municipalities | 448 983 | 0.82 | 445 233 | 0.74 |
| self-governing regions | 1 461 512 | 2.67 | 1 671 575 | 2.76 |
| other sources | 510 470 | 0.93 | 587 270 | 0.97 |
| State budget | 6 472 474 | 11.81 | 7 601 069 | 12.56 |
| Foundations | 161 553 | 0.29 | 294 187 | 0.49 |
| EU funds | 21 730 691 | 39.64 | 28 206 812 | 46.61 |
| Other | 2 382 395 | 4.34 | 1 893 225 | 3.13 |
| **Total** | **54 821 012** | **100** | **60 513 551** | **100** |

NB: Including data on provision of training for unemployed; excluding data on part-time studies in formal education offered to adult learners.

*Source*: Slovak Centre of Scientific and Technical Information.

While the number of graduates increased by 65.5% (from 76 564 in 2013 to 126 701 in 2014), in the same period financing increased by 10.4%. As shown in Table 8, labour market retraining organised by labour offices increased substantially, supported by ESF-funded projects.

CHAPTER 3.
# Shaping VET qualifications

Traditionally, acquiring a level of education and acquiring a qualification are separate elements. Completion of formal education programmes is primarily associated with achieving the level of education (indicated by a respective ISCED code). It is unusual to speak about obtaining a qualification as a result of completing a formal education programme.

In initial VET, awarding a qualification is also distinguished from certifying the level of education. Three-year upper secondary VET programmes (ISCED 353) prepare learners for an occupation. In this case, the so-called certificate of apprenticeship attests that graduates are qualified to work in the respective occupation, while the school-leaving certificate is considered as attesting the level of education entitling graduates to progress to subsequent formal education programmes.

A *maturita* school-leaving certificate awarded in school-based four-year VET programmes (ISCED 354) is considered as certifying both level of education and qualification. In this case 'qualification' refers to the ability to perform professional activities covered by the curricula rather than to an occupation. It is often called 'wider' qualification or even a prequalification compared to qualifications acquired in three-year upper secondary VET programmes (ISCED 353). Four-year programmes (ISCED 354) with up to 50% of work-based learning lead to a *maturita* school-leaving certificate and a certificate of apprenticeship. The latter offers a more specific qualification related to an occupation in addition to the wider qualification.

A *maturita* certificate acquired in general education certifies the level of education and provides access to higher education. Although this certificate is sufficient to find a job requiring only the level of education, it is not considered a qualification.

In the world of work, certificates awarded in formal education are among several components of a qualification. For some occupations, additional certificates may be required; a qualified worker is generally considered a person who has attained the prescribed level of education, the required certificate of professional competence, and even prescribed years of practice.

With the shift to the learning outcomes approach, both achieving a level of education and achieving a qualification refer to complying with standards set by

national authorities. Nevertheless, legislation ([31]) distinguishes between preparing for an occupation and for exercising professional activities. Further, the Lifelong Learning Act (568/2009) induces creation of the national qualifications framework and renewal of national qualifications system, and distinguishes between full and partial qualifications. The former correspond to all requirements of an occupation and the latter only to some knowledge, skills and competences related to the respective occupation. In practice, a full qualification corresponds to formal VET programmes at ISCED levels 353 and 354 and partial qualifications to narrower, occupation-oriented qualifications offered within continuing VET or adult education.

A mix of traditional and learning-outcomes-based approaches has led to conceptual divergences to be addressed by a new Lifelong Learning Act in preparation since November 2015 (Section 3.3).

## 3.1. Identifying current and future skill needs

Responsibility for analysing and forecasting labour market development lies with the central labour office (Central Office of Labour, Social Affairs and Family) according to the Act on employment services (5/2004). In initial VET, as stipulated by the VET Act (61/2015), chambers and/or employer representatives, especially 'sectoral assignees', support the central labour office (Section 2.4.). Legislation also requires self-governing regions to decide 10 months prior to the beginning of a school year how many new classes (by region and programme) can be opened. There are, however, no reliable data on skills demand to inform regional initial VET. Graduate career data are unavailable and school efforts to collect them are not yet properly supported despite expert recommendations.

Two models ([32]) of macroeconomic forecasting are available in addition to analyses of job vacancy data from online job portals ([33]). They are useful for informing national and regional authorities on anticipated labour market changes rather than for regulating initial VET in the regions.

The first model forecasts employment change by sector and future employment by ISCO ([34]) group.

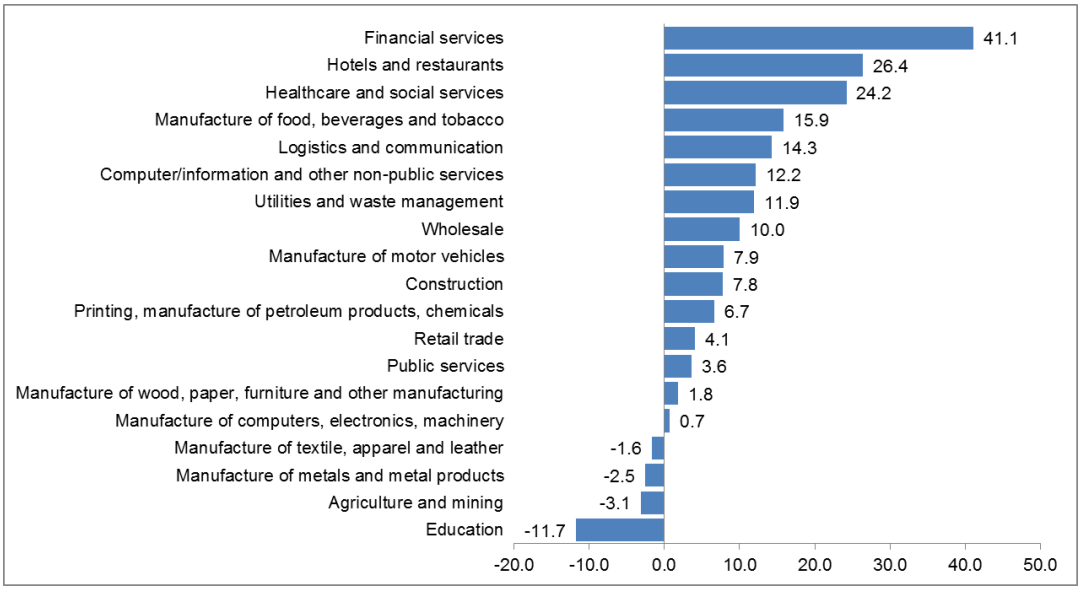
([31]) Education (245/2008) and VET (61/2015) acts

([32]) Developed by (a) the Institute of Economic Research of the Slovak Academy of Sciences (2014) cooperating with Cedefop on Skills Panorama project; and (b) Trexima Bratislava; see also Cedefop (2015).

([33]) See profesia.sk and istp.sk

([34]) International standard classification of occupations.

Figure 20. **Employment change in economic sectors in 2014-25**

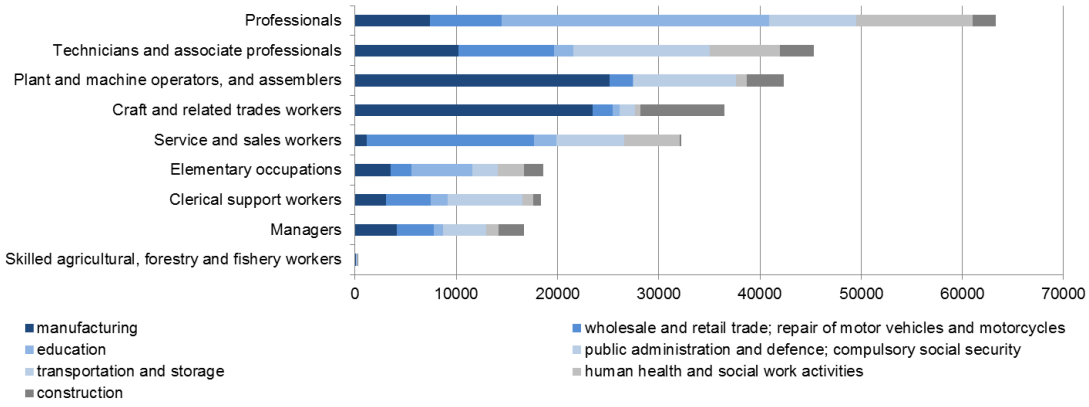



*Source*: European Commission, 2015.

The highest employment growth in 2014-25 is forecast in the service sector: in financial services (+41.1%), hotels and restaurants (+26.4%), logistics and communication (+14.3%) and IT services (+12.2%); the highest decline is in the education sector (-11.7%)([35]). In manufacturing, a strong increase is forecast in food, beverage and tobacco sectors (15.9%) and only a modest increase in the important export sector of machinery and electronics. This model has, so far, no visible influence on VET, in contrast to the second macroeconomic model. Figure 21 presents cumulative estimation of required employees in main sectors resulting from the second model.

([35]) Some forecasts indicate growing demand for teachers due to a high replacement demand as a result of ageing. This shows these forecasts are very sensitive to ageing in the occupation and do not sufficiently take into account administrative data already showing reductions in teaching staff due to shrinking younger age cohorts.

Figure 21. **Occupations requirement in main sectors until 2020**




NB: ISCO-08 categories; statistical classification of economic activities in the European Community (NACE Rev.2) sectors in the legend.

*Source*: Central Office of Labour, Social Affairs and Family (2015), based on Trexima Bratislava data.

The highest number of additional employees is forecast in manufacturing, wholesale and retail trade; repair of motor vehicles and motorcycles, and in education sectors. This may signal high sensitivity of this model to ageing of current employees. High labour market demand is forecast by 2020 for cleaners, sales assistants, accounting associate professionals, teachers in lower secondary (basic) education, heavy truck and lorry drivers, physical and engineering science technicians, accountants, mechanical machinery assemblers, toolmakers and related workers, and security guards.

An alternative picture is presented by job portals, indicating immediate labour market demand that can, however, be biased by wide fluctuation in some jobs.

The online labour market guide (*internetový sprievodca trhom práce* ([36])) job portal indicates the following 10 most frequently advertised occupations: mechanical machinery assemblers, manufacturing labourers, stock clerks, electrical and electronic equipment assemblers, assemblers, waiters and sommeliers, freight handlers, heavy truck and lorry drivers, shop sales assistants, and motor vehicle mechanics and repairers.

According to the job portal ([37]), the highest increase in vacancies was in some segments of industry, transport/logistics and banking sectors. In 2015, most vacancies were in industry, wholesale and retail and IT ([38]). Shortage of IT

([36]) www.istp.sk

([37]) www.profesia.sk

([38]) Detailed data comparing 2014 and 2015 vacancies and data about vacancies suitable for schools graduates were provided by profesia.sk.

specialists is a challenge for the education sector ([39]). Insufficient supply may open the market to foreign employees, particularly in Eastern Slovakia. Despite some growth from 21.4% in 2013 to 26.7% in 2015, only a quarter of vacancies are still explicitly declared as suitable for graduates from schools, according to the portal.

Forecasts ([40]) have been used by national authorities to enforce stronger regulation of secondary VET in response to employer criticism of secondary school graduate supply. The central labour office regularly presents information to the National VET Council based on forecasting and analysis of registered unemployed data. Self-governing regions and individual schools are also offered data about graduate unemployment rates and their transition to the labour market between September and May. These indicators should inform families and lower secondary students about their chances on the labour market. However, they are only proxies as data on employment of graduates are lacking.

The forecasts are used to inform self-governing regions maintaining secondary schools on additional labour market needs. These indicative data are expected to be translated into the numbers of new entrants needed in the respective fields of study at secondary schools. Subsequently, self-governing regions are expected to calculate how many new classes should be opened based on nationwide aggregated data. In 2016, a new procedure was introduced for this purpose. Newly created regional platforms composed of specialists from self-governing regions, labour offices and sectoral assignee representatives (Section 2.4) validate the annual forecasting data ([41]).

After discussions at the Regional VET Council the number of necessary first-grade classes for different programmes are calculated and need to be approved by the regional parliament. Every year by October, the self-governing regions approve the admission limits for the following school year and inform schools accordingly.

'Black' and 'white' lists of initial VET programmes created by the education ministry in cooperation with stakeholders (Ministry of Education, Science, Research and Sport, 2015a) also inform school directors about programmes with insufficient or excessive supply of graduates. Schools are financially encouraged

([39]) A new bylaw of the education ministry in the pipeline, prepared in cooperation with employers, reflects this challenge by creating the new (major) study field 'Informatics and data processing' subsuming IT programmes.

([40]) By Trexima Bratislava spol. s r.o., a private company that develops forecasts for public authorities.

([41]) See also media.radavladyovp.sk/2016_jun_16/K_bodu_5.3_1.pdf. Upper limits of secondary school capacities and estimated numbers of new entrants for 2017/18 are available at media.radavladyovp.sk/2016_jun_16/K_bodu_3.pdf

to open ‘white’ list programmes and not to open ‘black’ list programmes (per capita funding 10% higher or lower). A new bylaw issued by the education ministry, which aims at making the procedures for setting these lists more reliable, is expected to be applied in 2017.

In the absence of graduate tracking, macroeconomic forecasting is the only source for regulating initial VET envisaged by legislation and demanded by employers. This causes tensions between national authorities and self-governing regions. Lack of graduate tracking data is an obstacle to analysing graduate success in employment. Detailed skill needs analysis is lacking and transferability of skills is insufficiently studied: current efforts in informing secondary VET, risk being biased as relevant primary data on employment, and analyses to understand transferability of knowledge and skills between diverse qualifications/jobs, are not available.

## 3.2. Designing qualifications and curriculum development

In addition to curricular reform, three current initiatives aim at reshaping the qualifications system: two were initiated by the education ministry and led to setting qualification standards, one was launched by the labour ministry and led to setting occupational standards. This plurality is caused by a mix of tradition and new European stimuli.

### 3.2.1. Curriculum development

Prior to the 2008 reform, education was backed by detailed ‘input-based’ curricula, which had to be approved by the education ministry. Since then, curriculum development has been decentralised. Schools prepare their own curricula based on what could be considered national curricula setting educational standards (referred to as ‘State education programmes’, *štátny vzdelávací program).*

Educational standards are composed of so-called content and performance standards, as stipulated by the Education Act (245/2008). Performance standards can be seen as learning outcomes that students are supposed to achieve during their studies and demonstrate when completing them. Assessment standards are considered a tool to help evaluate whether learners have achieved performance standards and are to be developed by schools.

Since 2013/14, there have been 23 State education programmes replacing the original 83 developed for different ISCED levels separately. Now they cover all major VET fields under the responsibility of the education ministry and include

specific framework requirements for all relevant ISCED levels and educational standards for individual programmes. The ministries of health and interior are autonomous in programming initial VET under their responsibility.

Education authorities regulate the development of initial VET programmes:

(a) initiation: employers facing shortages of specialists usually take the initiative, as may schools looking for new opportunities to 'survive' in a competitive environment with a decreasing number of learners. Employer(s) and school(s) from the neighbourhood usually approach the education authority;
(b) inception: a proposal for an experimental programme is submitted to the education ministry. It should be supported by a self-governing region (that establishes VET schools) and discussed by a school board, local/regional employers, and the sectoral assignee representatives. Then a new programme comprising the so called 'graduate's profile' (characteristic features of a graduate, including a list of key and vocational competences) and detailed curricula is elaborated, including information on schedule, personnel and financial resources. This involves a specialist (in Slovak, *garant*) from the field assisted by the methodologist of the State Institute of Vocational Education. Once the education ministry approves and registers the programme, following a positive recommendation by the working group of the National VET Council, one to three schools may implement the programme as an experiment;
(c) evaluation: every year the *garant* evaluates progress and informs the education ministry of any changes or adjustments during the experiment. This phase is completed by his/her final evaluation at the end of the calendar year when the experiment has ended. The evaluation must include an explicit statement recommending a new VET programme or not;
(d) mainstreaming: if the *garant's* recommendation is positive, the ministry adds this new programme to the VET programme list and the respective State education programme is adjusted accordingly. Any VET school can offer it upon approval of the ministry, but it must develop its own curriculum.

Since 2015, developing curricula for dual VET has been in progress based on requirements from chambers and employers' representatives. Although the new VET Act (61/2015) uses the term 'dual system', in fact it stimulates provision of work-based learning in school-based secondary VET. Practical training is expanded and offered under the supervision of companies based on adjusted curricula. Eleven supplements to the respective State education programmes were issued by the education ministry for 2015/16 covering 42 VET programmes. For 2016/17, an additional 22 programmes are to be offered as dual VET. The State Institute of Vocational Education is responsible for designing national

curricula and also for dual VET, cooperating with respective sectoral assignees. Curricula must contain:

(a) a teaching calendar, assigning the number of weekly teaching hours for general education and vocational subjects and those dedicated to practical training offered outside school in certified premises;

(b) model syllabi for vocational subjects and practical training suggesting numbers of teaching hours for specific topics within all subjects.

While non-dual curricula do not include syllabi as they are considered to be embedded in the respective educational standards, dual curricula have returned to traditional detailed content prescriptions and represent a mix of input and output-based approach to curriculum development.

### 3.2.2. Designing qualifications

In addition to designing initial VET curricula and qualifications, there are also others designed according to the Lifelong Learning Act (568/2009). This defines the national qualifications system (*Národná sústava kvalifikácií*) with a public register of qualifications standards and assessment standards for full and partial qualifications (see preamble of Chapter 3) required to undertake professional activities. Despite its title, the act refers to further education and only covers continuing VET and adult learning offered within the education sector and regulated by the education ministry.

The 2013-15 national ESF project on developing a national qualifications system resulted in setting up a qualifications register ([42]) with 1 000 qualifications aligned to the eight-level national qualifications framework (SKKR) ([43]). Standards for these qualifications were developed by 24 sectoral (skills) councils composed of stakeholder representatives and approved by the National Council for Education and Qualifications, a qualification authority composed of stakeholder representatives.

Backed by the legislation to be prepared by the education ministry, these standards will replace the earlier set developed and used since 2013 due to the lack of a national qualifications system. These standards were approved by the education ministry and are now placed in the further education information system ([44]) to allow for the development of accredited further education

([42]) www.kvalifikacie.sk

([43]) Newly created qualifications are distributed by SKKR levels as follows: 2nd: 34, 3rd: 310, 4th: 262, 5th: 72, 6th: 139, 7th: 181 and 8th: 2.

([44]) http://isdv.iedu.sk/EligibleInstitutions.aspx

programmes and examinations to verify the professional competence of people interested in starting up a business (craft) (Section 3.4).

Observing a mismatch in supply and demand on the labour market, the labour ministry initiated the development of a national system of occupations within ESF projects. The system and its occupational standards developed in cooperation with social partners are available on a web portal ([45]) and are promoted by an occupations register in the labour market online guide ([46]). The occupations system portal also contains a competence register with a database of relevant knowledge, skills, and general abilities required by occupational standards.

The 24 sectoral (skills) councils currently involved in developing occupational standards are supervised by the Sectoral Council Alliance that finally approves these standards. Since 2013, responsibilities of these councils and the alliance have been stipulated by the amended Act on employment services (5/2004). As the 2008 curricular reform preceded the creation of the occupations and qualifications systems, their development should affect educational and assessment standards that are currently used within formal VET. The sets of (educational, qualification and occupational) standards already emerging in parallel are expected to be interlinked, with the following systems:

(a) national occupations system reflecting changes in occupations, work organisation and processes driven by new technology and, in turn, informing the national qualifications system;
(b) national qualifications system setting mandatory qualification requirements aligned to labour market needs and informing education and qualification systems;
(c) initial VET system and its education standards offering a variety of programmes with an appropriate mix of competences to suit the requirements of the labour market, continuing education and learners' personal development.

## 3.3. Qualifications framework

Creation of a national qualifications framework was stipulated by the 2012 amendment to the Lifelong Learning Act (568/2009). The initial version – already comprising eight levels with outcomes-based descriptors – that a working group

([45]) Available at sustavapovolani.sk

([46]) http://istp.sk/kartoteka-zamestnani

established by the education ministry had proposed was thoroughly reviewed. A new design was developed within a 2013-15 ESF project. SKKR is a comprehensive framework that comprises three categories of descriptors: knowledge (general, professional), skills (cognitive, practical) and competences (responsibility, autonomy, social competences). It is composed of four sub-frameworks for general education, secondary and postsecondary initial VET, higher education and professional qualifications (*kvalifikacie.sk/slovensky-kvalifikacny-ramec*).

Linking SKKR to the European qualifications framework (EQF) was discussed at the EQF advisory group in December 2015. The report was evaluated as work in progress. The group recommended providing more evidence on how prescribed referencing criteria were met and adding information on the self-certification related to the qualifications framework in the European higher education area. Also, the conceptual framework was not clear, as some terms (such as qualification) were used ambiguously (Cedefop and Council of Europe, 2015).

## 3.4. Assessment and validation

There is no genuine and appropriately developed national model for validation of non-formal and informal learning. Although the 2007 and 2011 lifelong learning strategies addressed this issue, a legislative basis is still lacking. The Lifelong Learning Act (568/2009) created some preconditions for gradual progress but it refers only to:

(a) recognition of further education results (outcomes) based on assessment against qualification standards leading to a full or partial qualification; the former corresponds to all requirements of an occupation and the latter only to some knowledge, skills and competences related to the respective occupation;
(b) verification of a 'professional competence' necessary for running a business regulated by the Trade Licensing Act (455/1991); it is also based on assessing compliance with standards.

The former refers to accredited programmes leading to qualifications described by standards, to formal rather than non-formal learning. Validation is based on examination of graduates from accredited programmes (1 291 in total in 2015) by an authorised institution that also organises the exam. Nevertheless, applying for this type of exam without prior completion of the accredited programme is possible for individuals who have at least five years of professional

experience. They receive a certificate confirming compliance with the related qualification standards.

Certificates verifying professional competence are not equivalent to those from formal education. They substitute a certificate of apprenticeship for the purpose of starting a business only: holders are entitled to start a craft regulated by the Trade Licensing Act (455/1991) but they are not allowed to progress within formal education based on these certificates, as they do not certify the respective education level.

In 2015, 15 institutions were accredited as per the Lifelong Learning Act (568/2009). In total, 224 authorisations for examination were granted ([47]).

In November 2015, a working group was created to prepare a new Lifelong Learning Act addressing, inter alia validity and reliability of validation processes and focusing on relevant tools. A follow-up to the ESF project, aiming to develop the existing national qualifications system, is also expected to focus on validation processes. National validation arrangements covering four well-designed stages – identification, documentation, assessment and certification – and tools may need to be developed and promoted, as exams are currently the main validation instrument (Cedefop and European Commission, forthcoming).

## 3.5. Quality assurance

National/regional quality assurance approaches applied so far are traditional in terms of governance and methodology. European quality assurance in VET (EQAVET) principles have not yet been implemented, but a new strategy paper for implementing quality assurance responding to international impulses has been prepared by the education ministry (Ministry of Education, Science, Research and Sport, 2016a).

### 3.5.1. Regional schooling including VET schools

The State school inspectorate is a main stakeholder that checks VET quality. It is a State administration body headed by the chief school inspector appointed for a five-year period by the education minister. By law, the inspectorate is independent in its evaluation work based on annual plans and resulting in yearly reports on the status of education and upbringing.

According to the Act on State administration and self-governance (596/2003), directors are responsible for the quality of their schools' performance;

([47]) More on the further education information system at isdv.iedu.sk/EligibleInstitutions.aspx

upon the chief school inspector's request, they can be replaced by a self-governing region.

The National Institute for Certified Educational Measurements is also responsible for monitoring and assessing quality of education according to the Education Act (245/2008). However, it focuses predominantly on general education and, despite envisaged expansion of national testing, quality check of VET provision by both institutions – State school inspectorate and National Institute for Certified Educational Measurements – would require staff expansion. This is why sectoral assignees are to help check the quality of practical training provided by companies. They are also responsible for certifying company premises established for provision of practical training within dual VET.

Recent legislative changes aim to help improve VET school quality significantly by:

(a) reinforcing involvement of business representatives in planning and designing initial VET and school-leaving examinations;
(b) setting equipment and human resource requirements for programme provision;
(c) creating VET centres in cooperation with self-governing regions and respective sectoral assignees, identified from schools complying with quality requirements in terms of learning environment, equipment and staff to serve as a 'lighthouse' school in a respective sector of economy and region.

A 2009-13 ESF project, run by the inspectorate, developed a national self-evaluation model for regional schools, capitalising on international experience. Although supported within continuing professional development programmes for school directors, its translation into practice has been slow.

### 3.5.2. Higher education

The main responsibility for checking quality lies with the institutions themselves. An important 2013 amendment to the Higher Education Act (131/2002) stipulated introduction of internal quality assurance systems and measures to strengthen selection of teaching staff, assessed together with programme document content during the accreditation process.

The accreditation commission, comprising personalities from academic and non-academic areas, is an advisory body to the government, independent from the education ministry. All programmes offered must be submitted for individual assessment. The commission is *de facto* fully independent in its decisions but not *de jure*. This is why it is only an associated member of the European Association for Quality Assurance in Higher Education.

In addition to input-based accreditation (about 65% of submitted programmes were accredited), in 2015, an evaluation of output quality was conducted for the first time within a so-called comprehensive accreditation based on criteria set in 2013. According to the commission's findings (Ministry of Education, Science, Research and Sport, 2016), study programmes do not correspond with labour market needs. Two-thirds of the accredited programmes belong to humanities and social science and only one-third to technical and natural sciences. The commission recommends changing the supply of secondary programmes. It also suggests:

(a) introducing financial incentives for students of technical programmes and selected natural science programmes and a *numerus clausus* for attractive programmes with too many students (with the option of charging fees for these programmes);
(b) distinguishing four types of higher education institution (research universities, universities, higher education institutions and professional higher education institutions) instead of three recognised by legislation;
(c) increasing substantially funding of higher education, while making financing of the institutions less dependent on numbers of students and publications issued and more on comprehensive accreditation results.

### 3.5.3. Continuing VET and adult learning

Detailed accreditation of further education programmes and authorised institutions for examinations with full or partial qualifications standards (see preamble of Chapter 3) are stipulated by the Lifelong Learning Act (568/2009). Despite addressing quality in its recent amendments, the act focuses on input assessment. Evaluation processes are still under development. Assessing course provision by graduate rating was suggested by the education ministry, but not yet put in place. New legislation is needed to address quality assurance in more detail and in the full range, as the current Lifelong Learning Act applies to programmes provided by the education sector only. Quality assurance in other sectors depends on sectoral authorities and is regulated in various ways.

CHAPTER 4.

# Promoting VET participation

## 4.1. Incentives for learners

Until 2015, there were few incentives for (potential) VET learners:

(a) State scholarships for socially disadvantaged learners;
(b) private scholarships, often from a company interested in hiring the student;
(c) remuneration for productive work performed during training.

A new VET Act (61/2015) has introduced more comprehensive and generous stimuli:

(a) a motivation scholarship by the State for learners in VET programmes preparing for occupations that are in demand on the labour market. This monthly scholarship equals 25%, 45% and 65% of the national subsistence minimum depending on learner's performance (EUR 55.78 per month for best performers in 2015/16);
(b) a scholarship from a company offering training that may amount up to four times the national subsistence minimum (up to EUR 361.68 per month in 2015/16);
(c) remuneration for productive work during training. This incentive may amount to between 50% and 100% of a minimum wage (EUR 1.16 to 2.33 per hour since 2016);
(d) State scholarship for socially disadvantaged learners. This scholarship supports completion of secondary VET and is paid if a learner performs well. It is up to EUR 45.21 per month with an average mark 2 or lower ([48]).

The education ministry has repeatedly suggested incentives for adult learners (also those in continuing VET) due to low participation in lifelong learning (3.1% compared to 10.7% in EU-28 in 2015) ([49]). However, they were rejected and excluded from the Lifelong Learning Act (568/2009). Exceptions were temporary support for training/attesting of healthcare sector specialists. Incentives for learners can be offered by public employment services, often partly financed by the ESF (for example, *Re-pas* project; Section 2.6.2.1).

([48]) Marks range from 1 (best) to 5 (worst).

([49]) Eurostat, table tsdsc440, extracted on 25.5.2016.

## 4.2. Incentives for VET providers

There are no incentives for VET schools (Figure 18). Law-makers have recognised the need to offer incentives to VET providers to encourage cooperation with companies as the only currently existing measure is a grant scheme to promote dual VET and occupations with skills shortages among lower secondary students.

## 4.3. Incentives for enterprises

Until 2015, legislation stimulated companies to offer VET learners contracts on future employment. Companies were offered tax exemptions for costs of learner meals, accommodation, travel, mandatory medical and psychological examinations, and provision of equipment.

A new VET Act (61/2015) redefined these incentives to make VET more attractive for companies.

(a) tax exemption for certified companies that train VET learners reduces training costs by 22%;
(b) companies also receive a 'tax bonus' of EUR 1 600 or 3 200 for each learner depending on the hours (200 or 400) of training provided per year; the remuneration for learners for productive work (Section 4.1) is also exempted from levies.

## 4.4. Guidance and counselling

The provision of career guidance and counselling for learning, career, and employment is the responsibility of two sectors: education and employment. According to the Education Act (245/2008) guidance and counselling in the education sector is provided by:

(a) centres of educational and psychological counselling and prevention;
(b) centres of special education guidance and counselling.

The services are provided by education counsellors, school psychologists, school special pedagogues, therapeutic pedagogues, social pedagogues and prevention coordinators. They address learners at primary and secondary schools. Education counsellors are regular teachers with specialisation gained through continuing training. While they can offer just information and some guidance, they are not genuine counsellors, as they are not professional psychologists. This is why their career counselling services are questioned by representatives of the psychologists' community.

This issue was addressed by several national ESF projects. The 2013-15 project on supporting vocational guidance developed an accredited vocational guidance and counselling programme for teachers of basic education: 480 teachers from 500 basic education schools have participated. The project also developed a catalogue for vocational guidance containing profiles of 110 jobs in metallurgy, mechanical engineering, electrical engineering, chemistry, food processing, wood processing and construction sectors. The catalogue offers learners information on working tasks and job requirements on the labour market. Development of the 2013-15 secondary VET project focused on career guidance, vocational guidance and counselling for secondary VET students. An accredited continuing training programme was developed resulting in certification of 355 specialists from 282 VET schools. As a result of both projects, an online tool ([50]) was designed to identify the career potential of learners at lower secondary level to take up VET, and to support counsellors in provision of career counselling to secondary VET students.

Career information and guidance centres are also available in some universities. A web portal ([51]) created within the national higher education ESF project informs young people on wage levels after graduation by higher education institution and field of study.

Guidance and counselling for adults is less developed. A network of 25 counselling centres spread across the country focuses on career and personal development of individuals, providing information on possibilities for participating in initial and further education programmes and for having further education results recognised through examination, as per the Lifelong Learning Act (568/2009). The 2013-15 project on further education and counselling for adults as a tool for better chances on the labour market developed standards and designed/provided modular training for counselling tutors.

In the employment sector, offices of labour, social affairs and family offer career guidance and counselling for job seekers. An amendment (2013) of the Act on employment services (5/2004) stipulates identification of personal dispositions of job seekers and evaluation/assessment of their competences. With the support of the Leonardo da Vinci project a *bilan de compétences* methodology (France) has been translated into the labour offices' practice and 46 specialists have been retrained.

([50]) www.profsme.sk

([51]) www.lepsieskoly.sk

Two institutions capitalise on international networking and guidance experience. Euroguidance Slovakia ([52]) focuses on guidance practitioners and policy-makers from both education and employment. The national forum for lifelong guidance is an advisory board to the education ministry.

([52]) http://web.saaic.sk/nrcg_new/_main.cfm?clanok=2&menu=2&open=1&jazyk=sk

CHAPTER 5.

# Key challenges and development opportunities

Gradually deteriorating learning outcomes of the young generation, as shown by PISA ([53]), PIAAC ([54]) results and employers' criticism, indicate the need to reform the education and qualifications system. The government elected in 2016 has agreed on objectives for 2016-20: 38 are devoted to primary, lower and upper secondary education (regional schooling), 34 to higher education and four to further education (Government of the Slovak Republic, 2016). Five objectives relate to secondary VET:

(a) further improving dual VET and specialisation of secondary VET schools;
(b) involving small and medium-sized enterprises in dual VET;
(c) providing effective career education and guidance in primary and secondary schools;
(d) improving progression opportunities by creating professionally oriented post-secondary VET programmes, including professional higher education;
(e) greater involvement of employers in training of teachers/trainers (initial and continuing), including internships in companies.

Some of these objectives have already been translated into measures to be implemented by end-2016 (Ministry of Education, Science, Research and Sport, 2015). The government has also announced increased investment in education (EUR 2 billion or +2.5% of the 2015 GDP cumulatively by 2020), but this commitment is not enough to make up for continually low education expenditure (Section 2.3) and to reach either the OECD or the EU average by 2020.

Some systemic changes, however, are considered even more pressing. They include:

(a) making initial VET more attractive by creating upward trajectories for its graduates supported by legislation (institutionalised licensed 'master

([53]) Slovak learners performed below the OECD average in all domains in PISA 2012, particularly in mathematics (OECD, 2014). They were third best in Europe in 1995 in a similar survey (TIMSS International Study Centre, 1996).

([54]) While the young generation performed below average, the older generation's performance was above average in numeracy and literacy; thus PIAAC confirms intergenerational decline.

craftsperson' diplomas at EQF level 6, widely available practice-oriented bachelor studies, and establishing universities of applied science);

(b) creating a grant scheme to support school-company cooperation projects that focus on work-based learning besides the already introduced dual VET;

(c) counterbalancing negative incentives of per capita funding, which solely reflects the number of new entrants; introducing fiscal incentives for schools (and training companies) whose graduates achieve high-quality learning outcomes;

(d) complementing the national qualifications system with qualifications that better correspond to the skills required in the workplace; besides traditional 'comprehensive' qualifications, VET schools should get the chance to deliver also 'narrower' qualifications on companies' or labour offices' requests;

(e) substantially improving labour market intelligence; macroeconomic forecasting is only one instrument to inform VET about labour market developments; tracking of graduate careers is needed to improve feedback loops.

By end-2016 the government intends to elaborate the national programme for the development of education *Learning Slovakia* (working title) which includes detailed reform steps until 2026.

# List of abbreviations

| | |
|---|---|
| EC | European Commission |
| EQAVET | European quality assurance in VET |
| EQF | European qualifications framework |
| ESF | European Social Fund |
| EU | European Union |
| GDP | gross domestic product |
| ISCED | international standard classification of education |
| ISCO | international standard classification of occupations |
| IT | information technology |
| NEET | young people not in employment, education or training |
| OECD | Organisation for Economic Cooperation and Development |
| PISA | programme for international student assessment |
| PIAAC | programme for the international assessment of adult competencies |
| SK | Slovakia |
| SKKR | *Slovenský kvalifikačný rámec* (Slovak qualifications framework) |
| UNDP | United Nations development programme |
| VET | vocational education and training |
| WB | World Bank |
| WBL | work-based learning |

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ANNEX 1.

# Learners by programme in 2015/16

| | ISCED 2011 | Full-time | | | | Part-time | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | total | public | private | church | total | public | private | church |
| Pre-school | 20 | 157 956 | 148 456 | 5 240 | 4 260 | | | | |
| Basic education: | | | | | | | | | |
| preparatory (grade 0) | 20 | 3 630 | 3 523 | 58 | 49 | | | | |
| elementary (grades 1-4) | 100 | 207 146 | 191 820 | 3 524 | 11 802 | | | | |
| part of eight-year programme (grades 1-4) | 244 | 12 877 | 9 562 | 745 | 2 570 | | | | |
| general (grades 5-8) | 244 | 216 642 | 202 026 | 2 470 | 12 146 | | | | |
| Upper secondary: | | | | | | | | | |
| part of eight-year programme (grades 5-8) | 344 | 9 222 | 7 071 | 531 | 1 620 | | | | |
| four(five)-year programme | 344 | 50 747 | 40 430 | 2 677 | 7 640 | 484 | 481 | 0 | 3 |
| Lower secondary vocational | 253 | 4 636 | 4 018 | 469 | 149 | 146 | 133 | 13 | 0 |
| School-based four(five)-year VET | 354 | 66 844 | 58 278 | 6 261 | 2 305 | 1 011 | 108 | 903 | 0 |
| Four-to-five-year VET with up to 50% of WBL | 354 | 35 177 | 31 872 | 2 827 | 478 | 186 | 97 | 71 | 18 |
| Three-to-four-year VET with up to 60% of WBL | 353 | 23 713 | 20 372 | 2 801 | 540 | 1 723 | 1 550 | 104 | 69 |
| Post-secondary follow-up | 454 | 6 683 | 5 918 | 580 | 185 | 1 872 | 1 526 | 310 | 36 |
| Post-secondary leading to second qualification | 454 | 513 | 405 | 108 | 0 | 4 000 | 2 374 | 836 | 790 |
| Higher professional | 554 | 1 661 | 1 241 | 347 | 73 | 278 | 108 | 120 | 50 |
| Performing arts | 244, 354, 554 | 3 021 | 1 834 | 1 004 | 183 | | | | |

NB: Data exclude special schools.

| | ISCED 2011 | Full-time | | | | Part-time | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | total | public | private | State | total | public | private | State |
| Bachelor | 665 | 70 400 | 65 209 | 3 909 | 1 282 | 17 990 | 10 959 | 6 546 | 485 |
| Master | 767 | 35 253 | 33 145 | 1 901 | 207 | 13 721 | 8 008 | 4 805 | 908 |
| Integrated bachelor and master | 766 | 7 558 | 7 223 | | 335 | 118 | 118 | | |
| PhD | 864 | 4 383 | 4 283 | 79 | 21 | 3 092 | 2 503 | 343 | 246 |
| **Total** | | **117 594** | **109 860** | **5 889** | **1 845** | **34 921** | **21 588** | **11 694** | **1 639** |

NB: Learners with Slovak citizenship.

*Source*: Slovak Centre of Scientific and Technical Information, extracted on 31.10.2015.

ANNEX 2.

# Schools by type and ownership in 2008/09 and 2015/16

| | 2008/09 | | | 2015/16 | | |
|---|---|---|---|---|---|---|
| | Public/State | Private | Church | Public/State | Private | Church |
| Kindergartens | 2 773 | 56 | 42 | 2 734 | 127 | 74 |
| Basic schools | 2 090 | 34 | 113 | 1 943 | 52 | 118 |
| Grammar schools | 156 | 40 | 55 | 149 | 40* | 57 |
| Secondary specialised schools (VET schools) | 397** | 89*** | 20 | 346** | 93*** | 19 |
| Conservatories | 6 | 6 | 1 | 6 | 10 | 1 |
| Higher education institutions | 23**** | 10+ | 0 | 23**** | 12 | 0 |
| Special basic schools | 272++ | 21+++ | 6 | 258++ | 28++ | 9 |
| Special secondary schools | 105 | 2 | 4 | 129 | 8 | 5 |

NB: * Including two schools offering only part-time studies.

** Including four schools of other (than education) ministries, of which one school offers only part-time studies.

*** Including three schools in 2008/09 and eight schools in 2015/16 offering part-time studies only.

**** Including three State schools (health, police, army) and the Catholic University in Ružomberok enjoying special status and regulations by church that is legally categorised as public.

+ Including one school offering only part-time studies.

++ Including 57 schools in 2008/09 and 50 schools in 2015/16 affiliated to healthcare institutions.

+++ Including nine schools in 2008/09 and 10 schools in 2015/16 affiliated to healthcare institutions.

*Source*: Slovak Centre of Scientific and Technical Information.

ANNEX 3.

# Shares of theory and practice in VET

| Programme | Entry requirements | ISCED 2011 | % | | | | Progression routes |
|---|---|---|---|---|---|---|---|
| | | | general | VET theory | VET practice | decided by schools | |
| two-year lower secondary VET with up to 80% WBL | Incomplete lower secondary (basic) education | 253 | 8.33 | 3.33 | 80 | 8.33 | Labour market; upper secondary programmes conditioned by completion of a bridging programme |
| three-year VET with up to 60% WBL | Lower secondary (basic) education certificate | 353 | 22.22 | 18.18 | 47.98 | 11.62 | Labour market; post-secondary follow-up programmes |
| three-year dual VET with 60% WBL | | | 18.50 | 21.50 | 60.00 | 0 | |
| four-year VET with up to 50% WBL | | 354 | 34.85 | 13.64 | 33.33 | 18.18 | Labour market; post-secondary programmes leading to second VET qualification, specialising programmes or higher professional programmes; higher education programmes |
| four-year dual VET with 50% WBL | | | 30.15 | 20.22 | 49.63 | 0 | |
| school-based four-year VET | | | 36.36 | 22.73 | 19.70 | 21.21 | |
| two-year follow-up programmes | Upper secondary three-year VET certificate in related study field | 454 | 34.85 | 22.73 | 12.12 | 30.30 | |
| two-year programmes leading to a (second) VET qualification | Upper secondary (general or VET) education certificate | 454 | 0 | 33.33 | 21.21 | 45.45 | Labour market; post-secondary specialising programmes or higher professional programmes; higher education programmes |
| two-year programmes leading to a (second) VET qualification with extended practical training | | 454 | 0 | 32.35 | 64.71 | 2.94 | |
| three-year higher professional programmes | | 554 | 0 | 26.26 | 33.33 | 40.40 | Labour market; higher education programmes |
| three-year higher professional dual programmes* | | 554 | 0 | 45.63 | 54.37 | 0 | |
| two-year specialising programmes | Upper secondary VET certificate in related study field | 554 | 0 | 34.85 | 22.73 | 42.42 | |

NB: Shares as in the national curricula framework for VET schools; performing arts programmes and programmes under the responsibility of health and interior ministries are not included; theory/practice shares of longer programmes (four-year ISCED 353, five-year ISCED 354) are not presented in this overview (Chapter 2); * shares relate to the one programme implemented so far.

*Source*: ReferNet Slovakia.

SK EU2016

EN

# Vocational education and training in Slovakia

## Short description

This publication aims to contribute to better understanding of vocational education and training (VET) in Slovakia, providing an insight into its main features and highlighting recent VET policy developments. The Slovak economy is largely driven by manufacturing and could benefit from more diversification to make it less sensitive to economic shocks and more skill-intensive jobs, encouraging innovation. VET has traditionally played a strong role, responsible for around two-thirds of graduates at upper secondary level. But qualifications do not always match labour market needs. A 'dual' VET scheme was introduced in 2015/16 as one way to address mismatch. First results show greater involvement of employers in VET: it is now in their interest to attract learners and to deliver job-relevant training. The government also intends to promote VET at higher levels to make it more attractive.

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