Chapter 5. Capacity building and public services in Latvia

Capacity building, including the provision of essential public services, is one of the main channels or incentive areas to support innovation and sustainable development. This chapter concerns three relevant policy areas: infrastructure and rural development policy; labour market policy; and education and skills policy.

5.1. Infrastructure and rural development policy

Broader rural development measures also affect sustainable agricultural development and structural adjustment. Increased off-farm income and employment opportunities mitigate farm household income risks, facilitate farm investment, and enable a wider range of farm production choices. Improved rural services, from banking to ICT, are important to ensure needed connectivity to suppliers, customers and collaborators. Rural policy can also attract innovative upstream and downstream industries, with possible spill-over effects locally. By reducing inequalities in economic development and access to services across regions, rural development policies improve the diffusion of innovation (OECD, 2015).

In a context of population decrease and concentration in urban areas, infrastructure and services planning for sparsely populated rural areas puts an increased burden on both central and local governments. This in turn reinforces the outflow of rural populations to urban centres. Connecting people to markets and providing information and services requires innovative solutions.

Quality of the physical infrastructure

Infrastructure investment is in line with the EU average and while infrastructures have improved, more needs to be done (IMF, 2018). Overall the quality of transport infrastructures is below the OECD average and while port and air transport infrastructures come close, the gap is wider for railroad and widens even more for road infrastructures (Figure 5.1, Panel A). The 2017 economic survey of Latvia stressed that transportation policies should address the strong regional disparities observed if inclusive growth is to be achieved in Latvia (OECD, 2017f). Long term investments aim to upgrade Latvia's physical transport infrastructure, co-financed by EU structural and investment funds.[1]

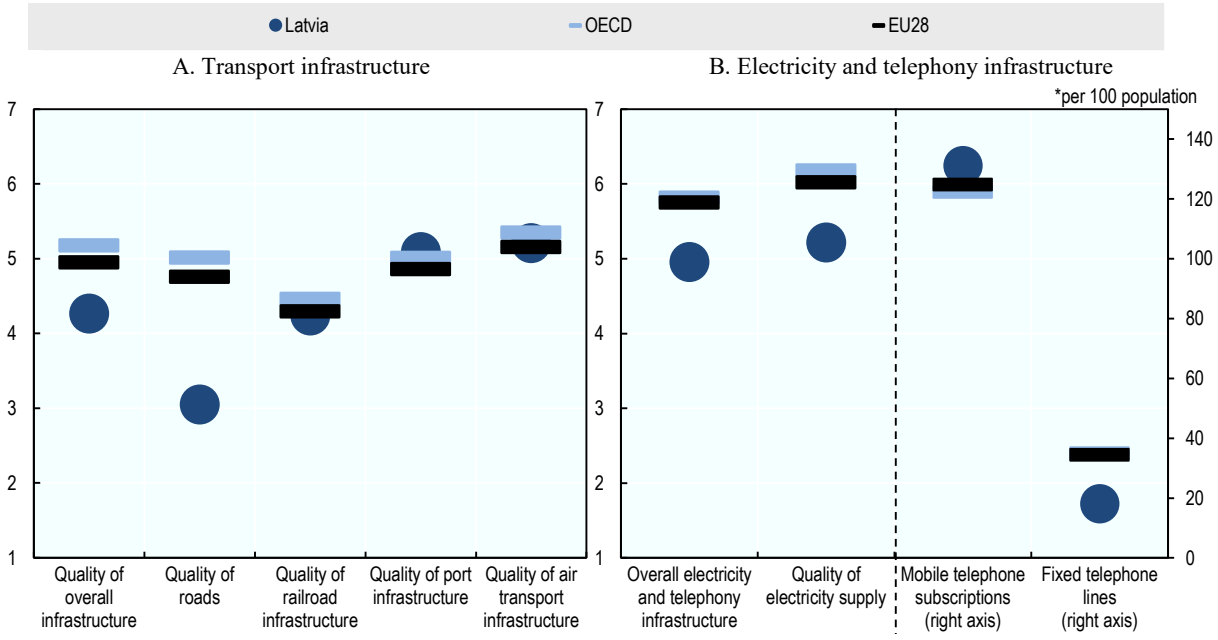
Despite major investments between 2005 and 2015 by which storage capacity was increased by 52%, the storage capacity is insufficient to absorb the robust cereals production growth and increased export volumes. Storage capacity is qualified as a serious potential concern for Latvian cereals and oilseeds crops (European Commission, 2017b).

Latvia's air transport infrastructure ranks 16th among EU infrastructures (Mobility and Transport, 2016). From 2012 to 2015, Latvia invested EUR 42 million in its air transport infrastructure; which is the 12th highest indicator among EU countries and 17th highest among OECD countries (OECD, 2017e). Riga International Airport offers Baltic States' passengers connections with cities throughout Europe and the world. In 2017, the airport at Liepaja also offered regular commercial transportations.

There are three major ports in Latvia and seven smaller ports. Ports benefit from significant tax rebates[2] to develop value added services and industrial projects. The port infrastructure handles more than 80% transit flow, it is well-developed and rated as slightly higher than the average of OECD countries (Figure 5.1, Panel A). Major ports are mainly used for the transhipment of transit cargoes, such as crude oil, fuel products, chemical and bulk cargoes, containers, Roll-on/Roll-off, metals as well as food products. They also handle most exports of agricultural products, including cereals and rapeseed.

Figure 5.1. Global Competitiveness Index: Quality of infrastructure, 2017-18

Scale from lowest (1) to highest (7) quality



Note: Indices for EU28 and OECD are the simple average of member-country indices.
Source: WEF (2017), *The Global Competitiveness Report 2017-2018*: Full data Edition, http://reports.weforum.org/global-competitiveness-index-2017-2018/.

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Latvia relies more on rail transport for freight than most other EU Member States (Eurostat, 2016). When considering cross-border rail freight, Latvia's 1 520 mm gauge railway lines seamlessly connect to rail infrastructures of Baltic neighbours as well as the Russian Federation and Belarus and, through these, to railway networks in other member states of the Commonwealth of Independent States and the east more generally. More than 80% of rail freight transits through ports to their final import or export destination. Transit freight includes exports from the Russian Federation to Western Europe and other destinations. Investments under the Connecting Europe Facility (CEF) framework co-finance the development of the regional "Rail Baltica" project and its connection to the European railway network under a Trans-European Transport Networks project (Rail Baltica, 2017).

While the density of the road infrastructure is qualified as adequate, their quality in rural areas ranks low compared to the OECD average. In 2015, 45% of Latvian state owned motor roads had bituminous pavement and 55% of roads had crushed stone and gravel pavement (MoT). More generally urban and intercity roads have bituminous pavements, whereas crushed stone and gravel pavement are mainly in rural areas (ITF, 2017). Domestic and EU structural and investment funds have been spent on improving road infrastructure in the past ten years. Despite investing about 1% of its GDP, one of the highest shares among OECD countries (CSB, 2017d), pressing needs remain and prioritisation is needed. The NDP 2020 aims to address these shortcomings.

The landscape of public transportation is similar; a generally well served capital city and main urban centres and less developed access in rural areas. The 2017 economic survey

of Latvia suggested that on-demand public transportation services may offer cost-effective ways to address needs (OECD, 2017f). A Concept for the public transportation post 2020 is under development. The draft Concept, a first such national document, provides for more effective and coordinated public transportation in localities with low population density and foresees a longer timeframe for reform so that the industry has time to adapt (Road Transport Administration, 2017).

The overall electricity and telephony infrastructures in Latvia rank lower than the OECD average (Figure 5.1, Panel B). Relatively high electricity prices for industry and a low-density electricity grid in rural areas may act as an obstacle to the installation of businesses (Eurostat, 2017a). However, Latvia's share of renewable energy production and consumption is one of the highest in the European Union. In 2014, 38.7% of the overall energy consumed was obtained from renewable energy sources, well above the EU28 average of 16% (CSB, 2015).

While the telephony infrastructure receives a low ranking, mobile phones are better ranked than the average for OECD countries and most of the Latvian territory has mobile network coverage (The Global Economy, 2016). This goes together with one of the lowest mobile communication prices in OECD countries (Measuring the Information, 2015). Similarly Latvia ranks high with regards to internet services. Internet coverage is available to more than 90% of households and public internet access points are available in cities and rural municipalities. Internet speed is ranked as good (Akamai's, Q1 2016 and Q1 2017 reports) and internet prices are among the lowest in the European Union (BIAC, 2015). The CSB reports that, in 2017, 97% of businesses used internet for their daily operations and 78% of the population used internet at least once a week (Science and Technology, 2016). The 2018 Europe's Digital Progress Report ranks Latvia 19th over 28 EU Member States, with progress in the shares of fast broadband subscriptions as well as the delivery of public e-services (EDPR, 2018). However, a digital gap remains between Latvian cities and rural areas (EDPR, 2018). In 2018 internet was used by 85% of the population in Riga and 75% in rural areas (Kantar TNS, 2018). Many public institutions offer, sometimes compulsory, e-services accessible to urban and rural populations alike. This is the case for applications to agricultural area support payments and for the e-health system for example.

Latvia has 626 ha of irrigated land (0.03% of the overall agricultural land) some of which are inherited from the past and not used. Considering the conditions in Latvia, the priority goes to drainage with regard to water related infrastructure investment (OECD Agri-Environmental indicators, 2017).

Infrastructure development priorities in the context of regional development

The Sustainable Development Strategy of Latvia until 2030 (Latvia 2030) and the NDP 2020 acknowledge the gap between urban and rural areas and emphasise the need for balanced development of the Latvian territory through the effective use of natural, economic and social resources available in each territorial unit. Along with traditional support and innovations in agriculture, there is funding allocated for business diversification in rural areas and effective use of cultural and social resources. They foresee investments in human resources, business environment and infrastructure and promote the activity and co-operation of local governments, entrepreneurs, non-governmental organisations and other stakeholders (Rural Development Programme, 2013).

Funding of infrastructure development

EU funds are the main source for infrastructure investments. These include European structural and investment funds (EAFRD, CF, and ERDF) and other instruments (Connecting Europe Facility, Exclusive Economic Zone). From 2014 to 2020, these funds will invest EUR 1.5 billion in the development of rural areas. Central and local governments generally supplement EU budgets to co-finance projects. Public Private Partnerships also contribute to infrastructure development.

Latvia's RDP 2014-20 under the CAP outlines Latvia's priorities for using approximately EUR 1.5 billion for the period from 2014 to 2020 (almost EUR 1.08 billion from the EU budget and nearly EUR 500 million from the national budget) (RDP, 2014, Summary of the National RDP, 2015) (Chapter 6). Infrastructure improvement is prominent in Latvia's RDP expenditure and about EUR 130 million are planned for investment in rural roads within the RDP Basic services measure (RDP, 2015).

The EU Cohesion Fund is the most significant EU financial tool for infrastructure improvement; its main priorities in Latvia are water management infrastructure and services, waste management, environmental infrastructures and promotion of environment-friendly energy, development of trans-European transportation network, development of sustainable transportation, development of motor roads, city transport, railroads, ports and airport infrastructure (Cohesion Fund, 2015). The European Regional Development Fund (ERDF) also invests in improving access to health, education and transport.

Public-Private Partnerships (PPP) in infrastructure development projects are an important instrument for reaching national goals. PPPs are regulated by the Law on Public-Private Partnership as an instrument of infrastructure development (Law on Public, 2009). Their development has been slow; identified obstacles include the high level of requirements for private investors, unsuccessful first attempts (such as the implementation of speed radars on the roads) and a low level of trust in the sustainability of such projects. However, several highly successful examples in the field of education, public services (heating supply, waste management), transportation, communications, and health, highlight the high potential of Public-Private Partnerships.

A PPP project has been launched to construct a new road infrastructure (Ķekava Bypass) using the Design-Build-Finance-Maintain model for the first time in Latvia for a transport infrastructure project. The launch of the public procurement process is expected at the end of 2018, the implementation of the PPP contract is to start in 2020 and the new constructed road infrastructure is planned to be available for use in 2023. A successful implementation of this project will be significant for the further involvement of the private sector in such projects.

Public services in rural areas

The "Regional Policy Guidelines 2013-2019" defines the "basket" of public services (health, culture, sports, education and social care) to be provided at each level of territorial settlement from parishes[3] and villages to development centres of international significance. More services are provided at higher levels of territorial settlement. The public services "basket" includes only those services that are suited for territorial differentiation and serves as a basis for planning of public services in municipalities.

Except for cities with a population exceeding 5 000 inhabitants, the whole territory of Latvia is deemed to be rural territory (RDP, 2014). In accordance with information

provided by the CSB, at the beginning of 2017, 68.3% of the population in Latvia lived in cities and 31.7% in rural areas (CSB Demography, 2017).

Territories classified in Latvia as rural areas are very different both in terms of population and infrastructure equipment. The territorial development index calculated by the State Regional Development Agency shows that there are signs of monocentric development in Latvia because a large part of the population and economic activities are concentrated in Riga and its vicinity (Territorial Development, 2015). The territorial development index reveals differences between several rural areas. For instance, according to national definitions, territories in the vicinity of the capital city of Riga legally and statistically are considered to be rural areas; however, in these areas territorial development indices have reached rather high values. This mainly can be explained by population mobility processes in the Riga vicinity resulting in the increase of economic activity, tax revenue and options to invest in infrastructure. These rural areas significantly differ from rural areas that are located far from Riga and especially from sparsely populated border areas, which are characterised by significantly lower levels of economic and social activities.

The Ministry of Environmental Protection and Regional Development considers that past investment in rural infrastructure may have lacked consistent territorial development plans (Regional Policy, 2013). The development of a central public service system under the State Regional Development Agency, by 2020, is expected to add medium term visibility and consistency in regional development planning (MK, 2015b).

Co-operation between non-governmental organisations and local governments results in the increase of delegation agreements. Local governments mostly delegate various social services to non-governmental organisations, e.g. care services, internet accessibly and consultations.

The experts from the Latvian Rural Forum emphasise that the main challenge for the rural development of Latvia is the transition to the approach that focuses on such development planning that is based on local population needs and resources, raising the responsibility of local populations for development of the area, reducing dependence on external funding and "top to down" defined needs of the rural community (Ādlers and Kudiņš, 2016). The co-operation networks among non-governmental organisations, farmers, entrepreneurs and local government that are aimed to find specific solutions for local needs in Latvia today can be regarded as a good practice.

The non-governmental organisations consolidate development of polycentric regions, establishing inter-district co-operation networks, e.g. establishing tourism routes that link several administrative territories. Some rural districts show good results in specialisation, namely, their projects and measures are focused on the development direction chosen by locals as their priority.

Although the service network in rural areas of Latvia currently cannot be regarded as homogenous, it has some growth potential as illustrated by the current co-operation practices and State-defined regional development guidelines.

5.2. Labour market policy

Labour market legislation

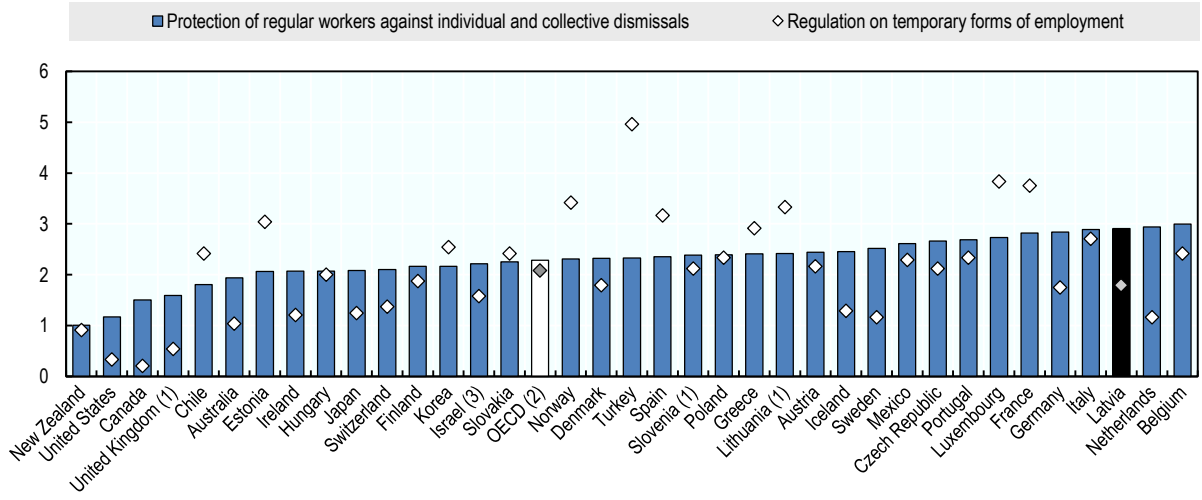
Labour relationships are governed by the Constitution of the Republic of Latvia (*Satversme*), international laws binding upon Latvia, Labour Law, Civil Law, Labour

Protection Law, and other regulatory enactments, as well as joint labour agreements and labour procedures. Latvia's labour policy contributes to the Europe 2020 Strategy.[4]

In 2015, the employment protection indicator against individual or collective dismissal in Latvia was one of the highest among OECD countries, only behind the Netherlands and Belgium (Figure 5.2). In terms of temporary jobs, the protection level for those working was lower than the average level in OECD countries.

Figure 5.2. Employment Protection Legislation Indicators, 2013

Index from least (0) to most (6) restrictive



Notes: 1. For Slovenia and the United Kingdom, data refer to 2014, while for Lithuania to 2015.
2. The OECD aggregate is the unweighted average for the 34 countries that were members of the OECD in 2013. It does not include Latvia and Lithuania.
3. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
Source: OECD (2016a), *Employment Protection Database*, www.oecd.org/employment/emp/oecdindicatorsofemploymentprotection.htm.

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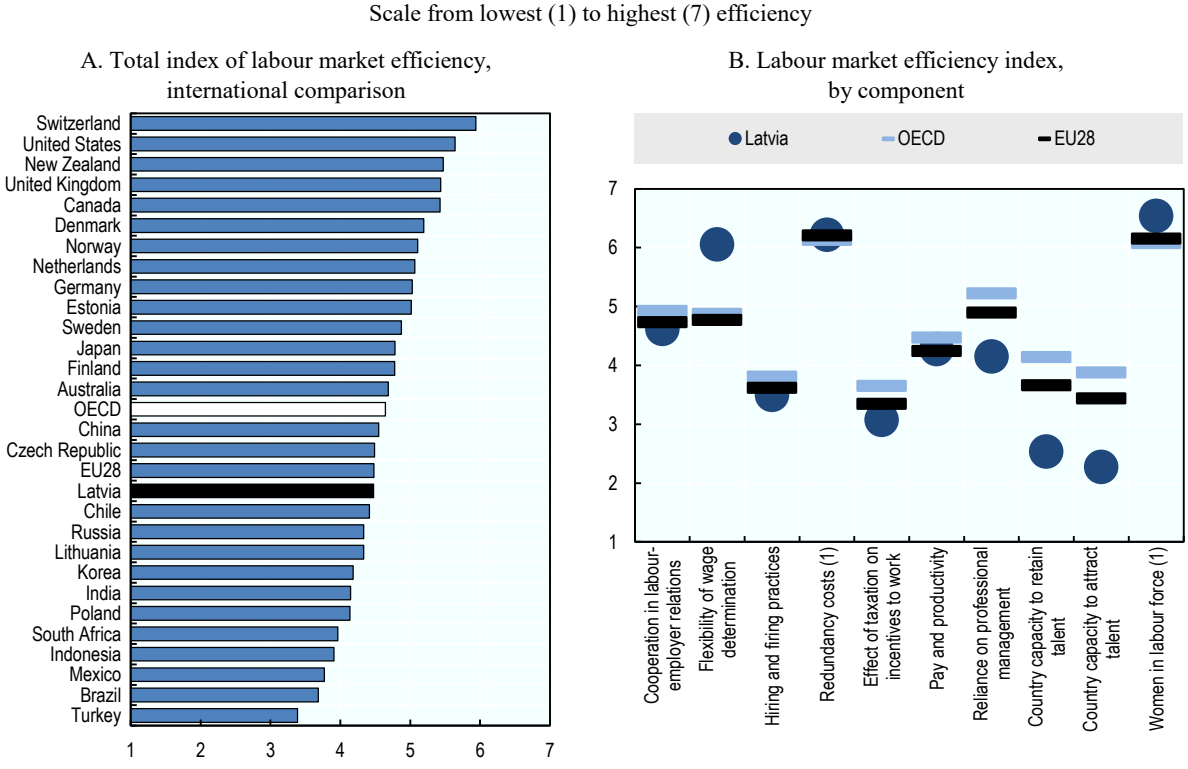
The Latvian Labour Law offers job protection to some segments of the labour force and enforces notifications conditions to the termination of an employment contract. The law foresees severance pay in the case of termination of an employment contract and conditions for collective redundancy. The severance pay ranges from one to four months of average earnings depending on the length of employment at the workplace. In the case of a partial reduction of the number of employees, those employees with higher performance results and higher qualifications are kept. For equal performance and qualifications, employees who have worked for a longer time and less protected social groups are kept.

Employment contracts may also be concluded for a specific duration, including seasonal work. Temporary contracts are not widespread in Latvia and 3% of the total number of employees have temporary contracts, compared to an EU28 average of 14.3% (Eurostat, 2017d). Other forms of contracts such as agreements concerning specific tasks are also less frequent.

Labour market efficiency

According to the World Economic Forum data, the labour market efficiency index in Latvia nears the average OECD and EU28 levels (Figure 5.3, Panel A). When looking at the individual components, Latvia's score is above or close to the OECD and EU28 averages for the flexibility of wage determination and the presence of women in the labour force, while wider gaps exist in a number of components (Figure 5.3, Panel B). Of particular relevance to innovation, the capacity to retain talent and the reliance on professional management are the two indicators where the largest negative gaps are observed (Figure 5.3, Panel B).

Figure 5.3. Global Competitiveness Index: Labour market efficiency, 2017-18



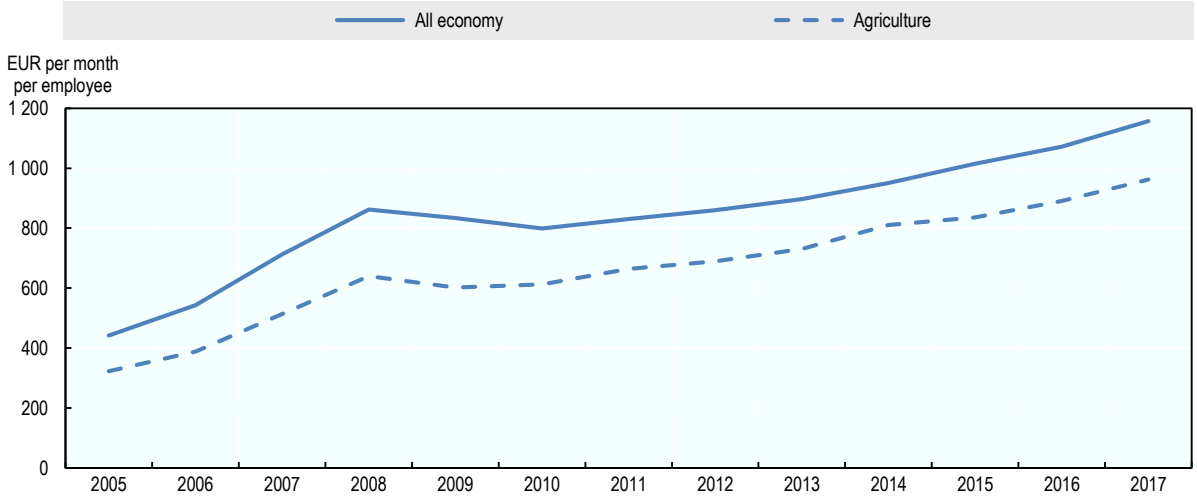
Notes: Indices for EU28 and OECD are the simple average of member-country indices.
1. Redundancy costs (weeks of salary) and Women in labour force (ratio to men) indicators are converted to 1-to-7 scale.
Source: WEF (2017), *The Global Competitiveness Report 2017-2018*: Full data Edition, http://reports.weforum.org/global-competitiveness-index-2017-2018/.

StatLink https://doi.org/10.1787/888933914043

According to Eurostat, hourly labour costs in Latvia, at less than EUR 10, are comparable to Lithuania and Poland and well below the EU28 average of EUR 26 per hour (Eurostat, 2017c). Taxation has a high and negative effect on incentives to work, affecting mostly low wages. The 2017 Latvia economic review notes the recent reduction of the tax on low incomes and recommends further reduction that would benefit employment, reduce the share of informality and possibly slow young workers' emigration (OECD, 2017f).

A minimum monthly wage applies in all sectors and regions. In 2018, it is set to be EUR 430. In 2017, the average monthly labour costs in agriculture was EUR 962, compared to EUR 985 in food manufacturing and EUR 1 157 in the economy overall (CSB, 2017c). Labour costs in agriculture have increased since 2010 but remain below the average in the economy. Structural change and the development of technologically more advanced agricultural businesses have increased demand for a higher skilled workforce, and labour shortage close to farms contribute to increased labour costs. Gross wages and salaries make up 80% of the labour costs (Figure 5.4).

Figure 5.4. Average monthly labour costs per employee in Latvia, all economy and agriculture, 2006 to 2017



Source: CSB (2018a), http://data.csb.gov.lv/pxweb/en/Sociala/Sociala__ikgad__dsp_izmaksas/DI0012_euro.px/?rxid=298ccdb0-d955-4865-afb3-c3758a3a91fd.

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Attitudes concerning adult education have changed in Latvia and the share of adults willing to participate in education and training has increased from 24% in 2011 to 41% in 2016 – compared to the EU average of 21% and 26% over the same period (Eurostat, 2018). European Social Funds have been harnessed to finance adult education and lifelong learning.

Adult participation in education has accelerated since 2011 and nearly half of adults (47.5%, compared to an average EU28 of 45%) participated in formal and/or non-formal education in 2016; an increase by 15 percentage points (EU average increase 5 percentage points). While also growing, the share (44.6%) and participation (up by 14 percentage points) in adult education are slightly lower in rural areas. Non-formal education makes up the largest part of adult education both in cities and rural areas (Eurostat, 2018).

According to the Adult Education Survey carried out in 2016 by the CSB, 77% of lifelong learning participants declare that their participation is mainly work-related, with the aim to improve performance on the job and career opportunities. In 2016, 3.2% out of all job-related non-formal educational activities were in the field of agriculture, forestry, fisheries and veterinary.

Specific provisions for farm operators and workers

A wage can be paid to seasonal workers and taxes can be deducted in accordance with the general procedure; however, a special procedure may be applied to seasonal agricultural work. A seasonal agricultural income taxpayer must be employed in agricultural seasonal work not more than 65 calendar days in total with one or several employers, and the overall income may not exceed EUR 3 000.

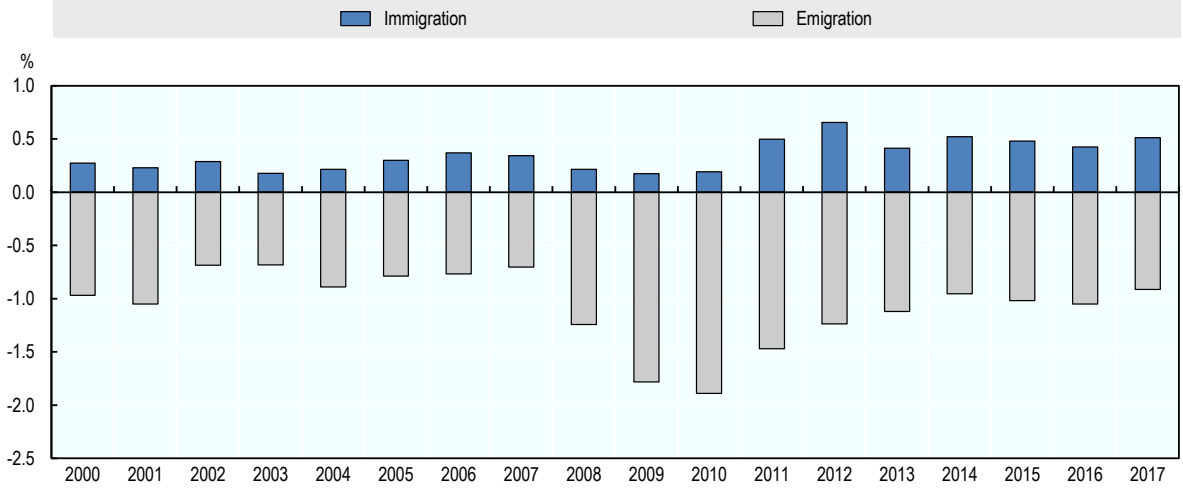
Workforce emigration and immigration

Latvia is a net emigration country – the number of people leaving the country is higher than the number of people moving to Latvia (Figure 5.5). A significant outflow of the population was experienced after the 2008 crisis explained by a sharp increase in unemployment – from 6.1% in 2007 to 19.5% in 2010 (CSB, 2018) - a significant reduction of salaries and the dramatic collapse of the real estate sector.

During 2008-16 total net immigration was about 170 000 persons. The European Union attracted more than 70% of long term migrants (CSB, 2018). The United Kingdom, Ireland, Germany and Norway have been the main destination countries.

Figure 5.5. Long-term immigration and emigration in Latvia, 2000 to 2017

As a share of total population



Source: CSB (2018), [IBG01, ISG02].

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While most employers in Latvia do not contract foreign workers abroad, migrant worker employment is growing. According to data collected by the Office of Citizenship and Migration Affairs (OCMA) the number of work permits issued to foreigners during the last four years has increased by 56%; in 2017 there were already 8 625 guest workers. According to the information provided by the OCMA, most workers are low- or medium-skilled, from Ukraine, Lithuania, the Russian Federation, Bulgaria and Belarus, and are mainly employed in rail and road transport, construction, computer programming and consulting, and catering services (GfK Custom Research Baltic, 2017; OCMA, 2016).

The MoE has approved a list of professions in labour shortage offering preferential conditions to attract foreign specialists. The list includes 237 professions and specialties. For professions on the list, the waiting-time before foreigners can apply to vacancies registered at the State Employment Agency (SEA) has been reduced from one month to ten working days.

State policy in creating new workplaces, re-qualification of workforce

At the national level, the SEA is tasked with reducing unemployment and supporting the unemployed and jobseekers. The SEA carries out both active employment and unemployment reduction activities along with various social and preventive activities, including training programmes (Section 5.3). Measures implemented in the labour market are reviewed and updated on a regular basis.

Latvia spends around 0.22% of GDP on economy-wide employment services and related Active Labour Market Programmes (ALMP). A very large part of ALMP funding (more than three-quarters in 2014) relies on external resources, notably the co-financing by the European Social Fund (ESF) (OECD, 2016b). EU projects are funded over the planning period from 2014 to 2020. They support the training of unemployed persons, the creation of subsidised workplaces, long-term unemployment reduction measures, forecasting short-term labour demand, promoting employment of young unemployed persons and the EURES (European jobs mobility network) activities in Latvia.

In 2016, Latvia started a new ESF project "Support for a Longer Work Life" (MoE, 2016). Another ESF project "Improving the Professional Competence of Employed" was started in 2017 with a total funding of EUR 27 million (EUR 23 million of ESF funding and EUR 4 million of state funding). The project is implemented by the State Education Development Agency (SEDA) to support more than 38 000 employed adults to improve their professional qualifications and competences. The programme provides support to employed persons from social risk groups (low skilled, pre-pension age etc.) in 12 priority sectors, including the food industry and agriculture. Since spring 2017, about 13 000 adults have participated in the programme.

5.3. Education and skills policy

Education policy affects innovation in at least three ways: a high level of education facilitates acceptance of technological innovation by society at large; innovation systems require well-educated researchers, teachers, extension officers, and producers to develop relevant innovations; it is generally easier for farmers and business operators with higher education and skills to adopt technological innovations. Continuous skills development (training, re-training, lifelong learning) is essential to improve the matching of skills to demand in an evolving agro-food sector where there is a need to adopt novel productivity and environmentally enhancing technologies and practices (OECD, 2013, 2015).

Latvia's education system has improved since independence in 1991 and more efforts are now needed to raise teaching standards and ensure that all students have access to a quality education (OECD, 2016b). The education system in Latvia is highly decentralised and influenced by multiple demographic factors that have contributed to declining student enrolment numbers in recent years; such as low birth rates, rural-to-urban migration and emigration. The overall education system needs to adapt to the changing demographic reality; hence, offering both a challenge and an opportunity to improve the quality of teaching in Latvia (OECD, 2017b). The 2017 economic survey of Latvia (OECD, 2017f)

identified Latvia's skill shortage as an impediment to business competitiveness and participation in global value chains.

The education system

Latvia's education system builds on eight levels of education from pre-school to higher education (Figure 5.6).

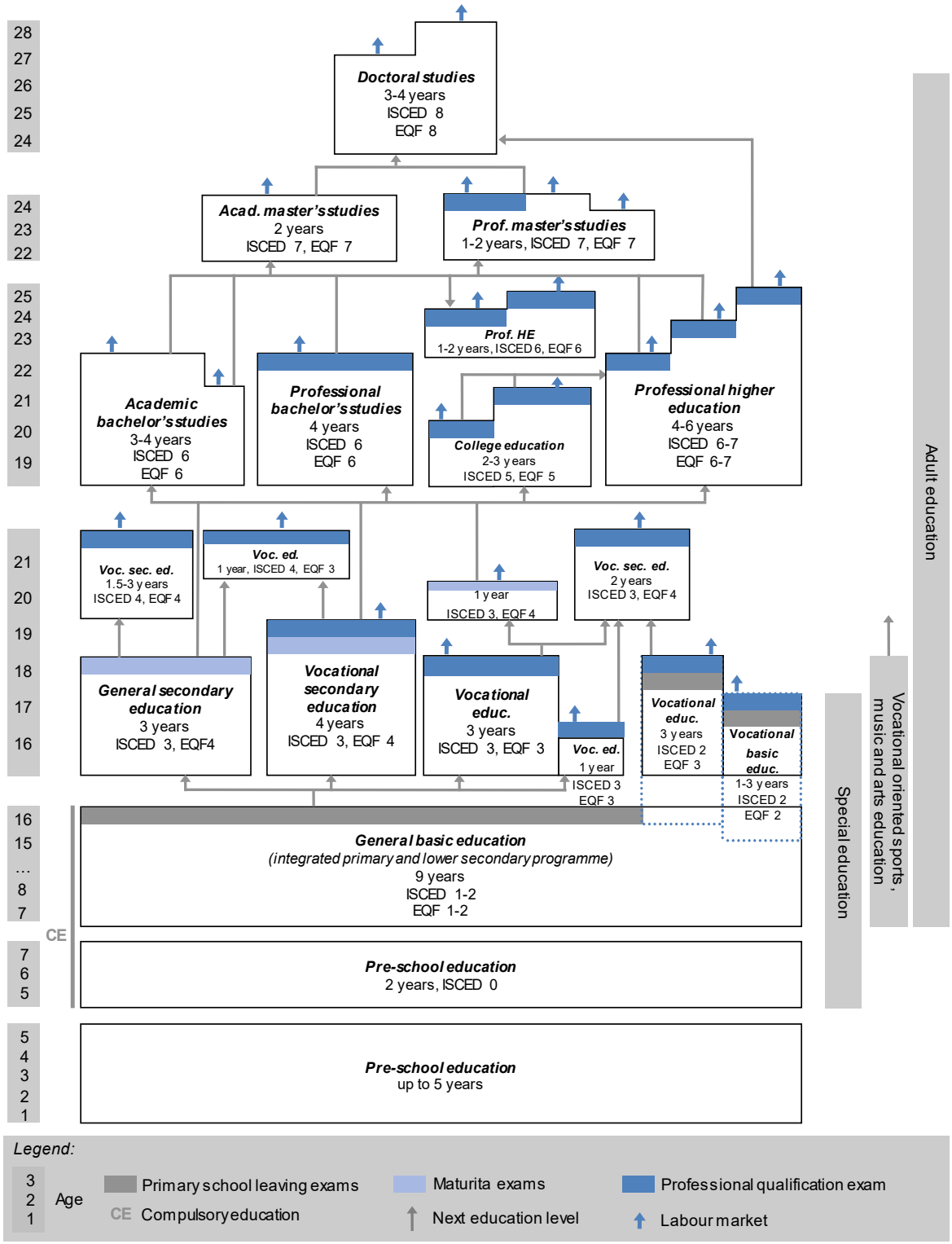
Agricultural education in Latvia is integrated into the secondary vocational education and tertiary education. General, vocational tertiary (higher academic and professional) education is provided at various levels of education:

- General education programmes cover pre-school up to upper-secondary education.
- The national curriculum is defined through the State Basic Education Standard and the State General Secondary Education Standard. There are four branches of general secondary education: general education; humanities and social science; mathematics, natural sciences and technology; and vocationally oriented education in arts, music, commercial science and sports.
- Vocational education programmes are provided starting at basic education and up to upper-secondary education; the compulsory content of vocational education is determined by the State vocational secondary education standard and vocational education standard; and by respective occupational standards.
- Tertiary education programmes are provided at higher education level and the general content is determined by the state 1st level professional higher education standard and 2nd level professional higher education standard, and academic education standard. According to the Law on Higher Education Institutions, the autonomy of an institution of higher education is expressed in the right to select the ways and forms for the implementation of the tasks.

The Vocational Education Law offers the framework for vocational education. According to the law, the level of vocational qualification reflects the theoretical knowledge and practical skills necessary to perform work corresponding to a certain level of complexity and responsibility. Vocational education is dispensed in vocational educational institutions implementing programmes leading to professional qualifications from the European Qualification Framework (EQF) level 2 to EQF level 4 (Country Background Report on Education System, 2015). The completion of the vocational programme is certified by a state qualification exam (VIAA, 2017).

The implementation of the European Social Fund project envisages investing nearly EUR 22 million in apprenticeship type schemes (nationally called 'work-based learning') and practice by 2024 (ESF funding – EUR 18.7 million and national co-financing EUR 3.3 million). It is forecasted that at the end of the project, 3 100 students will be involved in the work-based learning, while 11 025 students will have participated in practical training and practice placements in companies (MoES, 2016).

Figure 5.6. The education system in Latvia, 2018



Note: ISCED: International Standard Classification of Education; EQF: European Qualifications Framework.
Source: AIC (2018), Education in Latvia, www.aic.lv/portal/en/izglitiba-latvija.

The Employment Council was established in 2016 jointly by the Minister of Economy, the Minister of Education and Science and the Minister of Welfare. The Council addresses important issues for the labour market, including the quality of education and the impact of demographic trends. It offers a platform for discussion and finds solutions to improve key areas of relevance. These include the quality of education, the development of a lifelong learning system, improving Vocational Education and Training (VET), the promotion of STEM studies, the involvement of employers in the provision of the education offer and the improvement of skills and employability of young people. The Council considers increasing the capacity of competence centres for the provision of lifelong learning, especially in the local and regional aspect, effective, modern and high-quality vocational education. These issues are all important for the state and society for the growth of the national economy and the welfare of the society.

Those who have completed the general secondary education programme, as well as graduates from the four-year vocational secondary education programme, and from all vocationally oriented (sports, art and music schools) secondary education programmes can enter a higher education programme (ISCED-P-2011 level 5 and 6). The Academic Information Centre, provides an equivalence statement to those educated abroad (VIAA, 2017).

The admission to higher education is decentralised and, since 2004, admission depends on the results of the national centralised secondary education examinations. Higher education institutions (HEI) may set additional requirements concerning some specific prior education or training, special aptitude or previous qualification (for example, in arts, music, sports) (VIAA, 2017).

The system of higher education in Latvia is twofold as the Law on Higher Education Institutions sets a difference between academic and professional higher education. Universities and other institutions of higher education mostly run both academic and professional programmes. Tertiary level or higher education is provided in colleges and HEI, including universities. University-type HEI provide bachelors, masters and doctoral degree programmes. Publications in internationally quoted scientific journals are required before public defence of the thesis as an integral part of a doctoral study programme. The Council of Science appoints a Promotion Council and sets the procedures for an award of Doctor's degrees (AIC, 2012). At least 65% of the tenured staff in University-type institutions hold a PhD degree; publish in scientific periodicals covering areas of teaching and research implemented by the institution and which have divisions or research institutes performing scientific research (VIAA, 2017).

Governance and funding

The Parliament of Latvia (Saeima), the Cabinet of Ministers and the Ministry of Education and Science are the main decision-making bodies at national level. The Ministry of Education and Science (MoES) oversees the national network of education institutions, sets education standards and develops policy regarding teacher training content and procedures. In addition, branch ministries (including the MoA, the Ministry of Culture and the Ministry of Health) supervise and finance education institutions. Municipalities fund general education institutions (those that are not private). They are also in charge of separate vocational education institutions.

Education in Latvia is mainly financed by the national or municipal budget. While almost all students in primary and secondary institutions go to publicly funded institutions, approximately 40% of HEI are private, with public funding subject to agreements with

the Ministry (OECD, 2017b). The state covers tuition fees for a number of higher education students, as part of State Procurement. Students with higher performance receive state scholarship. Any student, conditional on nationality or residence permit, and who successfully studies in an accredited study programme may apply for a state guaranteed loan at lower than market rates.

The quality of education is assured through the accreditation of education providers and the licensing and accreditation of education programmes. In primary and secondary education, education institutions are accredited for six years, while educational programmes are accredited for two or six years. Accreditation may be refused if any of the following criteria is evaluated as "insufficient": curriculum, teaching quality, equipment and other material resources, human resources, security of learners (security and workplace safety), the work of the administration and personnel management (IKVD, 2017). Quality assessment of general and vocational education institutions (except pre-school, HEI and colleges) and educational programmes is carried out by the State Education Quality Service (IKVD) through an accreditation procedure (MK, 2015a).

External quality assurance of HEI and study fields, and licensing of study programmes is organised by the Academic Information Centre (AIC). There is no term for the accreditation of HEIs, while study fields are accredited for two or six years (AIC, 2015; MK, 2015a; MK, 2015c). The AIC has established a Quality Agency for Higher Education for the provision of these functions in line with the Standards and Guidelines for Quality Assurance in the European Higher Education Area. The AIC also promotes improvements in the internal quality assurance systems in HEIs, study fields and study programmes. Since June 2018, the AIC is a full member of the European Association for Quality Assurance in Higher Education (ENQA).

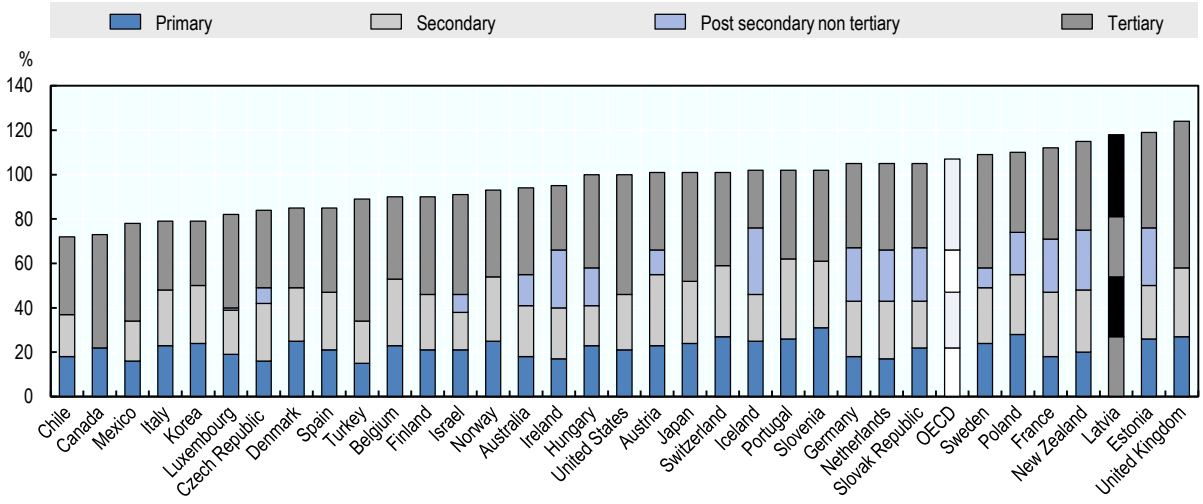
Compared to the average OECD annual expenditure per student of 107% of GDP per capita, Latvia spends 118% of its GDP per capita (Figure 5.7).

The share of Latvia's expenditure on education in primary to non-tertiary education is 8.5% of GDP (the OECD average was 8% in 2013), while in the tertiary sphere the respective figures are 2.6% and 3% (OECD, 2017c). In 2014, the public expenditure to GDP (6%) was above the EU average (5%) (EU, 2016). Public sources in OECD countries spend on average 4.4% of GDP on education institutions while in Latvia the respective figure was 3.8%. Tertiary education accounts for 1.4% in Latvia compared with 1.5% of GDP in OECD countries on average (OECD, 2017a). Private sector investment in higher education is also relatively low, with the exception of tuition fees paid by part-time and full-time students to private education institutions.

The collapse by more than 50% of public funding of higher education during the financial crisis of 2008 was accompanied by a simultaneous decline in research funding. This led to a reduction in budget-funded study places including those in agro-food specialities (MoES, 2014).

Figure 5.7. Annual expenditure per student by educational institutions for all services, 2013

As percentage of per capita GDP



Note: Total expenditure by education institutions from primary to tertiary levels of education. The OECD aggregate is the unweighted average of the 34 countries that were members of the OECD in 2013. It does not include Latvia and Lithuania. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
Source: OECD (2016c), *Education at a Glance*, http://dx.doi.org/10.1787/eag-2016-table103-en.

StatLink https://doi.org/10.1787/888933914100

A new model for funding higher education is being introduced in Latvia. The new financing model developed in 2015 based on the World Bank recommendations (World Bank, 2014) is intended to improve the efficiency of public spending in the field of higher education, promote higher education and research integration and ensure better quality accessibility and international competitiveness. The model consists of three pillars (Figure 7.3):

- Pillar 1: cost oriented basic funding allocated per number of field study places, number of mission professors/academic staff per field and weight in teaching and research.
- Pillar 2: performance-oriented funding allocated per number of graduates, number of incoming and outgoing students in teaching and bibliometric indicator, third party funds and number of PhD students in research.
- Pillar 3: innovation-oriented funding allocated on the basis of profile-oriented agreements in teaching and research supported by the EU Structural Funds.

Basic funding provides for the main part of operational costs, thereby enabling HEIs to perform their core tasks of teaching and research (Ziegele, 2013). The amount allocated per study place in each discipline or field (e.g. social science, medicine, etc.) is based on the costing relationship among the study fields (i.e. cost coefficients) and on the available budget for study places (basic funding).

In 2015, the government allocated EUR 5.5 million to Pillar 2 pilot projects based on achievements. The shares allocated for Pillars 1, 2 and 3 accounted for 60%, 20% and

20% respectively (MoES, 2016). The shares of funding in GDP are quite low, i.e. public funding accounts for 0.5%, private funding 0.3% and other funding (including the EU funding) 0.5% and the MoES has set a target of 1.5% of GDP to be reached by 2020 (MoES, 2016). In 2016 and 2017, it provided EUR 6.5 million per year. However, the amounts are below the levels necessary to implement the optimal development model recommended by the World Bank in its study. The international dimension of the new model is also limited. The only parameter related to internationalisation is the science-related funding from abroad.

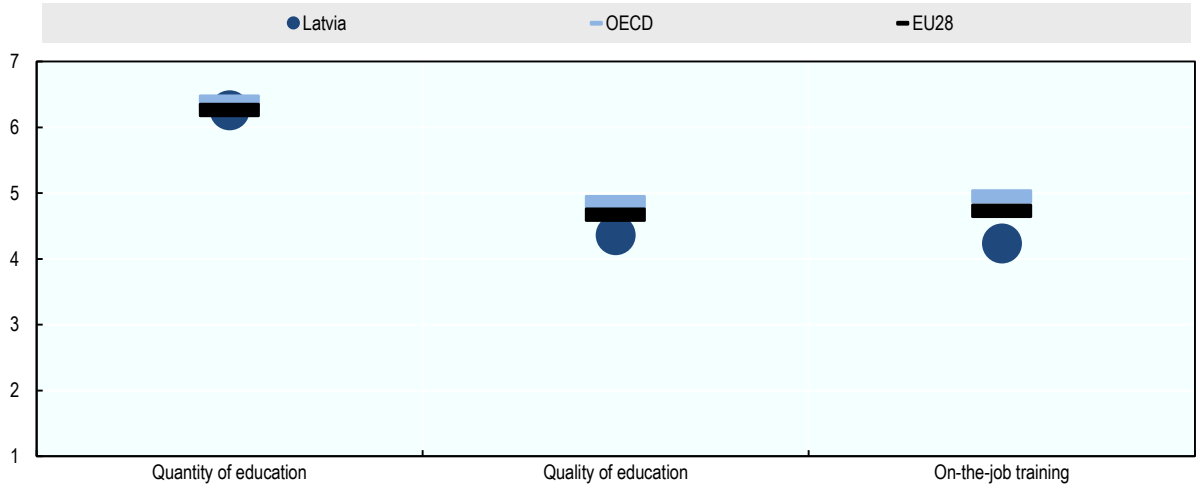
No additional national funding was granted through Pillar 3 in 2016 due to budgetary constraints (EU, 2016).

Overall performance

While according to business leaders, the quantity of higher education and training is high and aligned with the OECD and EU28 averages, Latvia ranks lower in terms of the quality of higher education and on-the-job-training (Figure 5.8).

Figure 5.8. Global Competitiveness Index: Higher education and training, 2017-18

Scale from lowest (1) to highest (7)



Notes: Indices for EU28 and OECD are the simple average of member-country indices.
1) The quantity of education index is based on secondary and tertiary education enrolment rates from UNESCO Institute for Statistics. 2) The quality of education index is based on responses from a WEF Executive Opinion Survey on how well the educational system meets the needs of a competitive economy; executives' assessment of the quality of math and science education in schools and the quality of business schools; and on how widespread Internet access in schools is. 3) The on-the-job-training index is based on survey responses on the availability of high-quality, specialized training services and the extent to which companies invest in training and employee development.
Source: WEF (2017), *The Global Competitiveness Report 2017-2018:* Full data Edition, http://reports.weforum.org/global-competitiveness-index-2017-2018/.

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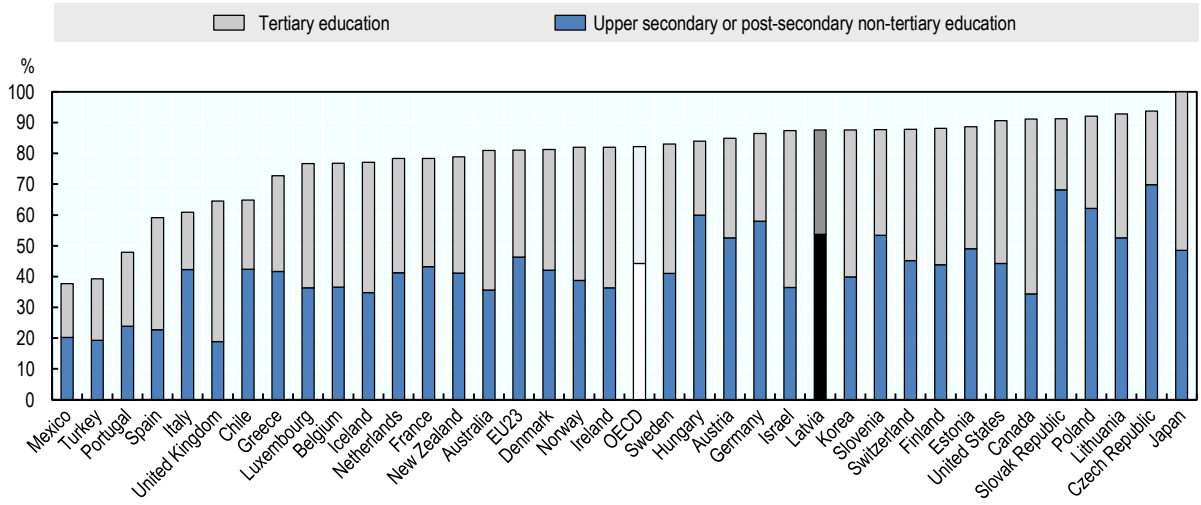
Educational attainment

On average across OECD countries, 82% of 25-64 year-olds have attained at least upper secondary education in 2016. In Latvia, educational attainment is 88%, which is above the OECD and EU23 averages (82% and 81% respectively) and one of the highest

indicators in the world. The share of population with upper secondary or post-secondary non-tertiary education is 54% in 2017 compared with on average 44% in the OECD and 46% in the EU23 average (Figure 5.9).

Figure 5.9. Upper secondary and tertiary attainment for 25-64 year-olds, 2017

As percentage of the population aged 25-64



Note: EU23 consists of countries that are members of both the OECD and the EU. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
Source: OECD (2018), *Education at a Glance 2018: OECD Indicators*, https://doi.org/10.1787/eag-2018-en.

StatLink https://doi.org/10.1787/888933914138

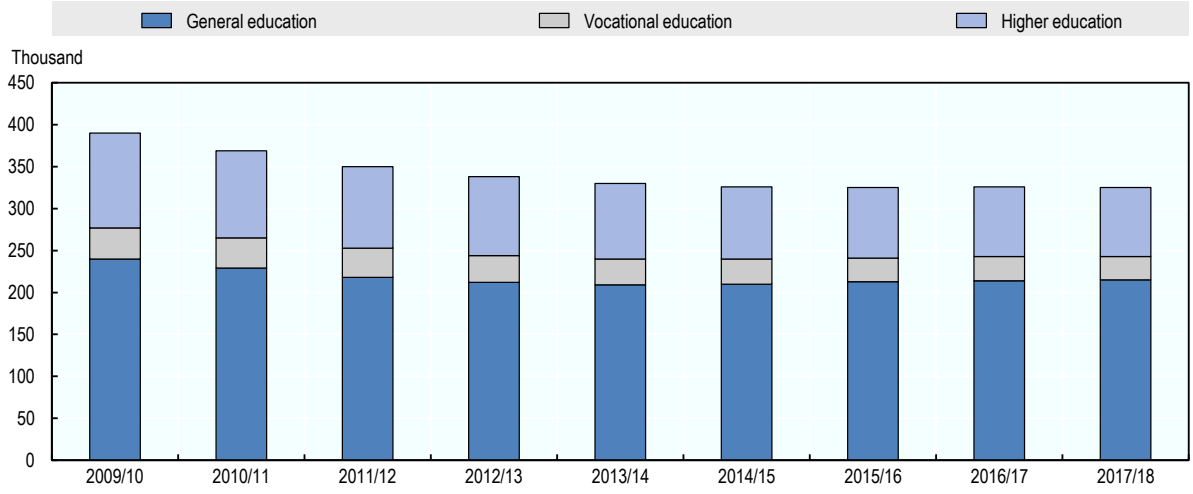
The share of Latvia's population aged between 25 and 64 with tertiary education is above the EU23 average, slightly lower than the OECD average level and lower than the best OECD performers (OECD, 2017a).

In 2016, among tertiary-educated adults in OECD countries, an average of 26% studied in STEM fields (science, technology, engineering and mathematics), while in Latvia the share is 22%, mostly in engineering, manufacturing and construction fields (15%) (OECD, 2017a). The share of STEM fields tertiary educated adults is expected to increase in the future as, in 2015, 27% of new entrants to tertiary education in Latvia chose a STEM field, a ratio equal to the OECD average – 18% in engineering, manufacturing and construction.

Changes in student demography

The education system in Latvia faces a demographic problem; the declining number of students from 390 000 in the academic year 2009/10 to 325 000 in 2017/18 is in part due to the ageing of population and to low birth rates (Figure 5.10).

Figure 5.10. Number of students in general, vocational and higher education in Latvia, 2009/10 to 2017/18



Source: CSB (2018b), Izglītības iestādes un izglītojamo skaits (mācību gada sākumā) (Education Institutions and Number of Students at the beginning of the Academic Year) (database), http://data.csb.gov.lv/pxweb/en/Sociala/Sociala__ikgad__izgl/IZ0010.px/?rxid=cdcb978c-22b0-416a-aacc-aa650d3e2ce0.

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Compared to 2009/10, there is 27% less students in 2017/18 in higher education and 24% less in vocational education, while numbers seem to have stabilised in these two sectors. The decline of the number of students participating in general education stopped in 2013/14; and although numbers increase slowly they have not yet reached 2009/10 levels.

Agricultural education

Availability of agriculture-related education programmes

Agricultural education in Latvia is available through both vocational and higher education programmes. Two HEI (among 17 state funded colleges in 2016-17) and 10 vocational education establishments provide agriculture related subjects (agriculture, animal husbandry, veterinary medicine, food processing, and apiculture). The Latvia University of Life Sciences and Technologies (LLU), under the MoA, is the only HEI specialising directly in agro-food related subjects.

The LLU is the fourth largest state HEI in Latvia and, according to the QS EECA rating, it is one of the leading universities of science and technologies in the Baltic Sea region, specialising in the sustainable use of natural resources aimed at the enhancement of quality of life for society (QS EECA, 2017). LLU implements programmes in agriculture, forestry, veterinary medicine, food technology, and landscape architecture as well as information technology, economics, social sciences, agricultural engineering, construction and pedagogy. It is a national university of a regional character covering both the region and state demand for highly trained specialists (LLU, 2017).

Two public colleges (Jekabpils Agro-business College and Malnava College) specialise directly in vocational study in agriculture and agro-business. Other vocational schools

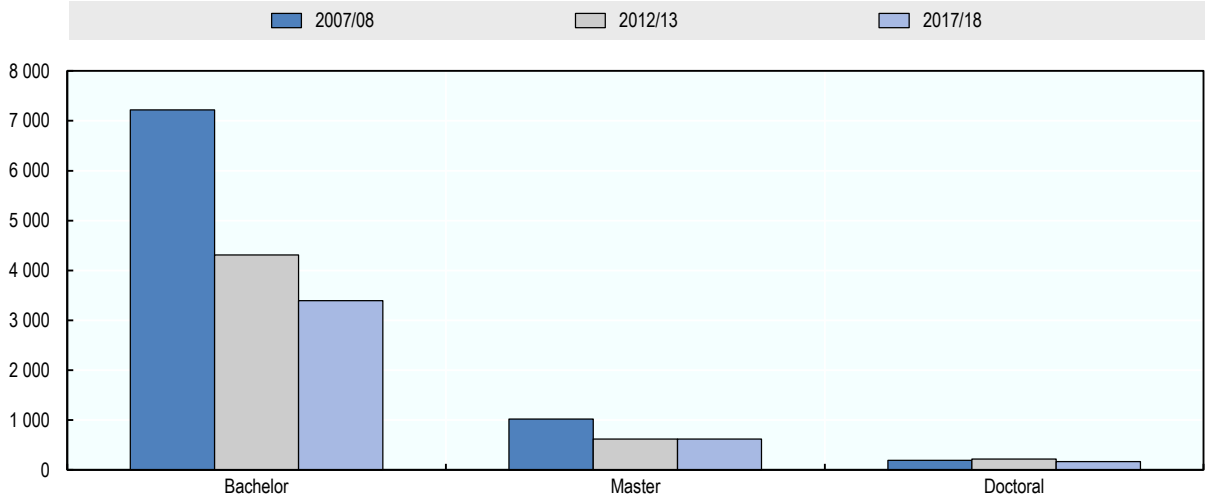
provide secondary vocational education in agriculture-related study programmes (rural property manager, plant husbandry technician, cultivator, horticulture technician, horticulturist, assistant in veterinary medicine, animal husbandry technician, agriculture machinery mechanic, beekeeper). On 1 October 2016, Malnava College had 1 047 students, an increase of 62% compared with 2010, while Jekabpils Agro-business College had 293 students, of which 50 studied agriculture. In 2017, the state limited liability company "Bulduri Horticulture Secondary School" became a structural unit of LLU.

The share of agricultural students in HEI and colleges fluctuated between 1.1% in 2009/10 to 1.8% in 2016/17, with its peak in 2014/15 when the share of agricultural students was 1.9% of the total number of students at tertiary level. The share of students in agriculture by vocational education programmes ranged between 2.7% in 2009/10 to 3.58% in 2016/17, the lowest and highest proportions being reached in 2011/12 and 2014/15, respectively 2.4% and 3.6%.

Agriculture enrolment trends

In line with the demographic downward trend in the entire education system of Latvia, the number of students studying at LLU has also decreased. The number of bachelor students has been halved since the academic year 2007/08. The number of Master level students and Doctoral students has also declined by 40% (-15.2%) (Figure 5.11). The comparison with the pre-crisis period reveals a decline in the number of LLU bachelor students by 52% (from 7 221 students in 2007 to 3 430 students in 2016) and master students by 40% (from 1 021 students in 2007 to 609 students in 2016). A slight decline (5% from 193 to 184 students) is observed also in the number of PhD students.

Figure 5.11. Number of students at LLU by level in Latvia, 2007/08, 2012/13 and 2017/18



Source: Latvia University of Life Sciences and Technologies, LLU (2018).

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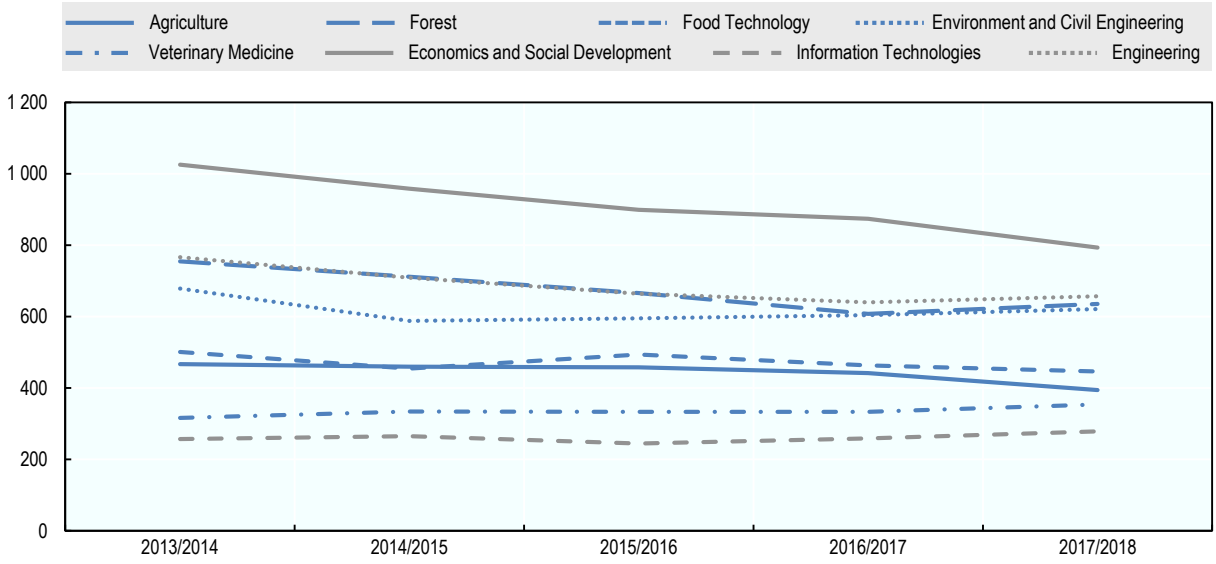
More recently, between academic years 2013/14 and 2017/18, the number of students studying agriculture related sciences has decreased by 16% (Figure 5.12) while the number of students participating in forest studies and in food technology studies has

declined by 16% and 11% respectively. The number of students studying veterinary medicine has increased by 12%.

The number of university students enrolled in social sciences has experienced the sharpest decline (-23%) between 2008 and 2017. A decline is also observed for the number of students in professional secondary education institutions (-28%).

Figure 5.12. Number of students at LLU by fields of studies in Latvia, 2013/14 and 2017/18



Source: Latvia University of Life Sciences and Technologies, LLU (2017), Gada pārskats (Annual Report), http://www.llu.lv/sites/default/files/2017-05/gada_parsk_12_4_2017.pdf.

StatLink https://doi.org/10.1787/888933914195

Meeting labour market needs in the agricultural sector

The demand for agricultural and veterinary medicine specialists is high in Latvia and in other European countries, driven by the spectrum of potential jobs from veterinary practices and agricultural and food companies to public administration, customs and border control and scientific institutions. Study programmes of all levels implemented by the LLU in agriculture, forestry, veterinary medicine and food technologies, specialise in areas of agricultural labour demand and meet the labour market skills requirements. The curriculum is developed in conjunction with employers in the sector, representatives of public training organisations as well as the State Examination Commission (LLU, 2013). The number of budget-funded seats in agro-food studies is consistent with the MoA calculations, which are based on labour market demand for agricultural sector specialists. In the academic year 2017/18, LLU has 634 budget-funded places in the agro-food sector, of which 470 places are allocated for bachelor studies, 147 for master studies and 17 for PhD studies.

Lifelong learning in the agricultural sector

In Latvia, the adult education policy is set out in the Education Development Guidelines for 2014-20. The Guidelines determine the course of action for the provision of qualitative and inclusive education. In parallel with these Guidelines, a number of other

policy and planning documents, both at national and European level determine the directions of education development (Parliament, 2014):

- The Growth Model of Latvia: A Person in the First Place is the long-term vision document that defines a human-centred growth model of Latvia emphasising knowledge and skills and their use as a growth resource.
- The Sustainable Development Strategy of Latvia until 2030 (Latvia 2030) is the hierarchically highest national level long-term development planning document, which commands a paradigm shift in education.
- Latvia's NDP 2020 is the hierarchically highest national medium-term development planning document that sets the medium-term priorities in the field of education and science, with emphasis on the development of competencies, research, innovation and higher education.
- Latvia's National Reform Programme for the Implementation of the EU 2020 Strategy defines the principle of lifelong learning, and proposes a number of structural changes and modernisation efforts to develop Latvia's scientific potential.
- The Inclusive Employment Guidelines for 2015-2020 promotes the level of education of the workforce and competitiveness in the labour market, with a particular focus on unemployed people who are not able to find work due to insufficient education. The Concept of Development of Latvian Higher Education and Higher Education Institutions for 2013-20 focus on the education quality assessment discussions with industry representatives in order to agree on a common vision on the most important issues.
- The Adult Education Management Model Implementation Plan for 2016-20 approved in 2016 sees to ensure access to quality education regardless of age, gender, previous education, place of residence, income level, ethnic origin and physical or mental condition. It is co-ordinated and monitored by an inter-sectoral consultative institution – the Adult Education Management Council. The Council consists of representatives from ministries involved in adult education and other organisations, as well as representatives from social and co-operation partners.

The Lifelong-learning Centre of LLU provides continuing education and professional development courses in agriculture, food technology, veterinary medicine and environment. The number of participants fluctuates depending on demand. The high demand of the agriculture and food production sector determined the growing interest in continuing education and professional development courses in 2013/14 (23 and 9) and 2016/17 (49 and 6) respectively. On average, 77% of course participants have graduated in agriculture related training.

As part of its activities in supporting the unemployed and jobseekers, the SEA offers both vocational and upskilling training programmes relevant to the agricultural (SEA).

Latvian Rural Advisory and Training Centre

The LLKC is a leading agricultural and rural business advisory service in Latvia with offices in 26 cities and towns. It provides advice and services related to production processes in crop and livestock farming, in forestry and fisheries industries as well as accounting and business planning to rural entrepreneurs and organisations. The LLKC

was founded in 1991. Its budget depends on the MoA (99% of shares) and the Latvian Farmers' Federation (1% of the shares). The strategic objectives of the Centre are as follows:

- promotion of rural development through raising the professional and economic knowledge of rural entrepreneurs;
- provision of organisation services for farm advice and training in all regions of Latvia;
- increase of competitiveness of the rural population in the European Union;
- provision of lifelong learning courses for employees working in institutions under the governance of the MoA.

The main task of the Centre is to inform the rural population about current developments in the agricultural sector. The Centre provides information relating to EU management requirements, best agricultural practices and environmental requirements on farms as well as information on support instruments. The Centre also collects information on agricultural and rural development indicators in the rural area of Latvia.

The LLKC acts as a bridge for co-operation between entrepreneurs, organisations, administration, education and research institutions, and the population representing different rural sectors. In addition, the Centre provides best practices to promote process efficiency, productivity and product quality enhancement, management of natural resources, and support for short food chains.

The lifelong learning programme offers participants with different initial education (basic, secondary, special, higher non-agricultural as well as agricultural).lifelong learning opportunities. Professional development programmes offer farmers and rural people the opportunity to retrain and develop a level of professional competence.

In addition to distance learning and webinars organised for young farmers, the Centre offers online or onsite training programmes and the possibility of live events broadcasting and other training courses and workshops for stakeholders.

The Centre and the LLU co-operate to provide on-the-job-training opportunities for LLU students, to develop joint training programmes and to provide consultation services. The Centre specialists participate at international scientific conferences held by LLU and have co-publications with the university researchers.

In 2016, the LLKC in co-operation with the LLU launched a training project, within the RDP 2014-20 Knowledge transfer measure, that offers training in four fields: agriculture, food products (except fishery products), forestry and co-operation. In 2016, the LLKC provided training in distance education in organic farming, distance learning in business basics and other specific agriculture related training courses (LLKC, 2017).

The Centre implements two accredited education programmes on "Basics of agriculture" and "Organic farming". Professional development courses include transportation of animals within the European Union, training for trade advisors for plant protection products, training for animal breeding specialists, training for milk sampling specialists, and animal welfare requirements for slaughter.

5.4. Summary

- Urban settlements host more than two-thirds of the Latvian population. They are endowed with better infrastructures and services than rural areas.
- Overall, the quality of transport infrastructures is below the OECD average and while port and air transport infrastructures come close, the gap is wider for railroad infrastructure and widens even more for road infrastructure.
- The port facilities are well developed and Riga airport is the biggest in the Baltic region. The rail system operates on a gauge railway line that seamlessly connects to neighbouring Baltic States and CIS countries, thus facilitating eastbound communications. Investments are planned to better connect it to the EU rail network.
- Road transport infrastructures serve urban areas better and are less developed in rural areas. Urban areas also benefit from better electricity and telecoms infrastructures. Whereas access to mobile phone coverage and internet services in rural areas comes close to urban levels.
- The storage capacity is insufficient to absorb the robust cereals production growth and increased export volumes.
- Labour market efficiency in Latvia is close to the average OECD and EU levels. Hourly labour costs in Latvia are comparable to Lithuania and Poland and well below the EU28 average.
- Labour regulation facilitates seasonal work.
- Labour taxation has been reduced. Further reduction would benefit employment, reduce the share of informality and possibly slow young workers' emigration.
- There is a high demand for skills in the whole economy, including food and agriculture. The employment rate is above the OECD and the EU average rates although unemployment is higher in rural areas.
- Latvia's education system consists of eight levels of education: from pre-school to higher education. Multiple demographic factors have contributed to the decline of student enrolment numbers in recent years; such as low birth rates, rural-to-urban migration and emigration.
- Overall, educational attainment is above the OECD and the EU averages and a higher share of the population has upper secondary or post-secondary non-tertiary education.
- At tertiary level, Latvia's attainment rate is slightly below the OECD average level. In particular, the share of Latvia's tertiary educated students in the STEM fields has been below the OECD and the EU average rates. However, more students have chosen STEM fields since 2015.
- Adult participation in training has increased significantly although from low levels and mostly in non-formal education. Measures that ensure the availability, accessibility and affordability of lifelong development opportunities both in qualifying and non-formal education should be strengthened.

- The agricultural education system is integrated into the general system and available at vocational and higher levels. It aims to respond to skills demand by adapting curricula, despite the overall decreasing number of students. Non-formal agricultural education opportunities also exist.
- Agriculture attracts a larger share of students today than it did in 2009/10. Agricultural students account for 1.8% of HEI and college students (1.1% in 2009/10) and 3.6% of students in tertiary education and vocational schools (2.7% in 2009/10).

Notes

[1] More information on EU Structural and Investment funds expenditure in Latvia can be found in https://cohesiondata.ec.europa.eu/countries/LV.

[2] http://www.rop.lv/en/for-clients-a-investors/laws-and-regulations/1020-law-on-application-of-taxes-in-free-ports-and-special-economic-zones

[3] A parish is the smallest official unit of territorial division in Latvia.

[4] Europe 2020, "A strategy for smart, sustainable and inclusive growth", https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:52010DC2020.

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