COUNTRY NOTE

EDUCATION AT A GLANCE 2020

Education at a Glance: OECD Indicators is the authoritative source for information on the state of education around the world. It provides data on the structure, finances and performance of education systems in OECD and partner countries.

Estonia

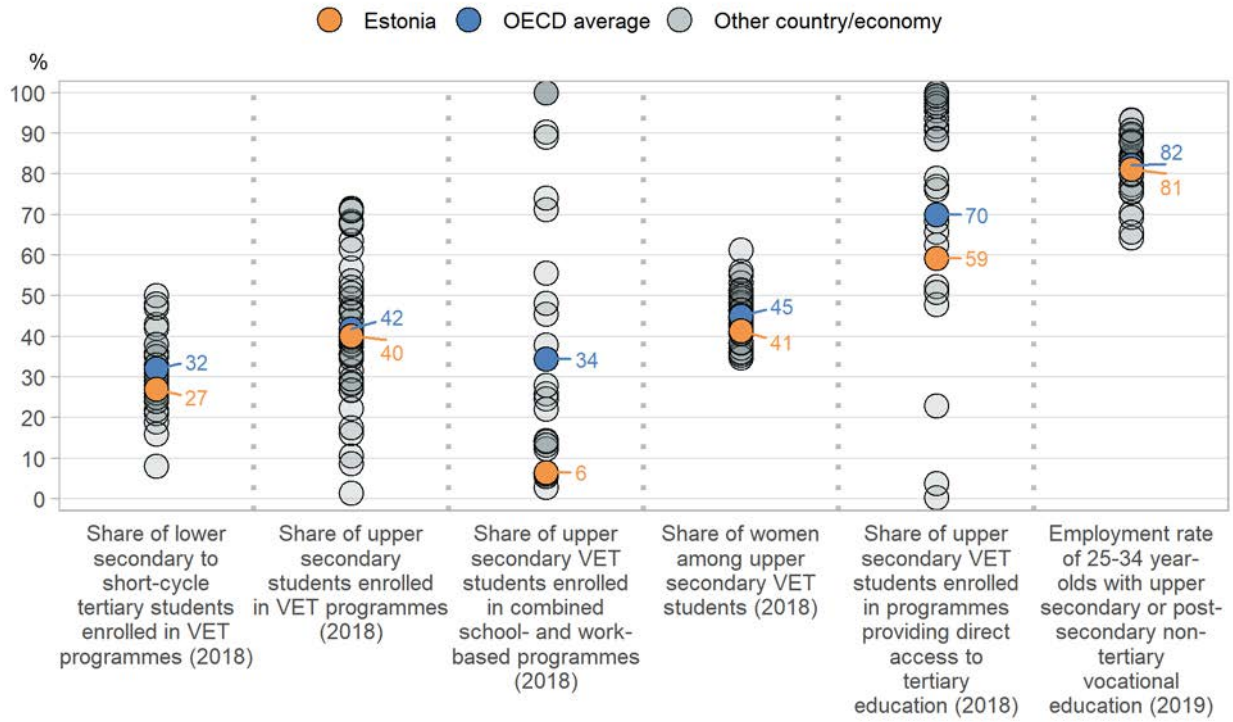
Highlights

- In Estonia, **40% of upper secondary students are enrolled in vocational education and training (VET) programmes**, slightly below the OECD average of 42%. Among these vocational students, **6% attend combined school- and work-based programmes**. This constitutes a significant increase compared to 2013, but it remains well below the OECD average of 34%.
- The **share of tertiary-educated young adults (aged 25-34) has increased significantly over the past decade**, from 37% in 2009 to 43% in 2019**.** It remains, however, **slightly below the OECD average** of 45%.
- In Estonia, an **above-average share of children over the age of 1 are enrolled in early childhood education and care** (ECEC). In terms of child-staff ratios, **there are only 8 children per teaching staff in Estonia, compared to 12 on average across OECD countries**.
- **Although total expenditure per student increased** by 2.5% between 2012 and 2017, **it remains below the OECD average**.
- **Teachers' actual salaries are below the OECD average at the pre-primary, primary, lower secondary general and upper secondary general levels.** In upper secondary general education, teachers earn an average of USD 27 819 per year in Estonia, which is well below the OECD average of USD 49 778.

Participation and outcomes of vocational education and training

- Vocational education and training (VET) programmes attract a diverse range of students, including those seeking qualifications and technical skills to enter the labour market, adults wishing to increase their employability by developing their skills further, and students who may seek entry into higher education later on.
- About one in three students from lower secondary to short-cycle tertiary level are enrolled in a VET programme on average across OECD countries. However, there are wide variations across countries, ranging from less than 20% of students enrolled in vocational education to more than 45% in a few countries. In Estonia, 27% of students are enrolled in vocational programmes, lower than the OECD average (32%), with the majority of these students in a VET programme (76%) found in upper secondary education (Figure 1). The remaining VET students are found in post-secondary non-tertiary education (20%) and lower secondary education (4%).

Figure 1. Snapshot of vocational education



Note: Only countries and economies with available data are shown. The years shown in parentheses is the most common year of reference for OECD and partner countries. Refer to the source table for more details.
Source: OECD (2020), indicator A3 and B7. See Education at a Glance Database. http://stats.oecd.org/ for more information and Annex 3 for notes (https://doi.org/10.1787/69096873-en).

- VET is an important part of upper secondary education in most OECD countries. On average, 40% of all upper secondary students opt for VET programmes in Estonia, a lower proportion than the OECD average of 42% (Figure 1). Certain fields of study are more common than others at this level. In Estonia, the most common broad field is engineering, manufacturing and construction with 50% of upper secondary vocational graduates earning a qualification in this field. This is one of the highest shares among countries with available data, well above the OECD average of 33%.
- The organisation and delivery of upper secondary VET programmes varies considerably from country to country. In combined school- and work-based programmes, between 25% and 90% of the curriculum is taught as work-based learning, while the remainder is organised within the school environment. In Estonia, recent reforms have aimed at increasing work-based learning opportunities (Santiago et al., 2016), and the share of students in combined school- and work-based programmes has increased from 0.7% in 2013 to 6% in 2018. This share, however, remains well below the OECD average of 34% (Figure 1).
- The average age of enrolment in upper secondary vocational programmes across OECD countries (21 years) tends to be higher than for general programmes (17 years). Estonia follows this pattern. The average age of enrolment in upper secondary education is higher for students in vocational programmes (24 years) than for students in general programmes (18 years). The share of upper secondary vocational students tends to increase with age. In Estonia, the share of upper secondary students enrolled in VET is 29% among 15-19 year-olds (OECD average: 37%), and 69% among 20-24 year-olds (OECD average: 62%).
- Vocational upper secondary students are typically less likely to complete their qualification than those from general programmes. Estonia follows this pattern as the completion rate for upper

secondary education (within the theoretical duration of the programme) is lower among students enrolled in vocational programmes (54%) than among those in general ones (85%).

- To support upper secondary vocational students' transition to post-secondary education and improve their career prospects, many countries have created direct pathways from vocational programmes to higher levels of education. In Estonia, 59% of upper secondary vocational students are enrolled in programmes that offer the chance of direct access to tertiary education, lower than the OECD average of 70% (Figure 1). The remaining 41% of vocational students in Estonia are enrolled in programmes that are insufficient for upper secondary level completion, without access to tertiary education.
- In 2019, 27% of 25-34 year-olds in Estonia held an upper secondary or post-secondary non-tertiary vocational qualification as their highest educational level while 19% held a general one. The employment rate of younger adults with a vocational upper secondary or post-secondary non-tertiary education tend to be higher than the employment rate of those with general qualifications at this level (by 9 percentage points on average across OECD countries). Estonia is an exception, as 81% of 25-34 year-olds with an upper secondary or post-secondary non-tertiary vocational qualification are employed compared with 82% of those with a general qualification (the difference is not statistically significant) (Figure 1).
- On average across OECD countries, adults with an upper secondary or post-secondary non-tertiary vocational education have similar earnings to their peers with a general education at this level. While the difference in relative earnings between adults with general and vocational upper secondary or post-secondary non-tertiary attainment is less than 5 percentage points in about one quarter of OECD and partner countries, it is 11 percentage points in favour of general qualifications in Estonia.
- Poorer labour-market prospects of VET qualifications combined with higher tertiary attainment may have contributed to the decline in the share of adults with an upper secondary vocational qualification across generations in many countries. On average across OECD countries, among those with upper secondary or post-secondary non-tertiary education as their highest attainment, 72% of 55-64 year-olds (older adults), compared with 59% of 25-34 year-olds (younger adults) held a vocational qualification. The difference across generations is much smaller in Estonia, with 60% for older adults and 59% for younger adults.
- On average across OECD countries, the ratio of students to teaching staff is similar in both upper secondary vocational and general programmes. In Estonia, there are 14 students for every teaching staff member in general programmes and 18 in vocational ones.

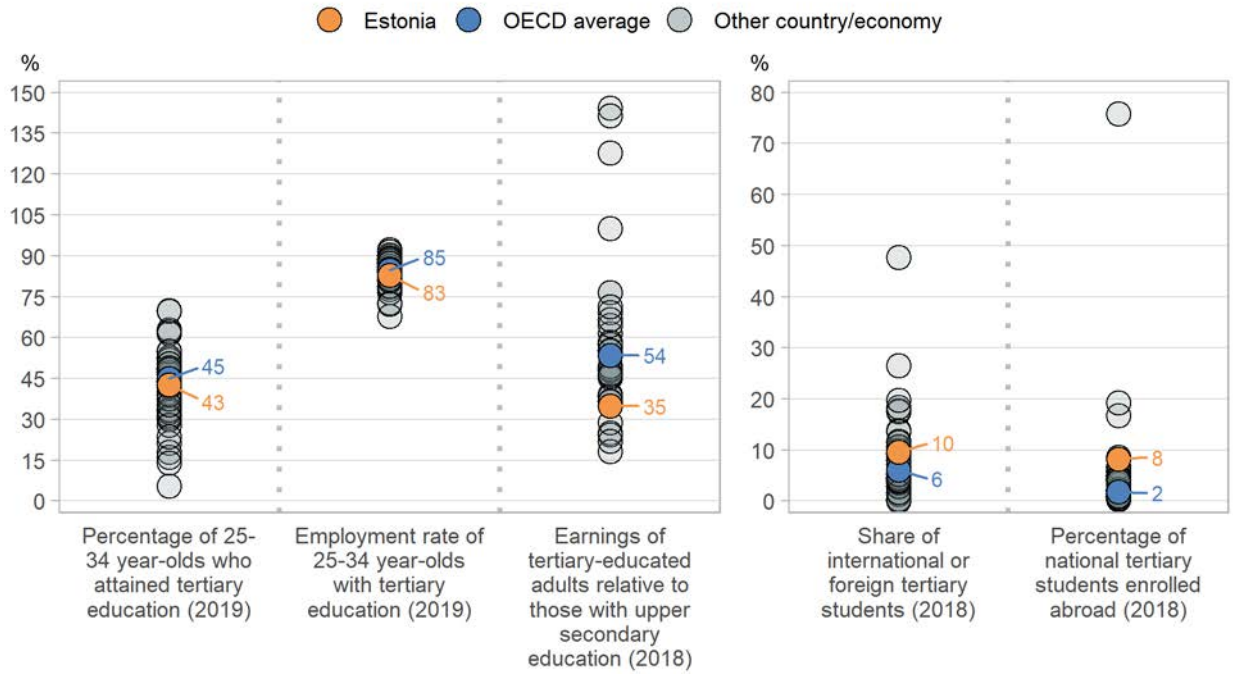
The rising demand for tertiary education

- The expansion of tertiary education is a worldwide trend. Between 2009 and 2019, the share of 25-34 year-olds with a tertiary degree increased in all OECD and partner countries. In Estonia, the share increased by 6 percentage points during this period, lower than the average increase across OECD countries (9 percentage points). In 2019, 43% of 25-34 year-olds had a tertiary degree in Estonia compared to 45% on average across OECD countries (Figure 2).
- From the gender perspective, younger women are more likely than younger men to achieve tertiary education in all OECD countries. In Estonia, 56% of 25-34 year-old women had a tertiary qualification compared to 30% of their male peers, while on average across OECD countries the shares are 51% of younger women and 39% of younger men.
- From an economic point of view, delayed graduation from tertiary education can be costly to the public purse, if adults postpone their entry into the labour market and hence when they start paying income tax. In Estonia, the average age of first-time graduates from tertiary education in 2018 was

26 years, slightly higher than the OECD average of 25 years. Structural factors, such as admission procedures, the typical age at which students graduate from upper secondary education, or cultural perceptions of the value of professional or personal experiences outside of education may explain the differences in the average age of graduation from tertiary education across countries.

- If current patterns of graduation continue, it is estimated that 38% of young adults will graduate from tertiary education for the first time in their life before the age of 30 on average across OECD countries (excluding international students). In Estonia, 30% of young adults will graduate from tertiary education by that age and most of them will graduate from a bachelor's or equivalent level.
- Young people often struggle to enter the labour market, but higher educational attainment increases their likelihood of being employed and is associated with higher incomes. On average across OECD countries, the employment rate in 2019 was 61% for 25-34 year-olds without upper secondary education, 78% for those with upper secondary or post-secondary non-tertiary education as their highest attainment and 85% for those with tertiary education. In Estonia, the shares are 69% for below upper secondary, 81% for upper secondary or post-secondary non-tertiary and 83% for tertiary attainment. Having a tertiary degree also carries a considerable earnings advantage in most OECD and partner countries. In Estonia, in 2018, 25-64 year-olds with a tertiary degree earn 35% more for full-time full-year work than those with upper secondary education compared to 54% on average across OECD countries (Figure 2).
- International student mobility has been expanding quite consistently in the past twenty years. In 2018, 5.6 million tertiary students worldwide had crossed a border to study, more than twice the number in 2005. In Estonia, the share of foreign or international students increased significantly, from 4% in 2014 to 10% in 2018. This increase may reflect, in part, Estonia's recent initiatives to encourage the internationalisation of higher education. Since 2013, Estonia has notably adopted a new performance-based funding system, which takes into account institutions' level of internationalisation (OECD, 2015). As for the percentage of Estonian tertiary students enrolled abroad, it is also significant, at 8% compared to 2% in total across OECD countries (Figure 2). English-speaking countries are the most attractive student destinations overall in the OECD area, with Australia, Canada, the United Kingdom and the United States receiving more than 40% of all internationally mobile students in OECD and partner countries. Among students leaving Estonia to study, the most popular destination country is the United Kingdom.
- Beyond the economic and employment outcomes, higher educational attainment brings greater social benefits. For example, those with a tertiary education are more likely to feel they have a say in what their government does. In 2018, on average across OECD countries participating in the European Social Survey, 52% of tertiary-educated adults agreed with this sentiment compared to 26% of those with below upper secondary education. In Estonia, 49% of tertiary-educated adults feel this way compared with 20% of those with below upper secondary education.

Figure 2. Snapshot of tertiary education



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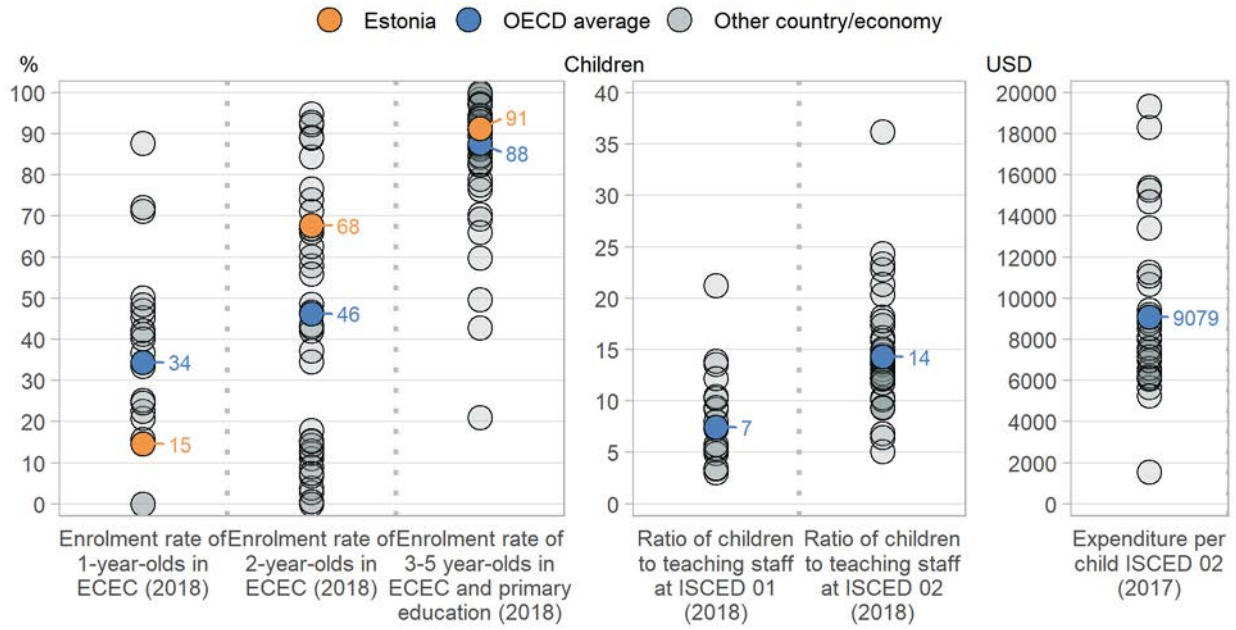
Source: OECD (2020), indicator A1, A3, A4 and B6. See Education at a Glance Database http://stats.oecd.org/for more information and Annex 3 for notes (https://doi.org/10.1787/69096873-en).

Starting strong

- Early childhood education and care (ECEC) has experienced a surge of policy attention in OECD countries in recent decades, with a focus on children under the age of 3 in many countries. In Estonia, 15% of 1-year-olds were enrolled in a formal ECEC programme (ISCED 0) in 2018, below the OECD average of 34%. In contrast, among 2-year-olds, the enrolment rate at ISCED 0 is 68% in Estonia, 21 percentage points above the OECD average of 46% (Figure 3).
- In many OECD countries, ECEC begins for most children long before they turn 5 and there are universal legal entitlements to a place in ECEC services for at least one or two years before the start of compulsory schooling. While compulsory education begins at age 7 in Estonia, 91% of 3-5 year-olds in 2018 are enrolled in ECEC programmes and primary education in Estonia, compared to 88% on average across OECD countries (Figure 3).
- Public provision of early childhood education and care is an important factor in ensuring broad access to affordable ECEC. In Estonia, as many as 96% of children in ECEC are enrolled in public institutions, which is well above the OECD average of 68%. This proportion is, however, closer to that of neighbouring countries such as Finland (85%) and Latvia (91%).
- The workforce is at the heart of high-quality early-childhood education and care: stimulating environments and high-quality pedagogy are fostered by better-qualified practitioners and high-quality interactions between children and staff facilitate better learning outcomes. In that context, lower child-staff ratios are found to be consistently supportive of staff-child relationships across different types of ECEC settings. In Estonia, there are 8 children for every teacher working in ECEC, compared to 12 on average among OECD countries.

- Sustained public financial support is critical for the growth and quality of ECEC programmes. In 2017, annual total expenditure in ECEC averaged USD 8 137 per child in Estonia, below the average across OECD countries (USD 9 661).

Figure 3. Snapshot of early childhood education and care



Note: Only countries and economies with available data are shown. Annual expenditure per child is shown in equivalent USD converted using PPPs. The years shown in parentheses is the most common year of reference for OECD and partner countries. Refer to the source table for more details.
Source: OECD (2020), indicator B2. See Education at a Glance Database http://stats.oecd.org/ for more information and Annex 3 for notes (https://doi.org/10.1787/69096873-en).

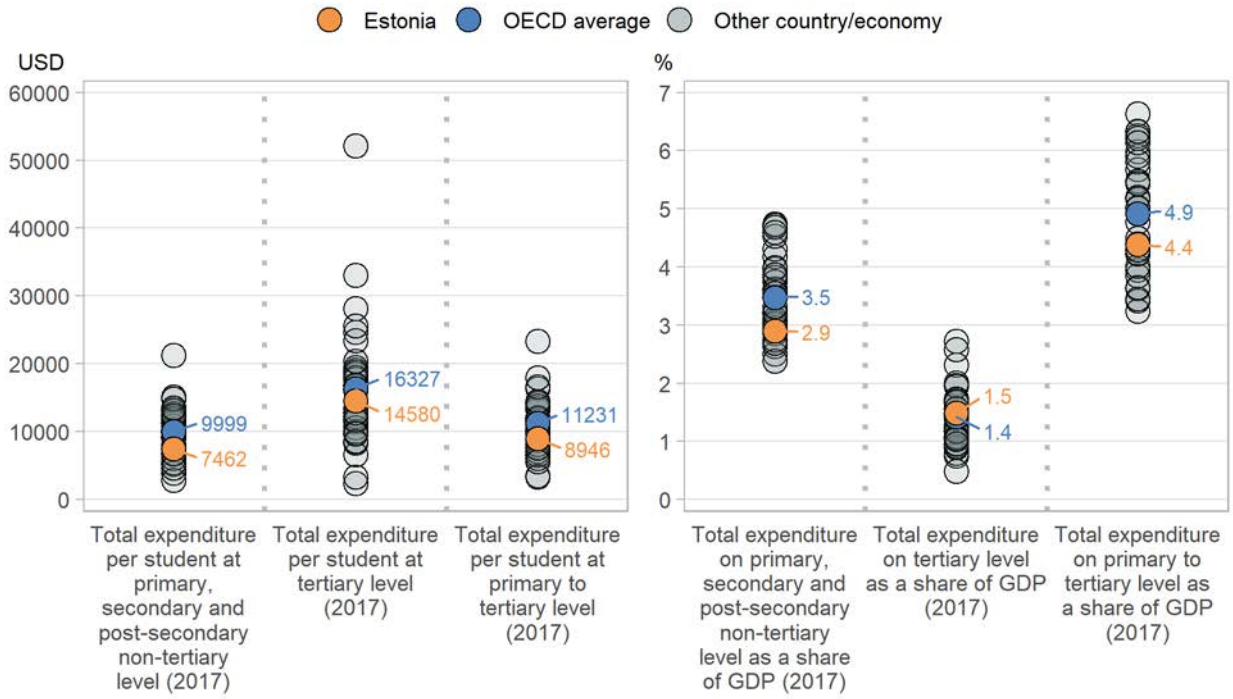
Investing in education

- Annual expenditure per student on educational institutions from primary to tertiary level provides an indication of the investment countries make in each student. In 2017, Estonia spent less on primary to tertiary educational institutions per full-time student than most other OECD countries, investing a total of USD 8 946 per student compared to USD 11 231 on average across OECD countries (Figure 4).
- The way education is provided influences how resources are allocated between levels of education and between public and private institutions. In 2017, Estonia spent USD 7 462 per student at non-tertiary level (primary, secondary and post-secondary non-tertiary education), USD 2 536 lower than the OECD average of USD 9 999. At tertiary level, Estonia invested USD 14 580 per student, USD 1 747 less than the OECD average (Figure 4). Expenditure per student on private educational institutions is higher than on public institutions on average across OECD countries. However, this is not the case in Estonia, where total expenditure on public institutions from primary to tertiary level amounts to USD 8 979 per student, compared to USD 8 377 on private ones.
- In most OECD countries, expenditure per upper secondary student varies according to programme orientation. Spending per student on upper secondary vocational programmes tends to be higher than for upper secondary general ones due to the higher cost of equipment, lower student-to-

teacher ratios, and work-based requirements of such programmes. On average across OECD countries, expenditure per student in upper secondary vocational programmes was USD 1 470 higher than in general programmes in 2017. Estonia follows the same pattern: spending per student in upper secondary vocational programmes was USD 792 higher than in general ones, amounting to USD 7 670.

- The share of national wealth devoted to educational institutions is lower in Estonia than on average among OECD countries. In 2017, Estonia spent 4.4% of gross domestic product (GDP) on primary to tertiary educational institutions, which is 0.5 percentage points lower than the OECD average. Across levels of education, Estonia devoted a below average share of GDP at non-tertiary levels and a slightly above average share at tertiary level (Figure 4).
- Between 2012 and 2017, expenditure per student from primary to tertiary education increased by an average annual growth rate of 1.3% across OECD countries. In Estonia, expenditure on educational institutions grew at an average rate of 1.3% a year, while the number of students fell on average by 1.2% per year. This resulted in an average annual growth rate of 2.5% in expenditure per student over this period.
- The largest share of funding on primary to tertiary educational institutions in OECD countries comes from public sources, although private funding at the tertiary level can be substantial. In Estonia, private sources fund 15% of total expenditure at the tertiary level, which is less than the average across OECD countries (29%).
- Capital costs represent an average share of expenditure on primary to tertiary institutions in Estonia. At primary, secondary and post-secondary non-tertiary level, capital costs account for 8% of total spending on educational institutions, 1 percentage points above the OECD average. At the tertiary level, capital costs represent 9%, slightly lower than the average across OECD countries of 10%.
- Compensation of teachers and other staff employed in educational institutions represents the largest share of current expenditure from primary to tertiary education. In 2017, Estonia allocated 69% of its current expenditure to staff compensation, compared to 74% on average across OECD countries. Staff compensation tends to make up a smaller share of current expenditure on tertiary institutions due to the higher costs of facilities and equipment at this level. In Estonia, staff compensation represents 62% of current expenditure on tertiary institutions compared to 72% at non-tertiary levels. On average across OECD countries, the share is 67% at tertiary level and 77% at non-tertiary level.

Figure 4. Snapshot of the financial resources invested in educational institutions



Note: Only countries and economies with available data are shown. Expenditure in national currencies is converted into equivalent USD by dividing the national currency figure by the purchasing power parity (PPP) index for GDP. The years shown in parentheses is the most common year of reference for OECD and partner countries. Refer to the source table for more details.
Source: OECD (2020), indicator C1 and C2. See Education at a Glance Database http://stats.oecd.org/ for more information and Annex 3 for notes (https://doi.org/10.1787/69096873-en).

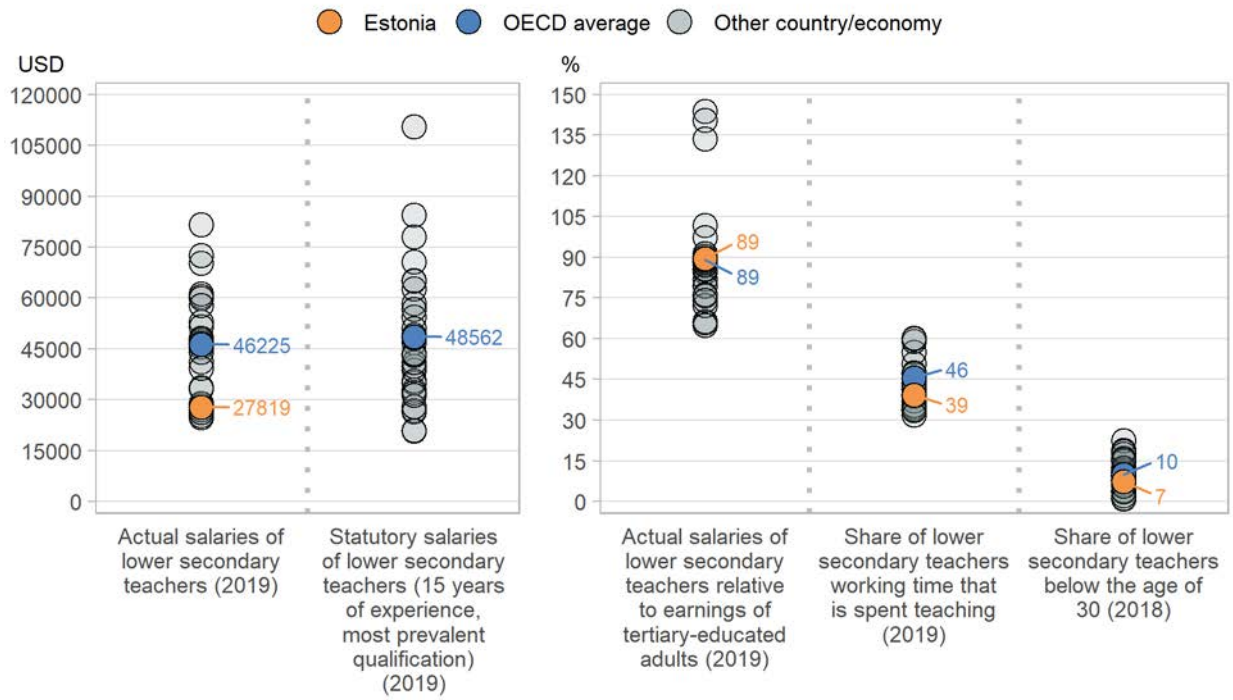
Working conditions of school teachers

- Teachers' actual salaries reflect their statutory salaries and additional work-related payments. Average actual salaries depend also on the characteristics of the teaching population such as their age, level of experience and qualification level. In Estonia, teachers' average actual salaries amount to USD 19 574 at the pre-primary level (ISCED 02), lower than the OECD average of USD 38 677. At the primary, general lower secondary and general upper secondary levels, average teacher salaries increase to USD 27 819 in Estonia. They remain, however, below the respective OECD averages of USD 43 942 in primary education, USD 46 225 in lower secondary general education and USD 49 778 in upper secondary general education (Figure 5).
- Teachers' average actual salaries are lower than those of tertiary-educated workers in almost all countries, and at almost all levels of education. Teachers' average actual salaries at pre-primary, primary and general secondary levels of education are 80-94% of the earnings of tertiary-educated workers on average across OECD countries and economies. In Estonia, the proportion ranges from 63% at pre-primary level to 89% at primary level, lower secondary level and upper secondary level (Figure 5).
- The average number of teaching hours per year required of a typical teacher in public educational institutions in OECD countries tends to decrease as the level of education increases, from 993 hours at pre-primary level, to 778 hours at primary level, 712 hours at lower secondary level (general programmes) and 680 hours at upper secondary level (general programmes). In Estonia, teachers are required to teach 1 332 hours per year at pre-primary level, 588 hours per year at

primary level, 606 hours at lower secondary level (general programmes) and 571 hours at upper secondary level (general programmes).

- During their working time, teachers also perform various non-teaching tasks such as lesson planning and preparation, marking students' work and communicating or co-operating with parents or guardians. At the lower secondary level, teachers in Estonia spend 39% of their statutory working time on teaching, compared to 44% on average among OECD countries (Figure 5).
- Large proportions of teachers in many OECD countries will reach retirement age in the next decade, while the size of the school-age population is projected to increase in some countries, putting many governments under pressure to recruit and train new teachers. In Estonia, 10% of primary teachers are considered young teachers (under the age of 30), which is lower than the OECD average of 12%. At the lower secondary level, this proportion decreases to 7% in Estonia and 8% on average across OECD countries (Figure 5).

Figure 5. Snapshot of teachers' working conditions



Note: Only countries and economies with available data are shown. Teachers' salaries are shown in equivalent USD converted using PPPs. The years shown in parentheses is the most common year of reference for OECD and partner countries. Refer to the source table for more details.

Source: OECD (2020), indicator D3, D4 and D5. See Education at a Glance Database http://stats.oecd.org/ for more information and Annex 3 for notes (https://doi.org/10.1787/69096873-en).

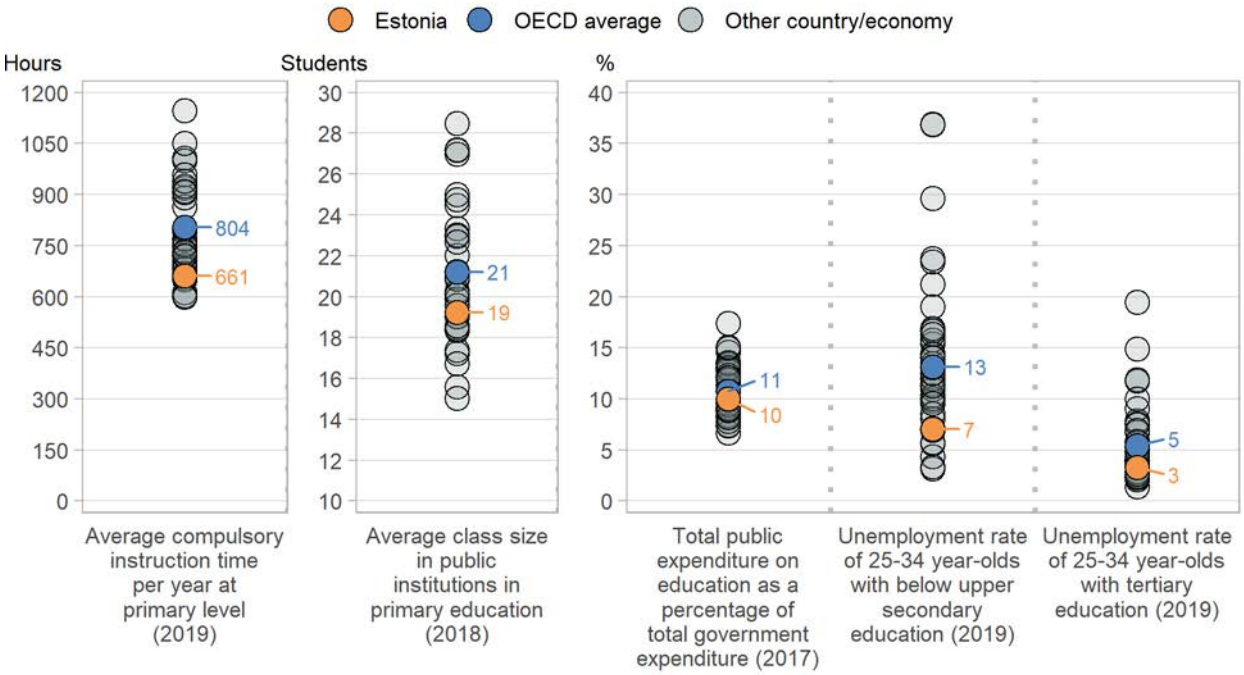
The impact of COVID-19 on education

- The global 2020 COVID-19 pandemic has sent shockwaves around the world. In a first effort to contain the virus, many countries have imposed a lockdown and schools and/or universities have closed for several months across all OECD and partner countries. In Estonia, the closures were nationwide from 16 March 2020. By 15 May 2020, schools are allowed to open under certain conditions. By the end of June, Estonia had experienced 9 weeks of effective school closures in some form, compared to 14 weeks on average across OECD countries (UNESCO, 2020).

However, the actual impact in some countries may have been less severe as some of these periods included scheduled school breaks.

- Excluding the non-compulsory part of the curriculum, students in public institutions in Estonia attended classes for 661 hours per year on average at primary level and 822 hours at lower secondary level in 2019. Each week of school closure therefore represents about 19 hours of compulsory instruction time at the primary level and 24 hours of compulsory instruction time at lower secondary level during which students have physically not attended school (Figure 6). During this time, many OECD and partner countries have turned to distance learning to ensure the continuity of education.
- School reopening in the context of the pandemic is contingent on the capacity to maintain a safe distance of 1-2 metres between pupils and staff. Countries with smaller class sizes will find it easier to comply with new restrictions on social distancing. In Estonia, the average class size at primary level is 19 students in public institutions, which is smaller than the OECD average of 21. Social distancing in the classroom will be equally challenging at secondary level in Estonia, while many OECD and partner countries are likely to face more challenges at that level. In public lower secondary institutions, there are 19 students per class in Estonia, compared to 23 students per class on average across OECD countries. However, the need to reduce class size may depend on other factors such as physical space, the availability of rooms and staff, and personal decisions by students and staff on whether to return to school (Figure 6).
- While there is uncertainty about the likely overall impact of the COVID-19 pandemic on education expenditure, governments will face difficult decisions on the allocation of resources, as government funds are injected into the economy and the health sector (Al-Samarrai, Gangwar and Gala, 2020). In 2017, public spending on primary to tertiary education as a share of government expenditure in Estonia was 10%, lower than the OECD average of 11% (Figure 6).
- The crisis may have a severe impact on the internationalisation of higher education as the delivery of online course material and travel restrictions may raise questions among international students' perception on the value of obtaining their degree from an institution abroad. Estonia, with a higher share of international students than in total across the OECD, may be more strongly affected than other countries.
- Unemployment may increase, as the economy struggles to cope with the reduced activity that resulted from the lockdown. Those with lower educational attainment are the most vulnerable, as they are the most unlikely to benefit from remote working. In 2019, before the pandemic hit, 7% of young adults with below upper secondary education in Estonia were unemployed compared to 3% of tertiary-educated 25-34 year-olds (Figure 6). In the aftermath of the 2008 financial crisis, the unemployment of young adults without an upper secondary education increased by 19.1 percentage points between 2008 and 2009 in Estonia compared to 1.5 percentage points among those with tertiary education.

Figure 6. Snapshot of indicators relevant to the impact of COVID-19 on education



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Source: OECD (2020), indicator A3, D1, D2, and C4. See Education at a Glance Database http://stats.oecd.org/ for more information and Annex 3 for notes (https://doi.org/10.1787/69096873-en).

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More information

For more information on Education at a Glance 2020 and to access the full set of Indicators, visit www.oecd.org/education/education-at-a-glance-19991487.htm

For more information on to the methodology used during the data collection for each indicator, the references to the sources and the specific notes for each country, visit Annex 3 of the publication (https://doi.org/10.1787/69096873-en).

For general information on methodology, please refer to the OECD Handbook for Internationally Comparative Education Statistics: Concepts, Standards, Definitions and Classifications (https://doi.org/10.1787/9789264304444-en).

Updated data can be found on line at http://dx.doi.org/10.1787/eag-data-en and by following the *StatLinks* under the tables and charts in the publication.

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The calculation on the number of weeks of school closures due to the COVID-19 pandemic is based on data from UNESCO (UNESCO, 2020). For general information on the methodology considered for the data, please refer to the methodological note.

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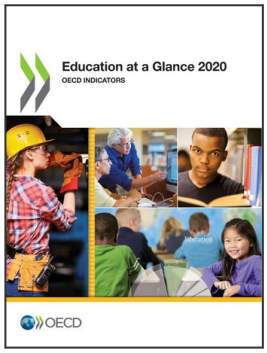
On 15 May 2020, the OECD Council invited Costa Rica to become a Member. While Costa Rica is included in the OECD averages reported in this note, at the time of its preparation, Costa Rica was in the process of completing its domestic procedures for ratification and the deposit of the instrument of accession to the OECD Convention was pending.



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