THE PRESENT AND FUTURE PROVISION
OF EDUCATION IN ESTONIA

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Five main questions

1. How has Estonia performed in terms of school consolidation in the past decade?

2. How can Estonia adapt its school network to be efficient while maintaining good access to high quality education everywhere?

3. How can Estonia best adapt its education provision to future demographic changes?

4. How can digitalisation improve the delivery of education services?

5. How can all actors involved in education decision making align under the same objectives?
How has Estonia performed in terms of school consolidation in the past decade?
More visible concentration of upper secondary education

Distribution (2020) of and change (2011-2020) in school, students and teachers by educational level and degree of urbanization

<table>
<thead>
<tr>
<th>Degree of urbanisation</th>
<th>Share of schools, students and teachers, 2020</th>
<th>Change in schools</th>
<th>Change in students</th>
<th>Change in teachers</th>
<th>Change in student-to-pupil ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basic education (ISCED 1+2)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sparse rural areas</td>
<td>73%, 34%, 40%</td>
<td>15</td>
<td>18930</td>
<td>1620</td>
<td>1.1</td>
</tr>
<tr>
<td>Villages</td>
<td>3%, 7%, 6%</td>
<td>-3</td>
<td>-3768</td>
<td>-301</td>
<td>-0.2</td>
</tr>
<tr>
<td>Towns and suburbs</td>
<td>12%, 27%, 25%</td>
<td>8</td>
<td>1462</td>
<td>167</td>
<td>-0.2</td>
</tr>
<tr>
<td>Cities</td>
<td>11%, 32%, 29%</td>
<td>13</td>
<td>3350</td>
<td>543</td>
<td>-1.3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>33</td>
<td>19974</td>
<td>2029</td>
<td>-0.3</td>
</tr>
<tr>
<td><strong>Upper secondary education (ISCED 3)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sparse rural areas</td>
<td>32%, 21%, 23%</td>
<td>-3</td>
<td>1808</td>
<td>59</td>
<td>3.0</td>
</tr>
<tr>
<td>Villages</td>
<td>11%, 6%, 7%</td>
<td>-19</td>
<td>-1559</td>
<td>-170</td>
<td>0.9</td>
</tr>
<tr>
<td>Towns and suburbs</td>
<td>23%, 31%, 31%</td>
<td>-23</td>
<td>-583</td>
<td>-177</td>
<td>2.3</td>
</tr>
<tr>
<td>Cities</td>
<td>34%, 42%, 38%</td>
<td>-20</td>
<td>-1252</td>
<td>-211</td>
<td>1.6</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>-65</td>
<td>-1586</td>
<td>-499</td>
<td>2.0</td>
</tr>
</tbody>
</table>
No evident territorial disparities in education quality...

...but big problem of ageing teaching staff

**Pupil-to-teacher ratios versus PISA 2018 scores by county**

*Bubble size represents total population of the county*

**Age and gender distribution of teachers in Estonia**

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Current policies reflect on geographical distribution of expenditure

**Municipal expenditure statistics by degree of urbanisation, 2014-2019**

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<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Cities</td>
<td>384</td>
<td>95</td>
<td>9.1%</td>
<td>1647</td>
<td>51</td>
<td>8.3%</td>
</tr>
<tr>
<td>Towns and suburbs</td>
<td>465</td>
<td>78</td>
<td>8.2%</td>
<td>1508</td>
<td>118</td>
<td>8.2%</td>
</tr>
<tr>
<td>Rural areas</td>
<td>537</td>
<td>125</td>
<td>8.6%</td>
<td>1513</td>
<td>132</td>
<td>8.7%</td>
</tr>
</tbody>
</table>

**Levels and change in expenditure in education per capita by municipality, 2014-2019**
In summary

- The education system in Estonia has achieved high quality and equity in provision combined with efforts to increase efficiency.
- Strong generational inertia on teaching staff has prevented downsizing teaching staff. However, many areas, especially rural, face young teacher shortages.
- Redistribution mechanisms seem to accomplish their goal but the efficiency gains of a fixed coefficient remain unclear.
- Incentives for school consolidation through funding for teaching staff may have led to over-dispersion in compensation across municipalities.
How can Estonia adapt its school network to be efficient while maintaining good access to high quality education everywhere?
Are rural schools undersized and/or over-staffed?
Have new schools been built in places with increasing number of students?
In summary

- Current spatial demand patterns may require three different strategies:
  1. Focus on improving within school efficiency by adjusting teaching staff levels in areas with low access
  2. Increasing the scale of schools in suburban municipalities with under-utilized potential for provision
  3. Increase provision in growing urban and suburban municipalities with a strategic and common planning vision
- Current expenditure in education shares generally reflect needs of municipalities facing unavoidable costs of smallness and remoteness
How can Estonia best adapt its education provision to future demographic changes?
How can Estonia best adapt its education provision to future demographic changes?

• By 2035 Estonia is projected to have...
  o an increase in the number of students in cities and decrease in other areas
  o the second largest increase in cost per primary school student in sparse rural areas in Europe

• Rural municipalities have both the lowest annual costs and distances per primary school student. Even after consolidation costs may remain high in some municipalities

• For more information, visit the EC-JRC/OECD interactive tool: https://urban.jrc.ec.europa.eu/thematic-analyses/edu-health-services/
In summary

- School consolidation will have to continue in the next decades in most municipalities.
- A few urban municipalities will have to deal with increasing capacity.
- School consolidation can be achieved without increasing travelled distances in the future.
- However, a number of small schools operating at high costs will have to remain open at relatively high costs for decades to ensure access.
- While future costs increase more in the case no school consolidation, increasing within school efficiency can lead to major cost savings.
How can digitalisation improve the delivery of education services?
Recent government strategies to digitalise education show encouraging results

• Several strategies and initiatives seek to reinforce students and teachers digital skills and the use of digital solutions
  ➢ Lifelong Learning Strategy (2014-2020)
  ➢ Education Strategy 2021-2035
  ➢ EDULAB

• All Estonian schools use digital solutions

• Estonian teachers and students have overall better skills than their peers in other countries (Programme for the International Assessment of Adult Competencies, PISA 2018)
Estonia plans to make vocational future ready despite remaining challenges

- Estonian efforts to digitalise education also target Vocational Education and Training (VET)
  - 2013 Vocational Educational Institution Act (Kutseõppeasutuse seadus)
  - OSKA labour market needs monitoring and forecasting system

- Significant challenges remain in the field of VET:
  - Only 6.9% of post-secondary VET graduates entered higher education (2019-2020)
  - 19.2% of all students who started vocational secondary education dropped out during their first year of studies (2020)
  - 9.4% of them did not continue studying either in VET or in general education next year after they dropped out
Broadband connectivity gaps are a major challenge for the provision of services

Gaps in download speeds, by TL3 region and degree of urbanisation

Ookla tests of fixed download speed, gaps estimated as percentage deviation from national averages (2020 Q4)
The digital skills and urban-rural divides are still a challenge to overcome

- Digital skills in Estonia are lower than those of its northern neighbours
  - 29% of persons with insufficient technical computer skills (2011-2012)

- On digital skills, rural-urban gaps also persist
  - 31% of individuals living in rural areas have basic digital skills, in contrast with 68% in cities

- Teachers’ low digital skill levels have represented a major challenge for Estonia (PIAAC study)
  - 27% of Estonian teachers had good skills in problem-solving in technology-rich environments (PS-TRE)
How can all actors involved in education decision making align under the same objectives?
Policy recommendations

1. Focus on training and career incentives to attract teachers to rural schools

2. Use objective measures of unavoidable costs while allowing more flexibility in the use of funding

3. Develop incentives to boost cooperation in education provision across municipalities

4. Consolidate higher education provision with a functional and strategic view
5. Further develop Demand-Responsive Transport (DRT) solutions to facilitate access to rural schools

6. Digitalise vocational education to broaden opportunities for rural youth

7. Develop a common strategy of adaptation to shrinkage across all service sectors
Thank you!

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