



# 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?**



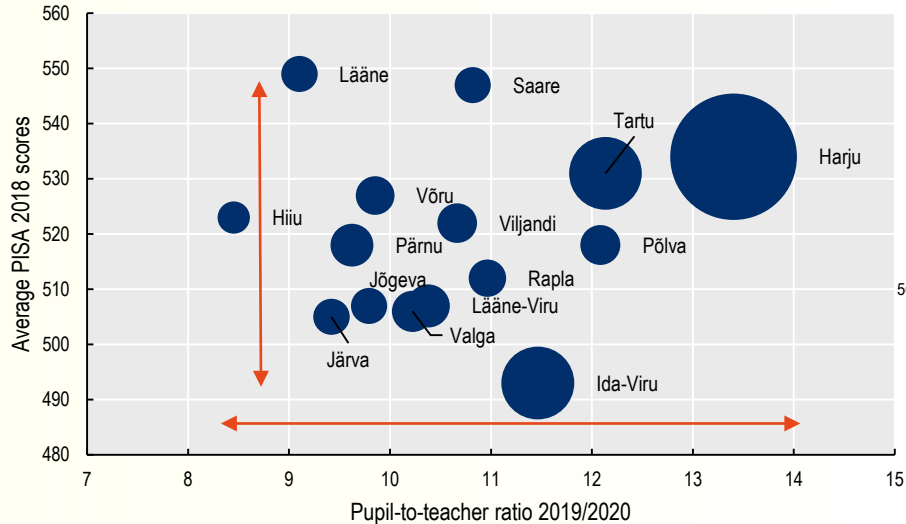
# More visible concentration of upper secondary education

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

Degree of urbanisation	Share of schools, students and teachers, 2020	Change in schools	Change in students	Change in teachers	Change in student-to-pupil ratio
<b>Basic education (ISCED 1+2)</b>					
Sparse rural areas	73%, 34%, 40%	15	18930	1620	1.1
Villages	3%, 7%, 6%	-3	-3768	-301	-0.2
Towns and suburbs	12%, 27%, 25%	8	1462	167	-0.2
Cities	11%, 32%, 29%	13	3350	543	-1.3
Total		33	19974	2029	-0.3
<b>Upper secondary education (ISCED 3)</b>					
Sparse rural areas	32%, 21%, 23%	-3	1808	59	3.0
Villages	11%, 6%, 7%	-19	-1559	-170	0.9
Towns and suburbs	23%, 31%, 31%	-23	-583	-177	2.3
Cities	34%, 42%, 38%	-20	-1252	-211	1.6
Total		-65	-1586	-499	2.0

# No evident territorial disparities in education quality...

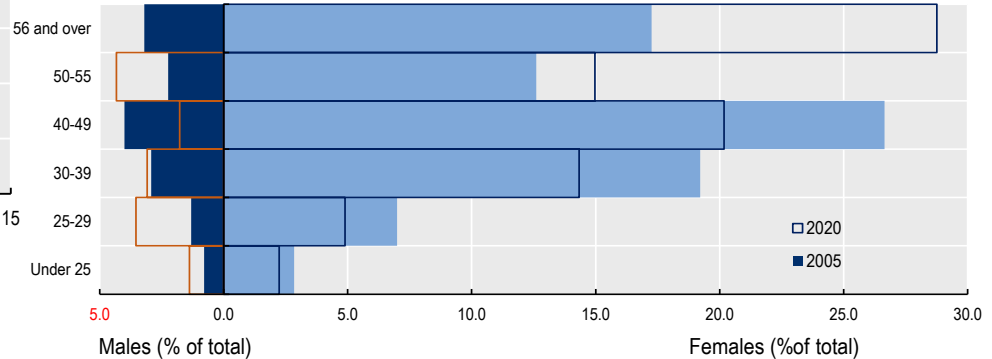
*Pupil-to-teacher ratios versus PISA 2018 scores by county*



*Bubble size represents total population of the county*

...but big problem of ageing teaching staff

*Age and gender distribution of teachers in Estonia*



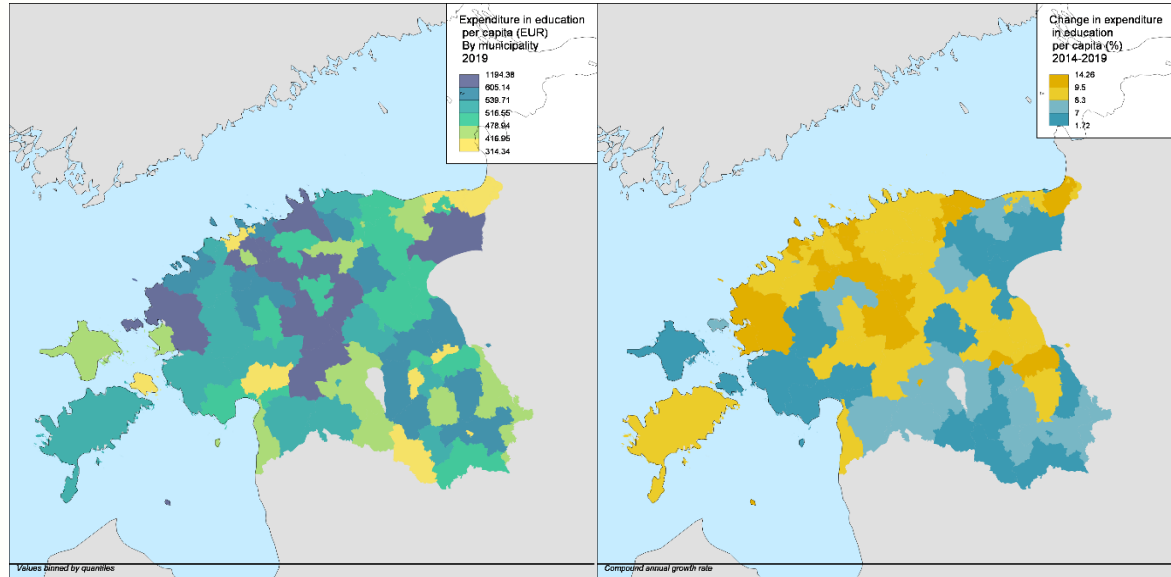


# Current policies reflect on geographical distribution of expenditure

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

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

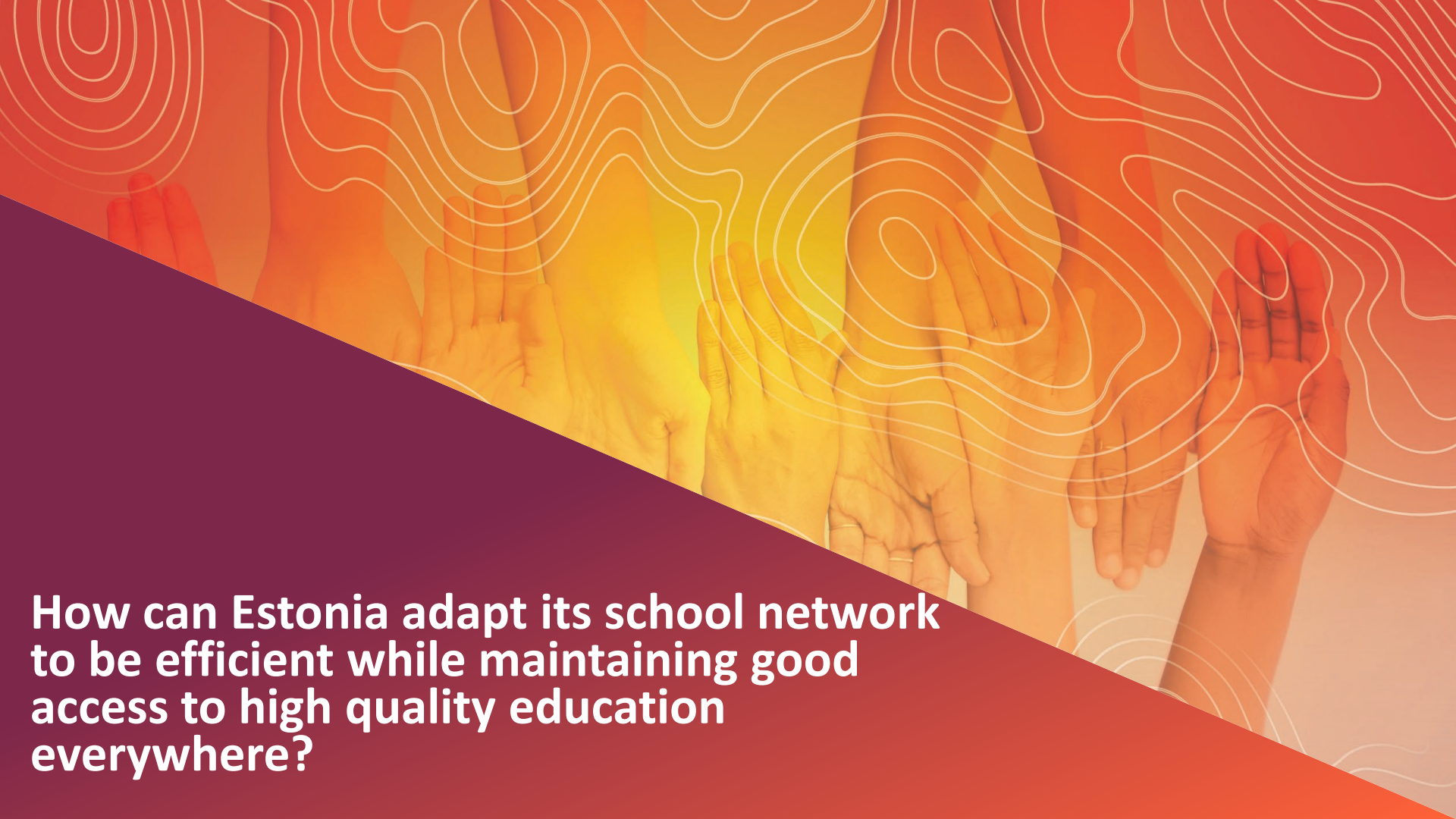
Degree of urbanisation (LAU2)	Expenditure on education per capita 2019	St. dev.	Change 2014-2019	Wages teachers 2019	St. dev.	Change 2014-2019
Cities	384	95	9.1%	1647	51	8.3%
Towns and suburbs	465	78	8.2%	1508	118	8.2%
Rural areas	537	125	8.6%	1513	132	8.7%





## 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?



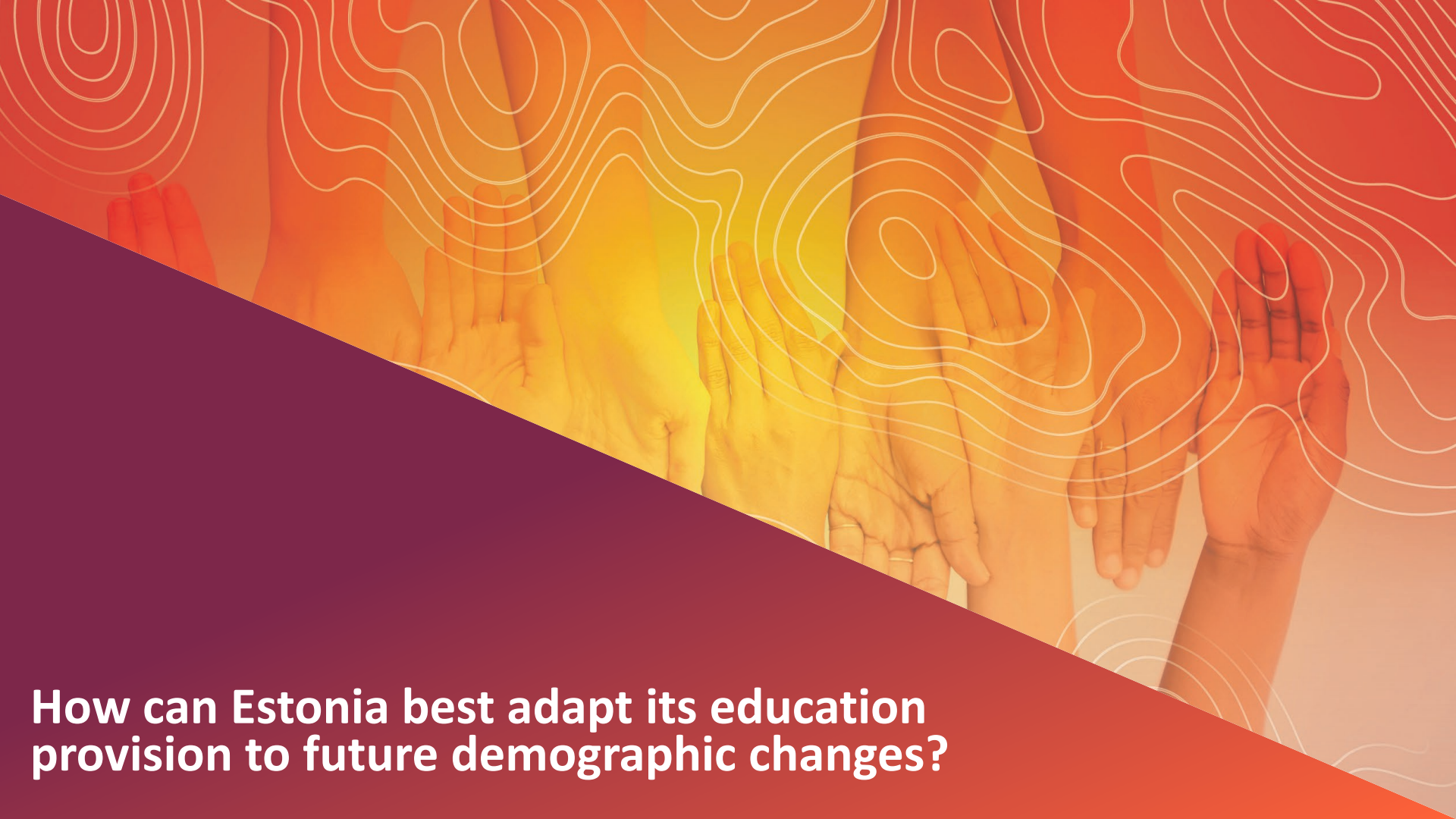
**Have new schools been built in places with increasing number of students?**





# 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...
  - an increase in the number of students in cities and decrease in other areas
  - 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

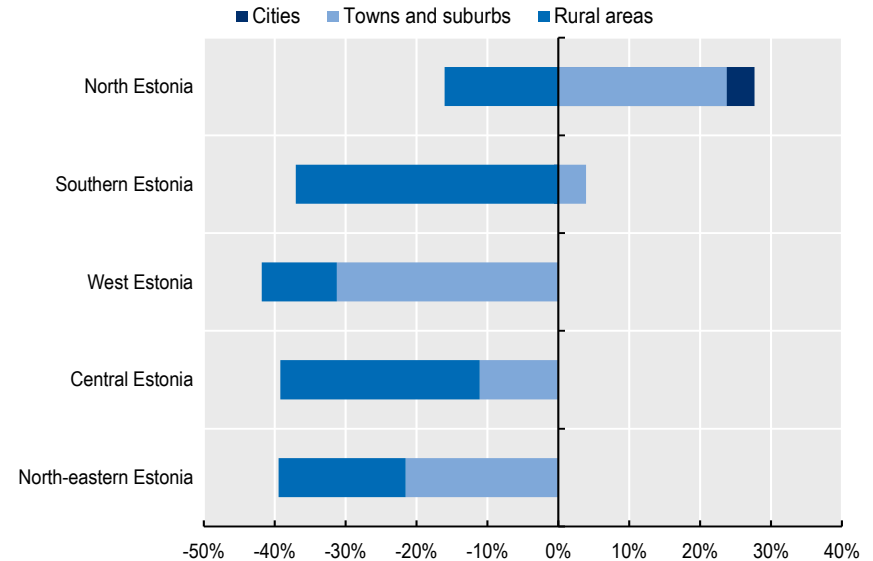
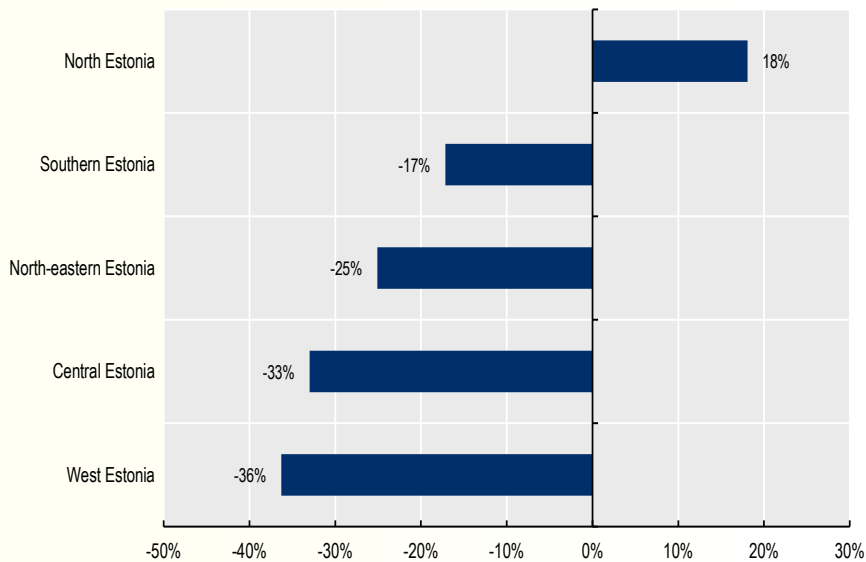
- Estonian efforts to digitalise education also target Vocational Education and Training (VET)
  - 2013 Vocational Educational Institution Act (*Kutseõppeasutuse seadus*)
  - OSKA labour market needs monitoring and forecasting system
- Significant challenges remain in the field of VET:
  - Only 6.9% of post-secondary VET graduates entered to 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



# Policy recommendations

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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