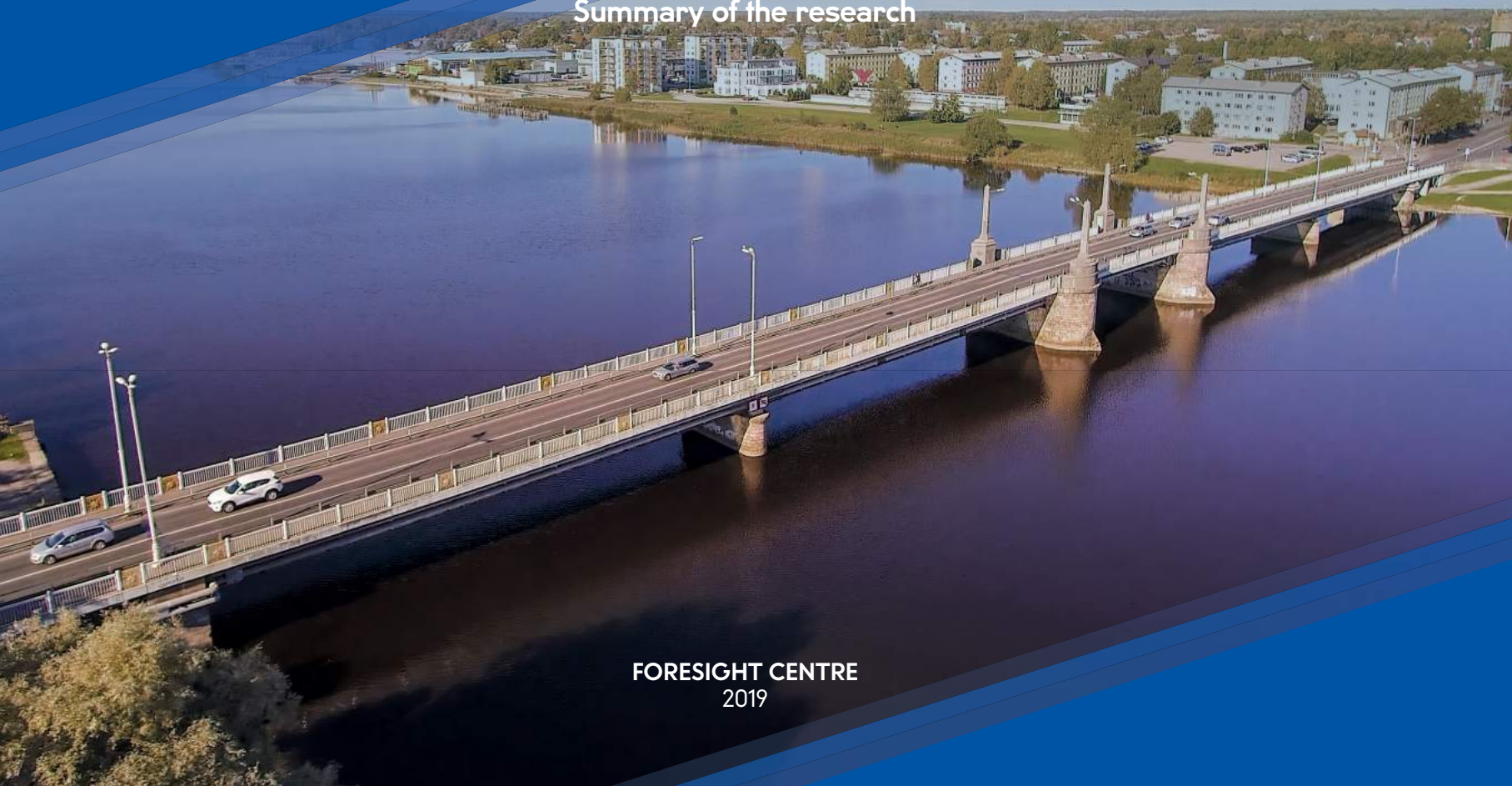




Future of Regional Economy in Estonia

SCENARIOS UNTIL 2035

Summary of the research



FORESIGHT CENTRE
2019

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Read also other reports published within the framework of the research:

- › Foresight Centre of the Estonian Parliament: Eesti regionaalse majanduse stsenaariumid 2035 (Estonian Regional Economy Scenarios 2035)
- › Veiko Sepp: Eesti regionide majandusarengut mõjutavate uuenduste ja trendide analüüs (Analysis of Trends and Innovations Impacting the Economic Development of Estonian Regions)
- › Kadri Kuusk: Regionaalse majanduskasvu teooriate ja tulutasemete ühtlustumist suunavate tegurite ülevaade (Overview of Regional Economic Growth Theories and Factors Driving Revenue Convergence)
- › Veiko Sepp: Riiklike ja maakondlike arengustrateegiate võrdlevanalüüs (Comparative Analysis of National and County Development Strategies)
- › Irina Martyanova: Regionaalsete majanduslike võrgustike analüüs Eesti käibemaksudeklaratsioonide andmete põhjal (in English) (Analysis of Regional Economic Network Structures Based on Estonian VAT Transaction Data)

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www.riigikogu.ee/arenguseire/regionaalse-majanduse-arengud

Foreword

It is impossible to imagine a high quality of life in the different regions of Estonia without a strong local economy. Or is it? What could regional economy be like in different regions of Estonia by 2035? How could we shape a smart regional policy that takes into account the potential development scenarios?

The Estonian regional economy scenarios outline alternative development paths and conjure up a vision of the future world – what could the economic activities in Estonia look like in 2035 and where would these be located. We need to be ready to adapt to global developments that are hard to predict, in order to gain the maximum benefit from the evolving environment and new technologies. The scenarios help to prepare the decision-makers but also the entrepreneurs and the population for changes to come.

Automation and artificial intelligence, as well as distributed small-scale generation, increasing environmental requirements, changing consumer preferences, urbanisation and counter-urbanisation, valorisation of new mineral resources, and decline in the importance of others – the list could go on and on. We can already make certain definite statements about the probable impact of some development factors, while we are standing at the parting of the ways regarding others, and it is not clear what direction the development would take.

We have developed the following scenarios on the basis of the innovations and trends that are the most likely to affect Estonia's regional economy. We must remember that the scenarios intentionally amplify the developments that take place under the influence of key factors, in order to outline the different development paths as clearly as possible. When describing the scenarios, we explain the political choices that may amplify the impact of different factors or may drive the development towards one or the other scenario.

We hope that this booklet would provide useful information as well as exciting you and sparking your imagination.

Happy reading!

Tea Danilov

Head of Foresight Centre





Summary of the research

Harju County keeps growing. Regional growth centres have not received the expected boost. However, technological development and the growing environmental mindset may breathe new life into regional business.

Estonian regional policy has set out to implement the potential based on regional identity. So far, however, this has not been able to reverse the increasing concentration of economic activities into metropolitan regions.

Two principal options emerge in the situation:

- › Accept a spatially highly concentrated economic model, and mitigate the negative aspects of the *Greater Tallinn* scenario, such as the deepening segregation and deteriorating living environment in the capital, and the scarcity of opportunities and general discontent in rural areas.
- › Pursue a considerably more vigorous regional policy that would lead to the growth centres scenario. This would include developing regional growth sectors through various policies, not only the regional policy. High-speed Internet, smart grid, and good transport links to the nearest centre are of great importance.

Climate policy conclusions

To transition to a green economy model, we must estimate the ecological footprint of the current main sectors, as well as the specialisation suggested in county development strategies, looking for possibilities to adapt to stricter environmental restrictions and changing demands. Building up a new energy and transport infrastructure is costly and time-consuming, and therefore decisions must be made now.



What supports the spatially concentrated economic model?

- › Economy of scale – for effective functioning, the scale of activities must be large enough in various sectors (industry, services, public services).
- › The diversity necessary for innovation is greater in cities.
- › Strong regional policy is not financially feasible.



What supports the spatially dispersed economic model?

- › Optimal use of local natural resources (arable land, wood, sea, scenic spots).
- › More evenly distributed income of population.
- › Cultural and ecological diversity is preserved.
- › Better crisis resilience.

Which political choices affect regional economy prospects?



Regional policy focus: stand-alone v. integrated with other policy areas.



Type of governance: centralised v. greater regional autonomy.



Transport policy: fast connections to the capital v. good intra-regional space-time connectedness.



Education policy: merger of universities and elimination of regional colleges v. regional research and development centres and (technology) curricula.



Business policy: uniform approach v. regionally varying conditions in support measures.



Regional infrastructure: managed reduction v. ensuring uniform fundamental infrastructure.



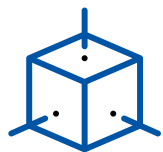
Energy policy: centralised energy production v. priority development of dispersed solutions.



Distribution of European structural assistance: giving priority to non-capital regions v. uniform approach.

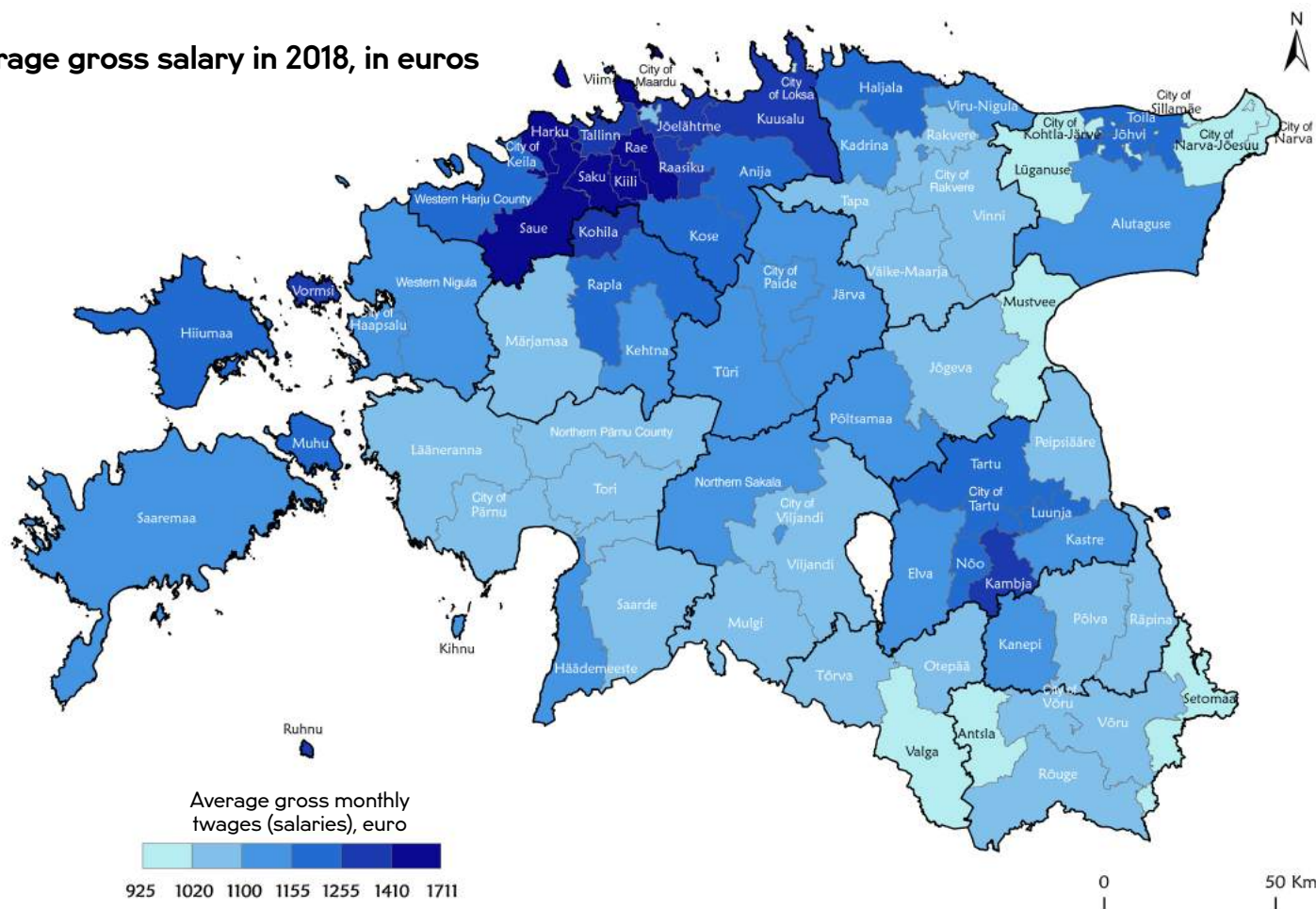


Issues concerning the refinement of mineral resources: exploration and extraction of mineral resources (phosphorite and other precious (earth) metals) v. abandoning active engagement.



Spatial development trends in Estonia and elsewhere

Average gross salary in 2018, in euros



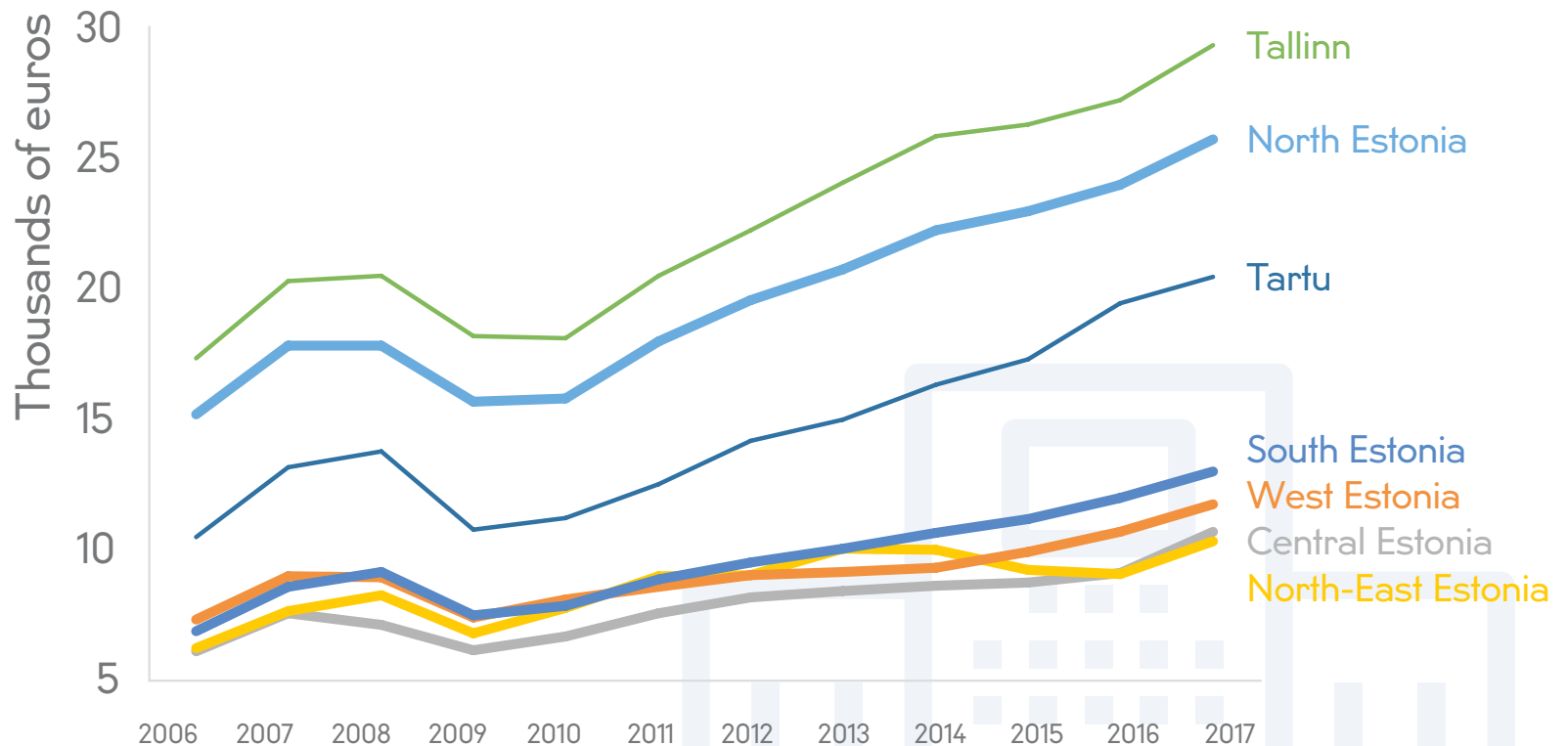
High salary is earned in two centres.

Source: Statistics Estonia



Regional disparity has increased over time.

Regional GDP per capita in NUTS 3 regions of Estonia (thousands of euros)



Source: Statistics Estonia

NUTS3 – common statistical classification of regional units of the European Union



Regional disparities have also persisted in other countries.

Reasons

- › The current technological development, globalisation, and elimination of trade barriers have encouraged the concentration of businesses and skills.
- › People's willingness and ability to move are overestimated: those able to move have moved; those who have not, either lack the necessary skills or they have other reasons.
- › Improvement of transport connections has further favoured large centres and has turned more distant regions into hinterland instead of independent economic regions.
- › Every region has a different development perspective, which is why a regional policy using only uniform measures is not always the best solution.

Results

- › Many peripheries and stagnating industrial regions have failed to find a place in the “new economy” – jobs are disappearing, the choice is narrowing, and the skills do not meet the requirements. People feel that changes in the economy have let them down.
- › Under the liberal economic model, regional variations should have been temporary and should have disappeared under the influence of market forces. The current experience indicates that the variations can be very persistent.
- › After a “brain drain” from a region, the remaining residents start to “protect the place”; that is, they become hostile towards new businesses and immigrants moving to the region.

More information: Kadri Kuusk, 2019, Regionaalse majanduskasvu teooriate ja tulutasemete ühtlustamist suunavate tegurite ülevaade (Overview of Regional Economic Growth Theories and Factors Driving Revenue Convergence), Foresight Centre of the Estonian Parliament



Which technological innovations will affect the future of Estonian regions?

MAJOR TECHNOLOGICAL INNOVATIONS IN TERMS OF REGIONAL ECONOMY ARE CONNECTED TO INFORMATION AND ENERGY TECHNOLOGY

Industrial automation and robotisation alleviate labour shortage but aggravate income inequality.

The impact depends on the developmental pace and cost-effectiveness of technologies. Automation leads to less demand for labour with lower qualifications, while the qualification requirements for the rest of the employees increase. Automation opens new opportunities to preserve small-scale industrial production in small settlements located further from the centres.

The Internet of Things/Everything (IoT/loE) connects devices and communities

IoT/loE is useful in daily life, business processes, industrial production, and governance practices. In terms of both economy and the availability

of services, low density areas could obtain the greatest possible profit from loE technologies, but regions that are culturally more open and where younger age groups dominate are in an advantageous position in the implementation of technology.

3D-printing (additive manufacturing) supports decentralisation but requires higher expenses and special skills to set up.

As technology becomes cheaper and more common, it becomes easier to transition from large-scale production to decentralised industrial production because there is less need for a variety of equipment and for recalibration. Lower start-up costs of RD&I (research and development and innovation) intensive product development.

Self-driving vehicles may provide alleviation to the main problem of low density – great distances in space and time.


If self-driving vehicles are successfully introduced, the commuting will become more convenient and

the commuting area will grow. This increases the attractiveness of rural regions as places of residence, but may also foster urban sprawl, and thus the formation of larger urban agglomerations. Cost saving in transport, including in the carriage of goods, is also a significant consequence of such a development. However, this leads to a considerable loss of jobs in the transport sector.

Smart energy systems with distributed generation help to popularise renewable energy

Smart grid receives and measures the input from many dispersed small-scale energy generation units, which improves the market position of renewable energy sources with alternating supply (wind, sun). Implementation opportunities depend on the development of energy storage systems. In the event of successful implementation of distributed generation, energy security increases, new opportunities to use renewable natural resources emerge, and proprietary income and employment also increase in low density areas.

More information: Veiko Sepp, 2019, Eesti regioonide majandusarengut mõjutavate uuenduste ja trendide analüüs (Analysis of Trends and Innovations Impacting the Economic Development of Estonian Regions), Foresight Centre of the Estonian Parliament

A wide-angle photograph of a vast solar farm. Rows of photovoltaic panels stretch across the landscape towards a horizon where the sun is setting. The sky is a mix of orange, yellow, and blue, with some clouds. The panels in the foreground are dark blue with a grid of silver lines.

Adoption of innovative solutions is faster and more feasible in wealthier regions with a larger economic and development capacity, while the potential positive impact of such innovations has the biggest impact in low density peripheral areas.

Which social and climate-related trends will affect the future of Estonian regions?



POPULATION AND SOCIETY

- › Estonia's population is decreasing and ageing.
- › The proportion of working-age population is decreasing but people are remaining in the labour market longer in their advanced years.
- › Job-related mobility grows.



HEALTH AND WORK LIFE


- › New forms of work allow working regardless of location.
- › People's lifestyle becomes more health-conscious.
- › New services emerge along with the increasing proportion of the elderly.



ENVIRONMENT AND CLIMATE

- › Warmer climate reduces heating costs and increases the competitiveness of agriculture.
- › Extreme weather phenomena affect people's sense of security.
- › Indirect impact of climate change is reflected in the preference for products with a smaller environmental footprint in the global market. Immigration pressure increases as several regions in the world become unfit for habitation.

More information: Veiko Sepp, 2019, Eesti regioonide majandusarengut mõjutavate uuenduste ja trendide analüüs (Analysis of Trends and Innovations Impacting the Economic Development of Estonian Regions), Foresight Centre of the Estonian Parliament

A photograph of a person standing in a lush forest next to a small stream. The person is wearing a dark jacket and a hat, and is looking towards the camera. The forest is filled with tall, thin trees, and the ground is covered in green moss and fallen branches. The stream flows through the center of the forest, surrounded by mossy banks. The overall atmosphere is serene and natural.

So far, social processes have worsened the future prospects for rural areas but the growing environmental awareness together with changes in lifestyle and forms of work may increase the attractiveness of the living environment offered by rural areas.



Regional economic scenarios

What will the spatial distribution of the Estonian economy be in 2035?

Regional economic scenarios 2035

Estonian regional economic scenarios outline alternative future worlds; they show what the nature and location of economic activities under the joint influence of various factors might look like in 2035. The scenarios intentionally amplify the developments due to the key factors, in order to outline the different development paths as clearly as possible. A multivariate concept of the future helps us to better understand which set of policy options would suit different situations – regional policy challenges require the contribution of a wide range of policy areas.

Four scenarios



1) GREATER TALLINN

(Economic) development converging into large centres in the circumstances of a slow change in the current way of life and economic model.



3) ECO-CAPITALIST ESTONIA

Export-oriented development model that takes into account the carrying capacity of the natural environment, but has concentrated production.



2) ESTONIA OF GROWTH CENTRES

Development model based on specialised regional centres under the circumstances of slow ecological adaptation.

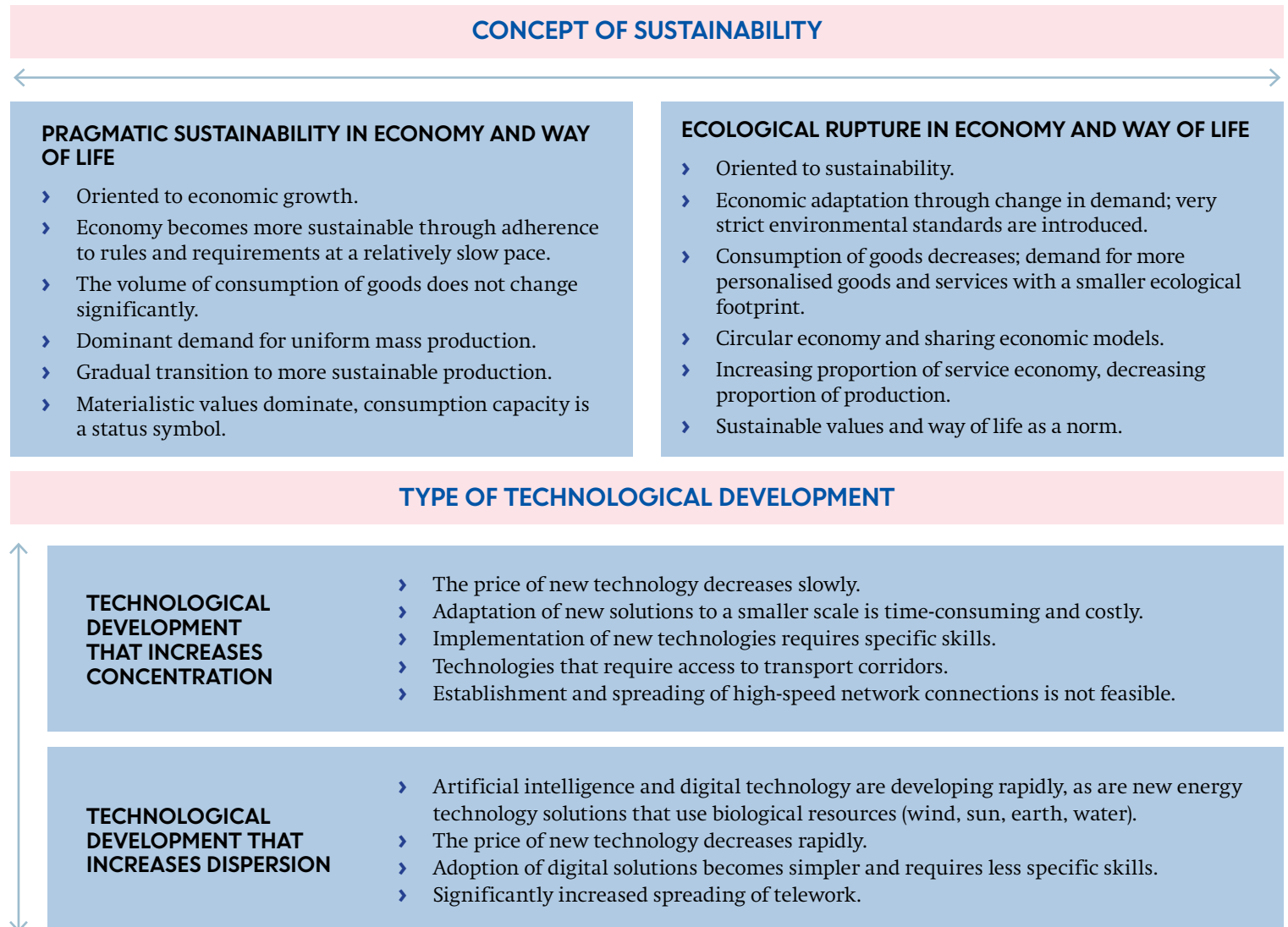


4) ESTONIA OF ECO-COMMUNITIES

More local and dispersed economy with a more ecological and social way of life.

More information: Uku Varblane, 2019, Eesti regionaalse majanduse stsenaariumid 2035 (Estonian Regional Economy Scenarios 2035), Foresight Centre of the Estonian Parliament

One of the main axes of the scenarios is a change in the economic model and lifestyle connected to sustainable development – either a pragmatic approach dominates or an ecological rupture occurs. Another main axis is the impact of technological development on the economy – whether it increases concentration or supports dispersed economic activities.





Greater Tallinn Scenario

GREATER TALLINN

Keywords: growth of the capital region, concentration of technology and knowledge-based economy, internationalisation, consumption as a hallmark of the good life, convenience services, depopulation of rural areas, social polarisation.

Consumption is a hallmark of good quality of life and high status, this increases the demand for convenience services and entertainment. Daily life can be described as 'complicated', 'complex', 'fast', 'nervous', and 'international'. The way of life offered by the capital region meets the expectations the best, and therefore people and resources continue to converge to the urban region of Tallinn, and to a lesser extent around Tartu and Pärnu. Divergence is also reinforced by the fact that as

the implementation of the latest technologies continues to be expensive and require special skills, these are first adopted in large centres. The implementation of such technologies in smaller regions is delayed because a relatively large scale of activities is needed to operate them profitably. This requires significant investments, good logistical connections, and enough skilled labour. The lead firms of value chains, and knowledge and technology-intensive economic sectors are located in Tallinn. Life becomes increasingly complicated in rural areas and small settlements – industrial enterprises move away because skilled labour is scarce and it is impossible to completely replace it with technology; simpler and less demanding work dominates here. Peripheries become essentially mineral deposits.



In production and daily life, technologies that require large scale activities are relied on, and adaptation to ecological pressure is slow.



SUPPORT POLICY OPTIONS

- › Controlled contraction, reduction of infrastructure according to the decrease in population, technological solutions in providing services (e-services, parcel terminals, telehealth).
- › Centralised governance, low local government autonomy, except in Tallinn.
- › Uniform business policy without regional preferences.
- › Investments into people instead of policies that target places (target people, not places), support for resettlement of residents.

OPPORTUNITIES

+ large volume of activities and economic growth in Harju County (to a lesser extent in Tartu and Pärnu) increases Estonia's international competitiveness

+ diversity needed for innovation

+ close integration with southern Finland, the emergence of Talsinki

RISKS

– in the rest of Estonia, deepening deprivation, lack of opportunities, despondency, and political disengagement

– segregation, tensions, and social contrasts both in the capital and in Estonia as a whole

– use of Estonia's natural resources may not be done in the optimal way

– industrial enterprises disappear from rural areas and only simpler work remains

HARJU COUNTY

- › More than one in two Estonians live in Harju County.
- › Increasing cost of living and traffic congestion.
- › Problems with increased segregation and inequality set to increase.

IDA-VIRU COUNTY

- › The scenario does not bode well for the region.
- › Industry and energy sector continue to degenerate, population is ageing, and population erosion seems unstoppable.
- › The last educated Estonian-speaking families leave the region and the state gymnasiums are again turned bilingual.
- › The impoverished local governments who have lost their mining compensations and employment tax revenues are trying to convert school and kindergarten buildings into homes for the elderly.

TALSINKI

Tallinn-Helsinki tunnel opened the door for a close integration of the region composed of Tallinn and Harju County in Estonia, and Helsinki and Uusimaa region in Southern Finland. This has created a business centre that can compete on the Scandinavian level with Stockholm and Copenhagen for large foreign investments and talents. The parties cooperate in providing public services, such as road network and public transport, which has improved the quality of services. Talsinki boosts the economic growth of the region and the gap with other Estonian regions keeps widening.

CENTRAL ESTONIA

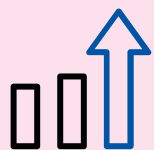
- › Central Estonia is split into two: population in towns close to Tapa-Rapla and Paide-Rakvere rail lines grows; these towns become suburbs full of commuters who work in Tallinn, while population at the border regions of the counties remains very sparse.
- › Agricultural production grows, very little on-spot refinement activities.

WESTERN ESTONIA

- › The outlook of the Greater Tallinn scenario is generally positive.
- › Rail Baltic has turned Pärnu into a suburb of Tallinn and Riga.
- › A summer house on one of the bigger islands becomes a status symbol.
- › Continued export of resources – wood, grain, peat, and stone; few investments into production because of lack of specialists and capital

SOUTHERN ESTONIA

- › Development concentrates around Tartu: software producers, higher education, and health care continue to provide jobs.
- › Since access remains poor, wage increase and real estate development come to a standstill.
- › Further than one hour's commute to Tartu, population becomes sparse.




Scenario Estonia of Growth Centres

ESTONIA OF GROWTH CENTRES

Keywords: growth centres boosted by forceful regional policy, concentration into regional centres, larger regional autonomy, domination of material values, more uniform population dispersion, and lessening inequality.

Technological innovations in industrial automation; distributed generation along with transport options make the location and the volume of activity less important. Increased flexible small-scale production both in processing industry and in energy; this supports the regional anchor employers and creates jobs. The determinants of the scenario include rapid increase in the cost of living

in the capital region, and deterioration of the living environment (traffic congestion, time spent commuting, air quality), as well as the fashion for a more quiet pace of life associated with increased average age. The population continues to concentrate into cities, but this takes place within the limits of the labour market areas of larger provincial towns. On the basis of local resources and increasing knowledge base, 4–6 strongly specialised and globally exporting regions emerge in addition to Harju and Tartu Counties. These regions serve as attractive places of residence and work. Economic and political stability have attracted a large number of people to return. The increase in the population numbers and economic importance of the capital region dwindles.



Economy and organisation of life are based on technologies that allow dispersed distribution and small activity volumes, while adaptation to ecological pressure is slow.



SUPPORT POLICY OPTIONS

- › Support for regional development requirements and basic infrastructure (fast internet, smart power grid).
- › On the regional level, larger financial autonomy of local governments, county-based local governments.
- › Regional connections to growth centres, good transport connections to the outside world, incl. regional airports.
- › In terms of European structural supports, advantage is given to regions outside the capital (Estonia was divided into two NUTS2 regions).
- › Government guarantees are given to home loans and investment loans outside major cities.

OPTIONS

- + efficient refinement of resources
- + problems related to urbanisation get easier in Tallinn
- + population is spread more equally across the territory; better preparedness for emergency situations

RISKS

- specialisation related vulnerability – when the conditions become unfavourable for a specific sector, the whole region suffers
- large scale regional policy is expensive and the result is not necessarily guaranteed
- new jobs in growth centres might not solve the problems of local employment because the readiness might be insufficient and people might live too far away from the growth centres both in terms of space and time

HARJU COUNTY

- › Growth of population slows down; the population of Tallinn forms less than one half of Estonia's population
- › Tallinn is the centre of financial and business services, ICT and corporate headquarters, which attracts skilled workers from abroad
- › Problems related to urbanisation get easier in Tallinn

IDA-VIRU COUNTY

- › Uses its strong industrial tradition and strong knowledge base.
- › Production continues in chemical industry; a new trend is mining and processing new mineral resources – the hot topic is graptolitic argillite, which is used to produce new battery metals.
- › Narva-Jõesuu beach is fully developed with hotels and villas – the brand of the Nordic Riviera has taken off.

CENTRAL ESTONIA

- › The slump of the intermediate years has been surpassed, and investments into bio-economy have increased employment.
- › The region is energetically independent, able to offer good and affordable living, so that it is the first choice for industrial producers to escape the high real estate prices of Tallinn and Harju County.

WESTERN ESTONIA

- › The bioeconomy strategy of Western Estonia is given concrete content, and in 2035 almost nothing is exported unprocessed – our ecologically clean food has found a market in European and Asian metropolises, while food and other biomass is “boiled” into biofuels; numerous algae and shellfish farms dot the sea.
- › Shipbuilding is doing well – new shipping energy sector needs supply and maintenance ships.
- › Tourism develops at its own pace: non-permanent residents arrive via Rail Baltic and the airports of the region.

SOUTHERN ESTONIA

- › Added value has also reached a new significance in regional cooperation – IT companies, universities, and science parks in Tartu are hard at work fulfilling commissions for automation and digitalisation as well as product development. The living environment in Tartu attracts foreign specialists.
- › Timber dominates industry: export of houses, furniture, and wood chemistry.
- › A wooden house has not been a cheap option for some time; instead, wood is used to build multi-stories (mass-timber); wood-based composite materials are developed and used.
- › Production of pellets has been replaced with new generation bio-fuels.

ECO-CAPITALIST ESTONIA

Keywords: making revenue in the conditions of strict ecological standards and requirements, centralised education, concentration of economic activities, social polarisation both in urban-rural key as well as within urban regions, increasing inequality and fraying social cohesion.

Environmental sustainability becomes more important, but in a context where new production technologies and sustainable solutions are expensive and can be implemented only with large volumes of activity. The companies that are oriented towards profit are keen to use the emerging opportunities, but production units are erected only in larger cities or, as a last resort, right next to the natural resources. As the new sustainable technologies require capital, which the domestic companies lack, foreign capital will gain an important role and buy up local natural resources.

Although Estonia participates in production with high ecological standards, it benefits little from this because mass production is in the hands of foreign companies. In this scenario, ecological niche production is not very profitable, which is why the scenario on the whole does not particularly benefit the local population. Production, transport, and day-to-day infrastructure, incl. energy, has been adapted to strict ecological requirements. The living environment as a whole is cleaner, but less varied and poorer in biodiversity. The preferred place of residence is a well-planned city centre with sustainable public transport and functioning circular economy that reduces the generation of waste to a minimum. Small environmental impact is the focus in developing services. Software development is doing great, and new, sustainability related global start-ups are established. However, development of the service industry still largely takes place in cities; rural regions continue to experience population erosion and increased unemployment because the conditions are unfavourable for small businesses.



Economy and daily life are still based on technologies that require massive activity volumes, and strong ecological pressure is seen first and foremost as a business opportunity.



SUPPORT POLICY OPTIONS

- › Centralised public administration.
- › Investments into environmentally sustainable industrial infrastructure, regional tax incentives to large industries.
- › International promotion of “Green Estonia”.
- › Energy security is very important; construction of a nuclear power station.
- › The Government monitors the fulfilment of regulations and helps businesses that are active in the ecological sector.



OPTIONS

- + export of ecological products and services
- + creation of the Green Estonia brand

RISKS

- although economy is environmentally sustainable, it mostly serves the interests of foreign owners
- despite less polluting production, natural biodiversity is falling
- huge risk of greenwashing
- social stratification is deepening because simpler work dominates in rural areas

HARJU COUNTY

- › Civil servants and specialists who cooperate with them in writing project applications for consulting firms live well.
- › A billion euro bio-fuels factory is launched in Paldiski.
- › Most of the heating in Tallinn comes from waste, some of which is imported from Finland.

IDA-VIRU COUNTY

- › The scenario favours the growth of the region, partly at the expense of skilled workers from our Eastern neighbours or Asia.
- › Residents of the region are accustomed to industry and there is less opposition to new developments than elsewhere: several new rubber, ash, and waste management plants are constructed.
- › Power stations in Narva are burning large volumes of wood from local and Russian sources at the basis of trade of statistics schemes.

WESTERN ESTONIA

- › Although Pärnu residents should reach Tallinn quickly on Rail Baltic, the reality is different: high-speed train tickets are expensive and passenger numbers are low.
- › The situation on the islands has become quite grim – there are too few people and not enough materials for sustainable circular economy, and transport costs are high.
- › Restrictions on using plastic puts a stop to the plastic cluster on the island of Hiiumaa, unless the companies manage to reinvent themselves as bio-plastics producers.
- › Land usage on coastal areas is intensifying.

CENTRAL ESTONIA

- › New massive farms have sprung up close to cities, with biomass processing gas generators.

SOUTHERN ESTONIA

- › Population density grows around larger towns, while falling in peripheral regions.
- › Bio-refineries for processing wood have been constructed south of Tartu.
- › Conspiracy theorists see their fears materialise: foreign capital buys up large chunks of forest from foundations and plants it full of rapid-growth GMO birches.
- › Support handed out from environmental foundations is not accessible to small farms because of red tape or lack of skills, or additional requirements make these pointless.



Scenario Estonia of Eco-communities

ESTONIA OF ECO-COMMUNITIES

Keywords: increasingly local economic model, sustainable values, more intense community life, people-to-people services via sharing economy platforms, distributed generation.


Increased awareness of the consequences of environmental deterioration results in a more sustainable lifestyle. This is accompanied by significantly higher taxation of carbon emissions, fossil energy, and (distant) mobility. Moving to the countryside becomes a growing trend, population in the cities no longer increases. Consumerist habits have changed – less is consumed, but more personalised things and services with a smaller ecological footprint are preferred. Environmental charges have noticeably reduced export and import, the economic model is considerably more local. Degrowth prevails, and the income per person

does not grow. Sharing economy and collaboration models spread. Digital service industry is successful. Our natural environment attracts software developers. This scenario favours niche production and uniqueness. In industry, only the branches that export finished products to neighbouring regions manage fairly well, and the possibilities for subcontracting will shrink. High emission fees have brought an end to the era of oil shale based economy and the existing infrastructure is standing empty. In electricity production, the keywords are wind, sun, and distributed local generation; production of biofuels, which is very common all over Estonia, provides good employment opportunities. With the influx of eco-conscious new residents, the quality of life and physical environment in rural regions improves. Some places develop more in this scenario while others die out. Increased influence of communities creates unique social associations where different value systems dominate.



In economy and daily life, focus is on technologies that favour small-scale production and scattered population. This accommodates a much more sustainable and green lifestyle.

SUPPORT POLICY OPTIONS

- 
- › The main emphasis is on environmental preservation. The strictest changes are made in the regulations of the fields with the largest emissions like energy, (large-scale) industry, transport, agriculture, and waste management.
 - › Larger autonomy of regions, spreading of voluntary work.
 - › Good local mobility and regional connections, micro transport, electrified core rail network, virtual mobility.
 - › Supporting micro entrepreneurship and entrepreneurial communities.
 - › Regional conditions of support measures, European structural supports give the advantage is to regions outside the capital (Estonia was divided into two NUTS2 regions).

OPTIONS

- + evolving into a development and testing centre for ecological technology
- + developing export relations with adjacent markets – Russia, Latvia, and Finland
- + good living environment; increased subjective well-being and healthy life years

RISKS

- reduced national economic wealth and falling living standard
- value based polarisation
- risk of communities remaining shut off, which can negatively affect the profitability of their economic activities

HARJU COUNTY

- › People start to restore gardens in summerhouse communities to their initial purpose of food growing, while earlier the focus was on converting the houses into permanent residences.
- › The key to ecological developments in the capital region is the public transport system: trains, trams and buses combined with a network of bicycle trails that connect to bus stops.
- › Ecological start-up sector of is doing well, the cluster of producers of urban or apartment garden products is booming.

IDA-VIRU COUNTY

- › The network of cities and summer homes becomes a kind of a model region in Europe where the Soviet era bartering system, which was born out of shortage and dire need, becomes a norm for the urban-cum-rural lifestyle in the new ecological era.
- › Greenhouse and fisheries complexes are constructed near power stations and wind farms.
- › Supplying markets and supermarkets in Saint Petersburg with local organic vegetables becomes a new niche sector.

CENTRAL ESTONIA

- › Global trends, new European standards, and national agricultural policy have set obstacles to the growth of large agricultural businesses, and more family and lifestyle farms spring up; these find a niche in supplying local centres and Tallinn with vegetables and fruit, as well as other organic produce.
- › Forestry and agricultural associations find new impetus; new village societies are established, after some very lean years.

WESTERN ESTONIA

- › Organic production and aquaculture receive a new breath of life in a novel form.
- › There is quite a bit more energy and food production based on new technology, wood and biomass processing, but also spa services with over 200 years of history, as well as eco- and nature tourism.

SOUTHERN ESTONIA

- › A paradise of eco-communities is born: urban and rural associations, energy cooperatives and organic food communities, communities of people with special needs, vegans or carnivores, as well as eco-communities.
- › Natural scientists and eco-activists from Tartu are often the leaders of the eco-sector.
- › New business models inspired by the traditional lifestyle – e.g. technology of delivery robots is inspired by roadside milk platforms.

Comparison of scenarios

	GREATER TALLINN	ESTONIA OF GROWTH CENTRES	ECO-CAPITALIST ESTONIA	ESTONIA OF ECO-COMMUNITIES
Features of the scenario	Concentration of (economic) development into large centres in the conditions of the present lifestyle and slowly changing economic model.	Development model based on specialised regional centres, with slow ecological adaptation.	Development model that takes into account the carrying capacity of the natural environment, but with concentrated production and focus on export.	More local and dispersed economy with a more ecological and social way of life.
Regional policy focus	Low level of regional policy; alleviating negative developments retrospectively.	Strong growth centre based regional policy supported by other policy fields.	Environmental preservation plus investments directed at the sustainable use of natural resources.	Regional policy based on small places; supporting grass roots initiatives.
Type of governance	Centralised public administration.	Larger autonomy of regions; growth centre based governance.	Centralised public administration.	Larger autonomy of regions; spreading of volunteer work.
Regional infrastructure	Self-regulating or managed reduction; reducing infrastructure in correlation with reducing population numbers.	Huge investments, incl. smart network, fast internet; regional airports and harbours.	Managed reduction; investments into environmentally sustainable industrial infrastructure.	Small-scale investments; there is no export of bulk goods.
Options in the scenario	Strong economic growth thanks to high efficiency; close integration with Southern Finland – development of Talsinki.	Processing regional resources; new place-based business models; better quality of life and more equally distributed wellbeing.	Export of ecological products and services; creating a green brand for Estonia as a whole.	People live longer and are happier; new adjacent export markets – closer relations with Russia and Latvia.
Risks in the scenario	Increasing exclusion, discontent and marginalisation of regions away from the capital; tensions and social contrasts in the capital; deepening environmental problems.	Vulnerability caused by specialisation; difficulties in financing large-scale regional policy; deepening environmental problems.	Economy serves the interests of foreign capital; social stratification; reduced biodiversity; risk of greenwashing.	Reduced national wealth and living standard; value based polarisation.

Comparison of scenarios

	GREATER TALLINN	ESTONIA OF GROWTH CENTRES	ECO-CAPITALIST ESTONIA	ESTONIA OF ECO-COMMUNITIES
Transport policy	Global connections in Tallinn, plus full development of Tallinn-Tartu road, increased dependency on private vehicles.	Regional connections to growth centres, transport connections between growth centres and the outside world, incl. regional airports.	“Green” connections from Tallinn, transition of railway and vehicle fleet to electricity, mobility as a service, transport on demand.	Local mobility and regional connections, micro transport, electrified rail network, virtual mobility.
Education policy	Merging of universities: closing regional colleges; autonomy of universities in using research funding.	Regional R&D units and (technology) curricula on the basis of high school education; national scholarship programme for starting to work in growth centres; funding favours applied research.	The main knowledge comes through foreign businesses; vocational schools cater to the needs of foreign businesses.	Curricula related to environmental preservation; knowledge transfer from Estonia’s centres to regions.
Business policy	Uniform approach across Estonia, which favours larger urban regions by default; support to relocation of businesses.	Regional conditions of support measures; tax incentives; dividing Estonia into two NUTS2 regions during the allocation of EU structural assistance.	Centralised approach; possible regional tax incentives for large businesses; supporting ecological products and technologies with export potential.	Regional conditions of support measures; supporting micro entrepreneurship and entrepreneurial communities; dividing Estonia into two NUTS2 regions during the allocation of EU structural assistance.
Energy policy	Slow transformation of energy; gradual closing down of oil shale based energy production.	Local distributed generation in combination with cross-border connections.	Concentrated production capacities; energy security is very important; nuclear energy.	Local distributed generation.

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