
Summaries

EDITOR-IN-CHIEF'S COLUMN

Lessons

TIINA KAALEP

Editor-in-Chief of Riigikogu Toimetised

As I am writing these lines, Estonia is enjoying warm summer weather, the streets are crowded with people, the shopping centres are full of shoppers and the restaurant terraces are packed with customers. Everything appears to be almost like it was before. The past year was something in which we did not want to and did not know how to live. However, it seems to be over now. It is time to count the losses and to move on.

The issue of RiTo you are holding in your hands contains almost exclusively articles on COVID-19. There are nearly twenty of them. We have tried to present as much argued information as possible, in order to learn from it and to discuss it, as well as to capture it for posterity. What exactly it was like.

We are writing about history, about the great plagues and diseases in the history of humankind.

We are also writing about legal dilemmas in imposing restrictions. Which argument makes the stronger case – the Constitution or a health risk?

We are also writing about the statistics that is so fascinating for us, the research carried out during the crisis, the impacts of the crisis and home learning on the

academic achievement of pupils, the effectiveness of teleworking, and the direct and indirect impact of the crisis on global and the Estonian economy.

We cannot avoid speaking of the family physician system in Estonia, because it is impossible to overestimate the role of family physicians.

And of course, there are several articles on vaccination in this issue.

I mentioned but half of the articles of the focus topic. Of course I do recommend reading them all, and certainly the two articles on history in the final part of RiTo – both the polemic article on the attitudes of the leaders of the pre-war republic and the memoirs of one of our most distinguished members of the Riigikogu.

CONVERSATION CIRCLE

Things Cannot Go Well in a Crisis. When Everything Is Going Well, There Is No Crisis

RIIGIKOGU TOIMETISED PANEL DISCUSSION

In the discussion panel of Riigikogu Toimetised on 14 April 2021, representatives of parliamentary parties Riina Sikkut (Social Democratic Party), Siret Kotka (Centre Party), Urmas Reinsalu (Isamaa) and Mati Raidma (Reform Party)¹ discussed

¹ The representative of the Estonian Conservative People's Party was unable to attend.

via the videoconferencing platform Teams how Estonia had managed in the global coronavirus crisis. Was Estonia ready for it? What lessons can we learn from it? The discussion was moderated by Tiina Kaalep. Some remarks from the discussion:

RIINA SIKKUT: We cannot expect Estonia to always be lucky. During the last 30 years, we have indeed been very lucky, but we should not have or must not have expected that the coronavirus crisis would be confined to the two months of the emergency situation. It does not matter if we speak of the training of health care workers or the planning vaccination or how to keep society together. And you should not always be collecting political capital from everything, because such a large crisis is something we have to overcome together.

SIRET KOTKA: As it always is with restrictions and recommendations, the restrictions that were imposed last spring – to wear gloves when shopping and to wash food products when you come home – have changed by now, and such recommendations are no longer actively given. In other words, everybody becomes wiser in the light of COVID-19.

URMAS REINSALU: Looking back in the perspective of several years, this crisis has taught us a very important lesson: an all-round crisis in one sphere of life will not be confined to just one sphere; it will have implications for the whole spectrum of life. In my opinion, this has to be taken into account when assessing the risk of any future military, internal security or ecological crises.

MATI RAIDMA: The crisis has given and is continuing to give us knowledge on how the country is managing in an emergency situation and in emergency. How different ministries and agencies are cooperating without long-term planning in advance. Actually, this is not even particularly coronavirus crisis-specific knowledge, and it can easily be transferred into the national defence dimension:

how the country can exist under special circumstances. It is an enormous and strong lesson. You cannot draft it on paper. You have to live it through and to feel it.

FOCUS

The World Was Not Ready for a Large Health Crisis

IRJA LUTSAR

University of Tartu, Institute of Biomedicine and Translational Medicine, Head of Office, Professor; Head of the Government's COVID-19 Scientific Advisory Board

The coronavirus crisis hit the whole world unexpectedly. We had been used to seeing natural disasters, local theatres of war and outbreaks of infectious diseases in developing countries (Zika and Ebola viruses). However, they were happening far away from us, looking frightening on TV screen, but leaving ordinary people relatively indifferent. We in the Western world are used to a life that includes travelling and holidays and fine meals for the sake of enjoyment, not eating to stay alive. It was no news to experts that viruses are transmitted from the animal kingdom to the human population, and that only respiratory viruses can cause pandemics.

We as humankind had developed a feeling that infectious diseases were subject to our will. We wanted to believe that it would remain so. And then, SARS-CoV-2 came. The virus entered the human population where it was expected to take place – in South-East Asia. Having been brought to Europe, the virus spread covertly at first, but in February 2020, the rates of infection increased drastically in Italy. The virus could not be contained, and within a matter of a month it had taken hold of the whole Europe. The crisis

had begun. But a crisis would not be a crisis if the humankind were ready for it. You are never ready for a crisis. And thus the spread of the virus was followed by a total chaos in Europe. Very soon it became clear that the infection prevention measures that were effective in the authoritarian Asian societies could not be implemented in the democratic European countries. But half-way solutions did not work.

The world was not ready for such a large health crisis, although it had been known that viruses, including coronaviruses, were capable of mutating and becoming human pathogens. It was urgently necessary to introduce a monitoring system for such viruses.

The pandemic has lasted for over a year now, more than 200 vaccines are being developed and the most successful of them have reached the market. However, the vaccines have shown side effects, and they may not be effective against all new variants of the virus. At the same time, the development of antiviral medicines is lagging far behind the vaccines. And yet they could be of great help against COVID-19.

The only means to fight the pandemic in 2020 was a full or partial lockdown of countries. This method was first introduced during the plague outbreaks of the 16th century. Unfortunately, no alternative has yet been suggested. Although lockdown is effective, it has a devastating effect on economy and on people's psyche.

Extensive vaccination of population is seen as the only solution to the crisis. However, it is not wholly clear if it will allow to discard other public health measures like social distancing, avoiding large gatherings, wearing a face mask, and temporary lockdowns. Nor will it be sufficient if total vaccination can be used only in the rich Western countries. There is a risk that, if the spread of the virus continues in Africa and in other developing countries, new variants of the virus will emerge there. This will force countries to

close their borders for a long time and to restrict travelling.

The spread of SARS-CoV-2 that started in 2020 and the health crisis that followed it may go on ebbing and flowing for many years to come. The WHO is probably right – nothing is over until everything is over. Our chance is to adapt to the situation as well as possible.

Three Centuries of Fighting Epidemics and the Current Victory

KEN KALLING

*Junior Lecturer of History of Medicine,
University of Tartu*

For nearly three centuries already, the government of Estonia has been fighting against epidemics. During this time, the understanding of the nature of infection, as well as the political system and the relations between the citizens and the state have undergone a total change. The paternalistic, so-called “medicine police” approach that developed in the 18th century on the basis of empirical observations was replaced by methods based on bacteriological theory in the 19th century. Both during the tsarist times and in independent Estonia, local governments had the main role in fighting against the outbreaks of infections. The national healthcare structure, especially in the tsarist times, was intended mainly for mediating of information. Only in the case of larger outbreaks and the diseases that were considered a serious risk (in 1933, there were 12 diseases in the list), the state took commitments in regard to covering the costs of treatment or vaccination. Vaccination against smallpox became mandatory only in 1914; compulsory hospitalisation of patients diagnosed with dangerous communicable diseases was possible, but due to the opposition of

population, it was implemented cautiously. (Compulsory hospitalisation was the most consistently applied in regard to lepers, however, leprosy has never been a real threat to public health.)

There is a paradox in the history of medicine that totalitarian systems tend to be ambitious and at the same time capable in the sphere of healthcare. Incorporation of Estonia into the Soviet Union and the German occupation that followed also brought along notable changes in the attitude of the state towards its citizens, as well as restrictions of autonomy for healthcare purposes. Mandatory vaccination against several diseases was introduced in Soviet Estonia by regulations of the executive power. The German occupation powers, who under certain conditions recognised the legislation in force in Estonia before the Soviet annexation, did not follow that principle in fight against communicable diseases, and the Reichskommissar issued their own regulations. Both the Soviet Union and Germany imposed harsh punishments on those who violated the healthcare laws.

In 1944, the soviet power returned to Estonia. Development of medicine and healthcare was from then on carried out extensively, based on the healthcare system established in the Soviet Union already before the war and focused mainly on prevention of communicable diseases. The work was effective, besides the opportunities to control the health behaviour of citizens provided by totalitarianism, the new instruments taken into use after the war, like the antibiotics, were also of help. It may be said that by the middle of the 1960s, an epidemiological transition had been achieved in Estonia by those means, and communicable diseases no longer had a significant role among the causes of death. This is one way to interpret the situation where the increase of average life expectancy, which had been taking

place until then, stopped for several decades. It started to grow again when Estonia regained independence and the state started to value the subjectivity of its citizens. This in turn created conditions for more substantive work in combating non-communicable diseases, including the so-called life-style diseases.

Data-Based Support for Corona Crisis Management in Estonia

KRISTA FISCHER

Member of the Academy; University of Tartu, Professor of Mathematical Statistics, Associate Professor of Biostatistics

MARIO KADASTIK

National Institute of Chemical Physics and Biophysics, Senior Researcher, Deputy Director

The global COVID-19 pandemic truly started to affect Estonia in the beginning of March 2020, when the first local cases of the virus were diagnosed. To support the Government of the Republic in managing the crisis, the Prime Minister formed the COVID-19 Scientific Advisory Board, whose key task is to regularly analyse the data on the spreading of the virus, and compile data-based reports and forecasts.

The article summarises the used data analysis methods and outlines the development of the epidemic in Estonia from March 2020 until April 2021. First we describe the data visualisation method that allows us to follow the spreading of the virus in time, its regional differences, and spreading dynamics in different age groups. We would like to point out that the multidimensionality of the data requires particular care in differentiating between relative and absolute indicators. For example, the number of infections per 100,000 individuals over a 14-day period is suitable for a rough estimate, but

we must remember that its value of 200 corresponds to less than 20 infections in the smallest Estonian county, Hiiu County, over the same period.

When describing the infection dynamics, it is important to understand the concept of infection rate R , which describes whether the infection trend is on the rise or falling, and which is very suitable for describing the effect of the measures on the spreading of the infection. Considering different scenarios for rate R dynamics, we can forecast the level of infections in the near future. However, one of the key tasks in data analysis has been the prediction of hospital and intensive care patient load, and the possible mortality rate. In order to fulfil this task, we need the most precise estimations possible for a number of input parameters, including the likelihood of need for hospital and intensive care, the length of hospital and intensive care stay (and the probability distribution of the relevant time periods), mortality rate, and death timeline. We have assessed these parameters and also modified these according to the need, specifically using Estonian data because international data might not describe our situation adequately.

The described analysis was led by the two authors of the article: a mathematician-biostatistician and a particle physicist. We learned first-hand that it was our fundamental STEM background that enabled us to quickly identify suitable approaches in a new situation that neither of us had encountered before. We have therefore concluded that supporting STEM education should be an important priority for the government, as it provides the necessary competence that could come useful in a variety of crisis situations which are still difficult to foresee.

The Role of Family Physicians in the Coronavirus Crisis

KARMEN JOLLER

Family Physician, Member of COVID-19 working group of the Family Physicians Association of Estonia

AGNE ANNIST

Family Physician, Member of COVID-19 working group of the Family Physicians Association of Estonia

ELLE-MALL SADRAK

Family Physician, Member of COVID-19 working group of the Family Physicians Association of Estonia

On 11 March 2020, the World Health Organization declared the coronavirus epidemic a pandemic. In Estonia, the first case of infection was confirmed on 27 February 2020. The Board of the Family Physicians Association of Estonia heard about it on the same day, in a train, on their way to the conference of family doctors in Narva. On 12 March 2020, the Health Board of Estonia announced that the number of cases had increased to 27 and the virus was spreading locally. In the late evening of that day, emergency situation was declared in Estonia. It was to last until 1 May. On 25 March, the first death case due to COVID-19 in Estonia was reported.

The role of the family physicians in the coronavirus crisis was translating the complicated information into the form understandable for the population and explaining the changed organisation of work of the medicine system. Globally spreading infectious diseases are actually nothing new to doctors – humankind has encountered them for thousands of years, and the modern basics of treatment of epidemics are at least 150 years old.

The spring 2020 wave of COVID-19 was like a large-scale exercise: various scenarios were tested, that were mostly realised only during the second wave, and even then not in the full extent. The style of working

of family health centres became more flexible, and during both the first and the second wave of the virus, only a few family health centres needed outside help.

We can draw a bold conclusion that actually the family physicians were ready for more intense extraordinary work. Extraordinary work did not exceed the capabilities of family physicians even during the second wave of COVID-19, when Estonia's infection rate was one of the highest in the world. The same can be said about vaccination capability.

The family health centres acquired several new useful practices for the future, like better planning of daily work, and sharing the work between office and teleworking. They will also retain the more effective digital solutions. During the whole pandemic, the family physicians experienced lots of support, helpfulness and generosity from both their patients and the public, many volunteers offered their help. Trust between colleagues and the confidence of the family physicians in the COVID-19 working group increased. The cooperation between the family physicians and the government was close and effective – this was especially noticed by the colleagues working abroad, who followed the events in Estonia.

COVID-19 Communication in the Context of Crisis Communication

ILMAR RAAG

Film Director, Communications Expert

The COVID-19 pandemic meant for us a crisis where one of the key words was confusion. The emergency situation that was declared on 12 March 2020 made many people compare the situation with other crises, among which war always also looms as a potential threat. The rhetorical

question was: “If a healthcare crisis makes us buckle, then how would we as a society deal with war?”

My paper does not aim to focus on some hypothetical war scenario, but to suggest for discussion some crisis communication considerations that relate to the question “What can the crisis communication do at all?” I would like to add here that all statements in my article must be treated as hypotheses and not as confirmed scientific facts.

In summary, it may be said that the successes and failures of Estonia's fight against COVID-19 cannot be unambiguously regarded as the result of good or bad communication. A comparison with boredom of war brings out that certain processes are inevitable in the case of large crises. In particular, we can see that the anxiety background created by the media is always more negative than the processes that develop objectively. At the same time, as in several previous crises, it could be seen that the attitudes of public opinion in Estonia are highly dependent on the news from the rest of the world, and the behaviour of people is not directly influenced by classical communication. Instead of that, everybody's personal experience of the crisis becomes important in achieving a long-term impact. The behaviour of people is also influenced by the restrictions established by force by the authorities. In such a situation, classical communication only has the role of explaining the restrictions.

If you look for the best communication practice, then it has been the publication of COVID-19 statistics, which also creates preconditions for introducing the so-called “traffic light system”. In the situation where the second wave of COVID-19 is about to end, we are entering the next stage, where we have to learn to live with COVID-19. The main condition for that is practices that are based on predictability.

Rule of Law During the Pandemic

ÜLLE MADISE

Chancellor of Justice of the Republic of Estonia

OLARI KOPPEL

Deputy Chancellor of Justice-Adviser, Director of the Office of the Chancellor of Justice

Even during the crises, including epidemics, restricting of fundamental rights has to be justified, instead of justifying not restricting, or allowing the rights or freedoms that are granted by the Constitution. Only unavoidable restrictions that correspond to the principle of proportionality enshrined in the Constitution are legal. Imposing of restrictions should be based on an analysis that makes a distinction between activities with low, average and high risk of infection and takes into account the possibilities for risk reduction. Setting different activities against each other is not proper – what is important for some may be meaningless to others.

In a state based on rule of law, the principle applies that the damage caused by restrictions should never exceed the profit expected and received from that measure. All restrictions that have little impact on the spread of infection, and strict restrictions that have alternatives with milder impact should be illegal and thus prohibited.

The impact of each restriction should be assessed both separately and as a part of a set. Prohibitions and orders should have a cause-and-effect relationship with the reduction of infections taking into account their real predicted impact. If the government does not ensure following the restrictions that are already imposed, new restrictions cannot be considered justified either. In order to prevent violations, those who violate restrictions should be called to order, instead of imposing even stricter restrictions to all. Making a healthcare event a police event is not reasonable and may bring along unwanted side effects,

from concealing of infection to knowledgeable risk behaviour.

In the case of a new, unknown and potentially large threat, restrictions may at first be imposed by precautionary principle. But when the danger is no longer unknown, if the character of its spreading, its impact and the measures necessary for managing it are known, transition to restrictions with proven effect is necessary.

It should be possible to contest restrictions effectively and rapidly if necessary. The barriers set to restriction of fundamental rights should be sufficiently high and strong to ensure that this extreme measure is implemented only in a really extreme situation and purposefully. The question of whether it is constitutional to impose restrictions with great economic and social impact by a general order should be resolved as soon as possible. The legal form used for imposing restrictions precludes effective monitoring of legality and protection against excessive restrictions.

Without losing time, it is necessary to start striving for objective truth and analysing the real impacts of all restrictions without looking for culprits. As most probably this pandemic will not be the last, it would be good to make use of the fruits of such a peaceful investigation in the future.

COVID-19 – a Catalyst for Vaccine Development

ALAR IRS

Chief Medical Officer, State Agency of Medicines; Teaching Physician, Tartu University Hospital

COVID-19 vaccines were taken into use quicker than any earlier vaccine. This was the appropriate response of the health science and industry to the pandemic,

and among other things, it also shows the possibilities provided by targeted cooperation in an optimal financial and logistical environment. The world could use this lesson also in tackling other so far unsolved health problems that maybe do not cause such a large short-time chaos but influence life and economy in terms of premature loss of health at least to the same extent.

In accelerating the development of COVID-19 vaccines, all appropriate quality and scientific standards were observed. Rapid preparation of the vaccines was ensured by the researchers' earlier experience with coronaviruses, the involvement of companies with strong product development experience, the covering of financial risks by the states and the availability of several new vaccine platform technologies. Increasing the flexibility of monitoring process was also of help.

Although communication was more open than is the usual practice in medicines development, the developers and the supervisors were unsuccessful in conclusively explaining to the public and the media the thoroughness of research before the authorisation of COVID-19 vaccines or the inevitable deficiencies of the new medicines research in describing extremely rare adverse reactions. The effectiveness of vaccines and the frequency of vaccination reactions relating to administration was ascertained during the research, but during large-scale use of the vaccines, it became clear, as could be expected, that in rare cases the vaccines also have adverse reactions that were not described during the research.

The greatest lesson to both the developers and the national health systems is the importance of clear messages, so that the citizens would agree to getting vaccinated and the successful vaccine development could have the expected impact on the progress of the pandemic.

The existing and new, gradually adopted COVID-19 vaccines are the

main instrument to stop the pandemic. According to the current data, the need for repeated vaccination is likely, and taking into account the mutation of the virus, the vaccines whose technology enables rapid adaptation to the new virus variants have an advantage.

Hunting Viruses through Genetic Research

RADKO AVI

University of Tartu, Associate Professor in Medical Virology

KRISTI HUIK

University of Tartu, Associate Professor in Medical Microbiology and Virology

TAAVI PÄLL

University of Tartu, Research Fellow in Medical Virology

AARE ABROI

University of Tartu, Specialist in Bioinformatics

The COVID-19 epidemic has set an unprecedented challenge to health care systems as well as societies as a whole around the world. However, the molecular-epidemiological progress has also reached a point where the whole genome sequencing of the virus permits us to conduct analyses that had remained out of our reach during earlier epidemics.

The KoroGeno-Est projects have so far sequenced more than 2,500 Estonian SARS-CoV-2 whole genomes. This has formed the foundation for analysing the virus variants in centres of infection as well as among various risk groups. The data shows that in Estonia, just like in the rest of Europe, the so-called English strain of SARS-CoV-2 had largely taken over from the earlier SARS-CoV-2 variants by mid-March of 2021. No wider intrusions or national level spreading of other dangerous strains or mutations have been found so far (as of the beginning of May 2021).

The KoroGeno-Est projects will keep their main focus on observing SARS-CoV-2 strains that are important in the context of vaccines and disease progression. The observed aspects include national level spreading, infections that have been imported into Estonia, as well as the infected individuals who have already been vaccinated. The results of the analysis are shared with the Health Board and other authorities and international organisation, in order to make the decisions necessary for managing the COVID-19 epidemic.

Corona Virus Herd Immunity in Estonia: KoroSero-EST Study

PIIA JÕGI,

Children's Clinic of Tartu University Hospital, Teaching Physician in Paediatrics; University of Tartu, Lecturer of Paediatric Infectious Diseases

HIIE SOEORG

University of Tartu, Research Fellow of Medical Microbiology

MARJE OONA

University of Tartu, Associate Professor in Family Medicine

PÄRT PETERSON

University of Tartu, Professor of Molecular Immunology

KAI KISAND

University of Tartu, Professor of Cellular Immunology

IRJA LUTSAR

University of Tartu, Institute of Biomedicine and Translational Medicine, Head of Office; Head of the Government's COVID-19 Scientific Advisory Board

The first COVID-19 case in Estonia was registered on 26 February 2020. One year later, in spring 2021, over 100,000 people have been diagnosed and over 1,000 deaths have been registered in connection with COVID-19. Stopping the spreading of

the disease and restoring the normal way of life is possible when the majority in the society has developed a permanent immunological defence, i.e. the herd immunity. To achieve that, the percentage of people with SARS-CoV-2 antibodies in the total population should probably be 50–75%.

The purpose of KoroSero-EST or corona virus seroepidemiological study in Estonia has been to determine the percentage of the population who have SARS-CoV-2 antibodies, i.e. the seroprevalence in Estonia at different times, and to assess the persistence of immunity after recovery.

In order to assess seroprevalence, we have repeatedly organised cross-sectional seroprevalence studies, where we have tested the prevalence of SARS-CoV-2 antibodies in all age groups and in different counties. We have estimated the persistence of both the antibody-mediated humoral as well as cell-mediated immunity in a case-control study within the KoroSero-EST study among individuals with SARS-CoV-2 antibodies, i.e. seropositive individuals.

In July 2020, a study conducted in Järveotsa General Practice in Tallinn showed a 1.5% SARS-CoV-2 seroprevalence (95% CI 0.9–2.5%), while Kuressaare General Practice on the Island of Saaremaa, which was the epicentre of the infection at the time, showed a 6.3 % rate (95% CI 5.0–7.9%). In both General Practices, the seroprevalence exhibited similar rates among men and women, and among different age groups. 80% of the seropositive had not experienced any symptoms, i.e. had been asymptomatic. The estimated prevalence of the infection in Harju County was about 13 times higher than the national statistics based on PCR analyses, and in Saaremaa about four times higher.

In September 2020, the national seroprevalence was 0.9% (95% CI 0.6–1.3%), reaching the highest level in Saaremaa. No seropositive individuals were found in the sample groups in eight counties.

In March 2021, the national

seroprevalence rate was 20.1% (95% CI 18.5–21.7), being the highest in Harju County with 28.0%, and the lowest in Lääne-Viru County with 4.6%. Seroprevalence was similar across all the age groups. The data in the Patient Portal shows that around one in three seropositive individuals had not been aware of their COVID-19 infection, and were not vaccinated against SARS-CoV-2.

After recovering from a light or asymptomatic SARS-CoV-2 infection, the antibodies and T cell immunity persisted for at least six months in 80% of the tested individuals; however, the high level of infection markers shows that the disease can have long-term health effects.

Therefore, one year after the start of the pandemic, 20–30% of the Estonian population have SARS-CoV-2 antibodies; this means that we have not achieved herd immunity and a large part of the population is receptive to SARS-CoV-2 infection. A large majority of the seropositive have experienced light symptoms or been completely asymptomatic, and have remained immune for at least six months.

Economic Impacts of COVID-19 Crisis: Winners and Losers

UKU VARBLANE
Foresight Centre

Although epidemics are bound to recur with a certain regularity, the humanity was not prepared for a wave of this magnitude and global spread. As a consequence of this epidemic, the economy has suffered through infected or self-quarantined employees not being able to work, anti-virus measures hindering the normal functioning of the economy, and the crisis-induced uncertainty affecting the behaviour and future hopes of the people, the businesses and the public sector.

The best general idea of the scope of the economic impact can be gleaned from the change in the total value of the gross domestic product, i.e. the goods and services produced on our national territory. In 2020, Estonia's economy fell by EUR 1.75 billion compared to the pre-crisis forecasts. Registered unemployment also increased – by the end of 2020, it exceeded the forecast by 10,300. We also saw the emergence of underemployment, i.e. workers were forced to accept a reduced work load. However, the impact of the crisis is still not fully evident in the statistics that reflect coping difficulties of individuals.

The crisis has affected economic sectors very asymmetrically – there have been clear losers, but the crisis has also been kinder to other sectors, and even generated new business opportunities for some. In the last group, we can find e.g. information and communication, pharmaceuticals, electronics and chemical industries. As expected, the least crisis-resistant are the fields where the restrictions set up to control the crisis as well as the changed behaviour of the people have led to the most drastic changes.

The uneven impact of the crisis also echoes through the recovery phase. There is increasing talk about K-shaped recovery, i.e. a situation where one part of the economy has practically exited the crisis while another remains depressed for a long time to come. The contribution of the sectors related to hospitality, catering and travel services or entertainment is likely to remain lower in the years to come, while certain niches – such as business and cruise tourism – might never recover to their former level.

For every sector, the emerged trends differ somewhat – e.g. covert protectionism in timber industry, or pressure from global competition following the triumph of online shopping.

One of the broader trends that has been amplified by the crisis is the automation and digitalisation of processes, which is set

to accelerate in the near future in many economic fields, including the very traditional ones. This process is boosted by the focus on the support packages to relaunch national economies. The by-products of this trend immediately materialise on the labour market as well – mid-skilled jobs are under threat and there is a large shortage of top specialists.

The corona pandemic forces global businesses to review their value chains and improve the risk resilience of these – although very long and complex chains are efficient, they are also extremely vulnerable. A greener economy also means a changed need for raw materials and fuels. Estonia could benefit from increased emphasis on wood based materials, as well as the growing need for battery and earth metals.

Distance Learning 2020: Experiences of Pupils and Teachers

KAIRIT TAMMETS

Senior Research Fellow in Educational Technology, Head of School of Digital Technologies, Tallinn University

EVE EISENSCHMIDT

Professor of Educational Leadership, School of Educational Sciences, Tallinn University

PIRET SOODLA

Professor of Inclusive and Special Education, School of Educational Sciences, Tallinn University

TIMO TOBIAS LEY

Professor Learning Analytics and Educational Innovation, School of Educational Sciences, Tallinn University

The purpose of the study was to give an overview of distance learning in the Estonian general education schools through the experiences of the pupils and teachers, bringing out its lessons for the education system. In June 2020, data were collected from 5th, 8th and 11th grade students (N = 1544) and teachers (N = 1270)

via a web-based questionnaire. The questions concerned the opinions of pupils and teachers about the frequency of the use of various teaching practices during distance learning and the changes in them, the frequency of collaborative learning activities in comparison to the time before distance learning, and coping with distance learning and its effectiveness.

The replies of the teachers revealed that a majority of teachers gave every day or every week assignments from textbook, workbook or the web for independent learning. Two thirds of the teachers created possibilities for the pupils to discuss what they had learned during the video lessons. The activities encouraging the pupils to work together decreased noticeably: more than half of the teachers did not use cooperative activities during distance learning at all. In the opinion of the pupils, too, cooperative project learning activities, solving of tasks in groups and in pairs decreased, and in the opinion of nearly half of the pupils, the volume of independent solving of textbook or web tasks increased.

Nearly half of the teachers found that distance learning was less effective, and in the opinion of a third of the teachers, the volume of the material learned had decreased. However, nearly three quarters of the teachers who participated in the study found that the pupils acquired additional skills in their subject in comparison to the ordinary learning situation, and nearly half of the teachers thought that studies were more connected with everyday life than they had been earlier. Nearly 40 percent of pupils found that distance learning was as effective as traditional learning, around a third of the pupils thought that distance learning was more effective than traditional learning. Nearly a quarter of pupils considered distance learning less effective, and they found that they coped with studying in distance learning format less than in the traditional format. In the opinion of teachers, their coping

with distance learning was influenced by cooperation with other teachers, other colleagues and the management, to a large extent also by their own pedagogical skills and digital competence. The greatest challenge was time management, which was connected with increased workload. Pupils' coping with distance learning mainly related to the increased volume of studying, the organisation of the teaching process at school and the skill to plan learning independently.

The distance learning experiences of pupils and teachers were very different. The results show that the methods of distance learning are still in the development stage. In order to use distance learning more effectively in the future, the teachers need appropriate training, and specific and clear instructions on how to implement it.

Teleworking – a Common but Unregulated Form of Working

HEDI ARUKASE

Lawyer, Master's Student at University of Tartu

KATRIN SARAP

Attorney at Law

Teleworking is a real and lasting form of working that is no longer an unattainable dream or a way of coping with the global pandemic. It has become a necessity, it is now a part of daily life. The need for flexible working relations has been discussed for years, but unfortunately, it has remained at the level of various draft legislation or protocols.

In Estonia, we are proud of the unicorns that have developed from the small start-ups founded here. Knowing their mentality, it is not unthinkable to claim that namely these enterprises are the bellwethers of flexible work formats. They have striven forward and reached

a goal regardless of the strict regulations of labour law, they have adapted modern solutions without thinking at what time the workday should start and end, and that generally the employer's office should be regarded as "the real place of work".

Working life adapts to the technological solutions and capabilities. Thanks to the mobile tools and convenient communication environments, the employees are available at all times and from everywhere. The location of doing one's work is no longer of such importance as it was even only a year ago. The employers are more flexible because the employees have proven that they work hard also at distance. Together with responsibility, the workers have also been given the freedom to manage their time themselves and to work when it is possible and where they want.

However, the seemingly attractive but still clearly unregulated teleworking format contains hidden risks for both the employees and the employers that both sides should be aware of. As the labour law regulates the employment relations of us all, it should be user-friendly. In the case of the work that can be performed by teleworking, the result is important, but at the same time, the working process has to be safe for both the employer and the employee. Therefore, it is necessary to regulate the issues of the place of teleworking, hours of work and rest, protection of business secrets, cyber security, occupational health and safety, etc. The ability of the worker working at the computer monitor at home in creating safe working conditions around themselves cannot and must not be underestimated. At the same time, the employer should not be put in the situation where all the risks of working environment are their responsibility also when the employee works from home.

It is also necessary to retain the principle that the regulations should not be excessively detailed, and to establish

general principles, which can be applied by each employer according to the nature of their business. The rule that whatever is not forbidden, is allowed should remain in force. Going to work no longer means the same as working; modern employers have understood that an hour spent at the table does not mean an hour of working, and it is also clear that all workers do not perform the same tasks at the same speed. Teleworking as one of the most important aspects defining flexible working is an invaluable part of motivation package for both the employee and the employer, and it should be made to work sustainably for both sides through reasonable regulation in legislation. This way, everybody would win and nobody would lose.

Scientific Advisory Board

On 20 March, the Government Committee on the Emergency Situation convened a Scientific Advisory Board on prevention of COVID-19 to collect and analyse expert information for the Government. The activities of the Scientific Advisory Board are coordinated by the Government Office.

The Scientific Advisory Board:

- ▶ evaluates the epidemiological situation in Estonia and in the world;
- ▶ keeps the Government informed about the latest scientific research;
- ▶ evaluates enacting and easing possible restrictions based on an epidemiological and clinical point of view, and gives recommendations to the Government for making decisions;
- ▶ represents Estonia at the regular meetings of the European Union virology experts.

The recommendations of the Scientific Advisory Board to the

Government are based on the following information:

- ▶ international studies and research;
- ▶ the statistics of the Health Board on the number of infections and people in need of hospital treatment, and prognostic models based on these data;
- ▶ the University of Tartu study “Detecting coronavirus in waste water”, the results of which are published on a weekly basis: <https://www.ut.ee/en/research/detecting-coronavirus-waste-water/>;
- ▶ The University of Tartu study “The prevalence of coronavirus in Estonia” that uses cross-sectional research to evaluate the actual prevalence of the coronavirus and the progress of the epidemic in Estonia: <https://www.ut.ee/en/research/study-prevalence-coronavirus-estonia/>;
- ▶ regular study commissioned in cooperation between the Government Office and the Ministry of Social Affairs that maps the attitudes and behaviour of the population in relation to the COVID-19 epidemic: <https://riigikantselei.ee/uuringud>.

Research-based information and links to international studies on COVID-19 can also be found at <https://meditsiiniteadused.ut.ee/et/covid19> and <https://www.ctm.ee/et/covid-19/>.

The Head of the COVID-19 prevention Scientific Advisory Board is the Professor of the Institute of Biomedicine and Translational Medicine of the University of Tartu **Irja Lutsar**.

The members of the Advisory Board are:

- ▶ Krista Fischer, Professor of Mathematical Statistics at the University of Tartu,
- ▶ Andero Uusberg, Senior Researcher in Affective Psychology at the Institute of Psychology of the University of Tartu,
- ▶ Peep Talving, Chief Doctor of North-Estonian Regional Hospital and

Professor of Surgical Diseases at the Institute of Clinical Medicine at the University of Tartu,

- ▶ Pilleriin Soodla, Doctor of Infectious Diseases at Tartu University Hospital,
- ▶ Andres Merits, Professor and Applied Virologist at the University of Tartu.
- ▶ Kristi Rüütel, the Scientific Secretary of the National Institute for Health Development, was a member of the Scientific Advisory Board until the end of 2020.
- ▶ Professor Irja Lutsar presents the positions of the Scientific Advisory Board to the Government at the cabinet meetings. The role of the Scientific Advisory Board is to consult and the decisions about restrictions are made by the Government.

Source: <https://www.kriis.ee/et/node/50501>

POLITICS

My First Fifteen Years as an Estonian Member of the European Parliament

TUNNE KELAM

Member of the European Parliament 2004–2019

As a long-time Member of the European Parliament (EP), the author shares his memories of the first EP elections in Estonia and the popular attitudes in Estonia in 2004 when we joined the European Union. As a respected leader, it was Arnold Rüütel who played a crucial role in persuading the sceptics; after his public appeals, the pre-referendum public opinion clearly turned in favour of the accession. The referendum received a new positive boost from President Rüütel's arguments that only accession to the EU could save us from becoming a grey zone between the EU and the CIS, and that the accession would by no means weaken Estonia's independence but instead

strengthen it. Eventually, the position of the Estonian citizens was clear – over two thirds (67%) voted in favour of the accession, one third against it; almost two thirds of the electorate (64%) took part in the referendum.

The author was elected to the world's largest parliament in the same year – 2004. He looks back at his seemingly unsure first steps in the European Parliament. Throngs of people circulating through one massive complex naturally makes one person feel small and almost powerless. Compared to Toompea Castle, the EP felt like an ocean with an immense mass of water and waves of up to ten metres high. It was not so much about staying afloat as about sensing out the different undercurrents, avoiding being automatically swept up by the main current, and instead starting to set the course towards one's own destination, ready to paddle against the stream when needed.

The author also takes a closer look at the so-called April events in 2007 and sums these up in the following manner. "Looking back today, from a distance of 14 years, I see the relocation of the monument to the Soviet occupiers to its rightful place and the successful quelling of the Moscow orchestrated riot as a logical full stop to the long process of restoring the independence of the Republic of Estonia. We needed to complete it one way or another, and the provocations of the Putin supporting extremists helped us to find clarity sooner – quite contrary to their intentions. The government of the Republic of Estonia had for years been treading tactfully and with full respect for the nostalgic sentiments of a large part of our population. Yet, the enduring presence of this symbol of the Soviet "liberators" only half a kilometre from the premises of the government authorities of the Republic of Estonia, and its increasingly aggressive politicisation, set Toompea a disagreeable but unavoidable question – who holds the power? To all intents

and purposes, this was an issue of double power, an equal recognition of a truthful and a false narrative.”

Three Dilemmas of Democracy

AGO RAUDSEPP

Historian

My doctoral thesis *Pääsemine ja häving: Demokraatia mõju Soome ja Eesti julgeolekule aastatel 1918–1948* (Escape and Destruction: Impact of Democracy on the Security of Finland and Estonia 1918–1948) argues that the link between democracy and security cannot be reduced to the three classical dilemmas: freedom vs. security, freedom vs. sovereignty, and sovereignty vs. security. The aim of the article is to examine these dilemmas by bringing examples from Estonian and Finnish history.

The first dilemma, which can be described as the dilemma of the security of democracy, is a corollary of the freedom of opinion, the *sine qua non* of democracy. And yet it leads to the impossibility to achieve complete security in a democracy. There is always the possibility that conflicts caused by different views can lead to anarchy and loss of security. If people are forced to make a choice between democracy and security, most people choose security. The challenge is to solve the dilemma in a way that preserves both: security and democracy.

In the democratic Finland, the state authorities had grown unable to stop vigilantism and political violence in the summer of 1930, while the democratic Estonia experienced violent clashes between the Social Democrats and the Union of Participants in the Estonian War of Independence in the summer of 1932. In both cases, the dilemma was solved by restricting the freedom of opinion as well

as democracy. One party of the conflict was excluded from the public life – the party whose removal was supported by the majority of the society.

The second dilemma, which we can call the dilemma of the sovereignty of democracy, is based on the unlimited sovereignty of a nation. If the majority of a democratic society has set out to destroy democracy – it is of no importance whether willingly or unwillingly, by action or inaction – it is very difficult to stop this. The challenge is to solve the dilemma in a way that preserves sovereignty, i.e. the power of the majority, as well as democracy.

Finland encountered the dilemma of the sovereignty of democracy in 1930, when the majority parties in the parliament refused to restrict the socially divisive activities of the Communists. Estonia found itself in a similar situation in 1932 and 1933, when the majority rejected the amendments to the Constitution at referendum. In both cases, this caused a conflict between a popular movement and the parliament. In Estonia, this led to abandoning the democracy; in Finland, democracy prevailed.

The third dilemma, described in the *Perpetual Peace* by Immanuel Kant, also comes from unlimited sovereignty, except not in internal but international relations. Kant attempted to envision the conditions for the freedom and security of nations. Kant saw the perfect solution in republican states, but because this would clash with the sovereignty of nations, only a “substitute” remained possible. Kant’s league of nations is a compromise solution, aimed at ensuring security, but in a way that would preserve sovereignty as well.

Between the two world wars, the majority of the society in democracies repudiated Kant’s solution. The citizens of democracies did not want to assume the responsibility to fight wars in defence of other nations, and held on to their right

to make decisions, i.e. their sovereignty. Estonia and Finland failed to find allies who would have enhanced their security.

STUDIES

Government Task Forces as an Innovative Form of Cooperation in Estonian Public Administration²

MARILIIS TREI

Junior Research Fellow, Ragnar Nurkse School of Innovation and Governance, Tallinn University of Technology

KÜLLI SARAPUU

Associate Professor, Ragnar Nurkse School of Innovation and Governance, Tallinn University of Technology

Nearly ten years ago, Estonia’s first government task force began its work on the initiative of the Government Office. It was an innovative solution in the Estonian governance system where the recommendation to use temporary broad-based working groups to address horizontal problems, originating from the OECD country governance assessment report, was used to solve coordination problems in the public sector. Compared with the usual forms of cooperation, task forces were different in five characteristics – they were formed to address trans-sectoral and strategically important policy problems, they were established under the mandate of the Government of the Republic, a designated head was employed to lead them, an independent budget was allocated and, to set their aims, the term of operation of task forces was limited to one up to three years. The aim of the article is to analyse the experience of eight task forces that operated in the period 2012–2018 and have terminated their

work and to point out the major lessons. The analysis relies on the results of a poll conducted among task force participants in the course of the research project “Coordination instruments at the center of government: opportunities and limitations of temporary task forces (PUT1461)” carried out in 2017–2021.

In terms of theory, task forces can be understood as temporary organisations for the improvement of coordination that are suitable for addressing complex and horizontal political problems. The flexibility, less bureaucratic format and results-orientedness of temporary organisations makes them a suitable means in finding new solutions. An analysis of the current experience of the Estonian task forces shows that, in terms of the outcomes and impact of task forces, the qualities that are connected with the engagement of participants and knowledge, the harmonisation of common understandings and the improvement of mutual contacts have been assessed highly. Although the format of task forces has helped parties to reach substantive and jointly approved action plans, the practical implementation thereof is receiving assessments that are more critical. This reflects the essential dilemma related to temporary organisations – how to ensure that a temporary form of cooperation leads to a change in aims and functioning practices in permanent organizations. Responsibility and political interest are key issues in connection with outcomes and impact. In order to achieve success, it is necessary that, where an issue is addressed further after the termination of the activities of task forces, there would be a concrete “owner” and political interest to make weighty institutional reorganisations. It is necessary to think of the consistency and implementation of outcomes in the course of the preparation, working process as well as winding up of the work of a task force. The experience of task forces offers several lessons for designing

² Peer-reviewed article.

and managing future task forces as well as network-type forms of cooperation different from the task force format.

Inequality in Estonian Health Care Funding³

ANDRES VÕRK

University of Tartu, Analyst

MAGNUS PIIRITS

Foresight Centre, Expert

Health care is funded from a variety of taxes, and cost-sharing contributions from the beneficiaries themselves. Taxes and cost-sharing contributions have different impacts on individual incomes and opportunities for consumption. This analysis calculates the cumulative result of the inequality that is inherent in health care financing. For this purpose, every tax and cost-sharing contribution towards health care financing is identified, and the EUROMOD micro simulation model as well as the household budget study data are used to calculate the Kakwani indexes of funding inequalities for 2005–2019.

The analysis shows that, in relative terms, higher income tax and social tax payments are made by higher income households, and higher consumer taxes' payments by lower income households. Lower income households pay larger cost-sharing contributions in relative terms. During the observed period, transfers have increased from the state budget to the Health Insurance Fund, as has the role of cost-sharing contributions of households in financing health care. As a consequence, financing on the whole has become less progressive, i.e. the relative burden of health care financing has shifted from higher income earners more towards low income earners. As long as health care financing is based on social or income tax,

³ Peer-reviewed article.

the prefinancing of health care remains redistributable, i.e. progressive, meaning that larger income earners pay relatively more for health care. However, if additional transfers from the general tax revenue in the state budget to the Health Insurance Fund increase while the important role of regressive consumption taxes in the state budget is preserved or even increased, the contribution to health care financing also becomes less progressive, or outright regressive.

The redistributing effect of health care financing or fairness of financing might not be the main arguments in choosing between the different sources to cover the health care expenses. Using the methods presented in the article, it is possible to monitor the dynamics of the inequality entailed in health care financing, and use the collected data as an input in the long-term planning of health care financing.

VARIA

Changes on Labour Market Accelerated

RIINA TILK

OSKA Program Coordinator

YNGVE ROSENBLAD

OSKA Head Analyst

While the spread of the COVID-19 virus in Estonia in 2020 was not so extensive as in most European Union Member States and the economic restrictions were milder, the labour market reacted to the crisis rather strongly. After the first wave of the coronavirus crisis, mainly the young people were hit the hardest on the labour market. If the virus crisis lasts longer and influences most sectors of economy, the labour market position of older workers may also suffer.

In the late autumn and early winter of 2020, the employment problems in the sectors connected with tourism deepened.

Other sectors, like clothing industry, oil industry, engineering industry, installation of machinery and equipment, were also in a complicated state. It is expected that in most sectors the situation will improve in 2021 due to vaccination. However, in tourism the difficulties will probably continue for some time. In some industries, like construction, certain branches of processing industry, the crisis may arrive with a delay. On the whole, unemployment may increase in 2021, because the return of economic growth will be reflected with a delay in labour market processes.

The representatives of our businesses see digitalisation and automation as by far the largest lever that fosters the long-term development of Estonian economy. Estonia could be a model country for testing of new smart solutions based on digitalisation and artificial intelligence in effective and efficient public and private partnership. During the virus crisis, green transition, increasing role of teleworking, changes in global supply chains and growth of the importance of physical and mental health of workers have strongly accelerated employment and demand for skills. Although developing the sustainability of economy might have remained somewhat to the background due to the crisis, there is a need for a national strategy for implementing the green transition.

More assistance from the state is expected in supporting of export. Due to the restrictions on cross-border mobility, many companies in the industrial, ICT and other sectors are facing the issue of developing the export of their products and services. One opportunity is to make greater use of the network of embassies. In the sectors that depend on foreign labour and seasonal workers, like industry and agriculture, it is expected that the government would understand that restricting the use of foreign labour may in its turn increase labour shortage and bring about salary boom.

Distance learning and lifelong learning need more systemic and extensive support. The state should set priority spheres of competence and establish funds for supporting improving of knowledge and skills. Retraining courses in social, health care and real estate services may be suitable for workers of the sectors that suffered the most due to the crisis. Pedagogical activities relating to their speciality could suit the creative persons of the culture sector. According to the employers, the second wave of the virus crisis has deepened the mental health problems of the people, therefore supporting of mental health also required more attention in society.

Important Role of Data-Based Solutions, Prevention and Awareness of People in Future Healthcare

MAGNUS PIIRITS

Foresight Centre, Expert

In Estonia, there are several areas of concern relating to health that require the improvement of healthcare, at the same time, however, changes in the behaviour of people towards the emergence of a healthier self is even more important.

This study focused on most important trends, which were also discussed in the previous issue of *Riigikogu Toimetised*. During the expert discussions, two important unspecified impact factors became evident from these trends: first, the health behaviour and epidemiological picture and second, the development of health technology, digital infrastructure and use of it in both prevention and treatment. A health transition may take place in health behaviours – health behaviour becomes better and more similar among the people, or turns even more

diversified, so that behaviour patterns on average remain the same as today, while differences in healthy behaviour widen. On the technological side, the alternatives are broad use of technology, where technological innovations are available to most people or all people can indirectly benefit from them, and restricted use of technology, where the technologies exist but there are no solutions that cover all social groups.

Health behaviours and impact factors of technology form four scenarios: “A dream of Healthcare”, “A pragmatic world”, “Half of the work” and “Keep carrying on”. “A dream of Healthcare” combines better health behaviour and broad use of technology in both prevention and treatment, and extends healthcare service, in particular, everybody would be covered by health insurance. In comparison with “A dream of Healthcare”, the technological side in “A pragmatic world” is primarily connected with treatment, the range of healthcare services does not increase, but everybody gets health insurance. Private insurance is established to cover cost sharing. In “Half of the work”, better health behaviour and narrow use of technology meet. If general health insurance cannot be afforded, the family physician service and compensated medicinal products will be accessible to everyone. In the scenario “Keep carrying on”, health behaviour becomes more diversified and the technologies will be for those who are ready to pay for it. The healthcare system will continue as it is.

The opportunities for additional funding were also studied: provisions for under 19-year-olds, raising social tax by 2%, splitting social tax between the employer and the employee, and applying health insurance tax to all other revenues. Each new service or change requires additional funding, and even if nothing is changed in the health care system, the funding of the Health Insurance Fund will still fall into deficit. None of the analysed sources of

additional funding would be able to bring the budget of the Health Insurance Fund into balance. Most probably, the solutions lie in the combination of several important factors – possibilities of additional funding, moving towards efficiency in funding of healthcare, healthier behaviour, etc.

The Royal Splendour of the Lost State Hall Building

JAAK JUSKE

Member of the Riigikogu

Toompea Castle in Tallinn, the historical small fortress, consists of several buildings dating from different periods. However, one magnificent representative building has been almost completely destroyed.

In 1561, during the Livonian War, Tallinn went under the power of the King of Sweden. Some time later, the reconstruction of the castle began at Toompea. The reconstruction works were given a new impetus when John III (Johan III) became the King of Sweden in 1569. A mediaeval fortress was transformed into a noble Renaissance palace. The most important innovation was the State Hall, which was built against the western wall of the front courtyard of the castle. The State Hall was 25 meters long and 11 meters wide and had a wooden ceiling. It was accessed from the castle courtyard by a two-sided grand stairway that ended in an open balcony; the Royal Palace in Stockholm was used as an example. Three large windows were cut into the western wall of the castle.

When John III and his son Sigismund – the King of Poland and heir to the throne of Sweden – met in Tallinn in August 1589, the State Hall and the state apartments were ready. After long negotiations, no agreement was reached, and at the end

of September, Sigismund went back to Poland. John III never saw his son again. The unsuccessful meeting later brought about wars between the two countries that devastated the territory of Estonia.

Today, you cannot find the State Hall Building at Toompea. When the Province Government Building was built during the reign of Catherine II in the second half of the 18th century, the second storey of the old palace was demolished and a new, lower building was erected on the remaining walls.

In the course of the extensive reconstruction of the castle complex in 1935, it was replaced by a narrow three-storey house with flats for officials, which was built against the western wall. Now the offices of the members of the Riigikogu are located there. Only three partially walled windows and the trumpeters' balcony (restored last year) on the western facade of the castle remain from the State Hall Building. When you look at Toompea Castle from Snell's Park, they are clearly visible in the high limestone wall.