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The Baltic States: Digital Democracy in the Era of the Pandemic

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SUMMARY

It is argued that new technologies are an effective tool used in the process of democratic development. They strengthen the fairness and transparency of elections, they guarantee civil rights and liberties, and they improve the quality of management in the public sector.

While Estonia is a leader of innovation in Central and Eastern Europe, both Latvia and Lithuania have been influenced by Estonia's success and invest as well in socio-political and economic digitalisation.

During the COVID-19 pandemic democratic innovations have been proposed by the Baltic authorities as a remedy for reviving representative systems as well as for increasing social and political trust. These include a range of new mechanisms aimed at expanding citizens' participation in political decision-making.

Such apparatus includes e-parliament and e-voting systems aiming at reducing face-to-face contact between officials and citizens, mobile apps delivering news and alerts about COVID-19, educational tools used during the period

of distance learning, as well as several innovative products and solutions for e-commerce and logistics.

At the same time the Baltic states have been exposed to information security risks, including conspiracy theories, disinformation and fake news about the virus disseminating via social media which undermined trust in objective facts and credible information sources concerning COVID-19, and generated dissatisfaction towards the state authorities among the public.

Due to new technologies we can predict some prospects for socio-political and economic development in the Baltic states after the crisis. Additionally, there are many positive examples of cooperation between governments and the private sector, which share experiences in the creation and development of digital solutions.

Information and communication technology (ICT) raises a number of questions about security and human rights as well. They include concerns of interference in the electoral process, cyberattacks, or privacy and data protection. Moreover, it should be emphasized that digitalisation can create inequalities and exacerbate digital divides, particularly in education and labour markets. The needs to apply new technologies as a remedy to boost productivity and sustain inclusive economic growth are significant for Latvia, where the development of ICT has not been a priority so far.

1. INTRODUCTION

It is usually claimed that digital technologies and organizational solutions may be useful in tackling some issues. Specifically, using the Internet for a variety of different political activities, from collecting information to collecting political contributions, may improve the quality of democracy. Democracy allows citizens to shape laws and public policies at global, national, regional, and local levels. But technology's benefits cannot be taken for granted – it needs to be actively nurtured and defended. In fact, new technologies are not the solution to all of the potential problems facing democratic systems. Most opponents point to the issue of online security, including cyber attacks and manipulation. Further, the growth of significant differences in the quality of Internet access increases the digital divide across the socio-economic lines. In a response to a major crisis, authorities may adopt policies which, in fact, undermine domestic opposition and curtail civil liberties. The COVID-19 pandemic has brought these challenges into relief: the exceptional emergency measures taken to address this unprecedented public

health crisis have affected the political process and, in some places, sparked concerns about the impact on democracy. New technologies were even claimed to reduce civil liberties, erode social capital, and bring about economic insecurity[1].

This "new" technological paradigm focuses on a new shift in the fast-changing world based on information and communication technology (ICT) and innovation. Development of new technologies is in the line with James Scott's high modernism, described as "form of modernity characterised by an unfaltering confidence in science and technology as means to reorder the social and natural world"[2]. In this context, it is worth recalling the concept of "democratization of technology,"[3] which assumes the dissemination and use of ICT by society in order to increase stability and security. According to this concept, new technologies meet specific social needs and serve the development of democracy. Appropriate legislation, testing, as well as increasing social competences in the use of technology, can contribute to strengthening the mechanisms of protection against the negative effects of these tools in democratic systems. Thus, they can indirectly contribute to the growth of social trust in political systems.

Recent decades show the positive achievement in information and communication spheres, including new technologies, constantly increasing Internet access, rising

1 D. Bol, M. Giani, A. Blais, P. Loewen, *The effect of COVID-19 lockdowns on political support: Some good news for democracy?*, "European Journal of Political Research" 2021, vol. 60, issue 2, pp. 497-505.

2 J.C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*, New Haven 1999, p. 4.

3 J. Piątek, *Technology "democratization". Peacetech – new quality of security management*, "Reality of Politics. Estimates – Comments – Forecasts" 2018, no. 9, pp. 59-70.

levels of information literacy among generations, and others. More and more public services are delivered in digital form. Not only the public, but also the private sector now accept the importance of ICT in stimulating growth and enabling economic development.

The aim of this research is to reveal the correlation between new technologies and democracy in the era of pandemics in the Baltic states, as the pandemic has both reopened and intensified debate over the state of democracy and the role of ICT under the (post-) crisis circumstances. COVID-19 has definitely disrupted traditional thinking around election organisation and overall participation in democracy. Protecting the health of democracy and citizens from another potential pandemic is of utmost importance.

The Baltic states are usually viewed as one region because of their geographical location, similar development levels of their economies, and analogous histories, cultures, and religion. The similar size of each country and similar historical backgrounds from being in the same geographic neighbourhood, as well as similar political and economic organisations, constitute shared targets and priorities for development as well. Despite economic uncertainty, the states have been continuing to progress in most areas of ICT capabilities. Robust e-governance platforms and vibrant tech ecosystems position the Baltics well to implement innovative digital solutions and to cooperate on addressing digitalisation and countering threats. For example, to mitigate health risks, the Lithuanian Central Electoral Commission has prepared special measures for strict disinfection procedures, temperature checks, mask distribution, social distancing rules, and more polling stations for early and

election-day voting, in addition to postal-only voting in countries where restrictions or regulations will prevent direct voting in embassies. Further, the Latvian Parliament has applied an e-Saeima solution, being among the first governments in the world to pilot a decentralised Apple-Google solution for contact tracing. Additionally, a kind of "Baltic Digital Bubble" was proposed to emerge in the aftermath of COVID-19, with the three countries sharing more ideas and case studies on e-governance and internet voting. In the wider context, the Baltic region is perceived as a digital policy and innovation powerhouse.

It is argued that new technologies are an effective tool for democratic development: 1. They strengthen the fairness and transparency of elections; 2. They guarantee civil rights and liberties; 3. They improve the quality of management in the public sector. New technologies can help to increase the quality of democracy – they make it possible for people who, for various reasons, do not have an opportunity to participate in political, cultural, and social life due to their disabilities or place of residence. For these reasons, new technologies may make the ideas of democracy a reality.

To ensure a democratic environment, several measures should be taken to provide free and fair elections as well as to reinforce media freedom. There is a need for modifications to election procedures to provide substantial flexibility and social security. The transitional process should include efforts to promote a different, robust, and interactive form of democracy. Among key recommendations, the following are proposed: 1. To strengthen free and fair election through voter education and manipulation prevention; 2. To guarantee human rights and freedom expression through effec-

tive regulation as well as to prevent from censorship; 3. To develop internet governance. The latter includes various e-tools which enable many different forms of democratic participation to spring up. Worth remembering is the fact that while digital technology does not directly increase the democracy, it helps keep society engaged and gives citizens freedom and flexibility.

Furthermore, the importance of new technologies may be related to the potential of state management in crisis situations. As a result, ICT optimizes strategies and directions of state activities, particularly under the circumstances of the pandemics. The Baltic states focus on the importance of establishing comprehensive e-governance ecosystems as a prerequisite to implementing e-voting, drew attention to emerging disinformation and digital campaign manipulation threats, and highlighted the need for extra measures to insulate elections from COVID-19-related risks. As Ieva Ilves, Advisor to the President of Latvia on Information and Digital Policy, said "COVID-19 can be described as a force majeure, but it is also an opportunity. It catapulted the search for digital solutions to the very top of policymakers' agenda; but it also calls for ensuring democratic responsibilities, such as privacy protection and building a trustworthy digital ecosystem." As a result, it is claimed that a post-COVID-19 "Pandemic Democracy" based on digital technologies may empower citizens and engage them in politics and decision-making. It should be underlined, however, that to be effective, new technologies have to be integrated into the legal and organizational framework in the state. Authorities should take into account social expectations as well.

Finally, it is argued that new technologies can stimulate international visibility and e-identity. In Estonia, new technologies have become part of the national brand. Lithuania may strengthen its recognition as an innovative and digitally developed country as well.

2. FRAMEWORK FOR ANALYSIS

It is nothing new to say that the digital revolution has transformed democratic politics. It brings new opportunities for electoral processes, human rights, and public governance. For several years digital technologies were deployed by electoral commissions during elections. As early as 2000, an online voting experiment was conducted in the United States using a straw poll of Alaska Republicans and during the Arizona Democratic presidential primary as well. As a result, Arizona became first state to use the Internet as a mode of voting. Further, in 2003 French nationals living in the United States were allowed to vote online. Similarly, the first tests of e-voting started in Geneva that year, and online voting was expanded for Swiss citizens residing abroad in 2008[4]. Since then, several online voting systems have been established in Australia, Brazil, India, Norway, and the Netherlands on different levels. In some cases, remote voting might be a part

[4] M. Musiał-Karg, *Challenges of i-voting – practices, rules and perspectives. Examples from Estonia and Switzerland*, "Przegląd Politologiczny" 2017, no. 4, pp. 61-72.

of the existing electoral system combined with traditional methods of voting but available to only some eligible citizens (in the armed force, police, senior citizens)[5].

Thus far, the potential of new technologies has been related to efforts to make the voting process more robust and effective, to reduce manipulation, and to make electoral results more transparent. Internet voting may make it easier for voters who have their own computers and online connection to participate in an election. Internet voting might lower the cost of voting. Technology enables faster vote counting, reduces the scope for human error, and saves money due to the need to recruit fewer poll workers. Finally, computers and electronic voting machines may be more accessible for disabled voters. Studies from Estonia show that electronic voting is gender- and age-neutral, and it does not influence people's political preferences. This method allows citizens to save time and money and is especially convenient for persons with disabilities and emigrants. It should be also emphasized that while several states have traditionally been reluctant to introduce IT more generally into the voting process, the COVID-19 pandemic and the need for physical distancing prompted renewed interest in electronic voting solutions.

[5] Experiments with Internet voting have failed in a few countries, while some states have still been on their path to introduce it. In the Netherlands public criticism arose around the secrecy of the source code and the evaluation reports, as well as the lack of verifiability. This, in fact, led the Netherlands to return to paper voting with manual counting of the ballots. Similarly, Norway implemented a limited Internet voting system for municipal elections but canceled the project due to security concerns and failure to improve turnout. Finally, the Åland Islands introduced the voting system for the first time in October 2019 for parliamentary election, but unexpectedly the project was cancelled due to problems creating, developing, and implementing technological innovations.

ICT can play pivotal role in guaranteeing the human rights of citizens. It creates new infrastructure for public debate and civic engagement (association) and brings new instruments for communication, making it easier for some groups — in particular young people — to ensure freedom of expression, access to information, and participation in public life and democratic debate. Due to new technologies, information becomes more freely and easily available. Moreover, technology creates opportunities for teleworking, education, and learning and promotes ecological transitions. For example, several projects are aimed at ensuring social inclusion by providing social literacy training to senior citizens to keep them connected to their families and friends. Digital technologies may also stimulate civil society development in a time of pandemics. They may guarantee participation[6] and inclusion for those being in quarantine. In fact, a human-rights approach to digitalisation may constitute a pillar for increased preparedness to crises.

However, digital tools must act as an enabler to safeguard citizens' health, promote social cohesion, and protect human rights, including digital rights. As a result, governments play crucial roles in shaping digital technologies in ways that ensure transparent, open, and inclusive decision-making processes to improve the lives of all residents under the principles of privacy, freedom of expression, and democracy.

[6] D. Bochsler, *Can the internet increase political participation? An analysis of remote electronic voting's effect on turnout*, DISC Working Paper Series 08, Center for the Study of Imperfections in Democracy (DISC), Central European University, Budapest 2009.

ICT has great impact on majority-minority relations within a country as well. Under the new circumstances minorities have new ways to express their needs and aspirations and demand recognition for human rights. The emergence of global civil society offers tools for minorities to promote their aspirations.

Finally, new technologies bring several benefits for public administration. By applying ICT, states seek to exploit opportunities for economic growth, promote an open and competitive digital economy, as well as foster better public service and quality of life. By delivering digital service, they seem to be closer to their citizens.

The development of electronic public services is consistently growing, and the number of Internet users is increasing rapidly. Relatively high computer literacy skills are achieved in all age groups in Europe. This allows us to assume that providing public service electronically is more attractive and acceptable to society than a service provided in a traditional way.

It is seen that the greatest gains from digitalisation come in countries where the qualities of democracy are higher and electoral awareness is deeper. Manuel Castells, researching the impact of new technologies on human life, stated that national states are losing power in certain fields, but at the same time they form new connections, which lead to new types of influence in global politics and economy[7]. Without any doubt, the growth of new technologies and the transformation of global politics has an impact on nation-states

[7] M. Castells, *Globalisation, Networking, Urbanisation: Reflections on the Spatial Dynamics of the Information Age*, "Urban Studies" 2010, pp. 2737-2745.

because they strengthen transparency and accountability of the states. Moreover, they stimulate new forms of cultural identities where the traditional values are still strong and present.

A number of studies reveal, however, that new technologies are not in fact the solution to many of the problems facing democratic systems. Instead, they may damage democracy by interfering with the act of voting or changing the vote results, manipulation and attempts at foreign interference, or even cyberattacks, which undermine trust and confidence in the integrity of electoral processes. For example, micro-targeting and behavioural profiling techniques derive on data improperly obtained and is misused to direct divisive and polarising narratives. This process opens new attempts to manipulate the electorate. Further, some works[8] have revealed that the costs of digital solutions are high and that they do not improve the efficiency of the electoral process. Additionally, it is claimed that these technologies may create significant opportunities for corruption that vitiate their potential impact. Digital processes may be a source of mistrust and undermine international and domestic confidence in policy-making process. Limited knowledge of many citizens and commentators about how digital process actually work may mean that it is extremely difficult to differentiate false claims from plausible ones. Besides, the question is if certain aspects of the technologies and organizational solutions could be implemented by different states. Finally, the growth of significant differences

[8] N. Cheeseman, G. Lynch, J. Willis, *Digital dilemmas: the unintended consequences of election technology*, "Democratization" 2018, no. 25, issue 8, pp. 1397-1418.

in the quality of Internet access influences the increase of digital divide across the socio-economic lines.

Digital technologies can threaten democracy by increasing the amount of fact manipulation, propaganda, fake news, and disinformation. Social media is one of the channels for attempts to manipulate public opinion, discourage participation in elections, and cast doubt on the integrity of election processes. Attacks, abuses of defamation laws, and other forms of intimidation and pressure damage the contemporary media ecosystem. It should be noted that misinformation is false or misleading content shared without harmful intent while disinformation includes false or misleading content that is spread with an intention to deceive or secure economic or political gain. Both may cause harm for state authorities, societies, and individuals. Additionally, foreign interference in the information space can disrupt the free formation and expression of individuals' political will by a foreign state actor or its agents. Other techniques include false news, conspiracy theories, fake accounts, and information operations to artificially amplify narratives on specific political issues and exploit existing divisions in society[9].

The COVID-19 pandemic has exacerbated these trends. It led to major advertising losses, hitting in particular small and local media. Disinformation, both before and during the vaccine campaign, applied both by China and Russia to

[9] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, *On the European democracy action plan*, Brussels, 3.12.2020 COM(2020) 790 final, https://www.vrk.lt/documents/10180/617905/Europos+demokratijos+veiksmu+planas/444f86b7-a967-4d85-ab87-8670208522b9?version=1.0 [18.06.2021].

shape a positive image of themselves for internal and external purposes. Since January 2020, China applied so-called "mask diplomacy." By shipping medical supplies to European countries, China was seeking to improve its image as a responsible global leader. Similar strategies were applied by Russia in the post-Soviet area. It disseminated news stories containing both true and false elements concerning the virus to promote itself as a donor country. In fact, Russia's disinformation campaign aimed to weaken Western institutions by showing them as incapable of dealing with the crisis in order to destabilise and undermine Western societies[10].

Most opponents to digitalisation point to the issue of online security, including restricted internet access, censorship, or the so-called national internet sovereignty, aimed to create boundaries on a network and then exert a form of control, which may lead to deterioration of human rights online. Moreover, they emphasize that barriers to the accessibility of technology continue to exacerbate inequalities. Indeed, the lack of digital accessibility has enormous impact on the quality of life of people with disabilities and those with limited literacy. Specifically, the current crisis added new urgency. Several communities and households had limited access to the Internet and, in fact, had little access to vital health-related information and education. Technology radically transformed the distribution of power, either mitigating or reinforcing existing inequalities.

[10] A. Kuczyńska-Zonik, *Propaganda and disinformation in the age of uncertainty – how to strengthen NATO capacities* [in:] *Towards #NATO2030: The Regional Perspective of the Baltic States and Poland*, M. Andžāns, M. Vargulis (eds.), Latvian Institute of International Affairs 2020, pp. 123-131, https://liia.lv/en/publications/towards-nato2030-the-regional-perspective-of-the-baltic-states-and-poland-896 [23.06.2021].

Additionally, privacy was a challenge in mitigating COVID-19, as governments looked towards technology to help trace patterns and movements of people through contact tracing apps and big data. Some methods seemed to be controversial, such as monitoring and archiving personal data, location tracking and lack of effective regulation protecting citizens' data. As a result, there was a risk that the rapid application of ICT during the emergency would limit social trust and confidence towards technologies in the states in general.

Finally, it should be emphasized that countering disinformation and the use of hate speech through education and training, as well as the promotion of open political debates, is crucial for effective participation in society and democratic processes. Media literacy skills help citizens check information before sharing it, understand who is behind it, why it was distributed to them, and whether it is credible. Digital literacy enables people to participate in online environments wisely, safely, and ethically. Additionally, in order to build and then maintain trust, governments need to keep the system open, observable, and auditable. Security remains a credible concern.

3. DIGITAL TECHNOLOGIES IN THE BALTIC STATES

Proponents for e-democracy stress the arguments that equal and accessible participation in decision-making is crucial for stable and healthy socio-political development. Evidence from the Baltic states confirms the positive achievement for the information and communication sphere, including new technologies, constantly increasing Internet access, rising levels of information literacy among generations, and others. As the Nordic countries are undoubtedly champions in the region – as well as globally – in terms of ICT advances, the Baltic states benefit from digital infrastructure and a culture of innovations as well. ICT diffusion in the Baltic states has eased and facilitated the development of a competitive market economy. Foreign investors who see the Baltic states as one region are very interested in the progress of all three countries[11]. The Baltics' recipe for relative success resulted from a transparent and business-friendly legal framework,

[11] J. Česnauskė, *Digital Economy and Society: Baltic States in the EU Context*, "Economics and Culture" 2019, no. 16, issue 1, pp. 80-90.

well functioning markets, effective education and research systems, and a widespread culture of education both in public and private sectors. The Estonian government, in particular, has prioritised innovation and universal ICT access as a tool for improved growth, and more public services have been delivered in digital form.

Interestingly, Estonia, which is the smallest country among the Baltic states, is one of the fastest growing economies in Europe, with development of new media technologies, industrial products, commercial resources, and political instruments. Its rapid transition to a market economy and integration into the world economy has confirmed its political and economic ties with Western Europe. Economic success has resulted from a set of instruments introduced by the government and intensive efforts in the field of innovation, infrastructure development, technology, and digitization. The liberal economic policy of Estonia includes openness to foreign capital, westernisation, as well as flexible tax and banking systems and needs-based legislation with a priority on facilitation of entrepreneurship. A transparent business environment is one of the key drivers of dynamic development in Estonia. Additionally, Estonia's use of ICT in order to modernize their public sector and provide transparent governance is one of the most recognizable features of modern Estonia globally. The high regard for Estonia is due to a dynamic transition from a planned economy to a competitive market economy, as well as the government's continuous prioritisation of innovation and universal ICT access as a tool for improved growth and competitiveness and includes strong cooperation public and private sectors. Now both the private and public sectors accept the impor-

tant role of ICT in stimulating growth and enabling the development of economies.

Currently, Estonia offers the most comprehensive governmental online services in the world. The so-called "first digital republic in the world," Estonia has digitised 99% of its public services, including digital identification, digital signatures, electronic tax filing, online medical prescriptions, and internet voting. This has brought Estonia to the top of the global ranking on Internet freedom as well.

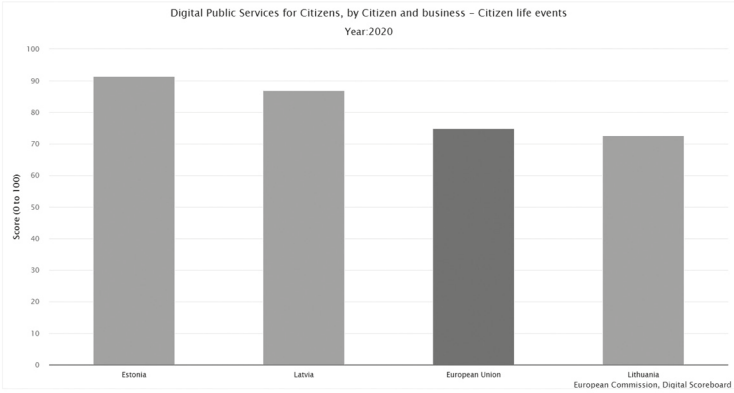
Estonia was the first country to introduce Internet voting for binding elections (in 2005 on a local level, in 2007 for parliamentary election, and since then for all kinds of elections – local, national, European). Since 2005, when internet votes constituted merely 2% of the total votes cast, in European Parliament elections 2019, the number increased to more than 46%. In order to vote online, people are required to use their digital identification card and a computer connected to the internet equipped with a smart card reader. Voting online enables Estonian citizens to log on with their digital ID card and vote during the pre-voting period or on election day. This unique technological solution is believed to limit election fraud, the use of force or other manipulations of remote voting, as well as increase the transparency, responsiveness, and accountability of the government. Authorities can use this form of voting as an instrument to involve society more actively in democratic processes.

While Estonia remains a leading country in Europe for digital public services, Lithuania is lagging behind the Baltic states (Figure 1), although it has been improving its digital infrastructure consistently for a few years as well. In Lithuania, more than 90% of public services are accessible on the

internet and more than 80% of citizens use e-government services, including e-tax, e-education, and e-health (Figure 2). Lithuania's public sector is active in digitising services and is searching for ways to further boost innovation. The digital economy in Lithuania is currently one of the most significant sectors of the economy in terms of its added value. In the digital economy, the information technology industry is the most prominent, and the number of information and communications technology professionals has been steadily growing. Currently "Innovative Governance" is one of the key pillars of the country's national development strategy "Lithuania 2030." This includes development of knowledge-intensive sectors of the economy, training of highly qualified specialists, and development, appropriate use, and commercialisation of innovative products, services, technologies, and methods with a focus on increasing innovativeness of businesses and active support for the commercialisation of the results of collaboration between science and businesses[12]. Some studies reveal, however, that skills development in the public sector remains fragmented and characterized by a lack of a strategic outlook.

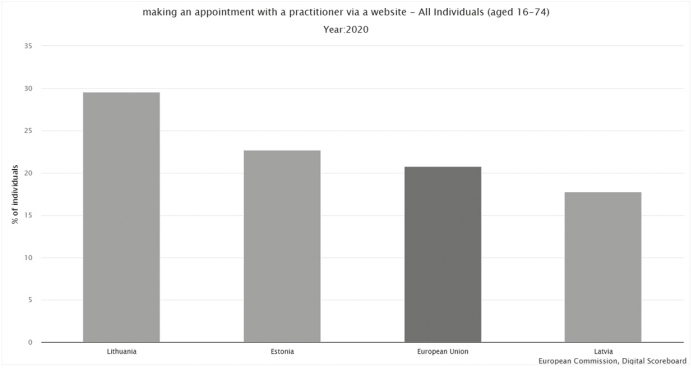
[12] Economic Affairs and Strategic Change Management, *2021–2030 National Progress Program: Strategic goals and tasks*, https://www.esinvesticijos.lt/uploads/main/documents/files/Post%202020/2_%20LRVK_NPP.pdf [28.06.2021].

Figure 1



Source: European Commission, https://ec.europa.eu/eurostat/data/database [22.06.2021].

Figure 2



Source: European Commission, https://ec.europa.eu/eurostat/data/database [22.06.2021].

According to the Digital Economy and Society Index (DESI) 2020 report analysing digital performance, Estonia

and Lithuania were above the EU average and were the highest ranking among Central European countries (Table 1).

Table 1

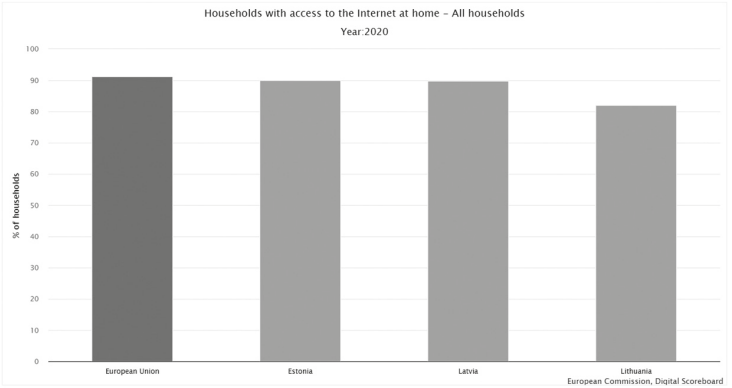
DIGITAL ECONOMY AND SOCIETY INDEX (DESI)			
	2017	**2018**	**2019**
Lithuania	18	14	14
Latvia	19	18	17
Estonia	9	7	8

Source: The Digital Economy and Society Index (DESI), https://digital-strategy.ec.europa.eu/en/policies/desi [28.06.2021].

Latvia ranks slightly lower than Lithuania and Estonia in terms of digital technology, but its significant improvement in the last few years needs to be noticed. That improvement has been driven by 1. increased use of e-government; 2. the availability of pre-filled forms; and 3. the availability of open data. It confirms a high level of online interaction between public authorities and citizens: a growing number of Latvians use e-government services. For example, in the 2021 municipal election, Latvian voters were able for the first time to vote at any polling station in the constituency (up until 2021, citizens could vote only in the polling station where they were registered). Due to an online registry, voters could use both a passport and an identity card as an election document to be registered at polling stations. The election commission members at a polling station use a smart device to scan the bar code or QR code of the voter's passport or ID card to make sure that the voter is registered on the appropriate municipal list of voters and determine if he or she has voted yet. In case of any technical problems, a voter can put

the vote into a separate registration envelope. Latvia is at the same place as Estonia in term of internet access (Figure 3).

Figure 3



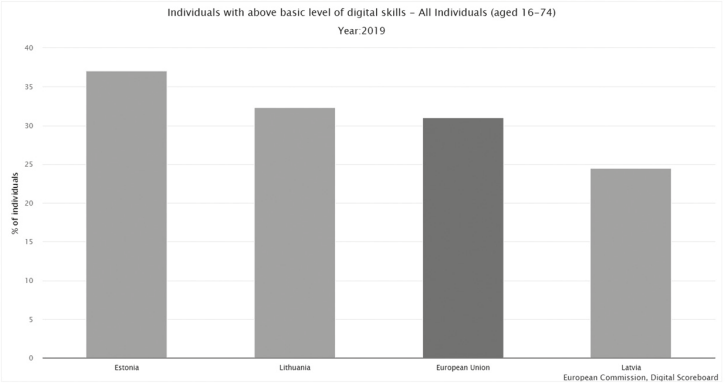
Source: European Commission, https://ec.europa.eu/eurostat/data/database [22.06.2021].

However, lower than in Estonia and Lithuania, priority of ICT in the Latvian government agenda includes factors such as political will and regulatory frameworks, as well as readiness and usage of ICT by the government[13]. In fact, during the pandemic crisis, it was extremely difficult to ensure universal and equal rights to the Internet for all residents. While a survey on use of ICT in Latvian households has revealed that the share of households with Internet in 2020 reached almost 90% (as compared to 2019, connection increased by 4.3%), the largest share of regular Internet users were in urban regions (Riga, Zemgale) and the smallest were in

[13] A. Zabašta, P. Rivža, *Analysis of information and communication technology development in the Baltic Sea region states*, "Economic Science for Rural Development" 2010, no. 11, pp. 37-44.

Latgale, the least developed area in Latvia. Additionally, while 70% of Europe's population has basic digital skills, in Latvia only 43% of individuals have basic skills with 24% above the basic level (Figure 4). To boost digital transformation of the Latvian economy, it is important to further raise awareness of the importance of digitisation in the public and private sectors and to step up existing efforts to enable the full range of benefits to be reaped from the adoption of digital technologies by businesses.

Figure 4



Source: European Commission, https://ec.europa.eu/eurostat/data/database [22.06.2021].

The Baltic states appear in the top of IMD World Digital Competitiveness ranking (Table 2) evaluating the landscape of developing digital technologies and examining the level of preparedness of an economy to challenges in the future. Further the eGovernment benchmark 2019 report revealed that Estonia is among the European front-runners in terms of eGovernment, while Latvia and Lithuania followed close

behind[14]. They are among the most innovative countries in the Central European region, and their standings are gradually rising. This reflects the openness of the states to new, non-standard ideas. Additionally, those data show how economies employ digital technologies, which could help predict their ability to weather the pandemic.

Table 2

IMD WORLD DIGITAL COMPETITIVENESS					
	2016	**2017**	**2018**	**2019**	**2020**
Lithuania	29	29	29	30	29
Latvia	33	35	34	36	38
Estonia	27	26	25	29	21

Source: IMD World Digital Competitiveness Ranking, https://www.imd.org/centers/world-competitiveness-center/rankings/world-digital-competitiveness/ [28.06.2021].

[14] European Commission, *eGovernment Benchmark 2019: trust in government is increasingly important for people*, 8 March 2021, https://digital-strategy.ec.europa.eu/en/library/egovernment-benchmark-2019-trust-government-increasingly-important-people [20.06.2021].

4. DIGITAL TECHNOLOGIES AND COVID-19

The role of digitalization has become particularly important in the face of the worldwide pandemic. State authorities were forced to use innovative solutions in their fight against the virus and the consequences of the epidemic. National governments were the first responders to the COVID-19 crisis and played an essential role in guaranteeing rights protections by providing public services. As the coronavirus was spreading around the world, governments had to introduce restrictions and rules on physical distancing. Governments applied technologies to monitor, anticipate, and influence the spread of the virus, as well as to provide education for those who could not access school. Technology made opportunities for residents to access to health service, information, and communication with authorities. At the same time, governments were obligated to ensure that when using digital technologies, human rights were protected.

As a result, democratic innovations have been proposed for reviving representative systems and increasing social

and political trust. They include a range of new mechanisms aimed at expanding citizens' participation in political decision-making, such as assemblies, deliberative pools, participatory budgeting, online petitioning, consultations, and forums[15]. Most of them combine social media and mobile technologies.

4.1. ELECTRONIC VOTING

Coronavirus has brought the idea of digital technology into the mainstream. Parliamentary sessions were postponed or reduced due to the ongoing COVID-19 crisis, and several debates were started about online public services involving the electoral system. They included development of electronic procedures as a part of the modernisation of public administration aimed at reducing face-to-face contacts between officials and citizens. In order to ensure safe continuation of its activities, the Seimas of the Republic of Lithuania convened and voted remotely for the first time amidst the turmoil of COVID-19. Due to Microsoft and its partners, the Seimas was allowed access to remote work and voting during the pandemic. As a result, e-parliament and e-voting was recognised as a decisive step towards a digital Lithuania at a difficult time for the country[16].

As the pandemic has highlighted a new issue dimension in elections – physical safety – Lithuania started to consider digital alternatives to protect the health of their citizens

[15] M. Karlsson et al., *Democratic Innovation in Times of Crisis: Exploring Changes in Social and Political Trust*, "Policy & Internet" 2021, no. 13, pp. 113-133.

[16] Seimas of the Republic of Lithuania, *Digital transformation of the Lithuanian Parliament: the Seimas has smoothly switched towards a remote work environment*, 25 January 2021, https://www.lrs.lt/sip/portal.show?p_r=35403&p_k=2&p_t=274449 [22.06.2021].

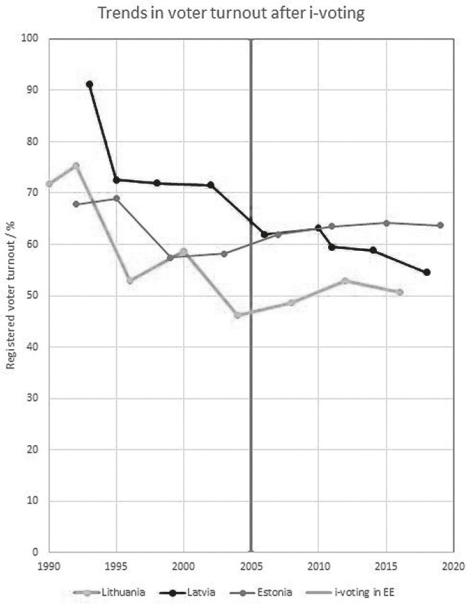
while governing in the face of the current and upcoming crises. As a result, the coronavirus has intensified disputes over electronic voting in Lithuania. Lithuanian authorities have been debating the issue for over a decade and have made several attempts to introduce remote voting. The main objective was to increase the turnout of young people and Lithuanians living abroad[17] (during the European Parliament election in 2009, Lithuania's voter turnout was among the lowest – 21%). Low turnout reflects scepticism towards democratic institutions in Lithuania (Figure 5). Proponents believe e-voting systems would allow faster and more precise counting of votes. Critics point to the probability of cyber attacks or the manipulation of votes, and the need for personal data protection. They worry about a drop in trust in elections as well.

With the coronavirus pandemic having brought public health concerns to the fore, Lithuania has returned to debates about online voting as "digital alternatives" to protect the health of the citizens and governance. The Central Electoral Commission (CEC) started considering measures for safe voting[18]. Finally, in June 2020, the Lithuanian government backed an amendment under consideration in parliament which would allow for the casting of ballots online in the upcoming general elections. The bill was drafted by

[17] A. Diržinskaitė, *Apolitiška karta: kodėl jauniems Lietuvos žmonėms neįdomi politika*, "Politologija" 2018, no. 4, issue 92, pp. 3-28.

[18] Vyriausioji rinkimų komisja, *Balsavimo elektroniniu būdu tvarkos aprašas*, https://www.vrk.lt/documents/10180/719400/Balsavimo+elektroniniu+b%C5%ABdu+tvarkos+apra%C5%A10+projektas+%28002%29.pdf/2a40d9e5-153b-4693-93f5-e0f374a8a5e5 [23.06.2021]; Vyriausioji rinkimų komisija, *Veiksmų planas dėl elektroninio balsavimo įgyvendinimo*, https://www.vrk.lt/documents/10180/714176/Seimo+rinkimu+istatymo+del+elektroninio+balsavimo+igyvendinimo+planas.pdf/00cefacd-2a92-41f9-b2da-dc1220e0ccab [16.03.2021].

Figure 5



Source: LRT.lt, *Lithuania eyes Estonia's online voting experience as elections loom*, 13 June 2020, https://www.lrt.lt/en/news-in-english/19/1187505/lithuania-eyes-estonia-s-online-voting-experience-as-elections-loom [22.06.2021].

the ruling Social Democratic Labour Party, which insisted that alternative voting options were needed amid the COVID-19 pandemic. Prior President of Lithuania, Gitanas Nausėda, also suggested introducing the online voting option for Lithuanian who live abroad. Under the bill, voters could cast their ballot online over the course of three days. Moreover, a person could change their mind and come to vote to a polling station. It would be first applied for expatriate voters, however, which means that online voting would be available only for the Lithuanians living abroad.

The CEC underlined that to ensure cyber security, a system needed to be built and tested this. Because it was impossible to develop and apply such a system before the parliamentary election which took place in October that year, the measure was not implemented for the elections. However, it could be used in municipal, presidential, EP elections, and referenda in the future.

The National Cyber Security Centre (NCSC) has recorded no cyber attacks against the Central Electoral Commission Information System during the Presidential and the European Parliament elections in 2019 or during the first and second rounds of the elections to the Seimas in 2020[19]. But during the election periods, it recorded problems with candidate and political party websites and their accessibility, most of which were due to technical reasons and had no impact on the elections[20]. Additionally NCSC identified suspicious activity (cyber events) against the CEC election-related information infrastructure, including perimeter scanning, port scanning, attempts to perform unauthorised connections using brute force, vulnerability scanning, and others[21].

At the same time, several studies argue that new technologies significantly affect the management of the electoral apparatus by ensuring electoral accessibility and participation, improving electoral processes in the context of new challenges, and finally stimulating the international visibil-

19 Nacionalinis kibernetinio saugumo centras, https://www.nksc.lt/ [19.02.2021].

20 National Cyber Security Centre, *Report of the 2019 elections in the Republic of Lithuania*, May 2019, https://www.nksc.lt/doc/en/analysis/2019_05_28_Report_of_the_2019_elections_in_the_Republic_of_Lithuania.pdf [29.06.2021].

21 National Cyber Security Centre, *Cyber security report of the parliamentary elections 2020*, October 2020, https://www.nksc.lt/doc/en/analysis/2020_12_08_CEC_report.pdf [28.06.2021].

ity of the state. It should be underlined, however, that while Estonia has had the option for e-voting since 2005, it is not a matter of copy and pasting for Lithuania. Therefore, e-voting might be a viable solution in the longer term only when the governments ensure a legal framework and strengthen citizens' trust. Additionally, as voter turnout is relatively low in Lithuania, e-voting does not directly increase participation even if it helps keep voters engaged and gives them freedom and flexibility to choose when and where to vote.

In contrast to Lithuania, there has been no debate over electronic voting in Latvia over the past few years, and residents should not expect to be able to emulate the country soon. In 2018, the issue was discussed by the Central Election Commission in Latvia when creating an electronic voter registry to make voting with an ID card easier, and the benefits and risks of online voting were discussed. However, opponents stressed the various risks of online voting due to security concerns based on the experience of other countries, such as Switzerland or Australia. Additionally, experts in Latvia argued that there were still no good voting solutions for those who only have ID cards. Overall, introducing an electronic voting system in Latvia would create several security risks; therefore, it was too early for electronic option for Latvia.

Recently the need for electronic voting was illustrated by the 2020 Riga City Council Extraordinary Election, in which only 40% of Riga citizens voters. This is the lowest turnout in the Riga local elections since 1997. One of the reasons for these results is people's fear for their own health and the possibility of contracting COVID-19 by going to polls. The introduction of electronic elections could be one way not

only to improve the electoral system in Latvia, but also to ensure safe voting in crisis situations, as well as for people abroad or those unable to vote in person for other reasons.

Similar to Lithuanian case, the introduction of the electronic voting system in Latvia requires changes to legal acts, including the laws for elections to city and county councils of the Republic and the Saeima electoral law, as well as laws related to public funds for the creation and maintenance of the system. Since electronic voting requires voters to use a computer, eID, etc., electronic voting must coexist with the traditional system, leaving voters free to vote in person or electronically. Electronic voting would facilitate participation in Saeima and municipal elections, and possibly also increase the number of voters. In turn, in crisis situations caused by infections or other exceptional circumstances, it would ensure remote participation and the right to a safe, healthy environment.

To summarize, Latvia has a reliable technology infrastructure, accessible Internet, and IT management. It ranks in good positions in terms of digital development in Europe, which results in Latvia being recognize as an innovative and digitally developed country. However, the issue of online voting is very complex. Technology experts warn about security risks and costs, which should be assessed. According to many, the Latvian electronic voting system is not secure enough to be used in elections. Further, citizens have reservations about this method of voting, and creating positive attitude towards new system may take a lot of time. Generally, at the moment it is not possible to ensure the anonymity and security of this method of voting, so it will not happen very soon. Additionally, it is said in Latvia

that a majority of voters only feel secure if they physically place their paper into a ballot box. Some feel that e-voting would be open to vote-buying, voting on behalf of others, and numerous other dangers to democracy. Local referenda and municipal elections could be a platform to test voting systems to be introduced at national level.

4.2. HEALTHCARE

Digital technologies have been a means of medical support and eased the access to healthcare during the crisis. For example, the University of Latvia has delivered a security room system and equipment to facilitate patient breathing. In May 2021, Lithuania revealed that a Vilnius-based company in cooperation with Swiss partners had potential to produce COVID-19 vaccines[22]. Moreover, in Latvia mobile apps have provided information about COVID-19 symptoms and how residents should act in the event of infection. The app has enabled daily coronavirus symptom tracking and the distribution of health advice and information. It was simple enough even elderly people were able to understand how to use it as well. The goal of the app was not only to help more easily determine which persons had been in contact COVID-19 patients, but also to allow society to participate in tracking. The data was encoded and did not include any personal information that could allow identifying a person or location. Another Latvian example confirms the cooperation between the IT industry and the Latvian authorities.

[22] Delfi.lt, *Minister: Lithuania has potential to produce COVID-19 vaccines*, 11 May 2021, https://www.delfi.lt/en/business/minister-lithuania-has-potential-to-produce-covid-19-vaccines.d?id=87164863 [30.06.2021].

The "Apturi COVID" (Stop COVID) application aided proximity and contact tracking and was the first of its kind in the world. It notified users if they had been in close proximity to someone with the coronavirus. The app delivered news, alerts, general instructions, and maps to users to avoid infections or to avoid hotspots. Similarly, the HOIA mobile app in Estonia aimed at informing close contacts of those infected with the coronavirus and providing them with initial instructions on how to proceed[23]. Furthermore, a Lithuanian-made app has launched to help those affected by the coronavirus crisis access emotional support. It provides a package of emotional support tools that includes breathing techniques, anonymous support communities, and free therapy sessions with certified professionals. Some studies have shown that the app could control the epidemic if 60% of the population used it. As a result, some experts argued that Estonia's HOIA coronavirus close contact notification app has not managed to reach its potential in terms of helping contain the virus. A survey carried out by pollster Turu-uuringute AS in October 2020, found that more than 90% of the population was aware of the HOIA application, while they did not have the application installed[24].

Although coronavirus pandemic revealed that none of the Baltic states is fully prepared for this crisis. Even Estonia's e-Health system which is a core part of Estonia's "E" narrative and has existed in its current form since roughly 2008, has faced some problems during the COVID-19 pandemic.

[23] Estonian Government, https://www.kriis.ee/en/hoia-mobile-app [28.06.2021].

[24] H. Laur Allik, *Series of flops or how HOIA failed*, Postimees, 22 February 2021, https://news.postimees.ee/7185647/series-of-flops-or-how-hoia-failed [22.06.2021].

Especially shortly after the pandemic was announced, it was difficult to disseminate accurate statistical information and to provide public data, which in fact turned out to be unclear and misleading[25].

4.3. PUBLIC SERVICE

The concept of digital resilience concerns the ability of organisations to move quickly and seamlessly to adopt new digital technology solutions and then to recover, rebound, and move forward if things go wrong[26]. This is in the line with what the Baltic states' authorities emphasize as a path of their transformation toward sustainability and prosperity. This also reflects the Baltic states' need for redesigning their institutional framework to enhance innovative and democratic systems. The states have stressed the importance of establishing comprehensive e-governance ecosystems and innovative ways for communication, and suggested "The Baltic Digital Bubble" to mitigate the COVID-19 impact on government, the economy, and society. Additionally, robust e-governance platforms and vibrant tech ecosystems position the Baltics well to implement innovative digital solutions and to cooperate on addressing digitalisation and countering threats such as disinformation in Europe.

In Estonia 99% of government services are online, but in both Lithuania and Latvia, the pandemic has required swift

[25] K. McBride, *Image of 'digital Baltics' cracks under weight of pandemic – analysis,* Lrt.lt, 2 February 2021, https://www.lrt.lt/en/news-in-english/19/1330589/image-of-digital-baltics-cracks-under-weight-of-pandemic-analysis [12.06.2021].

[26] D. Garside, *Digital resilience – a step up from cybersecurity,* Cybersecurity Deccrypted, 1 August 2018, https://www.csoonline.com/article/3293898/digital-resilience-a-step-up-from-cybersecurity.html [22.06.2021].

and effective measures leading to increased governmental use of digital technologies, including mobile applications installed on smartphones used for various purposes. The increase of interest in new technologies has often been accompanied by a shift towards digital solutions offered by the private sector and cooperation between public authorities and companies in digital markets. Latvia's digital response included an e-Saeima solution for parliamentary debate. Further, Estonian Ministry of Economic Affairs started a web portal to collect information from businesses that are willing to help the government with their resources, either material ones or knowledge. Finally, it was Estonia among others who introduced the EU digital COVID recovery certificate as a solution that would allow a person to prove recovery from the disease based on giving a positive test result in Estonia, for which there was a health care service provider who entered the information to the health information system.

Several examples confirm intensive collaboration between public authorities, volunteers, and the private sector. In March 2020, Estonia organised a hackathon ("Hack the Crisis") to share good ideas and to reduce the economic effects of the coronavirus through innovation. Among the winning projects were apps which could be used to tutor school kids who are in quarantine; to provide emotional and mental support for the quarantined; or to deliver tools and best practices for teams forced to work remotely for the first time. Shortly after, Latvia held a hackathon devoted to responding to the COVID-19 emergency where professionals from different backgrounds gathered to generate ideas. The goal was to find a way to digitally connect high-risk people

in need with volunteers who could help[27]. Additionally, the Lithuanian Digital Innovation Hub initiated an online hackathon "Hack DigitalSea'21" to promote the development of green ports, to reduce the pollution and impact of shipping, to preserve natural biodiversity, to strengthen food value chains, to promote the use of renewable energy sources, to make more efficient use of logistics, and to involve society in these processes[28].

4.4. COMMUNICATION

In the face of the pandemic, an overload of information and fake news contributed to information chaos. In Latvia in the beginning of 2021, fraudsters were sending false e-mails with invitations for vaccinations against COVID-19. Additionally, so-called "information fatigue" – mental exhaustion arising from exposure to too much information – seemed to be problematic. These jeopardised the public communication effort and discouraged individuals from following health recommendations.

The Baltic states are among the most vulnerable to information security risks. For Lithuania, Latvia and Estonia particularly the fight against Kremlin propaganda and disinformation has become a security priority.

During the pandemic, the Russian official state media, news sites, and social media have pushed multiple disinformation narratives exploiting modern political advertising techniques as well as advances in communications tech-

[27] I. Vaivare, *Latvian Hackathon devoted to Covid-19*, 3 June 2020, https://www.sdg-watcheurope.org/latvian-hackathon-devoted-to-covid-19/ [30.06.2021].

[28] EitFood, *The first of its kind Digital Sea hackathon in Lithuania*, 17 June 2021, https://www.eitfood.eu/news/post/the-first-of-its-kind-digital-sea-hackathon-in-lithuania [13.06.2021].

nology, which allows actors to reach wide audiences in the Baltic states. The narratives included conspiracy theories about the virus's origins ("the virus was invented by biologists and pharmacists in Latvia"), 5G technologies, or stories that the virus was disseminated to control local populations. Numerous coronavirus myths and fake news stories have been circulating on social media. The Russian pandemic-related disinformation campaign was aimed at undermining trust in objective facts and credible information sources concerning COVID-19; portraying democratic institutions as poor managers of the pandemic; and increasing the anxiety, anger, and mistrust among the public regarding their governments and other members of their societies. The COVID-19 disinformation campaign has slightly differed from previous Kremlin influence operations, however. The most visible novelty has been Russia's rendering of medical assistance to foreign countries by delivering many photo and video opportunities[29].

At the same time several measures were taken by the Baltic authorities to ensure that communities were aware of the current situation. The government has offered media tools to keep everyone informed about the state of the spread of the virus. Many online platforms have used automated content moderation technologies to reinforce their efforts to detect, remove, and otherwise counter false narratives. Privacy and data protection have had a pivotal role in building and sustaining trust in digital solutions. Moreover,

[29] R. Weitz, *Assessing the Russian Disinformation Campaign During COVID-19*, ICDS,13 November 2020, https://icds.ee/en/assessing-the-russian-disinformation-campaign-during-covid-19/ [30.06.2021].

digital technologies such as artificial intelligence have been used to reveal misinformation and expose the malicious foreign and domestic actors involved in disseminating it. For example, an innovative solution proposed by the Lithuanian-born initiative Debunk EU was applied in one of the major American platforms which tracks disinformation to make society more resilient to orchestrated disinformation campaigns.

4.5. EDUCATION

To ease adaptation to a new pandemic reality, several educational tools were used during the period of distance learning in Lithuania, Latvia, and Estonia. In fact, many students were forced to learn remotely and relied heavily on new digital solutions. The education ministries of the Baltic states and their subordinate agencies kept regular contact with the schools and tailored state-level support to the feedback from schools. This included short webinars, Facebook groups, answers to FAQs about school management, and organisation of studies. Guidelines for distance-learning environments were offered as well. Additionally, the Baltic states together with Sweden, Finland, Denmark, Norway, and Iceland announced that all of its digital education tools were free for use globally to support other countries' education systems during the COVID-19 crisis.

Particularly in Estonia, the sudden transition to distance education did not cause serious administrative or legal problems. Both the admission of students and the completion of studies took place throughout the year. In Lithuania, training resources were made available by Kaunas University of Technology and other suppliers, such as the EDUKA

Klasė digital environment licence, granted free of charge to all schools during quarantine, or the Google Suite for Education virtual training. In Latvia, E-klase (E-class) was the most widely used platform to access all important information, including guidelines for teachers for providing distance learning. Other platforms widely used were Uzdevumi.lv and Soma.lv, which allowed for online exercises and receiving immediate feedback. Additionally, educational TV channel Tava Klase (Your Class) for pupils in Latvia was created and has been on air since April 6, 2020. It supported pupils, parents, and teachers in the implementation of distance learning.

On the other hand, the COVID-19 outbreak exposed weaknesses in the education system in several other fields, such as the absence of broadband and computers needed for online education and the lack of teacher preparedness to use digital technologies for teaching activities and professional development. Data from the Teaching and Learning International Survey (TALIS) showed that before the pandemic, many schools in Latvia were not equipped enough to provide online learning[30]. Additionally, uneven development and provision of practical training at a distance and online learning was a problem. Further, a survey of local governments organized by the Latvian Association of Local Governments on the connection and speed of the Internet used in schools showed that there was wide divergence in connections and speeds. These lessons will be useful for the Baltic states, par-

[30] OECD, *Skills Strategy Implementation Guidance for Latvia. Developing Latvia's Education Development Guidelines 2021-2027*, https://www.oecd-ilibrary.org/education/oecd-skills-strategy-implementation-guidance-for-latvia_ebc98a53-en [22.06.2021].

ticularly for Latvia, as there are still significant gaps across urban and rural areas, and the use of technology could potentially reduce this gap. Moreover, local and regional governments have to ensure that digital technologies being utilized to keep students in school and offer ways for them to communication will not create inequalities.

To ensure digital resilience while safeguarding liberal democracies and individual rights as well as reducing inequalities, Baltic universities in collaboration with Microsoft in 2021 launched a digital skills improvement program that includes courses on business and data analysis and the development of applications.

4.6. BUSINESS

Despite economic uncertainty over coming years, progress in most areas of ICT continues in the Baltic states. Digital technology exploits several opportunities for socio-political development and economic growth. While the increase in COVID-19 infections in the Baltic states has resulted in a number of restrictions, several forecasts indicate that the recession in the next few years in Lithuania and Estonia would be one of the lowest in Europe. Without doubt, the improvement of economic results was due to the broad stimulus packages adopted by the governments of the Baltic states, the launch of vaccinations against COVID-19, and new technology development as well[31].

[31] M. Gołębiowska, *New restrictions and new (better) economic forecasts in the Baltic States*, IEŚ Commentaries no. 308, 8 January 2021, https://ies.lublin.pl/en/comments/new-restrictions-and-new-better-economic-forecasts-in-the-baltic-states/ [28.06.2021].

Several companies were forced to drastically rearrange their daily routines. Undoubtedly the crisis significantly accelerated the digitization of business as well. Many entrepreneurs were able to react quickly enough and reorient their activities using digital tools to deliver services online. They created and applied new innovative products and solutions for e-commerce and logistics. Several companies operating in health and technology ecosystems in the Baltic states have been actively involved in the fight against the COVID-19 pandemic. Additionally, according to the World Bank, FinTech institutions also helped in the response to COVID-19 by providing solutions to maintain social distancing, ensure business continuity, strengthen health-care outcomes, and prevent service disruptions. What is interesting is that the Baltic states attract FinTech companies from all over the world due to their favourable regulatory environment, co-operative attitude, smooth authorization process, forward-thinking regulations, access to a payment infrastructure, and a pro-innovative approach[32].

Some evidence lets us predict the prospects for economic development in the Baltic states after the crisis. For example, remote work may constitute a useful tool to increase productivity and efficiency or to reduce costs. Based on a survey of the Latvian Association of Information and Communication Technologies carried out during pandemic, 43% of companies have permitted working remotely, 45% of them have used e-invoices every day, and a quarter have used electronic

[32] Ecovis, *Despite the COVID-19 pandemic, the number of electronic money institutions continues to grow*, 7 December 2020, https://www.ecovis.com/lithuania/blog/2020/12/07/despite-the-covid-19-pandemic-the-number-of-electronic-money-institutions-continues-to-grow/ [30.06.2021].

signatures. Remote work may remain an alternative when traditional work circumstances cannot be obtained. However, the biggest challenge facing the market is uncertainty around how long the pandemic is going to last.

5. CONCLUSIONS

New technologies have been changing politics and societies. Modern forms of democracy based on innovation and development have been creating new technologies and have been acting as a catalyst and stimulant for novel policies.

Proponents for e-democracy stress the arguments that equal and accessible participation in decision-making is crucial for stable and sustainable socio-political development. To ensure a democratic environment, they suggest providing free and fair elections as well as reinforcing media freedom. There is a need for further change in terms of election procedures to guarantee security and democratic standards. There are e-tools such as e-voting which, while not always directly increasing participation, help keep voters engaged and give them freedom and flexibility.

Finally, digital technology may stimulate global visuality and e-identity. In Estonia, technology works as a basis for the national brand. The smart use of digital tools is an integral part of e-governance development for this country. It was preceded by a deliberate strategy, involving experimentation

and deep research on the issue of security. Also, the Estonian e-government ecosystem has an impact on international digital system architecture. Recently Benin and Ukraine have implemented an interoperability platform of Estonian origin crucial for modern public service development and further government initiatives.

The COVID-19 pandemic has forced an exponential increase in adoption of digital solutions for almost every aspect of society, including work, social life, and education. After the pandemic was announced, public health concerns were put on the general agenda of the Baltic states' parliaments and governments. They were forced to reorganize their activities not only due to the states of emergency declared, but also for sanitary reasons. During the pandemic, Baltic governments actively sought to protect their populations and respond effectively to urgent needs. Several emergency measures were adopted that have affected the enjoyment of human rights and freedom. In Lithuania, online voting has been once again debated, and only in June 2020, the parliament approved amendments to introduce online voting. Apart from electronic voting, the COVID-19 crisis accelerated the digitalisation of learning and work, communication, medical service, and business. Additionally, there are many positive examples of cooperation between governments and the private sector in the creation and development of the digital solutions. The above-mentioned examples illustrate that digital technology is the most crucial component of democratic ecosystem development during the ongoing unpredictability.

At the same time, the pandemic disrupted several economic sectors, risked increasing inequalities in education

and labour markets, and created a general difficulty for individuals to adapt and succeed in a fast-changing society. Involving digital technologies, even over a short time, may result in negative long-term effects on digital rights. Latvia, more than other Baltic states, needs to make the best use of new technologies to improve the productivity of its firms and sustain inclusive economic growth. It is projected that economic growth in Latvia will mainly come from the use of new technological processes, digitalisation, and the optimisation of processes, with the strongest job growth expected in high and medium-high technology sectors, such as information and communication, and occupations requiring high skill levels. To sum up, we should assess both the positive and negative consequences of digital transformations of the Baltic states.

Above all, ICT raises a number of questions about security and human rights. Governments are faced with a difficult dilemma: they have an obligation to protect their citizens from threats and ensure their privacy even while they must maximize the efficiency of service delivering[33]. It should be taken into consideration that digital infrastructure would not automatically ensure distributed innovations and equitable economic opportunities and growth. If people cannot use the service properly, the consequences could be unexpected. As Walker pointed out, the growing importance of "sharp power" meaning the regimes using technology and information to limit free expression, to spread confusion,

[33] G. Misuraca, *Rethinking Democracy in the "Pandemic Society" A journey in search of the governance with, of and by AI*, IFDaD 2020, http://ceur-ws.org/Vol-2781/invited1.pdf [22.06.2021].

and to make chaos may in fact put individual rights and democratic values at risk. This approach involves efforts at censorship or the use of manipulation to sap the integrity of independent institutions, takes advantage of the asymmetry between free and unfree systems and allows authoritarian regimes political environments in democracies[34]. As a result, to mitigate the risks and to contribute to the effectiveness of measures, it is essential for governments to build trust closely involving the civil society and general public and investing in transparency solutions because social trust and satisfaction with democracy are mutual dependent.

[34] Ch. Walker, *What Is 'Sharp Power'?*, "Journal of Democracy" 2018, vol. 29, no. 3, pp. 9-23.

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During the COVID-19 pandemic, democratic innovations have been proposed by the Baltic authorities as a remedy for reviving representative systems as well as for increasing social and political trust. Such apparatus includes e-parliament and e-voting systems aimed at reducing face-to-face contact between officials and citizens, mobile apps delivering news and alerts about COVID-19, educational tools used during the period of distance learning, as well as several innovative products and solutions for e-commerce and logistics.

At the same time, information and communication technology (ICT) raises a number of questions about security and human rights. These include concerns of interference in the electoral process, cyberattacks, or privacy and data protection. Moreover, it should be emphasized that digitalisation can create inequalities and exacerbate digital divides, particularly in education and labour markets.

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