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EDITORS' NOTE

The COVID-19 pandemic has markedly changed the world not only in the healthcare dimension but also in the political, economic and social spheres. Spatial extent, the number of infected and deceased people, duration as well as the long-term effects elicited by the pandemic – comparable to the Great Depression in the years 1929-1933 – justify talking about the pandemic as a macrosystemic event.

In the "Ante Portas – Security Studies" journal, we have published many articles on medical security in the past, but no other phenomenon in the recent history of the world has influenced the level of global security as much as the COVID-19 pandemic.

Therefore, the current issue of our periodic is devoted to the issue of the COVID-19 pandemic and its impact on changes in the global security architecture. The authors analyze this issue in various areas – geopolitical, military, economic, medical and social, pointing out the often very diverse implications of the pandemic on various aspects of life. In the current issue, we publish 10 articles by academics and experts from Poland, Romania, Denmark and Georgia. In the opening article by Alba Popescu, Romanian analyst, wonders how the pandemic affected the Global Geopolitical Game. Vakhtang Maisaia and others also analyzes the phenomenon of the pandemic from the perspective of geopolitics and information warfare. The next paper, by Anna Bałdyga, concerns the impact on the global economy. The social consequences of the pandemic, based on the example of Nepalese society, are analyzed by Carsten Sander Christensen. In the next text, Eka Beraia from Georgia wonders what the connections are between the pandemic and the Russian information war. The economic aspects of the pandemic and its impact on global supply markets are the subject of considerations by the next author, Przemysław Furgacz. Edyta Dziewięcka and others analyze the state of public awareness about the pandemic, using the example of Polish students. In the next article, Khatuna Chapichadze analyzes the phenomenon of anti-vaccine movements, which is important for security issues. In the next text, Aliko Guchua considers the SARS-CoV-2 virus as a potential biological weapon. In the last article, Leszek Markuszewski and others discusses the impact of the pandemic on changes in the Polish Health Care System.

We hope that the latest issue of the "Ante Portas – Security Studies" journal, which covers the topic of the pandemic in all articles, but analyzes it from the perspective of military, political, medical, economic and social security, will interest our readers and will constitute an intellectual contribution to research on the phenomenon of the COVID-19 pandemic.

Jakub Żak
Editor-In-Chief

I. ARTICLES

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Alba Iulia Catrinel POPESCU¹

Romania

THE IMPACT OF THE SARS-COV 2 PANDEMIC ON THE GLOBAL GEOPOLITICAL GAME

***Abstract:** Human history has been written by epidemics and technology. While technologies cemented the world order, epidemics undermined it, heralding its end. So it was with the great plague epidemics of Antiquity, the Middle Ages, and the great Spanish flu of the modern era. This article aims to analyse the impact of the current SARS-CoV-2 pandemic on the global geopolitical game. Or, in other words, whether this disaster has been powerful enough to herald the ‘dawn’ of a new historical era or whether it will merely be a reset of the international system, like many others in contemporary history.*

***Keywords:** SARS-CoV-2, reset, world order, international system, geopolitics, geoeconomics.*

Looking back on humanity's history, we see that the great epidemics heralded the end of one historical epoch and the beginning of a new one. Antiquity, with its ‘Pax Romana’ (‘Roman peace’) and slave republics, was wiped out by the Antonine plague (165-180), which killed over 5 million people. The early Middle Ages and the greatness of Byzantium faded into the lime pits where millions of victims of Justinian's plague (541-542), which killed about 10% of the world's known population, were thrown. In turn, the late Middle Ages ended in the funeral corteges of the 'black death', the bubonic plague epidemic (1346-1353), which wiped out 60% of Europe's population.

¹ Alba Iulia Catrinel Popescu, PhD, National Defence University (Romania). Email: albabopescu1@gmail.com

And, the Renaissance collapsed in the face of the millions of deaths of the plague epidemic in the second half of the 17th Century. Beginning with the age of Enlightenment and industrialization, with the development of sanitation and hygiene rules, plague epidemics decreased in intensity, but were replaced by another calamity – influenza. At the end of the first global conflagration of the 20th Century, the great Spanish flu (1918-1920) killed more citizens of the planet than all the war years, putting an end to the bourgeois romanticism of the ‘Belle Epoque’ and heralding the ‘entry on the scene’ of the Trotskyist-Bolshevik and Nazi left-wing totalitarianism. And not only that – against the backdrop of this medical cataclysm, in 1920 the foundations of global health governance were laid, with the establishment of the Health Organization of the League of Nations, which later in 1948 became the World Health Organization (WHO).

Since the end of 2019, humanity has been facing a new influenza, which has reached pandemic proportions due to technology-driven human mobility and urbanization-driven human agglomeration. A pandemic that has swept across every continent except Antarctica and has so far infected over 632.5 million people, killing 6.5 million of them². A pandemic produces an atypical viral infection with an unpredictable course, and a multitude of clinical pictures but with a low lethality of only 1,027%. A pandemic created by a beta-coronavirus called SARS-CoV-2/COVID-19³, which officially emerged in November 2019 in a fish market in the Chinese city of Wuhan, and through a complex of mismanagement errors ended up infecting an entire world and shutting down the economies of major powers. This article aims to identify whether the current pandemic could be the trigger for a new historical era and, if so, where might we be heading. Or will it only be followed by a common reset of the international game? Or, in other words, what is the impact of the SARS-CoV-2 pandemic on the global geopolitical game?

The geopolitical and geoeconomic impact

Let's take into consideration the thesis of French geopolitician Jacques Attali, which argues that human history is the result of the competition for power between the three non-state ‘orders’ – the priestly, the military-imperial and the economic one. The current economic crisis heralds great changes in the world's power cartel. As the real world order is commanded by the economic power concentrated in the ‘heart of the world’ – as Attali calls the pulsating core of global economic unipolarity – a change of its location, from one port-city to

² *COVID-19 Coronavirus Pandemic*, <<https://www.worldometers.info/coronavirus/>>, (22.10.2022).

³ Acronym for coronavirus disease 2019.

another, is possible only in the context of major financial crises. Specifically, the current 'heart of the world', in the context of the post-pandemic and intra-war economic crisis, might be about to leave its current host, the port city of Los Angeles, and move across the Pacific Ocean. It would be a move in the logic of the westward dynamic of this 'heart' which, as Attali stated, was born in the 13th Century in the Belgian city of Bruges and after a few continental European locations moved to London, then Boston, New York and Los Angeles. Or, the most likely future location of the world's economic and power centre can only be in an Asian port city. Such a shift would represent a reconfiguration of the global hierarchy of continental power. Thus, Asia could take the place of North America at the top of the global power pyramid and Europe could lose its chances of regaining its former global stature, at least for the foreseeable future. Also, if Attali is to be believed, the economic crisis triggered by the pandemic and amplified by the decoupling of the Russian economy from the Western market could contribute to the birth of a polycentric world dominated by nine nations: USA, Mexico, Brazil, China, India, Russia, the European Union, Egypt and Nigeria, with the proviso that Nigeria, China and India could undergo processes of fracturing similar to the implosion of the USSR. Also, countries such as Japan, Indonesia, Korea, Australia, Canada and South Africa could play important roles as major regional powers. The time horizon for the rest of the global geopolitical game envisaged by Attali would be 2035.

Moving beyond the literature of anticipation and back to the real world, we have to say that both at the level of human organisms and societies, the SARS-CoV-2 pandemic has hit vulnerable, already dysfunctional areas.

The European Union – the geopolitical battleground of the US-China-Russian Federation trilateral

The "biggest test since the Second World War", as the pandemic crisis has been called by UN Secretary-General António Guterres, has called into question European unity and solidarity and the ability of the United Europe to withstand shocks. Unfortunately, the answer was negative.

Although Italy called for the activation of the *European Union Civil Protection Mechanism* amid the avalanche of sickness cases in the first months of the disaster, the reaction of other European countries was virtually non-existent. Instead, the first state to respond to Italy's call for help was China, followed by the Russian Federation and the USA, which as of 12 March 2020, sent medical personnel, dozens of tons of medical supplies, including equipment for intensive care units, medical protective equipment and antiviral

drugs to Rome⁴. Subsequently, extra-European aid also reached other countries severely hit by the pandemic, such as Spain, France, Poland, and the Netherlands⁵.

The ability of the three major powers of the international system to intervene and the Europeans' lack of reaction demonstrated that, geopolitically, the EU is not a viable player. More precisely, United Europe has the status of a geopolitical 'theatre'/'battlefield' where the competition within the trilateral of the ordering powers of the current uni/multipolar system acts. This has been verified in the context of the Russian-Ukrainian War, in which the independent geopolitical player called Europe is practically non-existent.

Moreover, the failure of European solidarity in the face of the pandemic has amplified Euroscepticism. As I said in the book called *Geopolitics and Pandemics*, although Ursula van der Leyen, President of the European Commission, sent on behalf of the EU 'heartfelt apologies' to Italy, for the lack of support during the early days of the pandemic⁶, a survey conducted by the *Dire Agency* in Italy on 12-13 March 2020 showed that "88% of Italians believe that the EU has failed in its mission to support Italy in times of crisis". Also, "67% of respondents believe that joining the EU has been a loss for Italy⁷". And, an opinion poll, conducted on a representative sample of the Italian population between 9-10 April 2020 by the *Tecne Agency*, showed an increase in the share of Eurosceptics by a further 2%, reaching 69%⁸, of whom 49% say Italy should leave the EU!⁹ At present, the Euroscepticism amplified by the European failure to manage the pandemic is fully reflected in the emergence of anti-system leaders and parties and in the consolidation of parties

⁴ E. Braw, *The EU Is Abandoning Italy in Its Hour of Need*, <<https://foreignpolicy.com/2020/03/14/coronavirus-eu-abandoning-italy-china-aid/>> (20.11.2022); A. Nikolova, *Russian COVID-19 aid to Italy: PR stunt or covert operation?*, <<https://www.euractiv.com/section/defence-and-security/news/russian-COVID-19-aid-to-italy-pr-stunt-or-covert-operation/>> (20.11.2022); *USAFE supports Italy COVID-19 response*, <<https://it.usembassy.gov/usafe-supports-italy-COVID-19-response-march-22-2020/>> (11.09.2022).

⁵ J. Valero, *EU allocates Chinese aid to Italy to fight against the pandemic*, <<https://www.euractiv.com/section/coronavirus/news/eu-allocates-chinese-aid-to-italy-to-fight-against-the-pandemic/>> (11.09.2022).

⁶ J. Henley, *EU offers 'heartfelt apology' to Italy over coronavirus response*, <<https://www.theguardian.com/world/2020/apr/16/eu-offers-heartfelt-apology-italy-coronavirus-response-herd-immunity>> (11.09.2022).

⁷ T. Coratella, *Whatever it takes: Italy and the COVID-19 crisis: Italy's response to the virus is starting to reshape its politics*, <https://ecfr.eu/article/commentary_whatever_it_takes_italy_and_COVID_19_crisis/> (20.11.2022).

⁸ *ANALYSIS: Could Italy's coronavirus crisis boost euroscepticism and the far right?*, <<https://www.thelocal.it/20200420/italy-coronavirus-crisis-boost-far-right-euroscepticism>> (20.09.2022).

⁹ A. I. C. Popescu, *Geopolitică și pandemie*, București 2020, pp. 97-98.

with a conservative and sovereigntist discourse, such as the *Sweden Democrats* party led by Jimmie Åkesson and *Brothers of Italy* party led by Georgia Meloni, winners of the September 2022 elections in Sweden¹⁰ and Italy¹¹, the victory in this spring's elections of the Fidesz-KDNP alliance of Hungarian Prime Minister Viktor Orbán¹² or the victory this summer in the by-elections in the Spanish province of Andalusia of the Popular Party. Victory comes to consolidate the conservative Spanish right after two other victories in Madrid in May 2021 and another in Castile and Leon in February 2021¹³. Moreover, before the outbreak of the pandemic, Euroscepticism had registered a significant increase across the European community. In this regard, in 2019, “statistics showed that 16%, meaning one of six Europeans, voted with Eurosceptic far-right parties and, 33%, or one of three Europeans, voted with Eurosceptic far-left parties”¹⁴. This means that, as of 2019, 49% of Europeans were Eurosceptic! If we consider only the rise of Euroscepticism in Italy as a result of pandemic shock, we may say that in May 2020 the percentage of European Eurosceptics has exceeded the critical threshold of 50%¹⁵. And, it will increase further, amidst the economic crisis and subsequent poverty triggered by the grim and dysfunctional economy following the Russian-Ukrainian War.

Nor should the effect of the pandemic on the stability of the Eurozone be overlooked, again, with the solidarity of European states hardly being tested. The inter-European differences over the ‘corona-bonds’ – the financial mechanism by which the Eurozone debt was to be divided among all Eurozone states – are well known. Germany, Finland and the Netherlands rejected this mechanism. Moreover, Germany's insistence on using the *European Stability Mechanism* (ESM) – the Eurozone's €500 billion bailout fund created after the last sovereign debt crisis, which imposes strict conditions on countries seeking assistance in its rules for accessing it – has heightened tensions between

¹⁰ D. Crouch, *Swedish rightwing on verge of narrow election win but waits on final tally*, <<https://www.theguardian.com/world/2022/sep/12/swedish-rightwing-on-verge-of-narrow-election-win-but-waits-on-final-tally>> (13.09.2022).

¹¹ G. Jones, *Italy's right heads for clear election victory, final polls indicate*, <<https://www.reuters.com/world/europe/italys-right-heads-clear-election-victory-final-polls-indicate-2022-09-09/>> (13.09.2022).

¹² *Hungarian Parliamentary Election Results*, <<https://www.rferl.org/a/hungary-election-2022/31785004.html>> (13.09.2022).

¹³ *Spain's Popular Party boosted by Andalusia victory 18 months before general election*, <<https://www.euronews.com/2022/06/20/spains-popular-party-boosted-by-andalusia-victory-18-months-before-general-election>> (13.09.2022).

¹⁴ J. Henley, *Support for Eurosceptic parties doubles in two decades across EU*, <<https://www.theguardian.com/world/2020/mar/02/support-for-eurosceptic-parties-doubles-two-decades-across-eu>> (11.09.2022).

¹⁵ A. I. C. Popescu, *op. cit.*, p. 98.

Eurozone countries. In this regard, the criticism of Italian Prime Minister Giuseppe Conte, who did not sign the final statement, and the statement of French President Emmanuel Macron, who questioned the ‘survival of the European project’, are worth mentioning¹⁶.

Or, the failure of the massive funding program announced on 19 March 2020 by the European Central Bank (ECB), which allowed Eurozone countries to spend more to cope with the impact of the virus. The ECB's €750 billion program was to buy corporate and government bonds of European countries during 2020, including Greek government bonds, which were considered unsafe to invest in. The failure of this program was triggered by the decision of the *Deutsche Bundes-verfassungsgericht* – Germany's Constitutional Court, which ruled that the ECB's bond-buying program to stabilize the Eurozone partly violates the German Constitution, with the Bundesbank having the largest stake in the ECB¹⁷.

On top of the economic burden generated by the pandemic, the economic consequences of the Russian Federation's war of aggression in Ukraine have been superimposed, so that the Euro has now fallen to a historic low against the US Dollar, and has been overtaken by the US Dollar¹⁸. Inflation reached 8.9% in July 2022, and the Eurozone's recession is already a certainty¹⁹.

This economic collapse overlaps with the pre-existing difficult financial situation of the EU which, at the end of 2018, recorded the highest external debt globally, at \$29,270 billion and gold, and currency reserves worth only \$740 billion²⁰. And, also overlaps with the pre-existing structural crises of European construction such as:

- a. the identity crisis, generated by the unknown political status of the European ‘project’ – federation, confederation, NGO, etc.;
- b. the leadership crisis, generated by the rift between the ruling elites and the European people;

¹⁶ J. Barnes, *EU meltdown: Italy slams Merkel for lack of unity – Macron says coronavirus could end bloc*, <<https://www.express.co.uk/news/world/1261075/EU-coronavirus-summit-Italy-economy-Angela-Merkel-Emmanuel-Macron-collapse>> (11.09.2022).

¹⁷ *German court criticises European Central Bank crisis bond-buying*, <<https://www.bbc.com/news/world-europe-52542993>> (11.09.2022).

¹⁸ *Euro falls below parity with the dollar. What's the impact?*, <<https://apnews.com/article/dollar-euro-parity-explainer-9f7eb3fe4b87704d7f9e77a0f8c7f123>> (26.09.2022).

¹⁹ J. Cable, *Eurozone likely entering recession as price rises hit demand*, <<https://www.reuters.com/markets/europe/euro-zone-likely-entering-recession-price-rises-hit-demand-pmi-2022-09-23/>> (26.09.2022).

²⁰ *CIA WORLD FACTBOOK*, <<https://www.cia.gov/library/publications/the-world-factbook/>> (01.09.2022); A. I. C. Popescu, *Analize in comode*, Bucuresti 2020, pp. 82-85.

- c. the ideological crisis generated by the dichotomy between the new left-wing progressivism of the Brussels elites and the Christian conservatism of an important part of the European electorate;
- d. the geopolitical reality of the 'two-speed' Europe: of the Western 'core', corresponding to the core of the EU's founding states, and of the 'Eastern periphery', made up of the satellite states of the former Soviet Empire;
- e. the crisis of illegal cross-border migration, which has produced a great rift among EU states and fuelled Euroscepticism through a sense of civilizational and cultural aggression, amid the subversion of the European Christian identity;
- f. the fractionalization of the United Europe through the emergence of regional groups of common language and historical past: the 'neo-Hanseatic league' around Germany and the Netherlands, the 'Latin arc' around France, the 'neo-Habsburgs' around Austria, the 'Visegrad group' etc.

What could be the consequences of this state of affairs? The undermining of the Federal Europe project could be followed by any of these three scenarios:

1. The EU is left by some of the states, on the Brexit format, and the process of European enlargement and integration is stopped;
2. Maintaining the EU in the current format, but with major dysfunctions and tensions which, after a while, could lead to a profound reform of the Union followed by the abandonment of the federal project and its replacement with another formula, of confederative (Europe of Nations) or geo-economic (European Economic Community) type of association;
3. The dismantling of the current union format by mutual agreement followed by:
 - a. Abandoning the project and returning to the classical European nation-states;
 - b. regrouping the European states in the 'two-speed Europe' format with the Western states grouped within the borders of the former European Economic Community, and the Eastern states grouped within the borders of the Three Seas Initiative (3SI) format;
4. geo-economic and geopolitical regionalization: the 'Latin Arc' in the south, the 'New Hanseatic League' in the north-west, the 'neo-Habsburgs' in the centre, and the North-South/Sanitary/3SI Corridor in the east²¹.

²¹ A. I. C. Popescu, *Geopolitică...*, pp. 47-49.

USA – the hegemon of the uni/multipolar system

The COVID-19 pandemic broke out amid a highly tense domestic situation generated by the power struggle between the two major US parties and the political and geopolitical stakes of the 2020 election year. Although, at the end of 2019, the Republican administration of Donald Trump had reported an undeniable economic success, which was to become the rhetorical focus of the presidential campaign in the following autumn, the poor management of the pandemic weighed heavily on the loss of the second term for the president in question.

However, the legitimacy of the Joe Biden Democratic administration was intensely contested by supporters of the previous president, who charged massive fraud in the electoral process, particularly in the electronic and mail-in ballots, accepted as a preventative measure in pandemic conditions²². This deepened the rift between the two camps, and radicalized the political discourse to the point where loyalists of the former president were labelled as terrorists by some Democratic leaders²³ and Republican political leaders raised the issue of secession of the Republican states²⁴. Ideas are reiterated in the context of campaign rhetoric related to the legislative elections scheduled for November this year.

On the economic front, the pandemic has had enormous costs. Not at all surprising if we remember that the US economy has been in decline for decades due to two major structural causes: the ageing of the US population, which has led to a subsequent increase in healthcare costs, and the negative balance between federal revenues and government costs²⁵. Thus, although measures to counter the effects of the pandemic on the US economy and the incomes of vulnerable

²² B. McCarthy, A. Sherman, *The faulty premise of the '2,000 mules' trailer about voting by mail in the 2020 election*, <https://www.politifact.com/article/2022/may/04/faulty-premise-2000-mules-trailer-about-voting-mai/?gclid=CjwKCAjwhNWZBhB_EiwAPzlhNteapfPwPetAJMuDgMPnYm6nvShlPyRx4J_S6ABrBHd6L3x-67ZF2xoCUA4QAvD_BwE> (01.09.2022).

²³ *Majority Leader Schumer Floor Remarks Announcing The Senate Will Vote This Week On Moving Forward With The Domestic Terrorism Prevention Act*, <<https://www.democrats.senate.gov/news/press-releases/majority-leader-schumer-floor-remarks-announcing-the-senate-will-vote-this-week-on-moving-forward-with-the-domestic-terrorism-prevention-act>> (01.09.2022).

²⁴ N. Mizan, *Texas Republicans want a vote on 'Texas Independence.' But can Texas secede from the union?*, Politifact, <<https://www.politifact.com/article/2022/jun/27/texas-republicans-want-vote-texas-independence-can/>> (01.09.2022).

²⁵ *Why is the National Debt so High?*, <https://www.pgpf.org/national-debtclock?gclid=CjwKCAjwhNWZBhB_EiwAPzlhNs16Uss5NhbDsXypXgyTIdMQ__A361v0MiChrqVKsdpATpUuTMOLMBoC3tgQAvD_BwE> (01.09.2022).

populations were unprecedented in the history of the state, at the end of the first year of the pandemic, the US reported negative GDP growth rates of -3.5% ²⁶.

Although later, in 2021, the US reported a return of the GDP growth rate to positive values of 5.7% ²⁷, the decline of the US economy generated by the pandemic was deepened by the geo-economic consequences of the Russian-Ukrainian War, so that today the national debt of the federal state has exceeded \$30 trillion²⁸ (and a gold and currency reserve that on 31 December 2017, long before the pandemic crisis, was only \$123.3 billion²⁹), inflation exceeds 8.6% and, the price of oil is at a record high. A price that will rise if OPEC implements its plan to reduce oil extraction by 2 million barrels a day³⁰.

How much will the poverty of the American population matter in the future political and geopolitical game of the federal state? Hard to predict. As of this writing, Republican candidates in the November 2022 US Congressional by-election are credited with success³¹. What would it mean for the Senate and Congress to be controlled by Republicans? Possibly blocking or hindering the work of the Biden administration, including its economic, foreign and defence policies, as well as the resurgence of anarchist and extremist political movements on the left³² or right³³, which can dynamite the internal stability of the federal state.

All this in a state whose risk of secession has been theorized since the early 20th century by the American geopolitician Frederick Jackson Turner (1861-1932), who said in his article, titled *Is Sectionalism in America Dying Away?*³⁴, that secessionism not only preceded the building of the federal state, but has survived throughout history, and will not go away, even if the future of the federation will hang in the balance.

²⁶ GDP growth (annual %) – United States, <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=US&name_desc=false> (01.09.2022).

²⁷ *Ibidem*.

²⁸ *Why is the National Debt so High?*, *op. cit.*

²⁹ United States, <<https://www.cia.gov/the-world-factbook/countries/united-states/#economy>> (09.09.2022).

³⁰ OPEC+ plans major oil production cut despite US pressure, <<https://www.aljazeera.com/news/2022/10/5/opec-heads-for-large-oil-supply-cuts>> (06.10.2022).

³¹ D. Petka, *The Republicans Could Win the U.S. Midterms. Here's What that Means for the World*, <<https://foreignpolicy.com/2022/06/02/gop-congress-midterms-foreign-policy-ukraine-taiwan/>> (01.09.2022).

³² *What is Antifa?*, <<https://www.aljazeera.com/news/2020/06/antifa-200601170721571.html>>; *Measuring Occupy Wall Street's impact, 5 years later*, <<https://www.chicagotribune.com/nation-world/ct-occupy-wall-street-s-impact-20160917-story.html>> (01.09.2022).

³³ M. Wendling, *Proud Boys and Antifa – who are they and what do they want?*, <<https://www.bbc.com/news/election-us-2020-54352635>> (01.09.2022).

³⁴ F. J. Turner, *Is Sectionalism in America Dying Away?*, “American Journal of Sociology”, vol. 13, 661-675, p. 1908.

China – the main competitor for the hegemon status of the uni-multipolar system

The COVID-19 medical crisis was a great test of resilience for the Chinese state's political and military leadership. There were three major challenges. As the state of origin of the pandemic, with global hegemonic ambitions, the largest worldwide population, interethnic and interconfessional tensions and major problems in managing the discrepancy between the urbanized, modern, cosmopolitan coastal regions and the rural, traditionalist central regions, the challenges were:

1. the population's confidence in the state's ability to manage the pandemic could have ended up in questioning the country's unity;
2. the confidence of international partners in the honesty and good intentions of the Chinese state;
3. the management of the medical crisis that threatened to affect a state with a population of over 1.3 billion and to disengage China economically from its trading partners.

Until 31 December 2019, when the Chinese authorities officially reported to the local WHO office that they were facing pneumonia generated by unknown causes, the Beijing authorities had shown opacity both in their relations with their people and with the international community. This behaviour has been severely reprimanded by its population, especially after the death, on 7 February 2020, of ophthalmologist Li Wenliang. Dr Wenliang had been punished by the authorities for having informed his fellow citizens about the consequences of infection with a 'SARS-like' virus. So strong was the public outcry that, in an unprecedented gesture, on March 20, 2020, the Beijing government issued a 'solemn apology' to the bereaved family, defusing the general mood of anger³⁵. On the other hand, the non-transparent behaviour of the Chinese authorities during the onset of the pandemic and accusations that the pandemic was generated by a virus that escaped from the laboratories of the *Institute of Virology* in Wuhan have generated acid criticism in the international mass-media and even among political leaders³⁶. But, through a sustained and coordinated effort to support countries severely affected by the pandemic, China has successfully countered the image disaster. One such case was Italy,

³⁵ *Li Wenliang: Coronavirus death of Wuhan doctor sparks anger*, <<https://www.bbc.com/news/world-asia-china-51409801>>; *China exonerates Li Wenliang, doctor who warned of coronavirus*, <<https://www.japantimes.co.jp/news/2020/03/20/asia-pacific/science-health-asia-pacific/china-exonerates-doctor-li-wenliang-COVID-19/#.XpbIs8gzaUk>> (10.09.2022).

³⁶ R. Sharp, J. Elsom, J. Tapsfield, *China's 'Bat Woman' Shi Zhengli denies 'trying to defect with confidential files' as bombshell 'Five Eyes' Western intelligence dossier claims country lied about coronavirus transmission and refused to help other countries prepare a vaccine*, "Daily Mail", 02.05.2020.

where the population ended up being grateful to China for its support during the difficult months of the pandemic and considered it a friendly state³⁷.

On the economic front, in 2020, China recorded an economic contraction of 6.8%, the first contraction in GDP (PPP) since 1992³⁸. For example, one of the victims of the pandemic year was one of the major contributors to the national GDP, *Evergrande Real Estate*, the real estate developer with over 1300 projects in more than 280 cities in China³⁹, which went bankrupt. However, at the end of the pandemic year 2020, China reported economic growth, albeit of only 2.24%, and a year later, in 2021, the Asian economic colossus returned with an economic growth of 8.11%⁴⁰. All of this, while according to the CIA WorldFactbook, China holds the world's largest reserves of currency and gold, worth over \$3.236 trillion (31 December 2017 est.), and an external debt of \$2.027 trillion (2019 est.)⁴¹.

China has therefore passed the test of resilience in the face of the pandemic, and its neutrality towards the Russian-Ukrainian War has given it an advantageous negotiating status both vis-à-vis the Western bloc and the Russian Federation, with which it cooperates within the BRICS and Shanghai Cooperation Organization multipolar formats.

The Russian Federation – the third major global player, which before the war it waged in Ukraine was disputing with China its status as the largest continental power and hegemon of Central Asia, and with the U.S. its status as hegemon of Europe

In the Russian Federation, the pandemic has not had significant political consequences. Economically, however, the virus has caused the federal economy to contract, with April 2020 considered the most disastrous month for the Russian economy in the modern history of the state⁴². As an economy built mainly on the export of raw materials, especially energy, it has been affected by

³⁷ *Polls show 52% of Italians view China as a friendly country*, <<https://news.cgtn.com/news/2020-04-20/Polls-show-52-of-Italians-view-China-as-a-friendly-country-PQcD8DIHTO/index.html>> (11.09.2022).

³⁸ The year the Chinese government made its first international reports.

³⁹ *Evergrande: China property giant misses debt deadline*, <<https://www.bbc.com/news/business-58579833>> (06.09.2022).

⁴⁰ *China GDP Growth Rate 1961-2022*, <<https://www.macrotrends.net/countries/CHN/china/gdp-growth-rate>> (06.09.2022).

⁴¹ *China*, <<https://www.cia.gov/the-world-factbook/countries/china/#economy>> (06.09.2022).

⁴² M. Kotova, D. Shira, *The Social & Economic Impact Of COVID-19 On Russia And Recovery Potential*, <<https://www.russia-briefing.com/news/social-economic-impact-COVID-19-russia-recovery-potential.html>> (05.09.2022).

the 'oil factor'⁴³, which has taken its toll in the context of the global lock-down. At the end of 2020, the Russian Federation reported a negative GDP growth rate of – 2.68%. However, the geopolitical context of 2020, marked by China's international isolation and friction between Europeans and Americans, positioned the Russian Federation as a preferential trading partner of both, so that in 2021 the federal economy has returned to the positive GDP growth rate of 4.82%⁴⁴.

But the war of aggression unleashed by the Kremlin in Ukraine, followed by Russia's economic decoupling from the Western market, will have major consequences for the economy, forecast by the IMF to be – 6% in 2022 and – 3.5% in 2023. Moreover, currently, there is a trend towards a reconfiguration of the global geopolitical game and a return to bipolarity between the Western bloc and the Multipolar bloc of emerging powers.

Emerging geo-economic areas

On the economic front, the pandemic has kick-started the recession of an 'overheated' global economy that was hiding structural deficits. Thus, at the end of 2019, industrialized emerging economies such as Turkey, Indonesia and Argentina were already suffocating under the burden of huge debts, while other, fast-growth-oriented economies such as China, had succeeded in creating a modern industrial system at the cost of escalating national debt up to 300%, and developed economies with chronic budget deficits and 'hot' financial markets had accumulated external debts that could not be repaid in a foreseeable time⁴⁵.

The biggest losses were in economic branches such as tourism, transport, primary industries, automotive industry, film industry, leisure and beauty industries, leather and garment industries, electronic and household appliance industries, etc. Even though there was a slight global economic recovery in 2021, the military invasion of Ukraine by the Russian Federation and the economic sanctions imposed on the aggressor by the international community wiped out the post-pandemic recovery efforts.

Obviously, in a recession, the risk of inflation increases exponentially. In the most recent *McKinsey Global Economic Situation Survey*, respondents

⁴³ *Three Crisis Scenarios: A Forecast*, <<https://roscongress.org/en/materials/stsenarnyy-prognoz-tri-varianta-krizisa/>> (07.09.2022).

⁴⁴ *Russia GDP Growth Rate 1990-2022*, <<https://www.macrotrends.net/countries/RUS/russia/gdp-growth-rate>> (06.09.2022).

⁴⁵ *Three Crisis Scenario...*; A. I. C. Popescu, *Geopolitică...*, p. 62.

listed inflation as the biggest risk for 2023, except for China, which listed the COVID-19 pandemic⁴⁶.

As expected, the worst affected economies were those of developing countries with fragile economies based on extractive primary industries, unable to absorb the shocks of quarantine and global recession. According to data provided by the World Bank, globally, in 2020, temporary unemployment increased by 70% among graduates with the last level of primary education. Also, income losses were higher among young people, women, the self-employed and casual workers with lower levels of formal education. In turn, small enterprises, informal enterprises and enterprises with limited access to formal credit were the most affected by income losses due to the pandemic⁴⁷. Much more resilient, the economies of developed countries have adapted to the challenges of the pandemic, even at the cost of structural transformations such as the shift to the intangible and digital economy.

Thus, we can say that, at a global level, the pandemic crisis and, later, the economic consequences of the Russian-Ukrainian War, have deepened the economic disparities between rich and poor countries, the latter being dependent, since the pre-pandemic period, on foreign aid for survival. Or, to put it another way, the pandemic and the war widened the gap between the technological world of the Northern hemisphere and the developing world of the Southern hemisphere. An aspect that increases the likelihood of new waves of migration from the poor South to the rich and ageing North.

In this regard, the most recent African Development Bank report states that ‘Africa will need at least \$432 billion to address the effects of COVID-19 on its economies and the lives of its people – resources it does not have’, given that ‘around 30 million people in Africa were pushed into extreme poverty in 2021 and about 22 million jobs were lost in the same year because of the pandemic. And the trend is expected to continue through the second half of 2022 and into 2023. The economic disruptions stemming from the Russian-Ukrainian War could push a further 1.8 million people across the African continent into extreme poverty in 2022. That number could swell with another 2.1 million in 2023’⁴⁸. Where could this situation lead, taking into consideration that the EU

⁴⁶ *The coronavirus effect on global economic sentiment*, <<https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/the-coronavirus-effect-on-global-economic-sentiment>> (05.08.2022).

⁴⁷ *Chapter 1. The economic impacts of the COVID-19 crisis*, <<https://www.worldbank.org/en/publication/wdr2022/brief/chapter-1-introduction-the-economic-impacts-of-the-COVID-19-crisis>> (05.08.2022).

⁴⁸ *African Economic Outlook 2022: Africa’s 2021 economic rebound impacted by lingering COVID-19 pandemic and Russia-Ukraine war*, <<https://www.afdb.org/en/news-and-events/press-releases/african-economic-outlook-2022-africas-2021-economic-rebound-impacted-lingering-COVID-19-pandemic-and-russia-ukraine-war-51865>> (05.08.2022).

and US, the main donors for organizations funding African states, are now in a serious economic crisis? Either to a total failure of the African states, followed by chaos, famine and a huge humanitarian crisis or by a complete surrender of the very vulnerable and rich Sub-Saharan Africa into Beijing's hands and the total transforming of the huge subcontinent into the 'second China'. And what might mean that? It might mean that Europe will be neighbouring Russia's sphere of influence in the East, China's one in the South, and the aquatic masses of the Atlantic Ocean and the Arctic Ocean in the rest!

International institutions: WHO, UN

The worst impact of the pandemic has been recorded by the World Health Organization (WHO), the institution responsible for global public health governance. As we state in the book we are dedicated to the analysis of the geopolitical impact of the pandemic, 'as a result of the undue delay with which the WHO officially announced data on the nature of the virus, its transmission pathway, the severity of the infection, the alert on the public health emergency of international concern, the upgrading to pandemic level, the Agency is facing its most serious global credibility crisis since its establishment on 7 April 1948. Suspicions stem from the close links between WHO Director-General Dr Tedros Adhanom Ghebreyesus and China. There are accusations against Dr Tedros and the WHO that all these delays, which in turn led to delays in the international community's efforts to counter the disaster, were made at China's express request. If the WHO has not been informed by Beijing about the true aetiology of respiratory infections, China faces serious charges of facilitating the outbreak of the pandemic with all its subsequent consequences. If the WHO knew the nature of the etiological agent and did not immediately confirm the official human-to-human airborne transmission of the virus and avoided declaring the Chinese outbreak a Public Health Emergency of International Concern, the Agency bears a huge responsibility for the international disaster'⁴⁹. The discrediting of the WHO has also brought with it a certain discrediting of the UN, amplifying the risk of institutional 'paralysis' through the inability to implement programs, especially compulsory vaccination programs in the event of a future pandemic.

Social impact of the COVID-19 medical crisis

At the social level, the COVID-19 medical crisis has affected human welfare both at the economic level, through a decrease in the quality of life, and at the community level, through the restriction of individual and civic

⁴⁹ A. I. C. Popescu, *Geopolitică...*, p. 82.

freedoms, by limiting citizens' participation in political and administrative decision-making and the exercise of state power.

A report by the United Nations Development Program (UNDP) states that in the event of a prolonged crisis, 'governments of small and medium-sized states, faced with the spectre of inability to pay, could resort to sacrifice curves, suspending the payment of pensions and salaries to budget staff, suspending funding for non-productive sectors of society. All this translates into accelerated poverty and a marked decline in the quality of life of large masses of people, which could have a major impact on the security environment through increased crime and violent crime, intensified social movements of protest, civil disobedience and insurgency, illegal cross-border migration, etc.'⁵⁰. To these aspects must be added the impact on the educational process in poor countries, the lack of means of digital education, the disruption of cultural, sports, confessional and civic activities, banned during the period of the quarantine of cities, and the social phenomenon of alienation, the social distance imposed on man, a social being by definition.

In terms of public health, in the first months of the pandemic, the impact was devastating. In practice, the COVID-19 pandemic revealed the limits of national healthcare systems worldwide. For example, in Lombardy, where the most efficient health system in Italy was operating, or in large metropolises such as New York, Brazil, Mexico City, etc. It also showed that in the face of an avalanche of illnesses, a medical system, however efficient it may be, can only survive if it has stocks of health and medical supplies, protocols for action, reliable information and, above all, inter-human solidarity and international support. In terms of medical scientific research, however, the pandemic has been a catalyst, both for research efforts and for competition and technological nationalism⁵¹.

**Instead of conclusions: was the SARS-CoV-2 pandemic the trigger
of a new historical epoch or was it merely a reset
of the global geopolitical game?**

Therefore, was the SARS-CoV-2 pandemic the trigger of a new historical epoch? The answer is negative. Although it started strongly, generating major dysfunctions, many amplified by the WHO's faults, and highlighted the vulnerabilities of systems anchored in routine, the Chinese flu pandemic did not

⁵⁰ A. I. C. Popescu, *Impactul crizei medicale generate de pandemia COVID-19 asupra actorilor statali*, "INFOSFERA" – Revista de studii de securitate și Informații pentru Apărare", Vol. 12, No. 3/2020.

⁵¹ *Sputnik V: What we know about Russia's coronavirus vaccine*, <<https://www.aljazeera.com/news/2020/08/sputnik-russia-coronavirus-vaccine-200813070859021.html>> (13.09.2022).

have the force of such a transformation. The explanations are numerous and have to do primarily with globalization. The real-time transmission of information through the global media and the immediate access of the general public to information through the internet, the risks of political costs of unpopular measures and the uprising of the disgruntled masses, the increased speed of reaction of governments, the advance of medical and health technology, all contributed to the pandemic's extinction before it triggered major transformations of the world order. Thus, unlike the major epidemics listed at the beginning of this article, the SARS-COV II pandemic has not triggered revolutions. It has only brought minor changes in the means of production through the emergence of the digital economy in developed countries. Even so, however, the current pandemic can be seen as a global exercise for a future pandemic, with a much more pathogenic and virulent infectious agent. Could the current system and states withstand a hecatomb of death? Hard to believe. That is why the lessons of this pandemic must not be forgotten, as were those of the Spanish flu or the much more recent HIV infection.

Was the SARS-CoV-2 pandemic the trigger for a reset in the global geopolitical game? Here the answer is positive, but not in the sense anticipated by proponents of globalization. The discrediting of the WHO and the institutional inefficiency of global governance, coupled with the resurgence of conservatism and sovereigntist in Europe, the US and Japan (where the Liberal Democratic Party won the July 2022 parliamentary elections⁵²) have signalled that the process of globalization is beginning to slow down and lose the momentum of the first two decades of this century. So, contrary to the thesis of the new non-Westphalian world order, of global chaos through the fragmentation and devolution of states, the pandemic has generated a recalibration of anti-entropic, conservative, sovereigntist forces. This aspect was reinforced later in the context of the Russian Federation's war of aggression in Ukraine when the Ukrainian resistance demonstrated the importance of the state, of the idea of sovereignty, of patriotic education and patriotism, without which there can be no sacrifice for nation and country.

On the other hand, the overlapping crises that humanity is facing from autumn 2019 onwards could lead to a reconfiguration of the global geopolitical game through a return to bipolarity, this time between the Western bloc and the Multipolar bloc of emerging powers. A geopolitical scenario that could become reality in the context of Chinese military action in Taiwan and the outbreak of new conflicts or the reigniting of frozen conflicts in Asia, Africa, Europe, and South America.

⁵² A. Gunia, *Japan's Ruling Party Wins Big in Election After Ex-Prime Minister Shinzo Abe's Killing*, <<https://time.com/6195449/japan-election-shinzo-abe-death/>> (13.09.2022).

There is also the possibility mentioned by Attali, of a more or less stable multipolar world. But the security risks of such a scenario, especially when multipolarity is unbalanced and non-polar, will require the creation of blocs that will end up returning the international system to its stable bipolar, tripolar or uni-multipolar formats.

Therefore, contrary to the great epidemics that have led to the end of some historical eras and the 'dawn' of new ones, the SARS-CoV-2 pandemic has reaffirmed the role of sovereign states in contributing to the consolidation of the Westphalian world order, which has been under siege for decades by anti-sovereignist progressivism.

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COVID-19 THREAT GEOPOLITICS AND PREREQUISITE FOR INFORMATION WARFARE – LUGAR LABORATORY CASE

***Abstract:** Information warfare may be waged by the state or other groups, with specific actions and operations that may be political, economic, ethnic, religious, and so on. It is carried out to gain and influence the opposing side, and then to inflict material, ideological, economic, social and other damage against them. Information warfare can be carried out using disinformation, propaganda, cyber attacks, lobbying, manipulation, deliberate creation of a crisis, and other methods. The use of this methodology is especially important in today's reality, it can be said that these areas are radically demanding. Hence the true case of how the COVID-19 case provision could be used as a tool for wedging information warfare from the Russian Federation is the case of the so-called 'Lugar Laboratory'. The Russian PR sources denounced the Laboratory and conducted a so-called 'RED PR' campaign to discredit the one and tailor the mission as the tool for wedging information warfare against the U.S. and Georgia. The most adventurous premature for successful management case configured with endorsement since 2002 when proper agreement had been signed by the Defense Minister of Georgia and State Defense Secretary on operating the so-called 'Lugar Library' or the Richard Lugar Center for Public Health Research. The full name of the Agreement was "Cooperation in the field of prevention of the introduction of pathogenesis and experience related to biological weapons development". The Center was created due to by that time*

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existence of the Pankisi Gorge crisis with the emergence of jihadist warriors in the area and the identification of biological toxin entities Ricin production manufactured by the local branch of Al-Qaida. One of the missions on prevention and further dissemination of the toxin aimed for running the Center. The Lugar Research Center is fully passed on Government of Georgia, and since 2018 the Government of Georgia has provided full funding for the Lugar Research Center and Laboratory Network. The Center played a key role as a diagnostic facility during the 2020 coronavirus pandemic in Georgia. Exactly the factor played and still plays a vital role in monitoring and casting the COVID-19 virus in Georgia. The speed identification of the virus symptoms in 5 hours after the testing of the possible victim with a 95% result is a credible instrument for successfully fighting the asymmetric threat.

Keywords: *COVID-19, Georgia, Lugar Laboratory, cyber attack, Al-Qaida, the U.S.*

Introduction

A massive challenge to world society in the form of virus epidemic dissemination shifts not only the global security environment but also the daily life of the universe. The virus labeled COVID-19 emerged in Wuhan province in China has stimulated the global smite pandemic wave obscured the international political system and caused more than 10 thousand deaths toll in number. Certainly, COVID-19 belongs to a biological weapon and is more concretely affiliated with bacteriological agents of natural origin together with bacteria entities. Following international security provisions it is ascertained as an asymmetrical military threat with trend-centric origin. Today, information has become a strategic product, promoted by the development of information technology, created in the form of an information ‘triangle’ of information space, technical means and society. Technological development has provided less protection for information flows. Accordingly, the national and corporate security sectors of all states are under pressure of unprotected information.

The world is facing a new geopolitical challenge in the pandemic caused by the spread of COVID-19. The world economy has shrunk by about 3%. The trade war between the United States and China and their defensive agreements with other countries was already a huge problem, but it has reached a critical stage due to COVID-19. The United States has filed multiple lawsuits against China, alleging that they purposely released the Coronavirus. The objective of this article is to examine the shifting geopolitics, focusing on international economic and defensive relationships among countries, and especially on the Second Cold War between the United States and China. In this pandemic

situation, more countries are facing economic downturns and loss of human life. A new geopolitical journey has been started, which is based on the availability of Personal Protective Equipment (PPE) and medical products. All previous problems that had not yet been solved by the United Nations have become fresh challenges. Another big challenge is the demise of neoliberalism in the world. Bureaucratic wars have started in the interregional and intraregional zones, and the Second Cold War has started between the United States and China. A major finding of this article is the significant correlation between the death rate of different countries and the shift of geopolitics to a critical stage⁴.

When is being talked about the crisis, mentioning that the crisis is by definition – a social system – a community, an organization, a policy sector, a country, or an entire region – experiences an urgent threat to its basic structures or fundamental values, which harbours many ‘unknowns’ and appears to require a far-reaching response. The crisis itself also dwells in its origin namely merged those stakeholders who are personally getting involved in the crisis – an individual, a society, a state, a nation, etc. Therefore variety of perspectives of identification of crisis is forced to depict the tendency with namely several words. These words are presumable and easier to identify: threat, urgency, and uncertainty. The initially identified phrase threat means that someone or something is being threatened and exposed to menace and the one is being directly hits concrete values that are omnipotent to protect and pursue based on the protection of your interests and missions. These values that are to be saved up from the threat imposition and reflection are the following:

- a. Safety,
- b. Security,
- c. Rule of law,
- d. Welfare,
- e. Health,
- f. Integrity,
- g. Civil liberties (it expresses personal self-esteem and sense of identity)⁵.

These values could even more and could be expanded diversely but these values covering physical existence and social life implications promote one’s missions and interests. Any crisis development of any style and content, personal or societal subsystem, mainly targets to value and undermine the system at all. As for the assessment time pressure is a unique opportunity to

⁴ J. Mintu, R. Taniya, *The Shifting Geopolitics of Coronavirus and the Demise of Neoliberalism with the Big Challenge for United Nations*, “Asia-Pacific Journal of Management Research and Innovation”, Vol. 17, Issue 1-2, 2021.

⁵ R. Jerwis, *Perception and Misperception in International Politics*, Princeton 1976, pp. 56-57.

deal with any crises in a timely, quick and efficient way, which is also linked with timeframe conditions. It seems so that the concrete passage from the book *The Politics of Crisis Management* expresses how time pressure matters in case of development of the crisis, notable: “So-called creeping crises provide leaders with plenty of time to develop solutions, but the lack of urgency typically makes it harder to create the winning coalitions that are needed to push through required policy changes. When there is little time to act, on the other hand, leaders may have more authority to unilaterally impose changes”⁶. The crisis needs to be responded to in the shortest time as it links with uncertainty and unpredictability the situations and scenarios following up the crisis itself. The urgency to response and asymmetry of the occurrence of processes when the result and final end-up are yet to be predicted make the counter-measures to the crisis more desirable and ‘linearable’ i.e. response directly with all means available at hand. Uncertainty and unknown development of the scenario are causing defying conventional approaches to planning. Hence, it is difficult to plan in detail for unexpected and unknown events. Moreover, time spent provision on crisis responses is also related to leadership approaches in personal and organisational characteristics and its ability to mobilize momentum for tackling the emerging threat before it passes some critical threshold and becomes a crisis. An institutional crisis brings yet different challenges: leaders will have to shape stakeholder perceptions that underpin the legitimacy (and thus the functioning) of public organizations.

New Warfare Types and Biological Warfare Strategy

There are many transformations in developing and understanding of true content of Military Strategy and new realities have delivered fresh trends in analyzing, planning, performing and reviewing combat operations in the contemporary period. The transformation in Military Strategic Thoughts and Geostrategy is affiliated with the new conception of Fourth Generation Warfare, adopted at the turn of the 20th and the 21st Centuries. According to some academic conceptualizations – Fourth Generation Warfare is defined as military conflicts which involve the following elements:

- a. High technology (military drones, precise munition, armoured fighting vehicles, rocket projections, non-contact combat strategy, etc.);
- b. Terrorism as tactics;
- c. Non-national or transitional base;
- d. Direct attack on the enemy’s culture;

⁶ A. Boin, P. ‘t Hart, E. Stern, B. Sundelius, *The Politics of Crisis Management – Public Leadership under Pressure*, Cambridge 2017, pp. 23-25.

- e. Highly sophisticated psychological warfare, especially through manipulation of the media;
- f. Delivery of a high-intensity, short-duration attack and creating a sense of vulnerability, debilitation and abasement in the enemy⁷.

In addition to that as a part of Fourth Generation Warfare, a non-combat tactical element is being considered – a drug smuggling case as an Actor-Centered one. There is a quite new approach to what is to be formulated in waging a war and what kind of criteria for Fourth Generation Warfare are to be considered. How far has the Military Strategy shifted from the classical period of its origination from the 18th century till the 21st Century? In that regard, it is interesting to stress that Fourth Generation Warfare includes elements of Asymmetric Warfare doctrine that are very plausible for waging wars in the 21st Century. According to some academic sources, there are many different definitions of the doctrine, but one of them is Asymmetric Warfare – is war between belligerents whose relative military power differs significantly from or whose strategy or tactics differ significantly⁸. This is in contrast to symmetric warfare, where two powers have similar military power and resources and rely on similar strategies overall, differing only in details and execution. The popularity of new war theory in strategic studies, labelled as ‘hybrid war’ is being determined by the importance of globalization's effect on global security and the contemporary international relations system. Here is to be considered a hybrid war phenomenon. Having considered several assumptions, it is possible to identify the definition of the hybrid war – hybrid war is primarily based on the ability to target distant objects and processes through non-traditional military means, particularly those critical to state and military functions. It is important to admit that hybrid war is waged mainly between state and non-state opponents (including terrorists, like ‘the Taliban’, DAESH, etc.) that fully correspond to realms of the fourth war generation. Herewith is an interest in presenting the author’s view on the identification of hybrid war. Hybrid War Concept – method of waging combat operations by coercive power elements with non-military means and with insurgency tactical components pursuing the goal of destroying and demoralizing excessive enemy forces and subverting their will for further resistance⁹. Hence, hybrid war is an indispensable component of the Fourth War generation concept aiming at destroying the enemy's political will and culture for continuous further resistance. In this respective manner, the combination of the modern warfare strategy could be

⁷ V. Maisaia, A. Guchua, *NATO and Non-State Violent Actors – The Fourth War Generation Strategy and Its Regional and National Security Geopolitics*, Tbilisi 2020, p. 57.

⁸ W. Lind, et al., *The Changing Face of War: Into the Fourth Generation*, “Martine Corps Gazette”, October 1998, p. 22.

⁹ B. Aladashvili, *Russia's Hybrid War against Georgia in 1918-21*, Tbilisi 2018, pp. 4-6.

identified as the following: *High Technology + Short Duration + Flexibility + Mobile Forces + Deception*. Hence, it became important to identify what the term and jargon ‘geostrategy’ means. There are two definitions of the term ‘geostrategy’ and both indicate how politics is connected with military art and strategy. Here are the definitions:

1. Geostrategy – geopolitical analyses in aegis of military scrutiny of processes¹⁰;
2. Geostrategy – the traditional balance of power jargon that defines global geopolitical configuration in light of military parameters¹¹.

The geostrategic analysis could be realized in conjunction with concrete instruments and tools and hence is possible to augment in ways of concrete implications – those indicators and independent variables qualifying geopolitical analysis with military review exact environment of the area and creatures of the process or event taking place in that one. In this context is possible to elaborate the following implications for truly realizing the consequences and specifics of war in Ukraine and how the one reflects on geopolitical configuration at any level. Herewith there are concluded the following geostrategic implications:

- a. Historic prerequisites of the war in Ukraine sparked by the Russian Federation;
- b. Politico-military environment and its provision;
- c. New threat and risk perceptions and consequences;
- d. Military doctrinal features of key geostrategic actors (in the case of the Russian Federation).

The 21st Century has been determined by the development of revolution in military affairs that drastically changed the content of the war concept by large. Initially is important to define the true content of the definition. By the description stipulated by the author of the paper, Revolution in Military Affairs – occurs when new technologies combine with innovative organization concepts and doctrinal adaptation in a way that fundamentally alters the character and conduct of war. The trend and conceptual frame include the following geostrategic components:

- a. ‘The Computer Revolution’ – electronic sensing surveillance of VC and NVA in the 1970s by the Pentagon;
- b. ‘Weaponization of High Technology’;
- c. Precision Delivery Munitions;
- d. Reconnaissance and Precision Delivery – satellite reconnaissance grouping and space shuttle survey;

¹⁰ D. A. Minix, S. H. Hawley, *Global Politics*, Stamford 1998, p. 56.

¹¹ A. Dugin, *Osnovy Geopolitiki: Geopoliticheskoje Buduszeje Rossii*, Moscow 1992, p. 47.

- e. New Airpower Technology – Unmanned Aerial Vehicle (UAE) intensive usage in combat operations;
- f. Non-Contact Combat Strategy – massive air and naval strikes with modern missile and aircraft technologies and computer-modelling management of combat forces;
- g. RMA and current military operations – Iraq war in 1990-1991, Afghanistan and Iraq campaigns (2001 and 2003).

The revolution certainly had a great impact on the military operational planning process and also made it different from classical military theory. The shifts prioritized the notion that war is a continuation of politics by other means¹².

The trend demonstrated the revolution shift contributes to the promulgation of a variety of combat interactions. Hence, the process of war waging is being determined in special dimensions and there are identified, at the stage, the following warfare types:

- a. Land Warfare – Attrition, Revolutionary Insurgency and Maneuver;
- b. Maritime Warfare Strategy – ‘Gunboat Diplomacy’, Mahan's formula: $SP=N+MM+NG$;
- c. Airpower Warfare – Julio Douhet doctrine, massive reassured conception;
- d. Space Warfare – ‘Star Wars’ program, ‘Shield and Sword’ project or ‘Diamond’ program, GPS and GLONASS;
- e. Cyberspace Warfare (Information Warfare) – information technology, PR campaign, ideology war, cyber-terrorism¹³.

According to some academic sources, there are many different definitions of the doctrine, but one of them is that “Asymmetric Warfare is a war between belligerents whose relative military power differs significantly from or whose strategy or tactics differ significantly”¹⁴. This is in contrast to symmetric warfare, where two powers have similar military power and resources and rely on similar tactics overall, differing only in details and execution¹⁵. Concrete cases of wedging Asymmetric wars are seen in Central Asia and Caucasus Regions.

¹² P. Hough, S. Malik, A. Moran, B. Pilbeam, *International Security Studies: Theory and Practice*, New York 2015, pp. 87-88.

¹³ V. Maisaia, *Grand Strategy and Military Implications of New Russia's Military Doctrine in the 21st Century: Geostrategic Aspects of Hybrid Warfare Strategy Against Georgia and Ukraine*, [in:] *Proceedings of International Scientific Conference ‘Strategies XXI’*, Volume XVII, Bucharest 2022, pp. 11-15.

¹⁴ P. Bator, *International Conflict Management – Crisis, War and Peace*, [in:] *Introduction to Security Studies*, Bratislava 2014, p. 42.

¹⁵ I. Arrenguin-Toft, *How to Weak Win Wars: A Theory of Asymmetric Conflict*, “International Security”, Vol. 26, 2001, c. 1, pp. 93-128.

COVID-19 Geopolitics and Georgia's Security Dilemma

The first confirmed case of the spread of COVID-19 in Georgia was identified on 26 February 2020 and since then the number of patients has increased although at rates lower than some of the hardest-hit countries. This triggered the adoption of several corresponding governmental regulations to prevent the spread of COVID-19. On 21 March 2020, the President of Georgia adopted Decree No. 1, which was later approved by the Parliament of Georgia and declared a state of emergency on the whole territory of Georgia until 21 April 2020 (the State Emergency Decree).

The State Emergency Decree restricts the following rights guaranteed by the Constitution of Georgia:

- a. Human liberty;
- b. Freedom of movement;
- c. Right to personal and family privacy;
- d. Right to fair administrative proceedings;
- e. Right to property;
- f. Freedom of assembly;
- g. Freedom of enterprise.

The State Emergency Decree stipulates that specific limitations to the above-listed rights will be provided by the decree of the Government of Georgia (GoG). On 23 March 2020, the GoG issued Ordinance N181 regarding Approval of Measures to be Taken for the Prevention of Spreading of the New COVID-19 (the Ordinance on COVID-19). Since its adoption, the Ordinance on COVID-19 has been amended multiple times to address the rapid changes and challenges of the existing situation in the country.

The GoG has recently strengthened security measures and established the Operations Office to be able to better respond to the spread of COVID-19. The Operations Office will be authorized to establish exceptions to certain restrictions established by the Ordinance on COVID-19. The head of the Operations Office will be appointed and its regulations will be adopted by the Prime Minister of Georgia.

While the GoG takes steps to prevent the spread of COVID, restrictive measures have put a strain on businesses, preventing them from being able to satisfy their obligations under contracts. This article aims to provide answers to frequently asked questions and provides general guidance on legal issues around the COVID-19 pandemic¹⁶.

In light of the above restrictions, businesses are suffering major losses as the forced closure of businesses has significantly disrupted their processes and

¹⁶ *COVID-19 in Georgia. The legal issues you need to know*, <<http://georgiatoday.ge/news/20401/COVID-19-in-Georgia%3A-The-Legal-Issues-You-Need-to-Know>> (9.12.2022).

has put the performance of contractual rights and obligations under question. Therefore, frequently asked questions in these cases relate to force majeure clauses or other provisions or legal concepts that companies may rely on to avoid defaults on their contractual obligations.

The answer to these questions depends on the particular circumstances and the drafting of the relevant contractual provisions. Due to a lack of similar events that have taken place previously, there is little to take from experience on how to handle business relationships during epidemics or pandemics. The obvious route would be to engage in direct negotiations with contractual parties to reach a mutual understanding. If such negotiations are successful, it could result in a better position for both parties as they will avoid litigation costs and termination of the contract¹⁷.

The parties could agree on any commercially acceptable outcome, including an extension of performance deadlines, temporary suspension of the contract, reduction of price or even termination of the contract. Before proceeding with negotiations, the businesses would be advised to: first, examine the relevant contract, second, evaluate its options and third, seek legal advice, if necessary. Depending on the outcome of the parties' negotiations, legally effective and enforceable agreements may be required to document the terms reached in those negotiations.

Regarding how Georgia as a national state has made strategic decisions on combatting COVID-19 is to be reviewed as follows – The COVID-19 tsunami traced through all national borders endangered everything on its path and destroyed communities in one run. On 26 February 2020, 'Corona' (COVID-19) was reported in Georgia. An infected Georgian citizen was found to be in Iran. Just after this day, the people of Georgia learned the great importance of the Lugar Lab in our country. Unlike other countries we do not send tests abroad, we can conduct important research in our own country. The healthcare system is well-prepared to meet the virus that even the most powerful states in the world have to deal with. All state bodies united in the fight against of virus in Georgia. The doctors fight tirelessly for 24 hours to defeat the virus. On 27 February 2020, Georgian society woke up to a completely different reality, the geographical area of the Coronavirus growing. Georgia has already appeared on the map of the virus. Despite of serious threat imposed on Georgia with an introduction into the country emergency law and declared as 'red zone' two regions: Marneuli and Gardabani and with more than 6192 confirmed diseased persons (as of 1st October 2020), Georgia became a 'successful case-study' for fighting against the COVID-19 and despite of declaring emergency with

¹⁷ L. Carraro, M. Honorati, A. Marguerie, *Assessing Potential Work Disincentives of the Targeted Social Assistance System in Georgia*, Washington 2020.

elements of martial law elements (including enacting curfew since 9.00 p.m. till 6.00 a.m.) the application remarkable to the situation even due to case that no any militaries who are taking in force the strict measures in the ‘red zones’ have not been diseased with COVID-19. Why Georgia became such a ‘successful story’ relevantly compared with the same situation in Italy, France, the UK, and other European states could be considering the following patterns:

1. Georgia is a small country with a relatively small population and the control of such a small territory became more efficient with a high and thorough investigation of every cluster of confirmed cases;
2. A complete shutdown and no internal and international travel measures have been conducted by the Georgian government as soon as the first information on the COVID-19 virus spread over. By large, the national security system orientation namely on the prevention of natural disorder and catastrophic scenarios rather than obviation of military symmetric challenges that was enacted due to taking into force a new version of the Constitution of the country played also positive feedbacking. Currently, the main coordinator HQ on crisis management is in the hands of the National Security Council formally led by the Prime Minister but de facto led by the Minister of Internal Affairs who is simultaneously the Secretary to the Council. The structure has been operating sufficiently in times of declaration of emergencies. In addition to credible contributions paved by the Defense Forces of Georgia, namely the complete quarantine regime in the ‘Red Zones’ and the whole Ministry of Defense staff successfully led by incumbent Defense Minister Irakli Garibashvili. The Forces were well prepared for dealing with various scenarios of emergency and crisis management having vast experience gained in NATO and EU-led peace-making and crisis management operations abroad;
3. A list of high-professional and skills-based crisis public managers (medical high-level staff members) in the government of Georgia (mainly having experience with the so-called Civil Defence) oriented crisis management concept (mainly having proper biological defence segment of the concept) since the Soviet Union period also contributed in fighting successfully with the unknown threat. Moreover, three biological research institutions and centres have been operating since the Soviet period, for instance, Anti-Black Death Georgian Station, which is located in Tbilisi, which is now the National Center for Disease Control and Public Health, where almost 70 years were working on dangerous pathogens and another agency such Tabakhmela

Biochemical Plant as well as a bit later appeared Richard Lugar Center (see below)¹⁸.

As for the poor and less effective decision was made recently just on 10 September 2022, when the government despite the threat and menace regeneration of the pandemic race declared that the education and study process in Georgia will be gone in auditoria and non-online (direct) provision at any level, including high-education institutions. This is a very unclear step that further promotes the trend of infection among the population and the cluster-group is to be youth.

One of the short-run consequence examples could be considered in the aegis of the combatting COVID-19 imposition of the State Emergency by the Ordinance on COVID-19. Since its adoption, the Ordinance on COVID-19 has been amended multiple times to address the rapid changes and challenges of the existing situation in the country. Certainly, the step was not congruent with democratic nation criteria and hindered some liberties but dealing with COVID-19 consequences and overcoming a concrete crisis for a short time was a very acceptable and necessary one. As for the long-term consequence example in that regard could be sought the fact that the Georgian government (namely ex-prime-minister George Gakharia's political team) has, by that time, strengthened the security measures and established the Operations Office to be able to better respond to the spread of COVID. The Operations Office will be authorized to establish exceptions to certain restrictions established by the Ordinance on COVID-19. The head of the Operations Office will be appointed and its regulations will be adopted by the Prime Minister of Georgia. Setting up the Operation Staffs over quite a long time promoted clear coordination and cohesion of the political management vertical and increased communication channels with the population and society at large¹⁹.

Regarding short-term poor examples when the GoG takes steps to prevent the spread of COVID, restrictive measures have put a strain on businesses, preventing them from being able to satisfy their obligations under contracts. This article aims to provide answers to frequently asked questions and provides general guidance on legal issues around the COVID-19 pandemic. In light of the above restrictions, businesses are suffering major losses as the forced closure of businesses has significantly disrupted their processes and has put the performance of contractual rights and obligations under question. Therefore, frequently asked questions in these cases relate to force majeure clauses or other provisions or legal concepts that companies may rely on to avoid defaults

¹⁸ V. Maisaia, *Georgia and Its COVID Strategy and Gender Policy*, [in:] *SLP 2: Strategic Leadership and Global Security Challenges Course*, Stockholm 2022, pp. 5-6.

¹⁹ *Global Knowledge Partnership on Migration and Development (KNOMAD)*, 2020, *Remittances Data*, <<https://www.knomad.org/data/remittances>> (20.11.2022).

on their contractual obligations. When one is talking about long-term poor consequences example suspending the Updated COVID-19 Strategic Preparedness and Response Plan and cancelation all measures derived from the plan that has been conducted by the incumbent government led by incumbent Prime-minister Irakli Garibashvili. This indeed long-term consequences for the poor decision as it contradicts international fora and criteria for combatting COVID-19 and getting ousted from the international community, Georgia would lose its capability to deal with COVID-19 as a strategic crisis. The tendencies are seen now, unfortunately.

There are several important legal and conceptual documents and papers at the global and national levels (meaning Georgia's case) on combatting COVID-19 and its effects on global security provisions. From them are to be outlined the following ones:

- a. UN Comprehensive Response To COVID-19;
- b. The World Health Organization's (WHO) Strategy to Achieve Global COVID-19 Vaccination by mid-2022;
- c. Coronavirus Act 2020;
- d. Updated COVID-19 Strategic Preparedness and Response Plan;
- e. UN Framework for the Immediate Socioeconomic Response to COVID-19;
- f. Georgia's national government safety measures;
- g. A state of emergency declared;
- h. Georgia's borders were closed for passengers, and cargo transportation was not restricted;
- i. Learning process suspended in schools/universities;
- j. Only essential businesses remain open;
- k. Quarantine declared in Marneuli and Bolnisi regions;
- l. Construction, production and transportation were not restricted.
- m. Gender is not addressed in these two pieces of national legislation related to combatting COVID-19 issues²⁰.

Information Warfare and COVID-19 Phenomenon: Georgia's Case

Information warfare is a concept involving the battle space use and management of information and communication technology in pursuit of a competitive advantage over an opponent. Information warfare is the manipulation of information trusted by a target without the target's awareness so that the target will make decisions against their interest but in the interest of

²⁰ *Rapid Gender Assessment of the COVID-19 Situation in Georgia*, <<https://georgia.unwomen.org/en/digital-library/publications/2020/08/rapid-gender-assessment-of-the-covid-19-situation-in-georgia#view>> (20.12.2022).

the one conducting information warfare. As a result, it is not clear when information warfare begins and ends, and how strong or destructive it is.

Information warfare may involve the collection of tactical information, assurance(s) that one's information is valid, spreading of propaganda or disinformation to demoralize or manipulate the enemy and the public, undermining the quality of the opposing force's information and denial of information-collection opportunities to opposing forces. Information warfare is closely linked to psychological warfare. Information warfare may be waged by the state or other groups, with specific actions and operations that may be political, economic, ethnic, religious, and so on. It is carried out to gain and influence the opposing side, and then to inflict material, ideological, economic, social and other damage against them. Information warfare can be carried out using disinformation, propaganda, cyber attacks, lobbying, manipulation, deliberate creation of a crisis, and other methods. The use of this methodology is especially important in today's reality, it can be said that these areas are radically demanding.

The information itself is characterized by a variety of psychological characteristics that are directly related to the creation of public opinion and mood. According to *Experimental Psychology*, the voluminous information obtained from many sources seems more convincing, and public groups consider it credible. Consequently, quantity has its quality, and in the conditions of information warfare, extensive information is characterized by the following features:

- a. A large quantity of information completely captures the attention of the target group and leaves no room for counter-information, so different information is less noticeable;
- b. Large amounts of information can suppress the truth and deceive the public, for example by sharing Disinformation;
- c. The use of few information streams significantly increases the impact on the target group;
- d. Information, including false information, may be disseminated through television channels, newspapers, cyberspace, educational institutions, parties, NGOs, and others²¹.

Therefore, all the above processes are actively used in the activities of the intelligence services. Weaponizing information arguably remains the hallmark of Hybrid Threats and nonlinear strategies. It is used to undermine the perception of the security of the people by pitting political, social and cultural identities against one another. The purpose of the action is to exploit identity politics and allegiances, thus dividing influential interest groups and political

²¹ D. Kukhalashvili, *Intelligence Activity Role in Foreign Policy Decision Making Process*, Tbilisi 2022, pp. 62-64.

alliances. Confusion and disorder ensue as people feel more insecure. Under its low intensity and potential for deniability, Hybrid Threat activities designed to exploit this domain are generally low-risk, allow for a trial-and-error approach, much like the agile processes used in technology firms, and have a relatively low cost, with some even being open to outsourcing.

Cyber disinformation/(black) propaganda/fake news is false information, which is also intended to give the impression that it was created by those it is supposed to discredit. It is typically used to vilify, embarrass or misrepresent someone/the target. Fake news in social media is not just a post that has been liked, shared or followed; rather, it is a powerful technique of multiplying cyber propaganda. In the wake of the financial and economic crisis of the years after 2008, the local press in the U.S. almost collapsed. The internet became the leading and determining substitute medium. A medium and source of information that can be considered highly critical. The tools of this domain seek to shift the political discourse, to create or promote narratives, and to manipulate public opinion and sentiment. In addition, they may impair freedom of opinion and expression. Freedom of expression encompasses respect for media freedom and pluralism, as well as the right of citizens to hold opinions and to receive and impart information and ideas “without interference by public authority and regardless of frontiers”²².

Lugar Laboratory Case as Fake News Strategic Scope

The most adventurous premature for successful management case configured with endorsement since 2002 when proper agreement had been signed by the Defense Minister of Georgia and State Defense Secretary on operating the so-called ‘Lugar Library’ or the Richard Lugar Center for Public Health Research. The full name of the Agreement was *Cooperation in the Field of Prevention of the Introduction of Pathogenesis and Experience Related to Biological Weapons Development*. The Center was created due to by that time existence of the Pankisi Gorge crisis with the emergence of jihadist warriors in the area and the identification of biological toxin entities Ricin production manufactured by the local branch of Al-Qaida. One of the missions on prevention and further dissemination of the toxin aimed for running the Center²³. The Lugar Research Center is fully passed on Government of Georgia, and since 2018 the Government of Georgia has provided full funding for the Lugar Research Center and Laboratory Network²⁴. The Center played a

²² *European Convention for the Protection of Human Rights and Fundamental Freedoms*, Article 10, <<https://rm.coe.int/1680a2353d>> (20.12.2022).

²³ V. Maisaia, A. Guchua, *op. cit.*, pp. 292-293.

²⁴ E. Gvenetadze, *International Security Aspects*, Tbilisi 2017, p. 256.

key role as a diagnostic facility during the 2020 coronavirus pandemic in Georgia. Exactly the factor played and still plays a vital role in monitoring and casting the COVID-19 virus in Georgia. The speed identification of the virus symptoms in 5 hours after the testing of the possible victim with a 95% result is a credible instrument for successfully fighting the asymmetric threat²⁵.

Having considered that the whole Georgian society unilaterally supports brave Ukrainian people against its fair war against the Russian aggressors and the demonstration support hikes up utmost high dimensions, the Kremlin propaganda is seeking to utilize its methods of wagging information-psychological war against Ukraine in Georgia. A cohesive instrumental systematic approach has been promoted via specially articulated fake-news distributed mechanisms as are in Georgia now: Sputnik-Georgia media agency, *RIA-NOVOSTI* and its local satellites, like weekly newspaper: *The World and Georgia*, nationalistic TV *ALT-INFO*, etc. One of the famous fake news related to the war in Ukraine and disseminated by the pro-Russian actors are story on the so-called 'U.S. Biological Lugar laboratory' and its connection with similar ones in Ukraine. This is only one aspect of the wagging information-psychological warfare in Georgia and in this case, Georgia and Ukraine should reunite their effort to set up a Counter-Information War Coalition and promote a common agenda²⁶. Therefore, the Russian hybrid threat against Georgia in the case of Lugar Laboratory manipulation could be considered a 'Grey-Fake News' type and aims at discretization of both U.S. and Georgia's strategic cooperation and using special psychological operation to undermine Georgia's successful effort in tackling with COVID-19 geopolitics and asymmetric threat at national and global levels.

Conclusion

In the context of modern international security, the content of threats and challenges has acquired an entirely different purpose. Unlike the classic Cold War, when threats and challenges were calculated and predicted perfectly and logically possible, apart from the concept of strategic nuclear policy and strategic intimidation, the geopolitical processes in the early 21st Century took on a different dimension. Against this backdrop, the terms asymmetric threat and hybrid threat emerged as a major threat to the international community. Therefore, asymmetric threats, especially non-military ones, are more vulnerable than direct military asymmetric threats, because when using it, it

²⁵ T. Zedelashvili, *Digital Technology Century and Cybersecurity Modern International Political Challenges*, Tbilisi 2022, pp.80-82.

²⁶ A. Cohen, R. Hamilton, *The Russian Military and the Georgia War: Lessons and Implications*, Carlisle 2012, pp. 70-74.

makes more easier to manipulate and misinform the enemy combat units. One such set of actions is, for example, psychological warfare.

The notion of security has changed for years, not even the twenty-first century has been the exception. It is precisely that the 21st Century has coined the term asymmetry; its notion within the theory of security is linked to such a concept as ‘asymmetric threat’. The new term, asymmetric, contains signs of terrorism, natural cataclysms and hybrid warfare, as well as no military or political hassle²⁷. The form of asymmetric warfare is called warfare when the military power of the warring parties differs sharply from one another. The term asymmetric warfare is often used to describe military actions such as guerrilla warfare, terrorism, and insurgency.

Hybrid warfare is a new phenomenon, and its significance has become more widespread in the 21st-century international security system. The military aspects of its dimension are equivalent to the concept of fourth-generation wars, where priority is given to the fight to neutralize asymmetric military threats and defeat the will of the adversary, not the physical destruction of the adversary. Concrete hybrid warfare in this era is considered by the Russian Federation to occupy the Crimean peninsula of the Ukrainian sovereign territory of Crimea, carried out by parts of the Rapid Response Command and then annexed in 2014. In addition, hostilities in the context of hybrid warfare are observed in the regional war in Syria²⁸.

The phenomenon of ‘hybrid warfare’ has had a profound impact on contemporary international security systems, which has been characterized by two specific factors: theoretical-conceptual and realistic approaches. The theoretical-conceptual approach is that the existing international order actors have already recognized the importance of the ‘hybrid war’ and the magnitude of its impact and have made relevant reservations in their strategic documents. In 2014, for example, Russian President Vladimir Putin endorsed a military doctrine of the country outlining key parameters of a Russian hybrid war strategy. Under Article 32 of the new military doctrine adopted on 28 December 2014, one of the main tasks of the Russian Armed Forces in peacetime is to protect the interests and strategic communication transport nodes²⁹.

At this stage, it is impossible to decide between these scenarios. All the more so since these possibly major developments – we shall call ‘macro-geopolitical’ – can be influenced or deflected by the much more ‘micro-

²⁷ C. Muscato, L. Chapel, *Asymmetric Warfare: Definition, Tactics & Examples*, <<https://study.com/academy/lesson/asymmetric-warfare-definition-tactics-examples.html>> (10.12.2022).

²⁸ *Ibidem*.

²⁹ V. Maisaia, G. Magradze, *Hybrid War and 21st Century International Security Problems*, Tbilisi 2020, pp. 220-222.

geopolitical' effects of the COVID-19 crisis. Let us mention four of them, which may very well be combined.

1. The crowding-out effect: In the coming months, it will be difficult for policymakers and public opinion to focus their attention on anything other than managing COVID-19. Already, the strikes against US bases in Iraq, still going on by the way, and Washington's intention to withdraw some of its forces there, have gone virtually unnoticed.
2. The windfall effect: An opportunistic player can take advantage of this situation to carry out a 'coup' that he would not have otherwise pursued under different circumstances. One goes back once again to the Iranian-American confrontation in the Middle East, or even tensions in the China Sea, if not the 'capture of pawns' with which President of the Russian Federation Vladimir Putin is quite familiar in Russia's 'close abroad' strategy.
3. The escalation effect: a local incident can always escalate into a more general conflict, but in the present circumstances, elements of tension (see the 'narratives' war' and American journalists' expulsion from China) that are multiplying between Beijing and Washington can by themselves be factors of an intensification of the confrontation between the two powers.
4. An opportunity effect: finally, it cannot be ruled out that the pandemic also offers an opportunity to put forward constructive proposals (a new effort on the Iranian question, for example) insofar as the major responsible decision-makers may not be, in time of COVID-19, in the mood of opening up new conflicts.

Hence, the scenarios are to be considered as future models of how COVID-19 influences international and regional politics. However, the processes are being transformed into concrete mega-cognitive paradigms of resilience of the communities and human beings. Hence, future geopolitical events whether international society is getting accustomed to realities with the existence of COVID-19 and perceived as an inherent condition of our way of life. In this regard, information warfare technologies also could be considered as a key provision of has great implications and influences on the scenarios that are acceptable instruments of the Russian Federation political leadership.

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RETHINKING FISCAL POLICY – INDIRECT CONSEQUENCES OF THE SARS-COV-2 PANDEMIC. OVERVIEW THROUGHOUT CHANGES IN TAX SYSTEMS IN POLAND AND CHOSEN COUNTRIES

Abstract: *This article contributes to the discussion on the changes taking place in the directions of fiscal policy and the implementation of tax policy. The SARS-CoV-2 pandemic has created economic circumstances so unique that overcoming them using traditional instruments can be very long, and according to some researchers, even impossible. The new tax system would be more strongly based on values such as resilience, equity, diversity, care and inclusive politics and ensure greater redistribution towards poorer social classes to prevent them from falling into poverty. This phenomenon is accompanied by the intensification of work on the e.g. digital tax, the addressees of which are primarily global digital giants, which is in line with the described trend. An example of new thinking can be also the New Polish Deal programme. Although it has been strongly criticized by economists for numerous errors and chaotic implementation, it seems to be based on new values and assumptions more than before. Additional circumstances, i.e. Russia's aggression in Ukraine, high inflation or recession, seem to reinforce the changes taking place in tax systems on a global scale and their impact should be the subject of further research.*

Keywords: *Fiscal policy, tax systems, economic effects of SARS-CoV-2, fiscal pressure, digital tax, Polish New Deal, resilience, equity*

Introduction

The pandemic turned out to be a factor that shook not only the global sense of security, the global economy and supply chains. It has also had a

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profound impact on the tax systems of individual national economies, which, while initially underestimated, will only grow over time. Additional circumstances that have already emerged during the period of easing restrictions related to SARS-CoV-2, i.e. the invasion of Ukraine by Russian troops in February 2022, the energy crisis in Europe as well as high inflation on a global scale and other symptoms of recession – will probably highlight even more the imperfections of the tax systems of individual countries, becoming, apart from the pandemic itself, catalysts for the upcoming changes.

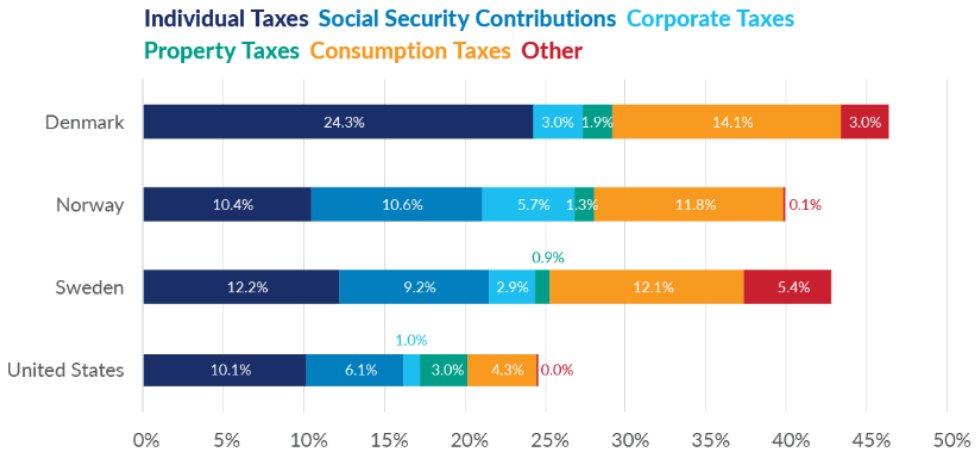
Traditionally the general tendency in fiscal policy development was that, thanks to inner stabilizers, it depends on the political authorities to an even lesser degree. A new trend seems to be shifting the emphasis from fiscal goals to selected non-fiscal goals. This was the case during the pandemic, when more important than regular tax revenues to the budget was, e.g. to maintain a high level of employment or protect those who lost their jobs or their business. In the phase of recovering from the pandemic and its economic consequences, this trend seems to continue. There is a growing discussion on the extent to which the post-pandemic reality is an opportunity for fundamental changes in tax systems, introducing new goals and values to them, not only to ensure but in fact to enable, overcoming the economic effects of the pandemic and to ensure further sustainable socio-economic development.

Brief look at the consequences of the pandemic on the tax system in different countries

A look at the scale and depth of the impact of the SARS-CoV-2 pandemic on the functioning of the tax systems of selected countries will allow us to understand whether the changes that have occurred in them during the pandemic are temporary or will become the nucleus of a completely new fiscal policy in these countries.

One of the more interesting questions in this matter was to check what was the impact of pandemic restrictions on the tax systems of the Nordic countries: Denmark, Finland, Norway and Sweden – traditionally referred to as welfare states. These countries offer, among others free medical care or higher education, which means a significant tax burden on citizens, whose share in GDP before the pandemic oscillated around 40-45%. Figure 1. presents these relationships in comparison with the United States.

Figure 1. Tax-to-GDP Ratio by Tax Revenue Source, 2019.



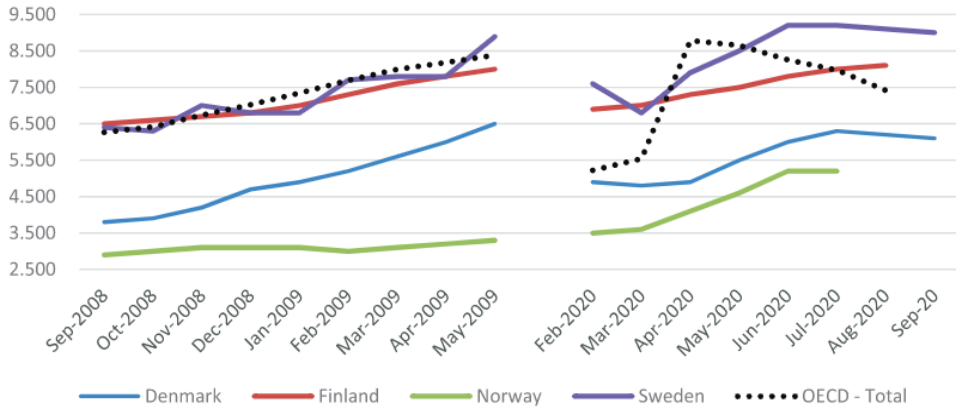
Note: U.S. payroll taxes are defined as social security contributions in this chart.
Source: OECD, "Revenue Statistics - OECD countries: Comparative tables."

Source: OECD, *Revenue Statistics – OECD countries: Comparative tables*, <https://stats.oecd.org/index.aspx?DataSetCode=REV> (12.12.2022).

The level of unemployment in the welfare Nordic countries in the first period of the pandemic between February and September 2020, compared to the corresponding period of the crisis in 2008-2009, is presented in Figure 2. A glance at the results shows that the impact of the pandemic almost immediately had an impact on unemployment levels as severe as it did during the 2008 crisis, and even more severe for Sweden and Norway. All of this, combined with a sharp decline in GDP growth, could not be neglected for tax revenues in these countries.

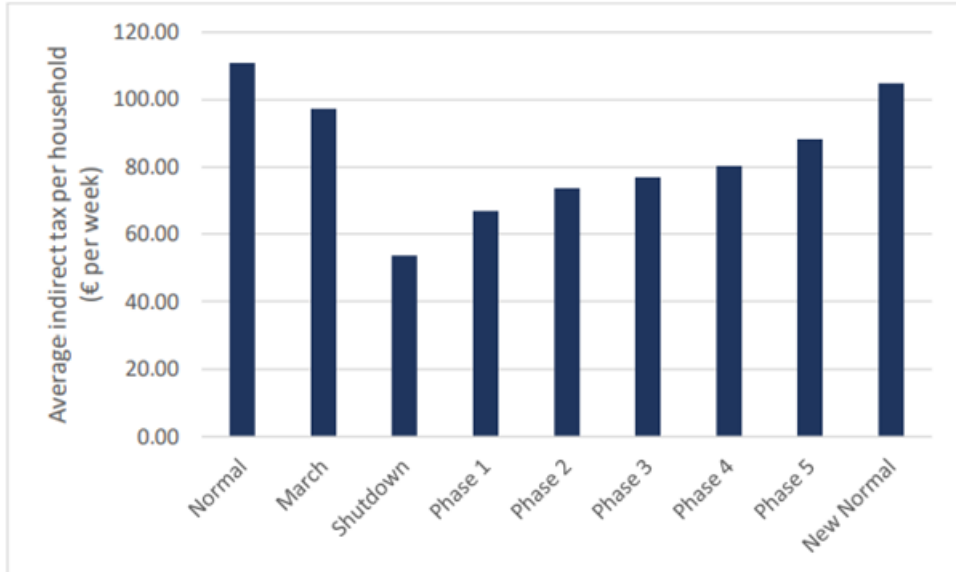
Shortly after the outbreak of the pandemic, a group of Irish researchers prepared a simulation of how tax revenues from indirect taxes would change as a result of changes in consumption induced by SARS-CoV-2. This view is interesting because the model used to estimate the indirect tax microsimulation shows the data weekly, as shown in Figure 3. This approach is important because most European countries very quickly launched various types of protection packages, shields and social transfers, especially those aimed at maintaining a high level of employment. They provided the so-called ‘cushioning effect’ not only for the beneficiaries themselves but also for the tax revenues they generated during this period.

Figure 2. Rise in unemployment great recession versus SARS-COV-2.



Source: OECD, *Harmonised Unemployment rates*, <<https://data.oecd.org/unemp/harmonised-unemployment-rate-hur.htm>> (30.11.2022).

Figure 3. Average weekly indirect tax paid per household in each phase of the pandemic (€ per week)



Source: C. Coffey et al., *The effect of the SARS-COV-2 pandemic on consumption and indirect tax in Ireland*, “Budget Perspective” No. 3/2021.

The presented data show that the average amount of indirect taxes per household in the pre-pandemic period was €111/week. During the lockdown period, according to estimates, it should drop to €54, gradually increasing after reopening to the ‘new normal’, which would be €105.²

However, when you compare the total tax revenues of European countries in 2019 and 2020 – these curves are relatively flat, which means that the difference in total tax revenues of individual countries, after the outbreak of the pandemic, does not seem so significant. There has been a decline in most countries, but not very much. The exceptions are countries such as Germany, France or the United Kingdom, where the decline was more noticeable. Meanwhile, countries such as Denmark, Lithuania, the Netherlands, Poland and Sweden, improved their result compared to 2019. The more that almost the entire first quarter of 2020 was a normal period, before the outbreak of the pandemic, which also affected and flattened the annual results. Details are presented in Table 1.

Looking at the data in Table 1., it is also worth noting that the vast majority of countries recorded a dynamic increase in tax revenues in 2016-2018. For many of them, 2019 turned out to be a kind of correction, and the pandemic year 2020, that followed, continued this trend. It can therefore be concluded that the pandemic did not so much reduce tax revenues as prevented their further growth, sometimes very dynamic.

When analyzing the impact of the SARS-CoV-2 pandemic on tax systems in different countries, it is worth looking at the table that presents a forecast of an important component – the financial condition of taxpayers, i.e. the level of savings of households in the European countries, as a percentage of their disposable income. The advantage of this forecast over the actual state in this case is that it does not take into account the influence of other important factors, like the new outbreak of the Russian-Ukrainian conflict, which took place only after the pandemic started. Their presumably significant influence on the matter analyzed in this article should be the subject of separate, more detailed studies.

² C. Coffey et al., *op. cit.*, p. 14.

Table 1. Tax revenue Total, Million US dollars, 2016-2020.

Location ▼	▼ 2016	▼ 2017	▼ 2018	▼ 2019	▼ 2020
Austria	165.12	174.34	192.16	189.42	181.15
Belgium	206.02	219.99	238.35	227.68	221.43
Czech Republic	66.79	75.26	87.09	87.83	84.35
Denmark	142.47	151.06	157.66	161.98	165.72
Estonia	8.06	8.74	10.07	10.41	10.55
Finland	105.18	109.33	116.79	113.55	113.42
France	1 121.01	1 192.96	1 279.60	1 224.76	1 192.11
Germany	1 308.62	1 389.68	1 527.48	1 501.42	1 471.10
Greece	74.97	78.46	84.84	81.06	73.28
Hungary	50.21	54.11	59.07	59.63	55.31
Ireland	70.33	75.59	86.02	87.41	85.85
Italy	792.15	820.47	872.38	850.32	807.63
Latvia	8.64	9.48	10.71	10.64	10.67
Lithuania	12.75	14.13	16.23	16.54	17.42
Luxembourg	22.04	23.98	27.97	27.69	27.97
Netherlands	300.83	322.02	354.41	357.35	361.74
Norway	143.39	154.51	171.99	161.85	140.00
Poland	157.67	179.63	206.45	209.68	214.43
Portugal	70.22	75.35	83.92	82.63	80.17
Slovak Republic	29.72	32.42	36.06	36.34	36.26
Slovenia	16.72	17.98	20.17	20.14	19.70
Spain	413.83	443.61	492.23	483.10	468.14
Sweden	227.51	238.60	243.21	228.74	230.49
United Kingdom	873.02	875.68	939.47	925.99	887.77

Source: OECD, *Revenue Statistics: Comparative tables*, <<https://data.oecd.org/tax/tax-revenue.htm>> (30.11.2022).

Table 2. Household savings forecast Net, % of household disposable income, 2019-2023.

Location ▾	▾ 2019	▾ 2020	▾ 2021	▾ 2022	▾ 2023
Austria	8.51	14.45	11.36	7.34	7.27
Belgium	6.13	15.49	11.18	5.63	4.29
Bulgaria	2.03	7.11	2.90	1.05	0.95
Czech Republic	8.54	16.88	11.39	4.15	2.91
Denmark	3.56	5.76	5.68	3.83	3.71
Estonia	8.74	11.87	10.20	7.22	5.77
Finland	0.55	4.76	3.17	1.68	1.23
Germany	11.06	16.29	14.97	10.00	9.25
Hungary	9.21	10.53	10.09	8.88	9.61
Ireland	5.33	21.59	15.35	6.46	5.09
Italy	2.49	10.32	4.73	0.97	-0.12
Latvia	0.07	9.08	12.85	8.20	4.95
Lithuania	-0.16	9.00	6.18	4.50	2.94
Luxembourg	7.88	18.11	19.92	17.28	14.04
Netherlands	11.36	17.79	15.35	12.57	12.47
Norway	7.61	14.53	13.40	8.17	7.68
Poland	0.70	6.85	4.29	-0.90	-0.65
Slovak Republic	4.13	5.14	5.17	3.18	3.17
Slovenia	6.48	16.25	12.35	7.31	6.17
Spain	4.21	10.81	6.90	4.84	4.50
Sweden	15.56	17.13	14.92	13.80	13.42

Source: *OECD Economic Outlook No. 106 (Edition 2019/2)*, <<https://data.oecd.org/hha/household-savings-forecast.htm#indicator-chart>> (30.11.2022).

The main conclusion from the analysis of Table 2. is that the outbreak of the pandemic mobilized the inhabitants of most countries to significantly

increase their savings in 2020 so that the surplus would then decrease in the next three years to levels much lower than in 2019. The table shows that citizens of many countries tried to cope with the economic challenges of the pandemic on their own, without expecting excessive help from the state.

At least one more country and changes in its fiscal policy in connection with the SARS-CoV-2 pandemic aroused the curiosity of researchers. The country where the pandemic began in 2019 – China. Figure 4. shows the level of tax revenues in China as a percentage of GDP over the last decade. A visible decrease in inflows can be seen, as well as a greater amplitude of fluctuations in inflows starting from 2019. In Q1 2020 alone, China's GDP fell by 6.8% YoY, imports fell by 16.1% YoY and exports by 6.4% YoY³.

Figure 4. China's Tax Revenue: % of GDP, 2012-2021.



Source: CEIC Data, <<https://www.ceicdata.com/en/indicator/china/tax-revenue--of-gdp>>, (21.11.2022).

To sum up, the pandemic has hit the tax systems of countries on a global scale, forcing them to take active action and non-standard steps, as well as providing new arguments for discussion on changes in the approach to fiscal policy in general.

Responses to a pandemic – evidence from some countries

As already mentioned, many countries relatively quickly proposed a number of tax solutions to mitigate the effects of the pandemic, especially for

³ National Bureau of Statistics of China, *GDP, Export & Import's annual growth rate*.

entrepreneurs. The priority was usually their survival and maintaining a high level of employment.

Let's go back to the welfare states. The activities of Sweden and Finland focused on facilitating VAT, i.e. the possibility of later payment or loan and facilitating the payment of this tax. Finland additionally waived the charging of penalties and interest for late VAT payments. In contrast, no visible tax changes have been observed in Norway. In turn, a number of interesting solutions, some for the first time, were introduced by Denmark. In addition to the delay in VAT payments, there was targeted support for large enterprises and selected industries; increasing liquidity in the banking sector, the state taking over the sick leave fee for the first 30 days (instead of the employer) or taking over fixed costs (including rent or interest payments) for selected companies that have been particularly affected by pandemic restrictions.⁴ Taking over the sickness payment obligation was particularly important at the beginning of the pandemic, because of the numerous SARS-CoV-2 cases of employees and their family members, which required frequent self-isolation of all household members.

The Irish authorities have decided to mitigate the income shock by supporting households whose members have lost their jobs due to the pandemic restrictions and by providing subsidies to employers for each eligible worker. Two instruments have been developed for this purpose:

1. Pandemic Unemployment Payment (PUP) – a social security benefit for both employees and self-employed who lost their employment due to SARS-CoV-2⁵;
2. Temporary Wage Subsidy Scheme (TWSS) – a temporary subsidy scheme that allows employers to get a maximum of €410 per employee. However, this subsidy was based on the employee's net salary, not gross⁶.

The United Kingdom has taken extensive measures in the face of the pandemic shock in the field of fiscal policy. Their scale has reached dimensions not recorded since World War II. It is worth mentioning that the UK's financial policy was not particularly stable before the pandemic. The net debt of the public sector in this country increased from below 40% of GDP on the day before the crisis in 2008 to 80% of GDP in 2019, on the day before the outbreak of the pandemic. As a result of the response to SARS-CoV-2, this debt

⁴ B. Greve et al., *Nordic welfare states – still standing or changed by the SARS-COV-2 crisis?*, “Social Policy & Administration”, 2021, Vol. 55, No. 2, pp. 295-311.

⁵ R. Hick, M. P. Murphy, *Common shock, different paths? Comparing social policy responses to SARS-COV-2 in the UK and Ireland*, “Social Policy & Administration”, 2021, Vol. 55, No. 2, pp. 312-325.

⁶ S. Byrne et al., *The Initial Labour Market Impact of SARS-COV-2*, “Economic Letter”, Vol. 2020, No. 4, pp. 4-9.

exceeded the 90% barrier in 2020⁷. Back to fiscal policy, however. The purpose of the support was not to transfer directly to households, as in the case e.g. of the United States, but to keep employees' relations with their organizations. By July 2020 alone, income protection obligations for employed and self-employed people, business grants and loans and large-scale government guarantees totalled £ 290 billion. The breakdown of this amount and the level of support for individual activities are presented in Figure 5.

As can be seen, the largest share of this amount, as much as 21% and £ 58.9 billion, was accounted for by public service spending. In second place were programs aimed at maintaining employment or at least postponing reductions – 20% and 57.7 billion pounds. Launched in March 2020, the package offered government funding for 80% of an employee's monthly salary, up to a maximum of £ 2,500. Employers were also encouraged to supplement the remaining 20%, but this was not a requirement. The program turned out to be very effective, although its burden on public spending was considerable. It covered 9.6 million employees and 2.7 million self-employed. Nevertheless, still 1.4 million people applied for unemployment benefits during this period⁸.

The third largest component was VAT and income tax deferrals (£ 50 billion, 17%) and business loans (£ 45.8 billion, 16%), which covered over a million businesses. At the same time, support was offered to the Bank of England in the purchase of short-term, unsecured debt of large companies, amounting to over 18 billion pounds⁹.

Other activities and forms of support did not exceed 10%, including direct support for households amounting to £ 9.5 billion, i.e. 3% of the total amount of support.

Tax preferences have also been introduced in Poland. The duration of the reliefs varied. The first category of reliefs expired at the end of May 2020, the next one will expire at the end of 2022, and the last one will only apply until the end of 2023. In the first category, it is worth mentioning: the exemption from tax on income from buildings by owners of commercial real estate value of at least PLN 10 million; the possibility of making a one-time depreciation write-off on fixed assets used for the production of goods related to counteracting SARS-CoV-2, or the possibility of deducting donations for SARS-CoV-2-related purposes to selected institutions or NGOs in the amount of 150 per cent or even 200 per cent donation amount. The second category included relief for bad debts, increased limits of PIT exemptions for benefits,

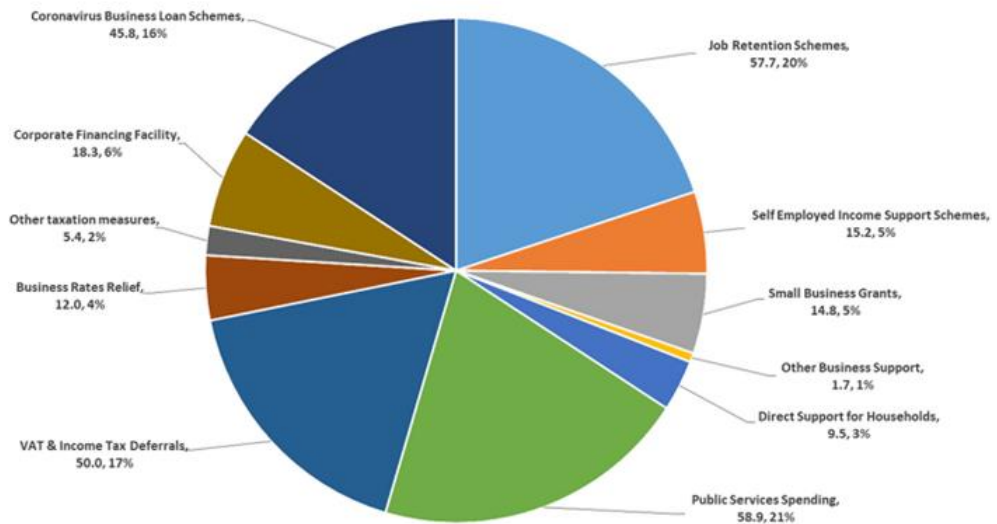
⁷ D. Heald, R. Hodges, *The accounting, budgeting and fiscal impact of SARS-COV-2 on the United Kingdom*, "Journal of Public Budgeting, Accounting & Financial Management", Vol. 32 No. 5, 2020, pp. 785-795.

⁸ *Ibidem*

⁹ Office for Budget Responsibility (OBR), *Coronavirus analysis*, <<https://obr.uk/coronavirus-analysis/>>, (30.11.2022).

and the third – increased limits of exemptions for selected benefits in connection with the financing of social activities¹⁰. It can be said that the main axis of support, in this case, was focused on counteracting and fighting SARS-CoV-2, which is why this type of activity could be settled on preferential terms in the first period of the relief.

Figure 5. UK fiscal response to SARS-CoV-2, 2019-2020 as £ billion and % of total, at 14 July 2020.



Source: D. Heald, R. Hodges, *op. cit.*, p. 789.

When analyzing various approaches, it is worth paying attention to Italy's anti-shock fiscal policy, implemented in the first phase of the pandemic. Three shocks required addressing: two supply shocks (decreases in labour and productivity) and one demand shock, which was a discounting factor. A detailed summary of the fiscal steps taken and their financial dimension is presented in Table 3. The largest share in the package had transferred to households and small businesses, considered critical for the Italian economy (€ 38.5 billion). The vast majority of this amount supported actually households, not businesses. It is worth noting that this pool also allocated €5 billion to support local governments, whose fiscal revenues also collapsed during the pandemic. The second step was to support lending to small and medium-sized enterprises (SMEs) to reduce the

¹⁰ T. Rolewicz, *Zniesienie stanu epidemii a zmiany w podatkach*, <https://www.ey.com/pl_pl/tax/zniesienie-stanu-epidemii-zmiany-w-podatkach>, (30.11.2022).

cost or increase the quantity of bank loans. This sector was in a worse shape even before the pandemic, which significantly exacerbated the situation. Another action was the steps aimed at reducing the fixed production costs of companies (€ 2.4 billion), including i.a. 60% tax relief for companies whose income does not exceed € 5 billion a year, and whose income fell by more than 50% in the period March-May 2020 compared to the same period in 2019. In turn, reductions in direct and indirect taxes amounted to € 8.2 billion, including a reduction of VAT on medical equipment to prevent the spread of the virus from 22% to 0% and a travel voucher of € 500 for each Italian family (to be used in Italy). And finally, the last step – an increase of € 12 billion in government spending, with more than € 8 billion in the health sector¹¹.

Table 3. Summary of fiscal policies in Italy in billion euros.

Summary of Fiscal Policies (Relaunch Decree)	
Fiscal Measure	Amount (in Billion Euros)
Transfers to firms and households	38.5
Fiscal transfer to businesses	6.2
Employment subsidies	26
Grants to local governments	5.3
Firms' cost of capital reduction (guarantees)	9.5
Firms' production cost reduction	2.4
Direct and indirect tax reductions	8.2
IRAP tax reduction	4
Tax credit for the tourism sector	1.6
Tax reliefs for selected sectors	0.45
Further indirect tax cuts	2.15
Increase in government spending	12
Health spending	8.2
Other expenditures	3.8
Other minor tax and spending interventions	4.65
Total	75.25

Source: M. D. Pietro, L. Marattin, R. Minetti, *op. cit.*

¹¹ M. D. Pietro, L. Marattin, R. Minetti, *Fiscal policies amid a pandemic: the response of Italy to the SARS-CoV-2 crisis*, "National Tax Journal", September 2020.

We can ask the question of whether the actions of the Italian government were: adequate, optimal in relation to the situation and, above all, effective. In this case, economics researchers attempted a simulation based on 4 scenarios. It is worth quoting the results of these studies, because they illustrate the limitations of fiscal policy and that in practice it very often does not achieve 100% effectiveness.

So, 4 scenarios were created and analyzed for the impact of SARS-CoV-2:

1. Lack of any fiscal stimulus in the situation of a pandemic outbreak;
2. Fiscal stimulus implemented by the Italian government;
3. Alternative fiscal plan change in the proportions of the package in scenario 2 in favour of increasing public spending to reducing taxes;
4. Alternative fiscal plan assuming the transfer of funds from households to companies with the remaining parameters of the package unchanged in scenario no. 2.

The following issues were checked: To what extent did scenario 2 ease the recession compared to scenario 1? Scenarios 3 and 4, on the other hand, examine to what extent alternative fiscal plans could have better mitigated the fall in GDP compared to scenario 2¹².

The results of the scenario study indicate that scenario 2 (actually taken by the government) allowed minimizing the fall in GDP by 25%, in the period of Q2/2020-Q2/2021. At the same time, better results could have been achieved by focusing the package more on public spending than tax cuts (scenario 3), but in this case, it would be resisted by businesses as the Italian economy had a high share of government spending and a high level of taxes even before the pandemic. The analysis also confirmed that a greater strengthening of tax reductions in enterprises at the expense of household support would also have brought better results than those achieved in the implementation of scenario 2. However, the implementation of scenario 4 would have had a negative impact on the income redistribution policy in Italian society, where the level of inequality has been increasing for the last two decades¹³. The example of this study clearly shows that the effectiveness of fiscal policy has never been and will not be the only determinant of its implementation. There are social costs, income redistribution policies, business expectations and much more that governments struggling with recession must also take into account. It is worth bearing this in mind when analyzing or evaluating the selected fiscal policies.

The summary of the fiscal response of individual countries to the pandemic will be completed by the analysis of China, which, as it was emphasized earlier, is of particular interest due to its global impact.

¹² *Ibidem.*

¹³ *Ibidem.*

China launched VAT reform even before the pandemic. The simulations showed that lowering the VAT tax is a necessary step to reduce the operating costs of enterprises, which will thus be better able to face challenges and develop. An additional effect was the stimulation of demand. Simulations showed that total GDP increased by 0.21% and indicators such as consumption, exports, total investment volume and production value increased significantly. At the same time, however, due to reduced VAT revenues, the local fiscal pressure increased by nearly 11% from 0.34 to 0.38. In fact, the outbreak of the pandemic has significantly revised these figures. Especially in the case of GDP, which not only did not increase but fell by nearly 7%. Other indicators fared much worse as well. And the local fiscal pressure instead of 0.38 amounted to 0.43, which meant its further increase by over 14%. The gap between revenues and expenditures of local governments in this country is already close to half of local government revenues, which poses a serious threat to their stability¹⁴.

Analyses indicate that the deep VAT reform in China will continue, leading to dynamic reductions, in order to stimulate supply. However, this should take into account various types of challenges and cyclical contradictions in the Chinese economy. It is also extremely important to reform the financial and tax management system in such a way as to balance the disproportions between the central and local government finances. Establishing a fair and transparent relationship between central and local governments will help reduce local fiscal pressures and stabilize finances.

Case Study #1 Digital Tax in Poland

The SARS-CoV-2 pandemic has triggered steps to reduce taxes in many countries. However, protective measures for entrepreneurs and employees affected by its effects were a significant burden for the state budget. Therefore, even during the pandemic, there were examples of reverse actions aimed at increasing the tax burden, e.g. by introducing new forms of taxation. An example here may be the introduction of a digital tax in Poland.

The need to set a digital tax was discussed in Poland even before the pandemic. Meanwhile, at the end of April 2020, a government bill on this matter was submitted to the Polish Parliament. It can be assumed that SARS-CoV-2 turned out to be its catalyst. The tax focused on VOD services and was to amount to 1.5% of the annual revenue obtained from fees for publicly available on-demand audiovisual media services or revenue obtained from broadcasting commercial communications, if this revenue in a given settlement

¹⁴ Y. M. Guo, Y. R. Shi, *Impact of the VAT reduction policy on local fiscal pressure in China in light of the SARS-COV-2 pandemic: A measurement based on a computable general equilibrium model*, "Economic Analysis and Policy", Vol. 69, March 2021, pp. 253-264.

period is higher. Pursuant to the Act, entities having their registered office in another EU Member State were also obliged to pay the tax. It is worth mentioning that the income from the tax was to be transferred in full to the Polish Film Institute¹⁵.

This tax in question was introduced on July 1, 2020. And although it was part of one of the anti-crisis packages, it has remained as a permanent tribute until now. However it is only a part of the comprehensive digital tax discussed at the level of the entire European Union, and in a broader context at the OECD forum (136 countries).

However, the challenge associated with this more complex digital tax, covering all the aspects of digital products and services – is, on the one hand, a change in thinking – the tax will be paid not only in the country of production of the product or service, but also in the country of recipients, and on the other hand, the fact that it is contrary to the currently applicable in many countries, including in Poland¹⁶, DST tax (Digital Services Tax). Therefore, the G20 countries, which in October 2021 announced the introduction of a digital tax at the turn of 2023/2024, also presented a plan to phase out DST. Poland was also among the signatories of the agreement¹⁷.

The proposal to introduce a complex digital tax at the international level has two pillars. The first is an international agreement on the nexus index (rules for taxation by suppliers of digital products and services and individual countries). It addresses, among others tax challenges related to the allocation of profits between different countries of operation. The subject of the second pillar is a global minimum tax with a rate not lower than 15% and a set of international regulations to ensure its functioning¹⁸.

Summarizing the topic of digital tax. It has been announced many times by the Polish authorities, such as in the Official Financial Plan of Poland for 2019-2022. According to estimates, additional revenues to the state budget on this account were to amount to PLN 217.5 million already in the first year of the tax's functioning¹⁹. Nevertheless, formal steps to implement it have not been carried out. This may be influenced by Poland's close allied relations with the

¹⁵ I. Krzemińska, *Pandemia COVID a podatek cyfrowy w Polsce*, <<https://home.kpmg/pl/pl/blogs/home/posts/2020/04/digital-economy-pandemia-SARS-CoV-2-impulsem-dowprowadzenia-podatku-cyfrowego-w-polsce.html>>, (30.11.2022).

¹⁶ The tax related to VOD in Poland is also treated by many researchers as DST.

¹⁷ M. Olejnik, *Podatek cyfrowy – nowa opłata dotycząca gospodarki cyfrowej*, “Magazyn Przedsiębiorcy”, 09.03.2022, <<https://magazynprzedsiębiorcy.pl/podatek-cyfrowy>>, (30.11.2022).

¹⁸ M. Żurek, M. Saciuk, *Opodatkowanie gospodarki cyfrowej w Polsce*, <<https://www2.deloitte.com/pl/pl/pages/tax/articles/podatek-cyfrowy-opodatkowanie-gospodarki-cyfrowej-w-polsce.html>>, (30.11.2022).

¹⁹ B. Sikora, *Digital Services Tax in Poland*, <<https://www.twobirds.com/en/insights/2019/poland/digital-services-tax-in-poland>>, (30.11.2022).

United States, where GAFA²⁰ companies and many other enterprises, which could be subject to the new tax, come from. The analysis of available materials and publications indicates that Poland will probably wait for a standardized complex digital tax project, introduced as part of a larger international forum, i.e. G20 or the EU, so as not to be perceived by a key partner and ally as a country 'going ahead'. Nevertheless, the topic itself will return to the public debate from time to time, especially in increasingly difficult times for the Polish economy.

Case study #2 Polish New Deal

The digital tax mentioned in the previous paragraph, in addition to seeking additional revenues for the state budget after the SARS-CoV-2 hit, can also be treated as an attempt to distribute income more equitably between the richest and the poorest. The pandemic has exposed the weakness of clichés and structures, also in the field of fiscal policy. One example of the search for a 'new deal' based on greater social solidarity may be the example of the New Polish Deal.

The New Polish Deal is the flagship project of the Polish government, the aim of which was to reduce social inequalities and improve the living conditions of all citizens. It appeared as an idea to get out of the economic effects of the pandemic. The five pillars of the program were: favourable tax changes for 18 million Poles (nearly half of the population), improvement of health care, proposals for obtaining own housing, abolition of PIT for pensioners receiving the lowest benefits and the creation of 0.5 million new jobs. According to the assumptions, the project is to cost over PLN 650 billion by 2030 (over PLN 72 billion annually)²¹.

The project itself, introduced under enormous time pressure, turned out to be underdeveloped and chaotic. Through numerous faults, it caused a significant complication in the Polish tax system, previously considered one of the most difficult and less transparent for taxpayers. The program itself was corrected 3 times within 6 months (in Poland, changes in the income tax are usually introduced once a year)²² and has been updated to versions 1.0, 2.0 and 3.0. An in-depth analysis of this topic should rather be the subject of a separate publication. At this point, it is worth focusing on the ideas and values that guided the creators of the 'new deal'.

²⁰ Digital giant companies, formed from the first letters of Google, Amazon, Facebook and Apple.

²¹ Polski Ład, *O programie*, <<https://www.gov.pl/web/polski-lad/o-programie>>, (30.11.2022).

²² Ł. Zalewski, *Wszystko o Polskim Ładzie 2.0. Co już wyjaśniono, a co wciąż budzi wątpliwości [PORADNIK]*, <<https://podatki.gazetaprawna.pl/artykuly/8500587,polski-lad-2-0-zmiany-wynagrodzenia-poradnik.html>>, (30.11.2022).

Looking at the 10 key areas of the New Polish Deal program, you can find not only issues such as a decade of development or fair work with decent pay, but also specific ideals that guided the authors of the project. These values, as can be assumed, had an overwhelming impact on the shape of the entire project. These include family and home in the centre of life, Poland-our land, friendly school and culture for the new century or the golden autumn of life²³.

According to experts' calculations, most taxpayers should experience favourable changes in earnings. The analysis of 6 different earnings scenarios shows that the first 4 scenarios in which earnings did not exceed PLN 10,000 gross per month increased or remained at a neutral level after the changes were introduced. However, exceeding the ceiling and earning more than 10,000. gross per month (scenarios 5 and 6) were subject to slight decreases in the New Polish Deal. This was mainly due to the reduction of the PIT tax rate from 17% to 12%, leaving an increased tax-free amount (PLN 30,000/year) and an increased first tax threshold (PLN 120,000/year)²⁴. It is worth noting that at the same time, a number of reliefs and deductions, i.e. relief for the middle class, and the possibility of deducting health insurance contributions, were eliminated – nevertheless, looking at the specific calculations, the overall balance seems favourable. It is also the result of the polarization of Polish society in terms of earnings, and the fact that the vast majority of taxpayers fall into the basic income ceiling not exceeding PLN 10,000 gross per month.

On the other hand, there is no shortage of research that proves that the 'New Polish Deal' project is unable to achieve the noble goals it proclaims. The results of the analysis suggest that tax transfers take place quite randomly to groups that either do not need them or, on the contrary, require much more attention and systemic changes. An example may be Polish pensioners. Forecasts indicate that in the future as many as 70% of retirees will receive only the minimum pension. This is due to the contribution system and the inefficiency of Polish institutions, i.e. the Social Insurance Institution (ZUS). Therefore, discussions on whether to exempt this social group from one or another contribution seem pointless, because they will not significantly affect the financial condition of this social group. This is one of the examples that there are social groups that, without a systemic change, will not be able to overcome the effects of e.g. the SARS-CoV-2 pandemic.

Summing up this thread, the created program 'New Polish Deal' seems to be an expression of the belief that in such unusual economic circumstances as the outbreak of a global pandemic, the acute phase of which lasted almost two years, it will not be possible to quickly and effectively rebuild the economy,

²³ Polski Ład, *10 obszarów*, <<https://www.gov.pl/web/polski-lad/10-obszarow>>, (30.11.2022),

²⁴ D. Leonik, *Polski Ład – zmiany w podatkach i przepisach, zmiany w wysokości wynagrodzeń*, <https://www.ey.com/pl_pl/tax/polski-lad-zmiany-w-przepisach>, (30.11.2022).

especially for people less earning using existing tools. The second conclusion is that it was considered right that a small percentage of the highest earners would experience unfavourable tax changes (even in the face of the post-pandemic recovery of the economy) so that a wide group of low and medium earners could experience a positive change in their standard of living. Although the implementation of the program clearly did not keep up with its assumptions in practice, the very fact of creating this type of project may be one of the signs of the upcoming changes in the approach to taxation rules on a global scale.

Some forecasts and predictions regarding tax systems

An analysis of publications on the response of fiscal policy to the medical and economic crisis caused by SARS-CoV-2 shows that in many countries an increase in tax burdens was predicted after the pandemic. These countries included: Australia²⁵, South Africa²⁶, Egypt²⁷, the US²⁸ and Estonia²⁹. Thus, just as the common reaction to the outbreak of the pandemic was to loosen fiscal policy and protect the groups that were most affected by its economic effects, recovery from the crisis will be characterized by an increase in fiscal burdens. It is worth continuing research in this area to answer the question of whether the groups of citizens most at risk of poverty will be additionally protected in this process.

Regardless of the assessment of the degree of restrictiveness of fiscal policy, in many analyzes there is a conviction about the need to develop new approaches, methods and tools to support fiscal policy in the post-pandemic period. And these are clearly missing. It is necessary to intensify scientific research in order to develop these foundations as soon as possible so that the theory can effectively support the implemented practice³⁰.

²⁵ J. Andrew et al., *Australia's SARS-COV-2 public budgeting response: the straitjacket of neoliberalism*, "Journal of Public Budgeting, Accounting and Financial Management", 2020, No. 32 (5), pp. 759-770.

²⁶ P. Burger, E. Calitz, *SARS-COV-2, Economic Growth and South African Fiscal Policy*, "South African Journal of Economics", 2021, No. 89 (1), pp. 3-24.

²⁷ E. M. Elkhashen, A. Sarhan, A. Ejiogu, *Egyptian budgetary responses to SARS-COV-2 and their social and economic consequences*, "Journal of Public Budgeting, Accounting and Financial Management", 2020, No. 33 (1), pp. 78-86.

²⁸ P. G. Joyce, A. Suryo Prabowo, *Government responses to the coronavirus in the United States: immediate remedial actions, rising debt levels and budgetary hangovers*, "Journal of Public Budgeting, Accounting and Financial Management", 2020, No. 32 (5), pp. 745-758.

²⁹ R. Raudla, J. W. Douglas, *This time was different: the budgetary responses to the pandemic induced crisis in Estonia*, "Journal of Public Budgeting, Accounting and Financial Management", 2020, No. 32 (5), pp. 847-854.

³⁰ E. S. Vylkova, *Tax policy in a pandemic SARS-COV-2: review of publications in leading economic journals*, "Management Consulting", No. 12, 2021, pp. 81-94.

Predictions regarding fiscal policy are not limited only to its nature but also penetrate into its deepest foundations and the values that it should be guided by. There are voices that the effective implementation of fiscal policy in the future requires the inclusion of values such as resilience, equity, diversity, care and inclusive politics. The factor accelerating such conclusions is the observation that the fight against the SARS-CoV-2 virus has exhausted the layers of public trust in the actions of the authorities, which now need to be rebuilt. A glaring example is China, where a zero-tolerance policy for SARS-CoV-2 is used as a restrictive tool of social control. And a lack of trust coupled with high levels of social inequality hamper cooperation and economic development³¹. It can be said that such an approach will also force rethinking the idea of economic growth and development. This discussion is already underway, and the related issues of climate change are conducive to focusing new economic theories not so much on ‘more’ as ‘better’, ‘healthier’, ‘more economical’. The development of fiscal policy seems to be joining this trend.

Conclusions

Collecting all the threads and problems presented in this article, three main conclusions can be formulated related to the ongoing changes in the role and function of fiscal policy on a global scale.

1. The impact of the SARS-CoV-2 pandemic on the economy was as negative as during the 2008 crisis, and even more so. What's more, it caused widespread shock and insecurity among many societies. Therefore, it is legitimate to say that the socio-economic circumstances that occurred after March 2020 are unprecedented and a change of approach is needed, including the method of implementing fiscal policy.
2. Implementing a new approach in the taxation systems without deeper systemic changes and new methodology is pointless. The poorest social groups, privileged under the newly proposed fiscal systems, in the long run, have no chance for a real change in their standard of living. There is a clear cognitive gap in this matter and scientific theories definitely do not keep up with the needs of practice. It is necessary to intensify research and scientific discussion on this subject in order to be able to propose adequate instruments for the implementation of new fiscal policy principles.

³¹ M. Leach et al., *Post-pandemic transformations: How and why SARS-COV-2 requires us to rethink development*, “World Development”, Vol. 138, February 2021.

3. One of the reasons for the difficulties faced by the authors of new concepts of fiscal policy is the change in the role of fiscal policy. In the traditional approach, issues such as stimulating growth and ensuring regular budget revenues were more strongly emphasized. Meanwhile, the new proposals focus on the function of redistribution and fair distribution, at the expense of the others, which in the long run may lead to the destabilization of public finances and, as a result, deepen income inequalities in society and increase the number of people living below the poverty line.
4. New concepts of fiscal policy principles try to incorporate an immeasurable, defined system of values into a very logical, quantifiable tax scheme. This is undoubtedly a difficult task and may require broader changes, e.g. in social thinking or approach to certain issues. Therefore, not only a new methodology is needed to effectively introduce changes, but also the readiness and maturity of society to carry them out and then apply them regularly, without incurring additional costs from the state.

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THE CHANGES IN NEPAL DURING THE COVID-19 PANDEMIC (2020-2022)

***Abstract:** In this paper, the author has chosen to focus on the many ways in which COVID-19 has affected and partly still affects the situation in Nepal. This applies not only to the health and financial consequences but also to the bright spots. COVID-19 has helped to focus on issues and areas of action, which will hopefully live on in the post-COVID-19 era. Among other things, cleaner air has not only provided a better view of the mountains but has also – more significantly – had a great effect importance for the health of the population. Furthermore, the focus will be on how these changes due to the Corona crisis in Nepali society affect the 17 Global Goals. Goals of how to solve i.e., the climate crisis and to improve everyday life for citizens worldwide. The third Global Goal: Ensuring healthy lives and promoting well-being for all at all ages was really put under pressure in Nepal during the COVID-19 pandemic. The dilemma was between saving elderly people versus the younger generations being locked in due to lockdowns. How did Nepal tackle this dilemma? And what about the country’s health system?*

Keywords: Nepal, COVID-19, the Health System

Introduction

The Nepalese Ministry of Health and Population reported on 23 January 2020, one confirmed case of COVID-19 in the capital, Kathmandu. This was also the first case of COVID-19 in South Asia. The first documented case of local infection was confirmed on 4 April 2020, and the first death occurred on 14 May. The number of confirmed cases has steadily increased since then, and

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on 27 August 2020, 34,418 confirmed cases were reported up until then of COVID-19 in the seven different provinces of Nepal, and at the same time 175 deaths were attributed to COVID-19. The Ministry of Health and Population estimates that 99% of cases are asymptomatic, i.e., with mild or no symptoms, and of those 97% are imported cases².

On 26 March 2020, the Ministry of Health and Population developed guidelines for managing and handling quarantine under COVID-19. The guidelines included several public health measures, including social distancing, hand washing, correct use of masks and hand sanitiser as well as information campaigns via radio, TV, and printed material. Nepal's government extended the country's lockdown for another four weeks, through 21 July 2020. Furthermore, all public and private offices and businesses closed. Only emergency services were kept open. The shutdown was, however, eased from 15 June, making it possible to move in private vehicles. In addition, work was carried out in certain sectors such as agriculture and construction. This soon after led to a sharp increase in the number of COVID-19 cases and hospitalizations, which meant that the government reinstated the country in a partial shutdown for some specific areas from 5 August 2020³.

This is not the first time that Nepal is facing a national emergency. Nepal has been affected by various infectious disease outbreaks in recent times, including cholera, influenza, and dengue fever. At the same time, large sections of the population have been vulnerable to chronic malnutrition, which is especially true in rural areas. Nepal is still struggling with a wide range of problems which was caused by the powerful earthquake in 2015.

Complete or partial shutdowns of the various sectors have had a major impact on the supply of resources to the healthcare system, and at the same time, the pressure on the healthcare system has increased further, due to the many cases of COVID-19. In particular, the health system's service around maternal health care has been affected. One recent study published in *Lancet Global Health* reported that the lockdown in Nepal has halved the number of births in hospitals and hospitals as well as increased the number of stillbirths and deaths in newborns. This has further raised serious concerns about ensuring timely and proper quality maternal health care at the local level⁴.

Despite the high number of confirmed COVID-19 cases, the country's overall mortality rate among those infected is low. This may be due to that Nepal has more young patients than other countries and that the young patients

² World Health Organization, *Focused COVID-19 Media Monitoring, Nepal – Sharpening the COVID-19 Response through Communications Intelligence*, <https://reliefweb.int/sites/reliefweb.int/files/resources/Focused%20COVID-19_Media%20Monitoring_July%2023%2C%202021.pdf> (20.10.2022).

³ *Ibidem*.

⁴ *Ibidem*.

are not affected to the same degree by the corona infection as the elderly. However, there is a need for further research into this regard. Furthermore, it is reported that more than 67% of COVID-19 deaths have occurred in patients with multiple diagnoses, including diabetes, hypertension, cardiovascular and respiratory diseases, a simultaneity, which despite a large prevalence in Nepal is not on the same level as in many western countries. The pandemic has also had an impact on mental health both with health workers on the front line and with the COVID-19 patient. Stigma and discrimination are reported among several healthcare workers at their workplace and for COVID-19 patients. Health workers have been forced to leave their tenancy housing because of their occupation. In addition, they have been shaped access to restaurants and hotels where they have been denied food and accommodation. This has ultimately put them at higher risk for psychological challenges.

On 7 May 2020, the government implemented a Health Sector Contingency plan, which should help to keep the morbidity and the mortality of the disease down. Health and vaccination stations at the international airport and the borders to India and China. All nationals entering Nepal must go into self-quarantine for 14 days and all international flights are being suspended. The next most important step that the government has focused on is overcoming the spread of COVID-19 through an expansion of the number of test centres from one to 22 during the last few months. In addition, 25 hospitals were appointed to carry out specific tasks in the fight against COVID-19, including isolation facilities for infected COVID-19 patients.

The pandemic has created an even bigger burden on an already overburdened healthcare system. Nepal has one of the world's poorest health systems with a density of health personnel (doctors, nurses, and midwives) of 0.67 per 1,000 inhabitants, which is below the WHO minimum fixed at 2.3 health personnel per 1,000 population. The existing rapid diagnostic facilities for testing of COVID-19 cases are inadequate and the provision of such services in the peripheral parts of the country are grossly inadequate. The hospitals are mostly unprepared for the increase in COVID-19 cases mainly due to a lack of resources, limited intensive care beds, isolation places, medical equipment, including test kits and delivery of personal protective equipment (PPE) for healthcare workers, limited capacity for data collection and reporting and limited coordination of efforts. During the epidemic is a significant part of the health personnel also taken out of active service due to the need for isolation after exposure to infected patients. In addition, it is challenging to maintain social distance in many parts of the country, as many homes have very little space. Furthermore, maintenance of basic hygiene is made difficult by restrictions on access to water and soap.

Nepal needs to invest more in infrastructure, capacity building and strengthening of primary health services to tackle the outbreak and not least to

avoid the derivative and indirect one's negative effects of the shutdown and the pressure on the health system. There is a great need to increase testing capacity and supply of PPE for frontline workers. The best strategy to limit the contagion at the community level is rapid identification of the infected through extensive testing and tracing of contacts, insulation of those infected with corona, prevention through awareness campaigns and prevention of infection in the vulnerable and exposed part of the population, such as the elderly and people with dependents comorbidity.

Local, voluntary health workers have largely remained, used to mitigate the shortage of professional health workers, especially in resource-constrained areas. In Nepal, it is pronounced degree health volunteers, local women, often with limited formula training working within the health system at the village level. They are considered the front line of healthcare workers in Nepal and are the first point of contact between residents of the local community and the primary healthcare facilities. They can act as an important element in information, tracking and reporting of corona cases and support those who will have to go into isolation. The pandemic has shown that it pays for the government to invest even more in this group of health workers. All in all, a coordinated, multisectoral effort with strong leadership from the public health sector, guided by strong political commitment, is required to tackle the COVID-19 pandemic and not least the derivatives and often indirect one's health consequences.

As can be seen, the third Global Goal was really under pressure, and the health system was on the highest alert. For the elderly and chronically ill, the SARS-CoV-2 is extra dangerous, and a large, sudden pressure on the healthcare system can take the focus away from other diseases. Many, especially older people, are unhappy and live with anxiety and fear of the situation. The COVID-19 situation has set back the third goal somewhat in Nepal.

However, *gender equality*, goal 5, will change in future. Women make up a larger proportion of the health and care sector and are thus exposed to a greater risk of being infected with corona. On the positive side, it commands respect that a great many women are at the forefront of hospitals and nursing homes, where they provide a vital effort.

Health in Nepal and COVID-19

Although Nepal is a poor country, its healthcare system is not the worst in South Asia, but it is nevertheless strongly challenged when it faces a pandemic like COVID-19. Nepal does not spend much money on its health care, and the country doesn't have very many doctors. There is a private sector with hospitals and healthcare staff, primarily located in Kathmandu, but here you must pay, and it is expensive to consult a private hospital. Outside of the larger cities,

there are relatively few healthcare professional facilities, and often a sick person must travel far to get one diagnosis and treatment. Many Nepalis in case of illness must make do with what may be of health experience in the local environment. Some may be lucky that there is a doctor in the nearest town who can help for a fee, and a pharmacy if medication is needed. It is typically many hours' walk from home.

Deaths per 1,000 population: heart diseases 158.35, lung diseases (especially COPD) 100.75, blood clots 80.01, influenza and pneumonia 47.23, diarrheal diseases 36.73, diabetes 33.25, tuberculosis 24.24, liver diseases 23.05, kidney diseases 21.72, Alzheimer's/dementia 20.52, COVID-19 12.00. When looking at data for the extent of the COVID-19 pandemic in Nepal, must be remembered that lung and respiratory-related diseases are very common and that 10% of deaths are due to these ill judgments. If you have a lung disease during these months, it can be difficult to determine whether it is ordinary pneumonia or whether it is COVID-19 that is the cause of the death. Families also cannot assess what their elderly – and other family members – die off. There can be many people infected with COVID-19 who are not tested and may die of COVID-19 without the cause being properly noted. The statistics are not going to tell the whole truth about the COVID-19 pandemic in Nepal. The extent of lung and respiratory problems in the population is worsened by the heavy pollution and generally poor air quality in Kathmandu Valley. Approximately 10% of Nepal's population lives here. It is unfortunately not much better out in the country where there are many families strongly influenced by a poor indoor climate in houses where food is prepared over an open fire indoors⁵.

In Nepal, however, there is limited understanding of mental health problems. There is little knowledge of the population's mental disorders. Mental problems are furthermore often associated with taboo and shame, and it's not something you talk about. However, COVID-19 has given rise to focus on the psychological and Behavioural consequences of the pandemic, which unfortunately seems to go hand in hand with limited opportunities to offer counselling, help and treatment.

The World Health Organization Assessment Instrument for Mental Health Systems (WHO-AIMS) found in 2016 that there are 0.129 psychiatrists and 0.024 psychologists available per 100,000 inhabitants of Nepal, i.e., a total of 35 psychiatrists and 7 psychologists throughout the country, and most psychosocial support facilities are found in the cities. The one in advance limited access to help, combined with the shutdown, which put a stop to

⁵ Nepal, Ministry of Health and Population, *Health Sector Response to COVID-19*. May 2021, <https://COVID19.mohp.gov.np/COVID/englishSituationReport/60b4e108d27c8_SitRep477_COVID-19_31-05-2021_EN.pdf> (20.12.2022).

treatment courses and treatment with psychopharmaceuticals, has made so difficult to offer the necessary help during COVID-19.

Psychosocial consequences of COVID-19 Transcultural Psychosocial Organization (TPO) performed between 23 April and 3 May this year a study on the psychosocial impacts of COVID-19. It was answered by 2014 participants. The investigation showed that about 50% of the participants had at least one psychosocial problem, while 32% had two or more psychosocial problems – concerning restlessness, fear, anxiety, worries or sadness. In Clinic One Kathmandu they say that from approx. April to July saw an increase of around 150% in the number of psychiatric patients who approached their clinic. They have just experienced demand for online consultations, which they now offer. The patients are mostly office workers who experience depression, insomnia, and anxiety to become infected. Furthermore, infected, who have been declared healthy, experience post-traumatic reactions or fear stigmatization in society, which is why they isolate themselves from others.

Alcohol has typically been used as a strategy for handling the problems, which has aggravated the existing psychological challenges. This has – in addition to several deaths due to alcohol poisoning – increased violence against women in the home. As we see here at home, there has also been commentary in Nepal about increased domestic violence because of the shutdown and the forced social distance and isolation. The national helpline has seen an increase in phone calls regarding partner violence, and the Women's Rehabilitation Center (WOREC), which fights violence against women and children, reported 336 cases of violence against women and children from 33 districts during the lockdown period from 24 March to 15 May. 198 of these referred to domestic violence, typically committed by the woman's spouse, but also by other family members or neighbours. 7 July was the number up to 843. In comparison, WHO reported 1319 cases of violence against women in the period July 2018 to June 2019. The focus has also been on pregnant women and new mothers who have not had access to the necessary help during and after the pregnancy. It is most often pregnant women⁶.

Furthermore, women's physical health, which is focused on COVID-19 opened a new awareness of the mental health of pregnant women. Many pregnant women have not had access to examinations and counselling during pregnancy or after the birth, when clinics closed, and public transport stopped. Below the shutdown saw a 200% increase in mortality among mothers, and likewise became an increase in mental health problems among new mothers⁷.

⁶ A. Nepal, *Domestic Violence—An Epidemic Amidst The Pandemic*, <<https://www.worecnepal.org/content/247/2021-06-07>> (20.12.2022).

⁷ Nepal, Ministry of Health and Population, *Health Sector Response to COVID-19...*

Under lockdown from 24 March to 6 June (i.e., 74 days) also saw an increase of 20% in the number of suicides, of which 80% have been due to depression. The risk cofactors include economic stress, social isolation, lack of access to psychosocial support measures, barriers (taboo and fear of stigmatization) with taking against treatment, increasing fear of dying by infection, loss of a loved one, work stress, social stigma, and discrimination. Insufficient and incorrect information regarding the virus has also been the cause of suicide among infected people.

Despite the limited focus on psychosocial challenges in Nepal, COVID-19 seems to have given mental health issues attention in a different way than earlier. Transcultural Psychosocial Organization has run a campaign on TV, on the radio and via social media and posters in the streets to make the population aware of the psychosocial challenges, Men can experience in connection with COVID-19 and to provide information on where you can contact. In addition, the organization has in all seven provinces initiated various support offers intending to psychosocial challenges, including i.e., individual psychosocial counselling, psychiatric help, and group services both online and in person⁸.

Nepal, COVID-19 & Health and Finances

Goal 8: *Decent jobs and economic growth*. In some industries, the crisis will lead to lower incomes, fewer working hours, and high unemployment. The crisis reminds us that we cannot continue to consume and the growth thinking – grow in the way we have been used to. Also, in Nepal?

Goal 9: *Industry, innovation and infrastructure*: A lot of innovation always happens during wars and crises, and we can benefit from man's general inventiveness.

As it can be read, it doesn't look so bad with COVID-19 in Nepal, but different studies present other types of problems that can be seen as derivative effects of COVID-19. How these problems affect the individual household, is very dependent on where the family lives in Nepal, where the family's income comes from, as well as the usual factors such as caste, gender, level of education and economic condition.

It is not only the health of Nepalis that is greatly affected by the COVID-19 pandemic, but it also affects their living conditions in several ways other, different ways, not least financially. Here I would like to mention the loss of

⁸ Transcultural Psychosocial Organization Nepal, *COVID 19: Operationalizing Regional Exchange 4 Mental Health and Psychosocial Support (CORE4MHPSS)*, <<https://www.tponepal.org/COVID-19-operationalizing-regional-exchange-4-mental-health-and-psychosocial-support-core4mhps/>> (20.12.2022).

three important sources of income, which have major consequences for many families:

1. About 10% of the population works outside Nepal, i.e., at least 3 million. Every year these workers transfer a lot of money for their family back home in Nepal. In 2015 and 2016 these transfers contributed more than 31% of Nepal's gross national product. In 2020, the extent of transfers from abroad decreased sharply, and this is primarily due to COVID-19. A study in the western part of Nepal, where many families have one or two members in positions as migrant workers in the Gulf States or a country in Southeast Asia, reported a decrease of 61% in the transfer of money. It affects both the individual families and the entire country's economy⁹.
2. Workers – often with day labourer-like status – both in agriculture and inside the cities, have also been hit hard, not least because of the government's shutdown of the country, but also of a general travel ban. Most of these workers are without the formal sector, that is, they cannot take sick leave, they cannot work from home, and if they cannot work, they lose their income. A study from Yale University in The United States as of April this year reports that 65% of the Nepalese migrant workers in India were sent back to their villages in Nepal when the Indian government shut down the country's economy. Lack of money transfers to families in the villages means that food reserves disappear faster, investments in agriculture fall, the next harvest will be smaller due to lack of fertilizer, insect control etc., food prices in the cities rise and so on¹⁰.
3. Trade in Nepal is also strongly affected by COVID-19, and many small traders and shop owners are experiencing heavy losses in their earnings. People have less money, fewer products are sold in the local markets, and borrowed money cannot be repaid with continue. It's another vicious cycle that's hard to break out of¹¹.

65% of the Nepalese who work in India were, as I said sent home. But the same also applies to a significant number of Nepali migrant workers in Southeast Asian countries as well as in the Gulf States. The workers who continue to stay without Nepal's borders have typically had the scope of their

⁹ B. Willitts-King, J. Bryant, *Scaling up humanitarian cash transfers in Nepal*, <<https://www.calpnetwork.org/wp-content/uploads/2020/03/scaling-up-ctp-in-nepal-1.pdf>> (20.12.2022).

¹⁰ Ministry of Labour, Employment and Social Security, *Nepal Labour Migration Report 2022*, Kathmandu 2022, <https://moless.gov.np/storage/files/post_files/Nepal%20Labour%20Migration%20Report_2022.pdf> (20.12.2022).

¹¹ Central Bank of Nepal, 2020. *NRB Releases Monetary Policy for FY 2020-21*, "NRB News", 41/ (1) 2020, pp. 1-4.

reduced job offer and therefore also their income compared to 12 months ago. New migrant workers cannot leave.

The effect in Nepal can be seen in Map 1. It does not only show lost earnings across Nepal, but it also shows that there are many households with too little food and that there is a close connection between the two relationships. It is also interesting that the decline in tourism revenues did not seem to be such a big problem; in Bagmati Province with Everest and Langtang, Kathmandu and Bhaktapur are doing well financially quite a bit better than in the Sudurpaschim and Karnali provinces. Gandaki province with Pokhara, Jomsom and Annapurna also has it reasonably purely economic.

How are Nepal and the Nepalese getting through COVID-19? Like the rest of the world, Nepal has high expectations for a vaccine against COVID-19 and hopes that it will arrive soon. Several people inside and outside the government are starting to look at the healthcare system's lack of capacity and not least lack of facilities and staff. For many years, Nepalis have focused on their children's education more than the family's general state of health. Maybe that will change now. With the new municipalities, there have been more resources for local development and not least for local services. Pressure from the population for more health clinics, doctors, nurses, etc. may lead to improvements. However the families' financial conditions require more help from the government at all levels – both municipality, province and central. It can go several months, perhaps several years, before the many migrant workers can return to their workplaces in, for example, the Gulf States. Maybe the jobs will be in large numbers for Nepalis in other countries not recreated after COVID-19, so Nepal must focus on domestic development, get the national economy going and create jobs for the Nepalese within its borders. COVID-19 could well have some positive effects for Nepal if politicians and managers start to focus on investments in production, infrastructure etc., which creates growth and jobs and thereby easy changes in the structure of the country's economy¹².

The long border between Nepal and India has pretty much always been open to traffic and trade between people on the plains to the south and the people of the hills and mountains to the north. Although there are a few border posts places along the 1808 km long border, the openness of the border is a historical fact on both sides. In Nepal, it has contributed to the development of opportunities for labour migration to India, which in recent decades has extended to include large parts of the world. This labour migration has become a crucial part of Nepal's economy. The financial year 2018-19 consisted of

¹² *Ibidem.*

remittances – the money which migrants send to their home country – 28% of GDP¹³.

Migrant workers often live and work under conditions that make them more vulnerable, partly because of fewer rights and more precarious working conditions. The global shutdown in the spring of 2020 because of COVID-19 created a renewed focus on the vulnerability of migrant workers, which became special visible on the border between India and Nepal. The Indian government shut down on 24 March 2020 landed with four hours' notice. It sent millions of migrant workers in India, suddenly out of work, on migration towards their home region, and while many of these were Indians, that was true too for hundreds of thousands of Nepalese labourers in India to go home. However, Nepal already had two days before closing its borders for fear that the disease would be brought into the country from China or India. Millions of Nepalese were stranded, and only slowly did they find 'alternative' routes across the border bypassing the border posts and in the direction of Far Western (Sudurpaschim) and Karnali Provinces, from which many originate. Elsewhere in India, migrant workers were housed in camps, where they waited in conditions of poor sanitation and hygiene and limited opportunity to protect against infection¹⁴.

Also, in the Middle East and Malaysia, many Nepali migrant workers were without work and the opportunity to fend for themselves. The United Arab Emirates demonstrates ready Nepalese migrants because they don't have been paid for two months, and many countries asked Nepali people who had lost their jobs to the Nepali government assistance for repatriation. The government's response was hesitant at best. Others, who were soon put to work, preferred to stay where they were, among other things, for the sake of their children's education.

It was early predicted that COVID-19 could have disastrous consequences for Nepal's economy because the crisis hit migrant workers particularly hard. The World Bank expected that the value of remit would fall by 14%. In Nepal, the atmosphere was about as pessimistic. Nepal Rastra Bank – the national bank – predicted a decline of 15%, and you also saw a sharp drop in April 2020. In the following months, however, the level of remits was roughly the same as the previous year. Economists explained this with the money that was sent home, stemmed from savings rather than wage income, and in August the Asian Development Bank reported a decline of as much as 28.7% for 2020.

¹³ ACAPS (The Assessment Capacities Project), *Migrant Vulnerability in Bangladesh, India, and Nepal: COVID-19 and Labour Migration*, <https://reliefweb.int/sites/reliefweb.int/files/resources/20201012_acaps_thematic_series_on_migrant_vulnerability_in_south_asia_0.pdf> (20.12.2022).

¹⁴ S. Biswas, *Coronavirus: India's pandemic lockdown turns into a human tragedy*, <<https://www.bbc.com/news/world-asia-india-52086274>> (20.12.2022).

Such a decrease would send many families in Nepal into poverty and make it difficult to implement education or just pay for rent and other necessities. As the figures came for July, however, they showed a more than healthy increase in remittances compared with the month before. Until then, the expectation in Nepal had been that hundreds of thousands of migrant workers would return home with imminent risk of mass unemployment, and the Nepalese government has therefore launched an ambitious and optimistic plan to create 700,000 new jobs with a particular focus on the one group. Besides entrepreneurship is with particular focus on agriculture. In the wake of COVID-19, there are in Nepal, like many elsewhere, created a renewed longing to become self-sufficient with a view to a nation to become resilient during the pandemic¹⁵.

Meanwhile, the question remains about why remittances are at their highest level ever. Looking at a country like the Philippines, which sends many migrant workers to the service industry, has there been a significant drop in remittances, which the receiving country? In contrast, Asian has countries that predominantly send migrant workers to manufacturing industries, seen an increase. This applies in addition to Nepal, for example, to Bangladesh and Pakistan. A possible explanation may be that many Nepali migrant workers, e.g., in Malaysia, are employed in industries that produce or have converted the production of goods of critical importance during the pandemic. Industries, such as the oil industry in the Middle East, which also has many migrant workers, are not like that either hit hard as first assumed. Another explanation for the fluctuations may be that a part of the sharp drop was due to the migrant workers waiting out the situation – both in Nepal and where they were – and that a lot of the money that was subsequently sent home and created the big increase in June and July, was originally scheduled to be aired home in April and May. If so, perhaps something significant could still be seen fall of 2020, although it may probably be less than the first predictions. Also, the Nepalese government's current stop for permits for labour migration outside the country led to one in Nepal not having this earning opportunity. With the relatively large number of returned migrants, there will be a significant drop in remittances, unless this situation quickly changes. We do not yet know about the crisis growth or decline in 2021 and that's all too early to conclude anything. What we know for sure is that there is still an elevated global uncertainty that may strike both vulnerable migrant workers and their families back home in Nepal hard¹⁶.

¹⁵ WHO Country Office for Nepal, *Situation Update #66- Coronavirus Disease 2019 (COVID-19)*, <https://cdn.who.int/media/docs/default-source/nepal-documents/novel-coronavirus/who-nepal-sitreps/weekly-who-nepal-situation-updates_66_v2.pdf?sfvrsn=1197fcb0_5> (20.12.2022).

¹⁶ *Ibidem*.

Nepal, COVID-19 & the Political Situation

Goals 1 and 2: *End poverty and stop hunger*. A prolonged financial crisis because of the coronavirus crisis will mean a loss of income for millions of people. More will be pushed out of poverty, and those who are already most vulnerable will be hardest hit. Hopefully, aid packages, citizen's wages and coordinated relief will help those who are hardest hit.

Furthermore, Goals 4 and 10: *Quality education and less inequality*. With closed schools and online education, many young men are not getting the quality education they were promised. However, the pandemic can save travel time, reduce traffic and reduce CO2 emissions. Inequality in the world will increase as a result of the coronavirus crisis. In Europe too, disagreements arise between the north and south about how to support each other. Those who have a lot must step in with a hand to those who waver. Here, aid packages can help to modify the negative effects of the crisis¹⁷.

Nepal has been affected by the COVID-19 pandemic and the resulting economic slowdown. But there have also been several other political cases which have shaped the domestic and foreign policy agenda in Nepal. In addition to the pandemic and the economic challenges that Nepal now faces, it remains the relationship between the Communist Party's two-party chairmen K. P. Sharma Oli and Pushpa Kamal Dahal, who leave their mark on the political debate. The rollout of federalism remains sluggish, and there have been several serious cases that have once again focused on the fight against discrimination and the need for equality between the social groups in Nepali society. The tense situation between the two big neighbours to the north and south, China and India, and their recent border disputes, also affect the buffer country of Nepal. K. P. Neither does Oli's nationalist political relations with India less smooth¹⁸.

On 21 July 2020, the then Finance Minister Yubaraj Khatiwada announced that the pandemic had peaked in Nepal, that the shutdown that had been in force since 18 March, was repealed, and that business was once again optimistic. But since then, it has gone downhill rapidly with higher infection rates and more deaths. The COVID-19 pandemic is effectively over control. The National Bank of Nepal has estimated that it will take at least nine months after a total reopening before business life is up to the level before the shutdown. It also has been estimated that almost 23% of all employees in Nepal have lost their jobs since March. The trade organization FNCCI has stated that the economic transactions are greatly reduced and that mainly is the

¹⁷ B. Adhikari, S. S. Budhathoki, *Silver-lining in the Time of Mayhem: The Role of Local Governments of Nepal During the COVID-19 Pandemic*, "Journal of Nepal Medical Association", vol 58, issue 231, November 2020, p. 961.

¹⁸ *Ibidem*, p. 963.

population's daily food and household purchases that keep consumption going. In line with the gradual reopening, it has proved that the purchasing power of the Nepalese has weakened, and that the business world has in no way recovered lost revenue. Apart from mobile phones, motorcycles and other popular electronic products, consumption has gone sharply down. Even sales of alcohol have fallen, by as much as 80%¹⁹.

Several factories along the Itahari-Biratnagar and the Simara-Birgunj corridors in the Terai were also hard hit due to COVID-19 cases among factory workers and the shutdown of production. The revenues in tourism and among the airlines are at rock bottom and have for long periods been close to zero. Local banks have provided substantial loans to hotels, restaurants, and the transport industry. Not since Nepal opened the outside world at the beginning of the 50s and began to receive tourists there have been as few as now. In the first half of the year fell imports by 20%, which has benefited the national economy. But at the same time, The Ministry of Finance lost significant VAT and customs revenue. With falling tax revenues, the government is forced to absorb new government loans. Today, government loans amount to approx. 37% of gross domestic product, and this is expected to rise, perhaps to 51%²⁰.

Nepal has 923,000 registered companies, and almost all are smaller companies with fewer people than 10 employees. According to the Nepali Ministry of Finance and the World Bank are expected the economic growth in Nepal to fall by around 0.6%, which sounds like a surprisingly small drop compared to many other countries around the world. This can be because the Nepalese economy is less integrated with the world economy, than is the case with many other economies.

Nepal, COVID-19 & Tourism

Global Goals 14 and 15: *Life in the sea and on the land*. Everything is connected. It is one of the teachings that we confirmed during the coronavirus crisis. All the changes that occur during the crisis in terms of transport, CO2 emissions and many kinds of activities in the world, have many derivative effects – including derivative effects on the conditions for life in the sea and on nature's ecosystems as well as global biodiversity. The estimate is that the interest in a term like 'planetary health' will be intensified because of the current health crisis.

In 2019, Nepal hardly waits for the turn of the year and the big tourist year, Visit Nepal 2020. The Nepalese were so clear, and they believed in tremendous

¹⁹ *Ibidem*, p. 962.

²⁰ *Ibidem*, p. 964.

tourism growth and dreamed of almost reaching its utopian goal of two million tourists in 2020 – not least via the big investment with the year of the visit.

Although Nepalese tourism only went ahead with a modest 2% in 2019, somewhat less than the hopes of both the authorities and large parts of the tourism industry side, where there are high hopes throughout the sector and large investments in hotel construction. However, the slowing growth also created quite a few frowns in the more analytical one's parts of the industry. What if you had done the right thing and done well enough?

At first, the major shutdowns and travel advisories wreaked havoc around the world during large parts of the spring season which is Nepal's second largest, which naturally created concern across all sectors. Simultaneously there was an expectation and belief in an almost ricocheting effect, and that some clean and the vital autumn had been saved. In the winter and spring seasons of 2020, almost 40% managed to be completed, before the shutdown hit with full force in April. Even so, the number of tourists has fallen from 730,000 in the period January to August 2019 to 199,903 in the same period in 2020. The decline in July and August reflects in higher degree of reality. It is as much as 99.9%, follow the Department of Immigration²¹.

Over the summer of 2020, it became clear that the normal Indian, Asian, and partial southern European visit would not come, and then everyone waited anxiously for Nepal's main travel season, the autumn season. Right up until early September large parts of the industry had a hope for an almost miraculous (large) number of tourists in October, especially after the news of an internal opening in mid-October. But the spread of COVID-19 to Kathmandu has at the same time extinguished great hopes, and the travel guides around the world make it natural that it presumably is not recommended to travel to Nepal for the time being – at least until 2020.

Nepal was in a difficult economic situation, and the estimated revenue loss continued until the end of 2020 reaching just over 700 Mio. Dollars. Well over 500,000 Nepalis have lost their direct source of income, and this affects 1.5 million livelihoods of Nepalis. At the same time, in the belief in progress, just over 1.5 billion dollars in the tourism sector. Some of them are threatened with the risk of a subsequent local financial crisis. There has been an intensive investment in hotels in Nepal in particular, where the 4- and 5-star hotels, which are concentrated in Kathmandu and Pokhara, have been in focus. But the Terai has also experienced large and increased investments. Alone in Chitwan, there are tourism investments underway for 250 Mio. Dollars. In Chitwan,

²¹ *Visit Nepal 2020 Tourist Arrivals: 2% Drop in January*, <<https://www.nepalisansar.com/tourism/visit-nepal-2020-tourist-arrivals-statistics/>> (20.12.2022).

16,000 Nepalis have by the way lost their job in the tourism business under COVID-19²².

The backlash is so deep and so violent that both the Maoist rebellion and the earthquake in 2015 suddenly appear as fewer parentheses, and you really must go back to the 1950s to see the same low number of voyages sent as now. Nepal thus once again stands for should revive the country's tourism sector, but it may prove more difficult than under the two recent crises due to a potential collapse among hotels – via the large degree of mortgage – in combination with most of a year without income. We must hope, the gloomy one's predictions turn out to be wrong.

The short-term strategy is therefore corrected towards China and the Asian markets. But also, towards the classic Indian pilgrimage, weekend, and casino market. On the other hand, the belief in a quick return of the Western markets is less visible. Moreover, it is gradually a very strong domestic market with a strong focus. The great economic progress, led in the larger cities, has led to a sharp increase in the number of Nepalese travelling in Nepal. It is estimated that there are 5 million domestic tourists on an annual basis.

However, Nepal has many underlying problems if a healthy recovery is to be achieved within a short time horizon of 1-2 years after the end of the coronavirus crisis. International studies point to the need for more strong niche products on the market, more real luxury à la the strategy in Rwanda, but without a price that scares people away. It will be interesting to see if, in the long run, an actual tourism strategy is coming – post corona – and not least, what it is in that case will deal with and contain. In the trekking and mountain industry, one predicts also difficult times. Many believe that trekking is the primary activity in Nepal, but probably only 20% of all travellers there take in the mountains in Nepal – i.e., trekking and mountain climbing. It's a big sector tough, with around 125,000 jobs and an important sector of economic diversification and income in the outlying areas²³.

In the countryside, the financial leverage is less than at the hotels in the cities, but owners of the accommodations in the mountains live currently without income, and many have invested their wealth (and liquidity) and therefore have a very marginal basis for survival. Therefore, there are many trekking areas, where the teahouse owners have left for a period in the highlands and have travelled to the cities of the Terai as well as Kathmandu and Pokhara to survive and make it through the crisis.

After a survey among Nepal's incredible 2,600 trekking agencies, of which under 5-8% are real companies, already showed in May up to 80% cancellations for the autumn season, a violent reaction 5-6 months before the

²² *Ibidem.*

²³ *Ibidem.*

start of the season. That number is now close to 100% for the rest of 2020, and the question is how many must close during autumn this year, and not least during 2021 if winter and possibly spring also smokes.

For the trekking industry, there is a future need for better accommodation options in outlying districts and for new routes, which not be hit by the cobweb of soil and driveways. It applies to both high altitudes and medium-high hiking routes. It is a very big challenge.

Nepal, COVID-19 & Nature

What depends on global goals 6 and 7: *Clean water and sustainable energy*, disrupted supply chains during the pandemic and lack of water could reduce access to proper hand washing facilities and essential products such as disinfection, which can prevent the spread of infection. Abut energy, the crisis will probably be reduced for a period due to less transport and fewer activities. Conversely, the many hours we users in front of the screens at home, of course, lead to increased amounts of energy on that front.

Together with global goals 11 and 12: *sustainable cities and responsible consumption*, where, especially, people in poor slum areas have a greater risk of becoming infected due to high population density and poor sanitary conditions. Urban development must now be thought of more sustainably. Some discover that it is nice when there are no noisy cars in the cities. Out in the country, others discover that they can live and work from there. The places and ways we live may change in the future. Furthermore, consumers, producers, distributors, retailers, and many others will possibly change their habits. More will realize that we cannot continue to calculate with such large growth rates as we do usually, and we can't keep producing and transporting like that unsustainable as it is now²⁴.

In the spring of 2020, the inhabitants of Kathmandu experienced that the grey blanket of smog that normally covers the valley suddenly lifted and disappeared. Now, for the first time in many years, they could see the Himalayas' row of white teeth stand clear and distinct against the blue sky. Though COVID-19 is causing major problems for the economy all over the world, we experience that for a while something good is happening for the environment and public health. Kathmandu is one of the world's most polluted cities. Kathmandu Valley is like a pot that keeps on the air pollution. It can already be seen when we approach landing at the airport, and it is felt in the throat after a few days in the city. That is not healthy for the people who travel in Kathmandu year out and year in.

²⁴ B. Dev Baral, K. Thapa, *Effect of the COVID-19 Lockdown on Ambient Air Quality in Major Cities of Nepal*, "Journal of Health and Pollution", 2021, 11/(29).

On 24 March 2020, Nepal shut down to limit the spread of COVID-19. They stopped production. Traffic died down, both on the roads and in the air. Already during its first month after the shutdown of society experienced a very significant decline in Nepal's larger cities in the air content of the so-called PM2.5 particles, which make up the main component of the smog. PM2.5 are particles smaller than 2.5 μm (micrometre). These PM2.5 particles which originate from different combustion sources, including aircraft and vehicles, are among the most harmful to health, as they contain toxic and carcinogenic substances²⁵.

The fact that air pollution is extremely harmful to health also prevails in other words, no doubt. In China alone, a quarter of a million people died each year – before the coronavirus – from diseases, and spring air pollution. In the same China, the coronavirus has limited air pollution by 25%.

Environmental experts around the world are calling on their governments to keep the focus on the environment and on everything we have learned about during the coronavirus limitation of CO2 emissions. At the same time, health experts point out that many lives have been saved during COVID-19 because the conditions for the world's lungs have become so much better. Scientists all over the world even believe that the drop in pollution has saved more lives than COVID-19 has taken. Also, this one announcement is extremely interesting for Nepal, which is among the world leaders when it comes to shopping about lung diseases.

Nepal, COVID-19 & Reflections

Sars, AIDS/HIV, Ebola, Bird flu, Swine influenza (Influenza A), MERS, Monkey Pox, Dengue fever, Zika, COVID 19 are all zoonotic diseases. A zoonosis is any disease or infection that is naturally transmissible from vertebrate animals to humans. A growing global population, spreading urbanization and climate change are all contributing to a higher risk of zoonotic diseases. Humans and wild animals live closer and closer together, creating opportunities for viruses to mutate in entirely new ways. Diseases on a global scale create poverty and famine.

To combat natural disasters on a global scale, international cooperation and coordination is required. Global goal 16: *Peace, justice and strong institutions* and global goal 17: *Partnerships for action*, precisely deals with this problem. When there is poverty and famine, the risk of conflicts between countries and/or organizations also increases. Many people suffer unfairly during such a crisis. Many are forgotten in the world, and in times of crisis, it reminds us how important it is to stand together on a global level. A crisis like COVID-19 can

²⁵ *Ibidem.*

put globalization in reverse, but it can also help to strengthen international cooperation within for example health, among other things in the joint search for a vaccine. Virtually all the consequences of the coronavirus crisis are about something that goes across. If you imagine that you can solve the problems in silos, then you are wrong. All this requires cooperation and partnership.

As for the global climate goal, the climate movement may lose its momentum for a while because we cannot come together on the issue. But at the same time, many will discover that a globe in lockdown leaves fewer climate footprints, as we produce less and transport less. In other words, the climate problem can be a background to future much more serious pandemics or mysterious disease outbreaks in individual isolated regions.

As it appears from the papers, a country like Nepal was affected in all areas that have to do with the 17 global goals. As for the COVID-19 pandemic, it has had very serious economic consequences and partly health consequences. On the political level, it has been partly used as a political tool. The politicians, either on purpose or due to a lack of understanding, have used the pandemic in their political interests. As poor organization of commercial life in Nepal as well as in the rest of the world has caused very big problems in commercial life. However, the climate movement may lose its momentum for a while because we cannot come together on the issue. But at the same time, many will discover that a globe in lockdown leaves fewer climate footprints, as we produce less and transport less.

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**THE CLIMAX OF RUSSIAN INFORMATION WARFARE
IN POST-SOVIET COUNTRIES MEANWHILE
AND AFTER THE COVID-19 PANDEMIC: GEORGIAN CASE**

***Abstract:** In our age of technological evolution, we are eyewitnesses of the fact that the world is interconnected more digitally rather than physically. This connection enables a variety of goals, set by different actors, to forge ahead, and go through the target society effectively and successfully to gain the preferable ending. In such conditions, psychological warfare finds the perfect ground and a corresponding theatre to conduct intensive non-military operations for achieving political, military, and economic goals. Even though the environmental conditions are permanently changing for psychological warfare, the main principles remain unchangeable. Governments and even non-governmental actors mainly use so-called psywar tactics to influence the target society and undermine credibility without suppression, coercion, or even using military force. Psychological warfare is considered to be the first phase or the first step in preparing suitable environments, and conditions for particular groups of people, and the territories where ‘the invisible invasion’ should be performed. In the majority of cases, government actors choose psywar as the main tool to demoralise the opponent. Social media, disinformation, and propaganda are used to strengthen the subvert of opponents, manipulate the target society’s beliefs and attitudes, forge scientific research data and historical facts to veil the real reason for wars and engage the goodwill and trust of people. Russia demonstrated several phases of psychological war before the invasion of the Georgian Brief War in 2008, by following the so-called ‘defeat – in detail’ tactics, which means defeating the enemy by division into small parts instead of using its entire strength. Such overwhelming attacks could weaken Georgian society, and cause vulnerability,*

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intense fear, and anxiety, and this way Russia could achieve superiority on the battlefield.

Keywords: *Psychological War, Propaganda, Military Doctrine, Manipulation operations*

What is a Psychological War?

The definition can be formulated this way: it might be several actions including everything from TV and Radio propaganda up to torture and violence that needs peculiar, comprehensive information on the target society. It is based on moral and physical aspects that are different from traditional military techniques. Its purpose is to destroy the will and spirit of the opponent and cause frustration and disappointment, this way guarantees a victorious ending. Psywar includes nearly every tool and every instrument that can impact an enemy's behaviour. Among these instruments propaganda is one of the most effective methods to manipulate the target society correspondingly².

In the 21st Century, hybrid warfare is the most common name of the war that we hear nowadays. Modern wars are full of hybrid elements. Even terrorist organisations are very good at it. They are getting modernised, they train and try to involve as many people as they can, using asymmetric methods of war and systematic campaigns by different means to target vulnerable sectors in society for their objectives. They are trying to manipulate people with social media or other cyber tools. As such, hybrid threats could be conducted by both state and non-state actors³. Detecting and revealing crime is a particularly attractive approach as it makes it more difficult for the targeted states to detect the harmful activity and respond before it occurs. Criminal organisations' business or job could include different types of actions such as smuggling networks, the ability to provide forged documents, financial crime schemes, or simply the ability to threaten, intimidate, pressure, or harm strategically important individuals or groups in a specific situation for political purposes. Next and most harmful is Psychological warfare, which is the most common tool for terrorist organisations. They are trying to spread information about explosions, terrorism, nuclear threats, etc. The true impact of a Psychological

² R. Coombs, *Psychological Warfare: Principles for Global Competition*, "Small Arms Journal", <<https://smallwarsjournal.com/jrnl/art/psychological-warfare-principles-global-competition>> (20.12.2022).

³ D. L. Buffaloe, *Defining Asymmetric Warfare*, "The Land Warfare Papers", No. 58, September 2008, pp. 17-26.

war can cause considerable fear, panic, and social disruption, exactly the effects terrorists wish to achieve⁴.

Psychological effects from fear of being exposed may be one of the major consequences. Unless information about potential exposure is made available from a credible source, people unsure about their exposure might seek advice from medical centres, complicating the centres' ability to deal with acute injuries⁵.

Psychological war is not a new phenomenon. Although it has always been in use since the old times. The emergence of Scientific interests as well as the development of communicational technologies and techniques is more often applied and used in the modern world. If we look back in history we will see how Vikings used this method by spreading different false stories, gossip, rumours, and legends about their brave character, fierceness, barbarity, and wildness to terrorise and intimidate their adversary. This was the best possibility to create a suitable environment for defeating the opponent before the battle. The Romans also used the same tactics to defeat Carthaginians when they started manipulating them for peace that would be worth humiliation and disgrace. The term 'Carthaginian peace' still carries the psychological message for those who will rise against the strong power such as the Rome of that time and abolish, will get shameful and embarrassing freedom that might be equal to slavery and failure⁶.

Psywar originated from political warfare which means 'Crisis diplomacy', 'war of nerves', or even 'Dramatic intimidation diplomacy' which means that Psywar and Political War (PW) have been synchronised to outline the ways to use propaganda (sometimes with military operations) for a particular government to achieve the desired goal. It is defined as a well-planned strategy of how to use communications to impact people, and their attitudes, and change their behaviour. Sometimes psywar includes ideological aspects to manipulate the target society, their emotions, and thoughts, to support the fulfilment of national objectives. The main point is that hate and victory, even empathy, sometimes must be emphasised and exaggerated to inject ideology or propagandistic opinion into people's minds. Thus, information becomes valueless and public ideals vanish. We have to mention that within Psywar propaganda plays a crucial role as it combines education, entertainment, and persuasion. Entertainment has to attract the audience's attention, education veils propaganda and makes it invisible even through its persuasive attitude and

⁴ *Ibidem*.

⁵ R. Coombs, *op. cit.*

⁶ M. Sarkar, *Psychological Warfare: War without Arms and Weapons*, <<https://www.unrevealedfiles.com/psychological-warfare-war-without-arms-and-weapons/>> (20.12.2022).

tones; Psywar is considered to be the tactical use of propaganda, threats, and many other strategies to deceive, mislead, intimidate, demoralise or influence an enemy's thinking⁷.

Over the years, even the specific terminology of psychological warfare was coined to appeal to a greater audience. There are some of them:

- a. MISO – Military Information Support Operation (activities now include everything from cyber warfare, deception, and social manipulation, to kinetic actions for psychological effect.);
- b. PSYOP – psychological operations (soldiers find themselves conducting a multitude of operations.);
- c. PSYHAR – Psychological Harassment (irritation, annoyance, etc.);
- d. ISSO – Interagency-Intergovernmental Support Operations that influences and shape foreign decisions and behaviours in support of regional policies, interests military threats. It is a special operation that strengthens planning capability, media knowledge, and capabilities on the regional level⁸.

Psychological warfare is the first step in conflict, the pre-war phase, the very first activity that starts the operation to produce effects on the real world. Some definite features characterise psywar:

- a. It is the first activity in conflict;
- b. It is continuous and active;
- c. psychological warfare produces effects in the 'real' world;
- d. psychological warfare occurs at every echelon; rank, or level of society;
- e. Psychological warfare is unrestricted;
- f. Psychological warfare plays a key role in competition and rivalry⁹.

Prussian general and military theorist Clausewitz focuses on morals that in the modern world can be understood as psychological, he suggests: “moral force has been the chief cause of the decision; after that was given, the loss continued to increase until it reached its culminating, the turning point at the close of the whole act”. In other words, to gain success over the enemy the moral power should be lost to divert their intentions and defeat. Niccolo Machiavelli, Italian diplomat, military philosopher, and historian claimed: “however strong your armed forces are, in entering a new province you will need the goodwill of the people of the place”¹⁰. Therefore:

⁷ R. Marinelli, *Psychological Warfare, We Are Under Attack!*, <<https://medium.com/@roccomarinelli/psychological-warfare-we-are-under-attack-39c3e37964d4>> (20.12.2022).

⁸ R. Coombs, *op. cit.*

⁹ M. S. Reshi, *Psychological Warfare: A Critical Study of Tactics and conceptualization in Indian perspective*, presented on a National Seminar on Emerging Contours of Laws and National, <https://www.researchgate.net/publication/336653855_Psychological_Warfare_A_Critical_Study_of_Tactics_and_conceptualization_in_Indian_perspective> (20.12.2022)

¹⁰ D. L. Buffaloe, *op. cit.*

1. Psychological warfare is the tool used to manipulate the behaviour of a target audience within an acceptable time frame. As the theories of bounded rationality and satisfaction suggest, it is always up to the target audience to decide how much pressure is enough to force a behavioural change;
2. Psychological warfare is the intentional, tactical use of propaganda, threats, and other non-combat techniques during wars, threats of conflict, or times of political unrest. It is designed to mislead, demoralise, intimidate, or otherwise manipulate the thinking or actions of an enemy. Why is it used?:
 - a. To assist in overcoming an enemy's will to fight,
 - b. To sustain the morale and win the alliance of friendly groups in countries occupied by the enemy,
 - c. To influence the morale and attitudes of people¹¹.

Propaganda

According to the Merriam-Webster dictionary, the term propaganda is defined as: “ideas or statements that are often false or exaggerated and that are spread to help a cause, a political leader, a government, etc.; the spreading of ideas, information, or rumour to help or injure an institution, a cause, or a person; ideas, facts, or allegations spread deliberately to further one’s cause or to damage an opposing cause; also: a public action having such an effect”¹².

A narrower definition of propaganda is presented in the NATO glossary – AAP-06: “Information, especially of a biased or misleading nature, used to promote a political cause or point of view”¹³.

The term propaganda is translated from the Latin gerundive as ‘things that must be disseminated’. The problem with this term is the fact that in different cultures it has different connotations. In some cultures, this term can have a neutral or even positive connotation. Thus, for example, in some Spanish and Portuguese-speaking countries, propaganda is usually associated with simple advertising. Another example is the Russian language, the Russian word *пропаганда* (propaganda) is usually used with the meaning of the English word promotion¹⁴. At the same time, in other cultures, mainly in Western ones, this term has a strongly negative connotation. The Czech historian Zbynek Zeman

¹¹ M. Sarkar, *op. cit.*

¹² B. Mueh Craven, *The Poster and Contemporary American Propaganda*, Fort Collins 2013, <<https://mountainscholar.org/items/d28f57a8-7845-4b24-99df-6a74db377268>> (20.12.2022)

¹³ NATO Standardization Agency, *AAP-06 NATO Glossary of Terms and Definitions (English and French) 2013*, <https://www.jcs.mil/Portals/36/Documents/Doctrine/Other_Pubs/aap6.pdf> (20.12.2022).

¹⁴ J. Ellul, *Propaganda: The Formation of Men's Attitudes*, New York 1973.

as well as Former officer Daniel Lerner outlines the US military's WWII Skywar operation in his 1949 book *Psychological Warfare Against Nazi Germany* divided propaganda into three main categories white, grey, and black. The main criterion that helps to distinguish these types of propaganda is the degree of involvement of the sponsor¹⁵.

White propaganda – (or open propaganda) represents the accurate information that comes from a source and is identified correctly. The goal of white propaganda is to promote the ideas and points of view that are pursued by the sponsor using truthful facts. The previous century, particularly the beginning of the bipolar period, covers a crucial event among many others. One such case was the so-called 'Project Troy' which recruited and mobilised top scholars and psychologists with one purpose: to identify all possible means of transmitting true information through the Iron Curtain via radio channels. That was the main reason why and how *The Voice of America*, the broadcasting network, was launched by IIS (International Information Service). *The Voice of America* served to enhance and promote the US's main values: democracy and democratic principles by neglecting the Soviet mindset and highlighting the priority of American attitudes and lifestyles. The project was part of the Psywar between the U.S. and the Soviet Union where foreign policy strategists and University experts worked in one team, to attack the enemy and demoralise. The cornerstone of this project was one of the most crucial documents in the political history of the U.S. – the National Security Council Paper NSC-68 which defined clearly that the Cold War was a real risk for the survival of the free world as defeating Communism demanded combining political, economic and psychological techniques. Soon it was obvious that only the Voice of America was not able to make miracles and penetrate the Iron Curtain, thus white propaganda came into action. University exchange programs, professional books, journal publications, and many other ways were to be implemented to manipulate the antagonist society and accomplish Project Troy. Even a Psychological strategy board was created to study the Soviet society's opinion and to take sufficient measures through the program where Soviet dissidents were also recruited. Thus, the White propaganda as a tool of psywar was successfully performed¹⁶.

Grey propaganda – represents accurate data but the citation is omitted or stated incorrectly. This type of propaganda can be visualised somewhere between white and black. The goal of grey propaganda is to promote the ideas and opinions a sponsor desires to spread, but at the same time, it is done in a

¹⁵ Z. Zeman, *Selling the War: Art and Propaganda in World War II*, London 1978.

¹⁶ J. Chisem, *U.S. Propaganda and the Cultural Cold War*, "E-International Relations", <https://www.e-ir.info/2012/08/16/u-s-propaganda-and-the-cultural-cold-war/#_ftn6> (24.11.2022).

manner that will be better accepted by the audience than the official statements. Thus, grey propaganda uses truthful information in combination with unverified information or just lightly distorts truthful information. The main idea of this tactic is the fact that the ideas provided by the neutral side will be perceived by the audience willingly¹⁷.

Black propaganda – stands out from the above-mentioned types of propaganda as it is misleading and untrustworthy as it spreads lies, fabrications, and deceptions. This propaganda is to hide the sponsor's real identity and involvement. Very often it is performed so that the sponsor seems to be on a hostile side. The goal of this type of propaganda is to destroy the prestige of the opposite side, cause negative feelings and undermine the reliability and trustworthiness of the opposition. To reach its goal, various newspapers, jokes, falsified documents, rumours, films, leaflets, etc. are usually implemented. Black propaganda was actively used during the Cold War period by the Soviet Union as well as the U.S. These propaganda activities along with other types of active measures were applied through the KGB's special organisation called *Служба – А* (Service A). Daniel Learner explained: “While grey and black propaganda efforts have the most immediate impact, they are also the most dangerous. The target populace will eventually recognize the material as incorrect, discrediting the provider. Credibility is a condition of persuasion. You must first persuade a man to believe what you say before you can get him to do what you want.” It has to be mentioned that the word 'disinformation' is often confused with the meaning of the word propaganda. “Disinformation” was coined by Joseph Stalin who served as the first editor of the Russian newspaper “Pravda” – the official newspaper of the Communist Party of the Soviet Union as a name of the KGB's black propaganda department as he was sure that the word he had coined sounded West and people would accept it as the French origin word. The main purpose was to mislead public opinion and attention. The classic novel *The Animal Farm* written by Eric Arthur Blair (better known to the readers as George Orwell) allegorically represents a group of animals who live on a farm and rebel against their human farmers. Orwell creates a clear picture of Russia after the 1917 Revolution and the rise of power of its leader Joseph Stalin. Readers vividly see how animalism turns into communism, the characters represent political leaders who played crucial roles in the history of Russia and in Creating the Soviet Union and each case depicted in the novel corresponds to actions undertaken by the Russian Communist Regime. “Napoleon is always right” – this is how clever language and particular words can manipulate people, distort and

¹⁷ J. E. Combs, D. Nimmo, *The New Propaganda: The Dictatorship of Palaver in Contemporary Politics*, New York 1993.

misrepresent the truth and create a false narrative to justify the actions, and decisions and keep people under control¹⁸.

The Dawn of the Russian Psychoanalytical Era

Today Russian foreign policy and its main military document are based on the demonstration of psychological methods of war. These methods were used in Georgia in 2008 as well as in Ukraine in 2014 and in 2022, to gain more details about Psywar conducted by Russians we have to analyse the historical background of how the process of psychological manipulation developed in Russian Society. From the very beginning, a deep interest in psychoanalysis arose in Russia. Russian psychoanalysis has a very interesting past. There were periods of sensitivity and activity when new psychoanalytical organisations were launched in Russia. Many well-known disciples of Freud returned to Russia with one desire to spread Freud's teaching and psychoanalytic concepts by establishing a school of Psychoanalysis, which would play a crucial part in promoting their country's successful future. There was an awakening interest in the theory and methods of Freud. His books were intensively published and his theories were represented widely in Russian society after 1917 when Russia experienced unparalleled social transformation or even an attempt to change, and establish new models in nearly every sphere such as politics, economics, culture, philosophy, and medicine, literature, pedagogy, etc. Thus, Psychoanalysis has become one of the most popular disciplines that could lure representatives of the different ranks of society, such as writers, artists, and philosophers. In 1921 the Russian Psychoanalytic Society was founded in Moscow under the leadership of Ivan Ermakov. The Russian Revolution and Civil War sharply outlined the problems of children and childhood as there were lots of orphans who experienced war and remained without their parents' care. Their emotional and psychological state urgently needed intensive intervention. The solution to the problem was using the method of so-called psycho-transformation or psycho-intervention for one purpose: to change mindset, habits, perception, etc. Russian leaders believed that the same change was also essential for the children of former Bourgeois and intelligentsia to change their behaviour and beliefs. Thus psychoanalysis structured the further theoretical framework of 'how to shape people's psychic'. Later as we have mentioned above, when the communists came into power psychoanalysis was used for political purposes and was blended into psywar methods.

¹⁸ J. Bridcut, *The KGB's long war against Rudolf Nureyev*, <<https://www.telegraph.co.uk/culture/theatre/3667963/The-KGBs-long-war-against-Rudolf-Nureyev.html>> (10.11.2022); G. Castillo, Domesticating the Cold War: Household Consumption as Propaganda in Marshall Plan Germany, "Journal of Contemporary History", 2005/40(2), pp. 261-288.

South Caucasian region – a target of Russia

The three main countries of the Caucasus region Georgia, Azerbaijan, and Armenia are referred to as the Trans-Caucasus. The region is considered to be one of the most complex and unstable regions in the former Soviet space. It is situated at the crossroads of Europe, the Middle East, and Asia. The region has a traumatic Soviet past as it has suffered from many problems such as economic mismanagement, corruption, social problems, weak institutions, and authoritarianism. As soon as the Soviet Union collapsed inter-ethnic conflicts started to appear. Georgia is the most visible country out of these three countries as its location underlines its geopolitical role in the region as a mediator. The South Caucasus is a region with a unique geographical location, and ancient cultural and historical heritage, where three different nations are interconnected but each takes a separate route at the same time before and after the collapse of the Soviet Union. Russia has had a wild interest in the region historically. During the period of Russian colonial expansion, no region has been so highlighted as the Caucasus. The massive conquest of the region started in the 18th century with the settlement of Cossacks. Time by time South Caucasus obeyed the Tsar's Russia and Georgia became the administrative centre of the Empire in the region, from here Russia could lead the conquest of the mountainous region, and highland regions easily. In the 19th century under the command of Russian General Aleksey Ermolov, the army started regular attacks against the mountain people, the so-called GORTS. The main imperial purpose of those battles was to take control over the military road and turn these isolated, little battles into a massive, permanent, and long war that Russia could use for its benefit. The particularly decisive stage of the war that took place in the North Caucasus against Muslims that lasted up to 1859 was led by the religious, political, and military leader Imam Shamil. This war is also known as the 'War of Murids'. Here Russian soldiers had to deal with the phenomena, we call today guerilla war for the first time. This war is believed to have played a crucial role in restructuring the Russian identity as a Russian high-rank society or elite started creating its multinational Empire by blending many different peoples, cultures, and pieces of land, and outlining the so-called mind map, where the Caucasus region would be a Russian version of the Orient. In this period plenty of Russians visited the Caucasus as the region has become the most important strategic place for them where their national identity was defined clearly. Moreover, the region represented a vast space for Russians to fulfil dreams, and accomplish further projections of romantic ideas about freedom and the so-called 'wildness', which they experienced in the high mountains. Here we have to mention that Russia at that time somehow associated itself with Europe (Eastern Europe precisely and not with Western

Europe) and this ‘oriental’ version was the best opportunity for them to strengthen their ‘Europeanism’¹⁹.

Russian Aspiration in Modern Era and Military Doctrine

As of now Russia’s Neo imperialistic views and attitudes towards the South Caucasus region demonstrate the same character, intentions, and methods it is obvious that our former ‘big brother’ still uses psywar tactics to occupy our land, minds, and souls, Russia under Vladimir Putin has set a goal to restore the Soviet Union and create a new version of the model of the former USSR. The purpose that stands behind this intention is not just the imperialist mindset of Russia but its aspiration to become an equal competitor and rival to the US and NATO in the international political arena. From this perspective, it would be interesting to review the brief history of the Russian military documents or doctrines.

Military doctrine determines the character of dangers to the state, their historical context, and likely opponents or potential allies. It also outlines the general ways or methods for solving these challenges and the developments in the armed forces required to meet them.

Doctrine is meant to rationalise political efforts with available military means to attain security for the state. It is subordinate to military policy, offering an initial scientific and practical basis for developing military concepts, programs, and plans, which are examined concretely by other government documents. The Soviet military doctrine was separated into socio-political and military-technical components. It was set by the political leadership to emphasise the initiation of military considerations. The Soviet Union’s political leadership established a defensive military doctrine in 1987. By this period in the Cold War, the USSR saw no political goals that could be achieved via an offensive war:

- a. An offensive operation is aimed at destroying or defeating the enemy and imposing the will on him for a decisive victory. E.g spoiling/ambush/raid/ demonstration;
- b. A defensive operation defeats an enemy attack, buys time, economises forces, or develops conditions favourable for a counteroffensive that regains the initiative and defeats the enemy.

As the Cold War faded, Soviet military doctrine reflected the general assumption that there were no political objectives that could be attained via an offensive war; hence, the Soviet forces assumed that their war would be

¹⁹ E. Avdaliani, T. Dundua, *Russian Propaganda Against Georgia Through Ancient And Byzantine Symbols – Analysis*, <<https://www.eurasiareview.com/05062020-russian-propaganda-against-georgia-through-ancient-and-byzantine-symbols-analysis/>> (16.12.2022).

defensive, but require offensive operations to prosecute. Strategy is typically evolutionary, rather than revolutionary, and active defence evolves from active defence concepts of the late Soviet period. The practical aspects of Russian strategy making, operational concept development, organisation of forces, armaments, support, etc. Russian military strategy today offers a much better alignment between political aims, military means, and the socio-economic requirements to support them in this iteration of ‘active defence’. Contemporary Russian military doctrine offers the broad provisions of “military policy and of military-economic support for the defence of the state based on an analysis of the military risks and threats facing the Russian Federation (RF) and the interests of its allies”²⁰. The military doctrine also offers a typology of conflicts, and periodization leading up to conflict (period of military danger and military threat). The Gerasimov Doctrine builds a framework for guerrilla, tactics (hackers, media, businessmen, leaks, and, yes, fake news, as well as conventional and asymmetric military means) and declares that non-military tactics are not auxiliary to the use of force but the preferred way to win. Gerasimov specifies that the objective is to achieve an environment of permanent unrest and conflict within an enemy state. General Gerasimov is no different in this respect from his predecessors. His so-called doctrine is hardly a driver of Russian national security policy. Rather, it is an effort to develop an operational concept for the Russian national security establishment to support its ongoing confrontation with the West. Instead of a new doctrine, Gerasimov offers a strategy to implement the actual doctrine that has guided Russian foreign and defence policies for over two decades: the Primakov doctrine. The Primakov doctrine is named after former foreign and prime minister Yevgeny Primakov whose elevation to the post of foreign minister in 1996 marked a major shift in Russian foreign policy. Before that, Russian foreign policy had largely sought accommodation with the West, following the outlines of Mikhail Gorbachev’s late Soviet foreign policy. One of the key elements of the Primakov doctrine is its insistence on Russia’s primacy in the post-Soviet space and pursuit of closer integration among former Soviet republics with Russia in the lead. Opposition to NATO expansion and, more broadly, persistent efforts to weaken transatlantic institutions and the U.S.-led international order are another. Partnership with China is the third fundamental component. All three remain major pillars of Russian foreign policy today²¹. What do critics say?

²⁰ M. Pietkiewicz, *The Military Doctrine of the Russian Federation*, „Polish Political Science Yearbook”, vol. 47(3) (2018), pp. 505-520.

²¹ G. Friedman, *Beyond the Post-Cold War World*, <<https://worldview.stratfor.com/article/beyond-post-cold-war-world>> (17.11.2022).

Current Russian doctrine is an evolution of Soviet doctrine. First, a Soviet military doctrine of military denial and deception – called *maskirovka* – is the cornerstone of current policies of dis- and misinformation. From various Russian wars in the late 1990s to today, the *maskirovka* doctrine contributed to success on the battlefield and in international media by disputing or conflating Western findings. In 2013, Russian General Valery Gerasimov shaped *maskirovka* into a non-physical tool to support Russian foreign policy, a document many in the West call the ‘Gerasimov Doctrine’. While the concepts of denial and deception are at least as old as Sun Tzu, Gerasimov’s correlation of nonviolent foreign policy tools – such as sanctions, removal of diplomats, and official condemnations – to kinetic military action on an ever-shifting scale of war is a different approach to the same goal of war as the United States: “to impose our will on the enemy”. Russia and the target country’s foreign policies are evaluated through the lens of the Gerasimov Doctrine. Similarly, the capabilities of adversarial states toward Russia are evaluated according to Gerasimov’s defined “primary phases (stages) of conflict development”. This capability is divided into three spheres of power: social, information, and military. As with the Gerasimov Doctrine, these spheres overlap, but providing general divisions between different forms of power creates a measurable base for this exploratory research²².

In February 2013, General Valery Gerasimov – Russia’s chief of the General Staff, published a 2,000-word article, “The Value of Science Is in the Foresight”, Gerasimov took tactics developed by the Soviets, blended them with strategic military thinking about total war, and laid out a new theory of modern warfare—one that looks more like hacking an enemy’s society than attacking it head-on. He wrote: “The very ‘rules of war have changed. The role of nonmilitary means of achieving political and strategic goals has grown, and, in many cases, they have exceeded the power of force of weapons in their effectiveness. ... All this is supplemented by military means of a concealed character.”²³

Russia is planning to revise its military doctrine, last updated in 2000, according to a series of statements from Russia’s National Security Council. The draft, titled “The New Face of the Russian Armed Forces Until 2030”. Nikolai Patrushev, secretary of the Russian Security Council, commented on the pending changes in an interview with the Russian newspaper *Izvestia*. The 2000 doctrine needs to be adapted to the new security environment, which is

²² M. Kofman et al., *Russian Military Strategy: Core Tenets and Operational Concepts*, <https://www.cna.org/archive/CNA_Files/pdf/russian-military-strategy-core-tenets-and-operational-concepts.pdf> (18.11.2022).

²³ V. Gerasimov, *The Value of Science Is in the Foresight. New Challenges Demand Rethinking the Forms and Methods of Carrying out Combat Operations*, "Military Review", January-February 2016, pp. 23-29.

likely to feature “local wars” and armed conflicts, he said. The current version allows the use of nuclear weapons “in response to large-scale aggression with conventional weapons in situations critical to the national security of the Russian Federation and its allies.” It also provides for the use of nuclear weapons against a non-nuclear-weapon state party to the nuclear Nonproliferation Treaty in the event of an invasion or any other attack on Russia, its territory, armed forces, or allies²⁴.

Just for now what we see is that Russia has become a force that started brutal military actions on its neighbouring territories or so-called zone of privileged interests (Georgia and Ukraine). The strategic geopolitical situation of Georgia at the crossroads of Russian ‘Top Interest territories’ has triggered the keen interest of the Russian Federation to occupy and invade Georgia. Besides there exist many other factors that sharpen the above-mentioned wild interest. These facts are the enlargement of NATO and the EU to former Soviet republics; Georgia’s foreign policy aspirations; and Political and economic developments in the South Caucasus, including conflicts and fragile stability in the North Caucasus. The Russian President trying to raise his Reputation in Russia shifted to a new model of Foreign policy as a possibility to consolidate Russian society. By focusing on the historical role of Russia in international politics, Vladimir Vladimirovich coined a new propagandistic term the phantom pains and painted a picture of geopolitical catastrophe in the modern age. Georgia is thought to be one of such phantom pains that represents the Russian traumatic past for Russia who dreams about restorations of its influence and power over Georgia, bringing it in a spinning orbit of the former space of the Soviet Union. So, returning Georgia into Moscow’s Orbit is the main goal of Neo imperialist Russia today. There are three main interests that Russia demonstrates today towards Georgia. These interests are:

- a. Global interests;
- b. Regional interest;
- c. Direct interest.

Russian Global interests were depicted in the official Russian Strategic document that was updated in 2020 during the Pandemic period. The document keeps the main framework of those adopted in 2013-16 that is perceived as post-2008 Russo-Georgian war and before the Crimea annexation.

The document differs from its previous version as it focuses on the exaggerated role of Russia as the Great Power in the multipolar world and outlines its responsibility to protect the citizens’ security, moral and spiritual values, defend Russia from the threat spread by the West and resist its information and psywar challenges. The document includes new attitudes toward Georgia and the Georgian Foreign Policy and highlights NATO’s and

²⁴ M. Kofman et al., *op. cit.*

the U.S.'s intention to militarise territories near Russia and even establish biological–military laboratories there, for example, Georgia’s National Center of Disease Control and Public Health (better known as Lugar Laboratory) represents the main threat to Russian security and needs an immediate response. During the pandemic period when the world struggled to manage the crisis caused by SARS-CoV-2, Russia activated its propagandistic machine to spread disinformation about vaccine diplomacy to engage the Georgian public distrust toward the vaccine such as Pfizer, AstraZeneca, etc. produced in Western countries, promoting the Russian Sputnik.

Religious Competence represents one of the main instruments Russia can use for its global interests and manipulation of Georgian Religious aspects. Therefore it was perfectly used as a part of the Kremlin’s disinformation campaigns – the role of religion (Orthodox, Christianity) has become the key to many manipulations of the Georgian people as Russia was the holy centre or a centre of gravity, who at the same time recognized the jurisdiction of Georgian Orthodox Church in the Occupied territories of Abkhazia and Ossetia and also has relations and close ties with Orthodox churches in both of the region.

As for regional interests, South Causes has always been of strategic interest to Russia for political, military, and economic purposes. Particularly Georgia and Azerbaijan lure Russia as Armenia has a strategic partnership with Russia. Since Armenia has no land border with Russia, both countries use the shortest route that runs through Georgia. The Nagorno-Karabakh conflict between Armenia and Azerbaijan remains one of the challenges in the region. Russia always uses its chance to play the role of ‘a mediator or a peacekeeper’ in the conflict. The two largest ethnic minorities live in Georgia; Armenians and Azerbaijanians, but there is no tension between them even in the region where the conflict reaches its peak. During the recent escalation of conflict, a piece of disinformation was spread to undermine these relations. Transferring Russian military equipment through Georgia – the information was equally sensitive for three of the three countries. Moscow tried to send “kind messages” to manipulate the oil and gas supply routes existing in the region and demonstrate its wild interest in the powerful influence over energy resources.

Russian direct interest in Georgia: Moscow and Tbilisi have always had complicated relations, particularly after the USSR's collapse. Georgia had set the goal to transform itself from a failing former Soviet country into a successful country with the ambition of becoming an aspiring member of the EU annatto and a loyal partner of the US. The brief August war of 2008 turned up to be a turning point in Russ Georgian relationship when Russian military forces invaded the internationally recognized border of Georgia and occupied the territories there, Russian president of that time – Dimitry Medvedev’s aim was easy to read: to prevent NATO’s enlargement process. Since that time the Status quo in the Russo-Georgian relationship has finally been established: the

recognition of occupied territories (particularly Abkhazia and Ossetia). The absence of diplomatic relations between the Kremlin and Tbilisi, the presence of Russian military bases on the occupied: internationally recognized Georgian territories, Russian agreement to ensure integration of Abkhazia and Ossetia into the Russian Federation. Taking the above-mentioned into account Russia realises that Georgian society has completely different values and the difference is growing day by day. It means that returning Georgia to the ‘Soviet Orbit’ is not as easy at all. Therefore, the Russian wild interest in the shortest-term objective is to use psywar methods and tactics intensively and create value-based similarities between Georgian and Russian societies to achieve its imperialistic desire.

To Sum up, Overall, Russia’s direct strategic interests in Georgia are to:

1. Bring Georgia closer to Russia in economic and socio-cultural terms;
2. Prevent the consolidation of democracy through increased polarisation in society, especially vis-à-vis issues related to values and foreign policy;
3. Prevent the Euro-Atlantic integration of Georgia through military dominance, economic sanctions, and influence operations;
4. Undermine the transit potential of Georgia (and the whole Caucasus region), not to allow for an alternative to Russian oil and gas supply to the West.

The climax of Russian Psywar from a pandemic period in Georgia to now

As the Georgian society's choice is evident – to join and become an honourable member of the EU and NATO (that is appropriately reflected in the Georgian constitution as one of the main priorities of Georgia) the path to its ambition for Georgians is not that easy. Russia, as we had mentioned above, still dreams about returning Georgia to the post-Soviet space and making the country its so-called backyard to build a solid fence that will prevent Georgians from the European integration process. Thus, Russia had chosen the more effective weapon to fight Georgia in the modern era: using Psywar methods that are considered to be one of the forms of hybrid warfare²⁵. One of the main targets of Russia’s Hybrid warfare methods chosen against Georgia is demonstrated by political actors, political individuals, information, communication technologies, non-governmental organisations, intensive propaganda, and disinformation. Russia permanently tries to impact Georgians’ perceptions, beliefs, and values to achieve its strategic goal. Georgia is considered to be the most reliable partner to the U.S., the EU, and NATO. It has to be mentioned that the Georgian-U.S. Strategic Partnership Charter (signed in

²⁵ M. S. Reshi, *op. cit.*

2009) is considered one of the main documents in modern Georgian political history and is still in progress. Russia at the same time tries to use all the possible methods to distract the bond between Georgia and the West which includes information manipulation as well as using hard power that is demonstrated at the so-called creeping wire borders at the occupied territories of Georgia. The latest polls conducted by IRI (International Republican Institute) show the consequences that 82% of Georgians believe that Russia is the main threat to Georgia as well as an economic threat, also this poll represents the reality of how the number of supporters of Georgia – Russian dialogue has reduced from 84 % to 40%. The best example of this can be considered the Georgians reaction and massive protest about the 2019 Junes event – when Russian MP Gavrilov – an Orthodox Christian, at the same time a communist took over the Speaker's chair at the Georgian Parliament. Such extreme vulnerabilities are always met by Russian attempts to deploy the narrative of the West, which is portrayed as ethically and morally corrupt, and anti-patriotic.

Georgian society is considered to be Orthodox Christian. According to the surveys conducted by The Caucasus Barometer (CB). Every seventh Georgian out of ten is a follower of the Georgian Orthodox Church conducts surveys simultaneously in all three South Caucasus countries and collects data, opinions, and people's attitudes to political issues. The CB has run the surveys since 2004 annually.) The majority of Georgians respect their traditions, and identity and try to protect them, therefore they believe that the main guarantor of preserving Georgian values is the Georgian Orthodox Church. This attitude is very well used by Russia by spreading fake information and threatening Georgians with the westernisation of Georgian values that are in danger of disappearing. This way Russia targets the vulnerability and conducts cognitive warfare against Georgians.

One of the Kremlin's promoted propagandists declared: "Russia intervenes in your brains and then you do not know what to do with your altered consciousness". This is the formulation of the method of how Russia manipulates target societies by using pro-Russian narratives and rhetoric, deploying scepticism and mistrust. This is a strategy on how to veil a real goal and pretend 'as true – patriotic intentions at aiming to preserve real traditional Georgian values. Unfortunately, in some cases, some Georgians are deceived by such narratives as the Soviet past of these people still works somehow. It is tailored propaganda that works sufficiently targeting a particular segment of Georgian society spreading advanced, well-digested information that can effectively impact this group of people. A well-known American research organisation defines cognitive hacking as an attack that includes a psychological understanding of the target group, place, and time to post the disinformation and achieve a desirable ending). In our technologically

advanced age, IT technologies provide Russian propagandists the vast opportunity to use the Internet and Social media to act effectively and manipulate the masses of people.

It has also to be mentioned that psychological manipulation operations are not conducted just once, this is a permanent, ongoing process that conducts an invisible, silent information war. In this process, three main phases can be distinguished:

1. Narratives that outline fear – this phase includes the spreading of pro-Kremlin messages which manoeuvres Georgian society by highlighting problems dealing with security, identity, and territorial integrity, Russian propaganda focuses on various fake sources and emphasises only the Georgian partnership with the U.S., the EU, and NATO and represents fake news about it, for example, Lugar Laboratory or Bio laboratory named after late Senator of the US Richard Lugar was opened in Tbilisi in 2011 with US support. Russians spread narratives (vocalised by Russian officials including Putin) as if the laboratory is developing a secret biological weapon that endangers the security of the region.
2. Establishing fear and vulnerability – this phase includes wide-spreading the vulnerable, fake news, causing scepticism and disappointment regarding pro-western orientation. The Russian narrative tries to persuade Georgians that Western democracy and values are decaying, that NATO and the EU will never find a place for Georgia in their family and that the door for Georgia will always be kept closed. Georgia will be abandoned by its so-called strategic partners.
3. Suggestions for a solution – this is a phase that regards a solution to each of above mentioned problems both countries are Orthodox Christians and have common religious values which is primary for Georgia to preserve its identity.

Conclusions

During the first period of the pandemic, Russia used various sources and possibilities to spread fake information about SARS-CoV-2. For instance, pro-Kremlin online media (such as News-Front Georgia and Ge.world.Ge) spread such propagandistic information not only on their websites but also used social media (Facebook, Instagram). The content covered a variety of themes and interpretations about the virus's cause, origin, spread and transmission, treatment, and the attempt to discredit the West in the fight against the virus by highlighting the fact that “even such a little country as Georgia can struggle better and could manage to handle SARS-CoV-2 than developed and rich Europe and America”. This way Russian propagandistic machine was painting

priorities of Russian scientific achievements and demonstrating Western weaknesses, as only China and Russia were ready to help Georgia, not Lugar lab, and the West allies.

Cyberespionage and the number of full-scale cyber attacks are rising in Georgia. During the 2008 Russo-Georgian war Russia conducted large-scale cyber attacks on the main infrastructures and governmental agencies in Georgia. Even today Russian cyber attacks remain one of the main threats to Georgia. Here we have to remember the results of the survey conducted by the organisation Georgian Reforms Association (GRASS) according to this research on August 7-12 Russia bombed 15 historical monuments in Georgia, 10 of them were churches, and 5 were museums (including Georgian translator, publicist, public figure's Ivane Machabeli's house – museum in Tamarasheni). After the war, the Russian military forces also destroyed 7 churches as a result of training. Among these churches two monuments were of the 9th Century: the church of St. George in the village of Kemert and the temple in the village of Kurta.

On August 5, 2022, one of the bars in Tbilisi called Dedaena Bar was cyber-attacked by Russian trolls. The reason for internet aggression was caused by the policy of bars demanding Russian visitors to condemn Russian aggression in Georgia in 1992 and 2008 as well as in Ukraine and to acknowledge more than 20% of Georgian territories occupied by the Russian Federation. As an immediate cyber attack result, the bar was punished by uploading negative, fake comments and reviews, and its rate level was reduced to 2.4. Besides, numerous aggressive comments were written on the bar's social network page.

Russian efforts to exploit Georgia's physical domain to achieve its strategic goals, either by planned interventions or by seizing opportunities provided by the local Georgian socio-political environment. Despite Russia's hybrid warfare, the Government of Georgia must continue on the road to attaining Georgia's European and Euro-Atlantic integration.

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COVID-19 PANDEMIC AS A HARBINGER OF WIDER PROCESS OF DEGLOBALIZATION AND RADICAL REARRANGEMENT OF GLOBAL SUPPLY CHAINS

Abstract: The author describes in the text succinctly and briefly how the COVID-19 pandemic impacted the global economy. Special attention is paid to the pandemic's influence on the global supply chain system and the evolution of corporate management over the supply chains in light of the lessons and experiences learned after the pandemic. The author argues that the global economy has entered the process of deglobalization and that the Western economies are gradually decoupling from China and Russia. According to the author, the pandemic prominently contributed to the rise in global debt level. Last but not least, the author is deeply convinced that soon the world will face a massive economic crisis and the unprecedented collapse of the global financial system which will shake the foundations of the global economy even more and which will make a huge reshuffle in world politics and geoeconomics. The COVID-19 pandemic virtually shook the global economy bringing about a lot of serious and miscellaneous socio-economic effects across the globe. It resulted in various economic upheavals that undermined many economies worldwide. The text aims to briefly describe the most germane economic effects and trends that were either produced, accelerated, or intensified due to the pandemic and economic policies introduced by governments in response to the pandemic. The pandemic crisis was a kind of overture to a much worse economic crisis that lies ahead and that will lead to the collapse of the global financial system totally and unavoidably.

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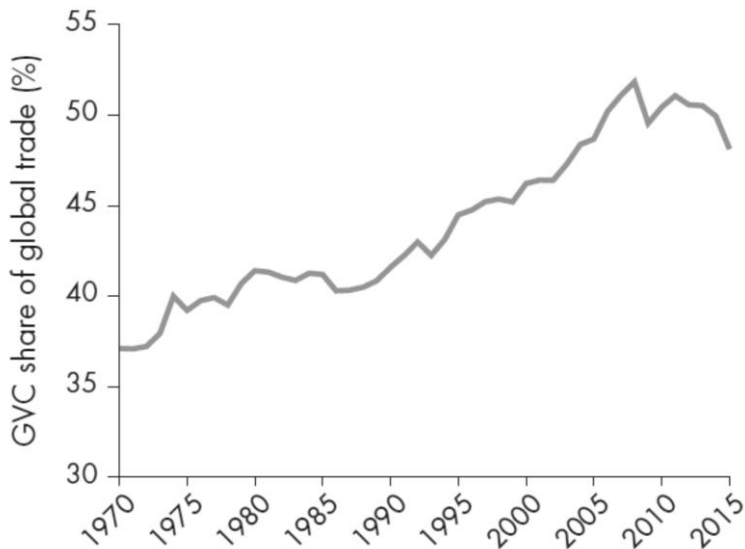
Keywords: *COVID-19, deglobalization, global supply chains, economic crisis*

Globalization and the global supply chains system

As a consequence of opening markets across the globe since the collapse of the communist bloc in 1989-91 as well as technical innovations and Deng Xiaoping's momentous reforms in China economic globalization materialized. The capital flows, including foreign direct investments, increased measurably in the last three decades on a world scale. Rising capital flows resulted in increasing transnational trade volumes. Corporations whose activities used to be focused exclusively on certain regions of the globe began to operate globally on all continents. As a consequence of a few decades of advancing globalization, presently the complex essence of industrial fabrication processes in the global economy ordinarily depend upon bewildering numbers of materials, parts and components as well as numerous stages of assembly. Managers of leading enterprises created very sophisticated and branchy global supply chains. Corporate managers across the world widely adopted strategies of outsourcing and offshoring. Widely touted by various corporate gurus so-called 'capital-light' models of doing business that came down to splitting design from actual production, became very fashionable amongst managers. In other words, to a substantial degree places of consumption were split from the places of production. The Western world experienced a far-reaching process of deindustrialization as the factories were relocated to China, Mexico, Poland, Vietnam and other less-developed states with lower wages and looser environmental protection regulations. The International Bank for Reconstruction and Development assessed that the global trade connected to global value chains increased from the level of roughly 37% of all global trade in 1970 to the level of 52% in 2008 as illustrated in Figure 1.

No wonder that a tightly interconnected global supply chain system with heightened specialisation amongst economies emerged in the recent three decades. On the downside of this phenomenon was the fact that this interconnected global corporate supply chain system had a truly low margin for error in the event of different possible supply chain shocks, which were so acutely exposed by the pandemic. As a result of the pandemic and the palpable rise in geopolitical rivalry, governments of major economies (like the U.S., China, and Russia) seem to begin to pursue a policy of self-sufficiency in crucial industrial sectors like the manufacturing of semiconductors, advanced batteries or medicines and medical equipment.

Figure 1. Global value chain share of global trade 1970-2015.



Source: *Trading for Development in the Age of Global Value Chains*, World Bank Group, 2020, p. 2.

Revision of the corporate supply chains and business approaches

The pandemic crisis led to a painstaking revision of the global supply chains of many enterprises operating transnationally. Managers of various international companies felt compelled to reject once thought as incontrovertible and fully justified approaches.

One can describe this process based on the example of a leading European automotive company – Volkswagen – a national champion of Germany. After the pandemic crisis erupted Volkswagen's management concluded that the corporation's supply chains ought to be above all shortened to make its business less reliant on suppliers situated in faraway countries².

Volkswagen's managers after the COVID-19 pandemic concluded that the undisturbed and sustained delivery of components and raw materials necessary for industrial output is more important than competitive, low pricing. That means that nowadays ensuring stable supplies of components and some of the raw materials used in the corporation's production processes has become more important than their low price. A supplier charging a higher price for their

² *Volkswagen Prepares for a Deglobalized World*, <https://www.wsj.com/articles/volkswagen-prepares-for-a-deglobalized-world-11648373580?mod=hp_lead_pos8> (27.03.2022).

supply may be preferred over a competitor charging lower prices but being more uncertain and at higher risk of failing in its deliveries. In other words, corporate priorities have been reshuffled and rearranged. Security and certainty became preferred over low prices. Volkswagen could no longer concentrate exclusively on receiving the cheapest components, however remote their producers were. Volkswagen managers also returned to the practice once commonly used – dual sourcing of certain essential parts. That approach ensures that in case of failure of one subcontractor, the firm would be able to raise the supplies order with the second sub-supplier.

Volkswagen's executives decided to diversify not only its sub-suppliers but also its main clients and markets. The geographic destination of Volkswagen sales needed to be diversified because the automotive concern was too dependent on one market – namely China – from where 40% of its sales come. In case of serious troubles in the Chinese economy, Volkswagen's business would suffer acutely. Therefore, the company's management decided to invest more in production and sales in the U.S. and emerging markets other than China. Moreover, Volkswagen's managers realized that their business is too dependent not only on the Chinese market but also on crucial Chinese components – semiconductors – import of which is necessary for uninterrupted, stable and efficient manufacturing in Volkswagen factories all over the world³. Being aware that deliveries of semiconductors from the Middle Kingdom or Taiwan to Europe are dicey in the event of geopolitical tensions and conflict even German politicians began to scramble for further development of the semiconductor industry in Germany and Western Europe.

Similar changes and evolution in corporate strategies can be noticed also in the case of other major global concerns. Greater resilience to supply chain shocks and disruptions became something not only desirable but also worth paying higher costs. Among means that can be done by corporate managers to bolster and futureproof their supply chains are: diversification of geographic output, shortening supply chains, devising more aligned procurement strategies⁴ as well and furthering the process of vertical integration by acquiring domestic and foreign suppliers⁵. Many corporations all over the world began to scrupulously identify potentially dangerous dependencies and bottlenecks in their supply chains, and even in the supply chains of their subcontractors. For

³ *Companies Ignore Major Risks in China*, <<https://www.spiegel.de/international/business/business-as-usual-german-companies-ignore-major-risks-in-china-a-27b66d20-f228-47d0-b2bf-95f3cc976e6c>> (04.11.2022).

⁴ J. Gattorna, *People powering contemporary supply chains*, [in]: *Global Logistics: New Directions in Supply Chain Management*, 8th Edition, ed. E. Sweeney and D. Waters, London & New York 2021, p. 287.

⁵ *The structure of the world's supply chains is changing*, <<https://www.economist.com/briefing/2022/06/16/the-structure-of-the-worlds-supply-chains-is-changing>> (18.06.2022).

instance, another major global automotive producer Toyota asked its sub-suppliers to present their supply chains to detect risks for potential interruptions.

Toyota and its way of managing supply chains has been especially closely watched around the world for decades since this is the company that revolutionized corporate logistics by introducing a new pioneering innovation – so-called just-in-time deliveries initiated for the first time in the 1950s. This approach vastly contributed to avoiding waste and reduction in operating costs. Toyota planned production and logistic processes in such an informed and well-thought-out manner that deliveries of different parts were transported to the specific assembly lines just in time in which they were needed in the production processes. Thanks to this approach substantial part of warehousing costs were omitted and cars could be produced cheaper. Of course in this logistics system, everything had to run like a Swiss watch but Toyota honed and perfected this skill. In consequence, it became a model example to follow for many other concerns – not only from the automotive industry – and went down in golden letters in the history of management. The Toyota just-in-time production system turned out to be so economical that literally every car manufacturing company that wanted to survive in the competitive world market had to adopt this approach and implement it. What is more, a multitude of companies representing other than automotive industrial branches adopted this just-in-time logistics system as well.

Nevertheless, the COVID-19 pandemic harmfully revealed that in the global economy with so numerous and so intricate supply chains the just-in-time production system had certain inherent risks in itself. It became too brittle. It could work very well only in case there were no external supply shocks. Toyota's managers began to reevaluate its world-famous approach to adapt it to modern times with increased geopolitical and geoeconomic risks. For instance, Toyota asked its suppliers to stockpile certain parts⁶. Toyota itself decided to expand – and in some cases create from scratch – inventories of certain vital though small in weight and volume parts like semiconductors. The cost of stockpiling and warehousing them are not as high as that of much bigger and heavier parts and they provide a kind of safety buffer that allows production to continue for some time by using stored stock in the event of interruptions and disruptions in supplies. Hence, we can sum it up to state that Toyota is replacing the just-in-time production system with a just-in-case production system. Obviously, this replacement does not encompass all components and parts but only some painstakingly selected ones. Therefore, it is not a full

⁶ *Auto Makers Retreat From 50 Years of 'Just in Time' Manufacturing*, <www.wsj.com/articles/auto-makers-retreat-from-50-years-of-just-in-time-manufacturing-11620051251?mod=hp_lead_pos5> (06.05.2022).

rejection of the just-in-time approach, but rather a partial and limited withdrawal from it. Nonetheless, Toyota's shift arguably is a harbinger of similar changes in the future. Once again Toyota's approach to logistics and production may be emulated worldwide as it used to be in the past. Moreover, Toyota convinced – or compelled – its suppliers to reveal who exactly sells them their parts and components⁷. Data gained in this manner was collected in a special large database used to identify potential bottlenecks and other problems in the supply chain.

Tellingly, Toyota also paid more attention to securing supplies of semiconductors. Together with another well-known Japanese firm Sony and a few other Japanese companies, it founded a new semiconductor factory in Japan⁸. This is the result of not only the COVID-19 pandemic but also the increasing trade clashes between China and the U.S. over primacy in the world semiconductor industry as well as worries about the stability of semiconductor supplies in case of eruption of Sino-Taiwanese military conflict.

Another signature change evoked by the pandemic in the management of global supply chains is making nearshoring widespread. Big global businesses are prone to relocation of output much closer to home than in the past. This is to a large degree the ramification of vastly rising freight costs provoked by the COVID-19 pandemic and ensuing lockdowns that heavily hit the harbours and maritime transport. The rise in maritime freight prices can be noticed in Figure 2. In the midst of 2021, the spot container-freight rate for the transport of containers from a Chinese port to a U.S. port situated on the East Coast increased nine times in relation to 2019. That was an immense rise indeed. The average price for a standard 40-foot shipping container made in China doubled in 2021 relative to 2016. Shipping costs in 2020 and 2021 hit records de facto becoming one of several drivers of increased global inflation. Hence, it became much more economical to transport materials, parts and components over shorter distances. So-called short-sea shipping became a wiser and more rational strategy for managers wanting to adjust and improve their supply chains⁹.

⁷ *Ibidem*.

⁸ *Toyota, Sony Set Up Advanced Chip Business in Japan*, <https://www.wsj.com/articles/toyota-sony-set-up-advanced-chip-business-in-japan-11668133504?mod=world_major_1_pos4> (11.11.2022).

⁹ To find out more about short-sea shipping see: T. A. Santos, C. G. Soares, *Assessment of transportation demand on alternative short-sea shipping services considering external costs* [in:] T. Vanelslander T., C. Sys, *Maritime Supply Chains*, Amsterdam-Oxford-Cambridge 2020, pp. 13-45.

Figure 2. Spot container-freight rates, from China to Europe and the U.S., 2017-2021.



The Economist

Source: www.economist.com

These factors made many managers seriously moot the relocation of production to low labour costs economies situated much closer to home markets or major consumer markets. A sudden and marked rise in maritime shipping by no means should be disregarded. If indeed reduced transportation costs lead to the fragmentation of industrial production on a global scale, as Venkatachalam Anbumozhi and Ji Hong Kim argue¹⁰, it is logical to assume that rising transport costs should cause the opposite process. To put it

¹⁰ V. Anbumozhi, J. H. Kim, *Complexities in Supply Chain Resilience Against Economic Shocks and Forming Public Private Partnerships: Korean Automotive Case* [in:] *Supply Chain Resilience: Reducing Vulnerability to Economic Shocks, Financial Crises, and Natural Disasters*, ed. V. Anbumozhi, F. Kimura, S. M. Thangavelu, Singapore 2020, p. 167.

differently, Mexico located very close to the U.S. became a much more attractive place of locating production for U.S. firms than faraway China. Transportation of goods from China via maritime route was much more expensive than transportation of the same goods manufactured in Mexico situated nearby. This phenomenon of relocating production closer to home gained the name nearshoring. A good example is Italian firm Benetton which after the pandemic shock made a decision to relocate fabrication to Serbia, Croatia, Turkey, Tunisia and Egypt – all these states are situated relatively not far from Italy and Western Europe which are the principal markets for the company¹¹. Benetton gradually reduced its manufacturing in South and East Asia relocating the production to the Mediterranean basin.

Overall, one may observe that after the COVID-19 eye-opening lessons corporations' push to minimize costs is to a certain extent replaced with a push to maximize the security and stability of deliveries and supply chains. Too complex webs of supply chains proved to be relatively vulnerable to disruptions and shocks of miscellaneous origins. In a modern-day global economy, the potential for disruption in manufacturing, transportation and distribution of manufactured and sold goods is simply too high to neglect. As analysts of the World Bank Group aptly remarked supply chain disruptions are particularly costly when companies effortlessly and handily resort to alternative suppliers¹². Thus, for corporate executives, it appears to be judicious to seek some alternative sources and routes of supply. Nearshoring may be one of the strategies aimed at the protection of complicated corporate supply chains. But this is not the only possible response to this issue. Another one is the so-called regionalization which basically brings down to manufacturing goods using delivered materials and components obtained exclusively from the region of the globe in which the produced goods are later sold.¹³ This response to the pandemic in fact leads to an increase in regionalisation instead of furthering pre-pandemic globalisation. By regionalisation possible supply chain disruptions and shocks would affect merely the functioning of the corporation in one region instead of its operations in the whole world.

Another strategy adopted by big business – though not the most popular – is simply reshoring, that is coming back with the manufacturing processes from overseas countries to the domestic market. This strategy is a particularly tantalizing option for U.S. corporations from the chemical industry because in the U.S. cost of natural gas and oil is generally lower than in the rest of the

¹¹ *How Companies Are Overhauling Supply Chains to Ease Bottlenecks*,
<<https://www.wsj.com/video/series/current-features/how-companies-are-overhauling-supply-chains-to-ease-bottlenecks/A0C8DD54-B722-4CFF-A439-869514E66C3F>> (08.01.2022).

¹² *Trading for Development...*, p. 50.

¹³ *How Companies Are...*

world. The reason for that is quite simple – the shale oil and gas revolution. The chemical industry consumes vast amounts of hydrocarbons to produce goods. Such a strategy makes the corporation much more resistant to transportation problems outside the domestic market. This solution is also attractive from the point of view of politicians who incessantly advocate for bringing jobs back to their motherlands – mostly the wealthiest states, which were subject to the long process of appreciable deindustrialization over several decades. What is more, as accurately observed by Ralph L. Kliem, during the COVID-19 pandemic many corporate executives were surprised to find out that foreign sources of cheap labour may no longer be so easily available¹⁴. However, the downside of reshoring is that it is simply quite costly to move manufacturing back to the home market to the point that in practice only the largest firms enjoying the biggest capital pools can afford such a strategy. Furthermore, this strategy can be quite time-consuming as well. On top of that, friend-shoring appears to slowly gain popularity in corporate management circles not without encouragement from many politicians concerned about national security and vast industrial espionage practised by the People’s Republic of China, among other things. Friendshoring in principle comes down to the relocation of manufacturing and business activities to friendly or allied states. Put another way, U.S., Japanese, South Korean, and Australian firms are considering relocating part of their business activities and investments away from China – which is commonly regarded in the aforementioned states as the threatening and strengthening geopolitical competitor – to some other attractive low-wage economies treated as relatively friendly like Thailand, Indonesia, the Philippines, etc. This phenomenon is a result of not only the COVID-19 pandemic but also the increasing geopolitical tensions so prominent in recent few years.

COVID-19 impact on tourism sector in the global economy

The branch of the global economy that was most severely affected by the cause of the onset of the COVID-19 crisis was certainly tourism. Unquestionably, tourism-dependent economies were hurt the most by the pandemic. As a result of the pandemic, ensuing lockdown and restrictions in transborder travel as well as widespread fear among tourists, the global tourism industry was hit exceptionally hard. International travel and tourism plummeted as a result of the pandemic. According to the UN World Trade Organization, the number of international tourist arrivals in 2020 compared to the pre-pandemic 2019 declined by an eye-watering 74%, which makes it –

¹⁴ R. L. Kliem, *Political Risk Management for the Global Supply Chain*, Boca Raton-Abingdon 2022, p. 31.

undoubtedly – the harshest-ever global tourism crisis¹⁵. Asia and the Pacific experienced the deepest decline in international tourist arrivals – 84%. It is assessed that as a consequence of the pandemic global export revenues coming from international travel plunged by USD 1.3 trillion. Undoubtedly, this was a colossal economic blow for states with a bloated tourism sector. For comparison, in 2009 – a year after the Great Recession – the global loss of export revenues coming from international travel was 11 times lower than in 2020. That gives us the notion of how devastating was the COVID-19 pandemic for the global tourism industry. No other development affecting the global tourism business is comparable to the COVID-19 pandemic.

For some states, the sudden unprecedented loss of revenues derived from tourism meant an economic catastrophe. Perhaps the best example to support this thesis is Sri Lanka, for which tourism accounted for 12% of its GDP¹⁶. Sri Lanka went bankrupt after its economy took a strong hit by diminished tourism revenues. Although the causes of Sri Lankan default are manifold, doubtless crushing tourism can be considered as one of the most relevant. The vastly decreased international travel and international tourism in the years after the outbreak of the COVID-19 pandemic can rightly be interpreted as a symptom of progressing deglobalization. Hence, we can assume that the pandemic in practice resulted not only in economic deglobalization but also in social deglobalization, to a certain degree. Ultimately, fewer people travelling and crossing the borders is tantamount to less social globalization.

Post-pandemic fiscal stimuli and their influence on the global economy

To counteract recession major economies in the world in response to the pandemic crisis considerably loosened their monetary and fiscal policies. The Biden administration enacted the so-called American Rescue Plan which added a sudden demand boost of \$1.9 trillion. This immensely increased U.S. Federal budget deficits. In fiscal year 2020, the U.S. federal budget deficit totalled a record-high \$3.13 T – it de facto tripled with the last pre-pandemic fiscal year 2019. In fiscal year 2021, the federal budget deficit reached nearly \$2.77 trillion. In the fiscal year 2022, the US budget deficit is projected to hit \$1.38 T¹⁷. These deficits are illustrated in Figure 3. The injection of such huge

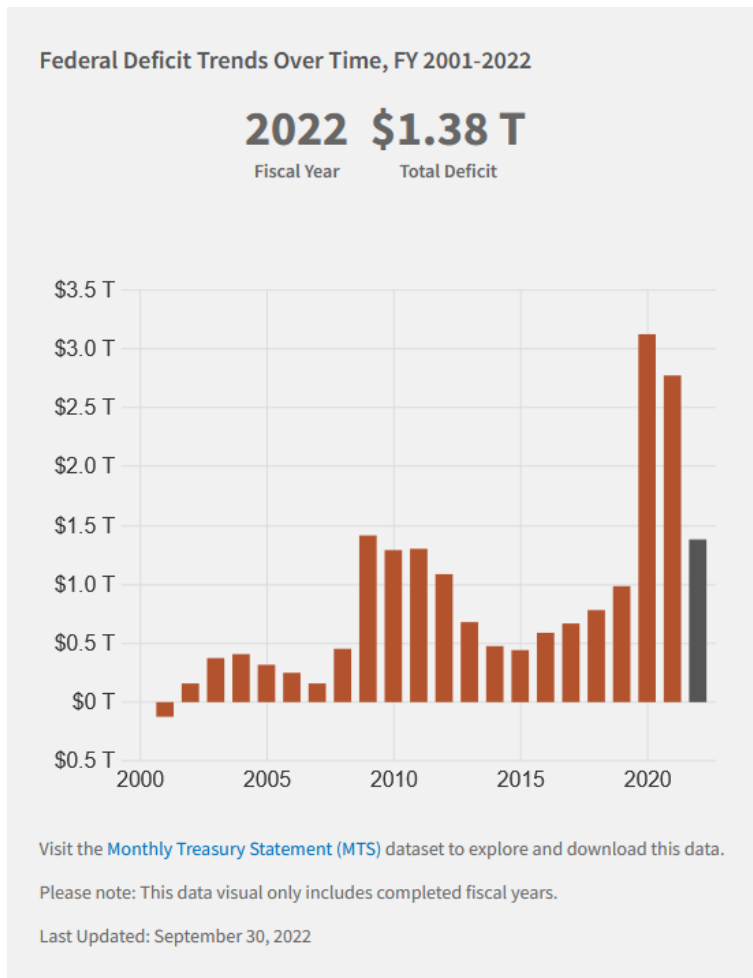
¹⁵ UNWTO *World Tourism Barometer and Statistical Annex*, Vol. 19, No. 1, January 2021, <<https://www.e-unwto.org/doi/epdf/10.18111/wtobarometereng.2021.19.1.1>> (29.12.2022).

¹⁶ *Sri Lanka's Economic Struggles Will Deepen Its Reliance on Foreign Funds*, <<https://cc.bingj.com/cache.aspx?q=%22Sri+Lanka%27s+Economic+Struggles+Will+Deepen+Its+Reliance+on+Foreign+Funds%22&d=4978485836316743&mkt=pl-PL&setlang=pl-PL&w=aGZLM516mJjX9Ag-nDgMW3TxUljOwngR>> (14.11.2022).

¹⁷ *What is the national deficit?*, <<https://fiscaldata.treasury.gov/americas-finance-guide/national-deficit/>>, (29.12.2022).

amounts of fiscal stimuli had to contribute to the risen level of inflation in the succeeding years on a global scale. Bear in mind, that increased demand in such a massive economy like the U.S. indubitably influences inflation in the entire world. Moreover, it noticeably increased the U.S. national debt.

Figure 3. U.S. Federal Budget deficit in fiscal years 2001-2022.



Source: *What is the national deficit?...*

Even before the onset of the pandemic crisis, U.S. firms were borrowing heavily taking advantage of very low interest rates. When, as the result of the COVID-19 pandemic and the Biden administration enacted lockdowns, the U.S. corporations still borrowed at even lower interest rates. Ergo nowadays not

only U.S. government debt is extraordinarily high, but U.S. corporate debt hit dangerous levels. The trend of ever-rising U.S. debt is presented in Figure 4. According to the Federal Reserve at the end of the third quarter of 2022, the aggregate business debt totalled \$ 19.8 T, the accumulated U.S. household debt reached \$ 18.8 T, the cumulative U.S. state and local debt hit \$ 3.26 T, whereas the combined U.S. federal government debt totalled \$ 26.6 T. For comparison, in the last quarter before the pandemic broke out, at the end of the fourth quarter of 2019 these debt levels amounted to, respectively: \$ 16.3 T, \$ 16.1 T, \$ 3.11 and \$ 19 T. That means that over the merely 11 quarters after the onset of the COVID-19 pandemic the overall U.S. business debt rose by \$ 3.5 T (21.5%), the aggregate U.S. household debt increased by \$ 2.7 T (16.8 %), the consolidated U.S. state and local debt surged by \$ 0.15 T (4.8 %), whereas the cumulative U.S. federal government debt swelled by \$ 7.6 T (40%). The tempo of a surge in U.S. debt (particularly federal government debt) is worryingly fast and heralds a gigantic debt crisis coming soon, much sooner than most people anticipate. In fiscal year 2022 U.S. net interest payments on its debt totalled \$475 bn¹⁸.

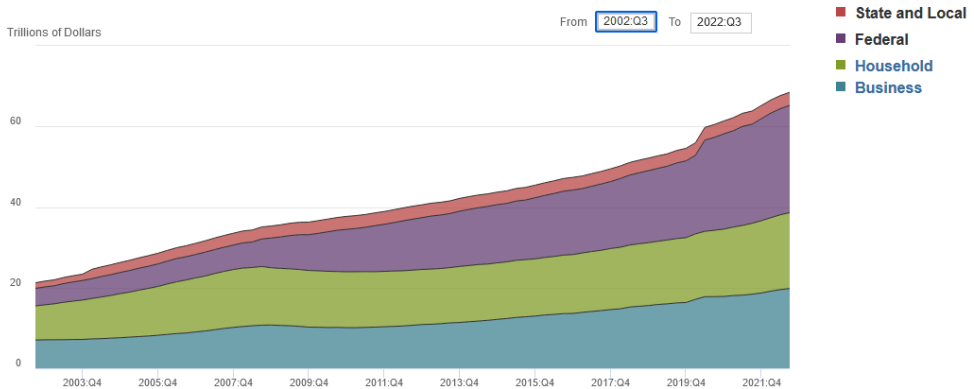
The rub of the immensely growing debt by far is not limited only to the U.S. It is estimated that at the end of 2022, the cumulative global debt will reach a mind-boggling sum of \$290 tn¹⁹. A substantive part of this debt was incurred during the pandemic years 2020-22. In addition, a considerable amount of this debt was incurred in U.S. dollars or euros, which means that the record-fast tightening of monetary policy by the Fed in 2022 and the slower tightening of monetary policy by the European Central Banks will surely result in increased debt service effects due to higher interest rates on the one hand and strong dollar appreciation against other currencies on the other hand. We should keep in mind that the rising of interest rates by major central banks was caused by growing inflation which in turn to some degree was caused by the snarled global supply chains because of the pandemic and restrictive lockdowns. Thus, the pandemic also contributed vastly to the global debt crisis we are going to experience in full scale in 2023-24 when a multitude of states worldwide would go bankrupt.

¹⁸ *Why the \$290 Trillion Global Debt Splurge Is Becoming Unsustainable*, <<https://www.wsj.com/video/series/dion-rabouin/why-the-290-trillion-global-debt-splurge-is-becoming-unsustainable/033CB864-D749-424C-A8EE-AF10D326D989>> (29.12.2022).

¹⁹ *Ibidem*.

Figure 4. U.S. state and local, federal, household and business debt, Q3 2002-Q3 2022.

All nonfinancial sectors debt



Note: Debt includes debt securities (commercial paper, Treasury securities, agency- and GSE-backed securities, municipal securities, and corporate and foreign bonds) and loans (depository institution loans, other loans and advances, mortgages, and consumer credit).

Source: *Financial Accounts of the United States*, <https://www.federalreserve.gov/releases/z1/dataviz/z1/nonfinancial_debt/chart/#units:usd> (29.12.2022).

One can even wonder whether the governments of at least certain countries do not intentionally pursue a policy of debt monetization. Indeed, it seems that monetization of debt is a strategy many governments are taking presently, although they do not announce it publicly due to obvious reasons. The national debts are simply too high for governments to pay them off in normal manners (through dynamic economic growth, increased national savings and socially unpopular budget austerity). It is worth accentuating that historically, the U.S. national debt used to significantly increase in times of war, but used to be paid off and decreased in times of peace. Now this pattern was put to an end in 2000 by consecutive U.S. administrations. U.S. debt in the last two decades – the time of relative peace – has swollen enormously. After 2000 U.S. government rose massively under George W. Bush, Barack Obama, Donald Trump and Joe Biden.

According to many economists, giant fiscal and monetary stimuli introduced widely in response to the onset of the COVID-19 pandemic are responsible for the vastly increased inflation that virtually the entire world has to struggle with. These stimuli had a colossal inflationary impact across the

globe. This argument was raised by, to name just a few, Tunku Varadarajan²⁰, Gerard Baker²¹, and "The Economist" journalist²², James Rickards²³.

Other signals of progressing deglobalization

Except for the pandemic other germane developments in the global economy both signal and conduce to a mounting process of deglobalization. The primary among them is the U.S.-China trade war started by the Trump administration and continued up to a point by his successor in the White House. Sometimes it is difficult to differentiate infallibly whether some trend resulted from the pandemic or rather from the trade or both of these egregious occurrences. Nevertheless, since the initiation of Trump's trade war with China in 2018 we can observe the growing imports to the U.S. from Southeast Asian states (like Vietnam, Indonesia and Thailand) as well as from nearby Mexico at China's expense²⁴. U.S. big business simply relocates parts of its supply chains from geopolitically uncertain China. Extremely drastic lockdown in the Middle Kingdom imposed on the Chinese citizens by Xi Jinping additionally makes it harder to import vital goods to the U.S. from this country. Hence, this must have been a further stimulus for U.S. companies to move at least part of their supply chains away from this increasingly unpredictable state.

As well, it is worth noticing the increasing and accelerating process of technological decoupling between the West (especially the U.S.) and China together with Russia on the other side. It seems that partly as a lesson learned from the pandemic the U.S., China, Europe, and even Russia are all pursuing self-sufficiency in key sectors such as semiconductors and batteries. The major economies endeavour to become less dependent on other states, especially their chief geopolitical competitors, in these strategic sectors of industry. Without a doubt, we are observing a growing relocation of production of semiconductor factories – the U.S. and Western Europe are trying to convince corporations to

²⁰ *How Government Spending Fuels Inflation*, <https://www.wsj.com/articles/government-spending-fuels-inflation-COVID-relief-pandemic-debt-federal-reserve-stimulus-powell-biden-stagflation-11645202057?mod=opinion_lead_pos5> (29.12.2022).

²¹ *The Price of Biden's Excuses for Inflation Keeps Rising*, <https://www.wsj.com/articles/biden-excuses-rising-putin-war-russia-ukraine-gas-prices-inflation-american-rescue-plan-build-back-better-stimulus-spending-11647275414?mod=opinion_featst_pos1> (29.12.2022).

²² *Why the Federal Reserve has made a historic mistake on inflation*, <<https://www.economist.com/leaders/2022/04/23/why-the-federal-reserve-has-made-a-historic-mistake-on-inflation>> (29.12.2022).

²³ *How Long Will Inflation Last?*, <<https://dailyreckoning.com/how-long-will-inflation-last/>> (29.12.2022).

²⁴ *Global Trade Is Shifting, Not Reversing*, <https://www.wsj.com/articles/global-trade-is-shifting-not-reversing-11672457528?mod=Searchresults_pos1&page=1> (29.12.2022).

produce less in China and more in the Western world. U.S. government under Joe Biden in 2022 decided to implement enormous (totalling \$369 bn) subsidies for manufacturing semiconductors and electric-vehicle batteries in the U.S. within the framework of the so-called U.S. Inflation Reduction Act²⁵. These moves are manifestly intended to prop up U.S. industry and to further encourage U.S. corporations to move back with fabrication activity to the motherland. It needs to be stressed that Washington implemented quite severe technological sanctions – aimed at inhibiting China’s technological progress, especially in the semiconductor business. We are witnessing the growing and precipitating process of technological decoupling between the major world powers and geopolitical as well as geoeconomically rivals. As relations between Washington and Beijing aggravate year by year, U.S. companies are inclined by the U.S. government to reorder their complex global supply chains away from China. The pandemic also gave a lesson for global concerns that being overly dependent on China is simply imprudent and unwise. Hard to explain the zero-tolerance approach to COVID-19 outbreaks imposed on the Chinese people by Xi Jinping contributed to the reshuffling of corporate supply chains too. Among firms that after the pandemic outbreak decided to precipitate plans to move some of their manufacturing out of China were a flagship U.S. firm – Apple Inc. Apple management told its suppliers to assemble Apple products elsewhere in Asia, especially in – treated as relatively friendly and more predictable than the People’s Republic of China – India and Vietnam²⁶.

Conclusion

First and foremost, it appears that the COVID-19 pandemic initiated a process of gradual deglobalization as it palpably laid bare the deep risks associated with maintaining the global supply chains or concentration of too much corporate industrial output in one country, such as the People’s Republic of China. The pandemic made corporate executives, politicians and normal people aware that global supply chains which once functioned smoothly and efficiently were not as effective and resilient to shocks as it was expected²⁷. The pandemic accelerated a process of rearrangement and relocation of industrial

²⁵ *Assessing Europe’s Concerns and Potential Response to the U.S. Inflation Reduction Act*, <<https://cc.bingj.com/cache.aspx?q=%22Assessing+Europe%e2%80%99s+Concerns+and+Potential+Response+to+the+U.S.+Inflation+Reduction+Act%22&d=1931195610166&mkt=pl-PL&setlang=pl-PL&w=6wTYIuuLfdJgpvNULrOGBcpLYVAj9xqi>> (20.12.2022).

²⁶ *China Increases Trade in Asia as U.S. Pushes Toward Decoupling*, <https://www.wsj.com/articles/china-increases-trade-in-asia-as-u-s-pushes-toward-decoupling-11672231684?mod=Searchresults_pos5&page=1>(20.12.2022).

²⁷ B. B. Adedeji, *Global Supply Chain: Using Systems Engineering Strategies to Respond to Disruptions*, Boca Raton-Abingdon 2022, p. 1.

production away from China. It is only a deepening of the process which was initiated before because of the U.S.-China trade war started by the Trump administration as well as rising costs of labour in the Middle Kingdom.

Among the most salient global economic results of the pandemic one can enumerate the following things:

- a. serious disturbances and delays in the global supply chains;
- b. relocation of production activity worldwide;
- c. revision of long-established global corporate supply chains;
- d. a considerable rise in global maritime trade shipping prices;
- e. a rise in inflation rates around the globe;
- f. nearshoring, reshoring and friend-shoring instead of offshoring;
- g. partial departure of just-in-time management which is replaced with just-in-case managerial approach;
- h. the collapse of the tourism industry in many states (like Sri Lanka);
- i. a rise in the global level of debt.

The global supply chains consist of tens of thousands of miscellaneous mutually interconnected supply routes and linkages. Any dependencies between supply chain entities (suppliers, partners, and clients) as well as shifts and modifications in the configuration of the extended supply chains (or in other words the suppliers to suppliers) potentially might bring about perturbation of different sorts in the supply of resources, goods and services²⁸. The COVID-19 pandemic made us realize that all too much. This experience proved acutely that highly complex and deeply interconnected global supply chains may disseminate disruptions rapidly across the world even generating the cascade effects. The stability, reliability, security and resilience of corporate supply chains were highlighted strongly by the pandemic crisis. Politicians and executives had to reevaluate, rethink, redesign and rearrange certain supply chains to make them more resilient and sturdy. These processes of reorganization of global supply chains started even before the unfortunate COVID-19 struck the planet with the initiation of Trump's trade wars. Later events only deepened and accelerated the above-mentioned processes. Even after 2022 the COVID-19 pandemic began to flag, other momentous developments like Russia's invasion of Ukraine and the ensuing Western-Russian economic war intensified the deglobalization by inclining business managers and political leaders to resign from partnership with certain states. The COVID-19 lesson teaches that supply chains ought to be not only efficient but even more importantly robust. With this end in view global business and political leaders especially in the Western world seem to focus at present much more attention on making their corporations and countries much more self-

²⁸ L. J. Krajewski, M. K. Malhotrap, *Operations Management: Processes and Supply Chains*, Harlow 2022, p. 592.

dependent in at least certain painstakingly selected strategic technologies and industries²⁹. Arguably, James Rickards is right when he shared the following thoughts with us:

*Anything as complex and as highly scaled as the global supply chain will always collapse; it's just a question of when. For 30 years, the goal of supply chain management has been efficiency, usually defined as the elimination of redundancy, inventory and latency. That's fine in the short run but it results in a system that is brittle and has no tolerance for even small disruptions*³⁰.

Indubitably, as a result of the pandemic states became even more heavily indebted than they were beforehand. The unbearably high national, corporate and household debt levels alongside tightening the monetary policies by major central banks at a record pace harbinger an extraordinarily hard financial and economic crisis. Furthermore, the global economy is about to face a major liquidity crisis³¹ compared to which even the Great Depression will pale. We can see huge economic troubles ahead. The excessively leveraged, highly opaque global financial system resembles a sort of gigantic Ponzi scheme ready for total collapse with all the associated dire economic, political and social ramifications. Admittedly, the COVID-19 pandemic did not create this inherently unstable and vulnerable to manipulation financial system, however it made it even more fragile and brittle. All that means that we have just entered the era of deglobalization, in which economies will at least partly split or decouple. It concerns particularly the United States and its prime foes – China and Russia.

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²⁹ *The structure of the world's supply chains is changing...*

³⁰ *Globalism's Achilles' Heel*, <<https://dailyreckoning.com/globalisms-achilles-heel/>> (17.12.2022).

³¹ *On the Cusp of a Global Liquidity Crisis*, <<https://dailyreckoning.com/on-the-cusp-of-a-global-liquidity-crisis/>> (05.12.2022).

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ASSESSMENT OF STUDENTS' KNOWLEDGE OF THE COVID-19 EPIDEMIC

Abstract: *COVID-19 disease has been a major epidemiological issue ever since its outbreak across the world. An adequate level of knowledge, especially of those members of the public who are professionally exposed to COVID-19 infections remains a priority. This paper aimed to establish students' level of knowledge about the COVID-19 pandemic and to analyse the results according to the field of study and socio-demographic situation. The study involved 146 nursing and cosmetology students of the Collegium Medicum UJK. The survey method was used, and the survey technique was applied. As a research tool, a self-study survey of 34 questions was used. Most respondents were people living in rural areas, people with good financial status and nursing students. Respondents demonstrated good knowledge of the aetiology, characteristics, course, symptoms, diagnosis, and treatment of the disease as well as methods of preventing the COVID-19 pandemic. There was a low level of knowledge regarding the average time of incubation of the virus as well as the use of antibiotics in the treatment of COVID-19. Knowledge of the COVID-19 triggering factor was indeed related to gender and marital status. The economic status, age and field of study significantly affect the knowledge of the*

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length of time that the airborne virus maintains the ability to infect. There is also a relationship between economic status and knowledge of the route of transmission. The main findings of the research are the following: 1) Students demonstrate the knowledge of the disease characteristics, aetiology, course, and symptoms as well as diagnostic methods, and treatments for COVID-19, 2) students demonstrated a good level of knowledge of the principles of prevention and the spread of the COVID-19 pandemic, 3) significant relationship between socio-demographic factors and the level of knowledge of the COVID-19 pandemic has not been confirmed, 4) the field of study does not significantly affect the level of knowledge.

Keywords: assessment of students' knowledge, COVID-19 epidemic

Introduction

At the end of 2019, coronavirus disease known as COVID-19 emerged in the world⁵. The name of the new disease was proposed and announced by the World Health Organization (WHO) on February 11, 2020⁶. This novel disease was defined as a dangerous infectious illness affecting the respiratory system⁷. The disease is caused by an unknown virus-coronavirus of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)⁸. The name of the virus leading to COVID-19 was proposed and approved by the Coronavirus Study Group of the International Committee on Taxonomy of Viruses⁹. In 2020, because of high morbidity and high death rates caused by COVID across the whole world from March 11, 2020, WHO declared an international pandemic¹⁰.

⁵ Z. Drulis-Kawa, *Koronawirus SARS-CoV-2 – biologia, wykrywanie i zwalczanie*, „Uniwersytet Wrocławski Przegląd Uniwersytecki” 2020, Vol. 231, No. 1, pp. 24-25.

⁶ *Ibidem*; L. Chih-Cheng, L. Yen Hung, W. Cheng-Yi et al., *Asymptomatic carrier state, acute respiratory disease, and pneumonia due to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2): Facts and myths.*, “Journal of Microbiology, Immunology and Infection 2020, Vol. 53, No. 3, pp. 404-412.

⁷ M. Ingot, *COVID-19 – opracowanie zgodne ze stanem wiedzy na 26.03.2020 r.*, <[https://www.umed.wroc.pl/sites/default/files/files/aktualnosci/2020/03/COVID_19_1_0_p_0prawiony_26_03_2020__wersja_po_formatowaniu_\(2\).pdf](https://www.umed.wroc.pl/sites/default/files/files/aktualnosci/2020/03/COVID_19_1_0_p_0prawiony_26_03_2020__wersja_po_formatowaniu_(2).pdf)> (20.12.2022).

⁸ Z. Drulis Kawa, *op. cit.*

⁹ L. Chih-Cheng, L. Yen Hung, W. Cheng-Yi et al., *op. cit.*

¹⁰ *COVID-19: Informacje kliniczne i wytyczne dotyczące leczenia. Międzynarodowa federacja farmaceutyczna*, <<https://www.nia.org.pl/wp-content/uploads/2020/04/FIP-Przewodnik-COVID-19-PL-002.pdf>> (20.11.2022); *WHO Director-General's opening remarks at the media briefing on COVID-19 – 11 March 2020*, <<https://www.who.int/>

COVID-19 is deemed to be a great unknown to both the medical community and the general public. It is also believed that due to its rapid spread, the virus is considered to be an epidemiological threat. Many COVID cases manifest by very severe course of the illness, leading to numerous complications and often death. SARS-CoV-2 is a pathogen of animal origin, where bats are its main reservoir. While the intermediate host through which the virus is transmitted to humans has not yet been established, it is believed that pangolins play a significant role in the spread of the disease among people¹¹. The adequate level of public knowledge of the disease and routes of its transmission may result in implementing preventative measures leading to reducing the number of cases.

Aim of the study

The research aimed to establish students' level of knowledge about the COVID-19 pandemic and to analyse the results according to the field of study and socio-demographic situation.

The assumed practical goal was to utilise the research results for undertaking activities related to obtaining the best possible level of students' knowledge regarding the COVID-19 pandemic. The obtained data will allow us to determine the area in which the students' awareness was the lowest. Concerning the objective, the following detailed research problems were formulated:

1. What is the level of knowledge of the surveyed students about the COVID-19 pandemic?
2. To what extent do socio-demographic variables influence students' level of knowledge about the COVID-19 pandemic?
3. To what extent does the field of study affect the level of knowledge about the COVID-19 pandemic?

Material and method

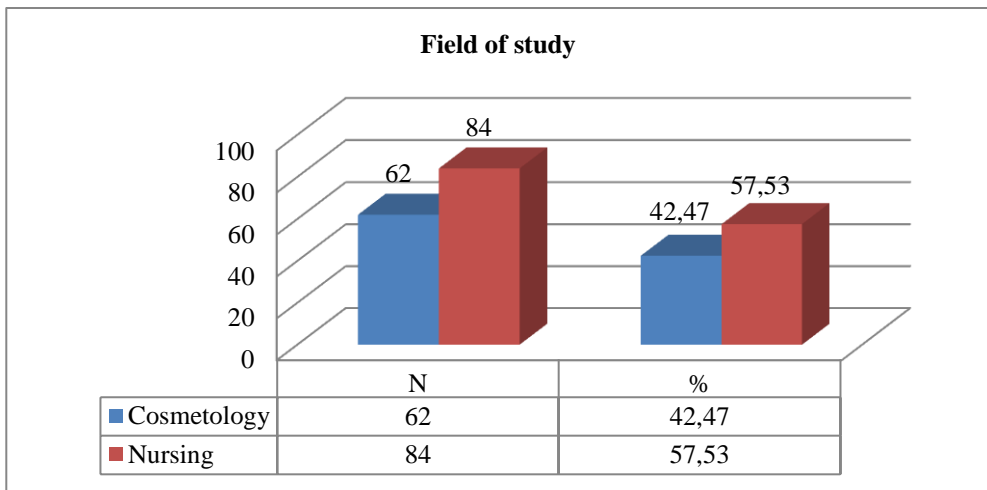
The study included a group of 146 students of Collegium Medicum of Jan Kochanowski University in Kielce. The group of subjects consisted of

director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-COVID-19---11-march-2020> (15.11.2022).

¹¹ A. A. Al-Qahtani, *Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV2): Emergence, history, basic and clinical aspects*, "Saudi Journal of Biological Sciences" 2020, Vol. 27, No. 10, pp. 2531-2538; Z. Pejsak, K. Tarasiuk, B. Tokarz-Deptuła, *Wybrane dane na temat zakażeń koronawirusami, ze szczególnym uwzględnieniem SARS-CoV-2, "Medycyna Weterynaryjna"*; Vol. 76, No. 5, pp. 258-262.

137 women and 9 men. The age range of the surveyed women was 19-45 years, the largest group were people aged 19-21 (n = 97). The surveyed students most frequently declared a good financial situation (n = 87). The decisive criterion for participation in the study was the field of study, which was either nursing or cosmetology. Nursing students prevailed in the study group (57.53%) compared to cosmetology students (42.47%). Detailed data is presented in Fig. 1.

Figure 1. The respondents by field of study.



Source: own research

The study used the diagnostic survey method, and the survey technique was used to collect the research material. The research tool was a self-authorship questionnaire focused on important aspects of the COVID-19 pandemic. The questionnaire consisted of 34 questions concerning the knowledge about the aetiology and characteristics, course and symptoms of the disease, diagnostic methods and treatment methods, methods of preventing transmission of the infection and the spread of the pandemic.

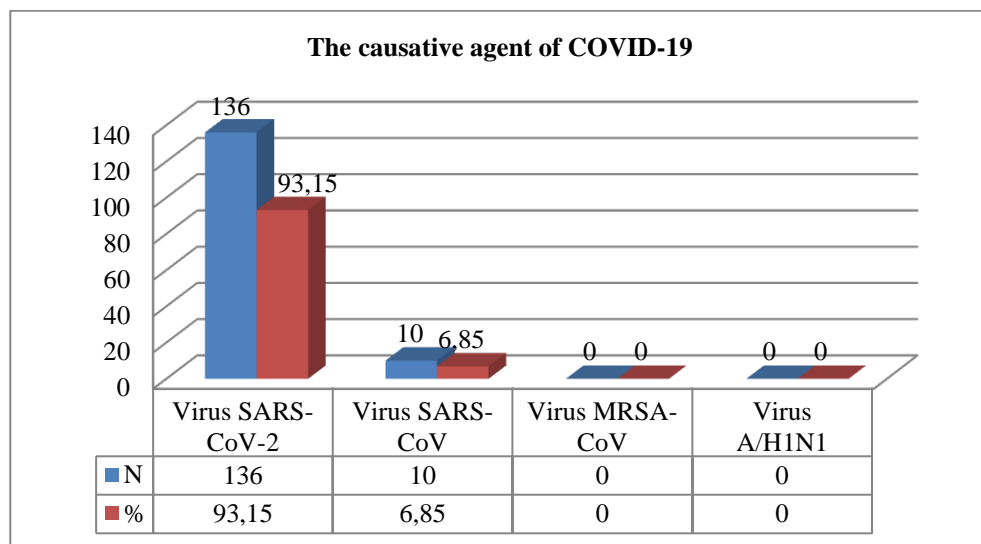
Results

The analysis of the knowledge of the studied students about the COVID-19 pandemic was carried out based on detailed questions regarding the aetiology and characteristics, course and symptoms of the disease, diagnostic methods, treatment methods, methods of preventing transmission of the disease and the spread of the pandemic.

Respondent's knowledge of the causative agent of COVID-19

Most of the respondents (93.15%) gave the correct answer to the question about the factor causing the COVID-19 disease, pointing to the SARS-CoV-2 virus. A small fraction of the group (6.85%) stated that it was the SARS-CoV virus (Fig. 2).

Figure 2. Knowledge of the causative agent of COVID-19 disease.

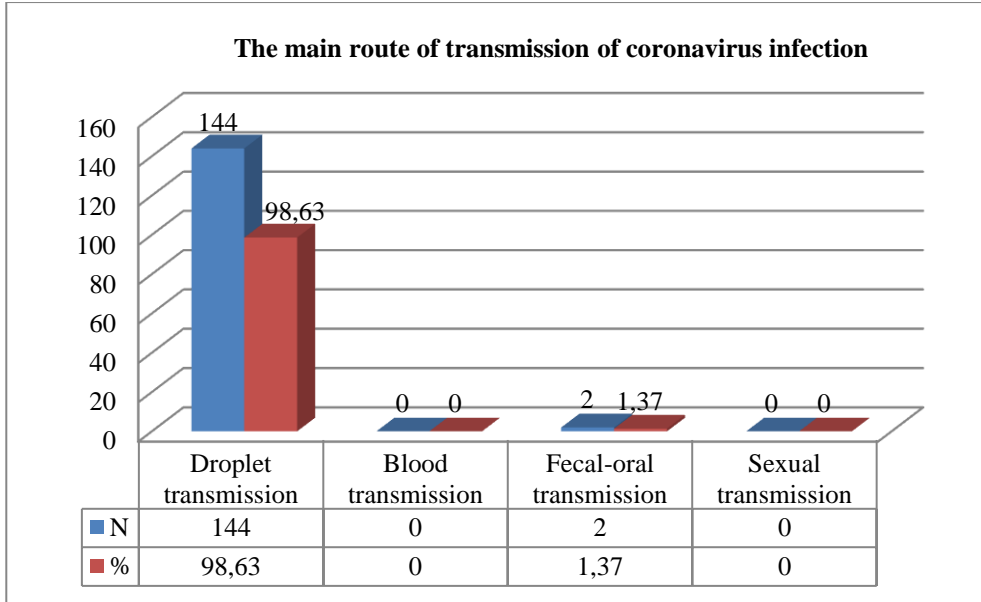


Source: own research

The respondents' knowledge of the main route of transmission of coronavirus infection

The analysis of the responses to the transmission route of the virus revealed that the majority indicated the droplet route (98.63%). Only a small percentage, 1.61% of the respondents identified the faecal-oral route (Fig. 3).

Figure 3. Knowledge about the main transmission route of coronavirus infection.

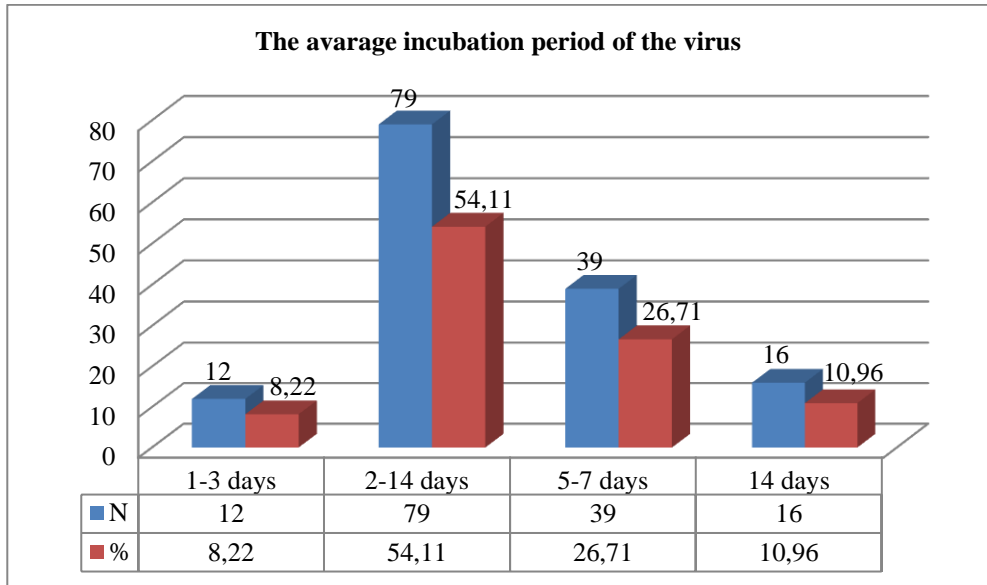


Source: own research.

Knowledge of respondents about the average incubation period of the virus

In the following question, respondents were asked to indicate the average incubation period of the virus. Only 26.71% of the students were aware that the correct incubation time for the virus was 5-7 days, and over half of them (54.11%) considered it to be 2-14 days. Others indicated the answer '14 days' or '1-3 days' (10.96% vs 8.22%). Detailed data is presented in Fig. 4.

Figure 4. Knowledge about the average incubation period of the virus.

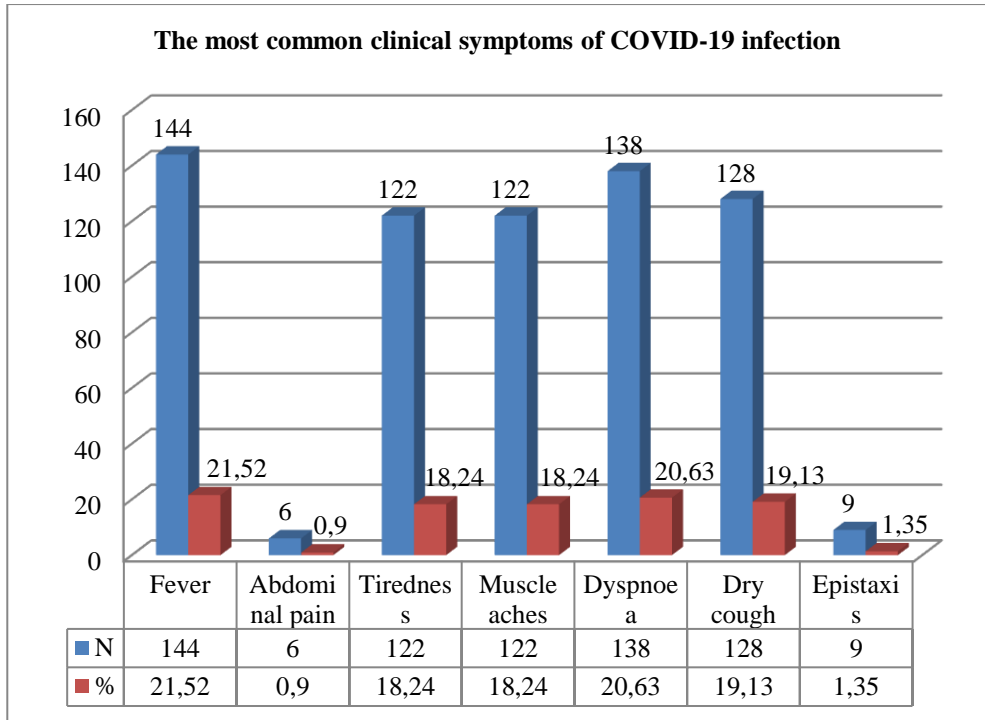


Source: own research.

Respondent's knowledge of the main clinical symptoms of COVID-19

In the next question, they were asked to indicate the basic symptoms of the disease, giving the possibility of multiple-choice answers. According to the respondents, the most frequent symptoms were fever ($n = 144$) and dyspnoea ($n = 138$). Abdominal pain was the least frequently indicated symptom by the respondents ($n = 6$). A detailed distribution of responses is presented in Fig. 5.

Figure 5. Knowledge about the most common clinical symptoms of COVID-19.

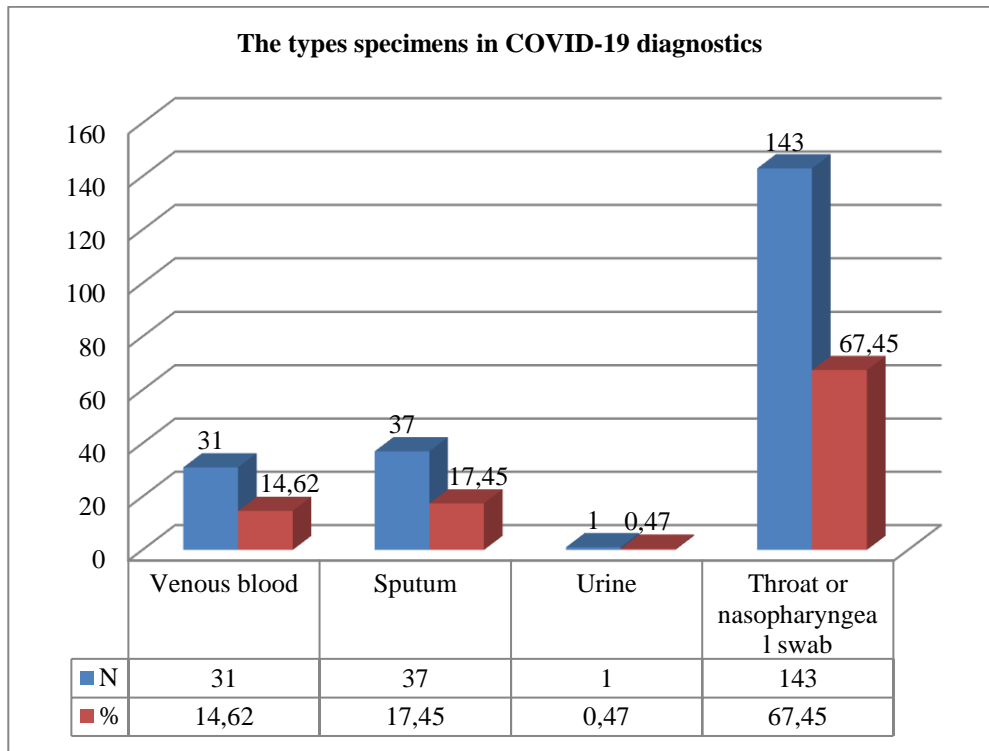


Source: own research.

Knowledge of the respondents about the type of specimens used in COVID-19 diagnostics

The respondents demonstrated knowledge about the specimens used in COVID-19 diagnostics, the most frequently chosen response was a throat or nasopharyngeal swab, which constituted 67.47% of all responses, and the least frequently a urine test (0.47%). Detailed data is presented in Fig. 6.

Figure 6. Knowledge about the types of specimens in COVID-19 diagnostic.

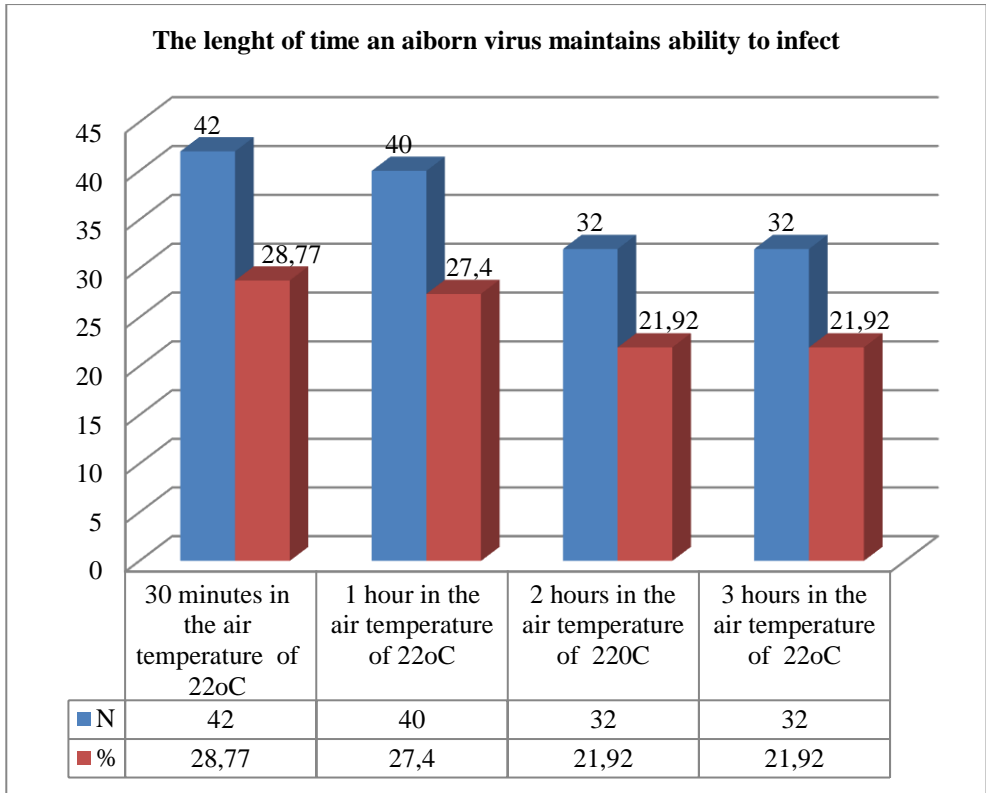


Source: own research.

The respondent's knowledge of the length of time an airborne virus maintains the ability to infect

Respondents were asked to indicate the length of time when a virus sustained in the air at 22°C maintains its ability to infect. Only 21.92% of students pointed at the correct answer of 3 hours. A significant group of respondents believed that this time was shorter and indicated 30 minutes (28.77%) or 1 hour. (27.40%). Other variants of the answer are presented in Fig. 7.

Figure 7. Information on the length of time an airborne virus maintains the ability to infect.



Source: own research.

Knowledge of the procedures used to reduce the risk of developing COVID-19

In the following phase, the knowledge of the principles of prophylaxis decreasing the risk of infection was analysed. Students most frequently indicated that avoiding close contact and avoiding being in the same room with those presenting symptoms of infection (98.63%) is the primary principle to minimize the risk of developing COVID-19. The smallest number of respondents (5.48%) recognized the legitimacy of limiting toilet use as a method of preventing infection (Tab. 1).

Table 1. Knowledge of the procedures used in reducing the risk of developing COVID-19.

What rules should be followed to minimize the risk of developing COVID-19?	N	%
Limiting use of electronic devices (mainly smartphones) in public transport	83	56,85
Restricting use of toilet to a minimum	8	5,48
Not touching water taps directly (closing a water tap off with a paper towel or a tissue) after washing your hands in a public toilet	119	81,51
Cleaning surfaces of smartphones using detergents or alcohol	125	85,62
Daily change of bed linen and towels and washing them in an antiviral agent	0	0,00
Avoiding close contact and avoiding being in the same room with those presenting symptoms of infection	144	98,63

Source: own research.

Knowledge of the respondents about the most effective methods protecting against the inspiration of the virus

The analysis of the responses showed that the students were aware of the types of equipment protecting against infection, against inhalation of airborne particles that may contain coronavirus, indicating a mask with a filter (80.82%). The smallest number of people indicated reusable masks made of double-layer cotton (2.05%), and none of the respondents indicated helmets (Tab. 2).

Table 2. Knowledge of precautionary measures against inhalation of airborne fine particles that may contain virus.

What is the best protection against breathing in fine airborne particles that may contain the virus?	N	%
Surgical masks	25	17,12
Masks with filters	118	80,82
Helmets	0	0,00
Reusable masks made of double-layer cotton	3	2,05
Total	146	100,00

Source: own research.

Analysis of the relationship between the knowledge of the COVID-19 pandemic selected sociodemographic variables and the field of study

The results of the conducted analyses did not show a statistically significant relationship between age ($p = 0.152$), economic status ($p = 0.0977$), field of study ($p = 0.717$), and knowledge about the causative agent of COVID-19.

Analysis of the relationship between the knowledge of the coronavirus transmission route selected sociodemographic variables and the field of study

There was no significant relationship between age ($p = 0.352$), field of study ($p = 0.997$) and students' knowledge of the transmission route. A significant relationship was demonstrated between the economic status and the knowledge of the main transmission route of coronavirus infection, which is confirmed by the statistical test $\text{Chi}^2 = 25.031$; $df = 9$; ($p = 0.0029$). Students most frequently indicated the droplet path as the main route of coronavirus transmission (98.63%). The respondents declaring a good financial situation more often chose this answer (59.59%) compared to other groups of respondents (Tab. 3).

Table 3. Knowledge about the main transmission route of coronavirus infection with the economic status of the respondents.

The main route of Coronavirus transmission	Economic status								Total	
	Very good		Good		Moderate		Poor			
Answers	N	%	N	%	N	%	N	%	N	%
Droplet	25	17,12	87	59,59	30	20,55	2	1,37	144	98,63
Via blood	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
Fecal-oral	0	0,00	0	0,00	1	0,68	1	0,68	2	1,37
Sexual contact	0	0,00	0	0,00	0	0,00	0	0,00	0	0,00
Total	25	17,12	87	59,59	31	21,23	3	2,05	146	100,0
Test Chi-X ²	25,031									
df	9									
p	0,0029									

Df – the number of degrees of freedom; p-level of statistical significance

Source: own research.

Analysis of the relationship between awareness of the time an airborne virus maintains the ability to infect with selected sociodemographic variables and the field of study

Interpretation of the test result ($\chi^2 = 22.606$; $df = 9$; $p = 0.007$) confirmed a statistically significant relationship between age and the level of knowledge about the time during which an airborne virus is capable of infecting. The biggest group consisted of the students aged 19-21 who believed that the infectious virus persisted in the air at 22°C for 1 hour (21.23%). Detailed data is attached in the Tab. 4.

Table 4. Knowledge of the length of time of an airborne virus maintains the ability to infect by age.

The length of time of an airborne virus maintains ability to infect at the temperature of 22C	Age of the respondents								Total	
	19-21		22-23		24-26		27-45			
Answers	N	%	N	%	N	%	N	%	N	%
30 minutes	24	16,44	16	10,96	2	1,37	0	0,00	42	28,77
1 hour	31	21,23	7	4,79	1	0,68	1	0,68	40	27,40
2 hours	23	15,75	1	0,68	6	4,11	2	1,37	32	21,92
3 hours	19	13,01	9	6,16	2	1,37	2	1,37	32	21,92
RAZEM	97	66,44	33	22,60	11	7,53	5	3,42	146	100,0
Test Chi - X ²	22,606									
Df	9									
P	0,007									

Df – the number of degrees of freedom; p-level of statistical significance

Source: own research.

The analysis of the test results ($\chi^2 = 32.607$; $df = 9$; $p = 0.00015$) confirms the relationship between the knowledge about the time during which an airborne virus is capable of infecting with the economic status. It has also been recognised that the largest group were people who declared their financial situation as good and believed that the infectious virus persists in the air at 22 °C for 2 hours (18.48%). The detailed results are presented in Tab. 5.

Table 5. Knowledge about the time during which an airborne virus is capable of infecting with the economic status.

The length of time of an airborne virus maintains ability to infect at the temperature of 22C	Economic status								Total	
	Very good		Good		Moderate		Poor			
Answers	N	%	N	%	N	%	N	%	N	%
30 minutes	12	8,22	22	15,07	8	5,48	0	0,00	42	28,77
1 hour	9	6,16	25	17,12	5	3,42	1	0,68	40	27,40
2 hours	2	1,37	27	18,49	2	1,37	1	0,68	32	21,92
3 hours	2	1,37	13	8,90	16	10,96	1	0,68	32	21,92
Total	25	17,12	87	59,59	31	21,23	3	2,05	146	100,00
Test Chi - X ²	32,607									
df	9									
p	0,00015									

Df – the number of degrees of freedom; p-level of statistical significance

Source: own research.

The analysis of the relationship between the knowledge about the time during which an airborne virus maintains its ability to infect and the field of study shows a statistically significant relationship, the test result (ChiX2 = 12.006; df = 3; p = 0.007). The correct answer (3 hours) was given more often by nursing students (13.70%) than cosmetology students (8.22%). Cosmetology students most often decided to answer 2 hours (14.38%), and nursing students for 30 minutes (21.23%). Detailed results are presented in Tab. 6.

Table 6. Knowledge of the period time during which an airborne virus maintains its ability to infect in relation to the field of study.

The length of time an airborne virus maintains the ability to infect at the temperature of 22C	Field of study		Total
	Cosmetology	Nursing	

Answers	N	%	N	%	N	%
30 minutes	11	7,53	31	21,23	42	28,77
1 hour	18	12,33	22	15,07	40	27,40
2 hours	21	14,38	11	7,53	32	21,92
3 hours	12	8,22	20	13,70	32	21,92
Total	62	42,47	84	57,53	146	100,00
Test Chi - X 2	12,006					
df	3					
p	0,007					

Df – the number of degrees of freedom; p-level of statistical significance

Source: own research.

Discussion / Summary

COVID-19 is a serious epidemiological threat since the virus responsible for it can spread very rapidly. Many patients with COVID-19 suffer from severe course of the disease, which is associated with numerous complications and often death. An appropriate level of public knowledge about the disease itself and transmission of the virus may translate into adequate preventive behaviour, which will contribute towards reducing the number of cases. The aim of the study, which was to assess the level of knowledge of students of health sciences about the COVID-19 epidemic, correlates with the above-mentioned issues.

146 students of nursing (57.53%) and cosmetology (42.47%) participated in the research. Looking at the age of participants taking part in the study, the great majority were people aged 19-21 (66.44%), and only 3.42% of people were over 27 years of age. When analysing the economic status of the participants, most of them declared economic status as good (59.59%), and the least often they referred to their economic status as poor (2.05%) As demonstrated by their own research, the surveyed students have a high level of knowledge about the clinical aspects of the COVID-19 pandemic. The respondents correctly answered the questions concerning: the causative agent of COVID-19 (93.15%), the transmission route (98.63%), and methods of protection against inhalation of the virus (80.82%).

Further analysis of the responses relating to the questionnaire reviewing the knowledge about the basic symptoms revealed that the most frequently chosen indicated symptom was a fever. The students were also able to correctly indicate other common symptoms of COVID-19, such as dyspnoea, dry cough, muscle pain and fatigue. Similar results were obtained by Erick T. Baloran in

his research on the level of knowledge about COVID-19, which examined 530 students and pupils in the Philippines. According to his research, 97.55% of the respondents claimed that the main symptom of the disease was a fever¹².

When collating obtained data with the study by Marwa S. Hamza et al. who assessed the level of knowledge of pharmacy students in Egypt, it was established that the majority showed a good level of knowledge about COVID-19 (72.5%). In his study respondents indicated the most correct answers in the question relating to the symptoms of COVID-19¹³.

The results of the own research confirmed that the students have proficient knowledge of the basic transmission route of the coronavirus, almost all of them considered it to be a droplet route (98.63%). A slightly lower result was demonstrated by Baloran's study, which shows that 73.58% of respondents knew how the coronavirus spreads and how it transmits¹⁴. Significantly lower results were found in studies by Akshaya Srikanth Bhagavathul et al., conducted on healthcare workers, which revealed that only 61% of respondents were able to indicate the correct transmission route – 61%¹⁵.

The analysis of the respondents' knowledge about the average incubation period of the virus showed that just over a quarter of the respondents (26.71%) indicated the correct duration of 5-7 days, and more than a half of them (54.11%) considered it to be 2-14 days. Others indicated incorrect answers, which is a disturbing phenomenon taking into consideration the specificity of the field of study.

The respondents also showed a good level of knowledge regarding the diagnosis of the disease as 67.47% of them indicated a throat or nasopharyngeal swab as the basic diagnostic specimen confirming diagnosis of COVID-19. Conducted research demonstrated insufficient levels of respondents' knowledge regarding the time in which an airborne virus maintains the ability to infect, only 21.92% of students indicated it correctly as a period of 3 hours. Respondents indicated social distancing and avoiding exposure to people demonstrating symptoms of infection, especially being in the same room as the most effective method to minimize the risk of coronavirus transmission (98.63%), as well as washing and disinfecting hands and surfaces. Students are aware of the means of individual protection against inhalation of airborne

¹² E. T. Baloran. *Knowledge, Attitudes, Anxiety, and Coping Strategies of Students during COVID-19 Pandemic*, "Journal of Loss and Trauma" 2020, Vol. 25, No. 8, pp. 635-642.

¹³ M. S. Hamza, O. A. Badary, M. M. Elmazar, *Cross-Sectional Study on Awareness and Knowledge of COVID-19 Among Senior Pharmacy Students*, "Journal of Community Health" 2021, Vol. 46, No. 1, pp. 139-146.

¹⁴ E. T. Baloran, *op. cit.*

¹⁵ A. S. Bhagavathula, W. A. Aldhaleei, J. Rahmani et al., *Knowledge and Perceptions of COVID-19 Among Health Care Workers: Cross-Sectional Study*, "JMIR Public Health and Surveillance", 2020, Vol. 6, No. 2, e19160.

particles that may contain the coronavirus. As concluded in the study they considered a mask with a filter to be the most effective way of protection (80.82%), while reusable masks and helmets were less useful tools in the fight against the pandemic.

In the context of Baloran's results, it was determined that social distancing and covering the mouth and nose with facial masks was considered as a primary preventive measure limiting the spread of the pandemic by 60.00% of Filipino students¹⁶.

In the following stage of the research, while analysing the relationship between sociodemographic variables and students' knowledge it was established that there is no statistical correlation between age ($p = 0.152$), economic status ($p = 0.0977$) and knowledge of the COVID-19 causative factor.

A statistically significant relation was confirmed between the economic status ($p = 0.0029$) and the knowledge of the transmission route. The knowledge about the time during which an airborne virus maintains its ability to infect was statistically significant and correlated with the age ($p = 0.007$) and economic status ($p = 0.00015$) of the respondents.

In the final stage of the research, the relationship between the field of study and knowledge about COVID-19 was analysed. There was a statistically significant relationship between the field of study and the knowledge about the time during which an airborne virus maintains its ability to infect ($p = 0.007$). In the database of available literature, there is little research on the level of knowledge about COVID-19 among students and the public, which may be because it is a new phenomenon and has not been fully studied by the scientific community as yet. The results of the research can contribute to increasing the awareness of students and the whole society and help reduce the spread of the disease.

Conclusions

1. Students have a good level of knowledge about the causes, and symptoms of the disease, diagnostic methods, and the principles of preventing the COVID-19 pandemic.
2. The significant relation between sociodemographic factors, the field of study and the level of knowledge about the COVID-19 pandemic has not been confirmed.
3. The field of study, age and financial status were significantly related to the level of knowledge of the virus's ability to infect.

¹⁶ E. T. Baloran, *op. cit.*

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THE ANTI-VACCINE SENTIMENTS IN GEORGIA

***Abstract:** The paper attempts to analyze major arguments and/or in fact, - counterarguments that have been being employed by the anti-vaccinationists in Georgia. This is a truly undeniable fact that as in the case of other countries, quite a solid and sometimes ever-increasing number of anti-vaxxers caused serious problems in the former Soviet republic as well – when struggling against the COVID-19 pandemic, which has still not ended globally. Taking into account various findings of several types of research conducted to explain the vaccine hesitancy in general and particularly related to the coronavirus disease in the world, very topical even nowadays – scepticism seems to be rooted substantially in the lack of or inadequate knowledge and misbeliefs. To better understand the anti-vaxxers’ motivations, and then try to approach them wisely – most probably to end up with new solutions that would be beneficial in terms of the prevention and mitigation of the consequences of the virus, we discuss the Georgian vaccine deniers’ concerns about the quality of the vaccine and specifically address the belief that they can overcome the pandemic without vaccination. While focusing on the significance of the online vaccine disinformation, there is a need to distinguish several groups: those who are opposed to immunization in general, Russia-oriented groups seeking to discredit the American and European vaccines, and opportunistic websites and groups that use vaccine scare-mongering as clickbait. Noteworthy to particularly consider how some priests from the influential Georgian Orthodox Church position themselves as sympathizers of the anti-vaccine sentiments.*

***Keywords:** Anti-vaccinationists; anti-vaxxers; Georgia; COVID-19 pandemic; online vaccine disinformation*

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Introduction

There seems to be a quite evident and logical reality that similar to the occurrences in other parts of the world, a persistent and in some cases rising amount of anti-vaxxers created formidable challenges in the former Soviet republic of Georgia as well in terms of dealing with the global pandemic, undoubtedly one of the most impactful in all spheres of life events of the 21st Century – COVID-19, which even nowadays has neither disappeared anywhere on its own nor was successfully managed yet to be ended worldwide.

Taking into account the above-mentioned, accordingly, the given paper intends to investigate the main standpoints and/or claims that have been being used and communicated by the anti-vaccinationists in Georgia.

Important statistics

In Georgia, from January 3, 2020, to November 18, 2022, there have been 1,785,138 confirmed cases of COVID-19 with 16,912 deaths, reported to the World Health Organization (WHO)². As of October 29, 2022, a total of 2,724,765 vaccine doses have been administered³. Assuming every person needs at least 2 doses, the number seems enough to have vaccinated around 37% of the country's population.

Table. 1 Situation by Region, Country, Territory & Area.

Name	Cases – cumulative total	Cases – newly reported in last 7 days	Deaths – cumulative total	Deaths – newly reported in last 7 days	Total vaccine doses administered per 100 population	Persons fully vaccinated with the last dose of primary series per 100 population	Persons Boosted per 100 population
Global	634,522,052	1,885,905	6,599,100	4,832	166.06	64	29.62
Georgia	1,785,1		16,912		68.3	29.6	6.236

² WHO COVID-19 Dashboard, <<https://covid19.who.int/region/euro/country/ge>> (19.11.2022).

³ *Ibidem.*

Source: adapted by the author from WHO COVID-19 Dashboard.

Anti-Vaccination: The Definition and Usage

According to Merriam-Webster, ‘anti-vaccination’ has been defined as opposition to vaccination⁴. The first known use of ‘anti-vaccination’ took place in 1849, and the following are provided below as examples of the usage of the term in the meaning described above: “But state health officials and vaccine proponents have argued that unvaccinated children pose a health risk to others. They point to the recent measles outbreak in Johnson County and elsewhere, a disease that has reappeared since the anti-vaccination movement has grown” (Sarah Ritter)⁵. Or – “Anti-vaccination parents have slammed a new law that bans unimmunised children from kindergartens” (Thomas Duff)⁶.

Based on the same source – Merriam-Webster, “a person who opposes the use of some or all vaccines, regulations mandating vaccination, or usually both” is defined as an ‘anti-vaxxer’⁷. The first known use of ‘anti-vaxxer’ in the meaning defined above dates from 2001⁸.

Anti-Vaccination Movements: A Historical Outline

Although vaccination has been praised by medical professionals as one of the top ten achievements of public health in the 20th Century⁹, scepticism and antagonism to it, i.e. vaccination, existed as long as the latter itself.

The precise history of the anti-vaccination movements begins with the period when the vaccine deniers started and had been rejecting the smallpox vaccine in England and the United States from the middle to the second half of the 19th Century. This was followed by the formation and functioning of the subsequent anti-vaccination leagues in England and the United States, after getting particularly encouraged by the British anti-vaccinationists.

⁴ Merriam-Webster, *anti-vaccination*, <<https://www.merriam-webster.com/dictionary/anti-vaccination>> (17.11.2022).

⁵ *Ibidem*.

⁶ *Ibidem*.

⁷ Merriam-Webster, *anti-vaxxer*, <<https://www.merriam-webster.com/dictionary/anti-vaxxer>> (15.11.2022).

⁸ *Ibidem*.

⁹ Centers for Disease Control and Prevention (CDC), *Ten Great Public Health Achievements. United States, 1900-1999*, <<https://www.cdc.gov/mmwr/preview/mmwrhtml/00056796.htm>> (16.11.2022).

Almost a century after the first-ever confrontation about the issue, new vaccination controversies over the safety and efficacy of diphtheria, tetanus, and pertussis (DTP) immunization emerged in Europe, Asia, Australia, and North America, among which the United Kingdom (UK) and the United States (U.S.) became the leading countries.

Nearly 25 years after the DTP controversy, more specifically, by the end of the 20th and at the beginning of the 21st Century, England found itself at the epicentre of major anti-vaccination activity again. This time, the cause was the measles, mumps, and rubella (MMR) vaccine and the story of the British doctor Andrew Wakefield, who in 1998, recommended further investigation of a possible relationship between bowel disease, autism, and the MMR vaccine. Later, in 2011, the doctor was reported to have committed scientific fraud by falsifying data, and also that Wakefield hoped to financially profit from his investigations in several ways.

Thimerosal, a mercury-containing compound used as a preservative in vaccines, has also been the centre of a vaccination and autism controversy. Even though there is no clear scientific evidence that small amounts of thimerosal in vaccines cause any harm, leading U.S. public health and medical organizations, as well as vaccine manufacturers together made a decision that thimerosal should be reduced or eliminated from vaccines as a precautionary measure already in 1999. Despite scientific proof, concerns over thimerosal have led to a public ‘Green Our Vaccines’ campaign, a movement to remove ‘toxins’ from vaccines, for fear that these substances lead to autism.

As soon as the COVID-19 vaccine mandate went into effect during the outbreak of persisting the coronavirus disease, similarly to all the other, above-mentioned and earlier cases of opposition to vaccination, when anti-vaxxers’ vocal discontent was a simultaneous and direct reaction to the obligatory vaccination laws, people began to rebel recently as well.

Even though quite a long time has passed since it all started, various sentiments, attitudes and deeply-built beliefs of philosophical, political, spiritual or other nature, underling the vaccination opposition have remained relatively consistent indeed – since Edward Jenner introduced vaccination¹⁰.

The Lack of Knowledge, Misbeliefs, and Social Media

There is no doubt that in the case of any vaccines, speaking also of those, which by the official medicine are believed, established, and promoted to protect people against COVID-19, the vaccine deniers are facing the problems

¹⁰ *History of Anti-Vaccination Movements*, <<https://historyofvaccines.org/vaccines-101/misconceptions-about-vaccines/history-anti-vaccination-movements#Source-2>> (14.11.2022).

of inadequate or insufficient awareness and misbeliefs accordingly, about them, i.e. the vaccines. Even looking at the history of anti-vaccination movements and anti-vaxxers in general, one can clearly and objectively see the consequences of not only a lot of ill health and medical practices being employed by the early medical professionals and doctors like for example, using non-disinfected instruments during conducting different medical procedures that later on have been finally solved for good or commonly – various professional and/or ethical mistakes and challenges stemming from still developing condition of the health and medical sciences overall.

At the same time, it always has to be taken into account the influence and outcomes of personal experiences with the healthcare institutions, policies, and a wide variety of guidelines functioning in the past, although not always formerly as they – different regulations, practices, and of course – even well-formed institutions may change with time, and that's what's happening pretty frequently too. The personal experiences, obviously not always very positive, might have a complex nature depending on several factors, including the social, cultural, economic and political contexts of a given country or locality, along with the common development level of health and medical sciences and practices. Especially the racial in the United States, and/or other minority, etc. issues in separate countries and places could explain many problems for distinct communities residing in specific environments.

Besides all the above-mentioned, significant is the factor of a mandatory status of vaccines that evidently can be and normally is justifiable when applicable, considering particular circumstances and scales of danger assessed in regards to any given infections and diseases. Bearing in mind the variety of psychological mechanisms responding with resistance from the part of the public to forceful decisions made and implemented top-down by the governments and other decision-making authorities in charge of separate states or internationally, there can be described the whole anatomy of inadequate or insufficient knowledge, and/or of the controversial beliefs determined mainly by the former.

Even though we all do quite logically believe in the special role of ever-increasing social media platforms with their rising indeed influence on our daily lives almost in every sphere and aspect of our contemporary livelihood, according to different research, depending on the varying demographic specificities like categorization by age, gender, nationality, education level, socioeconomic status, preferred social media platform, etc. of those surveyed, and also considering the time when the studies have been undertaken – prior or after COVID-19, still it does not seem that the majority of respondents – 76.4% have been influenced by the posts on social media about vaccines, while most of them – 92.7% have seen the posts. The majority of the interviewees – 82.2% identified themselves as middle-class socioeconomic status (SES), mainly aged

25–34 – 29.6%, females accounted for 80.1%, and predominantly North American with 70.3% from the USA and 12.9% – from other North American Countries. 34.5% of the respondents completed a Bachelor's (4 years) degree in terms of education level. Facebook appeared to be the most commonly used social media type in the population with 69.8%, followed by Twitter 15.6%, Instagram 12.9%, and then other forms of social media 1.7%. Other forms of social media were identified as Snapchat, Tumblr, Reddit, Pinterest, or using all platforms equally. Most people – 47.9% claimed to only spend 0-2 hours on social media daily. People claimed to trust doctors 89.4% the most with their immunization-related information/decisions. The remaining people trust the internet 4.1%, family 2.0%, peers and friends 2.3%, social media 0.2% and the government 2.0% with their information and decisions. Of the 2517 respondents overall – 2417 were included in the study analysis based on the inclusion/exclusion criteria. The research that was conducted by a cross-sectional multiple-choice study created via Survey Monkey, was available for completion from August 15, 2018, till November 1, 2018¹¹.

On the other hand, however, the data from a huge variety of surveys conducted during and in the time post-COVID-19 pandemic, shows in general more increased level of influence of information and correspondingly, misinformation on the disease posted on different social media platforms, and that such effects have been found globally more negative towards vaccination acceptancy rather than positive¹².

Noteworthy to emphasize at the same time that social media has created an easily accessible way to reach others, first of all, credible sources such as various national, regional or international medical institutions, associations, and organizations for instance, Centers for Disease Control and Prevention (CDCs) and WHO, who made their trustworthy and solid presence known at least at the moment of the height of the pandemic through many effective social media campaigns.

The Anti-Vaxxers' Major Arguments

We can group, subgroup or even cross-group various claims usually raised and often even loudly vocalized by the anti-vaxxers worldwide towards the following addresses:

¹¹ S. L. Benoit, R. F. Mauldin, *The "anti-vax" movement: a quantitative report on vaccine beliefs and knowledge across social media*, „BMC Public Health”, vol. 21, 2106(2021).

¹² F. Cassini, et. al., *Social media and attitudes towards a COVID-19 vaccination: A systematic review of the literature*, "eClinicaMedicine", Vol. 48, Jun 2022.

- a. Medical doctors (vaccine deniers' pretensions are about their qualifications or grounded on the credibility of the vaccines – how much the latter have been tested sufficiently, etc.);
- b. Governments and/or other political institutions, internal or external (anti-vaxxers' distrust of formal decision-making bodies operating locally, nationally, on regional or international levels).

And/or based on:

- a. Diverse religious fundamentalist grounds (number of Christian-Protestant, Catholic, Orthodox, other Christian, Jewish, Muslim, Amish, Hinduist and Sikhist groups' objections to vaccination frequently relate to – the faith in divine protection and healing);
- b. The concept of individual liberty and choice (a lot of vaccine deniers stand for autonomy over their and their children's bodies).

Those questioning the need, trustworthiness, rationality, desirability or eventual acceptability of the usage of the COVID-19 vaccines, among the variety of the arguments or counterarguments explained above, are first of all revealing quite huge, in fact, worldwide scepticism about political powers leading states, elites, different decision-making organs, formal and informal policy actors, professionals and experts, and even the most authoritative institutions and international organizations like WHO.

How Legitimate Can the Lack of Trust Be?

The lack of trust towards governance systems, domestic or international, or the deficit of any trust, may not be generally surprising due to such an unknown virus, spread so massively and dangerously across the globe after almost a century from the similar experience of another global pandemic connected with the 1918 Spanish flu.

When we try to explain the scepticism among the public, not speaking of the dramatic social, economic, and other long-term consequences caused by the pandemic and hard to address, the crucial management problems of the disease treatment and control should be noted here as well, especially for the very start of the outbreak of COVID-19.

The Spanish flu has been assessed as the second deadliest pandemic in human history after the Black Death bubonic plague, which was raging in Western Eurasia and North Africa from 1346 to 1353.

The above-discussed, highlighted, and thoroughly analyzed lack of confidence in the political institutions at large, can be undoubtedly considered as one of the key indicators showing the fundamental problems with the social capital, so decisive for the successful functioning of cohesive societies and states. The mistrust in the given context, can play an agent for raising anarchic sentiments either.

The Georgian Anti-Vaxxers' Main Claims Revealed

While making special efforts to particularly find out, deconstruct as much as possible, and address them with the corresponding effective ways towards identifying preventive and mitigating measures in regards to managing the outcomes of the current global pandemic, probably the most severe one in the 21st Century, we, first of all, pay our attention to learning of the motivations of anti-vaxxers living in Georgia.

To investigate what serves as major drivers for the Georgian vaccine sceptics and their arguments, it has been immensely useful to analyze the findings of the important survey conducted for the National Democratic Institute (NDI) by the Caucasus Research Resource Center (CRRC-Georgia) from February 17 to 24, 2021¹³.

The NDI poll revealing that economic and health concerns remained top priorities, and there have been persisting challenges ahead to building confidence in the COVID-19 vaccination program¹⁴, was carried out through telephone interviews with a nationwide representative sample of Georgia's adult population, excluding occupied territories, that included 2,024 completed interviews. Respondents were selected using the random-digit-dial method.

The study results have found that a year into the coronavirus pandemic, Georgians appeared to keep remaining concerned first of all about the state of the economy and healthcare. Even though the public continued to credit the government with managing the pandemic effectively (68%, up from 60% in December 2020), they proceeded to be sceptical of the planned vaccinations. Amidst persisting political crisis, Georgians have been looking to their elected leaders to prioritize policies that address their pressing concerns¹⁵.

Similarly to the previous months before the survey, the economic condition of the country, as well as the impact of COVID-19 remained central among the citizens' concerns. A quarter of the population reported either losing their job (13%) or experiencing salary/income reduction (12%) since the very start of the pandemic, while a plurality said they had remained unemployed. Georgians in the retail, construction, transport, and restaurant sectors were most affected by the pandemic. The public has been divided when evaluating the government's economic response to the pandemic; 50% assessed the government's economic

¹³ *NDI Poll: Economic and Health Concerns Remain Top Priorities; Challenges Ahead to Build Confidence in COVID-19 Vaccination Program*, <<https://www.ndi.org/publications/ndi-poll-economic-and-health-concerns-remain-top-priorities-challenges-ahead-build>> (19.11.2022).

¹⁴ *Ibidem*.

¹⁵ *Ibidem*.

plan as effective and half of those who had received financial assistance reported it as being sufficient¹⁶.

As Georgia was beginning to roll out its vaccination plan at the time when the poll was being conducted¹⁷, the population remained quite sceptical. Less than half (42%) of Georgians appeared to believe that the government's vaccination plan has been effective. Only 35% would choose to receive a vaccine if given the option right at the moment; 53% said they would not. The vaccine hesitancy was highest among women and individuals under 55. Among those who expressed themselves as hesitant, in the first place concerns about the quality of the vaccine (48%) and afterwards, the belief that they could overcome the pandemic without vaccination (20%) have been named as the main reasons for the scepticism regarding the COVID-19 vaccination. Georgians, who stated that they have been getting their news on COVID-19 primarily from television (60%) and the internet (35%), looked to medical professionals (74%) and the Georgian National Center for Disease Control (NCDC) (68%) for trustworthy information¹⁸.

Looking ahead, Georgians surveyed expressed their strong wish towards the elected representatives to make the public concerns and needs the first and major priority. For the upcoming year – 2022, the interviewed wanted to see the Georgian parliament focused on the economy, healthcare, and education. They revealed the anticipation from the political parties to address issues of inclusion, starting within their ranks: a majority of Georgians also would like to see more women in parliament; around half of them opted for equal representation. These priorities kept being consistent across political affiliations. However, Georgians continued doubting the parliament's willingness and readiness to address and solve their problems. A majority did not believe parliament would take into account the opinions of people like them (54%) and believed that MPs would only serve their interests (55%). The lack of faith in parliament likely contributed to low interest in engagement with the institution. When asked about the preferred form of communication, a plurality (39%) said they didn't want to be engaged with the parliament¹⁹.

¹⁶ *Ibidem*.

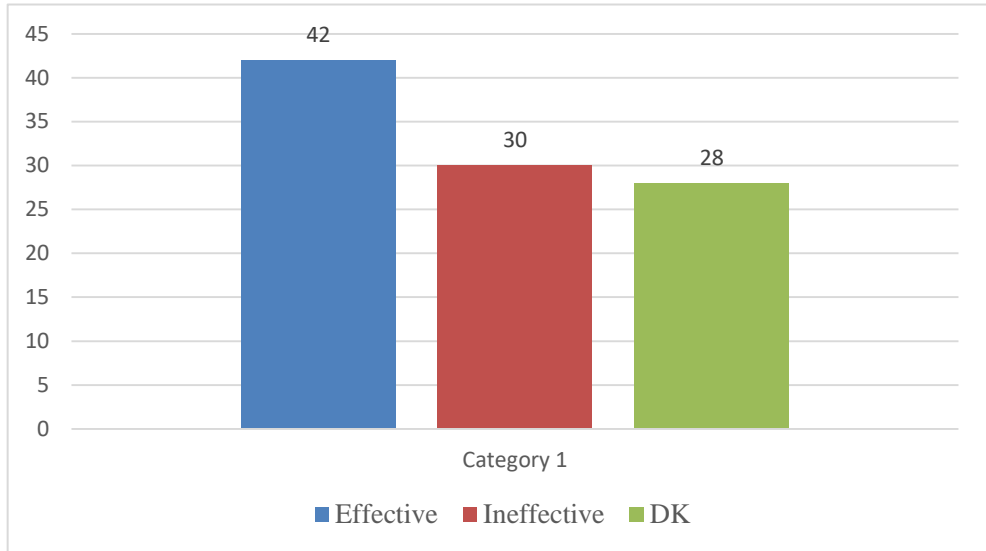
¹⁷ The COVID-19 vaccination started in the country in March 2021. See: *COVID-19 Vaccine is Already in Georgia*, <<https://www.moh.gov.ge/news/5767/>> (20.11.2022).

¹⁸ *NDI Poll...*

¹⁹ *Ibidem*.

Figure 1. Government vaccination plan.

Q. In your opinion, how effective or ineffective is the government’s plan for COVID-19 vaccination? (20)



Source: adapted by the author from the National Democratic Institute (NDI)²⁰.

Table 2. Government’s vaccination plan.

Q. In your opinion, how effective or ineffective is the government’s plan for COVID-19 vaccination? (20 X Settlement, Age, Gender, Party closest to you)

	Effective	Ineffective	DK	RA
National	42	30	28	
Capital	39	30	31	
Urban	45	29	25	
Rural	42	30	28	
18-34	43	32	25	
35-54	40	30	30	
55+	42	28	30	
Male	40	31	29	
Female	43	29	28	
Georgian Dream (GD)	67	10	23	

²⁰ The author adapted all the following tables’ data from the National Democratic Institute.

supporters (23%)				
Opposition supporters (15%)	24	55	21	
Did not name a party (62%)	36	31	32	

Table 3. Will you get vaccinated if you have a chance?

Don't know	Will not get vaccinated	Will get vaccinated
12%	53%	35%

Table 4. COVID-19 vaccine.

Q. Would you or would you not get vaccinated? (q21 X Settlement, Age, Gender, Party closest to you)

	Yes	No	DK	RA
National	35	53	12	
Capital	40	48	12	
Urban	34	54	11	1
Rural	33	55	12	
18-34	33	56	11	
35-54	32	56	12	
55+	40	47	13	
Male	39	52	9	
Female	32	54	14	
GD supporters (23%)	49	39	12	
Opposition supporters (15%)	33	60	7	
Did not name a party (62%)	31	57	13	

Table 5. Why against vaccination?

Q. If not, why would not you get vaccinated? (q22) – of the 65% who did not say they would get vaccinated

I don't trust the quality of COVID-19 vaccine	48
I believe we can handle the COVID-19 pandemic without vaccination	20
I won't be able to get vaccinated because of health-related issues	10

I will not do it because vaccination has alternative goals	6
Because I am generally against vaccination	5
Other	4
DK	6
RA	1

Table 6. Why against vaccination?

Q. If not, why would not you get vaccinated? (q22 X Settlement) – of the 65% who did not say they would get vaccinated

	Capital	Urban	Rural
I don't trust the quality of COVID-19 vaccine	49	47	48
I believe we can handle the COVID-19 pandemic without vaccination	25	21	16
I won't be able to get vaccinated because of health-related issues	9	10	11
I will not do it because vaccination has alternative goals	5	8	5
Because I am generally against vaccination	3	4	7
Other	5	4	5
DK	3	6	7
RA	.	1	.

Table 7. Why against vaccination?

Q. If not, why would not you get vaccinated? (q22 X Gender) – of the 65% who did not say they would get vaccinated

	Male	Female
I don't trust the quality of COVID-19 vaccine	45	51
I believe we can handle the COVID-19 pandemic without vaccination	25	16
I won't be able to get vaccinated because of health-related issues	6	13
I will not do it because vaccination has alternative goals	6	6
Because I am generally against vaccination	7	4

Other	6	3
DK	5	6
RA	.	2

Table 8. Why against vaccination?

Q. If not, why would not you get vaccinated? (q22 X Party closest to you) – of the 65% who did not say they would get vaccinated

	GD supporters (23%)	Opposition supporters (15%)	Did not name a party (62%)
I don't trust the quality of COVID-19 vaccine	33	61	50
I believe we can handle the COVID-19 pandemic without vaccination	26	13	20
I won't be able to get vaccinated because of health-related issues	12	10	9
I will not do it because vaccination has alternative goals	6	8	5
Because I am generally against vaccination	7	2	5
Other	7	3	4
DK	8	2	6
RA	.		1

Table 9. Information sources.

Q. What are your main sources of information for receiving news about COVID-19? Please tell me, which is your first main source of information. And what is your second main source of information about COVID-19? (q23, q24)

	First source	Second source
TV	60	23
Internet/Facebook	35	28
Neighbours, friends	1	12
Colleagues	1	3
Family members	1	6

Other	1	2
Do not receive information about COVID-19	1	
Receive information about COVID-19 only from one source		25
DK		1

Table 10. Information sources.

Q. What are your main sources of information for receiving news about COVID-19? Please tell me, which is your first main source of information. And what is your second main source of information about COVID-19? (q23 X Settlement, Age, Gender and Party closest to you)

	TV	Internet/ Face- book	Neigh- bours friends	Col- leagues	Other
National	60	35			
Capital	45	48			
Urban	59	35			
Rural	70	26			
18-34	40	55			
35-54	57	37			
55+	81	14			
Male	59	34			
Female	61	35			
GD supporters (23%)	65	31			
Opposition supporters (15%)	62	34			
Did not name a party (62%)	57	36			

Table 11. Trust towards information sources.

Q. How much do you trust or distrust information about the COVID-19 vaccine received from the following sources ...? (q25) – of the 99% who receive information about COVID-19

	Trust	Distrust	Do not receive information from this source	DK	RA
Medical professionals (outside NCDC)	74	19	4	4	
NCDC	68	23	4	5	
Government	62	30	3	4	
Journalists/media	56	34	4	6	
Your religious leader/church	47	15	33	5	1
Your local government (Sakrebulo ²¹ , Mayor's office)	46	23	27	5	
NGOs	28	27	37	7	

Table 12. Trust towards information sources – medical professionals.

Q. How much do you trust or distrust information about the COVID-19 vaccine received from the following sources ...? Medical professionals (outside NCDC) (q25_3 X Settlement, Age, Gender, Party closest to you) – of the 99% who receive information about COVID-19

	Trust	Distrust	Do not receive information from this source	DK	RA
National	74	19	4	4	
Capital	73	20	2	4	
Urban	77	19	1	3	
Rural	72	17	6	5	
18-34	76	17	5	2	
35-54	72	20	4	5	
55+	73	19	3	5	

²¹ Tbilisi City Municipal Assembly.

Male	73	19	4	4	
Female	74	19	3	4	
GD supporters (23%)	89	6	2	3	
Opposition supporters (15%)	67	26	5	2	
Did not name a party (62%)	69	22	4	5	

Table 13. Trust towards information sources – NCDC.

Q. How much do you trust or distrust information about the COVID-19 vaccine received from the following sources ...? NCDC (q25_2 X Settlement, Age, Gender, Party closest to you) – of the 99% who receive information about COVID-19

	Trust	Distrust	Do not receive information from this source	DK	RA
National	68	23	4	5	
Capital	69	23	2	5	
Urban	71	24	2	3	
Rural	66	21	6	6	
18-34	69	22	5	4	
35-54	68	23	4	5	
55+	68	22	3	7	
Male	67	24	5	5	
Female	70	22	3	5	
GD supporters (23%)	88	6	2	3	
Opposition supporters (15%)	54	38	6	2	
Did not name a party (62%)	64	25	4	6	

Table 14. Trust towards information sources – Government.

Q. How much do you trust or distrust information about the COVID-19 vaccine received from the following sources ...? Government (q25_1 X Settlement, Age,

Gender, Party closest to you) – of the 99% who receive information about COVID-19

	Trust	Distrust	Do not receive information from this source	DK	RA
National	62	30	3	4	
Capital	64	29	2	5	
Urban	62	32	2	3	
Rural	61	29	5	5	1
18-34	63	30	3	4	
35-54	61	32	4	3	
55+	63	28	3	6	
Male	61	30	4	5	
Female	63	30	3	4	1
GD supporters (23%)	86	9	2	3	
Opposition supporters (15%)	46	49	5		
Did not name a party (62%)	57	33	4	6	

Table 15. Trust towards information sources – Journalists/media.

Q. How much do you trust or distrust information about the COVID-19 vaccine received from the following sources ...? Journalists/media (q25_5 X Settlement, Age, Gender, Party closest to you) – of the 99% who receive information about COVID-19

	Trust	Distrust	Do not receive information from this source	DK	RA
National	56	34	4	6	
Capital	52	39	5	4	

Urban	57	35	2	6	
Rural	58	31	5	6	1
18-34	55	36	5	3	1
35-54	55	33	5	6	
55+	57	33	2	7	
Male	56	35	4	5	
Female	56	33	4	6	1
GD supporters (23%)	64	29	3	3	1
Opposition supporters (15%)	60	32	5	3	
Did not name a party (62%)	52	37	4	7	

Table 16. Trust towards information sources – Religious leader/church.

Q. How much do you trust or distrust information about the COVID-19 vaccine received from the following sources ...? Your religious leader/church (q25_4 X Settlement, Age, Gender, Party closest to you) – of the 99% who receive information about COVID-19

	Trust	Distrust	Do not receive information from this source	DK	RA
National	47	15	33	5	1
Capital	47	19	30	4	1
Urban	50	13	32	5	
Rural	46	13	35	6	
18-34	48	14	33	3	1
35-54	50	14	31	5	1
55+	44	16	34	6	
Male	49	13	32	5	1
Female	46	16	33	5	
GD supporters (23%)	61	6	30	3	1
Opposition supporters (15%)	38	25	33	4	
Did not name a party (62%)	44	15	34	6	1

Table 17. Trust towards information sources – Local government.

Q. How much do you trust or distrust information about the COVID-19 vaccine received from the following sources ...? Your local government (Sakrebulo, Mayor's office) (q25_6 X Settlement, Age, Gender, Party closest to you) – of the 99% who receive information about COVID-19

	Trust	Distrust	Do not receive information from this source	DK	RA
National	46	23	27	5	
Capital	45	24	25	5	
Urban	47	28	22	4	
Rural	45	18	30	6	
18-34	48	23	26	3	
35-54	44	24	26	5	
55+	46	21	27	6	
Male	46	22	27	5	
Female	46	23	26	5	
GD supporters (23%)	69	10	18	3	
Opposition supporters (15%)	33	37	27	3	1
Did not name a party (62%)	40	24	30	6	

Table 18. Trust towards information sources – NGOs.

Q. How much do you trust or distrust information about the COVID-19 vaccine received from the following sources ...? NGOs (q25_7 X Settlement, Age, Gender, Party closest to you) – of the 99% who receive information about COVID-19

	Trust	Distrust	Do not receive information from this source	DK	RA
National	28	27	37	7	
Capital	28	33	33	6	
Urban	31	27	34	8	
Rural	27	23	42	7	
18-34	33	30	33	4	
35-54	29	27	37	7	
55+	24	25	42	9	
Male	28	29	38	6	
Female	29	26	37	8	
GD supporters (23%)	30	32	31	7	
Opposition supporters (15%)	39	25	33	3	
Did not name a party (62%)	26	26	41	8	

Online Vaccine Disinformation

When realizing the clear importance of online vaccine disinformation, and attempting to thoroughly examine it in the example of Georgia, based on various studies²² conducted primarily by the Media Development Foundation/Fund (MDF), a Georgian NGO monitoring and combating disinformation, we need to analyze major specific trends, and accordingly, distinguish three key groups:

1. Those who are opposed to immunization in general (This group does not position itself to have any other political agenda and it frequently seems to borrow its anti-vaccine content and narratives from almost identical websites and webpages administered in the West, and particularly, the U.S.);
2. Russia-oriented groups striving to discredit the vaccines of American and European origin (These groups are almost universally focused first

²² T. Kintsurashvili, et al., *Infodemic in Georgia 2020*, Tbilisi 2021, <<http://mdfgeorgia.ge/uploads/Publication-ENG-with%20hyperlink-web.pdf>> (20.11.2022); T. Kintsurashvili, et al., *Anti-Western Propaganda 2020*, Tbilisi 2021, <http://mdfgeorgia.ge/uploads/antidasavlurieng2020_compressed.pdf> (20.11.2022)

of all, on the geopolitical context, employing vaccine scepticism similarly. They alternatively promote the alleged superiority of the Russia-developed *Sputnik V*, for instance.);

3. Opportunistic websites and groups that at any opportunity use vaccine scare-mongering as clickbait (Such groups as *Pears of Georgia*, *The Christian*, *The Truth*, etc., kept circulating especially the images of religious content like the photos of Mary and the baby Jesus or different saints claiming that they were ‘coronavirus-repelling’ and could be suggested as alternatives to vaccination.).

Worth underlining that many priests from the influential Georgian Orthodox Church, representing usually far-right and ultra-conservative or even greatly radical flank of the institution, openly and actively lead multifaceted anti-vaccination propaganda, which not rarely attracts the broader public.

In conclusion, there is a definite need to stress that even though in general, it is quite a big challenge to accurately measure the real effects of every variety of such complex phenomena as online disinformation campaigns, however, it is impossible to neglect, and we certainly should not underestimate the impressive numbers of hundreds, thousands or more shares and reposts of this kind of content on the internet with anticipated lasting and far-reaching consequences even ahead.

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SARS-COV-2 AS A POTENTIAL BIOLOGICAL WEAPON AND EMERGING CHALLENGES OF BIOTERRORISM IN THE CONTEXT OF ASYMMETRIC THREATS

Abstract: *Biological weapons are a significant threat to global security. A clear example of this in the modern period is the factor of the spread of SARS-CoV-2. When biological weapons are released, it is impossible to control them, to develop defence mechanisms, because new biological weapons appear in front of the world, which in many cases are artificially created. All this gives a more crushing effect. It must be said that these weapons falling into the hands of terrorists and bioterrorism pose the greatest threat to global security. The paper aims to investigate the potential threat of SARS-CoV-2 as a biological weapon, as well as the history and dynamics of its development. More specifically, the mechanisms of the spread of biological weapons and their prevention. This issue is interesting due to the developments in the world since bioterrorism poses the greatest threat to humanity. It is vitally important for the international community to take timely measures and pay more attention to this threat. It is also necessary to consider the creation of groups obsessed with extreme and fanatical ideas together with terrorists, whose goal is the destruction of humanity. Biological weapons are a very attractive and convenient weapon for organizations of this type, as a dangerous destructive force. The task of the paper is to identify mechanisms that will focus on the management components of biological weapons to examine the risks of its spread, as well as to determine prevention measures from the defence agencies, such as preparedness, detection and rapid response.*

Keywords: *biological weapons, SARS-CoV-2, terrorism, asymmetric threats, global security, weapons of mass destruction.*

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Introduction

In the modern period, global security faces many risks and challenges, among which are: armed conflicts, separatist movements, wars, terrorism, asymmetric threats, global warming, non-state aggressive actors, proliferation of weapons of mass destruction, pandemics, etc. Among these threats and challenges, it is important to distinguish the challenges arising from biological warfare and bioterrorism. Accordingly, the world events in 2019 attract significant attention and are a subject of study. Severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2), the cause of COVID-19, has shattered economies, and upended patterns of life globally. The first reports in late 2019 indicated that an epidemic caused by a zoonotic virus was spreading from Wuhan, China, believed to have been transmitted from an animal reservoir at a live-animal market. Speculation remains that the blame lies elsewhere, however, which seems surprising to scientists. For the public, the truth is easy to question because of the vast amounts of circulating misinformation².

Biological weapons are a significant threat to global security. A clear example of this in the modern period is the factor of the spread of SARS-CoV-2. When biological weapons are released, it is impossible to control them, to develop defence mechanisms, because new biological weapons appear in front of the world, which in many cases are artificially created. All this gives a more crushing effect. It must be said that these weapons falling into the hands of terrorists and bioterrorism pose the greatest threat to global security.

This issue is interesting due to the developments in the world since bioterrorism really poses the greatest threat to humanity. It is vitally important for the international community to take timely measures and pay more attention to this threat. It is also necessary to control the activities of groups obsessed with extremist and fanatical ideas, together with terrorists, and to respond in time to threats coming from them, whose goal is to destroy humanity. Biological weapons are a very attractive and convenient weapon for organizations of this type, as a dangerous destructive force.

SARS-CoV-2 as a potential biological weapon

There are many problems and challenges facing humanity in the world. All this poses a threat to human health. COVID-19 is a clear example of the scale of a pandemic. And also how powerless humanity is to fight it. It must be said that it is quite challenging to fight viruses, the origin of which is determined, but there are no vaccines against them. In order to better understand what a

² D. Knight, *COVID-19 Pandemic Origins: Bioweapons and the History of Laboratory Leaks*, "Southern Medical Journal", Vol. 114/2021, p. 466.

biological weapon is and what threat SARS-CoV-2 poses. Until then, let's explain the essence of weapons of mass destruction. In 1977, the General Assembly, through its resolution A/RES/32/84-B, affirmed the definition of Weapons of Mass Destruction as – atomic explosive weapons, radioactive material weapons, lethal chemical and biological weapons, and any weapons developed in the future which might have characteristics comparable in destructive effect to those of the atomic bomb or other weapons mentioned above³.

Weapons of mass destruction (WMD) are different from conventional weapons. with incomparably greater destructive power, which the subsequent and subsequent events of their use bring. The total power of M.G. in the world today is much more than it would be enough to completely destroy life on Earth. Therefore, during the Cold War, one of the main issues of West-East relations was the limitation of MGI production and disarmament. Currently, the creation of the so-called M.G.I. is a special threat. By pariah (unready) states (see recalcitrant state). The efforts of the democratic countries of the world are also aimed at preventing this weapon from ending up in the hands of authoritarian and irresponsible regimes. The proliferation of weapons of mass destruction and their delivery systems could have incalculable consequences for national, regional and global security⁴.

The ongoing COVID-19 pandemic has exposed global vulnerabilities to biological threats and refocused attention on the possibility of deliberate biological attacks⁵. The COVID-19 pandemic is also giving rise to the spectre of bioterrorism. Experts have warned that the pandemic may lead to a resurgence in interest among terrorists in using chemical and biological weapons. The possible risk of biological attacks by either state or non-state actors highlights the need to ensure effective biodefense strategies and strengthen international governance frameworks in the field of biosecurity and arms control, including the *Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction* (BTWC). Preparedness is essential both for deterrence purposes and to ensure adequate mechanisms to monitor and when necessary to

³ United Nations, Regional Centre for Peace and Disarmament in Asia and the Pacific, *Weapons of Mass Destruction*, <<https://unrcpd.org/wmd/>> (21.11.2022).

⁴ North Atlantic Treaty Organization, *Weapons of mass destruction*, <https://www.nato.int/cps/en/natohq/topics_50325.htm> (21.11.2022).

⁵ L. Alleslev, *Biological Threats: Technological Progress and the Spectre of Bioterrorism in the Post-COVID-19 Era*, NATO Parliamentary Assembly, Science and Technology Committee, October 2021, <<https://www.nato-pa.int/download-file?filename=/sites/default/files/2021-10/024%20STCTTS%2021%20E%20rev.%201%20fin%20-%20%20BIOLOGICAL%20THREATS%20-%20ALLESLEV.pdf>> (21.11.2022).

deny access to the building blocks of biological weapons as well as respond to a biological attack⁶.

From the early stages, wild speculation existed regarding the origins of the virus. In March 2020, the US Department of State summoned the Chinese ambassador to protest statements of a Chinese spokesperson, who suggested that the virus was brought to Wuhan by the US military, allegedly as a bioweapon. Then, a US senator suggested that the virus resulted from a botched Chinese bioweapons program. Other US officials suspected that the virus came from a Wuhan laboratory that was performing legitimate viral research because safety concerns had been previously identified at this laboratory. As time went on, concern grew because China was found to be censoring the results of research into the origins of the pandemic. The virus as a bioweapon and the possible laboratory leak from legitimate research are the two most common remaining theories about the origins of SARS-CoV-2⁷.

The World Health Organization (WHO) defines biological and toxin weapons are either microorganisms like viruses, bacteria or fungi, or toxic substances produced by living organisms that are produced and released deliberately to cause disease and death in humans, animals or plants⁸. Biological warfare is called a war where biological toxins or infectious agents are used. Viruses, bacteria and fungi are used to kill or harm a person, animal or plant. Biological weapons (also called bio-agents) include living organisms and replicating nanoparticles (viruses) that reproduce in host organisms. Toxins do not multiply in the host organism, although they are also classified as biological weapons. Entomological (insect) war is also a type of biological war.

Biological weapons form a subset of a larger class of weapons sometimes referred to as unconventional weapons or weapons of mass destruction, which also includes chemical, nuclear and radiological weapons. The use of biological agents is a serious concern, and the risk of using these agents in a terrorist attack is thought to be increasing⁹.

Biological weapons can be used in different ways. All of these are used to gain a strategic or tactical advantage over the opponent. Biological agents can be lethal (killing) or non-lethal and can be used against a single person, a group of people or an entire population. They generally consist of two parts – a weaponized agent and a delivery mechanism. In addition to strategic or tactical military applications, biological weapons can be used for political assassinations, the infection of livestock or agricultural produce to cause food

⁶ *Ibidem*, p. 3.

⁷ D. Knight, *op. cit.*, p. 465.

⁸ World Health Organization, *Biological weapons*, <https://www.who.int/health-topics/biological-weapons#tab=tab_1> (22.11.2022).

⁹ *Ibidem*, p. 1.

shortages and economic loss, the creation of environmental catastrophes, and the introduction of widespread illness, fear and mistrust among the public.¹⁰ In terrorism, when biological agents are used, it is called bioterrorism.

Almost any disease-causing organism (such as bacteria, viruses, fungi, prions or rickettsia) or toxin (poisons derived from animals, plants microorganisms, or similar substances produced synthetically) can be used in biological weapons. The agents can be enhanced from their natural state to make them more suitable for mass production, storage, and dissemination as weapons. Historical biological weapons programmes have included efforts to produce: aflatoxin; anthrax; botulinum toxin; foot-and-mouth disease; glanders; plague; Q fever; rice blast; ricin; Rocky Mountain spotted fever; smallpox; and tularaemia, among others¹¹.

A brief history of the use of biological weapons

Simple forms of biological weapons were used even in the distant past. There are many examples from antiquity. According to ancient records, the Assyrians poisoned the enemy's food with mushrooms, in the 6th Century BC. In 184 AD, Hannibal, along with his warriors, used clay pots filled with snake venom. These pots were thrown in the direction of the Pergamon ships. In 1346, the Mongols threw corpses infected with the Black Death into the besieged city of Kafa. This was repeated in 1710 when the Russians besieging Swedish forces at Reval in Estonia catapulted the bodies of people who had died from the plague¹². During the Sino-Japanese War (1937-1945) and World War II, Japan had secret facilities (e.g. Unit 731) where it conducted experiments on prisoners, among them, hundreds of Chinese, and observed the development of various diseases. They also used biological weapons against Chinese soldiers, causing thousands of casualties.

Fearing that Nazi Germany was developing biological weapons, the US, Britain, and Canada began biological weapons development programs in 1941, resulting in the conversion of anthrax, brucellosis, and botulism toxins into potential weapons. Later, it turned out that the fears of the Germans about biological weapons were greatly exaggerated. In terms of the development of biological weapons, significant research was conducted during the Cold War (1947-1991) by the United States, the United Kingdom, and the Soviet Union.

¹⁰ United Nations, Office for Disarmament Affairs, *What are Biological Weapons?*, <<https://www.un.org/disarmament/biological-weapons/about/what-are-biological-weapons/>> (21.11.2022).

¹¹ *Ibidem*.

¹² E. Hooker, W. C. Shiel Jr., M. Conrad Stöppler, *Biological Warfare*, <https://www.emedicinehealth.com/biological_warfare/article_em.htm> (20.11.2022).

However, it is believed that biological weapons were not used during this period¹³.

General description of biological weapons

Biological weapons have the potential to cause far more deaths than nuclear, chemical or conventional weapons. Therefore, it can be used strategically to gradually weaken the opponent. From a tactical point of view (i.e., in a small-scale battle and in a short period of time), it is less effective, because it often takes several days for a biological weapon to produce its characteristic biological effect.

Some believe that in modern times, humans will never use biological weapons on purpose. Due to its uncontrolled nature. A disease can be traced back to the host state, and it can do worse than its target. e.g. The virus that causes smallpox can spread worldwide quite quickly, and eventually, it will surely harm the person who uses it. However, this argument does not necessarily apply to all microbiological agents, as, for example, some bacteria can be used in such a way that they act only within a certain radius.

Ideal characteristics for a biological agent that can be used as a biological weapon against humans are high infectivity (the ability of a pathogen to cause infection, which determines how often it spreads between host organisms), high virulence, and the absence of vaccines. For a biological weapon, a desirable characteristic is that the biological weapon retains its infectivity and virulence even under long-term storage conditions. It is also desirable to be able to control its spread. Producing biological weapons is not so much a problem as finding the means to store and distribute them effectively.

Especially dangerous pathogens are biological agents with an epidemic and pandemic spread pose a special threat to human or animal health. It has the potential to become a biological weapon and is relatively easy to spread. It can cause widespread morbidity, mortality, or mass disruption of public functions, which requires national-level measures to contain the spread and eliminate the consequences¹⁴.

For example, *Bacillus anthracis* (the bacterium that causes anthrax, also known as anthrax) is considered one of the most effective agents for several reasons. First, it produces spores, which is important for its aerosol distribution. Second, its incubation period (the time period from exposure to the first clinical signs of the disease) is short, and in more than 90% of cases, inhalation of

¹³ E. M. Spiers, *Agents of War: a History of Chemical and Biological Weapons*, London 2021.

¹⁴ *Resolution of the Government of Georgia No. 347. Especially regarding the approval of the response plan for dangerous pathogens and biological incidents*, Tbilisi 2014, pp. 8-9.

anthrax spores ends in death if it is not treated in time. At the same time, the spreaders can protect themselves by using appropriate antibiotics.

For a large-scale attack with anthrax, it is necessary to create its aerosols, the size of which will be up to 1.5-5 microns. Because larger particles cannot pass through the lower respiratory tract. Also, biological weapons should be resistant to rain and ultraviolet radiation.

Biological agents believed to potentially be or have been used as biological weapons include the following bacteria: *Bacillus anthracis*, *Brucella* spp., *Burkholderia mallei*, *Burkholderia pseudomallei*, *Coxiella burnetii*, *Francisella tularensis*, *Vibrio cholera* and others. Among the viral agents, there are Ebola viruses, representatives of the *Bunyaviridae* family, viruses of the *Flaviviridae* family, and others. Among the fungal agents studied are *Coccidioides* spp.

Biological agents like anthrax, botulinum toxin and plague can pose a difficult public health challenge causing large numbers of deaths in a short amount of time. Biological agents which are capable of secondary transmission can lead to epidemics. An attack involving a biological agent may mimic a natural event, which may complicate the public health assessment and response. In case of war and conflict, high-threat pathogens laboratories can be targeted, which might lead to serious public health consequences¹⁵.

Toxins that can be used as weapons include ricin, staphylococcal enterotoxin B (an enterotoxin produced by the bacteria *Staphylococcus aureus*), botulism toxin, and many types of mycotoxins.

Biological agents can be spread in a variety of ways:

- a. In the air, in the form of aerosols: This is an effective way of spreading and for the infection to develop, a person needs to inhale a sufficient amount of it.
- b. By Explosives: The spread of biological agents is possible by the detonation of any explosive device, although this is not as effective a method as spread by aerosols. Because of the explosion, the biological agents are damaged and only less than 5% remain that can cause disease.
- c. Biological weapons can be spread through food or drink.

Delivery mechanism – Biological weapons delivery systems can take a variety of forms. Past programmes have constructed missiles, bombs, hand grenades and rockets to deliver biological weapons. A number of programmes also designed spray tanks to be fitted to aircraft, cars, trucks and boats. There have also been documented efforts to develop delivery devices for assassinations or sabotage operations, including a variety of sprays, brushes and injection systems as well as means for contaminating food and clothing.¹⁶

¹⁵ World Health Organization, *Biological weapons...*

¹⁶ United Nations, Office for Disarmament Affairs, *What are Biological Weapons?...*

The following can be used as a means of defence:

- a. Vaccination, for example, currently there are anthrax and smallpox vaccines;
- b. Antibiotics, in the case of bacterial organisms, antibiotics can be used for treatment;
- c. Special masks, currently available respirators or other types of air particle filters can be used to protect against biological weapons.

Biosecurity involves technologies, procedures, and protocols to secure the exchange of highly infectious pathogens and to control access to those pathogens within a defence, research, industrial, or storage facility. Biosecurity can include¹⁷:

- a. Licensing of facilities to work with highly infectious pathogens;
- b. physical protection barriers;
- c. procedures to ascertain personnel reliability;
- d. Pre-transport approval for highly infectious pathogens and appropriate security during
- e. transport;
- f. measures to ensure accountability for highly infectious pathogens;
- g. proper oversight of scientific, defence, and commercial activities; and,
- h. appropriate security for information related to processes and techniques that could be
- i. useful in the weaponization of the agent¹⁸.

Technological advances. In addition to concerns that biological weapons could be developed or used by States, recent technological advances could increase the likelihood of these weapons being acquired or produced by non-state actors, including individuals or terrorist organizations. For more information about recent scientific and technological advances relevant to the Convention. The 20th Century saw the use of biological weapons by individuals and groups committing criminal acts or targeted assassinations, biological warfare conducted by States, and the accidental release of pathogens from laboratories. There were also false accusations of biological weapons use, highlighting the difficulty in differentiating between naturally-occurring diseases, accidents and deliberate use¹⁹.

Entomological warfare

Entomological warfare is a type of biological warfare that uses insects to attack humans. The concept has been around for centuries and research is

¹⁷ *The Biological Weapons Threat and Nonproliferation Options. A Survey of Senior U.S. Decision Makers and Policy Shapers*, November 2006, pp. 5-6,

<<https://carnegieendowment.org/files/BIO-survey-final-report.pdf>> (21.11.2022).

¹⁸ *Ibidem*, p. 7.

¹⁹ United Nations, Office for Disarmament Affairs, *What are Biological Weapons?...*

ongoing even in modern times. In entomological warfare, insects are used as a means of personal attack or as vectors of disease. There are three types of entomological warfare: In the first, insects are used as vectors (carriers) that carry the pathogen; These insects spread to the target area and then, infect the people they bite. In the second type, insects are used against the crop of the enemy, therefore it is a danger to agriculture. In the third type, insects such as bees, wasps, mosquitos and others are used to directly attack the target²⁰.

The modern world is concerned about the illegal use of radioactive, chemical and biological materials, which often lead to tragic incidents. For example: the use of chemical weapons in Syria: during the years 2011-2018, 33 chemical incidents were recorded by the UN Commission. One recent incident in the city of Douma had dire consequences. On 7 April 2018, 70 people died and several hundred were seriously poisoned. According to widespread information, the poisoning was caused by sarin bombs (there is also a version about the use of chlorine bombs).

According to various sources, it could be the so-called Barrel bombs, custardy, cylindrical metal containers filled with explosives, damaging shrapnel, and poison gas. A mixture of fertilizer, ammonium nitrate and any fuel will be used as an explosive, the so-called ANFO (Ammonium Nitrate/Fuel Oil) which is well known to those who trade or use industrial explosives. And the function of poisonous gas can be performed both by sarin and ordinary chlorine. Chlorine was first used as a chemical weapon in World War I. by the Germans during the Battle of Ypres. It is a heavier-than-air gas and inhalation causes suffocation and damage to lung tissue²¹.

Chemical attack in the Tokyo subway. It was a terrorist act of a poisonous substance with a nerve-paralytic effect using sarin.

On 20 March 1995, an act was organized by the neo-religious destructive sect Aum Sinrikyo, which according to various sources killed 10 to 27 people, and 5,000 to 6,300 people received various degrees of poisoning. It was later found out that the members of the sect were making sarin themselves, and they bought the production technology from another country.

Political scandals followed the poisoning of Alexander Litvinenko with the radioactive substance polonium-210 in 2006. Also, the case of Salisbury, when the so-called Novichok class military poison A-234 was used to kill the Skripals²².

²⁰ *Biological warfare*, Tbilisi 2013, <<https://geoarmada.wordpress.com/2013/02/17/%e1%83%91%e1%83%98%e1%83%9d%e1%83%9a%e1%83%9d%e1%83%92%e1%83%98%e1%83%a3%e1%83%a0%e1%83%98-%e1%83%9d%e1%83%9b%e1%83%98/#more-1133>> (20.11.2022).

²¹ *Guidelines for raising awareness on the export control of dual-use products related to chemical, biological, radioactive and nuclear hazards*, Tbilisi 2020, p. 147.

²² *Ibidem*, p. 148.

The above examples show how much danger the uncontrolled trade and use of biological and chemical substances pose to the world. This is precisely why those involved in international trade should be well aware of their role in maintaining international security and peace. Political groups use chemical and biological weapons to eliminate their opponents.

Global threats from bioterrorism

In April 2020, the United Nations Secretary-General warned that “the weaknesses and lack of preparedness exposed by this pandemic provide a window onto how a bioterrorist attack might unfold – and may increase its risks”. The overall COVID-19 experience has stressed the importance of better preparedness against all types of public health threats, including bioterrorism²³.

Bioterrorism is the deliberate release and use of biological toxins or infectious agents. That causes disease or death in humans, animals or plants. These agents can be bacteria, fungi, toxins or viruses. They can be naturally occurring or man-modified.

Interpol's definition of bioterrorism refers to the intentional release of biological agents or toxins to harm or kill humans, animals or plants with the intent to intimidate or coerce a government or civilian population to further political or social objectives²⁴.

Bioterrorism is to destroy the population. Introduction of various infectious agents and biotoxins in the territory of the country by various means. In terrorism, if biological agents are used, it is called bioterrorism.

A bioterrorism attack is the deliberate release of viruses, bacteria, or other germs (agents) used to cause illness or death in people, animals, or plants. Biological agents can be spread through the air, through water, or in food, and may be used by terrorists. Some bioterrorism agents, like the smallpox virus, can be spread from person to person and some, like anthrax, cannot²⁵.

The act of bioterrorism is the deliberate use of a pathogenic biological agent or toxin to cause disease in a person or groups of people.

During the conflict, the use of biological agents is considered one of the most dangerous weapons. This type of weapon is different from chemical, nuclear and radiological weapons, which, together with biological, make up the military acronym for weapons of mass destruction. None of these are

²³ L. Alleslev, *op. cit.*

²⁴ Interpol, *Bioterrorism*, <<https://www.interpol.int/en/Crimes/Terrorism/Bioterrorism>> (25.11.2022).

²⁵ State of Hawaii, Department of Health, *Bioterrorism. Chemical, Radiological, and Nuclear Emergencies*, <<https://health.hawaii.gov/docd/prevention/bioterrorism/>> (23.11.2022).

conventional weapons, essentially due to their explosive, kinetic, or incendiary potential.

It is important to know what is meant by a biological incident – the release and/or spread of a pathogenic biological agent caused by natural means or as a result of unintentional or intentional action. At what time it can harm human health or cause death?

The purpose of a biological weapon varies in its form and purpose. Typically, the opposing party's goal is to gain a strategic or tactical advantage while instilling fear and panic in the public. Like some chemical weapons, the use of biological weapons can force the target group to leave the area. There are both lethal and non-lethal forms of biological agents that are used against a specific person, group of people, or an entire population.

Experts are concerned that the destructive social and economic implications of the COVID-19 crisis have drawn attention to the potentially potent impact of biological agents and may lead to a resurgence of interest in such methods among terrorists. These concerns are underpinned by reports that extremist groups have called on their followers to intentionally spread COVID-19 by coughing on targeted individuals or through other means. In the United States, at least two people have already been charged with terrorism offences after claiming they were intentionally trying to spread the virus. In the Middle East and North Africa (MENA) region, groups associated with Daesh and Al-Qaeda have also spread conspiracy theories claiming that the virus is a ‘soldier of Allah’ that is being used to punish the enemies of Islam²⁶.

Forms of bioterrorism

Bioterrorism directed against humans. This is a form of bioterrorism in which people are poisoned by using various biological agents. The advantage of such a weapon is that it is characterized by high infectivity (the ability of a pathogen to cause infection, which determines how often it spreads between host organisms). High virulence (ability to cause disease) and, in addition, there may be no vaccines to prevent transmission. Producing biological weapons is not so much a problem as finding the means to store and distribute them effectively. It is possible that a biological agent cannot maintain infectivity and virulence under long-term storage conditions. It is also possible that its spread cannot be controlled.

For example, the bacterium that causes anthrax, also known as anthrax, is considered one of the most effective agents for several reasons. First, it produces spores, which is important for its aerosol distribution. Second, its incubation period (the period from exposure to the first clinical signs of the

²⁶ L. Alleslev, *op. cit.*

disease) is short, and in more than 90% of cases, inhalation of anthrax spores ends in death if it is not treated in time; At the same time, its spread can protect itself by using appropriate antibiotics.

Bioterrorism directed against agriculture (crops, plants and aquaculture). It is a form of bioterrorism where diseases (e.g., bioherbicides or mycoherbicides) are used to destroy enemy agriculture. which causes plant wilting. Aquaculture and underwater plants can also be targeted by such biological weapons. Plant pests are sprayed using spray tanks and cluster bombs in agricultural areas. which subsequently leads to the initiation of plant epidemics.

Although a herbicide is a chemical against weeds, it is often thought of as a biological and chemical warfare weapon. This is because the herbicide can have a similar effect to that of biotoxins. Biotoxins are substances that are toxic and have a biological origin. Biotoxin is taken in different forms. There are mycotoxins (made from fungi), zootoxins (made from animals) and phytotoxins (made from plants). Taking these biotoxins is a simple formula and does not need special mechanisms. That is why it remains an acute challenge in the field of bioprotection.

Bioterrorism in which insects are used. It is a form of bioterrorism in which insects are used to attack the enemy. At this time, insects are used as weapons of direct attack (for example, bees, locusts, etc.), or insects infected with various pathogens spread to the target area. At this time they have the function of spreading various diseases.

As we can see, the danger of biological weapons is primarily the fact that, unlike other weapons of mass destruction, any person can become the owner of this weapon. It can be produced, developed, or stockpiled by both state and non-state actors. Accordingly, the use of biological weapons at both levels (covert from the arms of states and targeted terror from non-state actors) is uniquely classified as bioterrorism.

In bioterrorism, members of a nation or group that pose a mass threat can change the rules/norms by which they interact with members of another nation or group. A biological weapon allows its owner to create a potentially destructive threat. Moreover, unlike nuclear, chemical or conventional weapons, it does not require special storage conditions or storage costs. Therefore, this form of terrorism can be advantageous for strategic players at the international or state level and use biological agents as a weapon of attack on the battlefield.

The use of biological weapons is prohibited by the norms of international law, as well as by various international agreements. The use of biological agents in armed conflict is a war crime.

It is also important to focus on biological weapons in the context of biosafety. The use of biological weapons for offensive purposes is prohibited by the 1972 Convention. As of 2016, 178 countries had ratified and 6 had

ratified and in August 2019, 183 countries ratified or acceded to the treaty. The main purpose of this convention is to prevent biological weapons attacks. This is because all of this can lead to the death of large numbers of people and, at the same time, damage to the economy and infrastructure²⁷. Many countries, including those that have ratified the Convention, are conducting research into biological warfare, which is not prohibited under the Convention.

Although the United States, Russia, United Kingdom, Syria, Japan, and Iraq have had bioweapon programs in the past, China and Iran have never admitted to a developed program, although small-scale production is certainly possible. The US Department of State's 2020 Compliance Report notes, "The United States does not have sufficient information to determine whether China eliminated its assessed biological warfare program, as required under Article II of the Convention"²⁸.

In 1979, the ineffectiveness of the convention was demonstrated by an accidental airborne release of anthrax spores by a Soviet military microbiology facility in Sverdlovsk (now Ekaterinburg, Russia), which led to numerous deaths. Non-state-sponsored biological terrorism began to surface in the 1980s, which culminated with the 1995 sarin gas attack on the Tokyo, Japan, subway system by the Aum Shinrikyo cult. Soon after the 11 September 2001, terrorist attacks on the United States, letters laced with anthrax were sent to several news agencies and two Senators. This led to five deaths and many illnesses and one of the most extensive Federal Bureau investigations in US history. In 2013, the United Nations confirmed the use of government-sponsored chemical weapons (sarin and chlorine) during the Syrian Civil War²⁹.

The 2018-2020 Ebola outbreak in the Democratic Republic of Congo took place as violent conflict was raging in the country. The convergence of both events amplified the crisis and provoked concerns that adversaries could deliberately spread disease in future conflicts to inhibit responses and decision-making³⁰.

Despite some legal forms that prohibit the use of biological weapons, there is still a threat that these agents are being secretly produced in several countries. It is also possible that the stocks are owned by criminal and terrorist organizations. Consequently, the threat of bioterrorism continues to be a significant concern in virtually all states, including military and civilian populations.

²⁷ V. Maisaia, A. Guchua, *NATO and Non-State Aggressive Religious Actors (Islamic Caliphate, Al Qaeda and Taliban) – The Fourth Generation War Strategy and Its Geopolitical Aspects of Regional and National Security (2010-2019)*, Tbilisi 2020, p. 204.

²⁸ D. Knight, *op. cit.*

²⁹ C. Skolnick, *External Eye Manifestations of Biological and Chemical Warfare*, [in:] M. J. Mannis, E. J. Holland, *Cornea*, 5th Edition, 2019, p. 1043.

³⁰ L. Alleslev, *op. cit.*

Globalization factor in the spread of terrorism

The factor of globalization – nowadays, the threat of terrorism is recognized as one of the main challenges in the establishment of universal peace in the whole world. The asymmetric threat, which emerged not from conflicts between countries, but from terrorist organizations, in terms of maintaining security in the world, has become more and more noteworthy. In the era of globalization, parallel to the process of removing borders, terrorism has acquired a global scale. After the terrorist attacks on New York and Washington on 11 September 2001, the mentioned problem was further advanced. After the leaders of al-Qaeda publicly announced that their organization was actively testing weapons of mass destruction, this form of terrorism has become more of a concern to America and the world. In March 2002, US President Bush said in a speech that "all nations must seriously consider the growing threat of terrorism and its catastrophic proportions – terrorism armed with biological, chemical or nuclear weapons".

"Globalization can be defined as the intensification of social relations on a worldwide scale that bind distant places together in such a way that processes of local significance are affected by events many miles away."

Global terror has replaced political boundaries that coincided with national and state borders. The threat posed by terrorism has penetrated the borders of every nation-state. Considering that the free movement of products and investments is no longer a difficulty in the era of globalization. All this leads to the conclusion that smuggling between borders has become easier.

Along with the opening of borders, the financial independence of terrorist organizations has increased. Attracting new followers is not concentrated within the borders of a particular country, but covers the whole world. In particular, the growing spread of Al-Qaeda followers in all regions of the world (mainly in North Africa and Southeast Asia) is observed. Consequently, the globalization of terrorism and network connections have made terrorist organizations more flexible. The adoption of modern technologies has made the fight against terrorism relatively difficult.

It is difficult to determine the extent to which globalization affects international security. Because different regions are affected differently by the accompanying processes of globalization.

Geopolitical aspects

During the fight against terrorism, it is important to consider the geopolitical aspects of the state. Effective cooperation of international and regional organizations and the involvement of states are also important. This is to reduce the prevalence of organized crime in the first place. Also, the transit

of agents of weapons of mass destruction and illegal migration is associated with many dangers.

The COVID-19 pandemic has emphasised the importance of understanding biological vulnerabilities and assessing biological threats comprehensively. Such an assessment of biological threats requires risk/capability evaluations in many different areas, among others in the state of national healthcare systems, risks arising from international trade/travel, or the resilience of global supply chains³¹.

Because of the wide spectrum of potential biological hazards, efforts to manage the risks should be multidisciplinary, multi-sectoral, and above all, coordinated. As such, the BWC relies primarily on a network approach based on coordination with international, regional, and nongovernmental organizations and initiatives to address the interconnected nature of biological threats in a holistic manner. Under the framework of the BWC, improved coordination would provide positive externalities for managing disease, whatever the cause. Such an approach ensures that resources are used optimally to provide benefits for many. In this sense, for example, building capacities across sectors to monitor disease not only strengthens the ability to detect and respond to a biological attack, but also provides States with the capacity to track and mitigate naturally occurring diseases, thus vastly improving public health worldwide³².

Conclusion

Viruses are constantly mutating, and this leads to the emergence of new variants. It is logical to expect that of the thousands of variants resulting from mutations in the SARS-CoV-2 virus genome, some variants will eventually acquire a biological advantage and become more infectious, clinically aggressive, and resistant to therapies or vaccines. Alternatively, the dominance of a particular variant strain may be due to mere chance or the social behaviour of the population. The dimension of threats is added by the factor of terrorist organizations that want to obtain biological weapons.

Biological weapons falling into the hands of terrorists will cause significant crises and threats around the world. It will be impossible to deal with all this by one state or even by a group of states. Therefore, when there are terrorism-sponsoring states in the world that covertly finance and support terrorists, they should also understand that biological weapons falling into the hands of terrorists will lead to their spread, and therefore it will harm their population. Because it is impossible to control the spread of biological

³¹ L. Alleslev, *op. cit.*

³² United Nations, Office for Disarmament Affairs, *What are Biological Weapons?*

weapons. It must be said that the SARS-CoV-2 virus genome can be artificially mutated by terrorists as a biological weapon. To make it more deadly, to spread quickly and to make the fight against it more difficult. There is also the danger of dangerous viruses and deadly biological weapons being stolen from biological laboratories and falling into the hands of terrorists. All this will be associated with the worst consequences. Therefore, it is important to tighten the policy of non-proliferation of biological weapons at the international level. Ensuring chemical safety is also important. Along with this, in the future, humanity may be faced with more dangerous artificially or naturally occurring viruses and biological weapons. For the prevention of such risks and threats, strict control of international agreements is necessary. It is also important to increase the funding of peaceful scientific research by states and international organizations. The most important thing is to detect and neutralize (arrest) terrorist organizations and groups.

Accordingly, the protection of global security requires coordinated cooperation, sharing of information and new scientific studies on the part of global actors, international organizations and states.

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THE IMPACT OF THE COVID-19 PANDEMIC ON CHANGES IN THE POLISH HEALTHCARE SYSTEM

Abstract: *The rapidly spreading SARS-CoV-2 virus in Poland has affected every aspect of the country and society and has become a challenge for the healthcare system. Here we presented changes in the healthcare system induced by the pandemic pressure. We also tried to identify recommendations for further proceedings in the Polish healthcare system after the pandemic to provide it with a more optimal organizational model and greater efficiency of medical services for patients. The need for these modifications has long been well-known to experts, decision-makers, and ordinary citizens who commonly use health services. Although some of the system's shortcomings were obvious, there were several doubts about the priority areas for change. At the same time, the right conditions were lacking, including awareness of the importance of health care among public authorities and the public. Moreover, the pandemic and the lockdown caused a global economic and social disruption, triggering the biggest recession since the Great Depression. These allowed us to see the critical problems of Polish healthcare more clearly than before, which increased a social and political consensus for changes in our country's health policy. The main changes include systematically increasing financial and human resources for health care, shifting patient treatment from inpatient to*

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outpatient treatment, implementing e-health solutions to the fullest extent possible, and implementing value-based healthcare. Essential in the long and challenging process of optimizing healthcare is strengthening awareness of the importance of healthcare for society and the economy. Therefore, it is desirable to consolidate thinking about health as a factor directly related to the quality of social life and the economy. At the same time, looking at the possible return on investment in our health security is necessary, not just the cost perspective.

Keywords: *pandemic COVID-19, Polish healthcare, financial and organizational problems in healthcare, health security, quality of social life*

Situation in the Polish healthcare system before the COVID-19 pandemic

For many years, the overall level of health care in Poland has been the lowest in Europe. It is generally accepted that the most significant effect on healthcare in countries is the amount of public spending generated from the gross domestic product, the so-called GDP. In Poland, for many decades, state authorities neglected the issue of shaping an effective healthcare system, as they allocated just over 4% of GDP to healthcare in their annual budget spending plans. As recently as 2019, only 4.3% of GDP was spent on health care from public funds. The average in the European Union is almost 8% of GDP, and some countries like Germany and Sweden spend more than 9% of GDP⁴. In contrast, the average GDP spent on healthcare in countries belonging to the Organization for Economic Cooperation and Development (OECD), which brings together 38 countries, is 6.53%. Poland ranks third from the bottom of this group⁵.

In 2019, public spending on healthcare in Poland, relative to GDP, was lower than in all of Poland's neighbouring countries. An analysis of current public health expenditures per capita, considering the purchasing power of money presented in U.S. dollars, also shows that Poland's health expenses significantly differ from the European average. In Poland, it amounted to \$1568.1. Meanwhile, the average for Europeans is \$3270.4, with a median of \$3536.5. The distance between Poland and the highly developed OECD countries is significantly increasing instead of shrinking. At the same time, Poland has the lowest index, of all neighbouring OECD countries. The situation is even worse if we consider spending per capita in nominal terms. The

⁴ GUS, *Wydatki na ochronę zdrowia w latach 2018-2020*, <wydatki_na_ochrone_zdrowia_w_latach_2018-2020.pdf> (10.09.2022).

⁵ B. Skubel, E. Kocemba, R. Rudka, *Nakłady na ochronę zdrowia w Polsce na tle innych państw OECD*, Warsaw 2021, pp. 3-4.

indicator is presented in Polish zlotys and amounts to PLN 2593.4 for Poland. The average for Europe is PLN 11210.9, and the median is PLN 13004⁶.

The low level of funding for healthcare in Poland causes many negative phenomena and shortcomings. These include deficiencies in the material base and the health care personnel. Most medical facilities are equipped with outdated equipment and treatment tools, especially in medium and small cities, sometimes also lacking sanitary materials and medicines. Moreover, the staff receives low salaries, discouraging people from working in the medical service. As a result, there are severe staff shortages in all groups of medical personnel⁷. The shortage of staff generates problems with access to healthcare services for patients. Compared to other OECD countries, Poland has one of the worst results regarding the number of medical professionals concerning the number of inhabitants. In 2017, Poland had 24 physicians per 10,000 inhabitants compared to the average of 35 in OECD countries⁸.

The problem is even more visible if we look at speciality medical care. It depends not only on the number of medical staff but also on the region's distribution of speciality medical facilities. According to a report by the Supreme Chamber of Control, there are provinces whose residents are deprived of the opportunity to receive the services of certain specialists near their place of residence. It applies to gynaecology and obstetrics, among others. Lack of access to specialists means unavailability of services to patients⁹.

The inaccessibility is measured primarily through the waiting times for an appointment. The situation in this regard is worsening – at the beginning of 2019, the average waiting time for a health service (medical visit, diagnostics) was about 16 weeks or 3.8 months. Since 2012, the waiting time to receive service has been increasing, and on average approached three months. The increase in waiting time concerned services in fourteen medical specialities, of which in some amounted to more than two months. This was noted in vascular surgery (2.8), pediatric cardiology (2.3), palliative medicine (2.3), nephrology (2.2), neurosurgery (2.1) and orthopaedics and traumatology of the musculoskeletal system (2.9). Waiting times for services in some pre-2019

⁶ *Ibidem*, pp. 9-10.

⁷ M. Polak, *Szpital powiatowe tracą płynność finansową. Wiceminister Milkowski: strata łączna zmniejszyła się*, <<https://www.rynekzdrowia.pl/Finanse-i-zarzadzanie/Szpital-powiatowe-traca-plynnosc-finansowa-Wiceminister-Milkowski-strata-laczna-zmniejszyla-sie,239235,1.html>> (26.11.2022); S. Cofta et. al., *Alert zdrowotny 1 – Szpitale w czasie pandemii i po jej zakończeniu*, April 2020, <https://www.researchgate.net/publication/357151397_Alert_zdrowotny_1-Szpital_w_czasie_pandemii_i_po_jej_zakonczeniu> (26.11.2022).

⁸ B. Skubel, E. Kocemba, R. Rudka, *op. cit.*, p. 13.

⁹ NIK, *Raport: System ochrony zdrowia w Polsce – stan obecny i pożądane kierunki zmian*, Warsaw 2018, pp. 67-68.

specialities did not change significantly, but from the patient's perspective, effective treatment was impossible due to long queues. It applies to endocrinology, where one waits almost a year for a medical appointment or diagnosis, dentistry (8.2 months) or rheumatology (7 months). The waiting time was less than a month only in the case of three specialities – neonatology, lung disease and radiation oncology. Problems with waiting times for services affect public health care and private providers, although the average waiting time in the private sector was lower. The existence of queues in the case of commercially paid medical services may indicate a systemic shortage of medical staff in general and not just problems in the organization of work¹⁰.

The shortage of staff worsens their working conditions. Polish healthcare workers are generally employed in at least two different workplaces, which complicates schedule management and increases stress levels. In addition, medical cadres in Poland are ageing: 24% of doctors and dentists actively practising the profession are of retirement age¹¹. A similar problem applies to nurses, whose average age, according to the Supreme Chamber of Nurses and Midwives at the end of 2019, was almost 53. The retirement age has already exceeded 31% of nurses and 27% of midwives¹². There is also a problem with labour activation in Poland, with as many as 21% of registered nurses lacking employment status. Worrying staffing trends also apply to medical rescuers. For several years, the Polish Central Statistical Office has reported a decline in specialized medical teams and employed medical rescuers. A common form of employment among medical rescuers is sole proprietorship, which promotes exceeding health and safety standards and working hours set by the Labour Law. The transformation of medical-vocational education into higher education should raise the symbolic and actual status of lower medical staff as their competence increases. Meanwhile, they face a lack of recognition and even respect from doctors, which further contributes to their discouragement. In general, in Poland, nurses, midwives and medical rescuers earn very little and are overworked, which significantly reduces the number to enter the profession.

The labour market situation in Polish healthcare is also not helped by the international context. The European Union provides freedom of movement and employment in member countries, at the same time all the associated economies will face or are already facing an ageing population, which increases the demand for medical and care services. Moreover, medical competence is universal regardless of cultural context, encouraging a 'brain drain'. The survey carried out on young doctors undergoing speciality training on a full-time basis

¹⁰ *Barometr WHC. Raport nt. zmian w dostępności do gwarantowanych świadczeń zdrowotnych w Polsce nr 19/15/02/2019. Stan na grudzień/styczeń 2019*, Warsaw 2019, pp. 16-23.

¹¹ *Ibidem*, pp. 34-35.

¹² *Ibidem*, p. 41.

supported by the state budget showed that 84% of psychiatry residents admitted to emigrating, mainly due to unfavourable working conditions¹³. However, as the Supreme Chamber of Control's latest report on the health service indicates, there is no complex data on the emigration of medical personnel from Poland due to the lack of a developed method to estimate its scale reliably¹⁴. Nevertheless, it is known that the main obstacle before going abroad for work is the lack of language skills – this is easy and quick for healthcare workers to make up for, however.

In comparison, northern European countries (Germany, Switzerland, Scandinavia) may offer doctors, nurses and medical rescuers attractive working conditions (e.g., housing, training, high salaries, respect for labour laws), and at the same time, their healthcare needs due to the ageing population will grow. It is especially attractive for young Polish medical workers, who in Poland receive low wages and are particularly overworked. It was publicized by young doctors who took strike action in 2015 as part of the National Residents' Agreement – at the time, they called for an increase in wages and a reduction in weekly working hours to 48¹⁵. In contrast, in 2019, they took organized industrial action to terminate contracts containing so-called 'opt-out clauses', allowing a supervisor to force an employee to work more than 48 hours a week. Employers often do this because, with overall staffing shortages, the only way to ensure continuity of health care services at their medical facilities is to extend the working hours of medical staff. Nurses also publicly manifested their discontent in 2016 at the Children's Health Center in Warsaw. They published the famous 'nurses' strips' on social media, illustrating abnormally low pay levels compared to the number of hours worked¹⁶. Laboratory diagnosticians and physiotherapists also undertook smaller demonstrations in 2018 and 2019 in protest against their omission from the ministerial salary increase program¹⁷. These demonstrations should be considered a testament to the dire working conditions in Polish healthcare. Unfortunately, attempts to

¹³ E. Kurzyńska, "Drenaż mózgow" w psychiatrii: wyższe zarobki to niejedyny powód szukania pracy za granicą, <<https://pulsmedycyny.pl/drenaz-mozgow-w-psychiatrii-wyzsze-zarobki-to-niejedyny-powod-szukania-pracy-za-granica-998074>> (19.09.2022).

¹⁴ NIK, *op.cit.*, s. 89.

¹⁵ Porozumienie Rezydentów Ogólnopolskiego Związku Zawodowego Lekarzy, <<http://www.rezydenci.org.pl/>> (19.09.2022).

¹⁶ Ile naprawdę zarabiają pielęgniarki?, <<https://www.newsweek.pl/polska/ile-zarabiaja-pielęgniarki-pensje-pielęgniarek-strajk-czd/khff5vr>> (19.09.2022).

¹⁷ Diagnostyci laboratoryjni protestują, podwyżki nie dla nich, <<https://www.rynekzdrowia.pl/Finanse-i-zarządzanie/Diagnostyci-laboratoryjni-protestuja-podwyzki-nie-dla-nich,185837,1.html>> (20.09.2022); I. Bączek, Dlaczego fizjoterapeuci przyłączają się do protestu medyków? Pytamy o to prezesa KIF, <<https://www.rynekzdrowia.pl/Polityka-zdrowotna/Dlaczego-fizjoterapeuci-przylaczaja-sie-do-protestu-medykow-Pytamy-o-to-prezesa-KIF,223804,14.html>> (20.09.2022).

solve these problems have never been effectively and comprehensively implemented, as reform would require many costly sacrifices.

The low level of healthcare in Poland is also noticeable to patients. The predominant opinion is that it does not provide the proper quality of medical services in cases of health loss, nor the kind of life expectancy found in other European countries. The Center for Public Opinion Research (CBOS) in 2018 surveyed the public's opinion on the functioning of health care in Poland. Only a third of respondents positively assessed the healthcare system. Of the 66% of respondents who spoke negatively, 27% said that health care is terrible. At the same time, in the part of the survey dealing with services and advice received through universal health insurance, 70% of respondents positively assessed the competence of doctors, their availability in primary health care (68%) and their commitment to their work (65%). On the other hand, the healthcare system received the lowest marks for the availability of appointments with specialists (83% of negative votes) and the insufficient number of medical staff in hospitals (70%). Half of the respondents believed that the problem with the quality and availability of services is caused by too little public funding for the healthcare system and the poor disposition of available funds¹⁸.

These opinions prove that before 2020 everything ‘somehow’ worked – in some areas a little more efficiently, in others worse. It should be added that public criticism is unlikely to cover the clinical side of our health system¹⁹. There are hospitals in Poland that employ outstanding specialists in various fields of medicine, whose work and achievements are very highly rated not only in our country but also abroad, as evidenced by the ranking of the 48 best Polish hospitals presented on the pages of the American weekly *Newsweek*²⁰.

Changes in Polish healthcare during the COVID-19 pandemic

Health systems worldwide were not designed and prepared to deal with the SARS-CoV-2 pandemic, which erupted violently and proved to be an unpredictable, large-scale health challenge that required urgent mobilization of resources and affected the entire population. Poland was also not prepared for it. Practical measures to prepare for the pandemic were initiated in our country in January 2020. Special procedures were introduced for passengers arriving from China, and laboratory testing of people suspected of being infected with

¹⁸ CBOS, *Opinie na temat funkcjonowania opieki zdrowotnej. Komunikat z badań nr 89*, Warsaw 2018.

¹⁹ *Reforma systemowa w służbie zdrowia – stan prac i nowe zadania*, <<https://archiwum.mz.gov.pl/aktualnosci/reforma-systemowa-w-sluzbie-zdrowia-stan-prac-i-nowe-zadania/>> (20.09.2022).

²⁰ *World's Best Hospitals 2021*, <<https://www.newsweek.com/best-hospitals-2021/poland>> (20.11.2022).

the SARS-CoV-2 virus began. The Chief Sanitary Inspectorate warned against travelling to countries with numerous disease centres, such as Italy and South Korea. Visits to hospitals have been forbidden. Medicines that could help fight coronavirus had to stay in Poland. In early March 2020, Poland joined the European Union's mechanism for joint crisis tenders to purchase protective measures, medicines, and vaccines²¹.

The first official case of SARS-CoV-2 in Poland was reported on March 4, 2020, in Zielona Gora²². At that time, thirteen laboratory facilities were in the country, where samples were tested for SARS-CoV-2. From March 14 to 20, 2020, an epidemic emergency was in effect in the country, and from March 20, 2020, an epidemic state was introduced in Poland. Subsequent measures taken to combat the pandemic included:

- a. a cancellation of mass events of more than 1,000 people in enclosed spaces;
- b. a transition of universities to remote teaching mode;
- c. closure of schools, kindergartens, nurseries (remote teaching has been introduced in schools);
- d. temporary closure of road, rail and air borders, with the introduction of mandatory quarantine for land border crossers;
- e. implementation of fines and imprisonment for violations of quarantine rules;
- f. introduction of a temporary ban on movement (with exceptions);
- g. temporary ban on gatherings of more than two people;
- h. restrictions on the movement of public transportation were introduced;
- i. temporary closure of boulevards, beaches, parks and playgrounds;
- j. order to wear protective masks in enclosed public spaces.

In the last days of April 2020, the Public Opinion Research Center surveyed public attitudes toward restrictions and epidemics. It was conducted among the online community. Nearly 60% of respondents felt that the SARS-CoV-2 pandemic was something unprecedented. The remainder regarded SARS-CoV-2 as just another seasonal disease and did not consider it unusual. Older people, residents of major cities and those with higher education were convinced of the uniqueness of the epidemic. Most respondents (78%) observed restrictions on interpersonal contact and leaving the house, which could indicate their fear of infection. Many surveyed communities approved of the high penalties for breaking the new rules. However, most respondents were

²¹ T. Bielecki, *Czy Unia Europejska robi za mało w sprawie koronawirusa?*, <<https://wyborcza.pl/7,75399,25786156,czy-unia-europejska-robi-za-malo-w-sprawie-koronawirusa.html>> (1.12.2022).

²² *Pierwszy przypadek koronawirusa w Polsce*, <<https://www.gov.pl/web/zdrowie/pierwszy-przypadek-koronawirusa-w-polsce>> (1.12.2022).

wary of the rules, believing them to be too vague, which could lead to abuse. In summary, in the initial stages of the pandemic, the public accepted the government's new recommendations²³.

The speed of the spread of SARS-CoV-2 forced the implementation of often chaotic or temporary measures. It caused a drastic change in the lifestyles of many social groups. Due to the particularly adverse impact of the virus on the elderly, seniors have had their life activities severely restricted. Long-term isolation in homes resulted in the deterioration of the health of the elderly, for whom movement and social gatherings are vital to building their health and well-being. The existing procedures and standards for nursing homes were not adapted to the actual function of these institutions. Many outbreaks of epidemics in nursing homes in Poland were noted, which staff could not handle. During the pandemic, disabled people who were deprived of the opportunity to continue occupational therapies also increased. It negatively affected their health and increased the risk of mental crises in families without institutionalized support. The issue of oncology patients was similar. Those who had already been diagnosed had continued treatment. However, patients with cancer suspicion had a more complex situation because the epidemic in Poland has significantly increased the time for diagnostic procedures²⁴.

The SARS-CoV-2 pandemic has brought chaos to every aspect of state operations. It has forced a reorganization of logistics, transportation, economic relations, and international relations. However, it has triggered the need for numerous organizational changes in the health system, a more outstanding human capacity commitment, securing the necessary personal protective equipment and expanding the capacity of hospitals to increase the number of beds for patients infected with the SARS-CoV-2 virus.

The so-called Coronavirus Special Act (in Polish: *specustawa*) most clearly demonstrates this, or the Law of March 2, 2020, and unanimously adopted by Parliament on March 29, on special solutions related to the prevention, prevention and control of COVID-19, other infectious diseases and emergencies caused by them (OJ 2020, item 1423, as amended). It establishes the principles of preventing and controlling SARS-CoV-2 virus infection, the functions of public administration and citizens against the disease, and the rules for covering the costs of implementing the above activities. In addition, through this act, fourteen other laws were amended, including those on the professions of physician and dentist, the State Sanitary Inspectorate, on the profession of

²³ CBOS, *Opinie o epidemii koronawirusa i związanych z nią restrykcjach. Komunikat z badań nr 58*, Warsaw 2020.

²⁴ „Ochrona zdrowia w czasie epidemii” – rekomendacje Rady Ekspertów przy Rzeczniku Praw Pacjenta, <<https://www.gov.pl/web/rpp/ochrona-zdrowia-w-czasie-epidemii-rekomendacje-rady-ekspertow-przy-rzeczniku-praw-pacjenta>> (5.12.2022).

physiotherapist, the professions of nurse and midwife, public blood service, the Medical Research Agency, the Pharmaceutical Law, the State Emergency Medical Service, and on the prevention and control of infections and infectious diseases in humans. One of the changes introduced by *specustawa* was to simplify the return to active practice for midwives and nurses with a minimum 5-year career break. It was a response to understaffing, which was additionally depleted by quarantine. The act also introduced changes and additional possibilities in the organization of the work of medical entities:

- a. simplification of medical record keeping;
- b. the possibility for medical professionals to perform overtime, and additional work in medical entities, including the use of the so-called 'opt-out' clause;
- c. employment of a quarantined medical worker in the form of remote work, while not risking the loss of additional care benefits;
- d. obtaining sickness benefits at 100% of the salary base by medical employees placed in quarantine due to contact with infected persons as part of their professional duties²⁵.

The changes in the organization of medical facilities' work were aimed at optimal use of limited human resources. After the legalization of the law, it became possible to extend working hours (and the corresponding salary) not only for employees of medical entities with higher education but also for those with other levels of qualification, as well as for employees of such institutions as regional blood donation centres and the State Sanitary Inspectorate. Under the new law, medical professional examinations and specialization recruitment have been moved. It became possible to refer a doctor-in-training to perform tasks in combating epidemics while counting this time as part of the internship and speciality training period. Pharmacists gained the right to issue the so-called pharmaceutical prescription in the event of a threat to a patient's health and life.

The law also allowed the involvement of soldiers of the Territorial Defense Forces in the fight against the pandemic, who, among other things, were responsible for the initial selection of patients and taking swabs at collection points. It also accelerated and streamlined investments in the health sector by exempting the procedure for giving an opinion on the advisability of investments. Finally, the act introduced an additional ability – home isolation. It is applied to people with a mild course of illness without the need for hospitalization. As a result, it caused an increase in the available base of hospital beds for people with acute SARS-CoV-2. The rules on home isolation and quarantine were based on the ECDC's guidelines for risk assessment of

²⁵ *Walka z koronawirusem. Sejm uchwalił zmiany w 14 „zdrowotnych” ustawach*, <<https://serwisy.gazetaprawna.pl/zdrowie/artykuly>> (20.12.2022).

infection control in Europe and EU countries²⁶. The CBOS survey from July 2020 illustrated the legitimacy and effectiveness of the changes introduced by the *specustawa* law.

The spread of the SARS-CoV-2 infections significantly affected the use of healthcare services in Poland. In the first quarter of the epidemic (March-July 2020), more than 40% of respondents experienced inconveniences with access to medical care. It was manifested as cancellations and postponements of appointments, treatments, examinations, hospital admissions, problems with obtaining sick leave and prescriptions, and general difficulties in accessing medical services²⁷. Comparing data from 2018 and July 2020, CBOS states there was a clear increase in patients who didn't treat or have health checks (from 12% to 30%), and a decrease in patients who use medical services in a 'mixed' form (public and non-public, from 48% to 28%)²⁸. There has been a general decline in the use of primary care doctors, specialists, diagnostic and laboratory tests and dental treatment and a slight increase in people getting examined and treated only by supplementary insurance or with money from the household budget. The above data may respond to the difficulty of accessing medical services under public health insurance.

The SARS-CoV-2 pandemic has contributed significantly to the dissemination of telemedicine worldwide. Although such services have been available in Poland for many years, they were not popular due to telemedicine being treated as a curiosity and referred to with reserve. During the first months of the epidemic, Poles primarily consulted doctors by phone or online. This was due to the so-called e-prescriptions and e-referrals, which are still growing in popularity²⁹. The need for telemedicine services was also recognized by the European Commission, which subsidized the e-health platform with PLN 120 million. It allowed the update and expansion of the IT system with new functionalities. One of them is an online project for telemedicine which can be found on the patient.gov.pl website. It was designed for people who suspect infection of SARS-CoV-2 and need a medical consultation. The system allows registered patients to connect with doctors or other medical professionals (both by online form and video consultation). After the consultation, the patient could receive notification via text message or email about the next steps of treatment. At the same time, anonymized data can be reported for the health care system. Furthermore, the system can generate analytical reports to track data on patient service times, waiting times and waiting queues. For analytical purposes, the

²⁶ *Ibidem*.

²⁷ CBOS, *Opieka medyczna w czasie pandemii. Komunikat z badań nr 88*, Warsaw 2020.

²⁸ CBOS, *Korzystanie ze świadczeń i ubezpieczeń zdrowotnych. Komunikat z badań nr 98*, Warsaw 2020.

²⁹ CBOS, *Opieka medyczna w czasie pandemii, op. cit.*, pp. 4-5.

system also generates data on the distribution of requests with an assignment of their location to a map, which in the future can be helpful in the early detection of subsequent outbreaks, among other things³⁰.

Restricted access to health services has been particularly felt by people undergoing oncological treatment, patients after strokes and heart attacks, and patients with diabetes and other chronic diseases. Since the beginning of the pandemic, the Patient Ombudsman has received many complaints from the above patient groups. These included the inability to consult about the condition, renew prescriptions, and receive conflicting recommendations. It was associated with the lack of clear recommendations for patients who have not contracted SARS-CoV-2 or are suspected of coronavirus infection but need urgent cardiac or oncological care³¹. A difficult situation was also faced by patients with the suspected oncological disease, in whom the timing of diagnosis is a critical factor in the entire treatment process.

The inconvenience of treating patients with chronic diseases was that the healthcare system focused primarily on countering the spread of the pandemic and providing care for patients infected with the SARS-COV-2 virus. The essential resources of medical personnel and the material infrastructure of the health care system were incorporated into these activities.

Coronavirus vaccines played a breakthrough role in the fight against the pandemic. European Union institutions have also been involved in their development and marketing in Poland. At the end of December 2020, pharmaceutical companies completed the first stages of clinical trials of SARS-CoV-2 vaccines and obtained conditional marketing approval. On 21 December 2020, the European Commission agreed to allow BioNTech and Pfizer to market the vaccine, Moderna received such approval on 6 January 2021, AstraZeneca on 29 January, and a company belonging to the Johnson & Johnson group on 11 March 2021. To date, the European Commission has secured up to 4.4 billion doses of vaccines against SARS-CoV-2³².

Each European country has prepared its vaccination strategy. On 27 December 2020, Poland launched a national immunization program against SARS-CoV-2. Healthcare workers were given priority for vaccination (the so-

³⁰ *Telemedycyna wychodzi na prowadzenie*, <<https://politykazdrowotna.com/artykul/telemedycyna-wychodzi-na-prowadzenie/830499>> (12.12.2022).

³¹ M. Zieleniewska, *"Chorzy na nowotwory i serce byli w pandemii pozostawieni sami sobie. Innym wydawano sprzeczne zalecenia". Kto jest temu winny?*, <https://www.medonet.pl/koronawirus/koronawirus-w-polsce,chorzy-na-nowotwory-i-serce-byli-w-pandemii-pozostawieni-sami-sobie--innym-wydawano-sprzeczne-zalecenia--kto-jest-temu-winy-artykul,01684409.html?utm_source=www.medonet.pl_viasg_medonet&utm_medium=referal&utm_campaign=leo_automatic&srcc=undefined> (20.12.2022)

³² *Securing access to vaccines*, <https://commission.europa.eu/strategy-and-policy/coronavirus-response/public-health/eu-vaccines-strategy_pl> (20.12.2022).

called '0' group). Cancer patients who received chemotherapy or radiation therapy after 31 December 2019, were also included in the priority group³³.

In the second half of January 2021, Poland's universal vaccination against SARS-CoV-2 began. The program first covered people over 80 years of age. In the following months, subsequent age groups were allowed to receive the vaccine, depending on the vaccination levels of groups previously eligible to join the program and the availability of formulations. By the end of 2021, SARS-CoV-2. Nearly 20 million adults have been vaccinated. However, vaccination rates, especially among the elderly at the highest risk of dying from SARS-CoV-2, remained lower than in many EU countries.

The Polish Minister of Health, on 16 May 2022, officially declared the end of the epidemic state, introduced on March 20, 2020, replacing it with an epidemic emergency. Currently, the epidemic has begun to move into an endemic phase, where infection levels are low enough that people are beginning to learn how to live with the virus, protecting themselves through vaccination, antiviral drugs, testing, and, above all, following basic hygiene rules³⁴.

Recommendations for changes in Polish health care after the epidemic

The SARS-CoV-2 pandemic showed the healthcare problems in Poland and simultaneously provided an opportunity to discuss the necessary further reforms. The current situation has proven that the state of the population's health should be a priority in the government's activities, as it is a fundamental condition for sustainable socioeconomic development and the stable functioning of the state. Furthermore, weaknesses in the system showed the need for specific measures to optimize its functioning. Here, we attempt to identify the fundamental directions of change that can support medical personnel rebuilding a robust, well-organized, efficient, and crisis-proof healthcare system.

1. A systematic annual increase in funding for the health sector. For many years, experts have underlined that underfunding is the biggest problem facing the Polish healthcare sector. Currently, the level of public financing of the healthcare sector in Poland is one of the lowest in Europe. An increase in healthcare financing should occur in the coming years. Many Polish parliamentarians point to the need to increase public spending on health care to 6% of GDP in 2023. It would be an

³³ *Szczepionki przeciwko COVID-19: kto należy do grupy „zero”?*, <<https://www.infodent24.pl/lexdentpost/szczepionki-przeciwko-covid-19-kto-nalezy-do-grupy-zero,117044.html>> (20.12.2022).

³⁴ *Koniec pandemii? Szef WHO: widzimy szansę*, <<https://www.medonet.pl/koronawirus,koniec-pandemii--szef-who--widzimy-szanse,artykul,53174732.html>> (21.12.2022).

unprecedented 1% increase, as we only saw a 0.4% increase between 1990 and 2019. The funds would be used to improve the quality of public health care, raise wages in the sector and reduce problems with citizens' access to medical services.

2. Measures to enable more medical personnel. The SARS-CoV-2 pandemic has significantly highlighted the shortage of medical personnel in Poland. It has been pointed out for years that in Poland we have the lowest in the European Union and one of the lowest among OECD countries, the ratio of doctors per thousand inhabitants – 2.415. It is far from the average level of the indicator for the European Union, which amounted to 3.8. Therefore, it is necessary to actively increase the supply of healthcare workers through a modern system of training medical staff and optimizing the use of human resources in the health sector.
3. Healthcare is a prerequisite for economic development and appropriate quality of life. The statement was confirmed by the CBOS examination in July 2021, which showed that the pandemic caused the understanding of the healthcare system's role and importance to increase in our society's minds. Most respondents admitted that healthcare has become of fundamental importance to both citizens and the state.
4. Innovative medicines and countering delays in diagnosis and treatment. The SARS-CoV-2 pandemic demonstrated the need to work on the development of modern and effective vaccines. Unfortunately, in Poland, placing trust in innovative medicines has not been the norm. There are many examples of treating spending on innovative therapies only as a cost to the system and a burden on public finances. As a result, many modern drugs are not on the reimbursement list, which in most cases excludes their use by Polish patients. Meanwhile, effective treatment of patients with modern therapies results in fewer complications and severe ailments, which may reduce health and social spending in the future³⁵.
5. Strengthening e-health activities. During the pandemic, there was a significant increase in telemedicine consultations. Virtually all primary medical care and a large portion of outpatient speciality care have shifted to this mode. Greater use of e-health solutions was also observed, including e-prescriptions, e-visits, e-referrals, etc., which should be continued in the following years.

³⁵ A. Rulkiewicz, *Zdrowie Polaków po pandemii. Co możemy zrobić razem?*, Warsaw 2020; A. Rybarczyk-Szwajkowska, A. Staszewska, M. Timler, I. Rydlewska-Liszowska, *Zmiany organizacyjno-finansowe w pracy personelu medycznego podstawowej opieki zdrowotnej w okresie pandemii COVID-19 w Polsce*, „Medycyna Pracy”, 2021, No 5 (72), pp. 591-604; *Ochrona zdrowia w czasach pandemii. Zagadnienia publicznoprawne, medyczne i ekonomiczne*, M. Dobska, E. Kosiński, M. Urbaniak (ed.), Poznań 2021.

6. Healthcare as an investment in the future. The impact of the population's health status on the quality of our socioeconomic life occurs over the long term. The effects that are not visible in the short term do not prompt policymakers or the public to support the health area adequately. We should start thinking about supporting health as an economic and social investment.
7. Health security of citizens. The SARS-CoV-2 pandemic has highlighted viewing the healthcare field as a battlefield against disease, which may make it possible to qualify health security as an element of national security. By analogy with military security, the healthcare system should always be in a state of readiness to manage a crisis and, regardless of the situation, keep citizens in good shape through appropriate preventive and therapeutic measures. So that in an emergency, the system's capacity will be as high as possible³⁶.

Summary

The SARS-CoV-2 pandemic has made us see the key problems of health care in Poland more clearly than before. At the same time has contributed to a significant increase in social and political consensus for the introduction of expected changes in the system. Therefore, we believe that we need to seize the current moment and introduce changes that will improve the quality of citizens' health for the benefit of Poland's socioeconomic situation in the short term and over the next several years.

A key issue in the complex process of optimizing the Polish health service is to continue to strengthen awareness of the importance of health care for society and the economy. It is desirable to consolidate thinking about health as a factor directly related to the quality of social life and the economy. At the same time, looking at the possible return on investment in our health security is essential, not just the cost perspective.

The basic steps to optimize Poland's healthcare system are to increase financial and human resources for healthcare, shift patient treatment from inpatient to outpatient treatment, and implement e-health solutions to the fullest extent possible.

³⁶ G. Gielerak, K. Obłąkowska, A. Bartoszewicz (ed.), *Jak przygotować polską ochronę zdrowia na kolejne epidemie?*, Warsaw 2021; S. Szalewicz, *Wpływ dostępności do służby zdrowia na skutki pandemii COVID-19 w Polsce – analiza regionalna*, [in:] *Wymiary i determinanty rozwoju przestrzennego*, A. Zakrzewska-Półtorak (ed.), Wrocław 2021, pp. 93-109.

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