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Public health in Korea and Europe: contemporary challenges and possibilities for cooperation

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Introduction

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Although the EU and South Korea have excellent political relations, strong public health systems and health cooperation plays a significant role in their foreign policies, health cooperation between them, including EU member states, has traditionally been quite limited. For example, although the EU and South Korea hold over 40 sectoral dialogues and forums, none of them focuses on public health. The lessons learnt from the COVID-19 pandemic point to the significant benefits in increasing cooperation on public health between Europe and South Korea to better prevent and address the future developments of this disease and of new trans-border infectious diseases. This enhanced cooperation on public health would not only benefit the peoples of Europe and South Korea, but have a global impact, since it could help improve global health governance and materialise in joint health cooperation projects in developing countries.

The COVID-19 pandemic has made painfully clear that public health is an international public good and that global international health governance has limitations to guarantee it in terms of preparedness and capacity to respond. Despite being aware that devastating pandemics strike mankind periodically, supply chains of drugs and medical equipment are unreliable, most countries do not have adequate reserves of pharmaceutical products and medical supplies, and international investment in new vaccines is insufficient.¹ The response of the international community to the pandemic was hampered by an excessive politicisation for two reasons: its link with the management of globalisation and the geopolitical competition between China and the US. In a globalised world, the fight against infectious diseases is not only a public health issue. It also has obvious implications in the economic, political and security areas, as it requires managing risks inherent to globalisation such as the movement of people and goods. In addition, the pandemic was used by the US and Chinese authorities as a political weapon to erode the other's image, even resorting to disinformation to do so. This great power rivalry had a significant impact on the governance of global health since the Trump Administration withdrew from the World Health Organisation (WHO), while China showed its ambition to extend its influence within the organisation. This, together with the unilateral response of many national authorities, which raced to secure doses for their domestic population and made no significant efforts to coordinate a global strategy against the pandemic, severely constrained potential international cooperation for tackling COVID-19.

¹ Michael T. Osterholm & Mark Olshaker (2020), 'Chronicle of a pandemic foretold', *Foreign Affairs*, vol. 99, nr 10, https:// www.foreignaffairs.com/articles/united-states/2020-05-21/coronavirus-chronicle-pandemic-foretold?fa_anthology=1126067.

In this context, it is particularly urgent that stakeholders committed to multilateralism such as the EU and South Korea take an active role in international health governance. The EU and South Korea have pledged to work together and through multilateral institutions such as the UN, WHO, WTO (the Ottawa Group) and G20 to support each other and also less developed countries in response to COVID-19.² Doing so, they have also supported the WHO's leading role in coordinating the fight against the pandemic. In addition, both sides are united in their efforts to develop vaccines and treatments to be used for their respective citizens as well as for those living in vulnerable countries. Hence their participation in COVAX, which is particularly significant in the EU's case, to ensure universal access to tests, therapies and vaccines to counter COVID-19.

Despite some differences –for example criticism by South Korea's Foreign Minister of the EU's 'vaccine nationalism' when Brussels threatened to stop vaccine exports as a reaction to the reduction in the doses delivered by Astra-Zeneca due to its agreement with the Commission–,³ leaders of both the EU and the Republic of Korea believe that the COVID-19 pandemic will highlight both sides' shared values and strengthen their already existing strategic partnership. In responding to the current health crisis, during the EU-Korea summit in June 2020 they noted several ways of increasing cooperation: (1) increasing response capacities through coordination and information sharing by the health authorities; (2) offering mutual support in gaining access to medical products and cooperating in medical research and development projects; and (3) ensuring that there is a global response to the crisis where international organisations play a role and that vulnerable countries do not get left behind.⁴ More recently, in a February 2021 Joint Committee meeting, the EU and South Korea reaffirmed along the same lines the importance of being prepared for the possibility of future COVID-19 outbreaks, mutations/changes in the behaviour of the virus and other health crises.⁵

Nevertheless, the scope of cooperation between the EU's institutions and South Korea in health matters is very limited as the EU's role in public health is restricted by European treaties to complement the action of the states. Therefore, this working paper also covers the cooperation in public health between the EU member states and Korea. This was an underdeveloped area of cooperation before COVID-19 but intensified after the outbreak of the pandemic in Europe as the authorities looked East for partners with an effective record in managing the pandemic. South Korea's mass testing strategy was praised throughout Europe and there was great interest in learning about its best practices to tackle COVID-19 and buying its immunological tests.

3 Oscar Williams-Grut (2021), 'DAVOS 2021: Japan and Korea attack EU's vaccine nationalism', Yahoo Finance UK, https:// uk.finance.yahoo.com/news/davos-2021-japan-korea-vaccine-nationalism-covid-19-coronavirus-eu-122117522.html.

4 European Council (2020), 'Republic of Korea-EU leaders' video conference meeting, 30 June 2020', https://www. consilium.europa.eu/en/meetings/international-summit/2020/06/30/.

² European External Action Service (2020), '10 years of the EU-Republic of Korea', https://eeas.europa.eu/sites/eeas/files/ factsheet_eu_republic_of_korea_june-2020-v2.pdf.

⁵ European External Action Service (2021), 'EU-Republic of Korea: 17th Joint Committee', Press Release, https://eeas. europa.eu/delegations/south-korea/92916/eu-republic-korea-17th-joint-committee_en.

The remainder of this working paper is divided into four chapters. In the first, Professor Seonjou Kang presents a South Korean perspective on health cooperation with the EU, underlining how bilateral cooperation on vaccine development and production, pandemic response and consultation mechanisms for pandemics could serve as steppingstones to global initiatives that could increase the capacity of the international community to prevent and manage future pandemics. In the second chapter, Ramón Pacheco-Pardo analyses the prospects for new venues for health cooperation between the EU and South Korea and between the EU and North Korea. Cooperation with South Korea is much more promising than with North Korea and could improve their capacity to address pandemics and even the global health governance system. The third chapter, written by Oskar Piertrewicz and Carolin Wefer, deals with public health cooperation between EU member states and South Korea during the COVID-19 pandemic through the examples of Germany and the Visegrad countries. Since health, including the management of health risks and crisis, is the competence of the member states, the chapter focuses on practical cooperation in these fields. The fourth chapter concludes and summarises the main findings of the previous three.

1. A Perspective on South Korea-EU health cooperation in the post-pandemic era

Seonjou Kang Professor, Korea National Diplomatic Academy and Institute of Foreign Affairs and National Security

The emergence of a novel Coronavirus (COVID-19) in China was first noticed by the World Health Organization (WHO) on 31 December 2019 and it took just three months for the virus to spread around the entire world. As of late May 2021, global COVID-19 infections and deaths have exceeded 168 million and 3.4 million respectively.⁶ Since infectious diseases do not recognise national borders, efforts by individual countries are insufficient to confront the outbreaks of trans-border infectious diseases; it needs a globally coordinated response. The scale of worldwide COVID-19 infections and deaths over the past 17 months, however, indicates that countries have failed miserably in forging global coordination. Further, what is worse is that this failure occurred despite the world's prior experience in fighting infectious diseases together and was due more to non-medical factors, such as international politics and governance, than medical ones.⁷

The experience of the COVID-19 pandemic highlights the urgency of addressing these nonmedical factors and restoring international cooperation if countries are to handle transborder infectious diseases better in the future. Countries need to take action, individually and collectively, to mitigate these non-medical factors with a view to improving both national and global health conditions. In the second year of the current pandemic, South Korea is strongly interested in building partnerships for trans-border infectious diseases based on its own successes and failures in dealing with the current pandemic. And forming a partnership with the EU, which has led much progress made in public health over the years, would serve both South Korea and the EU to achieve their public health goals.

1.1. Lessons learnt from the COVID-19 pandemic

In order to map out where South Korea and the EU can cooperate over health challenges, it is first necessary to understand what led to the COVID-19 pandemic.

1.1.1. Unpreparedness for trans-border infectious diseases

The first lesson to learn from COVID-19 is to realise how unprepared the world was for pandemics. Since the mid-1990s, trans-border infectious diseases have been identified as a major threat to humanity, but countries were hardly ready to tackle them even when

⁶ https://www.worldometers.info (last accessed 25/V/2021).

⁷ The fact that COVID-19 vaccines were developed within a year attests to this. Reportedly, vaccine development usually takes about 10 years and the likelihood that such efforts will result in an effective and safe vaccine is below 10%. By early July 2020 there were 160 candidate vaccines under development against COVID-19 and vaccination got underway in the US as early as mid-December 2020.

pathogens came to spread easily and quickly in the era of globalisation and climate change. In addition, the source of the current state of unpreparedness for trans-border infectious diseases can easily be identified: globalisation. While the latter has brought prosperity to many countries and peoples around the world, it has at the same time weakened national systems and abilities to respond to pandemics efficiently. COVID-19 laid bare the negative side of globalisation when global supply chains were disrupted and the ability of countries to respond to the pandemic were constrained.

1.1.2. The politicisation of infectious diseases

The second lesson from COVID-19 is that trans-border infectious diseases can become a volatile political matter ruining the basic fabric of society and of international relations. Trans-border infectious diseases need to be addressed not only to save lives, but also to maintain peace and stability in the world. The COVID-19 pandemic gave rise to unilateralism, intensified already existing tensions and undermined the global cooperation needed to combat the virus, resulting in the enormous suffering witnessed today. This is not to say that the intention of countries to protect their nationals was wrong, but it is a fact that their actions left some worse-off because they failed to coordinate with each other.

The failure of global coordination was partly caused by great power politics between China and the US. The two countries were respectively the origin, and the biggest victims, of the virus thus far, and their hegemonic competition fuelled the politicisation of COVID-19, constraining global cooperation. Other countries, not surprisingly, faltered in their cooperation efforts for the sake of protecting their nationals from COVID-19, thus accelerating the virus's global spread. When no country was willing or able to lead global coordination, the WHO, which has been the main multilateral organisation in charge of coordinating global response to trans-border diseases, failed to function properly. Under political pressure, the WHO was unable to come up with coherent guidelines to control the coronavirus and provide countries with incentives to comply with them. The COVID-19 pandemic has revealed that the multilateral institution established in 1948 has also come under tremendous stress and strain.

1.2. Measures to prepare for future pandemics

Considering the non-medical factors that have hindered the articulation of an effective global strategy against the COVID-19 pandemic, the minimum measures required to confront future pandemics should include the following.

1.2.1. Managing the effects of globalisation

One measure to reduce the risks of trans-border infectious diseases is to manage the risks inherent in globalisation. Trans-border infectious diseases spread around the world following the movement of people and goods. Thus, to a certain degree, managing globalisation would lower the risks of trans-border infectious diseases in the future. Having said that, however, managing globalisation to prevent future pandemics means neither closing borders nor erecting trade barriers. Rather it means that countries, at the very least, should build national

health systems to detect and respond to trans-border infectious diseases at their borders, while they remain open to each other. Countries should be encouraged to invest in building health systems even if they seem to go against the forces of globalisation. Investments in health systems will now cost less than the economic losses from future pandemics.

South Korea is a case in point for reorganising a health system as a way of managing globalisation. The country was able to cope relatively well with COVID-19 because it strengthened its infectious disease control system after an outbreak of MERS-CoV in 2015. The MERS-CoV was transmitted by a Korean returning from the Middle East and spread through health facilities as the patient moved from hospital to hospital for treatment. Over a two-month outbreak, the MERS-CoV caused 38 deaths from 186 infections, the largest case outside the Arabian Peninsula, and brought economic losses estimated at US\$8.5 billion. The outbreak exposed weaknesses in the health system, especially preparedness for emerging global infectious disease control.⁸

1.2.2. Recalibrating health cooperation

The scale of humanitarian and economic hardship from the COVID-19 pandemic in the era of modern medicine shows that multilateral public health cooperation has become less reliable, and US-China rivalry has increased the uncertainty. Needless to say, multilateral cooperation for public health deserves a chance to be restored with a view to responding better to future pandemics. The question is what form of cooperation would be effective.

While the WHO will remain the main institutional framework to coordinate the global response to trans-border infectious diseases, it would be desirable for the WHO's functions to be supplemented by a separate mechanism. With diverging interests and organisational politics, it is hard for the WHO to be agile and authoritative in responding to trans-border infectious diseases. In fact, the WHO does not command and control actual capabilities with which to combat trans-border infectious diseases, since they correspond to individual countries. Thus, it would be better to allow a separate mechanism, comprising countries with the actual ability to detect diseases, share information and supply medical goods in the event of global pandemics, to supplement the WHO's role.

1.2.3. Building up a pharmaceutical capacity

Responding to future pandemics requires building pharmaceutical capacity, especially for vaccines, across the globe. The COVID-19 pandemic has been plagued by vaccine nationalism, although not for the first time.⁹ A few wealthy countries secured more than enough COVID-19 vaccines for their entire populations while precluding other countries from accessing them . Vaccine nationalism is problematic not just ethically since it also contradicts every country's health, economic and strategic interests, too. It prolongs pandemics by hampering herd immunity at the global level and causes unnecessary international tension

⁸ Myoung-don Oh *et al.* (2018), 'Middle East respiratory syndrome: what we learned from the 2015 outbreak in the Republic of Korea', *Korean J Intern Med*, nr 33, p. 233-246, https://doi.org/10.3904/kjim.2018.031.

⁹ Vaccine nationalism first appeared during the 2009 Flu (H1N1) pandemic, which killed 18,138 people globally through May 2010. When a vaccine was developed in just seven months, wealthy countries bought up virtually all the supplies. Later Australia, Canada, the US and six other countries shared 10% of their vaccines with low-income countries.

out of resentment against vaccine-hoarding countries. Under vaccine nationalism there will be no winners; in the end, every country will become a loser.

Given the possibility that the COVID-19 pandemic will drag on, the most effective way to break the spread of the virus is global vaccination, for which the supply of COVID-19 vaccines is critical. However, vaccine supply is prone to bottlenecks because R&D and manufacturing are expensive and complex processes concentrated in a handful of developed countries. As long as vaccine R&D and manufacturing is concentrated, bottlenecks in vaccine supply will hamper an effective response to future pandemics. Therefore, vaccine R&D and manufacturing should be expanded beyond a small number of developed countries in order to prepare for future episodes. By developing a plan to coordinate mass manufacturing and distribution of vaccines across the globe, countries will increase their chances of protecting their citizens.

1.3. South Korea-EU health cooperation in the post-pandemic era

The COVID-19 pandemic has renewed interest in international health cooperation, as it has become clear that countries cannot achieve national security from trans-border diseases through individual efforts. At the same time, international cooperation in health needs to be upgraded from the usual practices of the pre-pandemic era. This provides the opportunity for South Korea and the EU to reshape their cooperation in health matters. Furthermore, since South Korea and the EU have strengths in different but complementary areas of health, their cooperation has the potential to produce outcomes beneficial both at the bilateral and global levels.

South Korean-EU cooperation in health is already in motion. Soon after the COVID-19 pandemic broke out in 2020, South Korea and the EU set up a bilateral framework to encourage regular exchanges, learn best practices from each other and design common positions on multilateral health issues.¹⁰ South Korean-EU health cooperation includes disease control, crisis response and the development of pharmaceutical products. Nevertheless, South Korea and the EU still have room to take their cooperation in health one step further. And, in so doing, South Korean-EU cooperation of a bilateral nature can have global effects, too, serving as a springboard to facilitate multilateral cooperation for future pandemics.

1.3.1. The partnership for vaccines

South Korea and the EU can take their health cooperation into the area of vaccines. Capitalising on their respective strengths in the pharmaceutical industry, South Korea and the EU can become partners in vaccine R&D and manufacturing.

^{10 &#}x27;Republic of Korea-EU Leaders' Video Conference Meeting', 30/VI/2020, https://president.globalwindow.org (last accessed 17/V/2021).

After a year suffering from the current pandemic, vaccines have proved to be the most effective way of ending the pandemic. At the same time, however, unequal vaccine distribution has emerged as a problem. Proposed solutions to vaccine nationalism include making vaccines global public goods, and therefore a resource to be made available to all with one country's use of a vaccine not interfering with another's, and with an intellectual property waiver for vaccines.¹¹ Intellectual property sharing may solve vaccine nationalism but only in the longer term. Producing vaccines requires not only patents but also an entire ecosystem. That is why vaccines have been produced only in a dozen countries that can handle the quality-controlled active ingredients, such as the US, the UK and the EU. Even if intellectual property waiver is not the most urgent step to solve vaccine nationalism. An increase in vaccine manufacturing capacity should take place before or be accompanied by sharing intellectual property.

Vaccines can be an area for making progress in South Korean-EU health cooperation because they are complementary: the EU has advanced knowledge and expertise in vaccine R&D, whereas South Korea has pharmaceutical expertise and the infrastructure to produce vaccines under patent protection. Following the 2009 flu pandemic, South Korea started to take action to raise its vaccine self-sufficiency to 80% by 2025 and in 2019 launched a US\$1.7 billion five-year plan for biotech-related R&D and commercialization. Twenty-three pharma sites approved by the European Medicines Agency (EMA) are located in South Korea.¹² The South Korean-EU partnership in vaccine R&D and manufacturing would contribute to increasing vaccine supplies in the event of future pandemics. The current pandemic is not likely to be a one-off experience, and the world will need vaccines more than once. The vaccine R&D and manufacturing system that South Korea and the EU are building today can be a preparation for future pandemics. Also, it would set an example for the transfer of vaccine technology to low- and middle-income countries.

1.3.2. A bilateral agreement for pandemic response

South Korea and the EU can consider an agreement for pandemic coordination with a view to preventing hindrances in the response to pandemics. Responding to trans-border diseases is a multi-dimensional task that should take into consideration health, the economy, trade and border security. The response to trans-border diseases should be orderly and predictable if coordination is arranged in advance. Pre-arranged coordination for trans-border diseases would be workable for both South Korea and the EU because of the high degree of interdependence and systemic compatibility between them. Also, the bilateral coordination for trans-border diseases between South Korea and the EU could present a prototype for a multilateral pandemic treaty.

¹¹ UN Secretary-General António Guterres (2021), 'Only together' Campaign, 11/III/2021, https://news.un.org/en/ story/2021/03/1087072 (last accessed 20/V/2021); and 'Biden-Harris Administration is providing at least 80 Million COVID-19 vaccines for global use, commits to leading a multilateral effort toward ending the pandemic', https://www. whitehouse.gov/briefing-room/statements-releases/2021/05/17/ (last accessed 20/V/2021).

¹² Global Data Healthcare (2020), 'South Korea: biologics production and Covid-19 deals boost bio/pharma industry', 14/ XII/2020.

South Korean-EU cooperation in health is currently guided by the 2010 EU-South Korea Framework Agreement. The Agreement designates areas of health cooperation in rather broad strokes such as health strategy and plans, surveillance of infectious diseases and the safety of pharmaceutical products. However, given the complexity of pandemic responses, South Korea and the EU could conclude an additional agreement tailored to such an eventuality. A pandemic coordination agreement between South Korea and the EU would indicate that progress has been made in their cooperation in line with the new requirements of the post-pandemic era.

A pandemic coordination agreement between South Korea and the EU could cover several issues. First, travel assistance and export facilitation of medical and vaccine materials destined for the other party should be included. Today's medical supply chains are global. Neither South Korea nor the EU are likely to have all the inputs needed to respond to pandemics. It is necessary for both parties to assure the other of their unwillingness to impose export controls on medical inputs in a pandemic situation as a way to secure them for themselves.

Secondly, a pandemic coordination agreement between South Korea and the EU could cover vaccines, particularly investments in vaccines and their allocation criteria. This item would make sense all the more if South Korea and the EU were to form partnerships in vaccine R&D and manufacturing. They could arrange funds for vaccine development and allocation in proportion to public health needs rather than national wealth. By doing so, South Korea and the EU would need to conduct joint research on the allocation of vaccines needed to achieve public health objectives –such as protecting essential workers (healthcare and military personnel, etc) and vulnerable populations while effectively breaking transmission chains–. Having this information would help reduce a country's excessive demand for vaccines to immunise its entire population, as it learns to calibrate the volume of vaccine needed to reach its public health goals.

Third, a pandemic coordination agreement between South Korea and the EU could address regulatory harmonisation over medicines and medical supplies. A transparent pathway to medicine licensing and indemnification would spur the vaccine partnership between South Korea and the EU. Regulatory harmonisation between South Korea and the EU would reduce the costs and risks associated with vaccine development from the pharmaceutical companies' point of view.

1.3.3. Setting up consultation mechanisms for pandemics

South Korea and the EU could consider forming a consultation body for trans-border infectious disease. This bilateral body would detect disease outbreaks, share information and support the provision of medical responses in the event of pandemics. Such a consultation mechanism between South Korea and the EU could further become a stepping stone to building a broader body that would conduct similar functions with more countries in order to raise global preparedness for trans-border infectious diseases.

South Korea and the EU regard the WHO as the main institutional framework for global health. However, the fact that the WHO has difficulty in responding to trans-border infectious diseases with an objective authority due to its split interests in global health gives sufficient ground for South Korea and the EU to consider a separate mechanism for trans-border infectious disease. A mechanism that consists of systemically important countries with an actual ability to detect, share information and supply medical goods could supplement the WHO in coordinating the preparation for pandemic outbreaks.

Speaking of a broader body with such functions, the Global Health Security Agenda (GHSA) could serve a model. The GHSA was launched in 2014 by 69 countries, international organisations, non-governmental organisations and private-sector companies under US leadership.¹³ The GHSA aims to build and improve country capacity in the prevention and early detection of, and effective response to, infectious disease threats. The COVID-19 pandemic was exactly the situation that the GHSA was designed to address. It would be useful to have a GHSA-like body to strengthen the world's ability to prevent and respond to trans-border infectious diseases. Thus, South Korea and the EU could cooperate to create a new body similar to the GHSA or at least reinvigorate it.

1.4. Conclusions

From South Korea's perspective, health cooperation with the EU is desirable. After the COVID-19 pandemic changed the nature and priorities of public health around the world, South Korea's needs and interests in international health cooperation have changed accordingly. In that light, partnering with the EU makes sense for South Korea, since they have complementary interests and resources –expertise and finance– in public health, which would enable them to work alongside. In so doing, South Korea and the EU would need to transcend the health cooperation of the pre-pandemic era and chart a new territory for cooperation such as innovating (global) health governance and networking vaccine R&D and manufacturing. Once South Korea and the EU explore cooperation in these new areas, they will not be the only beneficiaries as they would also have a positive effect on global health.

¹³ https://www.cdc.gov/globalhealth/security (last accessed 21/V/2021).

2. Public health cooperation between Korea and Europe post-COVID-19: the EU perspective

Ramón Pacheco-Pardo

2.1. Introduction

The COVID-19 pandemic has laid bare the need to strengthen global health cooperation. Without cooperation, the international community will not be able to prevent and address future pandemics. Neither will the international community be able to tackle other health concerns such as dealing with communicable diseases (eg, AIDS/HIV and tuberculosis), lowering addiction rates (eg, drugs and tobacco) or universalise immunisation for certain diseases (eg, hepatitis and measles).

Public health cooperation is a cornerstone of the EU's foreign policy. In 2010 the Council set out the priorities of the EU's global health policy: worldwide improvement of health, reduction of disparities and protection against global health threats.¹⁴ From the EU's perspective, the three go together. And the international community ought to strive to prevent the causes behind poor health, support those suffering from health problems and learn lessons to address future diseases and other health hazards. Crucially, the EU sees health threats as global issues. Simply put, no single country can address health threats considering the globalised nature of the modern world.

Dating back to 2001, the European Commission has engaged in cooperation with the WHO. This includes general principles, objectives and procedures, including senior official meetings, and participation in meetings such as the WHO Executive Board and the World Health Assembly. Cooperation takes place at the WHO's Geneva headquarters for issues of global concern, with the WHO Regional Office for Europe dealing with issues of European concern, and in countries across the world for in-country cooperation. Furthermore, the European Centre for Disease Prevention and Control (ECDC) also works with the WHO, while the Commission and the European External Action Service (EEAS) work together to issue health-related statements on behalf of EU member states.¹⁵ The EU also works on public health issues through other UN bodies, via the implementation of the Sustainable Development Goals (SDGs), or through frameworks such as the Global Health Policy Forum or the Global Health Security Initiative.¹⁶ And the European Medicines Agency (EMA) is a member of four multilateral initiatives to coordinate action and share information on the

^{14 &#}x27;Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions The EU Role in Global Health', SEC(2010)380 SEC(2010)381 SEC(2010)382 /* COM/2010/0128 final */.

¹⁵ European Commission (2021), International Cooperation, https://ec.europa.eu/health/international_cooperation/ international_organisations_en (last accessed 6/l/2021).

¹⁶ European Commission (2021), *Global Health*, https://ec.europa.eu/health/international_cooperation/global_health_ en#:~:text=Cooperation%20encompasses%20both%20global%20health,health%20in%20the%20UN%20system (last accessed 6///2021).

approval and regulation of pharmaceutical products.¹⁷ But the WHO is the main institution through which the EU engages in addressing public health issues.

The EU also emphasises bilateral cooperation with third countries. This includes countries with strong capacities, sufficient resources and the ambition to both engage in bilateral cooperation and support global health governance. South Korea is one of them. As the EU and South Korea laid out in their joint statement following their June 2020 video conference, Brussels and Seoul have to work bilaterally through multilateral institutions to address COVID-19 and other public health issues.¹⁸ The COVID-19 pandemic should serve the EU and South Korea to strengthen cooperation in this area.

2.2. EU-South Korea public health cooperation

EU-South Korea public health cooperation has yet to fulfil its potential. Both are active members of the WHO, in the case of South Korea especially at the regional level. And they are also members of the four pharmaceutical-product-related initiatives mentioned above. Brussels and Seoul have also set up a bilateral framework allowing regular exchanges, opportunities to learn best practices from each other and coming up with common positions to take to multilateral institutions. But cooperation has been limited so far. Indeed, this has been the case between most countries around the world. The COVID-19 pandemic might change the current state of affairs, though. From the EU's perspective, it has brought a clear realisation that it is possible to learn from others. This could result in greater cooperation with South Korea, one of the countries that have better dealt with the pandemic.

At the bilateral level, article 21 of the 2010 EU-South Korea Framework Agreement makes specific reference to 'mutual cooperation and information exchange in the fields of health and the effective management of cross-border health problems'. This includes areas such as health strategy and plans, surveillance of infectious diseases and the safety of pharmaceutical products.¹⁹ However, more than 10 years after the Framework Agreement was signed there is no public health-specific bilateral dialogue, even if the EU and South Korea have already held more than 40 regular dialogues and meetings.²⁰ The bilateral dialogue on pharmaceutical products and medical devices has helped to facilitate trade in these products,²¹ but it does not have a public health component. Meanwhile, at the multilateral level there are regular

¹⁷ These four initiatives are: International Council on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH); International Coalition of Medicines Regulatory Authorities (ICMRA); International Pharmaceutical Regulators Programme (IPRP); and Pharmaceutical Inspection Co-operation Scheme (PIC/S). See European Medicines Agency (2021), *International Activities*, https://www.ema.europa.eu/en/partners-networks/international-activities (last accessed 13/l/2020).

¹⁸ European Council (2020), *Republic of Korea-EU Leaders' Video Conference Meeting, 30 June 2020*, 30/VI/2020, https://www.consilium.europa.eu/en/meetings/international-summit/2020/06/30/ (last accessed 6/I/2021).

^{19 &#}x27;Framework Agreement between the European Union and Its Member States, On the One Part, and the Republic of Korea, On the Other Part', 10/V/2010.

²⁰ Ramon Pacheco Pardo, Linde Desmaele & Maximilian Ernst (2018), *EU-ROK Relations: Putting the Strategic Partnership to Work*, Institute for European Studies, Brussels.

²¹ Ibid.

exchanges and information sharing between the EU and South Korea in the context of the WHO and, to an extent, the four pharmaceutical-product-related activities listed above. But these links could be significantly strengthened if underpinned by a dialogue focused specifically on health.

There is political will to reverse the fact that cooperation has been limited so far. Indeed, the health authorities from both the EU and South Korea plus the ECDC and the EMA on the one hand and the Ministry of Food and Drug Safety (MFDS) and the recently upgraded Korea Disease Control and Prevention Agency (KDCA) on the other have been sharing information and cooperating.²² Furthermore, the EU and South Korea have called for multilateral cooperation to assist the health systems of vulnerable countries.²³ In the case of the EU, the Commission's EU-Republic of Korea Dialogue Support Facility mentions global health issues as one of the areas to support.²⁴ As the COVID-19 pandemic continues to affect the EU, South Korea and the rest of the world, there is scope to strengthen cooperation in areas such as sharing information about best practices, new medical treatments and the implementation of appropriate track and tracing systems.

Once the COVID-19 pandemic subsides, the EU and South Korea have the potential to significantly boost bilateral health cooperation. Health areas that the EU prioritises as part of its foreign policy include disease control, the development of pharmaceutical products, health system strengthening, research on diseases, crisis response and the migration of health personnel.²⁵ South Korea has unique strengths in areas such as the development of pharmaceutical products and research on diseases. Therefore, it would make sense for EU agencies such as the EMA, relevant Commission Directorate-generals, universities and research centres, among others, to boost bilateral cooperation between Brussels and Seoul. The EU and South Korea could set up joint initiatives and provide joint funding. Indeed, the three science and technology agreements signed by the EU and South Korea in 2006 provide the framework for this type of cooperation to be strengthened.²⁶

Furthermore, the COVID-19 pandemic has served South Korea to successfully show its strengths in the area of disease control. The EMA and MFDS on the one hand and the ECDC and KDCA on the other should establish regular meetings, personnel exchanges and information sharing platforms to prevent and address future pandemics. Indeed, the MFDS already has agreements with, among others, its counterparts in Australia, Canada, Israel, Japan, and the US.²⁷ As for the ECDC, it already has MOUs with its counterparts in Canada,

27 MFDS (2021), *Bilateral Interactions with Non-EU Regulators*, https://www.ema.europa.eu/en/partners-networks/ international-activities/bilateral-interactions-non-eu-regulators (last accessed 6/IV/2021).

²² European Council (2020), Republic of Korea-EU Leaders' Video Conference Meeting, 30/VI/2020; EMA (2020), EMA and Korean Ministry of Food and Drug Safety to Share Confidential COVID-19 Information, 30/VI/2020.

²³ Ibid.

²⁴ European Commission (2019), Action Document for EU-Republic of Korea Policy Dialogue Support Facility, https:// ec.europa.eu/fpi/sites/fpi/files/annexe_10_eu-republic_of_korea_policy_dialogue_support_facility_pdsf_part1_v2.pdf (last accessed 6/l/2021).

²⁵ Susan Bergner & Maike Voss (2020), 'EU Global Health Policy: an Agenda for the German Council Presidency', SWP Comment 2020 C/12, March.

²⁶ See European External Action Service (2021), *Treaties Office Database*, https://ec.europa.eu/world/agreements/default. home.do (last accessed 6//2021).

China, Israel, and the US.²⁸ Meanwhile, the MFDS and KDCA cooperate closely with their counterparts across East Asia. Therefore, it would be relatively simple for the ECDC and KDCA to formalise bilateral cooperation.

At the multilateral level, the EU and South Korea can work together with other countries with strong public health systems to strengthen cooperation within the WHO framework. The COVID-19 pandemic is not going to be the last one, and there are other global health issues such as boosting vaccination rates and decreasing drug addiction levels that require multilateral cooperation. Since both the EU and South Korea have the expertise and financial resources to lead on these initiatives, they could do so together with other potentially willing countries such as Australia, Canada, Japan and the US. Boosting global health would be beneficial for the EU and South Korea even from a self-interested perspective, since it would help prevent new disease outbreaks.

Although the EU and South Korea regard the WHO as the main institutional framework to coordinate global action against COVID-19, they should continue to cooperate within the framework of the G20 Health Ministerial meeting.²⁹ In a post-COVID-19 environment, the meeting's emphasis on management of health risks and health security should serve as a springboard to boost cooperation. In particular, it would make sense for the EU, South Korea and the other partners to focus on areas already prioritised by the WHO, but on which the leadership of the G20 could serve to offer much-needed political support.

2.3. EU-North Korea public health cooperation

EU-North Korea public health cooperation is very limited, even compared with Brussels' cooperation with other developing countries. To a large extent, this is the result of a lack of transparency and underlying mistrust of third countries on the North Korean side. But cooperation has also been affected by the stringent sanctions regime on North Korea, which has created significant obstacles for governments and NGOs seeking to support vulnerable North Koreans.³⁰ These three factors are unlikely to change for the foreseeable future, with the partial exception of sanctions as the UN Security Council has been more willing to allow exemptions to the sanctions regime for humanitarian reasons.

Health cooperation between Brussels and Pyongyang essentially takes place at the country level. Dating back to 1995, the EU has been providing humanitarian aid to North Korea.³¹ EU aid, however, peaked in 2002 at US\$61.20 million and has been on an almost uninterrupted

²⁸ European Centre for Disease Prevention and Control (2021), *ECDC Partnerships*, https://www.ecdc.europa.eu/en/about-us/who-we-work/ecdc-partnerships (last accessed 6/l/2021).

²⁹ OECD (2021), *G20 Health Ministerial Meetings*, https://www.oecd.org/health/health-systems/g20-health-ministerial-meetings.htm (last accessed 6/l/2021).

³⁰ Kee B. Park, Miles Kim & Jessup Jong (2019), 'The human costs of UN sanctions and funding shortfalls for humanitarian aid in North Korea', *38 North*, 22/VIII/2019.

³¹ Mario Esteban (2019), *The EU's Role in Stabilising the Korean Peninsula*, Working Paper, 01/2019, Real Instituto Elcano, Madrid, 17//2019, http://www.realinstitutoelcano.org/wps/portal/rielcano_en/contenido?WCM_GLOBAL_CONTEXT=/ elcano/elcano_es/zonas_es/asia-pacifico/wp1-2018-esteban-eu-role-stabilising-korean-peninsula.

downward trend since then. In 2018 and 2019, EU aid to North Korea was below US\$5 million in each of them.³² Nonetheless, the EU continues to provide some aid to North Korea. Brussels prioritises improving health services, along with food provision and improving access to clean water and sanitation. The EU emphasises aid provision directly to North Korean citizens, rather than the government, and especially outside Pyongyang.³³ The EU provides aid to North Korea through the Directorate-General for European Civil Protection and Humanitarian Aid Operations and, since its launch in 2011, the Directorate-General for International Cooperation and Development (EuropeAid). It also provides aid through multilateral organisations such as FAO, UNICEF and the WFP.³⁴ And the EU coordinates its activities on the ground with the WHO.³⁵ The Food Security Office in Pyongyang coordinates the EU's aid activities in North Korea, including its health support projects.

The EU also provides financial and material support to the in-country activities of European and international NGOs operating in the health and related fields in North Korea.³⁶ However, these NGOs have stopped operating in North Korea as a result of the COVID-19 pandemic, and their personnel have left the country. It is unclear how many of them will return to the country once the North Korean regime reopens the country's borders. In any case, before the COVID-19 pandemic only around 10 European and international NGOs received EU support.

At the multilateral level, the EU and North Korea interact within the WHO. North Korea is fairly active in this organisation, of which it became a member in 1973 and which opened a country office in Pyongyang in 2001. Among others, North Korea has successfully eradicated measles and implemented a polio vaccine programme in its national immunisation plan with the help of the WHO.³⁷ In the specific case of the EU, its focus within the WHO framework relates to information exchange with North Korea.

Since the onset of the COVID-19 pandemic, cooperation between the EU and North Korea has been minimal. This has been the result of the North Korean regime's decision to close its borders, which has led many international institutions, NGOs and EU member states to temporarily close their offices in North Korea. However, Pyongyang's decision to apply to join COVAX should lead to cooperation between the EU and North Korea. COVAX is a facility set up by the WHO and GAVI to, among other things, provide vaccines to at least 20% of countries' populations.³⁸ As of December 2020, the EU and its member states

38 World Health Organization (2021), COVAX: Working for Global Equitable Access to COVID-19 Vaccines, https://www.who.int/initiatives/act-accelerator/covax (last accessed 6/l/2021).

³² OECD (2021), *Development Finance Data*, http://www.oecd.org/dac/financing-sustainable-development/development-finance-data/ (last accessed 6/l/2021).

³³ European Commission (2019), European Civilian Protection and Humanitarian Aid Missions. North Korea (DPRK), https://ec.europa.eu/echo/where/asia-and-pacific/north-korea_en (last accessed 6//2021).

³⁴ Ibid.

³⁵ World Health Organization (2021), About WHO in Democratic People's Republic of Korea, https://www.who.int/dprkorea/about-us (last accessed 6/l/2021).

³⁶ Korea Matters for Europe / Europe Matters for Korea (2020), https://www.korea-chair.eu/wp-content/uploads/2020/12/ Korea-Matters-for-Europe_30NOV2020.pdf (last accessed 6/l/2020).

³⁷ World Health Organization (2021), WHO in Democratic People's Republic of Korea, https://www.who.int/dprkorea (last accessed 6//2021).

had allocated €850 million in financial support for COVAX, making them the single largest donor to this initiative.³⁹ The EU, therefore, will indirectly provide COVID-19-related support to North Korea through COVAX.

In the longer term, EU institutions and European NGOs are likely to resume their regular health cooperation with North Korea. In this context, the EU could provide medical equipment and vaccines, share expertise, provide training opportunities in Europe and encourage North Korea to open up to greater health cooperation. Nonetheless, from the perspective of the EU it is unlikely that North Korea will become a stronger health partner compared with other developing countries. This would require Pyongyang to take substantial steps towards denuclearisation and more clearly pursue inter-Korean reconciliation for EU policy-makers to consider that conditions are ripe to prioritise engagement over sanctions, which would facilitate health cooperation.

2.4. Conclusions

From an EU perspective, public health cooperation with South Korea should increase post-COVID-19. After all, there is an existing bilateral and multilateral framework on which to base future cooperation. Plus, the COVID-19 pandemic has demonstrated the inadequacy of existing structures to prevent or manage a pandemic. Therefore, it makes sense for Brussels to boost cooperation with a country such as South Korea, which has the institutional capacity and financial resources to work together with the EU. From this perspective, South Korea is an ideal partner for Brussels.

When it comes to North Korea, however, the picture is different. Cooperation between Brussels and Pyongyang was minimal prior to the pandemic. It has been almost nonexistent throughout it. Therefore, the EU and North Korea will necessarily boost their health cooperation in the future because the baseline is very low. But in the absence of a change in North Korea's attitude towards its nuclear programme, Brussels is unlikely to strengthen its health support with North Korea to the same level as other developing countries.

³⁹ European Commission (2020), Team Europe Contributes €500 Million to COVAX Initiative to Provide One Billion Covid-19 Vaccine Doses for Low and Middle Income Countries, 15/XII/2020, https://ec.europa.eu/commission/presscorner/ detail/en/ip_20_2262 (last accessed 6//2021).

3. Public health cooperation between Germany and the Visegrad countries and South Korea during the COVID-19 pandemic

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Public health cooperation has become an important international topic since the outbreak of the COVID-19 pandemic in late 2019 and early 2020. As region after region have been affected, countries and government bodies have been seeking quick and effective responses and to learn from the lessons thereof.

At the outbreak of the pandemic in Europe, the continent was looking to its East Asian partners that had already demonstrated effective pandemic management systems. The existing level of health cooperation between EU countries and South Korea varies, however, to a great degree.

For Germany and the Visegrad Group (V4: the Czech Republic, Hungary, Poland and Slovakia), public health cooperation has so far been an underdeveloped part of the bilateral relations with the Republic of Korea (ROK).⁴¹ As Poland, Hungary, the Czech Republic and Slovakia are amongst the most important countries for South Korean investments in the EU, the pandemic has been treated primarily as a challenge to economic relations. For this reason, both South Korea and the V4 countries have been interested in maintaining stable economic cooperation. Meanwhile, Germany considers South Korea a strategic partner and maintains a long-standing cooperation particularly in the fields of education and technology research.⁴² The countries' state-of-the-art healthcare systems further allow high-level, specific exchanges on health and medical issues. However, for Germany too, public health cooperation with South Korea has only temporarily increased in response to the COVID-19 pandemic.

⁴⁰ Oskar Pietrewicz would like to thank Veronika Jóźwiak and Łukasz Ogrodnik for their research assistance.

⁴¹ According to publicly available information, Poland is the only V4 country that has signed bilateral agreements on health cooperation with South Korea, including the Memorandum of Understanding between the Polish Ministry of Health and the South Korean Ministry of Health and Welfare, in 2013. Ministerstwo Zdrowia Rzeczpospolitej Polski (2017), 'Korea Południowa', https://www.gov.pl/web/zdrowie/korea-poludniowa (last accessed 11/ll/2021).

^{42 &#}x27;Südkorea: Strategischer Partner in Asien', Auswärtiges Amt, 10/VIII/2020, https://www.auswaertiges-amt.de/de/ aussenpolitik/laender/korearepublik-node/maas-kang/2374150 (last accessed 15/IV/2021).

3.1. Germany-South Korea: research and technology

Despite both countries having state-of-the-art healthcare systems, public health cooperation before the COVID-19 pandemic had been a less developed area of bilateral cooperation between Germany and South Korea. Rather, both countries have maintained a close strategic partnership on economic, political, and research and development issues. Their shared experience with division has further led to the establishment of a German-Korean Advisory Board. Additionally, with a bilateral trade volume of US\$30.2 billion, the countries are among each other's most important trading partners.⁴³

Through continuous investments in education and research, South Korea has consistently topped Bloomberg's Innovation Index since its creation in 2013.⁴⁴ This has made South Korea a sought-after cooperation partner for the likewise innovative Germans.⁴⁵

In the field of education, the German Federal Institute for Vocational Training and Education, for example. cooperates closely with the Korea Research Institute for Vocational Education and Training (KRIVET) on the development of education, including information and experience exchanges specifically on the topic of the 'digitalisation of the workforce'. Alongside KRIVET, the Human Resources Development Service of Korea (HRD Korea) is an essential partner. Education and research cooperation with Germany is particularly important to South Korea as many South Korean students pursue their studies in Germany, which is among the top 10 for South Korean scientific co-publications.⁴⁶

The largest cooperation body is the German Federal Ministry for Education and Research (BMBF). Through its international department, the Ministry offers funding for connection, mobility and infrastructure. It also supports 2+2 projects that bring together at least one university or research institute with one company from either country. From 2005 to 2017, the Ministry funded around 250 joint projects in this way.⁴⁷ Additionally, the BMBF was also a partner in EU third-country cooperation with South Korea through KORANET and KONNECT.

46 Ibid.

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^{43 &#}x27;Germany and Korea (Republic of, South Korea): bilateral relations', *Auswärtiges Amt*, 23/II/2021, https://www. auswaertiges-amt.de/en/aussenpolitik/laenderinformationen/korearepublik-node/korearepublicof/229518 (last accessed 15/ IV/2021).

⁴⁴ https://www.bloomberg.com/news/articles/2021-02-03/south-korea-leads-world-in-innovation-u-s-drops-out-of-top-10.

^{45 &#}x27;Südkorea: Ein exzellenter Partner für die Zukunft', Federal Ministry for Education and Research, https://www.bmbf.de/ bmbf/de/europa-und-die-welt/vernetzung-weltweit/asiatisch-pazifischer-raum/suedkorea/suedkorea-ein-exzellenter-partnerfuer-die-zukunft.html

^{47 &#}x27;Länderprofil Südkorea', *GATE Germany*, 2017, https://www.gate-germany.de/laenderprofil/laenderprofil-suedkorea/ (last accessed 15/IV/2021).

Large-scale cooperation exists, too, in the field of technology. Notable institutions in this context include the Korea Institute of Science and Technology Europe (KIST Europe), the Max-Planck-Gesellschaft (MPG), the Fraunhofer-Gesellschaft (FhG), the Leibniz Gemeinschaft, the Helmholtz-Gemeinschaft (HGF) and the Federal Ministry for Economic Affairs and Energy (BMWi) in cooperation with the Korea Institute for Advancement of Technology (KIAT).⁴⁸

The basis for these diverse avenues of cooperation is the joint government agreement on scientific-technological cooperation signed in 1986.⁴⁹ However, as noted, many of these revolve around technology and innovation. Surprisingly, despite both countries having well-established healthcare systems, health cooperation has only intensified recently through the COVID-19 pandemic.

3.2. V4-South Korea cooperation: the economy

Germany has grounds for extended public health cooperation with South Korea due to a well-established healthcare system and already existing research cooperation. Meanwhile, the focus for the V4 countries has been primarily that of the economy. As some of the most important places for South Korean investments in the EU, the pandemic poses a challenge to economic relations and the economic fallout of COVID-19 has consequently been a primary factor for ongoing V4-South Korea joint activities.

In initial conversations regarding the pandemic, in comparison to public health cooperation, the arrangements to support the business activities of South Korea in Poland, such as allowing the entry of South Korean businessmen and the expansion of production plants, were far more important. Discussions were held in the case of Poland, for instance, in a telephone conversation between Presidents Andrzej Duda and Moon Jae-in on 7 April 2020.⁵⁰

Similar conversations took place in the case of Hungary. Foreign ministers Péter Szijjártó and Kang Kyung-wha made vague declarations of Hungarian-South Korean cooperation in response to the pandemic in June 2020. However, they did not mention specific medical cooperation, but rather emphasised the exemption from entry restrictions for South Korean businesspeople.⁵¹ In July 2020 a direct meeting between Kang and Szijjártó in Seoul reiterated the promotion of substantive economic cooperation post-COVID-19.⁵² For the Czech

52 Ministry of Foreign Affairs of the Republic of Korea (2020), *ROK-Hungary Foreign Ministers' Meeting*, 27/VII/2020, http://www.mofa.go.kr/eng/brd/m_5676/view.do?seq=321176 (last accessed 11/II/2021).

^{48 &#}x27;Überblick zur Kooperation mit Deutschland: Republik Korea (Südkorea)', *Kooperation International*, https://www.kooperation-international.de/laender/asien/republik-korea-suedkorea/zusammenfassung/ueberblick-zur-kooperation-mit-deutschland/ (last accessed 15/IV/2021).

^{49 &#}x27;Projekte: Republik Korea (Südkorea)', *Kooperation International*, https://www.kooperation-international.de/laender/ asien/republik-korea-suedkorea/projekte-suedkorea/ (last accessed 15/IV/2021).

⁵⁰ Prezydent.pl, Official Website of the President of the Republic of Poland (2020), *Prezydent Duda rozmawiał telefonicznie z Prezydentem Republiki Korei nt. walki z pandemią*, 7/IV/2020, https://www.prezydent.pl/aktualnosci/wydarzenia/ art,1743,prezydent-duda-rozmawial-telefonicznie-z-prezydentem-republiki-korei-nt-walki-z-pandemia.html (last accessed 11/II/2021).

⁵¹ Ministry of Foreign Affairs of the Republic of Korea (2020), *Telephone Conversation between Foreign Ministers of ROK and Hungary*, 9/VI/2020, http://www.mofa.go.kr/eng/brd/m_5676/view.do?seq=321112 (last accessed 11/II/2021).

Republic, the COVID-19 pandemic coincided with the 30th anniversary of its establishment of diplomatic relations with South Korea. In May 2020, in a phone conversation with Kang Kyung-wha, the Czech Foreign Minister Tomáš Petříček appreciated the effective South Korean response to COVID-19. While both sides emphasised the need for international cooperation, they, too, primarily stressed cooperation in economic terms such as the permission for South Korean businesspeople to enter the Czech Republic.⁵³ Presidents Moon Jae-in and Miloš Zeman spoke in a similar vein in their correspondence on occasion of the 30th anniversary of the establishment of diplomatic relations.⁵⁴

Moreover, in February 2021 South Korea endorsed the International Visegrad Fund's V4 East Solidarity Programme by granting over €180,000 to the project, thus helping the V4 states for its implementation in the Eastern Partnership region. This year their efforts aimed at providing economic assistance to Georgia and Ukraine in their fight against COVID-19.⁵⁵

3.3. From tech to health: the response to COVID-19

In a direct country comparison, Germany has around 30 million more inhabitants than South Korea. Life expectancy in both countries is roughly the same, while Germany's population is on average six years older and has a higher mortality rate, at 11.5% compard with 5.8%. The healthcare systems in both countries are well-developed with only marginal differences. While South Korea has around three hospital beds more per 1,000 people, Germany has roughly two doctors more per 1,000.⁵⁶

Due to its experience with the MERS epidemic in 2016 and its resulting legislative and material precautions, South Korea was well-equipped to respond to the coronavirus.⁵⁷ The country was able to resort to existing, effective strategies and structures, such as the Korea Disease Control and Prevention Agency.⁵⁸ South Korea has since shown that agility, continuous evaluation and evidence-based responses are essential in the management of the pandemic.

⁵³ Ministry of Foreign Affairs of the Republic of Korea (2020), *Outcome of Telephone Conversation between Foreign Ministers of ROK and Czech Republic*, 6/V/2020, http://www.mofa.go.kr/eng/brd/m_5676/view.do?seq=321078 (last accessed 11/II/2021).

⁵⁴ Ministry of Foreign Affairs of the Republic of Korea (2020), *ROK and Czech Presidents Exchange Celebratory Letters to Mark 30th Anniversary of Establishment of Diplomatic Relations*, 13/VII/2020, http://www.mofa.go.kr/eng/brd/m_5676/view. do?seq=321159 (last accessed 11/II/2021). Pražský hrad, Official Website of the President of the Czech Republic (2020), *Prezident republiky zaslal dopis korejskému prezidentovi*, 10/VII/2020, https://www.hrad.cz/cs/pro-media/tiskove-zpravy/ aktualni-tiskove-zpravy/prezident-republiky-zaslal-dopis-korejskemu-prezidentovi-15474 (last accessed 11/II/2021).

⁵⁵ Visegrad Fund (2021), V4 + Korea Jointly Assist Fight Against the Pandemic in Georgia and Ukraine, 1/II/2021, https:// www.visegradfund.org/news/v4_korea_against_pandemic/ (last accessed 11/II/2021).

^{56 &#}x27;Ländervergleich Südkorea Deutschland', *Länderdaten*, https://www.laenderdaten.info/laendervergleich. php?country1=KOR&country2=DEU (last accessed 15/IV/2021).

 ^{57 &#}x27;Transparenz, Kooperation und Engagement der Bevölkerung: Erfolgsfaktoren im Kampf gegen COVID-19', Konrad-Adenauer-Stiftung, 7/XII/2020, https://www.kas.de/de/veranstaltungsberichte/detail/-/content/transparenz-kooperation-undengagement-der-bevoelkerung-erfolgsfaktoren-im-kampf-gegen-covid-19 (last accessed 15/IV/2021).
58 Ibid.

As a 'strategic partner',⁵⁹ Germany initiated exchanges with South Korea on COVID-19 early on in 2020. In April 2020 both countries vowed to cooperate in the fight against the virus. Officials from both Foreign Ministries convened to learn about South Korea's antivirus programme, including fast tracking, testing, quarantine and treatment on the back of advanced medical and communications infrastructures.⁶⁰

Early discussions revolved around testing capabilities to allow swift detection and isolation of infected individuals. Specifically, in March and April 2020, during the first significant virus outbreak in Germany, the lessons learnt from South Korea were incremental in determining Germany's initial response. These included exchanges on the 3-T-Strategy –'testing, tracing, tracking'– as well as on re-opening concepts for schools and shops, and the minimisation of economic fallout.⁶¹ Additionally, the German Medical Association made a call for wearing masks for daily activities.⁶²

A strategy paper of the German Federal Ministry of the Interior in March 2020 commended South Korea's success in 'managing COVID-19 through many tests as well as the isolation of infected patients and contact persons'.⁶³ Germany was also one of the first countries to receive larger scale test-kit exports from South Korea.⁶⁴ Further, a government exchange took place at the highest level with the meeting of Foreign Ministers Kang Kyung-wha and Heiko Maas in August 2020 to discuss bilateral relations and specifically the ROK's early COVID-19 lessons.⁶⁵

3.4. Beyond the economy?

Beyond economic cooperation, the V4 countries focus less on strategic health cooperation with South Korea, but rather on concrete actions to tackle COVID-19. From the beginning of the pandemic, the Visegrad Group members have expressed an interest in purchasing diagnostic tests from South Korea, whose model of mass testing has been pointed out as an example to follow. The V4 countries' embassies in Seoul obtained information on the entities admitted by the South Korean authorities to export tests. As a result, during the

^{59 &#}x27;Südkorea: Strategischer Partner in Asien', Auswärtiges Amt, 10/VIII/2020, https://www.auswaertiges-amt.de/de/ aussenpolitik/laender/korearepublik-node/maas-kang/2374150 (last accessed 15/IV/2021).

^{60 &#}x27;S. Korea, Germany vow cooperation in fighting coronavirus', Yonhap News Agency, 3/IV/2020, https://en.yna.co.kr/ view/AEN20200403008951325 (last accessed 15/IV/2021).

⁶¹ Park Yoojin *et al.* (2020), 'Application of testing-tracing-treatment strategy in response to the COVID-19 outbreak in Seoul, Korea', *Journal of Korean Medical Science*, vol. 35, nr 45, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7683243/ (last accessed 15/IV/2021).

^{62 &#}x27;BÄK-Präsident ruft zum Tragen von Schutzmasken auf', *Ärzteblatt*, 26/III/2020, https://www.aerzteblatt.de/ nachrichten/111423/BAeK-Praesident-ruft-zum-Tragen-von-Schutzmasken-auf (last accessed 18/IV/2021).

⁶³ Hanno Charisius, Georg Mascolo & Nicolas Richter (2020), 'Innenministerium dringt auf massive Ausweitung von Corona-Tests', *Süddeutsche Zeitung*, 27/III/2020, https://www.sueddeutsche.de/politik/coronavirus-tests-strategie-1.4858950 (last accessed 15/IV/2021).

^{64 &#}x27;Coronavirus test kits pour off South Korean production line', *France24*, 27/III/2020, https://www.france24.com/en/20200327-coronavirus-test-kits-pour-off-south-korean-production-line (last accessed 15/IV/2021).

^{65 &#}x27;Südkorea: Strategischer Partner in Asien', Auswärtiges Amt, 10/VIII/2020, https://www.auswaertiges-amt.de/de/aussenpolitik/laender/korearepublik-node/maas-kang/2374150 (last accessed 15/IV/2021).

pandemic, the V4 countries purchased PCR tests (HS 382200) and immunological tests (HS 300215) produced by South Korean companies. In April 2020, Poland was the 5th largest buyer of South Korean test kits in the world in terms of value (after Brazil, Italy, India and the US).⁶⁶

Ultimately, at the end of 2020, according to Korea International Trade Association statistics, Hungary and Slovakia were among the top buyers of South Korean immunological tests in terms of value, spending US\$213 million (the 4th largest importer) and US\$60 million (the 8th) respectively. In the case of Slovakia, this was related to the country's decision to test the entire population for SARS-CoV-2 in autumn 2020.⁶⁷ Poland and the Czech Republic spent US\$6 million (the 42nd largest importers) and US\$5 million (the 48th) respectively. When it comes to PCR tests, Poland bought South Korean test kits for US\$40 million (14th), Hungary for US\$25 million (20th), the Czech Republic for US\$14 million (31st) and Slovakia for US\$3.5 million (75th).

A permanent element of cooperation between the Visegrad Group members and South Korea is also the exchange of information on dealing with the COVID-19 pandemic, carried out mainly through the V4 countries' embassies in Seoul.⁶⁸ For example, the Polish Embassy in Seoul played an important role as an institution to which the South Korean Ministry of Health and Social Welfare, the Ministry of Food and Drug Safety, and the Korean Disease Control and Prevention Agency regularly transferred their know-how on dealing with the COVID-19 pandemic. Consequently, Poland obtained information from the relevant South Korean institutions on issues such as the number of hospitals and hospital beds allocated for the needs of COVID-19 patients, as well as the effectiveness of available drugs in the treatment of patients with a varying severity of symptoms.⁶⁹ South Korea has further been sharing its experience on dealing with the pandemic with the V4 and other countries by organising a series of webinars on selected aspects of the fight against the pandemic, addressed to both medical experts and officials responsible for coordinating activities during the pandemic.⁷⁰

⁶⁶ Ko Jun-tae (2020), 'Exports of test kits pass \$200 million in April', *Korea JoongAng Daily*, 7/V/2020, https:// koreajoongangdaily.joins.com/2020/05/07/industry/testing-kits-diagnostic-kits-test-kits/20200507172900173.html (last accessed 11/II/2021).

⁶⁷ Ed Holt (2020), 'Slovakia to test all adults for SARS-CoV-2', *The Lancet*, vol. 396, nr 10260, 31/X/2020, p. 1386-1387, https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)32261-3/fulltext (last accessed 11/II/2021).

⁶⁸ For instance, the Embassy of the Czech Republic in Seoul emphasised South Korea's openness and transparency in sharing experience with medical professionals and public health experts. See Embassy of the Czech Republic in Seoul (2020), *How South Korea and Czechia are helping each other during COVID-19 epidemics*, 20/VII/2020, https://www.mzv.cz/ seoul/en/bilateral_relations/news_and_announcements/how_south_korea_and_czechia_are_helping.html (last accessed 11/ II/2021).

⁶⁹ Information provided by the Embassy of the Republic of Poland in Seoul.

⁷⁰ Ministry of Foreign Affairs of the Republic of Korea (2020), *Korea's Response to COVID-19, Special Webinar*, http:// www.mofa.go.kr/eng/brd/m_22741/list.do?page=1&srchFr=&srchTo=&srchWord=&srchTp=&multi_itm_seq=0&itm_ seq_1=0&itm_seq_2=0&company_cd=&company_nm= (last accessed 11/ll/2021).

3.5. COVID-19: one year and counting

After the initial contact and consultations, German-ROK health cooperation has become more subdued. While South Korea is managing the pandemic well, with clearly understood strategies and a citizenry that is mostly cooperative, the status quo in Germany is not as structured.

An initial success of German-South Korean cooperation was the expansion of government exchanges with other actors. Leading German research institutes, such as the Robert Koch Institut, connected with their Korean counterparts for joint R&D. Simultaneously, representatives of several German states as well as the city of Seoul initiated closer regional exchanges. The same applied to companies such as BioNTech, allowing discussions to be held on vaccine development and production.⁷¹

Germany's initial COVID-19 response was successful and internationally applauded. The country reached a consensus on lockdown, with exemplary testing and tracing tools, and its death and infection rates were among the lowest in the EU. The German population by and large abided by the rules, supported by a well-established healthcare system.⁷²

However, Germany's system has since become inflexible with difficult and diffuse rules, motivated by the individual interests of its federal states. The country went into a first lockdown from March 2020, reopened almost fully over the summer and early autumn but with no stage model like that of South Korea.⁷³ Consequently, the country had to shut down completely over the Christmas holidays and has remained in lockdown since.⁷⁴

A significant problem in Germany in response to the pandemic is the lack of a stage model that provides clear and easily understood lockdown measures based on case numbers for all citizens. Additionally, due to its federal system, Germany had initially abstained from initiating a national COVID-19 response mandatory in all its states.⁷⁵ What is more, 2021 is a major election year for the country, both regionally and nationally. Consequently, Germany has not succeeded in preventing the pandemic from becoming politicised.

From March 2021 the country struggled significantly with rising COVID-19 case numbers and in April 2021 applied an 'emergency break', enforcing stricter measures, including a curfew, nationwide for areas with a seven-day incidence higher than 100 per 100,000 people.⁷⁶ What is more, its vaccination strategy is disorganised, with appointment booking

⁷¹ According to insights from the Auswärtiges Amt.

⁷² Melissa Eddy(2021), 'Germany, once a model, is swamped like everyone else by pandemic's second wave', *The New York Times*, 20/II/2021, https://www.nytimes.com/2021/02/20/world/europe/germany-coronavirus-second-wave.html (last accessed 15/IV/2021).

^{73 &#}x27;Latest Coronavirus Update' (2021), Deutschland.de, https://www.deutschland.de/en/news/coronavirus-in-germany-informations (last accessed 15/IV/2021).

⁷⁴ As of April 2021

⁷⁵ Matthias Bartsch *et al.* (2021), 'The Failure of Germany's coronavirus strategy', *Spiegel International*, 16/IV/2021, https:// www.spiegel.de/international/germany/uniform-coronavirus-rules-the-failure-of-germany-s-coronavirus-strategy-a-6ba0fb52fa03-45c4-8bce-eb63b6f8e03b (last accessed 18/IV/2021).

⁷⁶ As of April 2021. Nina Amin (2021), 'Länderkritik an "Bundesnotbremse"', *Tagesschau*, 17/IV/2021, https://www.tagesschau.de/inland/laender-lockdown-hans-bouffier-101.html (last accessed 18/IV/2021).

systems being ill-equipped for the number of requests and aggravated by the recent recall of the AstraZeneca vaccine. The politicisation of the pandemic is likely to continue until September 2021 when Germans cast their votes in the federal elections.

3.6. Back to the economy

For the V4 countries there have been many conversations and diplomatic statements regarding COVID-19 cooperation with South Korea. Nonetheless, joint activities are set to continue with a clear focus on the economy.

The Presidents of Poland and South Korea have discussed general issues regarding bilateral cooperation in response to COVID-19. Beyond purchasing South Korean diagnostic tests and the exchange of information, as mentioned above, the participation of Polish medical experts in international seminars led by South Korean experts and officials was discussed. During a telephone conversation with the South Korean Foreign Minister Kang Kyung-wha in October 2020, the Polish Foreign Minister Zbigniew Rau mentioned public health (along with cybersecurity and water management) as one of the potential areas of Polish-South Korean cooperation.⁷⁷

Similar diplomatic language was used by the Czech Republic. The Czech Foreign Minister Tomáš Petříček appreciated the effective South Korean response to COVID-19 and thanked the Republic of Korea for cooperating by exporting swab kits and sharing its experiences. Both sides also emphasised the need for cooperation on vaccination and the development of medicines and the evacuation of nationals.⁷⁸

Since then, conversations on cooperation between the V4 and South Korea have returned to the economy and to investor relations. In Poland companies such as LG, Hyundai, Samsung and Kia provided financial support and donated diagnostic tests, hygienic masks, protective clothing and household appliances to local authorities and hospitals as a response to COVID-19.⁷⁹ In the Czech Republic, for instance, Hyundai donated CZK10 million (€390,000) to

⁷⁷ Ministry of Foreign Affairs of the Republic of Korea (2020), *Minister of Foreign Affairs Holds Telephone Conversation with her Polish Counterpart Rau*, 22/X/2020, http://www.mofa.go.kr/eng/brd/m_5676/view.do?seq=321299 (last accessed 11/II/2021).

⁷⁸ Ministry of Foreign Affairs of the Republic of Korea (2020), *Outcome of Telephone Conversation between Foreign Ministers of ROK and Czech Republic*, 6/V/2020, http://www.mofa.go.kr/eng/brd/m_5676/view.do?seq=321078 (last accessed 11/ll/2021).

⁷⁹ According to information provided by the Embassy of the Republic of Poland in Seoul, LG Chem in Wrocław handed over 10,000 diagnostic tests, 40,000 hygienic masks, 2,000 pieces of protective clothing and 1,000 pairs of protective glasses to the Lower Silesian Voivodeship and government representatives; LG Electronics in Wrocław donated 20 refrigerators and 20 washing machines to Wrocław hospitals; Hyundai Engineering donated PLN300,000 (€70,000) to the mayor of the city to support local hospitals in the purchase of respirators; and Samsung Electronics in Warsaw handed over 10 washing machines and 20 dryers to the authorities managing ambulances. The company also made it possible to display government information on COVID-19 on a digital screen installed on one of the walls of the Marriott Hotel in Warsaw (the screen is used as an advertising space by Samsung); Kia Motors in Warsaw donated 540 sets of hygiene and sterilising agents to one of Warsaw's non-profit-making organisations; KFTP from Katowice donated 200 hygienic masks to one of the hospitals in Katowice; and the association of Korean companies in Katowice donated protective clothing for a total value of PLN20,000 for the needs of the Śląskie Voivodeship.

combat the pandemic.⁸⁰ Moreover, a donation in the form of 12,500 KF94 masks was made by the Embassy of the Republic of Korea in Prague to the Czech Fire Service.⁸¹

3.7. Conclusions

Both the V4 countries and Germany have shown their recognition of South Korea's successes in the fight against COVID-19 in Europe.

For the V4 countries, an interest has evolved in fostering public health cooperation with South Korea, especially in terms of learning from South Korea's experience. However, the COVID-19 pandemic has also exposed the limitations of cooperation in this area. Communication between health and epidemiological authorities needs to be improved to allow regular exchanges of best practices and new medical treatments. Cooperation could further improve by maintaining stable contacts at the EU-South Korea level, for example between the European Centre for Disease Prevention and Control (ECDC) and the Korea Disease Control and Prevention Agency (KDCA).

Germany initiated health cooperation with South Korea early in the pandemic with successful exchanges at the government level and between other players. Despite both countries being similar in demographics, medical capabilities and the quality of their healthcare, there had not been significant health cooperation prior to COVID-19. It has also not reached intensified levels beyond the initial exchanges. Rather, while South Korea has implemented a clear and effective strategy, Germany has struggled, after its initial exemplary response to the virus, to implement a structured, easily understood system. Lockdown regulations in Germany were diffuse and changed on an ad hoc basis, while cases rose significantly in late 2020 and early 2021, and federalism as well as the politicisation of the virus due to an election year gave rise to a number of obstacles.

As a last resort, Germany thus implemented its 'emergency break'. A new increase in cooperation with South Korea could now help Germany to lay the ground for an efficient post-pandemic period.

⁸⁰ Embassy of the Czech Republic in Seoul (2020), *Hyundai Company Donated 10 Million CZK to Fight Coronavirus in the Czech Republic*, 26/III/2020, https://www.mzv.cz/seoul/en/bilateral_relations/news_and_announcements/hyundai_company_ donated_10_milion_czk_to.html (last accessed 11/II/2021).

⁸¹ Korean Embassy in Prague (2020), 체코 소방청 대상 한국 마스크 기부식 개최, 23/XI/2020, http://overseas.mofa. go.kr/cz-ko/brd/m_8933/view.do?seq=46&srchFr=&srchTo=&srchWord=&srchTp=&multi_itm_ seq=0&itm_seq_1=0&itm_seq_2=0&company_cd=&company_nm=&page=1 (last accessed 11/II/2021).

4. Conclusions

The COVID-19 pandemic has put health cooperation at the centre of the global agenda. Since the outbreak first crossed borders, it has become clear that only cooperation between countries can make the pandemic manageable –and prevent future international pandemics–. South Korea and the EU have long advocated multilateral cooperation. Health is no exception. They have also been expanding bilateral cooperation in an ever-growing number of areas since they signed their Strategic Partnership. Health, however, has not been one of those areas. Thus, there is scope to expand their joint work in areas of importance not only to policy makers but also to the people of both countries.

In terms of bilateral South Korean-EU cooperation, Seonjou Kang and Ramón Pacheco Pardo show that from the perspective of both Seoul and Brussels, they can both work together in three key areas. In other words, there is an overlap in their views about how to cooperate. To begin with, South Korea and the EU ought to establish a bilateral policy dialogue on health cooperation. With over 40 dialogues already in place and the COVID-19 pandemic showing the importance of information and best-practice exchanges, there is no reason why South Korea and the EU should not develop a health dialogue. A regular dialogue would serve as a springboard to promote cooperation between medical authorities, regulators, pharmaceutical firms and other health actors. Since South Korea and the EU already have similar structures, setting up a health dialogue is simple path that both governments should pursue.

Furthermore, South Korea and the EU can promote cooperation in the area of vaccine and pharmaceutical product development. With the WHO and other health authorities warning that the COVID-19 pandemic could become endemic, it will be necessary to develop new vaccines to keep the disease in check. It makes sense for Seoul and Brussels to promote cooperation between their laboratories, universities, research centres and pharmaceutical firms. But cooperation should not be circumscribed to vaccines. It is necessary to develop effective medical treatments for COVID-19 patients. And cooperation should certainly not focus only on COVID-19. There are hundreds of endemic diseases for which there is no known cure. In this context, cooperation between South Korea and the EU could both promote the public good and provide economic benefits for the government bodies and private firms involved.

Finally, Seoul and Brussels must work together with like-minded countries such as Australia, Canada, Japan and the US to boost multilateral cooperation. There are calls to reform the WHO. But it is necessary for any reform to strengthen rather than dilute the work of the organisation. And South Korea and the EU also need to ensure that the WHO's work –and that of other international organisations– is inclusive and promotes cooperation between all countries, regardless of their political or economic model. This is important, since diseases such as COVID-19 do not respect human politics. Since South Korea and the EU have decades-long credibility in supporting multilateralism, their voice will carry weight if they focus on international health cooperation.

When it comes to cooperation between South Korea and specific EU member states, Oskar Pietrewicz and Carolin Wefer provide us with a timely reminder that it has a great potential in bilateral terms. Looking at the case of Germany as a proxy for similar scientifically and technologically advanced EU member states, R&D and technology is an area that the two sides should prioritise. Public institutions and private firms can conduct joint work on a bilateral basis or as a part of broader EU-wide or even global consortiums. Both the South Korean and German governments promote this type of cooperation making use of public bodies and funding. Therefore, the framework to boost cooperation already exists: it is essentially a matter of encouraging the political and private sectors to find the will to do so.

The cooperation between South Korea and the V4 serves as a very good case study of the potential for cooperation between Seoul and some of the most vibrant economies across Europe. Indeed, potential health cooperation between the two sides has to be framed in the context of their economic complementarity. As a large-scale investor across the V4, South Korea is a preferential economic partner for the governments of the four countries. Thus, health cooperation between the two sides first came in the form of sales and donations of diagnostic tests, hygienic masks and other equipment from South Korea to the region. Yet, in the future, health and economic cooperation could be combined. It is not unthinkable, for example, that medicines or vaccines produced by South Korean firms could use countries in the V4 as manufacturing centres.

Looking at North Korea, it goes without saying that health cooperation with the EU and the EU's member states is far less developed than in the case of South Korea. Having said that, Pacheco Pardo explains that there are two areas of potential cooperation between Brussels and Pyongyang. To start with, the EU –along with some member states such as France or Sweden– are important aid donors to North Korea. This includes medical aid. Even though most if not all aid to North Korea ceased during the COVID-19 pandemic due to Pyongyang's decision to close its borders, at some point it will be possible to resume transfers. Once this is possible, the EU could prioritise the transfer of equipment, medicines and other products that would help North Korea cope with new waves of COVID-19 –as well as to prevent the spread of future pandemics–.

Meanwhile, the EU and North Korea can cooperate through multilateral institutions. COVAX is the obvious instrument to use for this purpose as long as the COVID-19 pandemic continues to rage across the world. But this mechanism also serves as a template for the potential distribution of other vaccines, medicines or equipment to developing countries to treat other diseases. The EU could thus promote the launch of similar mechanisms from which North Korea could benefit. Plus, Brussels should work with like-minded countries to ensure that any reform of the WHO leads to more effective mechanisms to support the people of developing countries. This would benefit North Korea, even if the EU does not specifically target it through its suggested reforms.

Overall, the contributors to this working paper offer a detailed analysis of the ways in which South Korea and the EU, on the one hand, and the EU and North Korea, on the other, can boost cooperation in the health sector. Interest in deepening cooperation in this field is only going to increase for the foreseeable future. Thus, it makes sense for South Korea and the EU to establish new cooperation mechanisms, and for Brussels to try to improve cooperation with Pyongyang for the sake of the people of North Korea.

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