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Understanding COVID-19 During the
United Kingdom's Struggle to Leave the European Union

Executive Summary

In our analysis of the state of the personal protective equipment (PPE) supply chain in the United Kingdom (UK), we find that two major events have led the UK to suffer from a PPE shortage. The international spread of COVID-19 and the UK's decision to leave the EU have disrupted the country's usual avenues for procuring PPE raw materials, manufactured intermediaries, and final products. This, compounded with the initial failings of the global PPE supply chain, has led the UK to incur great losses in the form of avoidable deaths due to pandemic unpreparedness. The inability of the UK to handle the medical providers' PPE demand became excruciatingly evident in late March and April when COVID-19 cases in the UK reached their highest levels while many frontline healthcare workers were unprotected when treating infectious COVID-19 patients.

Our policy suggestions are designed to ameliorate the interlocked consequences of COVID-19—the toll of the virus's spread on the medical supply chain and the subsequent havoc which a crippled supply chain wreaks on a national government's ability to handle a crisis. Hence, our policy suggestions will explore the responses to the instrumental medical supply chain problem at three semi-continuous levels: the local, the national, and the international. At the local level we suggest the creation of a network of warehouses containing the national stockpile of PPE in order to foster the creation of a national distribution chain centered at the local level. At the national level, establishing financial incentives to encourage manufacturing companies to produce medical devices within the UK are a positive step forward to mitigate international supply chain risks. And at the international level, the UK must resist the current

anti-globalist urges which dominate their political push to leave the EU and instead commit to working directly with multilateral institutions and other countries to procure and produce PPE for as long as the pandemic continues.

We believe that the sentiments that drive the push for Brexit must be tempered while dealing with the COVID-19 pandemic. UK far-right politicians have sought after an exit from the EU for at least a few years, and now that they have it, they will look to exploit any sense of freedom they have to negotiate harder and more rigorous trading deals with countries across the globe. They must remember, however, that though global connections may pose threats to them in the future, they cannot underestimate the ability of those same connections to pose solutions to the same problems they engender.

What is COVID-19?

On December 1, 2019, a World Health Organization (WHO) office in the People's Republic of China (China) picked up a media story about the outbreak of a disease described as a "viral pneumonia." This disease is now known as COVID-19, and it has impacted millions across the globe while throwing global and domestic economic activity into turmoil, while spelling doom for some companies and bringing entire industries to a screeching halt. China, the country from which the Coronavirus (the Virus) originated, made the decision to quarantine Wuhan and its 11 million residents from the rest of the country on Jan 23, 2020. This decision came merely days after the WHO detailed the first confirmed cases outside of China in Thailand, Japan, and South Korea, and as the United States announced its first confirmed coronavirus case in the state of Washington. On March 11, 2020, the WHO moved to characterize COVID-19 as a pandemic.¹

Immediately, we can expect that such a disruptive occurrence as a global pandemic would place global supply chains under great strain—particularly those supply chains which develop and distribute medical equipment. While a pandemic not only increases the cost of operation through absenteeism among various classes of workers, it also increases demand for medical goods such as PPE well beyond the capability of the supply chain to produce and distribute those goods. What further compounds this issue is the tendency of the global economy in the modern age to shun stockpiling as an emergency precaution. While stockpiling would help make supply chains more resilient against shocks by helping manufacturers or consumers to stockpile intermediary or final products, it takes money to store and maintain inventory. Current industrial systems pride themselves on the ability of supply chains to manage on-time, efficient delivery wherein demand is immediately and exactly satisfied such that no surplus materials or products exist within the system.²

The Asian Development Bank affirms that many of these issues have come to a head. As the Bank describes in their paper, “Global Shortage of Personal Protective Equipment amid COVID-19,” “Most of the raw materials and inputs used to produce PPE are outsourced to low-cost suppliers.” The three biggest suppliers of PPE by market share of revenue per region are North America, Asia and the Pacific, and Europe, with 33, 28, and 22 percent, respectively (Figure 1). China, in particular, dominated about 50-80 percent of the global mask production.

The concentration of the market meant that when production in any of these global supply centers took a hit, as production in China did at the outset of the pandemic,³ no country would be safe from the effects. When this paper was published in April, it was easily understood that disruptions to industrial output would spell trouble for the ability of nations across the world to have the PPE they needed to combat the spread of COVID-19. At the same time, the paper

recognized that “Europe has its own regional capacity with sources of PPE somewhat diversified among suppliers. This may help the region withstand to an extent the supply shock originating from Asia.” They added, however, that “production capacity in Europe is unlikely to meet a demand surge associated with the rapid spread of COVID-19.” To offset scarcity concerns in the UK, “more than 60 manufacturers including Airbus, Jaguar Land Rover, and Rolls-Royce have been sent blueprints for manufacturing up to 20,000 ventilators for COVID-19 patients.”

What is Brexit?

Within the global political climate of 2015-2017, right-wing populist candidates and issues shifted political discourse towards anti-transnational organizations; anti-globalization was the new black. To rid the British economy and demographics of European and other foreign involvement, leaders such as Nigel Farage and Boris Johnson lobbied to allow the UK to leave the European Union (EU).⁴ In the summer of 2016, following a long campaign between the “Leave” and “Remain” camps within British politics, a majority of those who participated in the subsequent referendum voted to leave the EU. While the outcome of the referendum was clear, the next steps for the economy of the UK were anything but.⁵ Over the next two and a half years, the UK sought to negotiate trade deals with the EU to maintain a flow of goods and services after an official withdrawal. By participating in the EU marketplace, the UK had expanded their own minor economic reach. UK-EU trade tripled that of UK-US trade, even as the US was the UK’s second largest trading partner. With a potential no-deal scenario looming, the UK had to conform their internal regulations to comply with EU standards. At the end of January 2020, the UK officially left the EU, with EU regulations continuing through the end of 2020.⁶

The State of the UK's Supply Chain in 2020 and Projections

By mid-March of 2020, as COVID-19 cases in the UK began to grow exponentially, the shortage of PPE became serious enough to prompt the UK to join 53 other countries in implementing export curbs on medical supplies.⁷ The EU's instituted its own bloc ban on March 15th which limited the sale of medical supplies outside of EU member borders.⁸ An analysis of PPE levels in the months preceding these bans suggests that these beggar-thy-neighbor policies were self-destructive.

Simon Evenett, professor of International Trade at the University of St. Gallen, has suggested that these trade policies have been detrimental to the UK and EU. He claims that the loss of international sales of medical supplies has discouraged manufacturers from ramping up production.⁹ Although in the short term the UK and EU are able to stockpile medical supplies, they are limiting the future production capacity of manufacturers by restricting trade. To promote production, the government must provide financial stimuli to manufacturers. However, this presents a financial burden on public funds, a trade-off which is less than ideal in a time of crisis. By far, the most dangerous effect of these trade restrictions has been the provocation of retaliatory restrictions on medical supplies by other countries.

The resulting scarcity of PPE and medical equipment is well documented by the British Medical Association, which surveyed frontline medical workers to study the severity of the shortage; in April, half of the 16,343 responding doctors said that they had to source their own PPE or relied on donations when none were available through the NHS supply chain.¹⁰ Additionally, 65 percent of all doctors said they felt only partly or not at all protected when treating patients with COVID-19. Overall, 48 percent of doctors reported that they had bought PPE for themselves or their department or received PPE as donations from charities.¹¹ This

shortage led the UK to make a deal with Turkey in order to acquire 400,000 medical gowns, one of its most limited PPE supplies—but 2,400 out of the 67,000 gowns that the UK received by April 22 did not pass quality control checks.¹² This, among other fiascos—only 30 out of 30,000 ventilators which had been planned to be manufactured were ready to go at the start of April¹³—highlight the strain placed on PPE and medical equipment supply chains. Under this strain, the supply chain’s quality and quantity faltered.

Before COVID-19 public health experts identified Brexit as a source of disruption for the medical goods supply chain.¹⁴ They believed that by breaking from the EU, the UK would disrupt and jeopardize the flow of materials and vital devices. As is to be expected, it has been hard to establish what the effects of Brexit might be or might have been for two reasons. The first is that Brexit, as we’ve said, has not yet been implemented, and the UK continues to follow EU regulations for now. The second reason is that if there were any presumptive or foreseeable effects, they would be hard to distinguish from the effects of COVID-19. Thus, prospective policy considerations should deal immediately with the immediate issue of COVID-19, and secondly with the longer-term issue of Brexit.

Local Level Policy Questions and Proposals

After failing to distribute PPE to various cities and hospitals across the UK, the Department of Health & Social Care published a report titled *Covid-19: Personal Protective Equipment (PPE) Plan* on April 10. This report outlined their plan to fix the distribution chain of PPE. The initial distribution failure was the government’s fault, the product of an unfounded claim made on March 17 by top National Health Service (NHS) officials to the Commons Health Select Committee that there was enough PPE to, “keep staff safe in the months ahead”.¹⁵ This claim

was founded on the existence of two national PPE stockpiles, one in case of a pandemic and another in the case of a no-deal Brexit.¹⁶ However, as the pandemic worsened, it became clear that 1) these stockpiles were not sufficient to meet the demand incurred by rising infection rates, 2) there was no adequate distribution system to efficiently distribute supplies, and that 3) the stockpile itself lacked the necessary PPE needed to combat COVID-19 and hence acted as a disease vector.¹⁷

At the local level, the biggest problems were PPE shortages and slow deliveries. The foreword in the aforementioned document by the Secretary of State for Health and Social Care highlights one of the reasons why delivery was backtracked: “While we entered the crisis with a stockpile designed to respond to an outbreak of pandemic influenza and a no-deal Brexit, our supply chain for PPE was designed to accommodate delivering to 226 NHS Trusts. As of this week, we are now providing essential PPE supplies to 58,000 different providers...”¹⁸ The sheer size of demand and increase in locations requiring delivery overwhelmed the existing supply chain management. Its collapse was circumvented by the creation of a new NHS website that would allow healthcare facilities to order PPE from the central inventory, enlisting the armed forces to distribute PPE faster, and relying on local government officials to source PPE by calling on donations from non-healthcare institutions such as schools, construction sites, art studios etc.¹⁹

However, the aforementioned solutions are only temporary fixes that have not proved to be very successful, partly because they do not address the core issues with the supply chain management system. In anticipation of future pandemics and health crises, we propose to decentralize the stockpile of PPE such that this national stockpile be dispersed across the UK. This would facilitate the logistics of sourcing PPE to cities and counties in the periphery of the

UK. Of course, this decentralization would require the creation of a sophisticated distribution system that would allow for the transfer of PPE materials across the four governments. Another plus, however, would be the distribution of the risk of any, one, large distribution center failing to perform during a crisis. Having multiple warehouses across the UK would prevent mismanagement of one site from being catastrophic. We believe this is necessary after an inquiry into the national stockpile revealed that the company contracted by the government to care for the stockpile, Movianto, had mismanaged the supply of PPE. Poor warehouse facilities and organization had allowed some of it to be contaminated with asbestos, go missing altogether, or require time-consuming reorganization before it could be delivered.²⁰ Having multiple warehouses across the UK would prevent this kind of mismanagement from debilitating the entire supply chain by spreading risk, promote the creation of a network of delivery, and help local governments be less reliant on the national government. In GSR terms, the more nodes added to the system, the greater the distribution of risks.

National Level Policy Questions and Proposals

As previously mentioned, a shortage of necessary medical devices within the NHS has limited the response of hospitals across the UK. The global supply chain for PPE, centered on production in China, was greatly disrupted by COVID-19.²¹ It's no question that relying on other countries can be risky at best and fatal at worst. No policy or trade relationship can dictate whether another state will be willing to maintain a supply chain, rather than hoarding medical devices for the service of their own people. For these reasons, it is critical that the UK, in recognition of the impending EU trade regulations expiring at the start of 2021, have emergency procedures to incentivize manufacturing of medical devices at home.

In March 2020, the UK government rolled out plans to compensate 80 percent of the salaries of furloughed workers in the wake of the outbreaks of COVID-19. For companies that chose to opt into the program, they would also be offered to “retain employees and the government will pay businesses a £1,000 bonus for each person they bring back after the furlough scheme ends.”²² These courses of action cost the UK government billions in salary compensation but prevented “hundreds of thousands from joining the unemployment queue.”²³

Our recommendation is to adapt the “80 percent scheme” to encourage nontraditional manufacturing companies to adapt their infrastructure to produce medical supplies, particularly when the NHS is in need. Subsidizing manufacturing limits the reliance on international production or stockpiles. A variety of US-based manufacturers have produced ventilators and face shields in light of shortages there.²⁴ Rather than continuing normal processes, manufacturers will be able to transition production and maintain their workforce. That said, adequate health measures will be necessary to protect the workforce from dangerous conditions. These adjustments will be tempered by the financial support provided by the government, rather than continuing to fund furlough options.

International Level Policy Questions and Proposals

In coordination with efforts to strengthen or encourage domestic production in the case of the worst, countries like the UK must yet also provide international support to international problems. As demonstrated by the Asian Development Bank’s research paper, put simply, a government cannot ensure that its country is well-prepared to handle a life-threatening pandemic without the necessary tools to do so. As was already demonstrated by the paper, the effect of COVID-19 was to drastically curb production of medical intermediary and final goods This

belief that a strong response to COVID-19 can only stem from supporting international medical commerce is not uncommon; the *Peterson Institute for International Economics (PIIE)* argues “Yes, medical gear depends on global supply chains.”²⁵ Both the ADB and *PIIE* put forth various policy suggestions for ensuring that the flow of medical gears begins to meet new demands.

The Asian Development Bank: Suggestions for International Information Sharing

The ADB draws a few of their policy suggestions from the hard-learned lessons of the past. Of those governmentally actionable policy items, the ADB believes that countries like the UK should be invested in centralizing the visibility of PPE flows. This means that systems that manufacture, distribute, and purchase PPE should make their orders and sales of PPE more transparent. Making such knowledge publicly available, the ADB argues, can “allow distributors and manufacturers to better detect duplicate orders and forecast product demand at national, regional, and global levels. Surge capacity can be facilitated, while trade and logistics support can be prioritized during pandemics.” Policies like this can help reduce waste and ensure that resources are allocated efficiently. The ADB also advocates for governments and private sector partners “to share situational and supply information” to ensure that institutions across the globe can effectively track the flow of PPE. This would allow countries which are working together to improve their resource allocation and production capacity within and across borders.

The PIIE: Suggestions for International Cooperation on Procurement and Production

Many of the *PIIE*'s suggestions build on the sentiments provided by the ADB, that countries must prioritize collaboration amongst themselves to effectively and efficiently produce and

procure PPE. To this end, the *PIIE* celebrates such policies by the EU that make freely available its basic standards for certain PPE and medical devices,²⁶ an effort which can “expedite and increase production both in EU member states and in countries outside the bloc. Under this arrangement, firms will no longer need to purchase and use European standards according to intellectual property rules, allowing factories to convert their production lines quickly.”

Furthermore, the *Institute* argues that governments in advanced countries should avoid nation-specific production and procurement regulations—like the U.S.-based “Buy America” provisions. The underlying logic behind these two proposals is that addressing a global pandemic requires global cooperation, especially since the tools for recovery are globally sourced. So, the *Institute* suggests that governments refrain from internationally antagonistic trade policies during a time when international goodwill is paramount to stabilizing trade relations and global supply chains. This means following the examples of New Zealand, Singapore, and a host of other countries in eliminating import restrictions on essential goods.²⁷

These guidelines and the curbing of regulations put forth by the EU serve as a good template for guiding the UK’s international trade policies. As much as possible, according to the ADB and *PIIE*, the UK should focus on working with the broader international community. While the UK continues to follow EU regulations until the end of 2020, it is imperative that they continue following any applicable regulations relating to the procurement and production of PPE if the crisis persists into 2021. To fail to do so would shock the delicate system which currently binds the UK to the EU and ensures solidarity during this time of unprecedented turmoil. To go solo while a crisis persists is to forego valuable multilateral guarantees for mutual support, which no country should consider at this time.

Closing Remarks on Brexit and COVID-19

Brexit, while it hasn't yet affected the UK, looms large over the country. UK far-right politicians have sought after an exit from the EU for at least a few years now—and because they now have it, they will look to exploit any sense of freedom they have to negotiate harder and more rigorous trading deals with countries across the globe. Even if there is any chance that this would be favorable for them in the long-term, they cannot forget that to escape the repercussions of global supply chains is near-impossible at this juncture—so while it is likely that global connections may pose threats to them in the future, they cannot underestimate the ability of those same connections to pose cures for their own diseases.

Figure 1

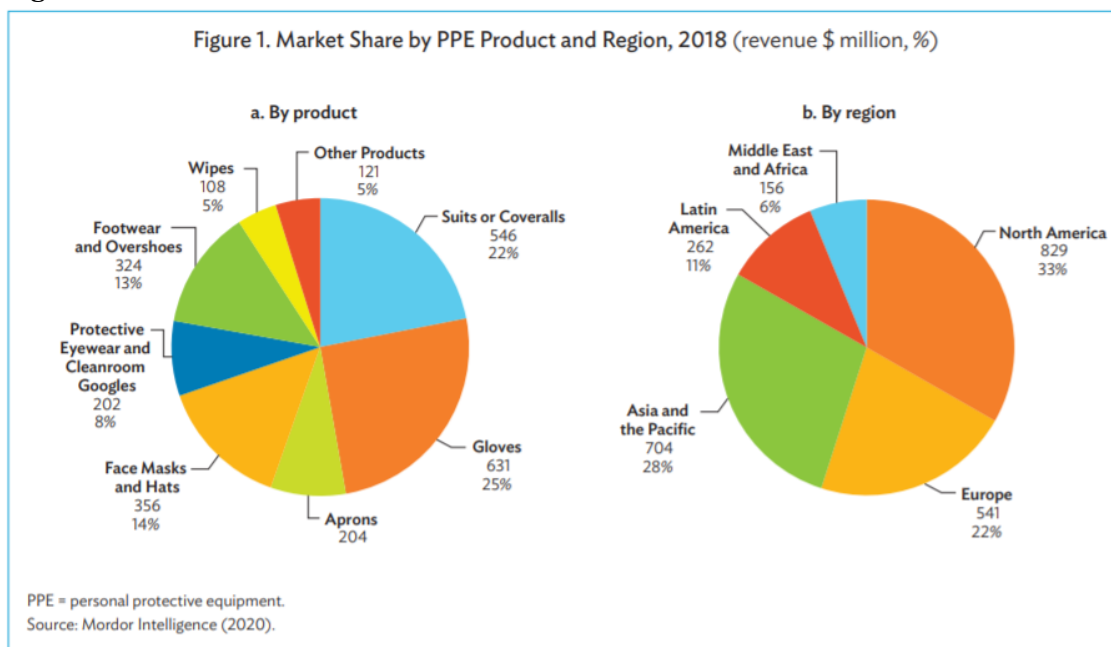


Figure 1: “Global Shortage of Personal Protective Equipment amid COVID-19: Supply Chains, Bottlenecks, and Policy Implications.” Asian Development Bank. <https://doi.org/10.22617/BRF200128-2>.

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