

## Protecting Productive Assets During the COVID-19 Pandemic

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### I. Background

1. In understanding the economics of COVID-19, it is useful to start decomposing the issue in four parts: (i) the public health problem, i.e., the characteristics of the disease and its epidemiology; (ii) the impact of the disease on economic activity; (iii) the connection between the two; and (iv) the economic policy solutions to what has fast become a global pandemic that threatens to destroy the economic and social fabric of modern society.

2. As of now, the infection is spreading aggressively in Europe and the U.S, with vast pockets of highly infected areas in Italy, Spain, and several U.S. states (New York, New Jersey, California, Washington and Texas). Many of these areas are in lockdown, with only essential businesses operating, such as food stores, pharmacies and gas stations. China has, as of today, shut its borders to foreigners after a recent spike in new infections imported from abroad. Epidemiologists suggest that even after the eventual peak and slowdown, a second wave might take place.

3. Three facts are well known about the COVID-19 public health challenge that all affected governments face:

- i. **Humankind faces an existential threat.** COVID-19 is a highly contagious disease, spread through people-to-people contact and aerosol, and the disease has a high death toll, especially among the elderly (> 59 years old). The spread has been extremely rapid, with the first reported case in China on November 17, 2019<sup>2</sup> and reaching global proportions (Pandemic) by the end of February 2020 (Ma 2020; CDC 2020).<sup>3</sup> At the time of writing this note, there are 200 countries, areas or territories around the world with a total of over 465,000 confirmed cases of the disease, and 21,000 confirmed COVID deaths (WHO 2020).<sup>4</sup> Essentially, the COVID virus is everywhere by now.
- ii. **Acquiring herd immunity is not an option.** Flattening the curve of exponential spread of the virus by cutting dramatically social interaction is the best way to minimize the spread of the infection and, therefore, the cumulative death toll, as most infected patients die due to the lack of treatment by stressed healthcare systems (Ferguson et al. 2020).<sup>5</sup> Allowing Coronavirus to spread rapidly through a society is not an option. Given the significant morbidity (severe illness and/or lasting

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<sup>2</sup> <https://www.scmp.com/news/china/society/article/3074991/coronavirus-chinas-first-confirmed-covid-19-case-traced-back>

<sup>3</sup> How easily a virus spreads can vary. Some viruses are highly contagious (spread easily), like measles, while other viruses do not spread as easily. Another factor is whether the spread is sustained, spreading continually without stopping. The virus that causes COVID-19 seems to be spreading easily and sustainably in the community in some affected geographic areas. The transmission happens mainly through respiratory droplets produced when an infected person coughs or sneezes. People are thought to be most contagious when they are most symptomatic (the sickest). However, some spread is possible before people show symptoms. It may be possible that a person can get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose, or possibly their eyes. *Centers for Disease Control and Prevention Web Site.*

<sup>4</sup> World Health Organization (WHO), <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>

<sup>5</sup> As shown by the now famous report from the COVID-19 Response Team at the Imperial College of London: 'Practicing social distance at different home isolation of suspect cases, home quarantine of those living in the same household as suspect cases, and social distancing of the elderly and others at most risk of severe disease) might reduce peak healthcare demand by two-thirds and deaths by half in the US. In the baseline (do nothing) scenario, the authors estimate 2.2 million deaths in the country.

disability) and mortality, even amongst people aged 60 and younger, health systems would be overwhelmed and millions of people would die unnecessarily from COVID and from non-COVID conditions.

iii. **Social distancing is likely to last.** Reduced social interaction is likely to be the norm for a while, until a vaccine or scalable highly effective treatment becomes available (potentially 18 months or more) -- given that transmission will quickly rebound, if interventions are relaxed. Health specialists have warned that similar crises may happen in the coming years as the virus mutates. Such a mutation was seen in the second wave of the Spanish Flu and is the reason why influenza vaccines must be adjusted and given every year to match the current version of the flu. At the same time, testing has been problematic, both due to the lack of proven reliable and easy-to-administer tests on those suspected of having the virus (which might be about to change) and the scarcity of test kits in order to test large groups of the population or affected cities and areas. Early and aggressive testing and contact tracing in some countries, such as Singapore and South Korea, succeeded in both containing the infection by imposing quarantine on those found to have the virus and limiting the overall number of deaths. Italy, by far, the worst hit country in terms of the overall number of confirmed COVID-related deaths, has started testing more aggressively, and regions where testing was done more rapidly and widely, have shown better containment and lower deaths.

4. **Limiting social interaction and imposing lockdowns on people and communities is the appropriate public health response, but it comes at a cost.** Social distancing and lockdowns will inevitably cause a deep contraction in economic activity, first and foremost, because a large share of the workforce is not producing goods and services. On the supply-side most of the working-age population will be asked to stay at home, given the risk of contagion, which means, for most individuals, being economically non-productive. On the demand-side, consumers will not visit stores and final demand for goods and services will also decrease drastically, due to lower income, wealth being eroded, and heightened uncertainty. More importantly, facing huge financial uncertainties, including the risk of job losses, consumers are likely to cut spending.<sup>6</sup> The GDP decline in the U.S. can be almost 10% in 2020, if the health crisis lasts for three months, with half of the labor force staying at home in the first month and one-fourth in the second and third months. In comparison, the decline in GDP growth in the U.S. during the 2008-2009 financial crisis (Great Recession) was around 4.5% (Gourinchas, 2020).

5. **It is important to recognize, though, that the upcoming health-induced recession will be unique in its genesis.** Most episodes of economic downturns have been driven by economic and financial factors, natural disasters or social unrest. Latin American countries suffered recessions in the 1980s as result of balance of payment crises; East Asia's recession in the 1990s was rooted in a deep financial crisis. Very often, recovery takes time -- up to 5 years for cases of a 10% of output drop (which can be the case in the US).<sup>7</sup> But this is so because such recessions involve the destruction of productive assets: from the bankruptcy of potentially viable firms due to hyperinflation and the associated loss of organizational and human capital, to the more extreme cases of infrastructure collapse. As a result, recessions tend to be

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<sup>6</sup> International trade plunged as COVID-19 became a pandemic. Depending less on human interaction, the digital economy, especially the segment of online services whose demand may increase with more leisure time of consumers, is slightly better off but will also be affected by the limitations of the real economy.

<sup>7</sup> Economic historians from the University of Groningen looked at the cross-country set of GDP stretching back to 1870 across 18 industrialized countries. There have been only 47 instances in which a country experiences an annual decline in output of more than 10%. Of the 4 large output declines, 42 occurred between 1914 and 1945. Across the period from 1870s, it took an average of 5 years for output in the countries that experiences decline in GDP of more than 10% to regain their peak.

deeper and last longer, and have profound social implications, essentially driven by the loss of employment and absence of effective social protection policies (Baird et al. 2011).<sup>8</sup>

6. **The upcoming recession is driven by a large, but temporary and controlled, reduction in labor supply.** Everything else the same, there is no obvious reason why economic activity should not rebound completely in a relatively short period of time. Yet, many things can go wrong in this process. Potentially productive firms that go bankrupt due to the lack of sales, may never see a second chance with productive assets being, at least in part, lost. Workers will take time to find new jobs and newly hired workers will take time to learn and get trained. Non-performing loans accumulated during the recession could threaten the stability of the banking system. Feedback effects would drive a negative spiral from which a depression could result. The health-induced recession would have become a standard recession/depression. This is the contagion that needs to be avoided. In the US, medical bills and an expected dramatic increase in bankruptcies will continue to suppress household spending.

7. **Yet, to avoid catastrophic economic damage on a grand scale and loss of economic opportunities for millions, if not billions of people, the policy objective would be to limit the timespan and severity of the recession.** Absent a vaccine or treatment, the only way to do that is to gradually allow workers who are not infected to return to work, so that production can resume and, in time, return to normal levels. To achieve this, rapid mass testing would be needed, strict rules on quarantine for the infected and creating virus-free workspaces that prevent new waves of infection. Over time, firms and individuals will acquire the tests to verify who is infected and will implement the decontamination measures needed for a safe work environment. This would not be easy but is doable, with both the public and private sectors working in a coordinated and responsible manner.

## II. Economic Aspects of the Pandemic

8. **On the 'macro' side, we find ample support for increasing public spending to meet the needs of the public health system, but there is less consensus about adopting broader counter-cyclical goals.** G. Mankiw, for example, advocates for unconditional fiscal support to curb the health crisis (*'Give Dr. Fauci anything he asks for'*, he recommends in his blog), but also argues that '[f]iscal policymakers should focus not on aggregate demand but on social insurance'. Monetary policy, in turn, should focus on maintaining liquidity, i.e., on central banks' role as the lender of last resort. The emphasis on social insurance is also clear: 'Externalities abound. Helping people over their current economic difficulties may keep more people at home, reducing the spread of the virus. In other words, there are efficiency as well as equity arguments for social insurance' (Mankiw 2020). Classical measures to expand demand could be adopted once the pandemic is over, if needed, to strengthen the recovery, but are ineffective as a tool when whole countries are shut down.

9. **On the supply side, one priority is to address market frictions that may restrain the supply of goods and services required by public health policy.** Short-term scarcity of medical supplies and equipment needed to fight the disease – alcohol, surgical masks, protective personal equipment (PPE) for medical personnel and other at-risk professions, test kits, essential medicines, emerging therapies, ventilators and hospitals ICU beds – is already an issue in most countries. Markets for medical products and services are heavily regulated and involve high entry costs, including access to know-how, that tend to make **supply relatively inelastic** (even in the medium-term). Moreover, several governments are limiting the exports of equipment related to the treatment of the disease. The spectrum of policy measures is large: some observers even advocating for typical state dirigisme in selected markets (Gans,

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<sup>8</sup> In fact, the social consequences of economic downturns are many and include, for example, an increase in infant mortality, especially female infants. See Baird et al. (2011).

2020), some policy-makers resorting to direct state production,<sup>9</sup> and many opting for measures to leverage the private sector – from strengthening public research and development (R&D) capacity to competitive procurement of a vaccine and reviewing regulation to facilitate the entry of new producers. Loan-guarantee schemes are also frequently proposed in order to incentivize the entry of new developers of vaccines or producers of equipment and supplies.<sup>10</sup>

10. **A quick rebound is possible, therefore, if we insulate workers, enterprises and banks from the negative impacts of the recession.** A core objective of the policy response should be to provide resources to firms and households to face forthcoming payments – avoiding a financial crisis and the productive capacity of the economy. But this will require a **fast and bold policy response** (Baldwin and Di Mauro 2020), which involves a relatively simple design, mindfulness of moral-hazard risks and prioritization of interventions that are easier to unwind and are less distortionary (Banerjee and Hofmann 2018).<sup>11</sup> Avoiding distortionary policies and misallocation of resources is important to boost productivity growth post-crisis and expedite the recovery. One way to mitigate this risk is to pay more attention to the design of policy interventions. Possible examples include:

- A public guarantee scheme that could facilitate restaurants to issue ‘bonds’, leaving consumers with the choice to support the restaurants they prefer which, in turn, would keep market discipline to some extent alive (as compared to writing a blank check to all restaurants) (Passy, 2020).
- Policies to support the private sector could try to focus on measures to strengthen firm’s capacity to compete in the future. For example, direct and indirect transfers to SMEs could be transformed into conditional loans with zero payment, if the condition – investments in productivity-enhancing investments in the future, such as improving digital capabilities of firms or adopting quality certificate -- is fulfilled within a certain timeframe.
- Income support programs for workers could be enhanced by additional monetary incentives for online training (with the additional benefit of helping individuals cope with the lockdown targets, one critical objective of public health policy).

11. **It is important to recognize that policy design is constrained by the country’s macroeconomic conditions -- fiscal space, monetary policy and financial sector depth and resilience.** These can be especially binding in emerging and developing economies, which usually have limited fiscal spaces, weaker monetary transmission channels due to underdeveloped financial systems and higher economic informality (Loayza and Pennings, 2019).

- The state can provide income insurance and become a payer of last resort. Subsidies can be provided to households and firms to meet their payment obligations; the government can

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<sup>9</sup> Brazil’s liberal president has announced the use of the army’s pharmaceutical laboratories to produce COVID-19 related medicine instead of procuring from the private sector.

<sup>10</sup> Germany and Britain, for instance, have already put these measures in place, but nonetheless it yet remains unclear who will process millions of loan applications (institutional side matter). A good practice approach will probably be to use the banking system – almost all firms have accounts. It is unclear to what extent banks will be able to absorb risks here and the increase in liquidity in the financial system will trickle down – as illustrated by the recent experience in ECA countries, such as Croatia.

<sup>11</sup> Like the 2008 crisis response, many advanced and emerging economies have announced ambitious increases in non-health related expenditures and Central Banks have been considering additional interest rate cuts or simply returning to quantitative easing. Yet, studies have shown the potential misallocation effects of those policies, their negative impact on aggregate productivity and on economic recovery. For instance, lower interest rates in OECD economies boosted aggregate demand and raised employment and investment in the short run, but the higher prevalence of ‘zombie firms’ they have left behind seem to have misallocated resources and weighed on productivity growth in recent years. ‘Zombie firms’ are firms that are unable to cover debt servicing costs from current profits over an extended period. See Banerjee and Hofmann (2018).

accept delays in taxes, public utilities payments, etc.). This would be the simplest, boldest and fastest response. However, many countries do not have much fiscal space.

- Even if the fiscal position is weak, but inflation is low, liquidity injections (including through debt purchases) can finance the policies mentioned above. However, many countries (oil producers or emerging markets) have limited monetary policy space due to the collapse in oil prices and capital outflows, which puts pressure on the national currency and can, in turn, increase inflation and destabilize the financial sector.
- Countries may support households with subsidies and provide credit to the private sector to meet payment obligations. Credit here is a substitute for subsidies. This requires deep and strong financial sectors and some form of credit risk sharing from the state (through partial credit guarantees PCGs) and liquidity support. Also, it is more difficult to apply when firms are already highly leveraged. In low income countries with underdeveloped financial sectors this approach would be difficult.
- When none of the other conditions are present, the policy response will need to be focused on restructuring or delaying payments of private sector liabilities (rents, loans, etc.) by mandating loan restructuring or a moratorium. These policies allocate part of the burden onto the private sector (banks, landlords, private utilities) as these restructurings typically result in a net present value reduction as interest is not capitalized.

12. **In addition to the macroeconomic conditions in the country, the policy response will depend on the expected duration of the recession and its effect on asset prices.** The longer the recession, the higher the costs of the policy response, therefore the more necessary will be to adopt targeted and possibly complex support policies. Hence the importance of prioritizing the health objective – extinguishing the pandemic – in the shortest time possible. Also, a decline in asset prices will likely have a negative impact on consumption and economic recovery. At the same time, investors are likely to react positively to the adoption of bold and swift policy responses.<sup>12</sup>

13. **The costs of the health crisis could be enormous:** Erik Berglof, former EBRD Chief Economist, argues that the \$2 trillion stimulus package approved last week by the US government will not be enough and may well run to triple that amount. In an open letter to the G20 leaders, signed by 20 prominent public health specialists and economists, he calls for immediate action to and making available \$8 billion to the Global Preparedness Monitoring Board and the WHO (Berglof and Farrar, 2020). The huge public expenditure associated with higher public health investment and support to the economy could be financed either through government debt (bonds) issuance or the central banks undertaking quantitative easing (i.e., massive purchases of corporate bonds and other debt instruments held by commercial banks, thereby creating liquidity for the banks to continue lending). At the extreme, central banks can always resort to printing money, which would generate inflation. Indeed, many analysts are advocating for QE by the leading central banks of the world (the Federal Reserve, the ECB and the Bank of England) and perhaps by central banks in other large emerging markets (Miles, 2020). Such massive monetary expansion will inevitably raise inflation, perhaps of the order of 10% or more in the aftermath of the crisis (Goodhart and Pradhan 2020). As long as this is a one-off spike, it can be tolerated and, as normal economic activity gets gradually restored, prices will adjust and come down, probably to a new higher equilibrium level. Cash holders, savers, pension funds and insurance companies will lose in real terms, while company and government debt will be inflated away.

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<sup>12</sup> As indicated by the reactions of Wall Street to the announcement of the emergence package in the US. On March 26, 2020 S&P 500 had its best three-day run since 1933 and the Dow soared more than 1,300 points for its third straight day of gains.

### III. Possible Measures to Limit Economic Losses Associated with Prolonged Social Distancing and Lockdowns

14. **The ideal solution is to help firms, workers and consumers go back to their daily routines as soon as possible.** Short of completely ending the pandemic, the best way to do that seems though measures to reduce the *risk of infection*. Paul Romer advocates for the development of test kits that produce quick results -- letting the non-infected go back to work and shopping -- and for a surge in the production of personal protective equipment – which would be used by first responders and health workers but also by anyone who works in a grocery store and anyone who shops there. He cites that a test that provides results in 45 minutes developed by Cepheid may be released soon by the FDA; and that the German Center for Infection Research and Sherlock Biosciences are also working on scalable initiatives (Romer, 2020). Abbott has recently released a point of care test that does not required a lab and that can give results in less than 15 minutes. Dewatripont et al. (2020) also argue that two currently available tests – a serology test and RT-PCR test – when applied in combination are sufficient in identifying people who are both free from COVID-19 and immune to it, making them safe to go back to work. They argue that a targeted scaling-up of testing for both will help maintain vital economic services, such as utilities, food stores, pharmacies and essential postal and delivery services, as well as reduce fears of contracting the virus from an infected co-worker (Dewatripont et al. 2020). Other economists also point that universal testing for the entire US population, including repeated testing over 10 times and logistics, would cost roughly around 0.2% of GDP, much less than the cost of say, 2% death rate would imply in economic value terms (Kopczuk 2020). Many lessons can be learned from the HIV/AIDS epidemic in which people were encouraged to “know your status” and in which early testing and treatment proved to be an effective form of prevention (Stop The Virus Website 2020).<sup>13</sup>

15. **Similarly, governments could focus on developing technologies (in the broad sense of the word) that enable the development of ‘COVID-19 free’ (business) environments.** Testing technologies would have to produce quick results and be portable (usable at home) by individuals. Technologies that enable owners to declare their business – factories, stores and products – ‘COVID-19 free’, could be an alternative to the development and massive production of new, more comfortable and less costly personal protective equipment (Taylor 2020; Zhao 2020). ‘COVID-19-free certificates’ would provide credible information that individuals, products, factories and stores are not infected by the virus.<sup>14</sup> None of those technologies require scientific breakthroughs and their development seems to be within the reach of the fiscal resources made available by developed and some emerging countries. Global coordination and collaboration with the private sector will leverage available public resources. A “COVID-19 free” business could implement, amongst other measures, frequent universal testing of staff, universal mask wearing (with instruction on how to don and doff), daily temperature and symptoms checks, hand hygiene gel at the business entrance and in every room.

16. **Reopening the economy will depend on factors at the community, business/institutional, and individual level.** On the community level, countries can reopen their economy district by district (or county by county, whatever is their smallest unit of government). In order for a district’s economy to be

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<sup>13</sup> <https://www.helpstoptheviruspro.com/start-hiv-treatment/treatment-as-prevention?>

<sup>14</sup> For example, China started using apps to certify who is clear of the disease and who is not. Both China and South Korea are using big data and social media to trace infections, alert people of hotspots and round up contacts. South Korea also changed the regulatory framework to allow the state to gain access to medical records and share them without a warrant. Other uses of technology specifically to administer quarantines and social distancing as an early preventive measure could also be explored. Mobile phone GPS tracking is used by the authorities to monitor that individuals that are mandated to self-quarantine stay home, especially among the young.

reopened it must meet a series of evidence-based, agreed upon criteria. These criteria will most likely include:

- COVID testing is available to all who seek it and to all who plan to return to work.
- There are adequate data systems to know the COVID rate at the community level.
- There are adequate COVID contact tracking systems, including sufficient numbers of field epidemiologists/contact tracers and potentially including voluntary GPS recording apps such as MIT's Private Kit:Safepass or Singapore's voluntary TraceTogether app.
- There are adequate systems in place to prevent newly COVID positive people from infecting others. Options include monitored home quarantine or voluntary isolation in hotels.
- Hospitals have the capacity to safely handle the potential increase in cases that may come with the re-opening of the economy (Rogers 2020).<sup>15</sup> This includes adequate numbers of health workers, high level personal protective equipment (gloves, gowns, face shields, masks, hair coverings, and shoe coverings), beds, pharmaceuticals, emerging COVID treatments, and ventilators, and respiratory clinics and protocols, etc. Hospitals can test every hospitalized patient.
- Adequate supplies of masks and gloves are available to high-exposure front line workers (cashiers, delivery workers, etc.)
- Adequate supplies of masks are available to all workers who will return to a setting in which there is contact with other people.
- Adequate supplies of materials for COVID monitoring and improved hygiene are available to businesses. These materials include infrared "no touch" thermometers, hand sanitizer, and sanitizing wipes (Hoke 2020).<sup>16</sup>
- The number of new cases falls below a given number per population
- The passage of regulations requiring all people to wear cloth masks in public and to practice social distancing.
- The availability of a toll-free COVID hotline that anyone can use to anonymously report situations that are unsafe from a COVID perspective.

Communities may also need "social distancing champions" who help change the local culture and reinforce the need to stay six feet apart and the need for new forms of greetings to replace handshakes, cheek kissing, and hugs.

Once community criteria are met, the decision can be made regarding which businesses/institutions may reopen. These criteria may consist of how essential a business is to basic human needs and how essential it is to the strength of the local economy. Business should be required to have a written COVID mitigation plan that is shared with the government and employees. These plans could include measures such as paid

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<sup>15</sup> Both China and Hong Kong have seen an increase in cases as they open up their economies. <https://www.wired.com/story/the-asian-countries-that-beat-covid-19-have-to-do-it-again/>

<sup>16</sup> The US and other countries have experienced shortages of alcohol due to the increased sales of hand sanitizer: <https://www.voanews.com/science-health/coronavirus-outbreak/shortage-ingredients-delays-production-sanitizers>

sick leave, policies covering workers or clients with COVID symptoms, limiting the number of clients on premises at a given time, improved ventilation, daily temperature and symptoms checks of employees, improved cleaning standards, personal protective equipment for workers, and hand sanitizer readily available. In addition, the COVID-mitigation plans should include staffing plans that shift high-risk individuals to telework or roles with less personal contact. Businesses and institutions (such as schools, libraries, and churches) may be certified COVID-free based on the honor system or on an approval process. For the honor system, businesses are given COVID-free certificates based only on the submission of the COVID mitigation plan and a signed statement that it is being implemented. These businesses would only be inspected if a complaint were lodged. Some governments may choose to go through an approval process for all the COVID-free plans or for high-risk industries. This would create more of an administrative and regulatory burden, however, most countries already have regulatory systems in place through departments of health that inspect restaurants, health care facilities, the beauty industry (hair and nail salons, spas, etc.), daycares, schools, sports facilities and hotels. The criteria can be created by Ministries/Departments of Health together with Ministries/Departments of Commerce and with private Chambers of Commerce. Departments of Health may need to expand their staffing to address the additional regulatory burden. The COVID-free certificates can be monitored either through the honor system and the anonymous reporting lines or through a system of periodic inspection. As the COVID outbreak diminishes in a community and the community's preparedness increases, sequential waves of less-essential businesses may reopen.

In order for individual workers to return to work, some countries may wish to certify workers COVID-free or COVID-immune. Both Germany and the UK are already considering such certificates. There is some concern that COVID-immune certificates would perversely incentivize workers to contract COVID to return to work (Baker and Larson 2020).<sup>17</sup> However, being COVID immune should not be a condition for return to work. It is instead an improved understanding of the individual's risk. For example, COVID immune workers may be placed in roles with higher interpersonal contact than workers without COVID immunity. We do, however, need a greater understanding of the possibility of COVID re-infection, its severity, and implications (Leung 2020).<sup>18</sup>

17. Batch testing of the population or of returning workers can be an efficient, low cost way to determine who is infectious (if the RNA test is used) or who is immune (if the antibody test is used). Perhaps better than immunity-certificates is the batch testing of employees. Before returning to work all workers could be swabbed for COVID RNA (which indicates infectiousness). The swabs are pooled into one batch and tested. If the test comes back positive, the batch is broken down into smaller groups and retested. This is a much more resource efficient way to identify any infectious people so they can be placed on medical leave. Most workers can be tested on return to work and perhaps once a month until a vaccine or more effective treatments are developed. High-risk workers such a healthcare workers and nursery and school teachers can be tested more frequently.

18. **Global food security concerns are mounting as some governments contemplate restricting the flow of staple foods, with around a fifth of the world's population under lockdown to fight the widening coronavirus pandemic** (Cullen 2020). As the crisis deepens and recession unfolds, agriculture and food value chains might be disrupted. Shortages might occur, if transport links are interrupted, borders closed or workers not working. Net importing countries could be affected negatively. Attention needs to be paid to protecting vulnerable rural and urban households and providing access to inputs for farmers (seeds, fertilizers, feed), which may also be disrupted due to trade and transport restrictions. While for the time

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<sup>17</sup> <https://www.bloomberg.com/news/articles/2020-04-09/there-s-a-big-problem-with-coronavirus-immunity-certificates>

<sup>18</sup> <https://time.com/5810454/coronavirus-immunity-reinfection/>



being, cereal crop production is not affected and stocks are high, if supply chains break, shortages might begin to appear. It would also be important to safeguard production for the next agricultural season. 9 million people die of hunger and malnutrition a year both directly and through the dramatic reduction in the immune system that leaves the malnourished vulnerable to infectious disease (Mercy Corps 2018).<sup>19</sup> The extreme disruption of economies, the agricultural sector, and food distribution could dramatically increase these deaths. When predictions are made that the cure could be worse than the disease, the possible spike in starvation and malnutrition deaths, is a plausible example.

19. **Appropriate trade and supply chain measures will be essential to combat the health crisis and also ensure the flow of food and other basic products, needed for survival.** The World Bank has put forth a series of policy notes that provide the do's and don'ts of trade policy in the time of crisis (World Bank 2020).<sup>20</sup> Special emphasis is put on making trade in critical medical goods, such as PPE, masks, ventilators and the like, as least restrictive as possible. Equally, food supply chains should be safeguarded, to the extent possible, which may prove challenging with some countries resorting to complete border closure.

20. **The COVID-19 crisis also reminds us of the importance of building scientific, technological and innovative capacity in developing countries.** While countries like Vietnam and China – where investments in research and development have been taken more seriously by the government – had some indigenous capacity that helped deal with the crisis, most of the developing economies will fundamentally depend on international cooperation and goodwill. As imports and FDI are paralyzed, technological solutions will be less available for developing countries. This will require special attention from global leaders in making new discoveries available to those nations. A more consistent approach to building indigenous capacity in developing economies does not mean that every country needs to have a CDC or NIH – a lot can be achieved regionally or even by contracting out research. The Africa CDC was founded for just this purpose. But a minimum capacity to absorb knowledge and adapt to local conditions is necessary.<sup>21</sup> During times of crises, such as this, such capacity can go a long way. Today, one of the bright news came from Serbia, where a World Bank-funded loan that supports R&D and innovation has made seven grants available for companies producing personal protective equipment and medical supplies, public handwashing stations, and respirators to combat the spread of the virus.<sup>22</sup>

21. **Other measures to support the private sector during the COVID-19 virus could be conceived along the following lines.** First, measures that enable the private sector help with the short-term needs of public health policies (flattening the disease curve). Second, measures that will help the private sector adapt to the 'new normal' (flattening the recession curve). To achieve those objectives, governments will need to use many of the instruments available to the state - financing, producing, regulating and incentivizing the private sector towards pre-defined goals. This is especially urgent for health-related products such as emerging therapies, PPE, ventilators, and other essential medications and medical supplies. The digital economy, especially online services, is a natural candidate of focus – with the advantage of further enhancing the economy's prospects in the future. Measures are assumed to be broadly consistent with the volume of fiscal resources announced. Priorities are, as always, country specific. In designing the policies, governments need to consider how to mitigate the risk of moral hazard (encouraging the wrong behavior of agents) and adverse selection (helping those who need less or do not need help at all). In

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<sup>19</sup> <https://www.mercycorps.org/blog/quick-facts-global-hunger>

<sup>20</sup> WBG Guidance Not: Do's and Don'ts in Trade Policy Response to COVID-19, March 30, 2020.

<sup>21</sup> This may start by strengthening the research capacity in infectious diseases to meet societal emergency but should go beyond and help countries to develop a S&T policy consistent with their needs and possibilities – including the capacity to do reverse engineering. As ventilators are becoming scarce in international markets, researchers in top research institutes in Brazil are struggling to design the more sophisticated parts required for safe use of the equipment.

<sup>22</sup> The First Serbian Respirator and Other Solutions to Combat the Epidemic – in Record Time. Source: energetskiportal.rs

addition, the private sector can be encouraged to find innovative ways to stay open during lockdowns. Examples include home delivery or curb-side service or moving services online. K through 12 schools need better support to engage young students so their parents can be more productive during the day.

22. **In flattening the disease curve, the core objectives are to increase the supply of critical medical products and keeping people at home to minimize the spread of the disease.** These policies that we observe now in the US and Europe, generally of containment and lockdown, should be informed by statistics about the disease and the epidemiological and virology public health and medical professionals. The role of Surgeon General in the US and Chief Medical Officer at the national level have never been more important. How could public policy enable the private sector to contribute to those objectives?

- Ease the regulation of basic health material sectors, such as masks, gloves, alcohol and hand sanitizers, to enable the entry of new producers.
- Ease the regulation on provision of services, such as online sales of over-the-counter drugs, which are prohibited in many countries.<sup>23</sup>
- Government and private sector to fund the acquisition of manufacturing know-how and the production of test kits, medical oxygen, respiratory equipment, and other essential supplies.
- Invest massively in testing capacity
- Provide funding and strengthen regulation for public-private partnerships for the expansion of health services (hospitals and ICUs).
- Ease restrictions of PPE in hospitals<sup>24</sup>, allowing health workers to wear their own PPE or home-made PPE.
- Provide guidance for surge staffing of hospitals. This can include more efficient team design and the sourcing of extra health workers from non-clinical positions, primary care, retirement, etc.<sup>25</sup>
- Ease the licensing of health workers to allow them to work across borders.<sup>26</sup>
- Ease restrictions on human clinical trials and provide a data platform for hospitals and physicians to share patient data.
- Review and ease regulation for providing medical services online -- digital medicine by the private sector (when applicable).<sup>27</sup>

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<sup>23</sup> For instance, online sales of pharmaceutical products (even over-the-counter drugs) are not allowed in most Part II countries in ECA. This makes it harder to get drugs and other products to patients in quarantine. But despite the need of the hour, regulators do not necessarily adopt a more flexible approach. Following COVID, the Croatian Chamber of Pharmacies, for instance, extended the ban on online sales even to hygiene products, despite growing demand for app-based delivery.

<sup>24</sup> CDC now allows health workers to wear bandanas if no other masks are available.

<sup>25</sup> For instance, California has started to train newly unemployed people to be auxiliary health workers.

<sup>26</sup> Medical professionals are in high demand, but entry restrictions limit their number. Countries can renew licenses of inactive professionals (as in the United Kingdom), allow some professionals to share exclusive rights (e.g., allow nurses to prescribe drugs) and relax rules around the recognition of qualifications (as done in some US states). The rules around the recognition of qualifications are time-consuming to change than license renewals and waivers. Even within the EU, the “automatic” recognition of professional qualifications for nurses, doctors, pharmacists and other medical professionals takes 4-5 months. While China sent 300 doctors to Italy, it is not clear if these doctors could actually practice.

<sup>27</sup> Even within the EU, many governments have not created the enabling conditions to provide medical services remotely. The gaps vary from country to country and no systematic inventory exists. These gaps often go beyond the need to update health care regulations to allow for telemedicine. Additional challenges include reimbursement and data privacy rules. There are also different generations of telemedicine (audio, video, remote measurement, etc.), each with its own policy constraints.

- Subsidize consultations by the public, especially on mental health, a concern during lockdowns and quarantines.

23. **In the short term, preserving the productive value of economic assets is second most important priority during the pandemic after preserving lives. Unlike war situations, when lives and physical capital are destroyed on a massive scale, the current health crisis does not have to cause a serious destruction of physical and human capital.** It has and still can cause a very high loss of life worldwide, on a scale unseen since World War II but the elderly population, a smaller share of the work force, has been by large the most affected by fatalities.<sup>28</sup> As discussed before, the challenge is the loss of productive value caused by layoffs and bankruptcies induced by the health-induced suppression of economic activity and the financial distress it may cause. In this sense, preserving productive assets, such as capital and labor, would require the following:

- Maintain worker salaries and wages, even partially, through public payroll relief to firms
- Provide cheap loans for working capital and payroll to SMEs and large firms, to minimize layoffs
- Pre-empt firm insolvency by allowing the rollover of firm loans from banks and other financial institutions and temporary interest payment moratoria; introduce short-term insolvency measures, such as preventing viable firms by being prematurely pushed into bankruptcy by increasing the barriers to creditor-initiated insolvency filings for a limited period of time, and temporarily suspending a company director's duty to file and the associated personal liability for failure to act (World Bank 2020)<sup>29</sup>
- Allow tax relief to firms and individuals for the duration of the containment period
- Provide essential public law and order measures to ensure that productive equipment and firm facilities and assets remain intact

24. **In flattening the 'recession curve', the core objective is to restore usual work and consumption routines.** In addition, supply-side measures that can enhance firm productivity and facilitate the recovery might be useful. For example:

- Fund a pilot project of 'Covid-19 free environment' in a selected space/industry/value chain could be one option.
- Help firms to keep afloat with a large injection of liquidity in firms (through tax holidays and short-term emergency debt re-financing) in the format of a loan for a defined period (6-9 months) and conditional on the realization of investments in productivity-enhancing measures (in which cases the loan would be canceled). This needs to be prepared as a structured 'emergency plan' with clear rights and obligations of the parties involved to mitigate the potential for failure associated with this type of intervention.<sup>30</sup>

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<sup>28</sup> The containment policies currently in place around the world work against massive loss of life, on a grand scale such as witnessed in wartime. Containment policies, however, work up to a point, both in developed and developing countries. People can only stay at home for so long. Some will flout the restrictions on home stay because they need to get out and work, especially in poorer countries. Younger people will also be less likely to observe strict lockdowns, if that goes on for long. If a prolonged lockdown (say, over 3 to 6 months were to take place) social unrest may erupt and additionally test the ability of governments to maintain public order. Riots and looting may lead to loss of physical value of shops, factories, and production facilities.

<sup>29</sup> COVID-19 Outbreak: Implications for Corporate and Individual Insolvency, World Bank, March 27, 2020.

<sup>30</sup> One way to mitigate moral hazard, adverse selection and misallocation is to follow, especially here, the EU Regulation for State Aids, section on restructure and emergency assistance. All the instruments must be available and used as needed, including easier borrowing terms, temporarily waving tax or payroll payments, suspension of loan payments, direct financial assistance etc.

- Consider the development of an ‘SME service bonds’ market through guarantees and liquidity provision.<sup>31</sup>
- Strengthen the digital economy by increasing network capacity (Black 2020)<sup>32</sup>, assisting workers to access wireless and laptops, funding digital entrepreneurship, including in areas of health and education, modernizing the e-commerce regulation and (if feasible), through:
  - Funding digital literacy, training of workers online, and supporting online tutoring for students up to high-school level.
  - Creating markets for the provision of services for the elderly by supporting private online platforms that provide risk-free helpers.
  - Promoting e-government through private sector related solutions, including for the development of mobile phone compatible content and services.
  - Consider the use of fintech for the provision of cash transfers – income support, paid-leave support etc., – via mobile phones and other e-services.<sup>33</sup>
- Review regulation to promote health security and productivity:
  - Ban the capture, raising, sale, and consumption of wild animals/non-traditional animals. Improve phytosanitary norms and health regulation in selected sectors to reduce the risks of future outbreaks.
  - Review regulation of infrastructure sectors, especially telecoms and logistics, to facilitate firm entry and growth.
  - Strengthen the insolvency regime as it may inevitably be in high demand during the recovery.
- Review and simplification of regulatory requirements- Governments could conduct a quick review of regulatory requirements for quick entry into anti-Covid-19 related core products and services. Core products include: (i) personal protective equipment (respirators, gloves, masks, gowns, alcohol gel; disinfectant etc.); (ii) testing kits and results; (iii) hospital infrastructure (beds, ventilators etc.). Based on the review, simplification measures could be implemented through an omnibus emergency regulatory instrument. These could be temporary, for the duration of the health emergency, or permanent – i.e. they are not required even when the situation normalizes.
- Relaxing inspections and enforcement - a possible measure could also be to relax inspections and enforcement related to the compliance with regulatory requirements for PPE, in particular. For example, the US FDA has issued guidance with less stringent requirements but also a moratorium on taking action against businesses that engage in production of PPE (for ex. alcohol production firms) for the duration of the public health emergency.
- Fast-track approvals for manufacturing and import of PPE

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<sup>31</sup> For example, China has already quickly implemented e-voucher programs that give out coupons that can be spent in local shops and restaurants. This could substantially boost households’ confidence and readiness to spend when conditions improve.

<sup>32</sup> <https://globalnews.ca/news/6753262/internet-work-school-home-coronavirus-covid-19-technology/>

<sup>33</sup> E-vouchers to be used when the pandemic is used could further support the recovery. If funds can be sent instantly through mobile phones or online bank accounts, people will feel more confident and avoid hoarding cash and slowing the recovery when pandemic is over. So, enabling the easy and fast cash flow through facilitating access to mobile technologies and finance could help, especially in low -income countries.

- Issuance of quick approvals to manufacture of import PPE - For example, the Thailand FDA aims to approve the applications within one (1) day, provided that all supporting documents are in good order.
- Expedited review of changes to manufacturing sites and expansion of production facilities for PPE. Manufacturers would be able to get expedited approval of such changes.
- Expedited approval for repurposing manufacturing product lines - Flexible and fast procedures to allow textile manufacturers to repurpose their manufacturing product lines to put them to use to make masks. Also, temporary measures to allow manufacturing of alcohol to incorporate into alcohol-based hand sanitizer products during the public health emergency.
- Relaxing requirements for restaurants and manufacturers for sale of packaged food (both perishable and non-perishable food) that lacks a Nutrition Facts label.
- Temporary realignment of various certification requirements for drugs and equipment
  - Expedited approval of drugs - Speeding the market approval of drugs that have been proven safe for other similar diseases.
  - Expedited approval of tests and anti-body tests: Speeding the market approval of tests and in particular anti-body tests that will allow gradual return of people to work.
  - Temporary approvals for equipment – for ex. emergency authorization to use respirators that might otherwise not be allowed for use (e.g. expired), and emergency certification for use of other types of ventilators (e.g. anesthesia gas machines, positive pressure breathing devices that are modified for use as ventilators).
- Facilitating Telemedicine
  - Relax the requirements and allowing the use of non-invasive remote patient monitoring technology (e.g. cardiac monitors, electronic stethoscope, pulse oximetry etc.) that will help eliminate unnecessary patient contact and ease the burden on hospitals.
  - Relax the requirements related to animal examination and premises visit for veterinarians.
  - Outreach and providing information to businesses
- Establish a dedicated focal contact point for manufacturers – that will focus on providing information and facilitating businesses to engage in activities that can help mitigate potential shortages by increasing availability of Covid-19 related material and devices.

#### IV. Conclusions

**The current recession is borne out of a medical necessity and requires swift and bold, unorthodox measures.** Standard fiscal and monetary policies fighting this recession are ineffective or even counter-productive (if they encourage people to engage in social contact). At the same time, politicians have imposed strict restrictions mandating that people practise social distancing and stay home, and rightly so. However, a prolonged recession that wipes out 30% of GDP or more in a matter of months is hardly socially desirable, as it will lead to an enormous loss of economic value and, ultimately, in due course, loss of life as well through increased poverty and associated infant mortality, for example.

**Phase 1: At present, we are in the first phase of policy response, where the aim is to preserve economic value, to the extent possible, and maintain physical capital and essential productive assets intact.** Essentially, policymakers are buying time by making sure economic agents, such as firms, banks and

workers, are provided with cash and liquidity to maintain some level of operation and be ready for a second, recovery phase. The aim is to minimize value lost and maintain the capacity to produce, once the health crisis is over.

In the absence of a solution, the basic objective of standard economic policy should be to (i) guarantee whatever fiscal resources are needed to combat the epidemic; and (ii) limit the economic damage that is inevitable, given that output is not produced when the labor force is largely kept at home.

Limiting economic damage, in turn, requires governments to act along three main lines to ensure that (Gourinchas, 2020):<sup>34</sup>

- Workers can remain employed and collect their wages – even if quarantined or forced to stay home to look after dependents.
- Firms can weather the storm without going into bankruptcy.
- The financial system is stable and robust, i.e., banks have access to the liquidity needed to handle non-performing loans.

**Phase 2: Flattening the recession curve requires reducing the risk of infection to negligible levels, enabling workers to go back to work, and consumers back to consumption.** This, in turn, requires an ambitious program involving (i) the development of quick, portable and accessible testing kits (a technology that is not yet available, but there are promising signs that accurate, cheap and reliable test kits will be soon be on the market), (ii) massive investment in scaling up testing, starting with essential workers in sectors that require contact with many people (health workers, transport workers, police, etc.) and (iii) large-scale sanitary measures to ensure the safe and secure disinfection of (potentially) virus-infected sites, buildings and premises. Testing is seen as the best policy to avoid a second recession, if there is a second wave of COVID-19 in the fall of 2020 or beyond. It can be the best policy to address the information gap in who the sick people are, and, in so doing, gradually restore economic activity at a minimum risk for further infection.

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<sup>34</sup> Pierre-Olivier Gourinchas (2020) -Mitigating the COVID Economic Crisis: Act Fast and Do Whatever it Takes. In R. Baldwin and Beatrice W. Di Mauro. (eds). CEPR.

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