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Abstract

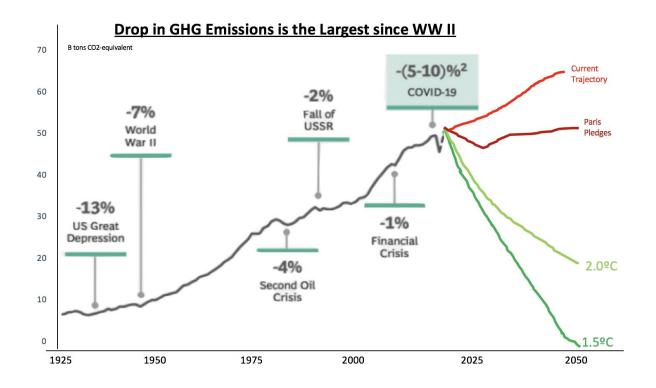
After upending life in China, Italy, and Iran, many began to wonder how long it would be before the Coronavirus would take up residency in the United States. For businesses and policymakers alike, this novel virus presented a challenge that nobody could have seen coming. Identifying the right strategies to utilize in times like these is often difficult, as companies and individuals scramble to ensure that their priorities are accounted for. Over 15 million people around the world have become infected with COVID-19, and more than 620,000 people have died from the disease. The United States has become the epicenter of the outbreak, as cases continue to pile up by the day. Keep in mind, these are figures recorded just months into the pandemic with very little end in sight. By the time you're reading this paper, those numbers might well double depending on the current trajectory reported by of our government. Unsurprisingly, a deadly virus coupled with ineffective governance often leads to more disastrous outcomes than anticipated. In less than a month following the outbreak, over 22 million Americans filed for unemployment. As words like "furlough" become a part of our daily vocabulary, millions of Americans were left with nothing but their savings to navigate this financial and global health crisis. In times like these, the onus falls on our government to implement strategies which not only alleviate the problem, but aim to solve it as well. To date, these strategies have been a combination of unsustainable solutions and temporary forgiveness policies. These "solutions" have done very little to remedy the situation; in fact, they've only highlighted the gaps that exist in our current systems: lack of comprehensive testing, little to no housing relief, and millions of dollars in bailouts for multi-million dollar corporations rather than assisting small businesses.

As much damage has been caused by this deadly virus, there is also a silver lining. In fact, if there is one thing that COVID-19 has shown us, it is how much climate change is related to human activity. Indeed, the sudden drop in travel and decline in general consumption has led to an 8% decrease in carbon emissions.² From Shanghai to Delhi, major manufacturing hubs are seeing their first clear skies in years. It's worth noting that we witnessed similar trends following 9/11 and the 2008 recession. It's even more important to note that by 2010, emissions had reached a record high, in part because governments implemented measures to stimulate economies, with limited regard for environmental consequences. As companies take this opportunity to reevaluate their current business models, it's important that they learn from the lessons of today.

¹ https://hub.jhu.edu/2020/<u>04/16/coronavirus-impact-on-european-american-economies/</u>

² https://www.weforum.org/agenda/2020/05/the-covid-19-reset-sustainability/





In bringing the world to its knees, this virus has served as a wake-up call for leaders across sectors. Climate change is a threat multiplier that will only exacerbate issues down the line. In fact, the risk of pandemics is amplified in a world where things like deforestation and carbon emission continue to increase. Deforestation occurs mostly for agricultural purposes and is the single greatest cause of habitat loss worldwide. This loss of habitat forces animals to migrate and potentially contact other animals or people and share germs.³ Livestock farms have been a hotspot for COVID and it's clear to see why. Decreasing the demand for animal meat and transitioning to a sustainable protein source can decrease emerging infectious disease risk while lowering emissions. Identifying intuitive and sustainable solutions like these will put society as a whole at lower risk of contraction.⁴ Both the private and public sector will be counted on to play a key role in the transition to our "new reality." After all, corporate responsibility works best when supported by effective policy making and collaboration on issues pertinent to society as a whole. Public health crises like COVID require a comprehensive, multi-layered response to address both the immediate consequences and long term ramifications.

³ https://www.hsph.harvard.edu/c-change/subtopics/coronavirus-and-climate-change/

⁴ COVID -19 BCG Perspectives: Facts, scenarios, and actions for leaders, Version: 22 June 2020 Accelerating Climate Actions in the New Reality



Introduction

2020 has been a monumental test for governments all around the world. Now more than ever, leaders are being called upon to act swiftly and in the best interests of all citizens. Maintaining order in a world where nobody wanted to leave their home was the easy part. Restoring economic confidence while maintaining social distance guidelines has been more challenging. From PPP to the CARES Act, we've already seen a number of different policy options deployed for the sake of stimulating the economy. We have seen governments experiment with UBI and paycheck protection programs, only to eventually run out of money months later. We've seen the public sector take steps to support and provide relief to small businesses and their employees. Unfortunately, the lack of clarity and changing guidance surrounding the programs has prohibited the smallest companies (generating revenue of <\$250,000) from even applying for aid.

This report is a compilation and reorganization of evidence surrounding COVID response and recovery efforts. In addition to breaking down many of the policies that have dominated the headlines, this report also proposes sustainable strategies to better appropriate stimulus funds. Moreover, as an intern for the Center for Sustainable Enterprise, I plan to illustrate how the subsequent relief packages passed by governments around the world can be utilized in a way that serves the triple bottom line. COVID-19 should not take away from the fact that we have a climate emergency on our hands, one that requires a swift, yet thorough response. Contrary to popular belief, sustainability is not something to be disregarded in the face of economic adversity. Rather, it is something which should be embraced by companies of all sizes in order to maximize their opportunities and play their part in decreasing their carbon footprint.

Robert Strand is the Executive Director of the Center for Responsible Business and an expert on Nordic sustainable business and corporate responsibility. I had the chance to read some chapters from his upcoming book, *Sustainable Vikings:*What the Nordics Can Teach Us about Sustainable Capitalism and Building Resilient Societies, and learned how the inextricable connections that capitalism forms between our health and our economic well-being can amplify issues during times of crisis. While resiliency and sustainability are becoming more mainstream concepts, taking on sustainable initiatives can only do so much in a system that is rooted in inequality. The fact that healthcare is tied to employment for 50% of Americans implies that access to adequate medical care is not a right, but a privilege. In a country where the slightest hint of collaboration or multi-state cooperation is associated with negative connotation, it becomes significantly more challenging to make genuine progress. Younger generations are finally beginning to find their voice, which many hope will tip the lever of public opinion towards more collaboration and knowledge sharing. By leveraging movements which are dominating the spotlight, such as Black Lives Matter or March for our Lives, the platform to communicate and spread awareness of the issues plaguing the world becomes amplified.





Capitalism is a vice that has prevented our country from progressing in a lot of ways. However, that isn't to say that the capitalist system is all bad. The extremely adaptive nature of capitalism has allowed it to weather economic shocks and create avenues for opportunity. The private sector is showing the world just how resilient and adaptable it can be. As COVID-19 alters the business landscape, companies are finding new ways to chase profit in a world without in-person contact. Shipping containers are being turned into makeshift hospitals, distilleries are now making hand sanitizer, and many restaurants are making use of delivery apps like Postmates and Uber Eats. However, being adaptive does not change the inherent flaws within the system itself. Capitalism will always find a way out of any recession or economic downturn; however, in order to create a more resilient society moving forward, it's going to take a system-level response to significantly improve the standard of living in this country. Until healthcare is seen as a right, rather than a privilege, those in poverty will continue to suffer. Until the government realizes that funding non-renewable energy sources is, by definition, a bad idea, emissions will continue to go up. COVID-19 has exposed the vulnerabilities and fragilities of our current systems across the board. This crisis has shown us how drastically unprepared we are for the fight against climate change. Economic shocks, new disease outbreaks, and other societal disruptions will continue to get worse as the fight against global warming evolves. Climate change, just like COVID-19, does not care about your race, ethnicity, religion, or socio-economic status. Unlike COVID-19 though, wealth does not make it any easier to escape the effects of a warming climate. The United States has finally encountered a challenge it cannot buy its way out of. Rather, it's going to require comprehensive strategies at all levels of government, as well as collaboration with the private sector, to have any chance at winning this fight.



What Have We Seen So Far...

It's been a little over five months into our new reality and we've already seen three different legislative initiatives take shape. The first was the Coronavirus Preparedness and Response Supplemental Appropriations Act signed into law on March 6. That was soon followed by the Families First Coronavirus Response Act signed into law on March 18. However, both of those pale in comparison to the third and largest stimulus package which was introduced through the Coronavirus Aid Relief and Economic Security Act, also known as the CARES Act. The act is divided into two main parts: Division A, which contains authorizing language for several programs and mandatory provisions, and Division B, which outlines emergency discretionary appropriations. The package secures nearly \$1 trillion in funding for states and local governments to respond to COVID-19, an increase in the federal matching rate to states for Medicaid by 14%, \$75 billion to bolster COVID testing and contact tracing efforts, as well as a plethora of changes to the terms of the Medicare Accelerated and Advanced Payment programs. The bill is capped off with a \$200 billion "Heroes Fund" to ensure that essential workers receive hazard pay, as well as \$100 billion in reimbursements to hospitals and other healthcare entities responding to COVID for health care related expenses or lost revenues. At \$2 trillion, it's hard to believe the program fell short, forcing Congress to add more stimulus dollars at the end of April.⁵ Carrying this piece of legislation was the program making all the headlines, Paycheck Protection Program (PPP). Initially set at \$349 billion, PPP aimed at keeping workers employed by providing small businesses with government-guaranteed, forgivable loans. 6 The program, administered by the U.S. Small Business Administration quickly ran out of funds days after it launched, moving Congress to approve an additional \$310 billion, making the PPP one of the largest economic stimulus programs in U.S. history.

⁵https://www.kff.org/coronavirus-covid-19/issue-brief/the-coronavirus-aid-relief-and-economic-security-act-summary-of-key-health-provisions/

⁶ https://www.smithschool.ox.ac.uk/publications/wpapers/workingpaper20-02.pdf



<u>Division A</u>	<u>Division B</u>
Provisions to address issues related to drug, device, equipment, and supply shortages/stockpiles.	\$4.3 billion for the Centers for Disease Control and Prevention (CDC) for coronavirus activities.
Amendments to the Food, Drug, and Cosmetic Act to expedite approval, review, and inspections of drugs and devices in limited circumstances and institute new user fees.	More than \$1 billion for the Indian Health Service to prevent, prepare for, and respond to coronavirus.
An amendment to the Families First Coronavirus Response Act to clarify that tests for the detection of SARS—CoV—2 or the diagnosis of the virus that causes COVID—19 are to be covered without cost-sharing by private insurance and Medicare even if that test has not yet received FDA emergency use authorization and an amendment clarifying that Medicaid must cover such tests regardless of whether they are authorized for emergency use by the FDA. Also provides consumer protections around balance billing for these tests.	More than \$127 billion for the Public Health and Social Services Emergency Fund at the Department of Health and Human Services (HHS), including, among other things, \$100 billion to reimburse hospitals and other health care entities responding to coronavirus for health care-related expenses or lost revenues attributable to coronavirus. It also includes \$275 million for Health Resources and Services Administration (HRSA) coronavirus-related activities through certain programs, including \$90 million for the Ryan White HIV/AIDS Program.
Provisions to expand coverage of and offer grants to support broader use of telehealth services including in Medicare, private insurance, and through other federally funded providers (e.g., community health centers).	\$80 million for a Pandemic Response Accountability Committee to promote transparency and conduct and support oversight of funds.
Reauthorization of multiple programs including programs to strengthen rural community health, the Healthy Start Program, and Temporary Assistance for Needy Families (TANF).	\$4.9 billion for the Department of Defense's Defense Health Program, including \$415 million for research and development efforts related to vaccines and antiviral pharmaceuticals and for procurement of diagnostic tests.
Provisions to address potential workforce issues, increasing flexibility for certain federal employee deployments, increasing training opportunities, and adding reporting requirements on workforce issues.	\$1 billion for Defense Production Act purchases of personal protective equipment and medical equipment, such as ventilators.
Several changes related to the Medicare program, including: eliminates certain Medicare requirements related to face-to-face encounters, delays certain scheduled payment reductions in the Medicare program, increases certain Medicare payments for the treatment of patients with COVID-19, permits 90-day supply of prescription drugs during the COVID-19 emergency, and requires coverage of any COVID-19 vaccine without cost-sharing.	More than \$25 billion for domestic food assistance programs, including the school breakfast and lunch programs, the supplemental nutrition assistance program (SNAP), and the emergency food assistance program.
	\$425 million to the Substance Abuse and Mental Health Services Administration (SAMHSA) to address mental health needs.



The Holes in Current Policy

Preliminary analyses of how the first round of loans was distributed suggest help did not consistently reach where it was most needed. No matter what metric you use, whether it be the number of cases, unemployment claims, or shutdowns, PPP never reached many businesses. Three months after the CARES Act was signed into law, the number of COVID-19 cases is once again soaring across the country, and the pandemic continues to rage through the economy.

Cameron Hepburn of the Smith School explains that the smallest businesses (classified based on revenues less than \$250,000), were significantly less likely to apply to PPP, commonly citing reasons like "changing guidelines" and "lack of clarity" for the reasons why. Regardless, the numbers illustrate that minority-owned businesses tended to apply at lower rates than other white-owned businesses. As alluded to earlier, given the interconnectedness of our systems, implicit biases and discriminatory policies can permeate into other aspects of life for millions of minorities. In addition to facing underlying structural issues that make it harder to scale a business successfully, minorities are also more likely to be concentrated in employment sectors which have taken the biggest hits following COVID. To make matters worse, it's almost impossible to bounce back from something like this when the system itself is pitted against you. At a time when every small business owner is applying for loans, it's worth noting that large banks approve roughly 60% of loans sought by white-owned businesses, compared to just 29% of black-owned businesses. At a time when most companies are experiencing some signs of limited financial health, minority-owned businesses were twice as likely to be classified as "at-risk" or "distressed." This is critical, as the US Federal Reserve explains that distressed companies are three times as likely to close from a revenue shock. Programs like PPP may seem color-blind on the surface, but dive a little deeper and you encounter many of the challenges that minorities face disproportionately more than whites.

Accompanying the CARES Act were a range of other policies including the Express Bridge Loan Pilot Program, employee retention tax credits and SBA loans. As one would imagine, many economists and policymakers' first reaction was to explore the range of typical monetary policies that have been utilized in previous recessions. However, it is important to highlight that the recession brought along by COVID-19 is very different from that which we experienced in 2008 and the great depression. The Great Recession and Great Depression were essentially demand shocks, which were met with standard macroeconomic policy. The difference with this recession is that it's a supply shock. The heterogeneity of how spending has

⁷ https://www.smithschool.ox.ac.uk/publications/wpapers/workingpaper20-02.pdf

⁸https://www.mckinsey.com/industries/social-sector/our-insights/covid-19s-effect-on-minority-owned-small-businesses-in-the-united-states#





been cut across goods suggests it's very much related to in-person contact as opposed to a general reduction in consumer spending across all goods as you would expect if there was a drop in purchasing power.



A New Recession

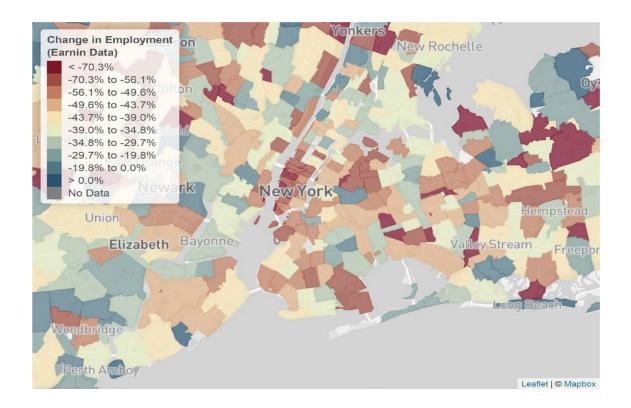
Prior to COVID-19, the economy was functioning as normal, but as the pandemic continued to intensify, millions were forced to put their lives on hold. As tens of thousands of people became sick, governments took onus and shut down the economy. Leaders around the world discouraged and restricted people from going to work. Given that this virus caused such a sudden contraction of the labor supply, the resulting loss of confidence in the market resulted in a secondary demand shock as well. It's important to note that the demand shock was a spillover and indirect effect of the fundamental loss of our ability to manufacture goods and produce services. While monetary policy can still play a role in circumstances like these, they only serve to contain the secondary shock to investor confidence. To make matters worse, uncertainty for the future has triggered precautionary behavior causing many investors to hoard their cash for the time being. COVID-19 has also eliminated all social and travel related activities leaving very few places to actually consume in today's economy. Couple that with the fact that our future will be shaped by the health status of our country rather than our financial response, and you have all of the ingredients for a long road to recovery.

Raj Chetty, an American economist based out of Princeton, found that many of these economic shocks actually materialized to a greater degree in higher income neighborhoods. However, employment losses have been concentrated at the lower end of the income distribution. The graphic below depicts the changes in employment by zip-code in New York. As Chetty alluded to, COVID-19 has had disparate effects on employment opportunities and spending cuts depending on the specific location. The different colors above and their spacing from each other indicates how unequal the effects of this pandemic have been. Wealthier zip-codes experienced the greatest drop in spending, which also implies a sharp drop in employment in these areas as well. The reason why this unusual trend is so important dates back to the Great Recession in 2008/2009. Evidence from the previous recession shows us that disparate job losses across regions can have persistent

⁹ https://bcf.princeton.edu/wp-content/uploads/2020/06/chetty.pdf



effects for nearly a decade because of how hard it is to get a job. ¹⁰ The lack of physical job postings, especially for low skilled labor, suggests we will have a long and inequitable road to recovery.



¹⁰ https://bcf.princeton.edu/wp-content/uploads/2020/06/chetty.pdf



Rescue vs Recovery: Why 2020 is not 2009

Governments have tried to supplement the loss in natural consumption with rescue and recovery packages aimed at promoting long-term stabilization. The priority of rescue packages has primarily been to increase cash flows to individuals in financial distress and support those struggling to access basic goods like food and electricity. The United States experimented with policies under the Care Act, such as Universal Basic Income (UBI), which provides cash injections directly to every citizen's pocket. Recovery packages on the other hand are meant to stabilize expectations, restore confidence, enter channel surplus desired saving into productive investment.¹¹

In the past, the majority of our recovery packages have tended to steer investment towards sectors which prolong the use of fossil fuels. Indeed, continuing along the current path and operating under the 'business as usual' umbrella, would imply a gradual temperature increase over 3°C. Fortunately, the last decade has produced a shift in both the technology and knowledge surrounding alternative sources of energy. According to a report by the International Renewable Energy Agency, unsubsidized renewable energy is now most frequently the cheapest source of energy generation ¹². This is critical as lower technology costs have made renewables the competitive backbone of energy de-carbonization. This includes solar and wind installations which are gaining serious momentum in the United States and around the world.

Rather than follow the traditional route that many of their predecessors have taken, today's policymakers have the unique ability to restore confidence by directing investment towards a productive and balanced portfolio of sustainable physical capital, human capital, social capital, and natural capital assets consistent with global goals on climate change. High productivity economies of the future will be those that make the most of artificial intelligence (AI) and the technologies of the fourth industrial revolution, while also protecting and enhancing natural capital such as ecosystems, clean air and water, and a stable climate. ¹³

As noted earlier, the traditional set of stimulus policies employed by the United States over the years has typically included large scale investments in non-renewable energy sources. With the dust settling on the current pandemic, researchers at the Smith school evaluated over 300 different stimulus policies that aim to have a significant impact around the world post-COVID. The data shows that 4% of the policies were classified as "green" with potential to reduce long run greenhouse gas

¹¹ https://www.smithschool.ox.ac.uk/publications/wpapers/workingpaper20-02.pdf

¹²https://www.forbes.com/sites/jamesellsmoor/2019/06/15/renewable-energy-is-now-the-cheapest-option-even-without-subsidies/#4530af855a6b

¹³ https://hub.jhu.edu/2020/04/16/coronavirus-impact-on-european-american-economies/



emissions. Four percent of the policies were identified as "brown" and likely to increase the greenhouse gas emissions beyond the base case. Ninety-two percent were classified as colorless, meaning that they maintain the status quo¹⁴.

One lesson that we still carry over from the global financial crisis is that green stimulus policies often have advantages over traditional fiscal stimulus. One example used by many policymakers and climate scientists around the world is that of renewable energy investments, which are attractive in both the short and long run, as they promote a future of certainty and resiliency. Renewable energy generates more jobs in the short run, which is especially important when jobs are scarce in the middle of a recession. In the long run, renewable energy requires less labor for operation and maintenance. This frees up labor as the economy returns to capacity. The more efficient use of labor and the savings on fuel means that renewables are also able to offer higher long-run multipliers and boost short-term spending. Another avenue which presents an opportunity for high growth is 'green' construction. Insulation retrofits and the development of clean energy infrastructure has proven to be very labor-intensive in the early stages. In fact, one model suggests that every \$1 million in spending generates 7.49 full-time jobs in renewable infrastructure and 7.72 full time jobs in energy efficiency. 15

Acknowledging that the current set of stimulus packages is not doing much to combat the growing threat of climate change has to be the first step. While fiscal injections are definitely a good way to start, our government and business leaders have to be doing more to ensure the well-being of our planet. With the world moving inexorably toward new digital norms and environmental urgencies, the rationale is clear. Whereas past stimulus packages have focused on jobs and short-term impact, future iterations must also spur innovation, digitization, and sustainability if they are to support resilience and prosperity far into the future.

¹⁴ https://www.smithschool.ox.ac.uk/publications/wpapers/workingpaper20-02.pdf

¹⁵ https://www.smithschool.ox.ac.uk/publications/wpapers/workingpaper20-02.pdf



Federal Level Response

During crises like these, both the public and private sector have a role to play in the transition back to normality. COVID-19 has demonstrated that governments can intervene decisively once the scale of an emergency is clear and public support is present. This pandemic has precipitated a major increase in the role of the state. Around the world, swift intervention efforts have begun to stabilize infection rates, prevent the healthcare system from being overwhelmed, and most importantly, save lives. What people fail to recognize is that the current climate emergency we have on our hands is very much like the COVID-19 crisis, just slower and much graver. Both involve market failures, externalities, international cooperation, complex science, resilient political leadership, and action that hinges on public support.

This also means that many of the same political mechanisms being employed in response to COVID-19 can be utilized in ways which promote sustainability. Combinations of push and pull policies will allow governments and business leaders to cooperate in the fight towards carbon neutrality. Pushes are regulatory interventions, or back stops, that give companies more certainty about future regulations and, therefore, encourage forward planning. A prime example of this is building new energy codes and implementing target dates to phase out old technology. Pulls, on the other hand, are financial interventions that compel companies to take particular actions such as tax credits, subsidies, grants, and loans. Tax credits might help accelerate improvements in industrial energy efficiency whereas loans can help fill gaps in private lending.

The next section of this paper will outline many of the policies that have already been employed in the past, while serving as a recommendation for future policymakers to act upon. The proposals outlined not only serve to promote the triple bottom line, but ensure a future characterized by resiliency and sustainability. As the climate threat continues to evolve, it is critical that we are proactive in our response to the Coronavirus, keeping environmental impact in mind. The following policies aim to deliver sustainable economic growth while ensuring an equitable road to recovery for millions of Americans.



UBI

UBI, or Universal Basic Income, is a fixed stipend given to every adult, rich or poor, working or idle, provided by the government. Disregarded early on by some critics for being too expensive and infeasible, the \$1200 check handed to every American quickly changed a lot of people's minds. By providing that immediate injection of cash, many citizens were able to experience some semblance of short term relief from the recent economic shocks. Some scholars believe that COVID-19 has revealed a fragile and inequitable economy, and that the recent UBI payment plan should become a regular feature to give everyone basic financial security going forward. While UBI isn't necessarily a new idea, we have yet to see it deployed on a national scale. Alaska actually offers a unique perk to its residence in the form of universal dividends every year. Since the early 1980s, Alaska has utilized the largest and longest-running UBI experiment in America: The Permanent Fund Dividend. Alaska deposits close to 25% of mineral royalties into the fund annually, which in turn, is invested by the Alaska Permanent Fund Corporation in domestic and global stocks, bonds, private equity and more. The interest earnings are then distributed to Alaskan residents on an annual basis paying out anywhere from \$1000 to \$2000 per person per year.

A 2013 report from Oxford University indicates that nearly 50% of the entire US workforce is at risk of losing their jobs from rising automation in the coming decade. Business moguls like Bill Gates and Elon Musk have been quoted saying that solutions like UBI will be necessary to address society's inevitable technological dependency. Adopting a UBI-like system would not require major changes either; some scholars have drawn comparisons between the benefits brought along by UBI and those of the current Earned Income Tax Credit (EITC) system. American University Washington College of Law professor Benjamin Leff believes that, "An expanded and reformed EITC could provide a universal safety net that could capture many of the benefits of a UBI without the need to invent a bold new system out of nothing."

In a world plagued by a global pandemic and shortages in the supply of goods, it's no surprise that there's been a massive demand for food banks from people who never needed them before. Food banks have endorsed a basic income and believe that people should not rely on the food banks themselves for food security. ¹⁸Adopting an annual \$12,000 basic income for every US adult citizen would permanently grow the economy by nearly 13%, or about \$2.5 trillion by 2025. This is including

¹⁶ https://www.theregreview.org/2020/05/02/saturday-seminar-universal-basic-income-after-covid-19/

¹⁷ https://www.vox.com/future-perfect/2019/9/5/20849020/alaska-permanent-fund-universal-basic-income

¹⁸https://www.thenonprofittimes.com/news/universal-basic-income-getting-more-notice-in-wake-of-covid-19-crisis/



an increase in the labor force by 4.5 to 4.7 million people. ¹⁹ Instead of focusing on survival human services like food and shelter, the hope is that basic needs would be covered, and instead, organizations like food shelters and non-profits could tackle more things like educational attainment and job training.

Similar to UBI, another proposed policy has been a negative income tax. While it sounds rather technical it is simple. In today's world, everybody who works pays taxes; a negative income tax flips it around. If you work, but your wages still leave you below the poverty level, rather than pay taxes, the government pays you. Intuitively this is the very definition of a social safety net--anyone who falls below the poverty line, employed or not, is lifted back to security, no questions asked²⁰. In the world of a negative income tax, protection against poverty would be a right, not a privilege. A negative income tax system that totally eliminated poverty would cost at most \$336 billion (based on estimates from the World Economic Forum). To put this number into perspective, the cost of child poverty alone and its effects such as higher healthcare expenditure, more crime, and worst performance at school were estimated to be \$500 billion. ²¹

Poverty has been a pervasive theme following the aftermath of COVID-19. However, that is not to say that the solutions in place were working prior to the pandemic. In fact, even before COVID, our welfare system was beginning to crumble.²² The coronavirus simply revealed the inadequacies of our political and economic infrastructure. Many of the programs in place aim to alleviate the situation for those below the poverty line, rather than solve the root cause.

¹⁹https://www.thenonprofittimes.com/news/universal-basic-income-getting-more-notice-in-wake-of-covid-19-crisis/

²⁰ https://www.weforum.org/agenda/2018/05/how-we-make-basic-income-reality-Rutger-Bregman

²¹ https://www.weforum.org/agenda/2018/05/how-we-make-basic-income-reality-Rutger-Bregman

²² https://www.dailycal.org/2020/05/12/poverty-in-a-crisis-why-we-need-ubi-during-covid-19/



Redirecting Subsidies

Given that the costs of key renewable technologies, such as solar and wind, are much lower than during previous periods of economic decline, the only thing that is missing is comprehensive public support to continue driving funding in the right direction. Governments have a unique opportunity to make clean energy even more attractive to private investors by providing guarantees and contracts to reduce financial risks. Couple this with the fact that current interest rate levels are on the decline, and it becomes easy to see that there has never been a better time to push for renewables. ²³

As I alluded to earlier, there are two overarching umbrellas in which most stimulus policies fall under, rescue and recovery. Tax credits, subsidies, and other financial incentives fall under the scope of this recovery. In the past however, governments have tended to direct funding towards unsustainable energy sources in times of economic decline. Fortunately, the recent steep drop in oil prices has presented a great opportunity for countries to lower subsidies for fossil fuel consumption. There are around \$400 billion worth of these subsidies worldwide; over 40% of them are aimed at bringing down the cost of fossil fuels. Current subsidies are inefficiently targeted, as they disproportionately benefit wealthier segments of the population that use much more of the subsidized fuel. ²⁴The only thing the current set of subsidies has done is encourage consumers to waste energy and therefore add needless emissions to our atmosphere. Setting prices at fully efficient levels would have lowered global CO2 emissions by an estimated 28% and fossil fuel air pollution deaths by 46% ²⁵²⁶. Unfortunately, we live in a world where the source of all power is money. Given their political influence and the number of jobs at stake, a range of different sectors from aviation to oil and automotive industries have successfully obtained environmentally damaging bailouts and a substantial relaxation of environmental regulation.

For years, policymakers have ignored the environmental impacts of their decisions. Profit has always been, and will always be, the driving force behind many of this country's decisions. However, that has often meant using profit as a justification for environmental exploitation and degradation. We, as a society, must work within the planet's natural limits while also ensuring that marginalized communities do not fall behind. Now is the time to be redirecting the \$400 billion spent on fossil fuel subsidies every year towards green infrastructure, reforestation, and investments in a circular, low-carbon economy. ²⁷

²³ https://www.iea.org/commentaries/put-clean-energy-at-the-heart-of-stimulus-plans-to-counter-the-coronavirus-crisis

²⁴ https://www.nature.com/articles/s41893-020-0563-0

²⁵ https://www.nature.com/articles/s41893-020-0563-0

²⁶ https://www.iea.org/commentaries/put-clean-energy-at-the-heart-of-stimulus-plans-to-counter-the-coronavirus-crisis

²⁷ https://www.weforum.org/agenda/2020/03/a-green-reboot-after-the-pandemic/





In a world where coal, oil, and gas get more than \$370 billion a year in support, compared with just \$100 billion for renewables, it's easy to see how we can improve. The international Institute for Sustainable Development (IISD) found that just 10-30% of the fossil fuel subsidies would pay for a global transition to clean energy. Indeed, a small renewable energy subsidy could tip the balance and turn renewables into a viable energy source that can replace large amounts of generation²⁸. In a meta-analysis or 20 countries, the IISD concluded that "A 30% swap to renewables would lead to emissions reductions between 11 and 18%."

Redirecting subsidies that already exist is just one-half of the equation. The other comes from a balanced low carbon stimulus portfolio which can produce significant economic and environmental benefits. Support from around the world is mounting for a low carbon recovery from the COVID-19 crisis. Top executives at over 150 companies have signed public statements calling for a net zero recovery, something which political leaders in Europe and around the world have been keen to follow through on.

In a 2020 analysis conducted by McKinsey, deploying between \$75 and \$150 billion in low-carbon spending, would produce between \$180 and \$350 billion of gross value added while creating up to 3 million new jobs. ³⁰This is in addition to supporting a 15-30% reduction in carbon emissions by 2030. Given that there are a multitude of ways in which governments can choose to spend their funding, leaders should look towards solutions which provide both short-term benefit and encourage long-term resiliency. For example, reinforcing the energy grid promotes more distributed microgeneration, which can, in turn, cut emissions. ³¹ Measures to support the development of low carbon technologies, such as advanced batteries or carbon capture and storage, may take longer to materialize. However, that difference can make an enormous impact, especially when the technology becomes ubiquitous.

²⁸ www.theguardian.com/environment/2019/aug/01/fossil-fuel-subsidy-cash-pay-green-energy-transition

²⁹ www.theguardian.com/environment/2019/aug/01/fossil-fuel-subsidy-cash-pay-green-energy-transition

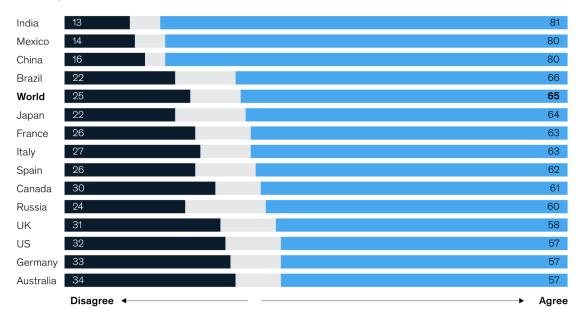
 $[\]frac{30}{\text{https://www.mckinsey.com/business-functions/sustainability/our-insights/how-a-post-pandemic-stimulus-can-both-create-jobs-and-help-the-climate}$

³¹ https://www.mckinsey.com/business-functions/sustainability/our-insights/how-a-post-pandemic-stimulus-can-both-create-jobs-and-help-the-climate



Nearly two-thirds of survey respondents say governments' economic-recovery efforts after COVID-19 should prioritize climate change.

Government actions should prioritize climate change in the economic recovery after COVID-19, % of respondents 1



'Ouestion: "To what extent do you agree or disagree with the following: In the economic recovery after COVID-19, it's important that government actions prioritize climate change." Response rates shown for "agree" include "strongly agree" and "somewhat agree"; rates for "disagree" include "strongly disagree" and "somewhat disagree." Survey conducted via online poll, April 17–19, 2020; n = 28,039; data are weighted to the profile of the population. Source: Ipsos MORI



Injecting Fresh Equity Capital

The fourth policy proposal is one unique to the United States in that it is the only country with such a problem. A supplementary response to COVID-19 has been to re-capitalize firms so as to restart investment and growth in the economy. To date, the response post-COVID has been liquidity provision via debt financing to firms whose cash flows have dropped or disappeared altogether. However, as many economists and policymakers are realizing during this time, the injection of short term liquidity does not solve the emergence of potential insolvency. In fact, this liquidity provision may aggravate the solvency problem if firms emerge from the crisis with crippling indebtedness and lower equity capital, as we saw in the wake of the 2008/2012 financial crises.³²

According to European Family Businesses (EFB) in 2012, debt bias creates significant economic distortions, leading to inefficiently high debt-to-equity ratios in many corporations. This debt reliance reduces the flexibility of companies when faced with market fluctuation, given that a larger portion of finances are now tied into paying off debt.³³ Time and time again we see that major financial crises are preceded by a jump in private debt. Private debt in the United States relative to GDP currently stands at 156%. For major economies, if the ratio of private debt to GDP is at least 150% and that ratio continues to grow by at least 18% over the course of five years, then a massive crisis is to be expected.³⁴ Fortunately, Javier Bianchi of the University of Maryland concludes that correcting for the current debt reliance will reduce the long run probability of a financial crisis by 10 times.³⁵

³² https://www.nature.com/articles/s41893-020-0563-0

³³ http://www.europeanfamilybusinesses.eu/uploads/Modules/Publications/pp---debt-and-equity.pdf

³⁴ https://www.theatlantic.com/business/archive/2014/09/government-debt-isnt-the-problemprivate-debt-is/379865/

³⁵ http://econweb.umd.edu/~bianchi/overborrowing.pdf



Adopting a Carbon Tax

The final proposal is rather straightforward. Utilizing a carbon tax as a way to directly decrease emissions from the nation's top emitters is not a new idea. We've seen different versions crafted by policymakers around the world, from basic carbon taxes to unique programs like cap-and-trade. A carbon tax is an important incentive for companies to develop new green technologies that reduce their CO2 emissions in the cost of complying with the tax. Mark Muro of the Brookings Institute finds that if a carbon tax passed \$30 billion, or 20% of the revenue generated from the tax, it would fund clean energy innovation programs ³⁶.

Adopting a carbon tax would also send a strong market signal that there are commercial opportunities in finding costeffective ways to reduce emissions. According to Rachel Brewster of Yale University, domestic legislation is a signal to the
international community that the United States is looking to engage states in conversations regarding global warming and
climate change. Other governments would observe the signal and be more likely to find it credible because the United States
would already be making sacrifices to reduce emissions. Eighty-twopercent of climate experts agree that implementing climate
policies could posit the United States in a strategic position to induce other countries to cut their carbon pollution. ³⁷Every year,
millions of people suffer from climate related events. Spillover effects from air pollution have become a silent killer over the
years. In a cumulative analysis with representatives from over 20 countries, Scott Nystrom of Regional Economic Models, Inc.
(REMI) finds that implementing a carbon tax would result in a cumulative 227,000 American lives saved over 20 years, just by
decreasing the risk of lung cancer and other cardiovascular diseases amplified by climate change.³⁸

³⁶ https://www.brookings.edu/wp-content/uploads/2016/06/13-carbon-tax.pdf

³⁷ https://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=1592&context=ylpr

³⁸ https://citizensclimatelobby.org/laser-talks/remi-general-findings/



State Level Response

In the midst of all the uncertainty surrounding COVID and the appropriate response, states have risen to the occasion and demonstrated their abilities to act in the best interests of their citizens. Rather than passing individual policies and isolation, states have typically found that an overarching strategy for developing energy efficiency, renewable energy, and Combined Heat and Power (CHP) can help articulate goals and identify the best ways to meet them. Similar to their federal counterparts, state governments have employed a range of different financial incentives and opportunities for funding. Revolving loan funds, property assessed clean energy financing, energy savings performance contracting, credit enhancement, and energy-efficient mortgages are all state funding strategies that aim to lower the upfront costs of investing in new technology and encourage wider adoption³⁹. When designing effective funding and financial incentive programs states typically keep a few general principles in mind. These include using financing and incentives as part of broader packages to encourage investments, as well as tracking the details of program costs and energy savings to ensure that the programs can be evaluated for cost effectiveness and therefore improved.

States have really taken the reins and led by example. North Carolina is one such state which offers a renewable energy tax credit equal to 35% of the cost of eligible renewable energy property that is constructed, purchased, or leased by a taxpayer. 40 Many local governments also require their agencies to purchase a certain amount of renewable energy or achieve specific levels of energy savings. Since they are uniquely positioned to use their purchasing power and scope of resources, states are in a prime position to lead by example. Maryland, for instance, led a regional partnership to purchase wind energy. As of 2012 green power was supplying around 25% of the aggregate demand in county facilities. 41

³⁹ https://www.epa.gov/sites/production/files/2017-06/documents/guide action full.pdf

⁴⁰ https://www.epa.gov/sites/production/files/2017-06/documents/guide action full.pdf

⁴¹ https://www.epa.gov/sites/production/files/2017-06/documents/guide action full.pdf



Housing

If there is one area where we have yet to learn from our mistakes, it is housing. On March 18, the Department of Housing and Urban Development (HUD) announced a 60-day moratorium on foreclosures and evictions for borrowers with Federal Housing Administration mortgages. Within this section, I plan to break down how COVID has presented a new challenge to our extremely fragile housing market. In addition to breaking down how the current set of policies compares to those in 2008, I also outline two potential solutions that have yet to be employed on a national scale.

Before moving to solutions, it is critical to understand the state of our current housing market and learn from past recessions. Following 2008, we witnessed severe house price declines, negative equity, and a large number of defaults. The fall in housing prices was accompanied by a swift run up in unemployment which led borrowers to exit existing mortgages by selling their homes. 42 While today's housing market is a lot more stable and secure than that in 2008, homeowners are still craving immediate payment relief. If the current set of issues can be mitigated the large equity buffer will enable borrowers to stay in their homes longer. 43

In today's COVID crisis, renters are more vulnerable to housing insecurity than homeowners. Low income renters, many of whom work in service industries, were hit hard by the shut down, and placed as high risk for eviction and homelessness during shelter in place measures. The biggest claim I hope to make around housing is that pausing evictions and forgiving late rent is *not enough*. While the moratorium on evictions has definitely helped the current situation, it won't change the fact that when the moratorium ends, those who lost their jobs will still be unable to pay the rent, only delaying the inevitable. The recent stimulus package has not done nearly enough to address the 11 million low income renter households paying more than half of their income towards rent, even before the pandemic started.⁴⁴ People of color are more likely to be renters than non-Hispanic white households. Black renters were hit harder than other groups following the 2008 market crash and have experienced the greatest drop in homeownership since that time. Black renter households are already the most vulnerable to economic instability, as they maintain the lowest median income, the lowest median liquid assets, and the highest unemployment rate among all racial and ethnic groups.⁴⁵

⁴² https://www.urban.org/urban-wire/2020-toolkit-helping-homeowners-crisis-better-what-we-had-2008

⁴³ https://www.urban.org/urban-wire/2020-toolkit-helping-homeowners-crisis-better-what-we-had-2008

⁴⁴ https://www.urban.org/urban-wire/its-time-reinforce-housing-safety-net-adopting-universal-vouchers-low-income-renters

⁴⁵ https://www.urban.org/urban-wire/covid-19-policy-responses-must-consider-pandemics-impact-young-renters-and-renters-color





This brings us to the first potential solution: streamlined refinancing. When refinance applications spike, capacity constrained lenders become much more selective about who to refinance and what rates to charge. Lenders are more likely to refinance borrowers with strong credit and straightforward applications that can be easily approved. As Steps can be taken to increase lender capacity by improving the availability or streamlined refinances. The home affordable refinancing program reduced payments for 3.4 million borrowers in the past. This streamline program offers simplified documentation, reduced loan level pricing adjustments, automated appraisal, and mortgage insurance transferability. Not only can this result in a faster and more efficient process, it can also improve lender capacity to process applications.

The second potential solution revolves around housing vouchers--an extremely underutilized tool in our political arsenal. We already have a system in place for helping low income renters: the federal housing choice voucher program. However, lack of funding has meant that only one in five households who qualifies for housing assistance ever receives it. Providing rental assistance to those who already qualify, many of whom are among the millions on the waiting list for assistance, could stabilize families and communities, as well as prevent costly episodes of homelessness. ⁴⁸It would also guarantee that landlords receive rent on time, and thus, pay their own mortgages. Vouchers have the unique advantage of reflecting the local rent value, which means they can adjust as people go back to work and experience increases in their income. Perhaps the most important feature of vouchers is that payments go directly to landlords, which ensures that rents get paid. To avoid potential vacancies and alternative costs, many landlords would find participating in this program with government guarantee much more attractive. By building on the success that we witnessed with vouchers during hurricane Rita and Katrina, we could expand assistance to an additional 20 million people who already qualify for assistance. In terms of financial cost, expanding assistance and extending coverage to these additional households would be roughly \$62 billion per year. Although this is a large sum, it pales in comparison with the cost of the \$2 trillion stimulus package and is critical to preventing large scale housing instability.⁴⁹

⁴⁶ https://www.urban.org/urban-wire/2020-toolkit-helping-homeowners-crisis-better-what-we-had-2008

⁴⁷ https://www.urban.org/urban-wire/2020-toolkit-helping-homeowners-crisis-better-what-we-had-2008

 $^{{\}color{red}^{48}} \ \underline{\text{https://www.urban.org/urban-wire/its-time-reinforce-housing-safety-net-adopting-universal-vouchers-low-income-renters}$

⁴⁹ https://www.urban.org/urban-wire/its-time-reinforce-housing-safety-net-adopting-universal-vouchers-low-income-renters



Energy Efficiency

For most people, energy efficiency is a blanketed term used to describe the bulk of our efforts in the fight against climate change. Indeed, people tend to think energy efficiency is a lot more complicated than it really is. Investing in energy efficiency for homes, businesses, and other facilities is a proven and cost-effective strategy for meeting electricity demand and supporting economic growth. Many states have already experimented with a variety of energy efficient policies, allowing customers to save nearly \$90 billion annually on electricity. ⁵⁰

At the state level, utilities are deploying energy efficiency to meet the electricity needs of a growing customer base and to partially replace retiring power plants. System planners are making use of energy efficiency as a strategy to achieve the reliability and system capacity requirements over an extended period of time. Rate-payer funded energy efficiency programs are organized efforts, typically overseen by a state public utility commission, to promote the adoption of energy-efficient measures in the home and business⁵¹. States develop these programs to meet energy savings goals and reduce the need for new power system capacity. These programs help educate consumers about the benefits of energy efficient purchases, and help overcome costs and other barriers that prevent households from buying-in in the first place. ⁵²In most states energy efficiency programs are funded through modest electricity surcharges on customer bills, but it is worth considering transferring the cost onto the public side. Promoting energy-efficient programs serves to benefit both the economy and atmosphere on multiple levels.

⁵⁰ https://www.epa.gov/sites/production/files/2017-06/documents/emvframeworkpaper 2017-01-19.pdf

⁵¹ https://www.epa.gov/sites/production/files/2017-06/documents/guide action full.pdf

⁵² https://www.epa.gov/sites/production/files/2017-06/documents/guide action full.pdf



Energy Codes

In a country where over 30% of all energy consumption takes place in commercial buildings and residential households, it would make sense that many states are beginning to reevaluate their individual impact to our climate problems. Some states like California, Washington, and Vermont have begun to realize the benefits of stricter energy codes that force them to cut back on energy usage. In fact, California announced that all buildings constructed in a post-Covid world must follow the 2019 Title 24 Energy Code. California's leadership when it comes to environmental codes and standards is likely to create momentum for more environmentally conscious energy standards around the country.⁵³

As explained, the primary goal of an energy code or standard is to optimize and reduce energy usage. One-third of the nation's greenhouse gas emissions can be traced to commercial buildings and residential households. A report by the McKinsey Global Institute found that the United States could decrease energy use in new and existing buildings with measures that pay for themselves within 10 years. By optimizing energy use, it is estimated that energy codes would produce a financial benefit to owners of nearly \$15 billion annually by 2030. On the other hand, failing to catalyze building sector transformations would raise the cost of meeting long-term climate goals by nearly \$500 billion globally. These energy savings translate to cumulative savings of 800 million metric tons of CO2 by 2030, or the equivalent of removing 145 million vehicles from our roads.

During times like these, where policymakers are expected to deliver immediate results, few policies generate as much economic impact as building energy codes. As new codes are created for greater energy efficiency in buildings, many new jobs would become available including technical experts, quality control assessors, building and system commissioning agents, energy auditors, and compliance officers. The private sector has the ability to capitalize on these types of economic opportunities brought by COVID-19. Companies who are able to adapt to the current climate and identify ways to grow profit in this new reality will be the ones that are still thriving years down the road. Adaptation is a critical skill that all business leaders must have if they want to succeed in an ever-changing business environment. By taking advantage of the unexpected and

⁵³ https://www.globest.com/2020/06/11/title-24-energy-codes-impact-on-the-post-covid-built-environment/

⁵⁴ https://www.globest.com/2020/06/11/title-24-energy-codes-impact-on-the-post-covid-built-environment/

⁵⁵ https://www.energycodes.gov/resource-center/ACE/adoption/step1

⁵⁶ https://www.energycodes.gov/resource-center/ACE/adoption/step1

⁵⁷ https://www.ase.org/resources/building-energy-codes-fact-sheet





shaping operations to be more in tune with the fast changing world, companies have been able to reframe situations and create their own "smart luck."



The Role of the Private Sector

Thus far, we've seen the public sector bear the brunt of the responsibility in slaying the monster that is COVID-19. However, cases are still on the rise, people are still losing their jobs, and for millions, government assistance is falling short. The private sector has an opportunity, or some may say an obligation, to aid in the public sector's efforts and assist wherever possible. Regardless of size, industry or geography, every company can lend their voice to encourage multilateral responses that increase the resources required to tackle the outbreak. ⁵⁸

There are things that the private sector can be doing right now that would serve to alleviate the situation for millions of people. For example, companies that have the capacity, should repurpose manufacturing facilities and ramp up production to support the provision of essential supplies such as PPE. Companies around the world who have some form of liquidity should also consider contributing to the World Health Organization COVID-19 solidarity response fund. ⁵⁹ Many of those donations are directed to countries with weak healthcare systems to assist with first response.

A rather unique phenomenon that has begun to take shape in the private sector is the development of high multiplier partnerships. These partnerships prioritize impact over competitive business considerations and create innovative strategies to accelerate impact. One example of a fortuitous partnership that has emerged is that between Ventec Life Systems and GM, which has committed to producing critical care ventilators. ⁶⁰ One area in which governments have specifically asked for help is with regards to financing for the development and procurement of new equipment. We are seeing innovative financing solutions play an important part in curbing the pandemic; the International Finance Facility for Immunization (IFFI) has led the way in developing these solutions. For example, the IFFI has issued bonds that private investors can buy on global capital markets to finance immunization campaigns. ⁶¹

As companies move forward, we are seeing those which prioritize resiliency and sustainability leading the charge out of this recession. A perfect example relates to the concept of E.S.G., or environmental, social, and corporate governance. Share prices for companies that have the highest E.S.G. ratings are significantly outperforming others and have recovered more quickly since the onset of COVID. More stakeholder-oriented firms appear to be faring far better in the short term and

⁵⁸ https://www.techuk.org/insights/opinions/item/17810-the-environmental-opportunity-created-by-covid-19

⁵⁹ https://www.connectingbusiness.org/covid19-in-conflict

⁶⁰ https://www.weforum.org/agenda/2020/06/3-ways-companies-build-resilient-society-after-covid-19/

⁶¹ https://www.weforum.org/agenda/2020/06/private-sector-investors-must-now-step-up-to-quell-the-covid-19-crisis/



making choices that will set them up for success in the future. ⁶² This ought to send a message that the trend towards stakeholder capitalism, in which companies create value for all stakeholders, is gaining serious momentum.

Resiliency has become the keyword for companies following the pandemic. By developing internal systems with longer life cycles and fewer to no emissions, companies can begin to build that resiliency. Localizing and simplifying supply chains has also become a major theme for many companies following the virus. The new mantra of "make where you sell" is putting new emphasis on automated manufacturing and localized supply chains. Companies are taking this opportunity to set themselves apart as a brand. ⁶³ Consumers have a renewed interest in protecting humanity against existential risks such as climate change, and therefore seek out corporate leadership committed to tackling those problems. Now more than ever, companies have the ability to anchor their business around environmental responsibility and set themselves apart from the competition. ⁶⁴

The private sector needs to be ready to pounce once everything starts going back to normal. Companies need to take steps now that enable them to accelerate through the pandemic curve so that they can take advantage of opportunities when the pandemic ends.

2020 has shown us just how important the shift to digitized operations has been. Much of the growth that the private sector has experienced in the last few months has blossomed out of the shift to online consumption⁶⁵. Rather than look at this as a one-time trend related to COVID, it is important that companies recognize the value of shifting operations online entirely. Coming out of the COVID-19 crisis, there will be a huge appetite for IT modernization that enables new growth opportunities. Winning companies have already made the jump to cloud migration, illustrating that making the necessary changes early can yield significant results in the future⁶⁶.

⁶² https://www.techuk.org/insights/opinions/item/17810-the-environmental-opportunity-created-by-covid-19

⁶³ https://www.strategy-business.com/article/The-environmental-opportunity-created-by-COVID-19?qko=0051f

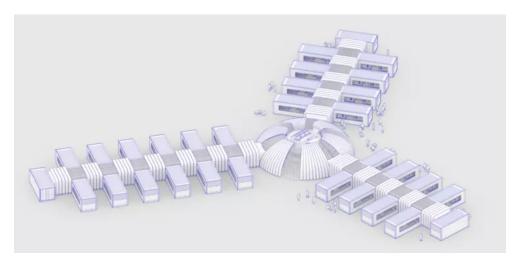
⁶⁴ https://www.strategy-business.com/article/The-environmental-opportunity-created-by-COVID-19?gko=0051f

 $[\]frac{65}{\text{https://www.forbes.com/sites/peterbendorsamuel/2020/04/21/capturing-business-advantage-after-the-covid-19-crisis/\#34788bf336a5}$

⁶⁶ https://www.forbes.com/sites/peterbendorsamuel/2020/04/21/capturing-business-advantage-after-the-covid-19-crisis/#34788bf336a5



As much harm and devastation as COVID-19 has caused, it has also created new opportunities for companies to take advantage of. Companies that manufacture shipping containers are retrofitting their products to act as makeshift hospitals for infected patients (see image below). General Motors is assisting in the development of critical PPE. Construction companies are creating retrofitting programs to increase energy efficiency in individual homes. It's important to remember that capitalism,



in and of itself, is extremely adaptive. Moreover, there will always be people with vested interests working to ensure that the economy doesn't collapse onto itself.

In my conversation with Robert Strand, an expert in Nordic Sustainability at UC Berkeley, we discussed some of the industries

in which free-enterprise has demonstrated the ability to catalyze growth, such as pharmaceuticals. However, there are also areas in which public-ownership has proven more effective and equitable, such as in healthcare and childcare. At the end of the day, we are lucky to live in a country that affords us so much economic opportunity. That being said, it's critical that we use this opportunity to learn from our Nordic counterparts and recognize areas in which the free market works well and where it does not.



The Promise of Collaboration

As stressed throughout this report, the path towards "green" growth and a sustainable future must include public-private collaboration. Because many stimulus packages target a variety of companies, policymakers can create delivery mechanisms that allow wide access to funds by designing each measure to reach its intended beneficiaries. A combination of push and pull mechanisms can foster new hiring and growth before regulations begin to restrict certain economic activities. We've already seen a variety of examples illustrating the efficacy of public-sector support for private-sector initiatives. With regards to electric vehicles, governments can regulate or restrict the use of internal combustion engine vehicles in urban areas, while introducing substantial tax breaks for the installation of electric vehicle charging stations. For It was this very line of thinking that helped Tesla get its start. The Obama administration lent Tesla motors \$465 million to spur the development of fuel efficient vehicles and the battery packs needed to propel them. This joit of capital was exactly what Elon Musk needed to jumpstart production. It makes sense that both the public and private sector collaborate on such an initiative, given that the benefits can be reaped by all of society. Indeed, electric vehicle incentives reduce local air pollution which is especially valuable in dense urban areas. Policy makers must proactively act to identify potential co-benefits during the policy design stage and shape implementation criteria to maximize total impact. Recovery packages that are focused on purely consumption, rather than productive investment which delivers sustainable returns, could exacerbate intergenerational inequalities.

There has been increased focus on green stimulus packages that spur job growth and create a more resilient system.

The best example of this collaboration comes from the largest US and supported, CEO-led, climate advocacy group. 155 companies representing more than 5 million employees signed a statement urging governments to align their COVID-19 recovery efforts with the need to achieve a net zero carbon economy. 69

Few countries have exemplified this level of cooperation better than Israel. The "Start-up Nation" has blossomed over the last few decades, as government assisted financing has helped pioneer some of the most innovative startups in the world. Israel has demonstrated success through the use of government assisted financing programs which have allowed academics and entrepreneurs to bring their ideas to fruition with limited risk. Since taking on this initiative, the results have been staggering. Israel now has more tech start-ups per capita than all of Silicon Valley and is leading the way in VC investment per capita.

^{67 &}lt;a href="https://www.mckinsey.com/business-functions/sustainability/our-insights/how-a-post-pandemic-stimulus-can-both-create-jobs-and-help-the-climate#">https://www.mckinsey.com/business-functions/sustainability/our-insights/how-a-post-pandemic-stimulus-can-both-create-jobs-and-help-the-climate#

⁶⁸ https://www.wired.com/2009/06/tesla-loan/

⁶⁹ https://unglobalcompact.org/news/4535-05-18-2020





As the private sector continues to take on projects which serve the triple bottom line, the onus falls on governments to assist in whatever way possible. COVID-19 has exposed the fragilities of our current systems. If anything, this crisis has shown us how drastically unprepared we are for the fight against climate change. Climate change, just like COVID-19, does not care about your race, ethnicity, religion, or socio-economic status. The United States has finally encountered a challenge it cannot bail its way out of. Rather, it's going to require comprehensive strategies at all levels of government, as well as collaboration with the private sector, to have any chance at winning at both.