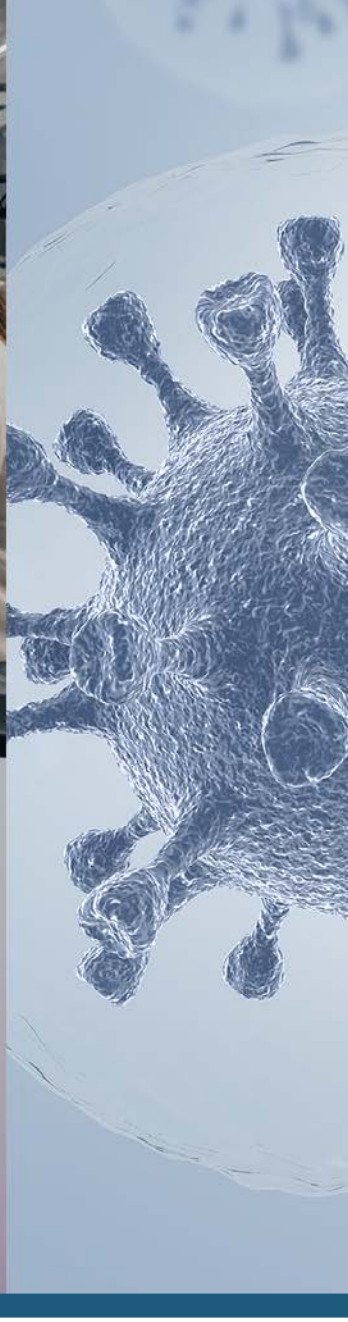


GTIPA PERSPECTIVES:

COVID-19 IMPACTS ON PUBLIC HEALTH AND THE ECONOMY OF GTIPA MEMBER NATIONS

OCTOBER 2020

GTIPA Perspectives: COVID-19 Impacts on Public Health and the Economies of GTIPA Member Nations

About the Global Trade and Innovation Policy Alliance/Introduction

The Global Trade and Innovation Policy Alliance (GTIPA) is a global network comprising over 40 like-minded, independent think tanks that support greater global trade liberalization and integration and deplore trade-distorting "innovation mercantilist" practices, but yet believe that governments can and should play important and proactive roles in spurring greater innovation and productivity in their enterprises and economies. Member organizations advocate and adhere to research and policy consistent with a core Shared Statement of Principles.

The Alliance gives world-class think tanks a space to collaborate on events, research, and reports while enjoying a platform that highlights and cross-pollinates member organizations' work on trade, globalization, and innovation policy.

Think tanks interested in joining the Alliance should contact Stephen Ezell, vice president for global innovation policy at the Information Technology and Innovation Foundation (ITIF), at sezell@itif.org.

Introduction

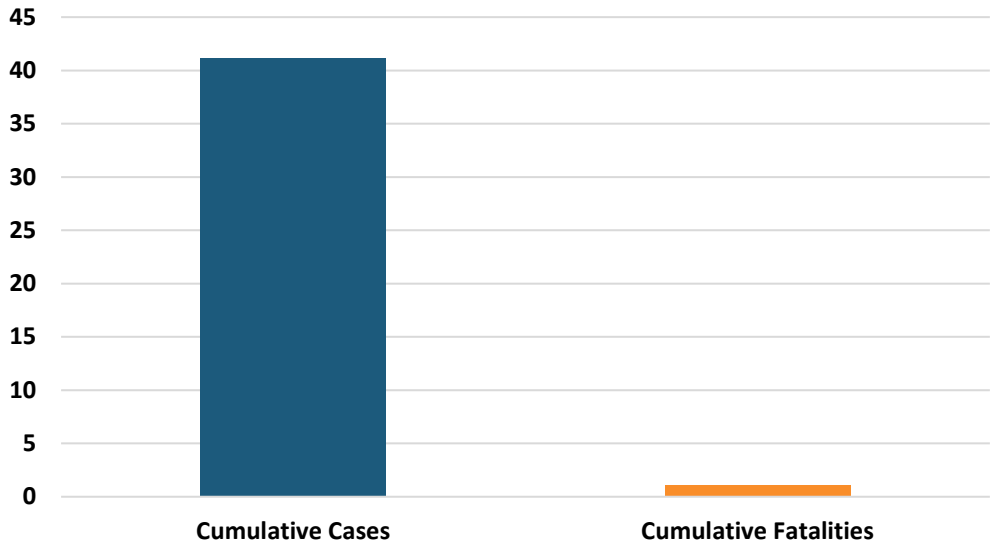
By: Stephen Ezell and Kevin Gawora, Information Technology and Innovation Foundation, October 22, 2020

The COVID-19 (coronavirus) pandemic that emerged at the start of 2020 has impacted the global economy and public health to an unprecedented extent. This anthology analyzes the economic and public health impact and policy responses of 20 nations and regions—Argentina, Australia, Bangladesh, the California Bay Area, Chile, Colombia, the European Union (EU), Germany, Greece, Honduras, Indonesia, Italy, Jordan, Korea, Latin America, Mexico, Poland, South Africa, the United Kingdom, and the United States—to the coronavirus pandemic. The Latin America section delves deeper into the coronavirus responses of seven additional nations: Brazil, Bolivia, Ecuador, Peru, Paraguay, Uruguay, and Venezuela. (These monographs were written over the late summer and early fall of 2020, and reflect the most-currently available data as of their time of authorship.) Before moving into the individual country case studies, however, the report starts with a brief overview of the pandemic's broad global health and economic impacts.

Global Public Health Impact

Even approaching almost one year into the crisis, the COVID-19 pandemic continues to ravage the globe, with cases and deaths rising worldwide, with more than 5 million new cases in the past 14 days alone.[1] As of October 21, 2020, there were over 41 million cases and deaths exceeded 1.1 million, according to the latest estimates from the World Health Organization (WHO). (See Figure 1).

Figure 1: Global COVID-19 Cases and Fatalities (millions, as of October 21, 2020)[2]



There is substantial variation by region, however, as the Asia-Pacific region continues to see relatively minimal COVID-19 impacts, at least compared with the much-higher case and death rates being experienced in the Americas, Europe, and Central Asia. (See Figure 2 and Figure 3). The Asia-Pacific represents the lowest region with regard to all four categories of new cases, cumulative cases, new deaths, and cumulative deaths. As of October 21, the entire Asia-Pacific

region experienced 3,225 new cases for a total of over 691,000 cumulative cases, and 25 new deaths for a total of almost 150,000 deaths. This compares with the Americas, which had almost 111,000 new cases for a total of 18.9 million, and 1,737 new deaths for a total of over 610,000 deaths.[3]

Figure 2: New Coronavirus Cases by Region (as of October 21, 2020)[4]

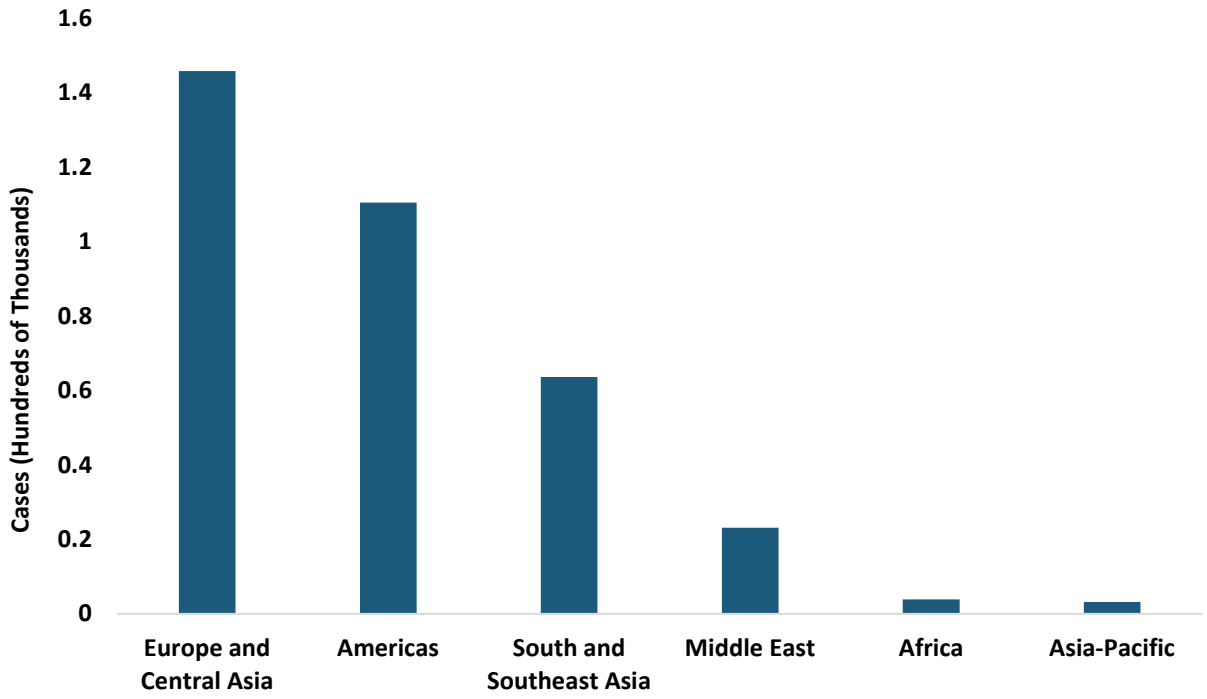
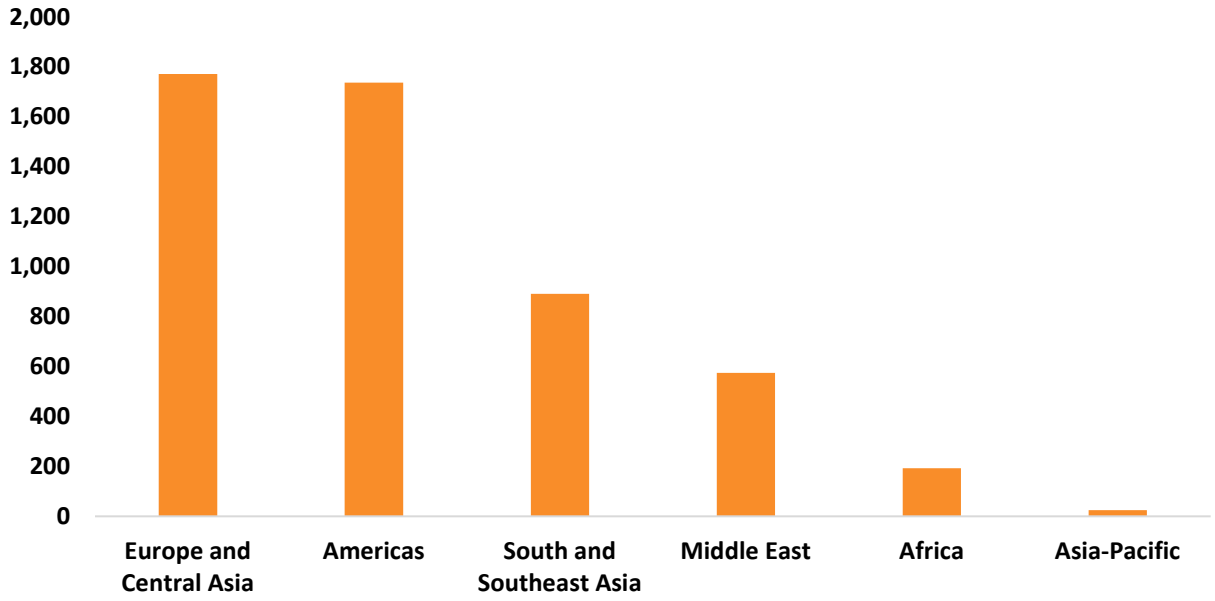


Figure 3: New Coronavirus Deaths by Region (as of October 21, 2020)[5]



Europe and Central Asia are struggling as well, with a spike in recent cases and deaths surpassing even the Americas. Europe in particular now seems to be in the midst of the dreaded "second wave," with movement restrictions and travel lockdowns beginning to reappear across the continent. In Europe and Central Asia, there were almost 146,000 new cases and 1,771 new deaths from COVID-19 on October 21, 2020.[6] However, cumulative cases and deaths by region are much lower than in the Americas, with almost 8.4 million cases and just over 260,000 deaths.

The Middle East and Africa represent two regions that are handling the COVID-19 pandemic surprisingly well, given their relatively low levels of development and medical care compared to the industrialized world. Like the Asia-Pacific region, the Middle East and Africa have also seen relatively low levels of new cases and deaths. As of October 21, 2020, the Middle East experienced 23,000 new daily cases and Africa 4,000, while deaths were just 575 and 193, respectively. Cumulative deaths are low as well, with the Middle East having lost almost 72,000 people and Africa less than 29,000 since the pandemic started. South and Southeast Asia appear to be in the middle of the pack regarding their COVID-19 cases and deaths. On October 21, 2020, the region saw almost 64,000 new cases for a total of 8.6 million, and 891 new deaths for a total of more than 136,000. Regardless, the loss of over 1.1 million global citizens from this disease has been staggering.

Global Economic Impact

The COVID-19 pandemic has inflicted the largest shock on the global economy since the Second World War, resulting in job losses for over 500 million individuals worldwide, reduced global trade flows, and a sharp decline in gross domestic product (GDP) growth.[7] The effects have been severe, with the global economy at the end of 2020 projected to be 8 percent smaller than it would have been in the absence of the pandemic.[8] According to the latest edition of the World Economic Outlook released by the International Monetary Fund (IMF) earlier this month, the global economy is expected to shrink in aggregate by 4 percent in 2020, rebounding to 5 percent growth in 2021.[9] In dollar terms, this amounts to an estimated $3.7 trillion in wealth being destroyed in 2020.[10] Advanced economies are projected to be hit harder than the global economy on average and recover more slowly, with GDP forecast to fall almost 6 percent this year, and only rise about 4 percent next year.[11] By contrast, the developing world is projected to see a more than 3 percent drop in GDP this year, and a surge of more than 6 percent in 2021.[12] This leaves the developed world to deal with the economic consequences of COVID-19 after many developing nations have surpassed their pre-COVID-19 GDP peaks, resulting in diverging growth paths between the developed and developing worlds. This is evidenced by the largest distribution of growth across 50 countries in 40 years during the second quarter of this year, and the estimate that America's economy will be the same size next year as it was in 2019, while China's will be 10 percent larger.[13]

Global trade is projected to fall (and subsequently rise) disproportionately to GDP growth, both this year and in 2021. The World Trade Organization (WTO) forecasts that global trade will fall by around 9 percent in 2020, rebounding to a greater than 7 percent increase next year.[14] However, the most recent trade forecast is significantly better than the 12.9 percent drop forecasted by the WTO in April.[15] Trade in COVID-19-related products, such as personal protective equipment (PPE), and strong trade performance in June and July due to easing lockdowns have all improved the once-dismal outlook. This is in contrast to the 14.3 percent-collapse in global trade flows experienced in the second quarter of this year, highlighting the severe economic consequences of the lockdowns initiated around the world.[16] However, the projected surge of trade next year has

also been dampened from an original 21.3 percent growth estimate, due to new data on potentially weak pent-up demand and restocked business inventories.[17] Overall, global trade was heavily impacted by COVID-19. International cooperation and internal stimulative policies will be necessary to ensure that trade growth is revived post-COVID-19.

Governments around the world have increased spending to combat the fall in aggregate demand resulting from the pandemic. Globally, fiscal measures to combat the coronavirus amount to 6 percent of global GDP.[18] Among advanced economies, fiscal stimulus so far this year has amounted to almost 8 percent of GDP on average, compared with an average of 2.5 percent of GDP in the developing world.[19] Within the European Union, increased stimulus amounts to slightly less than 4 percent of GDP, highlighting the fiscal benefits of early and aggressive counter-measures to combat the pandemic.[20] Nevertheless, already by the end of April, the European Union had approved more than €2.2 trillion ($2.6 trillion) in state aid. In the United States, measures to tackle the virus have been piecemeal and ad-hoc, yet still the total value of U.S. COVID-19 fiscal stimulus packages is now equivalent to 13.2 percent of the country's GDP.[21]

The COVID-19 Country Case Studies

With that summary introduction, this report now proceeds to the country COVID-19 case studies. For each nation covered, this report examines the public health impact of the coronavirus in terms of infections, fatalities, and recoveries and documents public health responses nations have taken, including everything from diagnostic and testing approaches, to the preparations of hospitals and intensive care unit (ICU) beds, to nations' efforts to develop coronavirus diagnostic kit and tests, therapeutic drugs, and vaccines to their plans to disseminate them to domestic and global audiences. Equally, the report examines the impact of the pandemic on nations' economies in terms of GDP and employment effect, industrial output, and changes in trade flows. It considers both demand- and supply-side effects as well as business and consumer impacts. It also examines the economic and regulatory policy responses these nations have introduced in responding to the crisis.

The report considers both nations' short- and long-term responses to the pandemic, and pays particular attention to how nations, once the world gets through the pandemic, can position themselves for higher levels of greater long-term economic growth. In the short-run, the report notes that the coronavirus pandemic has exerted a massive supply-side shock; in other words, the global economy was fairly robust going into the crisis, but the subsequent lockdowns and impediments to productive work and enterprise introduced a supply-side shock that cratered production and employment, leading to layoffs that propagated global demand-side declines, thus leading to a vicious cycle of reduced supply and demand amidst widespread global uncertainty which collectively tremendously reduced global growth. Only did massive fiscal and monetary interventions from nations worldwide, including income support for citizens, stabilize the situation. However, the most-sophisticated countries in terms of responding to the crisis, such as Austria and Germany, recognized that a key point of intervention was working with companies to develop or to provide needed safety equipment and protocols to keep production environments safe for workers, so that enterprise and employment could sustain. Those two countries also quickly turned to re-implement their short work or "Kurzarbeit" schemes (as they had during the Great Recession) in which employees work reduced hours (perhaps 80-90 percent of normal) with state or federal governments chipping in the difference and often those hours being used for educational or retraining opportunities. Equally, nations that had significantly advanced digital infrastructures

could transition a significant amount of productive output (especially in services industries) to the home and virtual environments.

In terms of better positioning nations for longer-term economic growth, additional examples from the case studies include countries' efforts to redouble deployment of digital infrastructure such as high-speed broadband Internet and next-generation mobile networks as well as to make greater embrace of digital applications such as e-government, telemedicine, tele-education, intelligent transportation systems, and contactless payment systems. The report also finds that many nations and regions are using the crisis as an opportunity to sweep away low-value-adding regulations that impede the deployment of digital technologies, such as restrictions on the use of automated grocery checkout, robots, drones, or autonomous vehicles.

Unfortunately, the pandemic has led countries to consider introducing a range of trade restrictions, from export controls on medical equipment, PPEs, and pharmaceuticals to renewed efforts from a variety of nations to indigenize supply chains, reshore production activity for critical goods like pharmaceuticals and medical supplies, or to adopt local procurement requirements. In fact, the IMF has identified over 120 new such export restrictions over the course of 2020.

However, as a global consortium of think tanks (many represented in this volume) argued in the report, "A Joint Declaration on the Importance of Collaboration, Open Trade, and Innovation in Tackling COVID-19," (and reiterate throughout this report), international collaboration and open trade will be vital if nations and their citizens are to get through this pandemic.[22] That report calls for the world's governments to commit to embracing the following seven collaborative actions to address the pandemic: 1) Abolish tariffs on medical supplies and medicines; 2) Reject export bans on medical supplies; 3) Reduce customs red tape; 4) Enable the free flow of relevant health data across borders; 5) Maintain transparency in collecting and sharing epidemiological data; 6) Increase cooperation with other countries to speed up drug approval; and 7) Support innovation, including by recognizing and protecting intellectual property rights.

The coronavirus represents a global problem; therefore, it's going to require a collaborative global solution. Indeed, global cooperation is needed now more than ever to effectively respond to the economic and public health challenges the coronavirus will wreak into 2021 and beyond. How the global community responds to this crisis will set the course for how the rest of this century unfolds: as one of greater collaboration among nations, or one where global economy and society become increasingly fractured along ideological, political, and regional lines. The members of the Global Trade and Innovation Policy Alliance call upon global policymakers to choose the more-enlightened path.

Argentina

By: Iván Cachanosky, Libertad y Progresso

Risks and Opportunities From the Coronavirus Pandemic: Economic, Social, and Political Impact of the Pandemic on Argentina's Businesses

Situation of COVID-19 Pandemic in Argentina

Argentina was favored by its geographical location in the Southern Hemisphere in the place furthest from the initial focus of the Pandemic in China. Argentina was able to watch European reaction against the explosive growth of infections and death.

The first case of COVID-19 in Argentina was detected on March 3, 2020. Then, on March 7, the first death was confirmed. The government on March 19 issued a "need and urgency decree" ordering a total quarantine in the entire country except for the production of goods and services considered "essential," As it is known, the number of detected cases depends on the number of test. In the case of Argentina, the numbers of tests were not only few at the beginning, but they continue to be so today when compared with countries of the region. On one hand, Chile and Peru lead in the number of tests carried out; on the other, Argentina and Paraguay are at the bottom of the list. By the beginning of September 2020, Argentina was recording 15,000 new daily cases (see Figure 4), with the total number of coronavirus cases rising to over 500,000 by the start of September (see Figure 5.)

Figure 4: Daily New COVID-19 Cases in Argentina, February to September 2020[23]

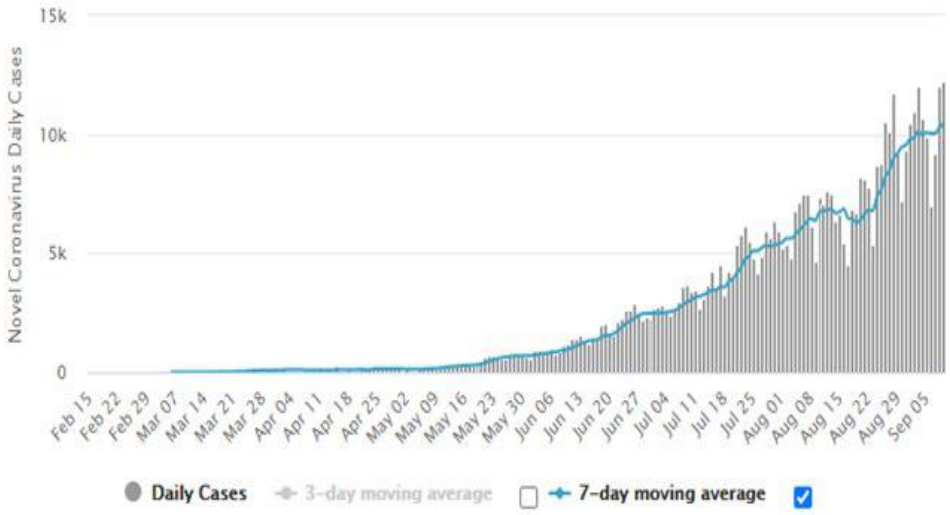
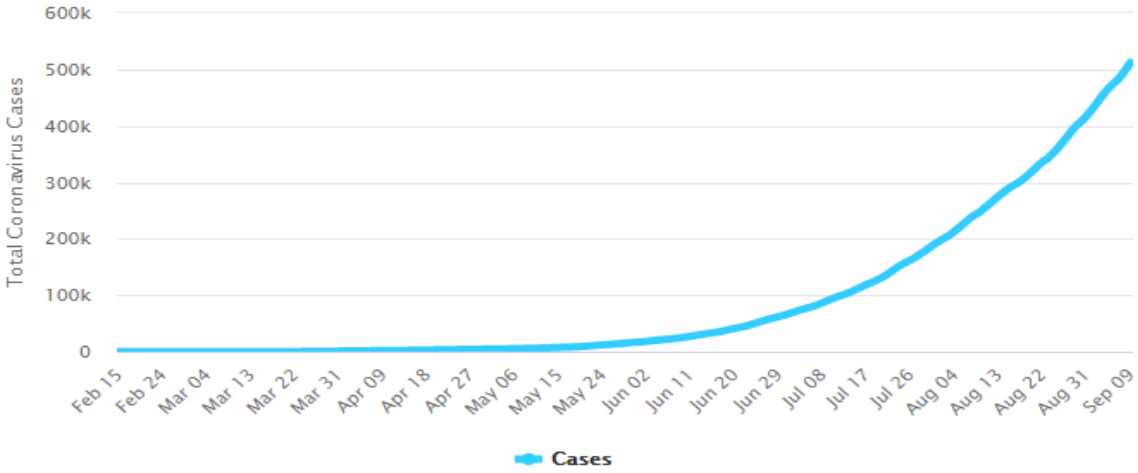


Figure 5: Total Coronavirus Cases in Argentina Through September 2020[24]



And intensive care hospital facilities are 62 percent occupied at the National Level, while in the Metropolian Area of Buenos Aires are at 69 percent.

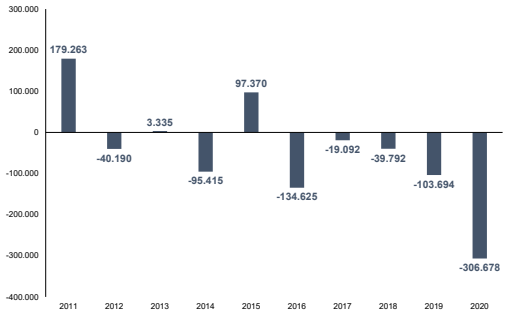
Social Impact of COVID-19 in Argentina

The impact of COVID-19 on the death rate is lower in Argentina than in the region, standing at 0.02 percent of the population, compared with a regional average of 0.055 percent.

Quarantine is still maintained in Buenos Aires and its outskirts (AMBA), where a little more than one-third of the country´s population is located. According to preliminary data, around 3.3 million people are doing homeworking and over 5 million people have working permits within an economically active population by 13.4 million people, meaning that about 38 percent of them have serious difficulties to work properly.

Activity is contracting significantly, and the year-on-year GDP average might fall between 10 to 15 percent in the current year, adding it to the two falling last years. Furthermore, there is an additional complication. Many workers are becoming unemployed and because Argentina has a rigid labor market, rehiring is difficult in the current context of Argentina. Between January and June, more than 300,000 workers were laid off, a figure that is much higher for the same period in previous years. (See Figure 6.)

Figure 6: Number of Argentinean Worker Variations, January–June 2020[25]



Some informal forecasts have already shown increasing poverty of up to 45 percent and may go even higher. Poverty and unemployment guarantee a new stage of misery for a part of the population that enjoyed intermediate incomes.

Political Impact

The president took over on December 10, with a popularity peak that although falling ever since has remained at a high level at the beginning of the quarantine. The economic plan seemed to focus only on the possibility of renegotiating the public debt in very favorable terms and finally an agreement was achieved much closer to what the private creditors demanded than to what the government wanted.

Hasty quarantine was well received by the population and the president´s positive image exceeded 60 percent. It looked as if the people used to following strong leaders had put the President Alberto Fernández in the place of a "protector leader," Throughout his frequent appearances on TV the president speaks "as a professor" about the growth of the pandemic in detail but he avoids talking about economics and answering questions on that issue. The presidential image fell after the release of prisoners with the excuse of overcrowding jails and the risk of contagion; it also fell with the purchases of food and hygiene items at outrageous prices and the crazy idea of forcing the retired to crowd on the streets to be able to receive their pensions.

Our expectation for the coming months once the virus is gone and the stark evidence of the economic situation is obvious, a fall in its positive image and increase in its negative image are likely to happen. This is already happening. It is not quite clear yet whether the opposition will take advantage of this situation.

Economic Impact

Once the quarantine is over, many distortionary and irrational measures will remain in an economy needing solutions. For example, it is expected that the "cepo" (restriction to buy foreign currency) will show an upward trend to "delay" the official Exchange rate. This will be evident in the increase of the gap between "parallel dollars," legal and illegal ones that will continue to reflect the deepening of the peso depreciation as a consequence of a Central Bank (BCRA) keeping a high level of issue and a demand still contracting in the midterm. Restrictions to operate in the exchange market of legal parallel dollars will increase, meaning a larger use of illegal dollars making saving less formal and discouraging dollar deposits in the local financing system. It should not be overlooked that net international reserves is at critical levels, leaving little room for the Central Bank to act. Furthermore, since the exchange rate delay will discourage exportation and encourage imports, there will be a negative impact on BCRA´s international reserves.

Changes in Industry and Business Trends

1) Imports will be profitable due to the trend of the official exchange rate to delay what will be controlled. However, as long as there was no domestic competence or importers had the way not to be reached by quantitative restrictions.
2) Producers of importable goods that will be affected by import restrictions to their competitors—basically consumer goods—will be beneficiated. However others will have problems to be competitive during the exchange control that will continue to be delayed beyond underlying corrections.
3) Exports of goods and services (ex. Knowledge Economy) will have to face a growing loss of competition due to distorting government´s rules, high tax pressure, permanent change of rules,

and delay in the official exchange rate due to the "cepo" (restriction to buy foreign currency) established by the Central Bank.

4) Oil and mining sectors will be complicated with the distortive regulations that will benefit domestic demand and delay in the official exchange rate. This will turn production less competitive with prices behind the "Argentine cost" that will show the real depreciation of the Argentine peso.
5) Internet, communication, and telecommunication services will have a greater use than before due to the learning of them forced by social isolation. The problem is that the infrastructure is not ready for a greater demand, and given the unfavorable social and economic context investment will not be satisfactory.
6) Informal, domestic, and personal service workers will drop due to impoverishment and because after months without working due to the quarantine their employers will not need them anymore. For example, domestic and maintenance personnel.
7) In the banking sector the use of Internet or Asset Purchase Programs (APPs)s will be greater with a lower personal attendance at the banks. In fact demand for financial services to companies that work through APPs only will grow so the need of branch offices will drop and there will be idle capacity for a while.

Midterm Scenarios

In the midterm, Argentina´s future does not seem promising. The fact is that when COVID-19 arrived the economy had pre-existent pathologies. A recovery in the activity level is expected as long as sectors resume working. But given the current policies there is a high possibility that growing inertia will not last very long, no more than the beginning of 2021. From then on, a terminal process of crisis will start, and it could take one to three years to come out from it.

Private construction and real estate sectors were punished by exchange controls. However, it is true that for some people building or buying houses was the way to run away from local currency and protect their assets from the restrictions to buy foreign currency or repatriate profits. Therefore, there may be a chance of recovery related to the building of industrial plants, but that is always limited by the need to protect assets, especially given Argentina's low levels of economic growth.

It is probably that the national government will seek to subsidize the consumption of energy that would increase midterm demand. However, there will always be the limit of the difficult to sell the product abroad due to the loss of competitiveness that government´s policies imply. Government´s intention to encourage the developing of shale gas in the "Vaca Muerta" field may help raise a demand for services and supplies to meet their needs. Another sector the government wants to encourage is the production of lithium and its several processing methods and later industrialization.

Looking more at the mid or long term the question arises about an eventual change of administration considering the deep crisis expected in 2021 or in the 2022-2023 period. In the first case it is possible that the government lose midterm legislative elections within an explicit demand for a change of course. If that were the case, two scenarios could be imagined: in one case President Alberto Fernández would lead that way out toward a market economic policy with a higher respect for the institutions while in the second case the "Kirchnerist" pressure of the strong left wing of the ruling alliance would predominate trying to deepen the statist and interventionist course. The second case is very unlikely to be endorsed by the society from a cultural point of view and also because it would drive to a deepening of the economic crisis. So it is probably that a change in government either on presidential election in 2023 or most likely before that date

through advanced elections. Surely the new president will stand for a better institutional quality and market freedom.

In case the economy begins to collapse by the end of 2021 or the beginning of 2022, the change in the economic and institutional policy is expected to occur through the presidential election in 2023. The main point is that the president elected in that moment will probably change the course of the country toward a freer economy with more solid institutions.

No matter which of the two cases, there will be opportunities for good business. There is the perception of a government with a management aiming to solve severe problems of Argentina and advancing in the pending underlying reforms. At the beginning, the opportunity will arise from buying at cheaper prices assets of sectors that were badly hit by the economic management but should be competitive and profitable in a normal context.

Given the certainty of a change of course, interesting opportunities could be found within the export sector that will regain competitiveness thanks to fewer regulations, a free exchange market, and the trend to a lower pressure. Some examples are a) food and beverages; b) agriculture sector; and c) mining especially lithium.

The expectable improvement in the domestic demand that will bring growth of the activity level will generate potential opportunities in a) real estate purchases that will highly recover value on time especially housing; b) investment in infrastructure for supply and distribution of electric power including gas production; c) sale of material for public transportation; d) construction will also mean good business but with a lower risk/return rate because profits will take longer be made; e) import of goods will rise sharply due to a greater demand and a less protectionism so there will be a good chance for those who face that business or those who provide the services needed to bring products from abroad; f) "Knowledge economy" is a field with a high potentiality of development; g) There will also be opportunities although not in the short term due to the high level of idle capacity, for those who provide services and materials for the installation of industrial plants; and h) There will be an increase in the demand for services to families and companies since the international competence is very little as well as the possibility to keep idle capacity in time.

Considering risks and opportunities for the midterm, the quarantine will also generate potential business. Unfortunately, there will be many bankruptcies and difficult financial situations but chances to buy those companies should fulfill two conditions: a) to be within the activities considered good business once Argentina recovers from the on-coming deepening of the crisis; and b) to have a cheap price that justifies embarking on that business and go through the complex short term awaiting in the country.

Australia

By: Hasan Tawfique, The Institute for Policy, Advocacy, and Governance (IPAG) Asia-Pacific

Australia's Response to the Coronavirus Pandemic

Introduction

Australia was one of the earliest countries whose citizens contracted COVID-19, with the very first case affirmed on January 25, 2020. To curb the spread, the Australian government subsequently adopted stringent social distancing and lockdown measures, including prohibiting public get togethers of multiple individuals and closing down unnecessary business activities. Given the country's early and rapid response, its handling of the crisis (despite recently recovering from a second wave) has been regarded as one of the most successful in the world. As of October 22, 2020, Australia has met with 27,466 positive cases with 905 casualties.

The Government's Federal Response

In response to the pandemic, the federal government took the remarkable step of forming a "national cabinet" including the leaders of all state and territory governments to coordinate the nation's response. This included measures such as physical distancing and lockdown restrictions to reduce the infection rate. Other measures included closing borders and curbing incoming international flights. Additionally, the government closed non-essential services, including cafes and restaurants, except for takeaway services. Also, travel between states and territories was halted or severely restricted. Individuals who tested positive, returned from overseas trips, or who were in contact with a known positive case were requested to go for self-quarantine for 14 days voluntarily. This subsequently progressed to mandatory supervised quarantine in many hotels for all travellers returning from overseas, irrespective of their COVID-19 status.

After the National Cabinet declared a three-step plan on May 8 to loosen up COVID-19 limitations, states and territories undertook provincial control measures. A provincial COVID-19 resurgence set off a second phase of lockdown in metropolitan Melbourne from July 9. This was subsequently fixed (Stage 4 limitations) on August 2, and limitations (Stage 3) were likewise set up for the State of Victoria (outside of Melbourne) beginning from August 6. On September 6, the Victoria government unveiled a guide for easing lockdown rules based on decreases in dynamic COVID-19 cases. As new daily cases have declined, restrictions in metropolitan Melbourne and the remainder of the State of Victoria have been eased since September 28. A few states and territories have enacted provincial travel limitations. Notwithstanding, abroad travel stays have been prohibited, and any foreign visitors to Australia are isolated for 14 days, with the exemption that travellers from New Zealand have the option to enter without having to undergo the isolation period, from October 16.

As of September 28, the nation has returned to some clearly outlined social distancing rules which include: "(i) Ensuring physical distance of 1.5m; (ii) wearing a mask; (iii) practicing good hygiene and regular sanitizing; (iv) Quick actions in case of personal or staff ill health; and (v) Avoiding interaction in closed spaces and finally (vi) creating workforce bubbles." These have been enacted to gradually reopen the country and rejuvenate the economy by opening businesses while still tackling the pandemic.

Key Policy Responses to Uplift the Economy

Fiscal Responses:

Recent measures in the fiscal space has seen the government announce A$300 billion ($213 billion) worth of emergency stimulus which is expected to significantly worsen the budget deficit. In addition to this, personal tax cuts have also been announced to the extent of A$ 12.8 billion ($9.10 billion), while the government has also allocated A$3.7 billion ($2.63 billion) toward programs that would boost employment in the economy. All these measures, which were announced in early October 2020, are expected to push the budget deficit to a record A$213.7 billion ($152 billion) which is approximately 11 percent of the country's GDP. The government's measures have made it clear that any policies relating to economic recovery and budget deficit reduction will involve prioritization of the creation of employment opportunities first. The country's unemployment rate already hit a staggering height of 7.5 percent in July 2020.

Monetary Responses:

In response to the pandemic, the Reserve Bank of Australia (RBA) had already cut interest rates by 0.25 percent while pumping billions of dollars into the bond market to ensure credit flow. To help liquidity, the RBA has also directed one-month and three-month repo activities daily. To help with the smooth working of Australian capital business sectors, the RBA expanded the scope of qualified insurance for open market activities to incorporate protections given by non-bank enterprises with a venture grade. To help the arrangement of credit, particularly to SMEs during the time of disturbance brought about by COVID-19, the RBA set up an A$90 billion ($64 billion) Term Funding Facility (TFF) in March for banks to get to three-year financing at 25 instalments until September. The RBA has as of late extended the TFF to A$200 billion ($142 billion) and extended the program through June 2021.

Health Responses:

The government's response to the pandemic in terms of its health care sector has been mostly thorough and comprehensive, which has helped the country keep its number of cases to lower figures than most of counterpart developed-country nations. Early in the pandemic, the government unveiled a A$2.4 billion ($1.7 billion) health package to protect the people of Australia. To ensure access to quality healthcare for the people from their home, the government allocated A$669 million ($476 billion) to expand the Medicare-subsidized telehealth services. The government also pumped money in excess of A$120 million ($85 million) on mental health support and services. In addition to the above, the government used the allocated funds to provide support for domestic, sexual, and family violence during the pandemic as well as home delivery of prescription medicines, provision of adequate health equipment, conducting root-level testing and tracing, and bolstering pandemic related communication

Conclusion

While Australia has performed moderately well in tackling the pandemic's spread and impact, the social and economic outcomes are wreaking havoc on the country. The policy decisions that the government makes in the coming months will have long term impacts on Australian society, particularly with regard to Australia's vulnerable, marginalized communities. The ongoing pandemic did not affect everyone equally. In Australia, as in many other countries, the hardest-hit sectors have been the overall economy and the travel and hospitality sectors specifically. So, to overcome these challenges, recuperate from the crisis, and advance into a post COVID-19 future successfully, a greater commitment to implement required policies and strategies at the national and international level is very important for the nation.

Austria

By: Scott Nelson, Research and Strategy Advisor, Austrian Economics Center

Austria's Response to the Coronavirus Pandemic

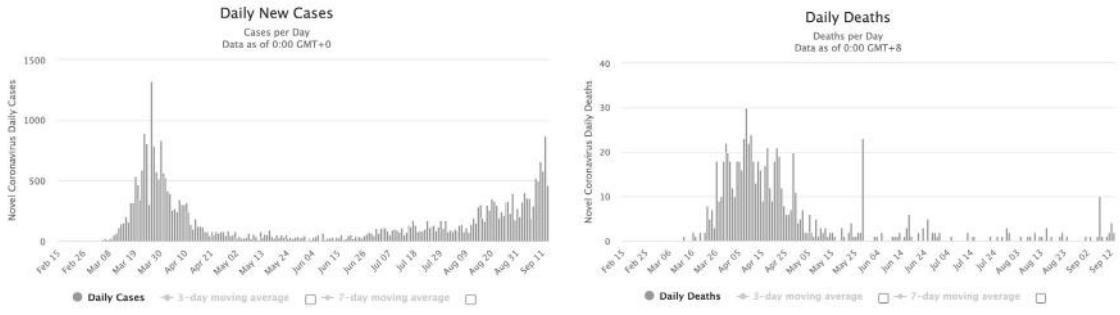
Introduction

Emerging from a year of growth below expectations in 2019, the COVID-19 crisis hit Austria with full force. Being an export-oriented economy with a strong tourism sector, international lockdown measures have had a devastating effect. The health crisis was handled well by international standards and the medical situation remains stable thanks to a health system with high capacity and good accessibility. A nationwide lockdown was implemented on March 16, 2020 around the same time as in most other European countries and slowly lifted starting in April. By mid-May, virtually all shops and businesses had reopened. Masks are required in some essential shops, such as supermarkets and bakeries, and public transport to this date, while large gatherings and cultural events still have to follow strict guidelines. The full consequences of the holiday season, school reopening, and the increased number of indoor activities as temperatures are falling are just unfolding. In late August and early September, the number of cases has started to rise again, and the Austrian government is already speaking of a possible second wave.

Overview of Health Situation (Mid-September 2020)[26]

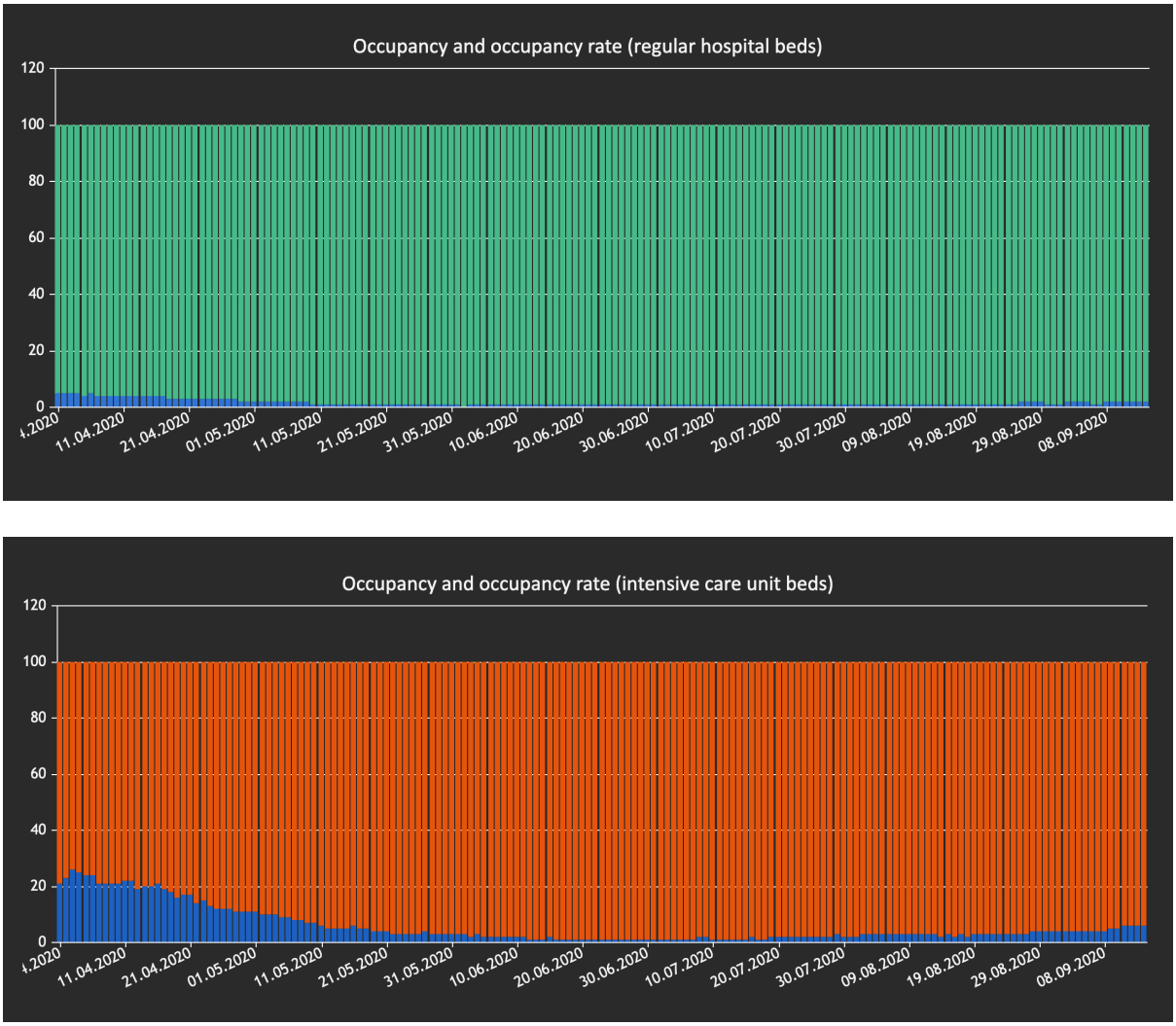
The following provides an overview of the Austrian health situation as it relates to the coronavirus. While the number of cases is rising, the numbers of hospitalizations, emergency cases, and deaths remain stable. Currently 255 patients are being treated in hospital, of which 47 are in intensive care.[27] (See Figure 7.)

Figure 7: Number of Daily Cases and Deaths From the Coronavirus in Austria



As the following charts show, there is ample spare capacity available in terms of regular hospital beds, as well as intensive care unit beds.[28] (See Figure 8.) Occupancy has remained relatively stable. This is largely due to the low average age of the patients and the increased number of tests on individuals without symptoms as part of the government's track and trace efforts.

Figure 8: Occupancy and Occupancy Rate (Regular Hospital and Intensive Care Unit Beds)



Overview of Economic Situation

While GDP has shrunk by unprecedented amounts (see Figure 9), the unemployment rate has remained within the norm (see Figure 10). This can largely be attributed to generous government policy. The full effect of the collapse in GDP remains to be seen. The following paragraphs outline specific issues in the areas of demand, supply, business and government policy, clarifying the data presented in the introduction.

Figure 9: Austrian Annual GDP Growth Rates, 2012 to 2020[29]

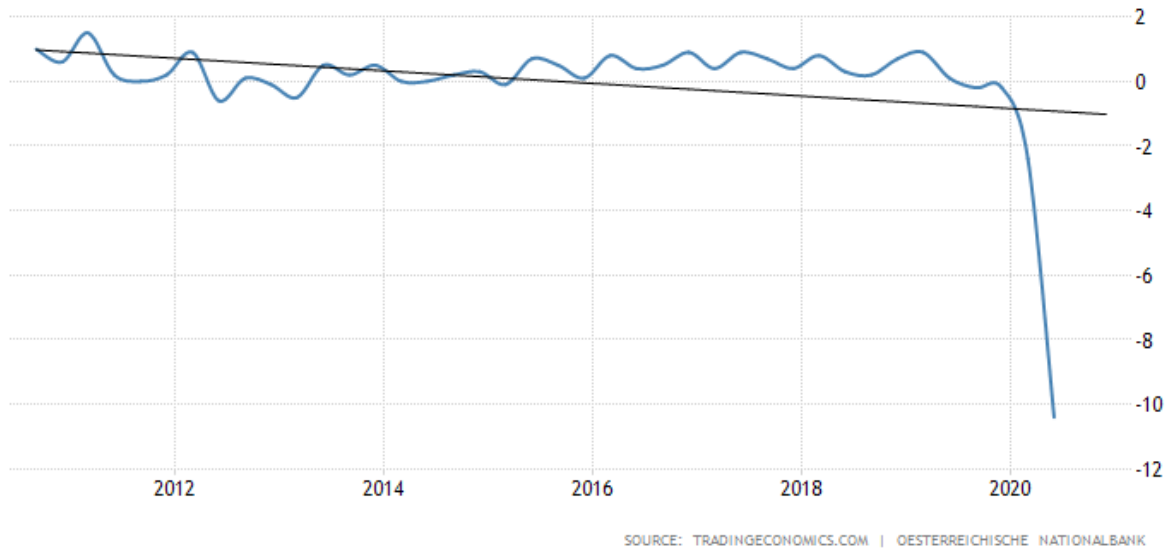
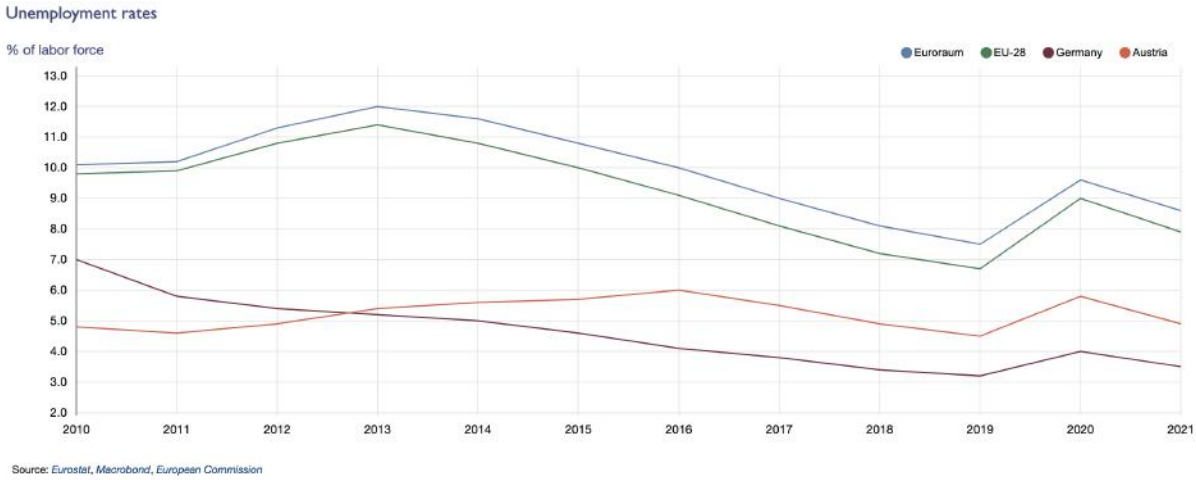


Figure 10: Austrian Annual Unemployment Rates, 2010 to 2021[30]



Demand-Side Issues

Demand has taken a severe hit as a result of the national and international lockdowns. Austria is heavily reliant on the services sector (70 percent of GDP), which was affected strongly by measures to prevent the spread of the pandemic.[31] A major factor in this regard was the almost complete shutdown of international travel. In June 2020 the number of overnight stays was down by 70 percent compared to the same month in 2019.[32] The reopening of borders between Austria and Germany could salvage little, even though Germans account for 37 percent of tourists in Austria.[33] In July this number significantly improved. Due to increased travel activity by Austrians within Austria, which rose by 15.2 percent compared to 2019, the overall number dropped to "only" -17.4 percent in July.[34]

While international travel restrictions affected tourism, the national lockdown severely impacted domestic consumption. Household consumption fell by 15.4 percent in the second quarter compared to the same period last year according to the Austrian Institute of Economic Research (WIFO).[35] Furthermore, fixed asset investment also contracted by 11.2 percent in Q2.[36] This fall in demand can be largely attributed to increased economic uncertainty amongst the population and falling wages. In a survey conducted in April 2020, 41 percent stated that their incomes were negatively affected by the crisis and 33 percent that their household was threatened economically.[37] Ninety percent said in another survey that they had completely stopped spending on luxury brands.[38] Reflecting the fall in wages and the economic uncertainty, the proportion of people who regularly overdraw their savings account increased from 16 percent in 2018 to 23 percent in May 2020.[39] These demand problems were a main factor contributing to the collapse of GDP in the second quarter, which was down 12.5 percent compared to last year.[40]

Austrian Supply Chains

A questionnaire in late April by the Austrian Chamber of Commerce, aimed at assessing the robustness of Austrian supply chains, was sent to 102,386 members of the Chamber of Commerce and conducted electronically.[41] The survey received 17,393 company replies. Over a third of the respondents stated that they had at least one supplier whose failure would lead to a complete shutdown of their operations. Of those suppliers that were classified as "highly critical" by the companies, 35 percent are located abroad. Of the approximately 40 percent of companies which rely on one "highly critical" supplier, 55 percent have no alternative for this supplier. This represents a key weakness in the supply chains of Austrian companies. The picture improves when looking at the amounts of reserve stock Austrian companies hold. On average, the study shows, production could continue for one month before a supplier-related shutdown occurs. Another factor proving the relative resilience of Austrian supply chains is the fact that Austrian companies affected by the coronavirus crisis could resume normal operations within two weeks, which is relatively quick by international standards.

Effect on Business

All shops could open in the beginning of May and all restaurants by mid-May, which was relatively early compared to the rest of Europe. Still, the fall in demand and overall economic activity as a result of the lockdown remains a considerable challenge for businesses. A study by the Institute of Higher Studies in Vienna published in May estimated that there will be a loss of value added to the economy of €31.6 billion ($37.1 billion) in total in 2020.[42] However, the effects on different sectors vary significantly. The production of goods and gastronomy and hospitality are estimated to record the worst losses: €7.76 and €7.21 billion ($9.12 and $8.48 billion) respectively. Agriculture, forestry and fishery, on the other hand, will only lose €330 million ($388 million) according to the IHS.[43] When asked by *Die Presse* how severely business was impacted as part of its survey of 1,100 businesses, 40.8 percent responded "quite strongly," and 27 percent responded "very strongly." While this paints a bleak picture, when asked how well prepared they feel for what is still to come, 50 percent responded "well" and 15 percent responded "very well."[44]

The government was swift to react, planning to pour €50 billion ($59 billion) into helping businesses get through the crisis. Specific measures include the short work scheme, emergency funds, tax deferrals, and a hardship fund. However, there has been widespread criticism of the government for its bureaucratic delivery of the above-mentioned aid package. A study by Unique

Research published in June 2020 shows that 59 percent of Austrians agreed with the statement that "the government aid package was not arriving at the businesses."[45]

The Short Work Scheme *(Kurzarbeit)*

The Austrian labor market has been under severe stress ever since the COVID-19 crisis reached Europe. Even though the numbers improved after the lockdown was lifted, at the end of August the unemployment rate was still 27.9 percent above last year's levels.[46] The most prominent measure by the Austrian government to counteract rising unemployment is the short work scheme, which was recently extended to last until 31 March 2021.[47] Employers and employees can agree on a reduction of working hours by a maximum 70 percent of the previous hours.[48] Employees earning up to €1,700 ($2,000) will receive at least 90 percent of their wage after tax; those earning between €1,700 and €2,685 ($2,000 to $3,155) will receive 85 percent; and those earning more than €2,685 will receive 80 percent.[49] The extra cost will be paid to the businesses by the Austrian Labor Market Service (AMS). This way businesses can keep many of their employees despite the slowdown of economic activity without incurring extra costs. About one-third of working-age individuals were enrolled in the short work scheme at the height of the first wave in late April. While this policy has been highly effective in saving jobs in the short run, its long run effects remain to be seen. If the economy does not bounce back as predicted, mass unemployment might have just been postponed instead of prevented.

"Hardship Fund" (*Härtefall Fonds*), Tax Deferrals, and Credit Guarantees

To ensure liquidity, for small businesses in particular, the government has introduced a number of measures. The "Hardship Fund," worth €2 billion ($2.35 billion), is targeted toward the self-employed and small businesses.[50] Businesses can apply to receive cash payments from the government in cases of economic emergencies. Between the end of March and the end of April, 30,000 cases were approved in Vienna alone.[51] In addition, businesses can apply for tax deferrals until January 15, 2021 if they are encountering economic hardship or liquidity bottlenecks.[52] In the tourism sector the government is also liable for up to €100 million ($118 million), when businesses request loans in order to remain solvent over the summer season. When it comes to small and medium-sized businesses the same applies, with a liability framework of €10 million ($11.8 million).

Urgent Need for Long Term Thinking

The economic downturn caused by this crisis has been more sudden and severe than anything experienced by the Austrian economy since 1945. The government has implemented decisive measures to ensure that the immediate effects and human costs of this unprecedented economic slowdown are minimized. However, when looking at the medium term, the picture is a bleak one. Due to high taxes, relatively strict regulations and a labor market that lacks flexibility, the Austrian recovery will be slow. In addition, the fiscal stimulus package and a fall in tax revenue has led to an increase in national debt for the first time since the fourth quarter of 2016. Rising to last year's level, the national debt is now 72.8 percent of GDP compared to 70.4 percent just before the crisis.[53] The near future is not likely to bring a reduction; the Institute for Applied Systems Analysis estimates national debt to rise to 75 percent by the end of 2020.[54]

The struggling auto industry is a key challenge for the medium-term future of the Austrian economy and illustrates many important issues that need to receive the government's attention. With a foreign turnover worth €14.1 billion ($16.6 billion), it's Austria's second-most important export

sector.[55] About 370,000 jobs are directly or indirectly linked to it. The COVID-19 crisis has impacted car makers particularly heavily. Internationally, the losses in the second quarter amounted to €10.8 billion ($12.7 billion), compared to €21 billion ($24.7 billion) in profits last year. Austria's car parts industry is likely to suffer the consequences of planned cutbacks amongst German carmakers. This represents a key supply-side challenge for the Austrian economy, putting extra stress on the labor market. For example, Schaffler, a German manufacturer, is planning on cutting 4,400 jobs, most likely affecting Austrian sites as well. MAN, a VW subsidiary, is beginning cuts that will amount to 2,300 job losses at its plant in upper Austria. If Austria wants to keep its role in the global car parts supply chain, it needs to embrace innovation and create a more business friendly environment. German car makers are changing—electric and hybrid cars have entered the mainstream. Austrian manufacturers need to be given the space and the means to keep up with these global trends.

It's imperative that the Austrian government's economic policies do not merely postpone economic collapse but ensure long-term growth and a sustainable path out of this crisis. Investment needs to stabilize, and businesses need to be able to grow and create jobs. To that end, the government should consider creating a more business friendly tax environment in the future and accelerate approval processes significantly. A coherent industrial policy is needed, which ensures attractiveness for Austria as an industrial location. This would incentivize more foreign businesses to set up shop in Austria and help Austrian businesses deal with the long-term effects of the COVID-19 crisis. That way productive jobs that do not rely on government money can be kept as well as added to the economy.

In order to create a more dynamic economy that is able to recover quickly from this unprecedented downturn, the focus cannot solely be on keeping existing businesses alive. The process of starting a new business needs to be significantly simplified and accelerated. For inspiration, the government could take a look at Estonia, which holds the world record of 18 minutes, when it comes to registering a new business. Estonia's digitalization efforts have paid off massively. Not only could the Austrian economy become more dynamic and emerge out of this crisis more business friendly than before, bureaucracy could also benefit from digitalization, saving the government large sums of taxpayer money.

Austria handled the immediate crisis well by international standards. The health system is working well with much spare capacity still available; unemployment is being held in check, and businesses are kept alive. But the measures presently in place cannot be prolonged indefinitely. It is now time to look to the future and think about how to emerge from this crisis stronger than before. Once the government's aid packages are exhausted, businesses need to be able to stand on their own two feet and start growing again. One of the government's priorities moving forward should be to provide the right environment for this to happen.

Bangladesh

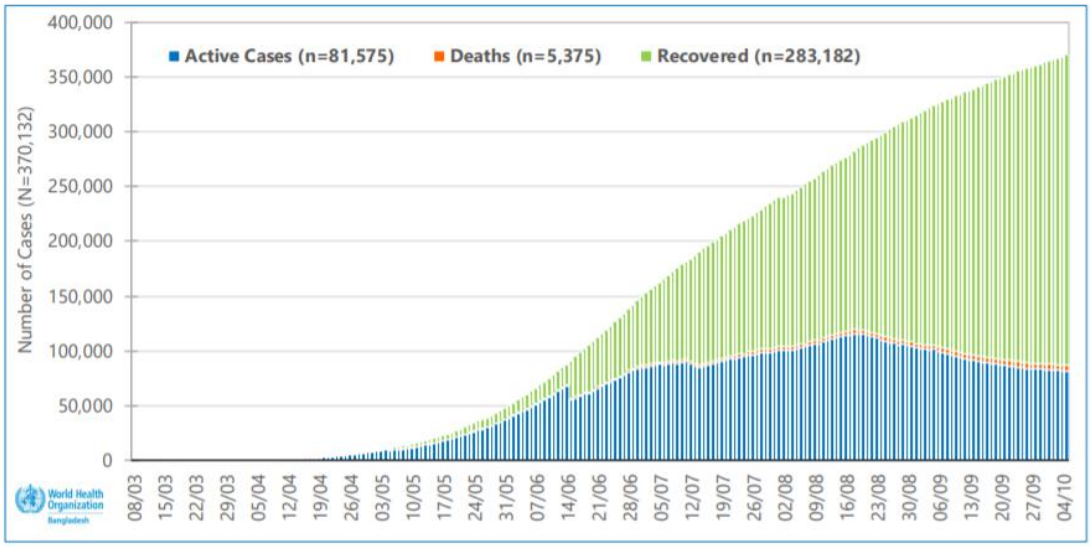
By: Abdullah Ar Rafee, Senior Research Associate, The Institute for Policy, Advocacy, and Governance (IPAG)

The Coronavirus Pandemic: Assessing Bangladesh's Response

Introduction

Coronaviruses are zoonotic viruses that usually circulate amongst animals and spill over to humans from time to time. They have been causing illnesses ranging from mild symptoms to severe infections which are similar to respiratory illnesses. The world has been facing an unprecedented crisis in 2020 from one such strain of the coronavirus, COVID-19, which has already caused over a million deaths and over 36 million reported infections. The World Health Organization (WHO) declared COVID-19 a pandemic on March 11, 2020 (WHO, 2020). The first case of COVID-19 in Bangladesh was detected on March 8, 2020.[56] With the ever-evolving nature of the coronavirus, it is hard to keep track of the current status, as the information stays relevant for a few days or merely hours. Through now, the country has detected 260,507 confirmed cases of COVID-19, of which 5,375 have died and 283,182 have recovered after treatment. In total, 452,378 people have been quarantined (institutional and home) through October 9, 2020 of whom 399,638 have been released from the state of quarantine. (See Figure 11.) Currently, 18,940 patients are being kept in institutional isolation.[57]

Figure 11: Status of Confirmed COVID-19 Cases, March 8-October 5, 2020[58]



The government of Bangladesh has been working with relevant public health agencies such as the Bangladesh Institute of Epidemiology, Disease, Control, and Research (IEDCR); Directorate General Health Services; and the Ministry of Health and Public Welfare to battle the outbreak.[59] Bangladesh is also working with various international organizations like the World Health Organization to tackle the pandemic. In response to the outbreak, various committees have been formed at city-corporation, municipality, district, upazilla (an administrative region in Bangladesh),

and union levels for the prevention of the spread of the virus. Initially, Bangladesh went for a complete lockdown for two weeks starting March 26, which was extended through April 14, keeping only emergency services open. Additionally, the government reintegrated quarantine and social distancing in all sectors making it mandatory for all. Areas with the most reported cases were subjected to complete lockdown. So far, 3 divisions, 49 districts, and 395 upazillas were under complete lockdown.[60] As of August 9, 2020, there are 539 ICU beds at COVID-19-dedicated hospitals and 290 organizations have been prepared for institutional quarantine across the country. There are also a total of 7,693 isolation beds in selected medical institutions and hospitals in eight divisions of the country.[61]

Bangladesh's Response to COVID-19

Bangladesh had a considerable preparatory time, as the first case of COVID-19 was recorded in early March while the pandemic first started in December 2019. Yet the country struggled initially, with the number of cases rising rapidly, while the government was unable to provide sufficient testing kits. In addition, only a few thermal scanners were bought by the government, with most of them rendered inoperative shortly thereafter. As a result, the mandatory temperature check procedure was halted at airports. On the other hand, institutional quarantine was introduced very late. From early March, many government ministers including the Health Minister said that the government was fully prepared to tackle the crisis. However, some of the remarks of government officials and Cabinet Ministers on COVID-19 made citizens raise questions about the preparations.[62] Furthermore, Bangladesh was seen to be lacking dedicated hospitals, testing kits, labs, training, and supplies for the frontline fighters. Particularly, the shortage of testing kits was a significant concern. So far Bangladesh has been one of the countries with the lowest testing rates in the world.

Prime Minister Sheikh Hasina addressed to the nation on March 25 and 31, urging the citizens to stay at home. Her speech depicted the initial policy framework of the government incorporating social, health, and security measures to apprehend the crisis situation. In her speech she mentioned that the government has been establishing 27 testing labs and preparing specialized hospitals across the country. The Prime Minister also said that during the lockdown period, the government would assist low-income citizens through various means.[63] To minimize the economic impact of COVID-19 and the economic crisis faced by low-income individuals, the prime minister declared an $8.5 million bailout for the ready-made garment (RMG) and other business sectors. Among this, $590,000 was for the RMG sectors; $3.4 billion was given to the affected industries and service sectors as working capital as soft loans; $2.3 billion was disbursed to small and medium enterprises as working capital; and the rest was given to increase the Bangladesh Bank's Development Funds from $3.5 billion to $5 billion so that they can help the importers of raw materials. In addition, $590 billion was allocated for a Pre-shipment Credit Refinance Scheme under Bangladesh Bank.[64]

Elsewhere, the Asian Development Bank (ADB) announced a $6.5 billion initial package to address the immediate needs of its developing member countries as they respond to the COVID-19 pandemic. Bangladesh might receive another $3.5 million in grants from the ADB and $50 million in grants from Jeddah-based Islamic Development Bank.[65] As a former lead economist of the World Bank noted, "We all need to keep one reality in mind: if the pandemic is protracted, what will save livelihoods at the end of the day is not the printing machines or credit entries. What will save livelihoods is our willingness to share the accumulated real wealth with those who cannot cope with the cracks in livelihood systems resulting from cautionary steps taken to save lives." He also

added that temporary payroll support, tax concessions, and even financial bailouts are options that deserve serious consideration keeping the resource constraints in mind.

Overwhelmed Health and Socioeconomic Crisis in the Pandemic

In the first two months since COVID-19 began spreading in Asia, there were no visible preparatory measures in the health system of Bangladesh. Due to a lack of testing, the actual number of affected people on record doesn't reflect the real scenario. Many activists went so far as to address the situation as "No test, no corona" policy. Many doctors and frontline fighters also lacked sufficient personal protective equipment (PPE), leading to many unfortunate casualties. A large number of doctors and nurses had to work risking their lives in an unsafe environment. Many hospitals had to turn away patients with COVID-19 symptoms due to insufficient numbers of ventilators and ICUs.[66]

Like most countries, the lower-income groups of Bangladesh have been the most affected by the coronavirus pandemic and subsequent lockdown. According to the Bangladesh Bureau of Statistics, at least 10 million workers are dependent on their daily incomes, most of whom had their earnings halted due to the pandemic.

During lockdown, a transportation blockade and a policy debacle caused thousands of garments workers to walk miles to save their jobs, exposing glaring errors in the administration's communications. Many of them lost their jobs too. Surveys have shown a rising rate of starvation among a significantly large section of the population which threatens the decades-long period of economic growth of Bangladesh.

Impact of COVID-19 on Rohingya Refugees

Bangladesh is a densely populated country with a population of 170 million. On top of that, almost one million Rohingya Refugees have been sheltering in the sprawling camps of Cox's bazaar since 2017. There remains a grave concern that an outbreak of the coronavirus in the camps could overwhelm the inadequate medical facilities. The first case of Coronavirus in Rohingya camps was recorded on March 30.[67] While a massive outbreak has been contained in the subsequent months, the densely populated camp remains in grave danger of a massive outbreak at any time. The International Rescue Committee's Bangladesh country director, Manish Agrawal, said, "Without efforts to increase health care access, improve sanitation, isolate suspected cases and decongest the camp, the disease will devastate the refugee and local population here." In this regard, the government, with support from international aid agencies and community workers, has been working relentlessly in different camps to educate the refugees on self-isolation and hygiene. Nevertheless, the government imposed a lockdown on the southern district in April 2020, which is home to the refugees, to prevent the spread of the coronavirus.[68]

Reopening of the Economy

The government announced on May 28, 2020 that the closures and movement restrictions would be lifted gradually from May 31. Beyond the domestic impact of the health crisis, the two main channels through which the Bangladesh economy was expected to be impacted were remittances and exports of ready-made garments.[69] Despite initial hiccups to these two sectors, they have remarkably recovered, showing signs of pre-COVID-19 conditions in recent months. Many domestic and international flights have now been opened. Additionally, most tourist spots have also been reopened maintaining travel restrictions.

Bangladesh's Response to Uplift the Economy

The legislature declared 19 upgrade bundles which represent around 3.7 percent of the GDP of the nation to recuperate the economy. The measures that have been taken until now are as follows:

Fiscal Response

1) A stimulus package of $590,000 for export-oriented industries to pay the wage bill for three months. It comes as two-year loans to factory owners at a rate of 2 percent interest.
2) $3.5 billion for banks to provide working capital loan facilities to affected industries. Loans, under this stimulus package, are offered at an interest rate of 9 percent. While half of the 9 percent is to be borne by the borrower, the other half will be borne by the government as a subsidy.
3) $2.4 billion for banks to provide working capital loan facilities to small (cottage industries) and medium-sized enterprises. However, these loans are offered at an interest rate of 9 percent: 4 percent to be borne by the borrower, and 5 percent by the government as a subsidy.
4) A refinance scheme of $590 million for the agriculture sector. The Bangladesh Bank will charge an interest rate of 1 percent from the banks, and banks will charge 4 percent to customers. The loan will be repayable within 18 months, including a 6-month grace period.
5) Under the Back-to-Back LC arrangement, the Export Development Fund of the Bangladesh Bank is increased from $3.5 billion to $5 billion to facilitate further import of raw materials. The interest rate is 2 percent.
6) $590 million pre-shipment credit refinance scheme by the Bangladesh Bank for local products and the export sector, under which the Bangladesh Bank will charge interest of 3 percent from banks, and banks will charge 6 percent to customers.

Monetary and Macro-Financial Response

The focus of the Bangladesh Bank (BB) has been to ensure that there is adequate liquidity in the financial system to support the operations of financial institutions. It announced that it will buy Treasury bonds and bills from banks. The repo rate was lowered from 6 percent to 5.75 percent effective March 24 and was further reduced to 5.25 percent effective April 12. The repo rate was cut again from 5.25 percent to 4.75 percent recently, effective July 30. The capital requirement regulations (CRR) were initially reduced from 5 percent to 4.5 percent (daily basis) and from 5.5 percent to 5 percent (bi-weekly basis), with a further reduction to 3.5 percent and 4 percent, respectively, from April 15. Recently, CRR was cut to 1.5 percent (daily basis) and 2.0 percent (bi-weekly basis) for offshore banking operation, effective July 1, and 1.0 percent (daily basis) and 1.5 percent (bi-weekly basis) for non-bank financial institutions (NBFIs), effective June 1. BB has also raised the advance-deposit ratio (ADR) and investment-deposit ratio (IDR) by 2 percent to facilitate credit to the private sector and to improve liquidity in the banking system. The Export Development Fund was raised to $5 billion, with the interest rate now fixed at 2 percent and the refinancing limit increased. BB has also created several refinancing schemes amounting to a total of $4.4 billion, a 360-day tenor special repo facility, and a credit guarantee scheme to support exporters, farmers, and SMEs, and to facilitate the implementation of the government stimulus packages. To further support farmers, BB also announced an agriculture subsidy program that will take effect for 15 months until mid-2021. In addition, BB has taken measures to delay non-performing loan classification, relax loan rescheduling policy for NBFIs, waive credit card fees and

interests, suspend loan interest payments, impose restrictions on bank dividend payments, extend tenures of trade instruments, and ensure access to financial services.[70]

The Response From Local Communities and Organizations

Since the outbreak of the coronavirus, many local organizations and communities have been working relentlessly to combat the situation and maintain balance.

- The COVID-19 pandemic has put female garment workers in a more vulnerable state than their male counterparts. Sommilito Garments Sramik Federation (SGSF) reported a significant number of terminations of pregnant workers while others continue to work in fear of losing their jobs. Gender-based violence has also seen a considerable rise. In response to gender-based violence (GBV), SGSF and IndustriAll Global Union joined forces and are using social media to call out the government to ratify the ILO Convention C190 against sexual harassment in the workplace.
- Following concerns over the shortage of personal protective equipment for doctors and nurses, five organizations—Pay It Forward Bangladesh, Honest, Buet Alumni Association, Rotary Club Dhaka North-west, and Manush Manusher Jonno Foundation—approached Marks & Spencer with a request to produce 400,000 suits for doctors and nurses.

These cases only represent a handful of examples amongst the many cases of inspired responses from non-governmental institutions and community organizations throughout the country.

Challenges Moving Forward

Bangladesh's stimulus package, in proportion to its GDP, has been much higher than those of South Asian and Southeast Asian counterparts. It must be noted that Bangladesh does not have enough experience in implementing such a large amount of stimulus packages. The crisis induced by COVID-19 is very different from the crises such as cyclones or floods which the country usually faces and handles much more effectively. Therefore, during this crisis, when such a huge amount of money is being injected into the economy, the success of the stimulus package will depend largely on the management of this package by the government.

There are two aspects to the stimulus package. One is to assist the affected industries, and the other is to address the food security problem of poor and vulnerable people. In both cases, there is a need for efficient supervision. For the affected firms, the operationalization of the stimulus package remains a considerable problem. The operationalization procedure involves the identification and selection of the affected firms, disbursing of credit through the banking channel, and monitoring of the overall process. All these steps suffer from critical institutional challenges in Bangladesh. In this context, when there is a question of disbursement of a large amount of money through the stimulus packages, there will always be people (within and outside the public management system) to take unfair advantages. Therefore, transparency and accountability should be ensured in the implementation of the stimulus packages. Without proper monitoring of the use and management of stimulus package funds, its purpose will remain elusive. Thus, there is a need for the immediate formation of a national monitoring committee comprising representatives from government agencies, non-governmental organizations (NGOs), civil society, the business community, and labor organizations.

One of the major challenges in dealing with the COVID-19 outbreak was also the unemployment and employment leading to internal migration, further causing two major technical spikes in the number of cases reported positive. The first spike was caused due to the urban to rural migration from the lockdown restrictions and then the RMG sector workers being employed in the factories because of the non-cooperation of the luxury clothing brands, which led to another phase of internal migration (i.e., from rural to urban causing the second spike in the number of cases). The other challenges include the distribution of food items through the Order Management System (OMS) procedure which avails a subsidized price and also attracts people in abundance, making the practice of social distancing hard. These three issues are extremely important for the effective implementation of all the current schemes and services in Bangladesh to help reduce the coronavirus.[71]

Some Noteworthy Actions

As one of the leading garment industries in the world, Bangladesh has quickly mobilized its RMG factories to make personal protective equipment for its population and for exports globally. The country, being the global laboratory of development innovation, has brought various stakeholders together in this regard. Bangladesh has implemented a new scheme wherein frontline responders are provided with incentives and special insurance for their work and dedication. Bangladesh is also ready to increase its digital financial services and transfer cash aid to more than three million people living under the poverty line. The government has set up platform helplines as a resource for COVID-19-related support and information. The country has also developed a dedicated website with a chatbot to help and assist the people in need.[72] The expansion of telehealth services has been praiseworthy. Various medical researchers have also been working on a vaccine.[73] Since the outbreak, Bangladesh has been facing many challenges, but those challenges have highlighted a myriad of good practices while creating new opportunities.

The Journey Ahead

The coronavirus pandemic is unprecedented and so should its methods for recovery and response be. The challenges that lie ahead are quite steep. The government realized it and quickly adopted a cocktail solution that is unique for Bangladesh. Nobel Laureate economist Abhijeet Banerjee has largely agreed that, despite the hiccups, Bangladesh's economy has been able to endure the lockdown. The main goal is to pinpoint the infection curve while reopening the country and economy. The government and the economy will have to be prepped identically to the strategic lockdown as the signs of emerging out of the COVID-19 situation are promising. The country and people must prepare themselves to fight the next battle during the cold wave, implementing policies and strategies accordingly. Otherwise, Bangladesh will lag behind when the rest of the world will advance combating the COVID-19 pandemic.

California/Silicon Valley, United States

By: Sean Randolph, Senior Director, Bay Area Council Economic Institute

Meeting the Crisis with Innovation: California/Silicon Valley's Response to the Coronavirus

In September, the coronavirus entered its tenth month dominating international headlines—a far cry from expectations in March that businesses would close for a short period, workers would be furloughed but quickly re-hired, and the economy would see resurgent growth by the third quarter. In the United States, the virus hit communities and economies hard: national GDP declined by 5 percent between January and March and a further 9.5 percent between April and June.[74] The official unemployment rate was 10.2 percent as of July—below an April peak but far above any modern recession level.[75]

Health and Economic Impacts of COVID-19

California's response to COVID was more immediate and extensive than in most states. It was the first state to shut down as a precautionary measure against viral spread and thereby avoided the disastrous case spikes of Northeastern and Southern states. The coronavirus's damage in California has nevertheless been intense and lasting. With 676,860 confirmed cases and 12,278 deaths at this writing, California's case load of around 1,690 per 100,000 people is below the national average of 1,744 per 100,000 but continues to pose a major health threat.[76] A partial reopening of businesses in June was followed by a resurgence in infection levels which caused further business re-openings being halted. The resurgence was due less to business activity, however, than to social gatherings during the late-May Memorial Day holiday where many failed to observe social distancing. The July spike pushed health care providers in parts of the state close to the breaking point, with daily new infections reaching 10,000 and some counties like San Bernardino reporting 100 percent intensive-care unit (ICU) capacity.[77]

Despite that peak California's ICU capacities have not been breached and in subsequent months caseloads have remained moderate. From July through September the daily rate of infection in the state dropped three-fold to 3,367 as of late September.

The crisis has revealed significant demographic disparities. African American and Hispanic Californians experience disproportionately high infection and hospitalization rates compared to whites. This is largely due in part to the fact that minorities account for a high percentage of frontline "essential workers." Disparities also persist in childcare opportunities for low-income individuals: One-quarter of California's care facilities have been closed and those remaining have seen enrollment drop by 50 percent on average—with working parents forced to continue sending their children or risk losing an income.[78]

The state's unemployment rate as of July 2020 stood at 13.3 percent, with over two million fewer Californians holding jobs than one year previously. California now has one of the highest unemployment rates in the United States, with 2,510,000 individuals losing their jobs since the pandemic began—many in the hospitality, trade, and government sectors.[79] Added to the existing unemployed labor pool, a total of 6.45 million Californians were receiving unemployment as of mid-August.[80]

The San Francisco Bay Area has experienced unemployment rates slightly below the state's average.[81] Infection rates have also been comparatively low, and as of late September San Francisco had by far the lowest number of deaths per 100,000 people and the lowest number of deaths as a percentage of confirmed cases among major U.S. cities. This can be attributed to the city's early shutdown in March and the caution of local officials in reopening the economy, its technology and professional serviced-led economy that has enabled many people to work from home, and a culture of trust and respect for public health which led most residents to follow public health directives and embrace the use of masks.

Research into the health and economic effects of the coronavirus has brought to light significant demographic disparities. African American and Hispanic Californians experience disproportionately high infection and hospitalization rates compared to whites. This may be due in part to the fact that minorities account for a high percentage of frontline "essential workers." Disparities also persist in childcare opportunities for low-income individuals: one-quarter of California's care facilities have been closed and those remaining have seen enrollment drop by 50 percent on average—with working parents forced to continue sending their children or risk losing an income.[82]

High unemployment has also exacerbated pre-existing challenges such as homelessness. Governor Gavin Newsom was forced to reallocate some of his funding for a $750 million homelessness response plan toward renting hotel units for more than 14,000 homeless individuals during the pandemic under "Project Roomkey."[83] The decision raised concerns over the state's ability to resolve its longstanding housing crisis, which has contributed to 150,000 Californians being homeless. While a temporary moratorium on private property evictions was enacted, short-term measures of this kind will do little to mitigate California's long-term challenge of homelessness and housing availability.

California's aggressive implementation of self-quarantining and other public restrictions has saved lives but has also severely damaged its economy, the world's fifth largest. A massive $54.3 billion budget deficit now faces state legislators. To cover the deficit, $22 billion in savings has been identified by combining financial reserves with service cuts, with an additional $4.4 billion potentially coming from controversial business and industrial taxes.[84]

Local governments also face severe deficits. Los Angeles County—the state's largest county—is confronting a $400 million deficit. San Francisco is anticipating a budget deficit of between $1.1 and $1.7 billion spread over the next two years.[85] San Jose is similarly expecting a two-year $110 million deficit, and Oakland had a $122 million shortfall to close during its FY 2020–2021 budget.[86]

Shutdowns have deeply affected Californian businesses, particularly small ones. According to a poll by the National Bureau of Economic Research, upwards of 100,000 small businesses had closed by the beginning of May and a further 25,000 retail stores are anticipated to close by the end of the year.[87] California's reinstatement of restrictions on restaurants and other small businesses in July damaged business and consumer confidence, as did the failure in August of the U.S. government to extend the Paycheck Protection Program's $600 unemployment supplement.

County-by-county reopening of restaurants began in August with limited outdoor dining, and limited indoor dining was resumed in selected counties in October. That limited level of service (25–50 percent of capacity) hasn't been enough for many restaurants, however, and thousands have permanently closed. With job recovery slower in the San Francisco Bay Area than in many other places, an inverse correlation has developed between the intensity of restrictive measures

that have produced positive health incomes, and the underlying health of the economy as seen in unemployment and business closings.

California and Bay Area Policy Responses

COVID-19-related measures in the Bay Area and California have been among the most aggressive in the nation. On March 16, seven counties in the Bay Area were the first in the country to order residents to shelter-in-place. Three days later the Governor initiated California's "safer-at-home" initiative and approved $1.1 billion for state coronavirus relief—making California the first state to fully shut down its economy and public spaces. Within a month a "Four Phase Resilience Roadmap" for reopening California was announced. Based on benchmarks the roadmap designated shelter-in-place, opening of low-risk venues, opening of high-risk venues, and full reopening as the four stages for returning to economic and social normalcy, though the recovery process was anticipated to be long.[88]

While the state attempted to pursue the Recovery Roadmap as far as Phase Three, the second viral surge in July forced a statewide return to Phase Two for several weeks. Given the varying degrees of COVID-19 severity across the state, subject to state government approval individual counties have the discretion to reopen as local health and elected officials see fit. California has created a watchlist to track counties it considers high risk, wherein if a county remains on the list for three or more days state officials have the authority to order it to roll back its reopening. The watchlist is based on criteria such as hospital capacity, hospitalization levels, and county COVID rates.[89] In early September many of California's largest counties remained on the list, including eight of the nine Bay Area counties and Los Angeles County.[90]

State and local governments have attempted to mitigate the economic effects of these measures in several ways. Executive orders by the Governor have restricted the ability of utilities to shut off power to COVID-impacted customers, and the 2020 Fall election was moved to Mail-In.[91] On March 27, an executive order placed an eviction moratorium on all renters affected by the coronavirus until May 31, with an extension continuing until July 28 and then September 30. With financial assistance from FEMA the Governor also redirected $150 million toward providing 14,200 rented units to the unhoused under the previously mentioned Project Roomkey. The July Budget Act extended the project to the end of the year under the title "Project Homekey," drawing on an additional $600 million from the General Fund.[92]

The California Department of Finance mobilized several billion in funds to fight the virus and is authorized to spend a further $5.7 billion. This includes $1.4 billion in immediate crisis relief funds, $1.3 billion in relief for counties and $500 million for cities, and $750 million in redistributions from the state's General Fund.[93] The federal government provided an additional $214 billion in direct and indirect assistance to the state, its businesses, and citizens, primarily through the Paycheck Protection Act, CARES Act, COVID-19 Preparedness Act, and Families First Act.[94] A $716 million California Special Fund for Economic Uncertainties was created to respond to changes in reopening policies.

While California's K-12 education system survived the Budget Act without cuts to its $49 billion budget, $11 billion of the allocated money will be deferred by the state until the 2020-2021 year by requiring districts to cover associated costs without repayment for several months.[95] For some districts, this deferral is reminiscent of recession-era budget cuts, and some school systems have begun making staff cuts in expectation of future cutbacks, despite over $6 billion in K-12 funding provided through the CARES Act to help schools prepare for a COVID-19 school year. The Governor announced in mid-July that primary and secondary education would begin the fall semester online

to reduce COVID-19's transmission, and school districts are struggling with how and when to resume in-person instruction.

Higher education funded by the state faces almost $1 billion in cuts if the federal government fails to provide relief by mid-fall. Community colleges are burdened with $791.1 million in deferrals, while the California State University (CSU) system potentially faces $500 million in budget cuts and the UC system an associated $258 million in cuts.[96] The state's most prestigious universities, UC Berkeley and Stanford—both located in the Bay Area—expect losses of $340 million and $267 million respectively. Both will pursue hybrid (residential and virtual) semesters for the fall, with all CSU and most UC campuses adopting primarily remote instruction for the first semester. Severe revenue losses in higher education are likely to persist, particularly as some parents are reluctant to pay full tuition for on-line learning.

In the Bay Area, the nine counties received a total funding package of $270.9 million in state coronavirus relief allocation as well as $144.2 million in additional aid from the California General Fund.[97] The funding was provided in coordination with $500 million in state emergency funding for incorporated cities—including the second-highest statewide allocation of $37 million for the City of Oakland.

Impacts on Businesses

Job losses in the region and the state are widespread but concentrated. Of the over 2.5 million unemployed persons in California, 607,000 jobs were lost in leisure and hospitality between June 2019 and June 2020, with an additional 268,000 lost in trade and transportation and 198,000 in government services.[98] Of the statewide layoffs, 493,200 were in the Bay Area, accounting for 17 percent of California's total job loss.

Small businesses, many of which are in the service and hospitality sectors, have been the hardest hit by California's public health restrictions. A May poll by the Los Angeles Business Federation found 52 percent of businesses had been forced to furlough workers and 90 percent said COVID-19 had severely impacted their financial flows.[99] The California Restaurant Association—representing an industry responsible for $7 billion in annual sales tax revenue for the state—stated in a letter to the governor they could lose 20 to 30 percent of member businesses without federal or statewide intervention.[100] Similarly, in San Francisco the Golden Gate Restaurant Association estimated in April that as much as 50 percent of San Francisco's restaurants could close without public sector support.

As early as mid-spring a survey conducted by the Small Business Majority found 31 percent of small businesses had been forced to lay off employees, 49 percent temporarily furloughed workers, and 44 percent had been forced to draw on their savings.[101] The implementation of Assembly Bill 5 by the California Legislature, a bill passed last year targeting rideshare services such as Lyft and Uber that made employing a wide range of independent contractors more difficult, also became an impediment for businesses and employees reliant on a flexible contract employment business model. [102] State voters will decide whether or not to repeal AB5 on the November 2020 ballot.

California's state government and the federal government responded to the business downturn through a variety of financial measures. Businesses with less than $5 million in assets were eligible to defer up to $50,000 in sales tax for this filing year and may also have qualified for low-interest disaster loans provided by the California Infrastructure Bank for businesses with fewer than 750 employees.[103] Small businesses also have access to $700 billion in federal aid programs, including $377 billion from the CARES Act and $659 billion from the Paycheck Protection Program—of

which $70 billion has been accessed by Californian businesses.[104] Over $530 billion in federal aid is also available to large businesses, almost all of which is from the Federal Reserve's business bailout and securities buyback programs.

At the local level, efforts to raise public funds in response to the pandemic have come with significant controversy. San Francisco placed a controversial "CEO Tax" on the November ballot, which would impose a tax of between 0.6 and 1 percent on companies where executives make 100 times or more than their median employee.[105] The proposal would take effect in 2022. Two additional tax measures in San Francisco—Propositions I and F—would raise local revenue by increasing taxes on commercial properties and increasing gross receipts and payroll taxes on businesses.[106] Businesses are strongly opposing these propositions, arguing that San Francisco's budget is already bloated—having grown tremendously in the past decade—and that new taxes would damage an already struggling business community and its ability to recover.

Where furloughs, reductions in force, and pay cuts are widespread among businesses, at this writing the City of San Francisco has not proposed service or employee cuts but in response to public employee unions is instead considering public employee raises estimated at $250 million.[107] In a display of the increasingly tenuous relationship between the public and private sectors, the CEO of hotel company Pebblebrook announced that the company would defer $60 million in improvements in its San Francisco facilities as a result of the city's pandemic response, which includes making COVID-19 health codes permanent and continuing to restrict leisure travel.[108] He stated, "The city is taking it for granted that businesses can pay anything they ask, that they can live with whatever regulations that exist."

Tax and other initiatives on California's November ballot could also impact the economy and its ability to recover. Proposition 15 would increase tax on commercial properties.[109] Such a move which could generate up to $12.4 billion annually and help pay down the massive budget deficit.[110] As previously indicated, the most-controversial proposition on the ballot, Proposition 22, challenges Assembly Bill 5, which classified app-based drivers as employees rather than independent contractors.[111] The proposal is a bid by companies like Uber, Lyft, and Door Dash to salvage plummeting revenues in California by turning back state law that defines app-based drivers as employees and not independent contractors. Proponents of Proposition 22 argue that restricting employment flexibility and opportunities is the wrong direction for the state in an environment where businesses and workers are struggling.

Despite these relief measures, a Yelp Consumer Review published in July estimated California had lost the most businesses of any state during the pandemic, with 14,100 permanent closures and 15,300 temporary closures.[112] Los Angeles and San Francisco ranked first and third among U.S. cities respectively for closures, with a combined permanent loss of 7,700 businesses. The pandemic's economic impact has even reached into the prosperous Santa Clara County—the heart of Silicon Valley and usually an anchor for the state's technology and service-sectors. Although Bay Area technology job losses have remained in the single digits, a reassuring display of strength, a June survey by Lending Tree found that 14.8 percent of Silicon Valley small businesses felt they would never fully recover their customer bases.[113]

In Silicon Valley a business coalition led by major CEOs, the Silicon Valley Recovery Roundtable, has met since spring to consider recovery strategies. Areas proposed for initiatives include: strengthening financial stability for individuals and businesses including better banking serviced for people of color; job creation to support displaced workers; preservation of existing housing and the creation of new affordable housing; reimagining local neighborhoods and reinvesting in small businesses; creating a new generation of transportation; and bridging the digital divide.

Sources of Resilience

Despite these many challenges, some California industries have been less affected by the coronavirus and are expected to gain strength in a post-COVID economy. Sectors likely to grow include online retail, app-based food delivery, digital entertainment, remote management, telemedicine, and remote learning. This reflects one of the pandemic's major effects: the rapid acceleration of pre-existing trends toward the digitalization of business. For example, Netflix added 16 million subscribers to their platform during the first quarter of 2020.[114] San Jose-based Zoom Video Communications has more than doubled in value to $250 per share since the shutdowns began, and California-headquartered Apple and Facebook have achieved all-time stock highs during the pandemic.[115]

Companies with flexible work models are reshaping their workspaces to reflect a greater long-term reliance on remote work. Despite initial expectations of severe productivity disruptions as employees worked from home, many companies have actually experienced an increase in worker productivity. The Bureau of Labor Statistics has reported a significant divide in labor productivity between different sectors, with productivity in business services 6.6 percent higher in Q2 2020 than in Q2 2019, contrasted to a 15.5 percent reduction in productivity in manufacturing over the same period.[116] The San Francisco/Silicon Valley Bay Area, with its heavy concentration of technology, digital, and professional services companies is at the center of this trend.

Businesses experiencing these productivity gains have with some success managed the shift to digital interactions with employees, and many have begun a long-term transition toward remote office spaces and work environments—with Facebook announcing it would begin hiring full-time, remote employees in May.[117] Companies like Coinbase, Nationwide Insurance, Shopify, Square, Twitter, and Upwork followed suit by shifting to indefinite hybrid or fully remote business models—four of these companies are based in the San Francisco Bay Area.[118] A summer 2020 poll by the Bay Area Council found that more than 80 percent of business respondents, including many traditional non-technology companies, expected that some portion of their workforce would remain permanently remote. Large companies such as Google and Salesforce have indicated that employees can work remotely until early or mid-2021, with a partial return to office work implemented in phases. For many this will result in a long-term pattern that is very different from the traditional model where all or most employees were expected to come to the office five days a week. This pattern opens the door to a further decentralization of employment both regionally and nationally, as employees who work remotely can work in other cities, states, or even countries. Shopify's CEO said in his announcement on the shift to remote work, "Office-centricity is over."[119]

One sector negatively affected by this trend is commercial office space, as tech campuses and downtown office towers refill partially or slowly. This in turn will impact center-city businesses such as restaurants and retail services that heavily depend on weekday office traffic.

On the other hand, the Bay Area's technology strength positions it particularly well to adapt to a post-pandemic economy. In particular, with the highest number of technology-based businesses among U.S. states and 1.8 million technology-related jobs, many technology companies can be expected to prosper in a virtual world.[120] Bay Area companies can be expected to be at the forefront of change as demand for innovative, technology-based solutions to the challenges raised by COVID-19 grows.

Ample venture capital remains available for investment. Total venture funding from January to July remained comparable to 2018 and 2019 peaks.[121] While young companies seeking seed and early-stage funding will be more challenged to find funding and are under serious pressure to economize and extend their investment dollars, venture firms are exhibiting two trends: Many are increasing their support for existing portfolio companies, and are increasing their investment in companies that are adapting to changing markets or addressing new ones. Sectors that are particularly benefitting include biotech, healthtech, electrical and autonomous vehicles, digital and financial technology, telemedicine and remote learning, digital entertainment, cloud computing, and digital management.

In the first two quarters of 2020 the number of venture deals grew.[122] And in the second quarter the number of mega-rounds (fundings of $100 million or more) reached a record high.[123] Nationally, while the number of up-rounds (where valuations increased) in Q2 was down from the same period in 2019, the Bay Area saw a disproportionate increase. Of the 283 U.S. up-rounds involving companies valued at $100 million or more, 224 involved companies that are Bay Area-based.

Sector analysis of early-stage investment in the first half of 2020 shows the leading recipients to be Internet service companies, receiving over $11 billion in seed capital during Q2, followed by healthcare and software start-ups.[124] Biotechnology, where the Bay Area hosts one of the largest clusters in the United States, has seen surging investment during the pandemic. A similar pattern is evident in the distribution of unicorns (companies valued at over $1 billion), which are heavily concentrated in the Bay Area. The most valuable of these include Stripe, SpaceX, Palantir, Airbnb, Door Dash and Instacart—all of which are in technology-based or COVID-resilient sectors.[125] Palantir had a highly successful IPO in September achieving a $21 billion valuation; and cloud data platform Snowflake had a successful $2.1 billion IPO. Airbnb is planning a major IPO for the Fall, and large biotech IPOs are pending.

Two of the ten highest-yield venture agreements in June were signed with Bay Area-headquartered technology companies: Robinhood and Varro—both online platforms for personal finance.[126] Four of the remaining ten investments were in digital technologies, two in biotech, and two in next-generation transportation. In total, 11 of the 30 highest-yield agreements tracked by Pitchbook between April and June were signed by businesses headquartered in California. Most of these were in technology and new-wave industries that could readily transition their business models toward a virtual marketplace. Laying the foundation for long-term growth, R&D investment remains strong in fields such as AI, the Internet of Things, robotics, and electrical vehicles.

Looking to a Post-COVID Future

As businesses attempt to salvage revenue and individuals struggle with unemployment and social stress, the primary question for many Californians is what a post-pandemic—or at least predominantly reopened—state will look like. With the state still in response mode and most counties still under stricter shutdowns than most of the country, state and local governments are continuing to focus primarily on crisis response rather than long-term recovery. Some initiatives, however, are underway.

In April, the state established the Governor's Task Force on Business & Jobs Recovery to enable a strategic focus on post-pandemic economic development. The task force includes former governors like Gray Davis and Arnold Schwarzenegger and CEOs of companies such as Apple, The Walt Disney Company, and Williams-Sonoma.[127] The Task Force has been criticized, however, for failing so far to develop the expected long-term roadmap for economic recovery.

On August 12, California's Governor detailed aspects of his economic recovery efforts and programs. Included were plans to provide hiring tax credits for small businesses, remove minimum franchise taxes for new businesses, extend tax deadlines, defer sales tax payments, and implemented a massive $1 billion earned-income-tax-credit program for Californians.[128] Business permitting is also targeted for improvement to help the construction industry, and a $400 million construction bond program has been proposed to help the unemployed find public work in New Deal-style development projects. The Governor was ambiguous, however, regarding the timeline for these programs or the degree of legislature support.

Local governments and businesses are collaborating to help disadvantaged communities face what may become a "new normal." Beginning in April, Bay Area-based Google and a variety of other Internet and technology providers began creating free Internet hotspots and providing laptops for students without private Wi-Fi access. In early August, AT&T continued this trend by announcing 11,000 hotspots for San José students as part of the municipal Digital Inclusion Expenditure Plan.[129]

The Governor has also signed broadband-related legislation designed to upgrade the state's electronic infrastructure—which is seen as increasingly important as more employees work from home, more commerce is digital, and more students learn remotely. This includes the creation of a State Broadband Action Plan by 2021 and a targeted minimum download speed of 100 MGB per second for state agencies.[130] Two additional broadband-related bills presented to the legislature, AB 570 and SB 1130, focused on improving broadband access and speed for Californians during the pandemic.[131] The details include increasing funding to the California Advanced Services Fund and streamlining the approval and implementation of broadband installment and expansion programs.

Comparing California's response to the pandemic in relation to the national U.S. response is difficult, since the federal government has largely left pandemic response to the individual states and has opted to provide public health recommendations rather than mandates in most circumstances. Of the largest states, New York has the highest coronavirus death rate at 0.39 percent followed by Florida at 0.049 percent and Texas at 0.041 percent. California has the lowest death rate of the four largest states at just 0.031 percent, or 31 deaths per 100,000 individuals. The state's low death rate—also below the national average of over 54 deaths per 100,000—can most likely be attributed to the early and aggressive shelter-in-place program implemented at the state level and California's cities and counties.

A low mortality rate, however, has come at the cost of high job loss. States with less-restrictive policies in response to the pandemic, including Florida and Texas, have seen lower unemployment rates than did California. However, California's unemployment rate—while high compared to many states in the South and Midwest and the sixth highest nationally—remains below rates in the Northeast.[132]

California appears set to emerge from the most-destructive impacts of the pandemic in 2021. Stringent safer-at-home mandates came at the cost of millions of jobs and a large decline in GDP—with sectors like tourism, arts and entertainment, hospitality, and transportation absorbing the deepest losses, and requiring the longest times to recover. While the Bay Area and California have not produced governmental plans or strategies to enable long-term growth and recovery—beyond improving broadband and a developing a focus on social equity as the state's economy comes back—their future is being shaped and led by the private sector, as seen in venture and other investment that is placing forward bets on strategic technologies that will reshape management,

production, employment, health, and education not just in Silicon Valley and the state but nationally and globally as well.

Chile

By: Natalia Gonzalez, Director of Juridical and Legal Affairs, Libertad y Desarrollo

Fiscal, Economic, and Employment Policies Adopted by the Chilean Government Due to the Pandemic: Orientations and Challenges

Introduction

As in most countries of the world, Chile was struck by the expansion of COVID-19. Along with the relevant sanitary measures taken (some of which are detailed ahead) a scheme of temporary mobile quarantines was centrally undertaken (by initially undetermined periods that depended on positivity levels and critical bed occupation) and applied to different boroughs and cities of Chile, with the consequential impact in economic activity. Measures taken, restricting a variety of rights and freedoms, were adopted based on scientific sanitary recommendations.

In Chile, as before said, the scheme of quarantines imposed on the different boroughs and cities was differential, so as to diminish the effect on labor markets and family incomes. Certain economic activities, such as mining activity, were never interrupted, along with all those necessary activities to supply the cities. The aim of the scheme was to save lives and employment. However, in some districts, imposed quarantines were extended during long periods of time (more than three months, continuously). The first quarantines were imposed on March 13 and 20, in the locations of Caleta Tortel and Rapa Nui, followed by quarantines imposed in different boroughs of the city of Santiago. A few days later, cities in other regions of Chile and other districts in Santiago were subject to the same mobility restrictions. Closure of a substantial part of the Gran Santiago area was imposed during May and endured until August. By September, however, still several districts of the Gran Santiago and other cities in Chile remained under confinement or had returned to the same.

The pandemic has substantially altered economic activity as well as labor markets. The substantial drop in the Chilean monthly index of economic activity and the destruction of over 1.8 million jobs (13 percent unemployment as of August 2020), are the consequences of the paralysis of economic activity. Public policy measures taken, especially the Employment Protection Law, have helped, as explained ahead, to contain the effects of the sanitary crisis on employment.

Chilean Government Main Policies and Actions Taken

Aiming to build a bridge between the situation provoked by the sanitary crisis and the one that will be lived after the pandemic, and in order for families to keep certain levels of income and avoid massive bankruptcies, the Chilean government, since March 2020, has submitted to Congress, approved, and implemented a series of legislative measures, along with other regulatory and administrative polices to aid, through direct transfers of resources and credit schemes, vulnerable families—that generally depend on informal jobs—and middle income families, as well as to restrain the effects of potential dismissals of formal workers from their jobs.

Chile is facing this sanitary crisis in a stressed fiscal scenario, mainly due to the increase in fiscal expenditure after the riots and internal violent incidents occurred as of October 2019 and so on,

which certainly had a negative economic impact which amounts to the one the country is facing due to the pandemic.

The governmental packaged announced involves fiscal resources for over $12 million (COVID Fund, available until June 2022 or until fully expended), representing 4.8 percent of the Chilean GDP this year, involving a fiscal deficit of 9.6 percent this year and leaving the fiscal debt in 34.8 percent this year and an expected 39.6 percent in 2021.

Latest Economic Activity Data, Employment Data, and GDP Projections

The graph below shows the monthly index of economic activity path, reflecting the effect of the pandemic on the activity in general and in the mining and non-mining sector of the economy. (See Figure 12.) The next graph shows the unemployment rate path through July 2020 (blue bars reflecting unemployment and red line reflecting employment). (See Figure 13.) Investment analysts expected economic growth to start recovering in several Latin American countries, including Argentina, Chile, Peru, and Uruguay during the third and fourth quarters of 2020. (See Figure 14.)

Figure 12: Monthly Indicators of Colombian Economic Activity[133]

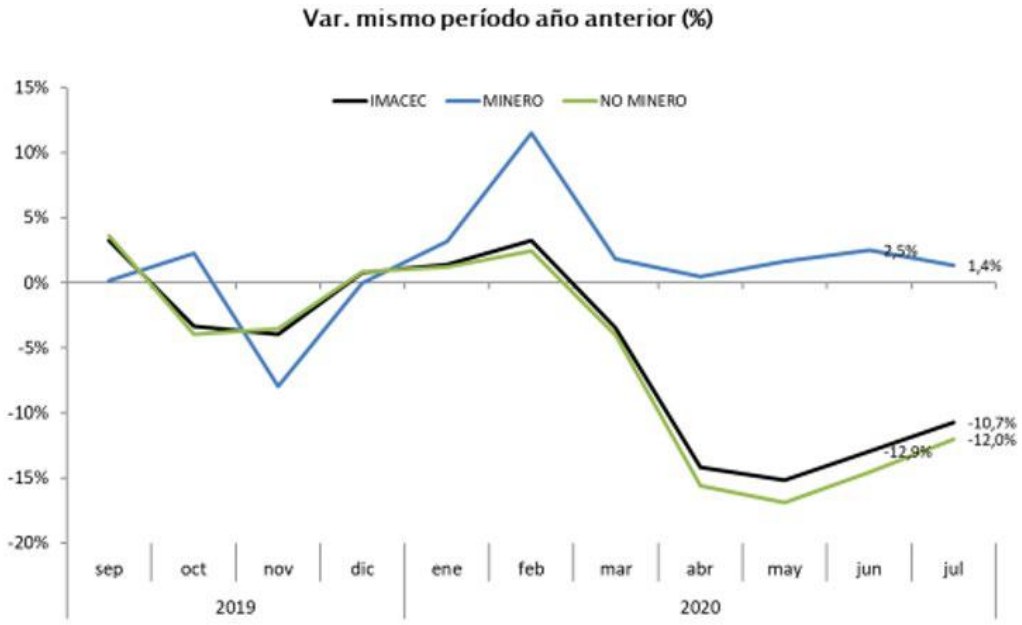


Figure 13: Chilean Unemployment Rates, 2014 to 2020[134]

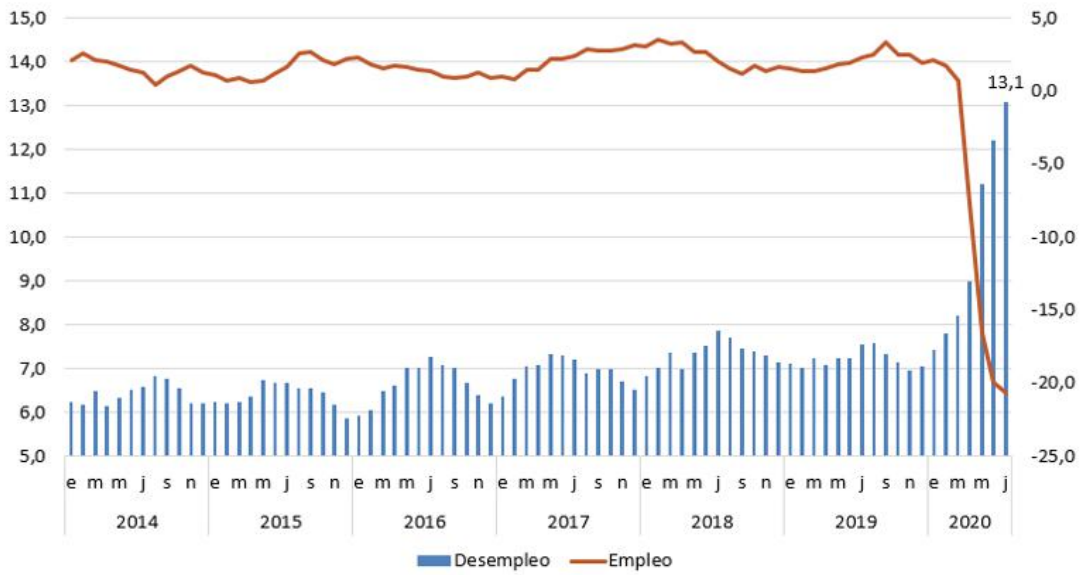


Figure 14: GDP Projections for Several Countries of the LATAM Region[135]

Evolución del PIB

	Var. % 12 meses		Var. % Trim/Trim Desestacionalizada				
	2019	2020	4T219	1T20	2T20	3T20	4T20
Chile	1,1	-6,8	-15,3	12,4	-43,3	18,0	18,0
Perú	2,2	-13,5	2,0	-11,9	-63,2	55,0	30,0
Argentina	-2,1	-13,4	-3,6	-18,0	-52,0	32,0	14,0
Uruguay	0,2	-3,6	-2,8	-6,4	-17,0	10,0	4,0

Summary of the Main Measures Taken and of the Policies Adopted by the Chilean Authority

The following summarizes the main measures taken by Chilean authorities to deal with the public health and economic challenges wrought by the coronavirus pandemic in the country.
(See Table 1).

Table 1: Public Health and Economic Policy Responses in Chile

Health Policies and Actions	▪ Creation of a Health Fund ▪ Implementation of the COVID-19 Integrated Health Network (public/private) and infrastructure that allows the government to coordinate and articulate resources of both the public and private health system. ▪ Increased infrastructure capacity of the public hospital network. ▪ Reconversion of regular bed capacity into critical bed capacity. ▪ Purchase of mechanical ventilators and reconversion of other sanitary equipment into such ventilators. ▪ Private sector has been an important player to support the Chilean government during the pandemic. Private health providers have experience and a well-reputed efficiency history, as well as capacity and infrastructure that was made available to the sanitary authorities. ▪ Traceability systems have also been implemented and increased tests capability.
Fiscal (state) resources to protect family income	Initial Policies Adopted ▪ One-time direct money transfer "**Bono-COVID 19**" to vulnerable families whose main income came from informal jobs ($170 million) ▪ **Creation of the Solidary Municipality Fund** ($100 million) to attend emergency crisis deriving from the drop in sales of the local micro-commerce. ▪ **Employment Protection Law**: Fiscal contribution to the existing Unemployment Insurance System to the Solidarity Fund which is financed only by the Chilean State. The Insurance System also contemplates an Individual Fund financed by employees in the formal labor market and employers to protect the income of those workers belonging to the formal labor market through the payment of a fraction of the salary of those employees suspended from their jobs or had their work day reduced under the Employment Protection Law, maintaining the labor contract and relation with the relevant employer (this reduces the expense on remunerations providing liquidity to the companies. As of August 2020, 722,600 people were beneficiaries of the Employment Protection Law, equivalent to 8.9 percent of the labor force. If added up with the unemployed, it would mean

	that unemployment would increase from the current 13 percent level to 21 percent. **Further Policies** ▪ Reduction in the commercial world flows and the deterioration of the finance conditions due to COVID-19 together with the incremental restrictions of mobilization, damaging employment and family income, especially those of informal workers, placed the government in the need to extend the financial aid initially provided in time and resources. ▪ **Emergency Family Income.** The government created an emergency family income program that was then amended, for vulnerable homes (income primarily came from informal labor). Beneficiaries: homes pertaining to the 80 percent of low-income families, payable in a determined period of months, extendable for another certain period, to help homes in the financing of their basic expenses. The income so supplied diminishes over time. ▪ **Direct money transfer from the state and fiscal loans** (according to the level of income, respectively) to independent workers that have experienced a diminishment of at least 30 percent of their average monthly income, considering the last 12 months prior to April 2020. ▪ **Further aids to middle-income families:** These include state loans with a 0 percent interest rate, further state money transfers, and rental subsidies, among others. ▪ **Protection for parents and other adults that take care of children in pre-school stage, that are formal dependent workers**. It consists of an extension of the maternal license for as long as the emergency crisis declared by the Chilean State endures, allowing them to benefit from the Employment Protection Law. ▪ **Temporary postponement of payments due by university students that had previously obtained a student loan in the banking sector, guaranteed by the State.**
Supporting entrepreneurships, SMEs, and larger companies	▪ Suspension of the monthly interim payments due on account of the Company Income Tax. ▪ Postponement of VAT payments. ▪ Anticipated income tax returns. ▪ Postponement of the Corporate Income Tax for SMEs.

	▪ Postponement of the real state tax for low income families. ▪ Temporary reduction (0 percent) of the stamp tax. ▪ Accelerated payments program by the state to its providers. ▪ Capitalization of the state-owned bank ($500 million) for loan purposes. ▪ Capitalization of the State Guarantee Fund for SMEs, applicable in the provision of loans by the financial and banking institutions, and exceptionally extending the benefit (partially) to big size companies (aiming to benefit 99.8 percent of the total companies in Chile that represent 84 percent of formal employment).
Economic Recovery Plan	▪ **Employment Subsidies** ($2 billion), including the expansion in range of current subsidies and the creation of new subsidies. ▪ **State/Public investment plan**, including physical, social, and digital infrastructure (2020–2022 period) $34 billion, of which $4.5 billion is additional investment with a capacity to generate 250,000 new jobs. ▪ **SME support through existing financing and subsidy programs**. ▪ **Temporary tax incentives for private investment** (private investment amounts to 80 percent of total investment), mainly focused on SMEs including temporary reduction of the Corporate Income tax, accelerated depreciation for companies (all size) until December 2021, and incorporating the depreciation of intangible assets. ▪ **Expediting 130 investment projects for $2.1 billion that are aimed to generate 120 million jobs**. ▪ **Strengthening and expediting the private concessions program**. ▪ **Simplifying permits and expediting terms to promote investment**. ▪ **Labor conversion and training programs through existing policies.** ▪ **Amendments to Chilean bankruptcy law**.

Colombia

By: Michael Sepulveda, Research Analyst, TicTac

Measures and Actions for Economic Recovery in Colombia in Times of COVID-19

The current pandemic situation caused by COVID-19 has required actions and policies from governments and local authorities aimed at halting the spread of the virus and reactivating the economy. For Colombia, these actions pose a scenario in which public policies need to be based on the principles of sustainability, economic competitiveness, social inclusion, and government efficiency. This document studies the different policies adopted by the Colombian government and local authorities to contain the spread of COVID-19 and, in parallel, the response they have had to face the economic and social shock it has produced. In this manner, a series of recommendations is specifically proposed to encourage consumption and investment, as well as concrete actions that accelerate the digital transformation of the country, with this being a driver for transformation of other sectors of the Colombian economy. The results show that national policies and local decisions have been trying to serve the most vulnerable in the population and give companies and households some peace of mind and confidence in financial matters. Suggested actions in this document are to obtain a rapid and sustainable recovery of the country's economy and to address the new normal.

1. Introduction

The pandemic generated by COVID-19 arrived in Colombia at a time when the country was working to achieve more significant economic growth in an environment of global and national uncertainty. Meanwhile, at an international level, the political tension resulting from the trade war between the United States of America and China increased the uncertainty of the markets, generating instability in the price of commodities, the country's primary source of income. Moreover, the Venezuelan migration, a product of the social and economic crisis that the neighboring country is experiencing, harms the already-deteriorated social indicators that Colombia confronts. On a national scale, the country is going through a social and economic crisis, unemployment, and tax reform. The implementation of the peace agreement led the country to an environment of polarization and discontent marked by strong protests and social mobilizations, which seem to have returned with the new normal.

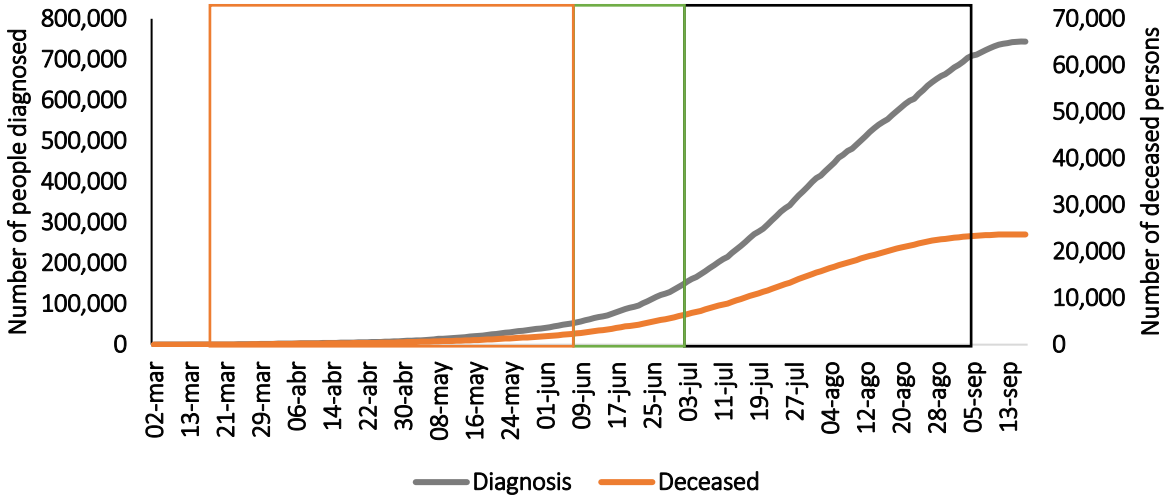
The Colombian authorities confirmed the first case of COVID-19 on March 6, 2020 (MinSalud, 2020), and since then the virus has spread throughout the national territory. From the date of the first diagnosis until June 30, 2020, the number of infected inhabitants in the country reached a figure of 97, 846 with 3, 334 deaths: with an incidence rate of 294 cases per 100,000 inhabitants. At the same time, the national mortality rate is 66.2 deaths per one million inhabitants (PAHO, 2020). Following June, the number of people diagnosed with COVID-19 in Colombia has grown exponentially. Right up until the second week of September, the country reported 743,945 infected inhabitants, which represented an increase of 660 percent compared to the last figure in June. Additionally, deaths throughout the 28 weeks of the pandemic totaled 23, 665, which represent an increase of 610 percent compared to the last figure in June.

During the second week of September, the virus in Colombia had reached 87.7 percent of the country's municipalities, with a national mortality rate of 3.18 percent, being higher than the

global rate, which is 3.15 percent, and lower than that of the Americas, which is 3.15 percent. Furthermore, the national incidence rate of the virus was 1,476 cases per 100,000 inhabitants, while the national mortality rate was 469.8 deaths per million inhabitants.

The number of infections and deaths in Colombia began to rise rapidly beginning in late June 2020. (See Figure 15.) The following results were found in the three quadrants with different characteristics: In the first quadrant that occupies the first months the slow rate of growth of infections and deaths can be seen. The second quadrant stands out for being shorter and for denoting the transition between the one in reduced growth to the exponential. The third quadrant is characterized by being the one with the most vertiginous growth followed by the flattening of the contagion curve. Until July, the number of infected inhabitants grew at an average monthly rate of 248 percent, while the number of deaths did also at an average rate of 200 percent. Meanwhile, the average monthly rate of recoveries was 250 percent. Over the next few months, the rate of infection and deaths decreased notably.

Figure 15: Growth in the Number of Infected and the Number of Deaths in Colombia (March 6 to September 17, 2020)[136]



As previously shown, the virus spread aggressively across the territory, forcing national authorities to decree a mandatory quarantine throughout the country. On March 24, 2020, 18 days after the arrival of the virus in the country, the quarantine was decreed with it being originally scheduled to be for 19 days (El Espectador, 2020). Within the framework of quarantine, aid would be provided to the most vulnerable of the population and support for some producers' specific incentives. According to the speed with which the virus spread, it was necessary to extend the quarantine for five months. During this period, the national government tried to alleviate the economic crisis with some initiatives that sought to encourage trade, while seeking to expand the number of medical units trained to care for the infected population.

The five-month quarantine in the country was characterized by uncertainty since the term of this gradually extended and the end date was not clear. Meanwhile, the government tried to stimulate the economy through initiatives that sought to promote trade and support some productive sectors. These factors led to the implementation of a lax quarantine, which ended up affecting the most vulnerable population upfront. As a result, the informal economy, on which 60 percent of the country's workers depend, stopped. This ended up worsening their living conditions (DW, 2020).

Finally, various cases of corruption, wherein public funds destined to support the most affected population by the pandemic were siphoned off to private coffers began to appear (Dinero, 2020; Semana, 2020; El Espectador, 2020).

This document seeks to contribute to the understanding of the impacts on public health and the economy caused by Colombia's different actions and policies adopted by authorities to contain the COVID-19 spread. The study also seeks to contribute with a series of recommendations for public policy and regulatory measures that address the various opportunities identified for economic recovery and reactivation.

The organizational structure of this paper contains five sections: The second section discusses measures against the spread of COVID-19 adopted by the Colombian government. The third section presents the impacts on public health and the economy of such measures. The fourth section gives a series of recommendations for public policy and regulatory actions to reactivate the economy with a focus of opportunity, given the current situation. Finally, the fifth section presents the conclusions of this paper.

2. Measures Against the Spread of COVID-19

The first version of the guidelines on the detection of COVID-19 cases that all health providers must follow were issued and approved by the Colombian Ministry of Health on January 31, 2020. Using this version of the guidelines, anyone who "fits" the symptoms of COVID must be tested by a health provider.

An ongoing, coordinated, public information campaign exists through traditional channels and social media since at least March 9, 2020, and onward. An overwhelming majority of the public information campaigns can be found on the website of the Ministry of Health. In compliance with the Colombian Health Ministry, individuals with specific symptoms are tested. Tests are to be carried out in private laboratories for those individuals who have paid private insurance want the results in the shortest period.

On June 9, 2020, the Ministry of Health announced the launch of the Program for Sustainable Testing, Tracing, and Isolation (PRASS), to monitor patients with COVID-19 and their potential contacts with other people and accelerate their isolation processes. The Council for Economic and Social Policy (CONPES) welcomed the PRASS, which carried out a favorable evaluation of the Duque administration's health, social, economic, and fiscal actions to mitigate the ravages of COVID-19.

3. Responses from the Government of Colombia to COVID-19

After the issuance of Decree 417, the government offered free reconnection of the aqueduct service for those families who had the service suspended. From April 7, 2020, the government started implementing transfer schemes through different national social protection programs, the government has delivered financial assistance to two million elderly individuals (with an amount of $240,000 Colombian pesos ($62)), they also provided financial assistance to 2 million families (with an amount of $330,000 Colombian pesos ($85)), and gave financial assistance to 1,200,000 families that were not registered in previous government programs (with an amount of 160,000 Colombian pesos ($42)). The Solidarity Income transfers replace less than 50 percent of the median salary. The Colombian government has been transparent in providing information regarding progress in the transfers of resources for families and has implemented additional reliefs for certain sectors.

The national government issued the Decree 639 of 2020 that creates the Formal Employment Support Program (PAEF) to protect formal employment, through a subsidy to pay the payrolls of companies whose incomes has been decreased. Through this program, the national government will subsidize the equivalent of 40 percent of a minimum wage for dependent workers of companies and non-profit entities who have seen their income decrease by at least 20 percent and request this contribution.

The debt and contract reliefs for households have been maintained and additional forms of relief have been announced. For example, the FNA (the national savings and social protection fund for public servants), relief has been granted (as of May 12, 2020) providing 52,743 mortgage loans, for a value of 2.3 trillion Colombian pesos ($594 million).

The Minister of Labor announced on May 29, 2020 that the government will extend the government subsidy for premium payments to workers earning between the minimum wage and 1 million pesos ($277), benefitting an additional 4.2 million workers. They also announced a $45 transfer for workers who lost their jobs during the pandemic, benefitting around 600,000 workers.

The Colombian government announced a new measure on June 4, 2020, for the support of the commerce, industrial, and tourism sectors. It will be in place until December 31, 2020, stating all touristic services and hotels will be exempt from paying the value-added tax (VAT); lodgings, theme, and recreation parks will be exempt from paying a surcharge on energy; the advance of income for travel agencies and air transport will be eliminated and the parafiscal contribution will be deferred in order to provide cash for this sector in the second semester; franchise restaurants, ice cream shops, bakeries, etc. will be exempt from paying VAT and consumption tax; and corporate tax advances are to be reduced by 25 percent for clothing, footwear, furniture, and events sectors.

The Colombian government announced that it will extend the financial aid until next December to three million households which are not beneficiaries of the existing social protection programs. Cash transfer programs will continue for the poorest and most vulnerable families: *Bogotá Solidaria en Casa* and the national government will ensure a basic income of 240,000 Colombian pesos ($62) to 700,000 families (some 2.5 million people) will be delivered. Of that total, 550,000 will receive bank or money orders, while the other 150,000 will receive basic income in markets. The national government announced the extension of a deferral program for the payment of public services for low- and middle-income households.

With the extension of the health emergency until November, measures to relieve payments and obligations remain in place, such as the freezing of rent and housing fees or the elimination of late-payment interest for independent employees.

3.1 Responses from the Central Bank

The Central Bank of Colombia has resorted to various tools to inject liquidity into the economy, thus helping companies, households, and the financial system to be affected as little as possible. The measures adopted are aimed at protecting the payment system, preserving the supply of credit, stabilizing essential markets under pressure, and stimulating economic activity (Banco de la República, 2020).

The Central Bank has lowered the intervention interest rate 250 basis points in the last six months (1.75 percent). These decisions alleviate the financial burden of old debtors (at a variable rate) and new debtors. Although it may not have a short-term impact on investment and consumption decisions, it allows anticipating reductions that would be necessary for the future when the

incentive of low-interest rates has restored to spending by companies and households (Banco de la República, 2020).

The International Monetary Fund (IMF) approved a new agreement for two years in favor of Colombia within the framework of the Flexible Credit Line (LCF) for an amount of Special Drawing Rights (SDR) 12.267 billion Colombian pesos (approximately $17.2 billion) (IMF, 2020).

4. Main Impacts

To date, 8.2 billion Colombian pesos ($2.1 million) was earmarked for health care and 5.2 billion Colombia pesos ($1.3 million) were allocated in various payroll aids such as the Formal Employment Support Program (PAEF), a premium subsidy and support for workers with suspended contracts. Also, 4.2 billion Colombian pesos ($1.9 million) were invested in humanitarian assistance and 7.7 billion Colombian pesos ($1.9 million) in extraordinary spending to face the contingency generated by the pandemic. Additionally, the Emergency Mitigation Fund (FOME) has committed resources for 6.3 trillion Colombian pesos ($1.63 billion), which does not correspond to fiscal spending transactions, but it is used to attend to health and economic emergencies.

The purchase of private securities mainly attended to the large withdrawals of the so-called collective investment funds. These withdrawals were forcing the funds to sell the securities (mainly CDTs) and produced sharp falls in the prices of the latter, with the consequent effect of the substantial devaluation of the funds, which could induce more withdrawals, sale of securities, etc. The Bank's intervention injected liquid resources to guarantee adequate liquidity in this market, and thus contribute to the stability of the financial system.

The implications of these measures enable a more than sufficient liquidity of the financial system.

5. Economic Reactivation Measures

As TicTac (2020) has written, a whole series of recommendations of public policies thinking about the reactivation issue has been elaborated. Next, the most relevant will be exposed:

5.1 Actions for Stimulating Investment and Consumption

- Increase the activity of the Study Commission of the Tributary Territorial System led by the deputy technical minister of Ministry of Finance and Public Credit (MinHacienda).
- Review and regulation of decree 535 Law of 2020 to accelerate and standardize the process of recoverable balances refunded by the National Directorate of Taxes and Customs (DIAN).
- Establish a fixed percentage by the Ministry of Information and Communications Technology (MinTIC) with the income resulting from the periodic consideration for the delivery of communication services for investment in strategic sectors, determined by the national government and considering the recommendations of the OECD.
- Set up a subsidy scheme by MinTIC and MinHacienda for long- and medium-term pay-tv and Internet services for people with low to medium incomes.
- Set up an action plan by MinTIC, MinHacienda, Ministry of the Interior (MinInterior), and the representatives of the territorial entities of the country for eliminating charges associated with the infrastructure deployment, public goods, or properties.
- Issue the guidelines for the investment in technology adaptation and modernization of the public entities, from the presidential advisory for the digital transformation, all within the

framework of redesigning of the public budgets to meet the pandemic situation and their economic impact.

- Issue a Republic Law that sets a 1.5 percent of the consideration for each intermediate service through mobility platforms, destined specifically for the national economic reactivation, modernization of transport, or smart cities development.
- Make modifications to the tax statute including differential taxation (VAT) for the acquisition of computer equipment designated for low to middle-income households.
- Review by the MinTIC and MinHacienda the tax burden that applies to the ICT sector to reduce and simplify.
- Establishment by Ministry of Labor (MinTrabajo), Ministry of Education (MEN), MinTIC, MinHacienda, and the advisor for the digital transformation of an incentive program and a tax lease for access to computing equipment and Internet connectivity for education and work. This program would include better student bonds for the acquisition of devices and a plan to provide direct support to those workers in strategic sectors.

5.2 Actions for Boosting and Adjusting the Productive Sectors to the Digital New Normality

- Set up a National Plan of Technologies of low contact and for the support of the distancing measurements directed by National Planning Department (DNP), MinTIC, Ministry of Commerce, Industry and Tourism (MinCIT), and the presidential advisor for the digital transformation.
- Deepen the implementation of Digital Transformation on the CONPES 3975, materialize incentives to the virtualization and adoption of technologies such as cloud, artificial intelligence, and the Internet of Things for all the productive sectors.
- Check the municipal and departmental budgets allocating specific percentages for inversion in transition digital projects.
- Review of the distribution resources allocating specific percentages for inversion in transition digital projects.
- Make an investment national plan for the Internet of Things that defines the security and interoperability standards by DNP, the MinTIC, and the presidential adviser for the digital transformation.

5.3 Public Policy Actions and Regulation for Reactivating ICT Sector

- Establish by legislation, with the support of MinTIC, the Presidential advisor for the digital transformation, and the Communications Regulation Commission (CRC) of a national single window for the communications infrastructure permissions, including requirements, procedures, and homogeneous process.
- Coordinate through the CRC, the local authorities' requirements for the infrastructure deployment, even giving legal competition to be responsible for issuing permits and licenses.
- The regulatory scheme should be explored further by the CRC for simplification of burdens and obligations, also building a regulatory sandbox scheme for the activities.

- Setting up a cross-sectional committee directed by MinTIC and the CRC to reformulate the requirements for infrastructure display of ICT megaprojects (such as the development of backbones, modernization of networks and massification of 5G).
- Create a national strategy to fight against piracy, working together with the MinTIC, CRC, and the presidential advisor of digital transformation.

5.4 Actions to Promote Work and Virtual Education

- Issue flexible regulations by the MinTrabajo regarding the different forms of remote work that are gradually identified as relevant.
- Modify Law 1221 of 2008 to make the current regulations on teleworking more flexible.
- Creation of a national plan, by MinTrabajo and MinTIC, for the sustainable adoption of virtual work that includes:
    - Strategies for the acquisition of minimum technologies for virtual work by employers and the public sector.
    - Alternative mechanisms for the acquisition of technologies for virtual work (such as the substitution of a transport subsidy for a connectivity subsidy or computer equipment).
    - Program to promote virtual work in SMEs that provides them with training benefits and access to technology.
    - Establish a national goal for the adoption of virtual work based on an international benchmark.
- Implement, within the framework of CONPES 3995 on Security and Digital Confidence, Cybersecurity, and Information Security, policies in all companies and particularly MSMEs, with the coordination of the Presidential Council for Digital Transformation.
- Generate through the Ministry of Education and the education secretariats of the territorial entities a support plan for the activities of the teachers for the planning and execution of activities through technologies.

5.5 Actions to Adapt the Public Administration to the New Digital Normal

- Accelerate the measures contained in the DIAN Modernization CONPES to improve the national tax and customs system.
- Generate a plan by MinSalud and MinTIC for the adoption and massification of health care through virtual means. This plan should be financially sustainable to massify it in the medium term.
- Establish a plan by the control entities (Prosecutor's Office, Comptroller's Office, and Prosecutor's Office) for the implementation of technologies for monitoring and inspection of the use of public funds.
- Continue with the process of eliminating face-to-face procedures directed by the Presidency of the Republic and MinCIT to advance toward procedures by electronic means.
- Establish a prioritization in the national budget for the acquisition of technological tools for public entities by the MinHacienda.

5.6 Actions to Promote E-commerce and the Cultural and Creative Industries

- Promote, through MinCIT and MinTIC, a plan for the acquisition of goods and services by electronic means, while promoting home deliveries. Likewise, generate plans to accelerate the digitization of MSMEs and their participation in e-commerce. This plan should also promote measures for innovation in low-touch sales.
- Establish by the DNP within the CONPES, a public policy to maintain the advancement and sustainable growth of e-commerce during the current health emergency with an articulation of the policy at a national level.
- Within the framework of the new CONPES of public policy for e-commerce, establish measures aimed at improving the logistics and distribution capacity of products in Colombia and the world that:
    - Coordinates between the MinTIC, the CRC, and 4-72 programs that integrate solutions with private mail services, which reduce shipping costs within the country.
    - Modernizes and optimizes in the short term by DIAN the import and export processes.
    - Facilitates Colombian companies' ability to have accounts denominated in foreign currency, simplifying cross-border e-commerce.
- Within the CONPES framework of public policy for e-commerce advanced by MinTIC, MinHacienda, MinCIT, and SFC, promote electronic payment mechanisms including:
    - Contactless technology;
    - Promotion of and regulatory frameworks for payment methods like electronic wallets; and
    - Elimination of taxes on digital transactions (VAT, ICA, ReteFuente and GMF).
- Establish and promote from MinCultura, MinTIC, and CRC for a flexible regulatory framework following the new technological needs and that doesn't discourage the quality of Colombian content in different formats, to reactivate the cultural and creative industries, strengthening support for national production content, such as films, movies, plays, dance and theatre.

6. Conclusion

Considering that the COVID-19 pandemic represents a change never seen before, which implies challenges to adjust to the new needs that it imposes. Measures must be taken to support the reactivation of productive sectors, enable work and virtual education, stimulate consumption and investment, promote electronic commerce, and digitize public administration.

Besides, security measures should be enacted to promote the digital transformation of the productive and public sectors and the construction of an institutional framework that favors the continuous adoption of technologies in different strategic sectors to facilitate the reactivation of the post-pandemic economy by encouraging consumption and investment. The role government and authorities need to carry out has been highlighted; however, there are still many gaps to close, which represent opportunities and challenges.

The concrete actions proposed are developed in this document to obtain a rapid and sustainable recovery of the country's economy and to attend to the new normal. It is of great importance that the present ones are implemented in both the short- and long-term so that they serve as an economic stimulus and that they emerge as a channel to allow digital transformation.

References (Colombia)

Banco de la República. (2020). Obtenido de https://www.banrep.gov.co/es/se-ha-beneficiado-economia-colombiana-con-las-medidas-tomadas-el-banco-republica; Obtenido de https://www.banrep.gov.co/es/medidas-banrep-covid-19-0

DINERO. (2020). La corrupción tras los recursos para la pandemia. *DINERO*. Obtenido de https://www.dinero.com/edicion-impresa/editorial/articulo/la-corrupcion-tras-los-recursos-para-atender-la-pandemia/290434

DW. (2020). Coronavirus en Colombia: la cuarentena está causando hambre y protestas. Obtenido de https://www.dw.com/es/coronavirus-en-colombia-la-cuarentena-est%C3%A1-causando-hambre-y-protestas/a-53233269

El Espectador. (2020). Corrupción, una pandemia tan peligrosa como el coronavirus. *El Espectador*. Obtenido de https://www.elespectador.com/noticias/nacional/corrupcion-una-pandemia-tan-peligrosa-como-el-coronavirus-articulo-916480/

El Espectador. (20 de Marzo de 2020). Cuarentena total en Colombia por coronavirus, declara el presidente Duque. *El Espectador*. Obtenido de https://www.elespectador.com/coronavirus/cuarentena-total-en-colombia-por-coronavirus-declara-el-presidente-duque-articulo-910489/

IMF. (2020). *IMF Executive Board Approves Augmentation of Colombia's Flexible Credit Line.* Obtenido de https://www.imf.org/en/News/Articles/2020/09/25/pr20300-colombia-imf-executive-board-approves-augmentation-of-the-flexible-credit-line

INS. (2020). *Instituto Nacional de Salud.* Obtenido de Instituto Nacional de Salud: https://www.google.com/search?q=instituto+nacional+de+salud&rlz=1C1CHBF_esCO877CO877&oq=instituto+nacional+de+salud&aqs=chrome..69i57j0l6j69i61.5984j0j7&sourceid=chrome&ie=UTF-8

Minsalud. (2020). *Colombia confirma su primer caso de COVID-19.* Bogotá. Obtenido de https://www.minsalud.gov.co/Paginas/Colombia-confirma-su-primer-caso-de-COVID-19.aspx#:~:text=Bogot%C3%A1%2C%206%20de%20marzo%20de,una%20paciente%20de%2019%20a%C3%B1os.

OPS. (2020). *Reporte de Situacion COVID-19 Colombia No. 143 - 17 de septiembrede 2020.* Bogotá: Organización Panamericana de la Salud (OPS). Obtenido de https://www.paho.org/es/documentos/reporte-situacion-covid-19-colombia-no-143-17-septiembrede-2020

OPS. (2020). *Reporte de Situacion COVID-19 Colombia No. 92-30 de junio de 2020.* Organización Panamericana de la Salud. Obtenido de Organización Panamericana de la Salud: https://www.paho.org/es/documentos/reporte-situacion-covid-19-colombia-no-92-30-junio-2020

SEMANA. (2020). La pandemia disparó el virus de la corrupción en los contratos. *SEMANA*. Obtenido de https://www.semana.com/nacion/articulo/coronavuris-en-colombia-crece-la-corrupcion-en-contratos-en-cuarentena/673562/

TicTac. (2020). *Medidas de Reactivación Económica en el contexto de la pandemia de COVID-19.*

European Union

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The EU Response to the Coronavirus Pandemic

Introduction

The COVID-19 pandemic has posed a challenge to the European Union in different fields, from health to economics to security to sustainable development. The rising case numbers today aren't quite comparable to the peak in April because countries are now testing far more people on a daily basis. As before, however, each country has its own strategy for controlling the pandemic. Meanwhile, different economic instruments have been deployed to support member states in facing the economic crisis generated by the pandemic. In the following paragraphs, the EU health and economic response to the COVID-19 pandemic is synthesized, closing with future perspectives.

1. COVID-19 in Europe: Situation Update

The COVID-19 pandemic continues to pose a major public health threat to European Union/European Economic Ara (EEA) countries and the United Kingdom (UK).[137] As cases increased, peaking in early April 2020 in the EU/EEA, many countries implemented a range of response measures which led to a reduction in incidence. As cases increased, peaking in early April 2020 in the EU/EEA, many countries implemented a range of response measures which led to a reduction in incidences. As countries regained control of the virus transmission and the burden on health care was alleviated, many measures were relaxed or removed to allow for a more viable way of life. However, subsequently, a recent increase in COVID-19 cases has been reported in many countries. (See Figure 16.) The "good news" is that, overall, COVID-19-related death incidences are still following a stable/decreasing path, though with differences amongst countries. While many countries are now actually testing mild and asymptomatic cases, which has resulted in increased case reports, a true resurgence in cases has emerged in several countries as a result of physical distancing measures being relaxed. According to the latest updated data as of September 14, 2020, 2,675,637 cases have been reported in the EU/EEA and the United Kingdom, and the three main stricken countries are Spain, France, and the United Kingdom with more than 300,000 cases since the beginning of the pandemic.

Figure 16: 14-day Cases and Deaths Notification Rate in the EU/EEA Area and the United Kingdom[138]

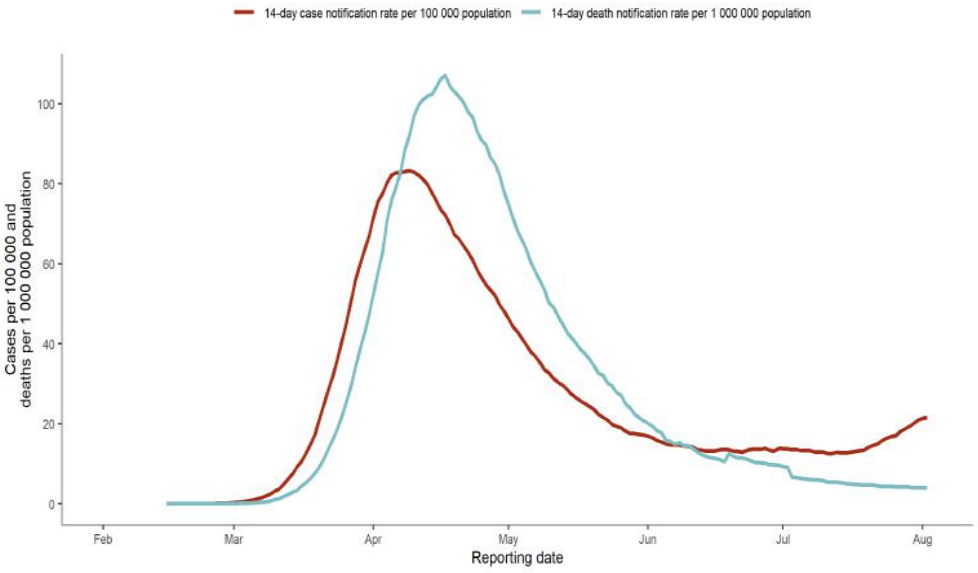


Figure 17 shows current differences in COVID-19 cumulative case numbers for the EU 27 countries (United Kingdom not included) while Figure 18 shows the 14-day cumulative number of COVID-19 cases per 100,000 inhabitants. It is clear that in the last two weeks the growing trend in COVID-19 case incidences observed during summer has been confirmed in a number of EU countries, mainly in Spain (270 cases per 100,000 inhabitants)band in France (153 cases per 100,000 inhabitants). The latest risk assessment of COVID-19 published by the European Center for Disease Prevention (ECDC), on August 10, 2020, compares weeks 29/30 with weeks 30/31 2020, and reveals an increasing trend in the 14-day incidence of reported COVID-19 cases/100,000 population across and within countries.[139] All countries reporting an increased 14-day case notification rate also had increased testing rates per 100,000 of population. Generally speaking, the age distribution was different when comparing the periods of January through May and June through July. Between January and May 2020, 40 percent of cases were aged 60 years or above and the largest proportion of cases were reported among 50–59 year-olds. In contrast, in June and July, persons aged 60 years or above accounted for 17.3 percent of cases, and the largest proportion of cases were reported among 20–29 year-olds.

Figure 17: Sum of COVID-19 Cases in EU 27 Countries Since the Pandemic Beginning (as of September 14, 2020)

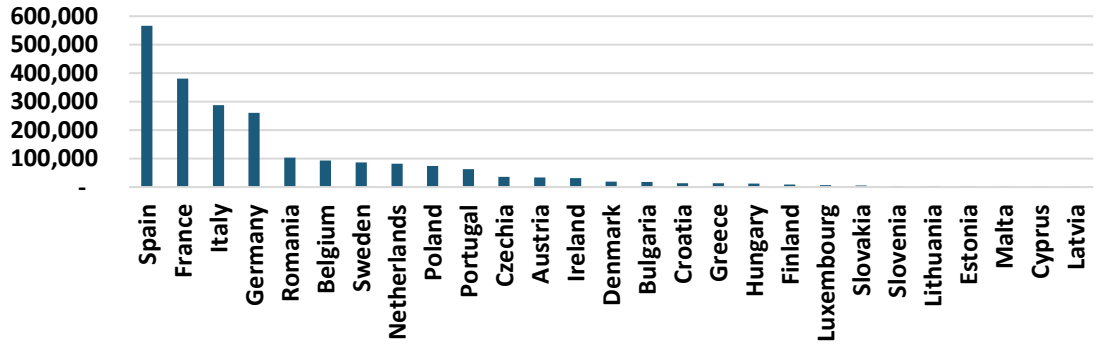
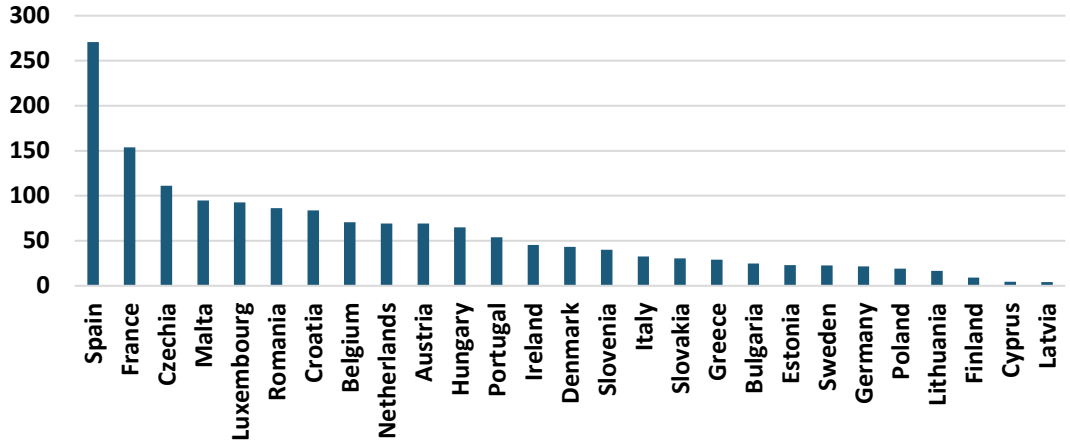


Figure 18: Last 14-day Cumulative Number of COVID-19 Cases Per 100, 000 (as of September 14, 2020)



Most European countries have introduced multiple response measures, ranging from advice regarding hand and respiratory hygiene to limiting the size of non-essential groups to <50 people, stay-at-home recommendations for risk groups, closures of public spaces, and the mandatory and voluntary use of masks in the community, as well as border closures and controls. Between June 1 and July 1, less than half of European countries (15 out of 31 EU/EEA and UK countries) reduced the number of measures in place, while 2 out of 31 countries introduced additional measures to help control the spread of COVID-19. Contact tracing continues to be a key public health activity for the containment of COVID-19 clusters and outbreaks and it is ongoing across Europe, although implementation has varied over time, and between regions within countries.

2. The EU Role in the Response to the Coronavirus Crisis

When the initial spread of the novel coronavirus rapidly intensified, with the World Health Organization designating the virus as a pandemic just a few months after the initial outbreak, the

EU struggled to play a coordinating role. It complemented national policies to help countries in facing common challenges, such as a lack of sufficient health care organization and provision, so that each member state was better prepared for the health care challenges posed by the virus. Indeed, while most federal states have an authority or an agency with such a remit, and responsibilities on global health and epidemic intelligence, the equivalent does not exist for the EU. In the latter case, responsibilities are decentralized to member states, which only began sharing information after the European Centre for Disease Prevention and Control was established in 2005. It is an EU agency aimed at strengthening Europe's defenses against infectious diseases, and it was mainly created in response to the SARS outbreak in order to coordinate a European response to future outbreaks.[140] However, it plays a limited role and does not engage in public health decision-making. The European health policy relies on three EU pillars: the first is Article 168 of the Treaty (TFUE) giving the EU a role in health security, including two agencies—the ECDC and the he European Monitoring Centre for Drugs ("OEDT")—which are involved in publishing reliable data and avoiding medicine starvation; the second is the European Single Market which includes rules to commercialize drugs and medical devices and allow for health professional mobility; the third regards fiscal governance. Article 168 states that the Union shall complement national policies, for instance, supporting the "cooperation between the member states" or adopting recommendations, while the Union shall respect member states' health policy and organization.[141]

2.1 The EU Public Health Institutional Response

The EU's institutional response has been mainly (though not exclusively) led by the European Commission, and meetings of European Council members. The European Parliament and European Central Bank have also played important roles.
The EU public health response mainly involves:

- Direct financial support for procurement programs to support health care systems;
- Support for research into treatments and vaccines;
- Medical guidance for member states;
- Coordinating the supply and manufacturing of Personal Protective Equipment (PPE).

The European Commission is coordinating a common European response to the coronavirus outbreak and taking action to reinforce the EU public health sectors and mitigate the socio-economic impact across the European Union. (See Table 2.) The aim is to help member states coordinate their national responses and to provide objective information about the spread of the virus and effective efforts to contain it.

Table 2: Chronology and Trends of the Initial EU Response to the Crisis

January 9	Directorate-General for Health and Safety (DG SANTE) opened an alert notification on the Early Warning and Response System (EWRS)
January 17	First novel coronavirus meeting for the Health Security Committee
January 28	Activation of the EU civil protection mechanism for the repatriation of EU citizens
January 31	First funds for research on the new coronavirus
February 1	EU member states mobilized and delivered a total of 12 tonnes of protective equipment to China
February 1-2	447 European citizens brought home from China, co-financed by the EU Civil Protection Mechanism
February 23	The Commission co-financed the delivery of more than 25 tonnes of personal protective equipment to China in addition to over 30 tonnes of protective equipment mobilized by EU member states and already delivered in February 2020
February 28	First procurement for medical equipment jointly with member states

The crisis has been coordinated at several levels, through videoconferences of the European Council, through regular discussions with national health ministers, to frequent meetings of the Health Security Committee. Notifications regarding serious cross-border health threats are made through the Early Warning and Response System for communicable diseases in the European Union. This system allows EU member states to send alerts about events with potential impacts on the EU, to share information, and to coordinate their responses. It was created by the European Commission to "ensure a rapid and effective response by the EU to events (including emergencies) related to communicable diseases." The first alert notification for COVID-19 was opened on the system on January 9. Meanwhile, the European Centre for Disease Prevention and Control has played a key role in assessing the threat from a scientific viewpoint. The ECDC produces rapid risk assessments, provides frequent epidemiological updates, and offers technical support by issuing guidance on how to best face the outbreak. This guidance includes, but is not limited to, outbreak surveillance, preparedness and response planning, and laboratory support.

The principal health policy action taken by the Commission was on March 17, after Italy had already proceeded with the introduction of its national lockdown in response to the rapid increase in COVID-19 cases. On that day, the European Commission set up an advisory panel on the coronavirus made up of seven expert epidemiologists and virologists from several member states to formulate science-based EU response guidelines and to coordinate risk-management measures. The panel, which was created following a mandate by the EU member states, is chaired by the Commission President, Ursula von der Leyen, and the Commissioner for Health and Food Safety, Stella Kyriakides. Based on the scientific advice of the European Centre for Disease Prevention and Control, and the COVID-19 advisory panel, the European Commission published its first recommendations for community measures and testing strategies on March 18, and on Health Systems Resilience on 30 March.[142] Meanwhile, the Commission also decided to set up a strategic RescEU stockpile of medical equipment to help EU countries in the context of the COVID-19 pandemic. The RescEU is part of the European Civil Protection Mechanism which strengthens cooperation between participating States in the field of civil protection in order to improve prevention, preparedness, and response to disasters. The stockpile includes intensive-care medical equipment such as ventilators; personal protective equipment such as reusable masks; vaccines; therapeutics; and laboratory supplies. The Commission financed 90 percent of the stockpile, while the Emergency Response Coordination Centre managed the distribution of the equipment to ensure

it goes where it is needed most. The initial EU budget of the stockpile was €50 million ($58.6 billion). Moreover, the European Committee for Standardization and the European Committee for Electrotechnical Standardization have established a number of European standards for certain medical devices and personal protective equipment. This is to help both EU and third-country companies to swiftly start production and place products on the internal market more easily while ensuring a high degree of safety.

At the end of March, the pandemic was putting health care systems across Europe under unprecedented and increasing pressure, so the Commission issued (on April 3, 2020) practical guidance to member states in order to facilitate cross-border cooperation in transferring coronavirus patients for treatment in member states where hospital beds were available, as well as medical expert teams. The Commission has also extended the Solidarity Fund to cover public health emergencies concerning cross-border cooperation.[143] Thereafter, on April 14, the Council quickly approved the European Commission's proposal to activate the EU's Emergency Support Instrument to directly support the member states' health care systems in their fight against the pandemic. The European Commission immediately provided €2.7 billion ($3.16 billion), allocated firstly to the nations which needed it most urgently and had limited health infrastructure at the ready to handle the crisis. In implementing the instrument, the Commission works in close dialogue with member states' national authorities and the European Parliament, as well as other stakeholders. During April some EU countries were already studying a strategy to exit from national lockdowns, defining tracing and testing strategies. Consequently, the Commission published guidance on developing new apps that support the fight against the coronavirus regarding data protection. It plans to offer the framework guaranteeing citizens appropriate personal data protection and limiting intrusiveness while using such apps. This guidance is to be accompanied by an EU toolbox on contact tracing apps.

Concerning COVID-19 treatment and vaccines, the European Federation of Pharmaceutical Industries and Associations (EFPIA), in partnership with the European Commission, is strongly committed to the Innovative Medicines Initiative (IMI).[144] Currently, €117 million ($130 million) have been raised (€72 million ($84 million) from the HORIZON 2020 Programme and €45 million ($53 million) from partner pharmaceutical companies) to finance a large number of projects focused on the development of therapies and diagnostics for SARS-CoV-2. The selected projects are part of the common European response to the pandemic coordinated by the Commission since the beginning of the crisis. Following, on May 4, the European Union, together with various partners around the world, launched the fundraising initiative "Coronavirus Global Response" to support "Access to COVID-19 Tools Accelerator" (ACT-Accelerator), the World Health Organization program established to find the resources needed to reduce the time and cost of vaccines and testing. Since then, about €16 billion ($18.75 billion) have been raised (€1.4 billion ($1.64 billion) directly committed by the EC) from donors around the world to develop vaccines, new therapies, and diagnostic tools to prevent the spread of the virus.[145] At the same time, the Commission has mobilized €546.5 million ($640 million) since January 2020 to develop the relevant vaccines, new treatments, diagnostic tests and medical systems. These include:

- €48.2 million ($56.5 million) for 18 new research projects involving 151 teams of researchers from all over European and other nations;
- €100 million ($117 million) as a contribution to CEPI (Coalition for Epidemic Preparedness Innovations);
- €25.25 million ($29.6 million) for the Europe-Developing Countries Clinical Trials Partnership;
- €72 million ($85 million) (compared to the €45 million ($53 million) initially planned) from the HORIZON 2020 program for the Innovative Medicines Initiative;

- €6 million ($7 million) from the Health Knowledge and Innovation Community of the European Institute of Innovation and Technology;
- €156.6 million ($183 million) for innovative solutions to face the coronavirus emergency, with a €150 million ($176 million) additional contribution entirely dedicated to fighting the pandemic;
- €129.45 million ($152 million) to strengthen production and deployment capacity and improve the understanding of the pandemic.

In addition, the Commission offered CureVac, a highly innovative European vaccine development company, financial support through a €75 million ($88 million) loan guarantee from the European Investment Bank (EIB). The EIB also signed a €100 million ($116 million) financing agreement with the immunotherapy company BioNTech SE for the development of a vaccine program. The EIB financing is supported by both the HORIZON 2020 program and the Investment Plan for Europe. On May 28, 2020, the Commission announced the next steps of the "Coronavirus Global Response" initiative in favor of universal access to affordable treatment and vaccines. Together with the international organization Global Citizen, the launch of the awareness-raising campaign "Global Goal: Unite for Our Future" was planned, in order to mobilize additional funding to develop and distribute vaccines, tests, and treatments against the virus, ending on June 27, 2020 at the World Donor Summit. EFPIA also supports the European Commission together with Vaccines Europe, to ensure that vaccines developed against COVID-19 will be accessible to citizens throughout Europe, as quickly as possible, as set out in the EU Vaccines Strategy COVID-19, published on June 17, 2020.[146]

The strategy—which is part of the set of initiatives developed by Europe to address the health emergency and provide concrete responses to the needs of the population—aims to achieve three main objectives:

1. Ensure the quality, safety, and efficacy of vaccines, supporting research at European level in compliance with the regulatory framework;
2. Ensure timely access to vaccines to all member states and their citizens, while continuing efforts at the level of international cooperation and solidarity;
3. Ensuring fair access within the single market, especially with regard to prices.
   At the same time, the EU realized that old approaches to health and pharmaceutical policies have not been effective and, thus, launched a public consultation to evaluate a strategy to ensure affordability, sustainability, and security of supply for innovative drugs and beyond. The pandemic has shown that the EU needs a crisis-resilient system and the means to produce medicines within the EU to ensure timely access to essential medicines for citizens and hospitals under all circumstances. The initiative was launched on June 2, 2020 and stakeholders could until July 7 send feedback. Following this first phase, there will be the official publication of the various provisions, also on the basis of the information received from the public consultation opened from June 16 to September 15, 2020. The entire package should be adopted by the end of the year.

3. Health Scenarios

Since the beginning, European countries have adopted similar responses to the pandemic. The way each country has responded to the emergency not only reflects the objective needs of that country (i.e., number of fatalities, share of older people, or share of people infected, etc.), but also the differences in its national system and, almost without exception, the country's self-interest. A key political lesson of this crisis is that further collaboration is needed in Europe to face health challenges such as the COVID-19 pandemic, and the European Union seems to have learnt those

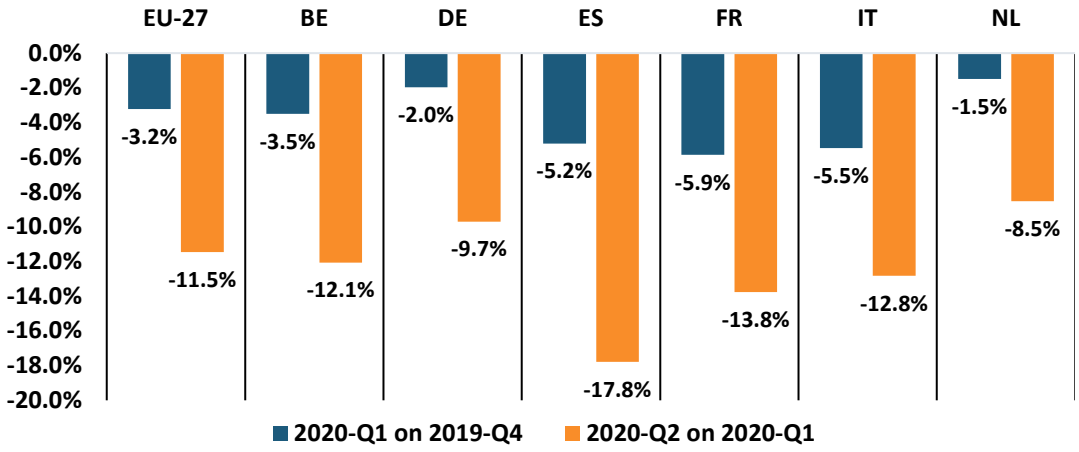
lesson. One way to overcome problems of collective action would be to create a European public health authority, with powers beyond the limited coordination activities carried out by the European Centre for Disease Prevention and Control. Indeed, the management of pandemics does not respect borders and requires collective actions to face the challenges.

The European Union, not being a "federal" entity, needs to consider setting up an institutional body to enforce cross-border cooperation to this end. The President of the European Commission, Ursula von der Leyen, in her first speech on the State of the Union, at the Eurocamera, in Brussels (September 16) stated that, with the Italian Presidency of the G20, the Commission will organize a Global Health Summit in Italy to show that Europe is there to protect its citizens. The aim is to build a Health Union, said von der Leyen, as the pandemic is not over and recovery is still in its early stages. For this reason, the EU must act with responsibility and unity. Von der Leyen announced that the Commission will create a new European Agency following on from an idea emerging from the Macron-Merkel summit held on May 18, 2020, where it was clearly stated that Europe should regain some sovereignty. It was then taken up in the conclusions of the European Council meetings held from July 17 to 21. The Agency would follow, with the appropriate differences, the U.S. Biomedical Advanced Research and Development Agency (BARDA) model. The European BARDA would be an agency able to support the preparation and response to trans-national health emergencies, both of natural and artificial origins and should be part of the European health self-sufficiency program, especially in the field of pharmaceutical sector dependence on global supply chains. The establishment of a European biomedical advanced research agency would not only allow for overcoming the fragmentation of expertise currently scattered across the various European bodies and organizations, but would also play the role of coordinating the research of diagnostic and therapeutic solutions so as to be prepared for the management of epidemic and pandemic emergencies, unfortunately destined to reoccur over time. In synthesis, the creation of such an agency would also involve the strengthening of the role of the ECDC, whose current mandate is to work with national and EU-level health authorities to facilitate cooperation and provide the evidence base needed for effective action.

4. The Economic Consequences of the Pandemic in the European Union

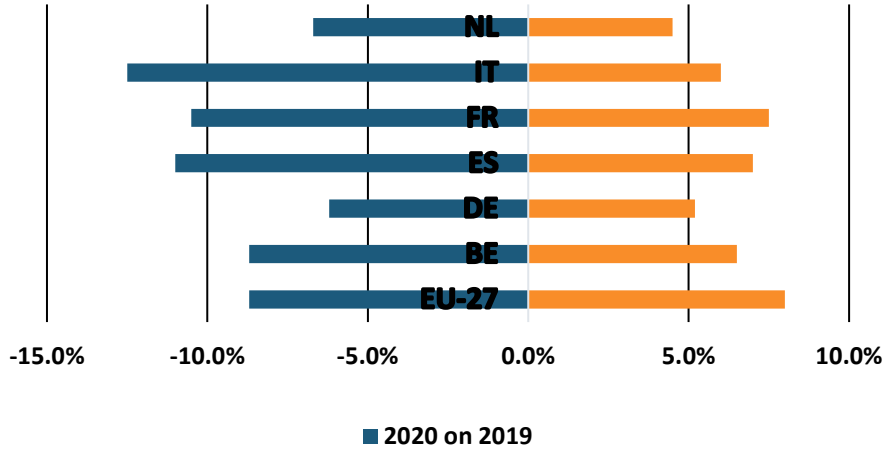
The COVID-19 pandemic and the confinement measures caused a sharp slump in the European Union area economy in the first two quarters of 2020. The progressive spread of the virus earlier this year prompted international and local authorities to implement restrictions on mobility, industry and businesses, and public health measures aiming at flattening the curve of infections and preventing the collapse of health care systems. In the first quarter of 2020, GDP decreased by 3.6 percent in the euro area and by 3.2 percent in the EU, whereas in the second quarter, still marked by COVID-19 containment measures in most member states, seasonally adjusted GDP decreased by 12.1 percent in the euro area and by 11.5 percent in the EU-27, compared with the previous quarter.[147] (See Figure 19.)

Figure 19: GDP Growth Downturn in Q1 2020 and Q2 2020 (Selected Countries and EU-27)[148]



Economic performances have been quite different among EU member states depending on multiple factors. As Figure 20 shows, among the most-affected countries in the second quarter of 2020 were Italy (-12.8 percent), Spain (-17.8 percent), France (-13.8 percent), and Belgium (-12.1 percent percent). The European Commission's forecast indicates a wave-like pattern for growth and an incomplete recovery (even by the end of 2021). Growth is likely to turn from about minus 8.7 percent to plus 8 percent in 2021 compared with the previous year. However, subsequent quarters in 2022 could see a slowdown in growth.

Figure 20: GDP Estimated Growth YoY (Selected Countries and EU-27)[149]



The recovery is expected to be incomplete in a large majority of euro area countries, as the level of GDP at the end of the last quarter of 2021 is forecast to be inferior to what it was in the last quarter of 2019. The differences between member states in GDP growth estimations for the next years are mainly to be found in the different methods of containment of the pandemic and in the different recovery paths.

Among the largest euro area economies, only Germany's output is likely to return to its pre-crisis level, whereas Italy, Spain, and France are expected to have lower performances.

In the first half of 2020, the euro area labor market underwent a massive deterioration induced by the COVID-19 pandemic and the measures taken to contain it. This has translated essentially into a sharp decline in the number of hours worked with a major fall in average men's working hours, which has been considerably worse than in women's ones. However, the increases in unemployment have also been small compared to the decline in economic activity. In April 2020, the unemployment rate increased only slightly in the EU (from 6.4 percent to 6.6 percent).

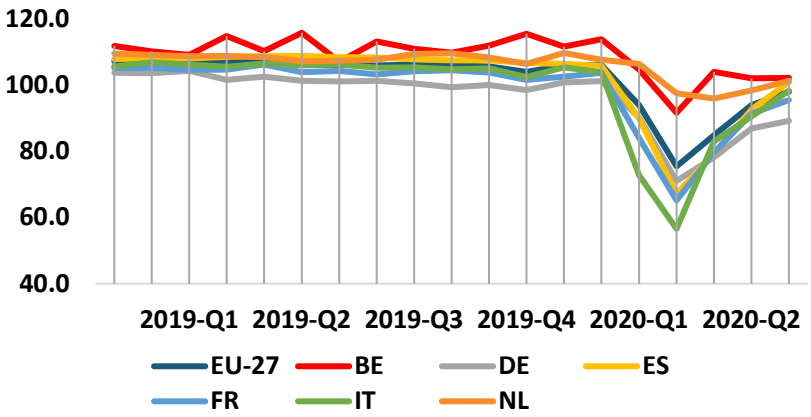
Three orders of factors could explain the phenomena:

- Extended short-time work schemes have played an important role in keeping employees attached to their jobs even in periods without any or with substantially reduced economic activity;
- To be considered statistically as unemployed, a person has to be available to the labor market, which was not possible everywhere during the strict lockdowns. Many persons were discouraged from actively seeking a job due to the lockdown measures implemented as the pandemic spread;
- In several member states, changes in the legal framework of the economy have made layoffs more difficult or almost impossible. This includes measures that exclude insolvencies for some time or that explicitly forbid companies to lay off staff because of the crisis or during a state of emergency.

The European labor market is unlikely to return to its pre-pandemic level. Many of the legislation schemes issued during the pandemic in order to preserve jobs and sustain workers' salaries are limited in time. In addition, in the case of a prolonged period of weak economic fundamentals, regulation will not be able to stop an increasing number of firms from downsizing, with huge consequences for the labor market. In the second half of the year, a number of companies are also likely to see liquidity problems turn into solvency problems.

Industrial production collapsed by 17.1 percent in April, resulting in a cumulative contraction of about 27 percent since February. (See Figure 21.) Output fell in almost all industrial activities. Looking at the breakdown by sector, the most-affected industries were the manufacture of motor vehicles, trailers, and semi-trailers (about -70 percent), as well as that of leather and related products (around -60 percent), followed by clothing (around -40 percent). Most activities saw output contractions of between 15 percent and 25 percent.

Figure 21: Manufacturing Output (Selected Countries and EU-27; 2015=100)[150]



Euro area production in construction fell by 14.6 percent in April but was highly uneven across countries. While France and Spain both saw production fall by more than one-quarter of total output, the reduction in Germany and the Netherlands was only in the single digits.

Overall, these indicators suggest that the euro area economy was operating at between 25 to 30 percent below its capacity at the height of the crisis. Survey results point to a trough in April and a gradual recovery starting in May and gathering pace in June.

5. EU Institutions' Economic Response to the Pandemic

The EU economic response to the COVID-19 crisis is multifaceted and complex in its structure.[151] Under the flexibility of EU budgetary rules, €575 billion ($675 billion) in measures has been forwarded by national governments. Moreover, through the SURE fund, €100 billion ($116 billion) has been allocated for short-term work schemes. €70 billion ($82 billion) of direct EU budget support have been released, sustained by three other major measures: €3.045 billion ($3.56 billion) in national liquidity measures, €240 billion ($280 billion) under the European Stability Mechanism Pandemic Crisis Support for member states, and lastly €200 billion ($234 billion) in financing for businesses through the European Investment Bank (EIB).

The total value of the EU response to COVID-19 crisis amounts to approximately €4.2 trillion (just under $5 trillion).

On July 21, 2020, EU leaders agreed on the Recovery Plan and the multiannual financial framework for 2021-2027, leading the way out of the crisis and mobilize investments.[152]

In order to mobilize the necessary investments in the economy, the European Commission is putting forward a two-fold response based on the Next Generation EU instrument (of €750 billion ($878 billion) which will boost the EU budget with new financing raised on the financial markets for 2021-2024) and on a reinforcement of EU's long-term budget (2021-2027 of €1.1 trillion ($1.3 trillion)). The Commission proposes to exploit the potential of the EU budget to mobilize investments and focus financial support in the first crucial years of recovery.

The Next Generation EU instrument will temporarily supplement the EU budget with new funding from the financial markets. The funds raised, through EU programs, will support the urgent measures needed to protect livelihoods, get the economy back on track, and promote sustainable and resilient growth. The overall framework in the fight against COVID-19 will be rolled out from two financial and economic different pillars:

A. Direct support to member states to recover through the Recovery and Resilience Facility (RRF).[153] The RRF consists of large-scale financial support to both public investments and reforms, notably in green and digital, which make EU countries' economies more resilient and better prepared for the future. This will be made possible thanks to an investment up to €310 billion ($363 billion) in grants and up to €250 billion ($290 billion) in loans, through the REACT-EU measure (which represents a€55 billion ($65 billion) addition to the cohesion funds and programs).

B. Fostering private investments through the Solvency Support Instrument, which has been designed to help prevent enterprise insolvencies. In the framework of the European Fund for Strategic Investments (EFSI), it will use the EU budget to support equity investments in companies with solvency problems.[154] Also, the InvestEU measure is aimed at increasing direct investments in paramount sectors to ensure EU's strategic autonomy (i.e., investments in

critical infrastructures, supporting SME's and start-ups, and fostering research and innovation).[155]

Inside the recovery plan, the European Commission decided to take advantage of the need to modernize the EU's economy, fostering the European "Green Deal" strategy and the Single Digital Market strategy. The EU continues to provide immediate liquidity to businesses affected by the crisis through the Coronavirus Response Investment Initiative, which is under shared management with member states. In addition, the Commission has made available up to €8 billion ($9.4 billion) in financing for 100,000 small businesses hit by the crisis, with the European Investment Fund.

The SURE program helps member states cover the costs of national short-term work schemes and similar measures allow companies to safeguard jobs. SURE is a crucial element of the EU's comprehensive strategy to protect citizens and mitigate the severely negative socio-economic consequences of the coronavirus pandemic.

The European Commission has activated the general escape clause of the Stability and Growth Pact as part of its strategy to respond quickly to the coronavirus outbreak in a timely and coordinated manner.

To access resources from the RRF, Members States need to prepare national recovery and resilience plans containing detailed schemes of reform and investment agendas. Each of them will be assessed by the European Commission following specific criteria, including "strengthening the growth potential, job creation and economic and social resilience" of the member state concerned.[156]

The Commission's assessments will be submitted to EU finance ministers for approval by a qualified majority. In addition, payments will be subject to the satisfactory fulfilment of relevant milestones and targets. In case one or several member states consider that there are "serious deviations from the satisfactory fulfilment of the relevant milestones and targets" by another member state, EU leaders may suspend payment until a positive decision that the milestones and targets have been reached. This strict mechanism was introduced at the insistence of the so-called frugal four countries—Austria, Denmark, the Netherlands, and Sweden—whose economies have all been relatively less negatively affected by the COVID-19 crisis and will therefore benefit relatively little from the RRF. In addition to wanting to minimize their net contributions to the RRF, the frugal countries feared that some of the main beneficiaries—such as Italy and other southern countries that were badly hit by the crisis—may not otherwise direct sufficiently the new EU funds to improving their economic resilience.

6. The Role of the European Central Bank (ECB)

Since 2015, the ECB has been purchasing about €20 billion ($23.4 billion) monthly in government, regional, and local bonds and also corporate bonds, asset-backed securities, and covered bonds under the existing APP. The aim was to push inflation up to its target. In response to the pandemic, on March 12, the ECB announced it would buy an additional €120 billion ($140 billion) under the APP scheme.

The ECB launched the €750 billion ($878 billion) Pandemic Emergency Purchase Program (PEPP), which will last until the coronavirus crisis period is over and, in any case, until the end of 2020. The assets to be bought under the PEPP are mostly the same: the biggest part goes to national and regional government bonds, including for the first time Greek sovereign debt, supra-national debt, and various types of private sector bonds.

On June 4, the ECB increased the maximum size of its purchases of government bonds under PEPP by €600 billion ($700 billion) to €1.35 billion ($1.6 billion) and extended the horizon for those purchases to at least the end of June 2021. The ECB also emphasized that it wants to maintain flexibility in the purchases across asset classes and among jurisdictions.

Given that access to credit has been deemed as paramount in the strategy to recover the economy after the harsh COVID-19 pandemic, the European Central Bank has encouraged banks to use their capital buffers, freeing up capital for €120 billion ($140 billion). Banks can use these funds to absorb losses resulting from the crisis or earmark them to finance up to €1.8 trillion ($2.1 trillion) in new loans to households and businesses.

More flexibility on non-performing loans is then guaranteed in order to not penalize credit institutes from giving loans. To encourage banks and their shareholders to do their share, the ECB has asked banks not to pay out dividends or buy back stocks during the pandemic. Instead, the ECB has asked them to use any funds freed up from the measures outlined to absorb losses or to grant loans to the euro area economy.

The ECB has also launched a package of monetary policy measures to ensure that banks and companies have enough funds available. For instance, buying several kinds of assets under the €1.35 billion-PEPP, making more funds available, and letting banks be able to lend to households or businesses. The ECB also buys companies' bonds, giving them an additional source of credit. Both kinds of purchases should boost spending and investment, with the aim of supporting economic growth. In addition, the ECB expanded its targeted long-term refinancing operations (TLTROs) in response to the COVID-19 crisis. In TLTROs, the ECB offers to banks cheap, long-term loans with incentives to use the funds to lend to euro area consumers and businesses. Banks can now borrow for three years at an interest rate of minus 0.5 percent. Moreover, banks that lend above a certain threshold to businesses and consumers will pay an interest rate as low as minus 1 percent.

7. Economic Scenarios

As illustrated above, it's unlikely that, despite the first signals of recovery, many sectors of the economy will remain weak for the next years, while others have already bounced back. Governments are likely to continue playing a fundamental role in domestic economies with the implementation of measures to sustain consumption and providing support to citizens affected by a persistent economic downturn (with special attention to labor-market trends). Moreover, some 'GDP gap' will persist since there remain important sectors that will operate below normal capacity for some time. The question for macroeconomic policy is thus whether government should go beyond providing replacement income and try to lift further aggregate demand. The first reaction to COVID-19 in Europe was not exemplary under an economic policy perspective, with many countries acting in an "egoistic" way and showing a lack of solidarity or willingness to cooperate with other member states. This initial "my country first" attitude has stopped an even faster response by EU institutions. Nevertheless, with the pandemic spreading unrestrained, Europe learned, and learned fast, its lesson. The agreement reached at EU Council level, propitiated by German Chancellor Angela Merkel and French President Emmanuel Macron, on July 21, 2020 which launched a new plan for recovery (the RRF) is a historic event for the EU. Why is it historic? Because it is the first time that the European Commission will issue more common debt on the capital markets (to be repaid until 2058), which could bring the European safe assets—together with EIB and ESM—toward €2 trillion ($2.34 trillion). Furthermore, it could be a step toward a stronger European

common fiscal response in times of crisis, strengthening the position of Europe globally. Finally, it shows that a certain degree of European solidarity still exists. Funding schemes have been designed to transfer money from the wealthier countries toward the hardest-hit and lower-income ones. This unprecedented stimulus package comes on top of an increased seven-year budget of the EU which also include measures for innovation, and a green and sustainable transition.

Germany

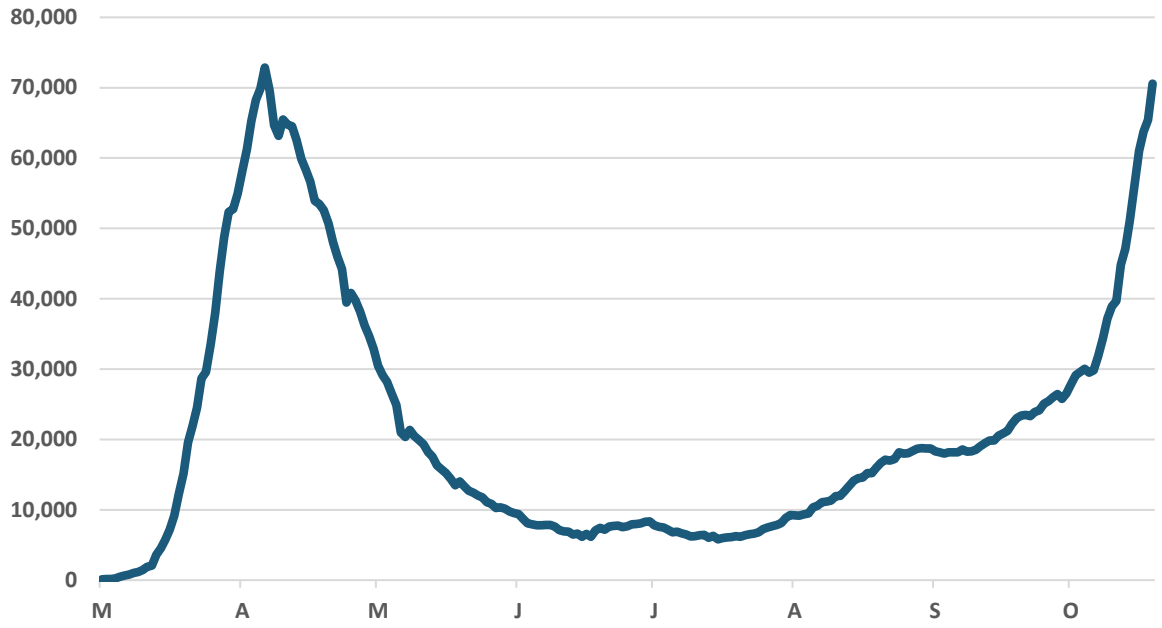
By: Hubertus Bardt and Michael Grömling, German Economic Institute

Germany's Economic Response to the Coronavirus Crisis

Introduction

After several quarters with shrinking production in the manufacturing sector, the COVID-19 crisis has hit the German economy with unprecedented force. The simultaneity of multiple supply and demand shocks is likely to be unique compared to previous economic crises. A nationwide lockdown with the closing of schools and many services, contact restrictions, and event cancellations was introduced in March and gradually lifted in May 2020. The number of active COVID-19 cases, which rose to a maximum of 72,000 in early April (see Figure 22), has declined since then and remained well below the 10,000 cases-threshold since the end of May. Although the medical situation is stable, the consequences of the holiday season, the reopening of schools, and more indoor activities in autumn and winter are not clear yet. In August 2020, the number of infections had begun to increase again and reached a new peak in mid-October. However, due to higher testing activities the number of undetected cases is probably lower than in April. A new nationwide lockdown situation still seems to be improbable, yet cannot be ruled out any longer.

Figure 22: Active COVID-19 Cases in Germany[157]



Corona From a Business Perspective

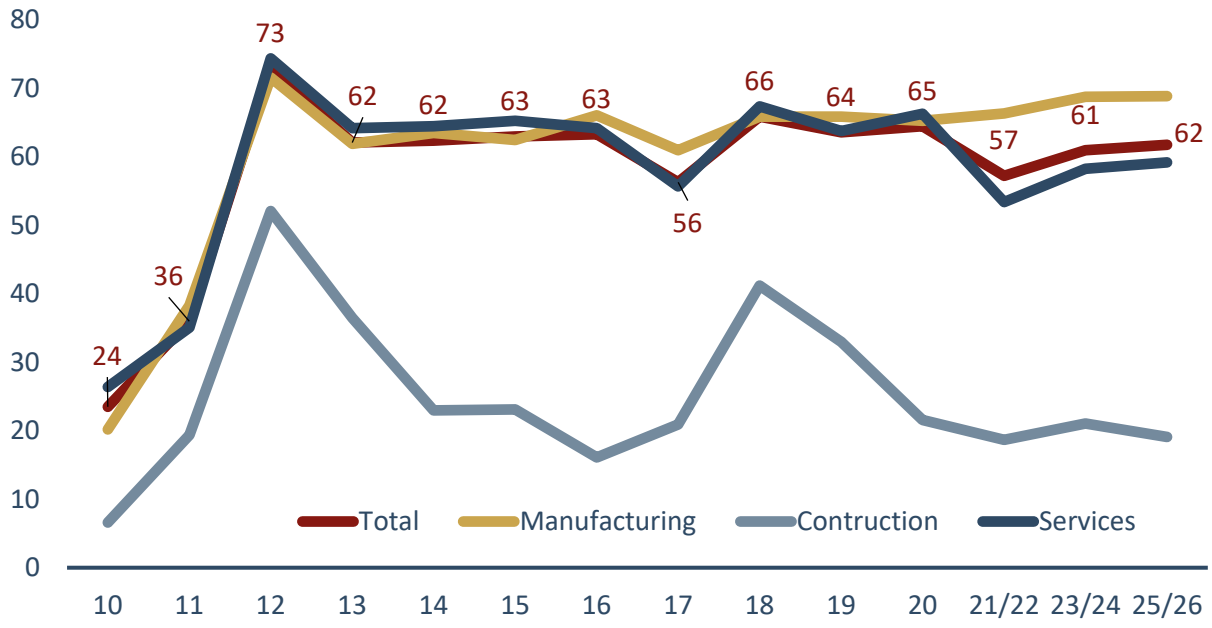
Regarding the economic consequences of the pandemic, there is also a high degree of uncertainty about the duration and extent of the diverse effects on the supply and demand side of the German

economy. The impact of the coronavirus pandemic on the business processes of German companies was assessed with the regular business survey conducted by the German Economic Institute (see Grömling, 2018 for details on this economic survey). Given the extraordinarily high demand for information and the assumption that companies' assessments could change significantly in the short-term, the IW survey was carried out weekly from early March to mid-May and until the end of June on a biweekly basis. It investigated the impact in spring/summer 2020 as well as for 2020 and 2021 as a whole. In each case, businesses were able to select "strong," "weak," or "no impact" as a response option, which should help to assess the extent of the disruption. Furthermore, the survey asked about the duration and causes of the impacts. For more details on the methodology, scope, and interpretation of the current survey results, see Bardt/Grömling (2020).

At the beginning of March, the proportion of companies expecting severe adverse effects was only 24 percent. (See Figure 23.) With the closure of schools and other lockdown measures in calendar week 12, the proportion of companies expecting strong short-term economic impacts in spring and summer of 2020 shot up to over 70 percent. This percentage dropped slightly in calendar week 13. Up to the end of the survey period in June, the proportion of companies that were severely affected was persistently around 60 percent of those surveyed. There has been no decrease in the pressure on businesses following the easing of the lockdown. The negative consequences of the COVID-19 crisis are still present in all sectors except for construction, where short-term negative effects are relatively rare.

Figure 23: Negative Consequences of the Corona-Pandemic for German Businesses[158]

The percentage of German companies which expect the coronavirus pandemic to have strong effects on business processes in spring/summer 2020; results by calendar week and sector

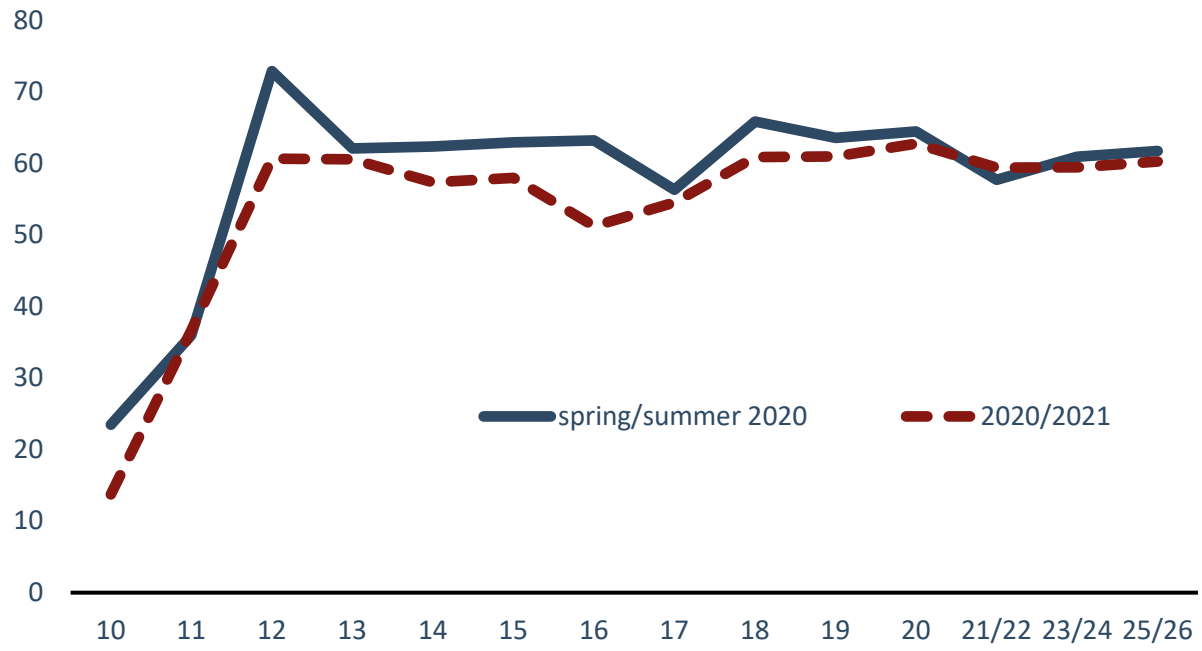


Even more worrying is the fact that business expectations for the period 2020/2021 are not much better than for the short-term period of spring/summer 2020. (See Figure 24.) Approximately the

same share of companies that see strong effects on their business processes in the short run also believe in severe negative consequences for the total of both years. This does not contradict the expectations of a gradual recovery over the next quarters, but it does make a quick V-shape recovery less plausible.

Figure 24: Longer Term and Short Run Expectations of German Businesses[159]

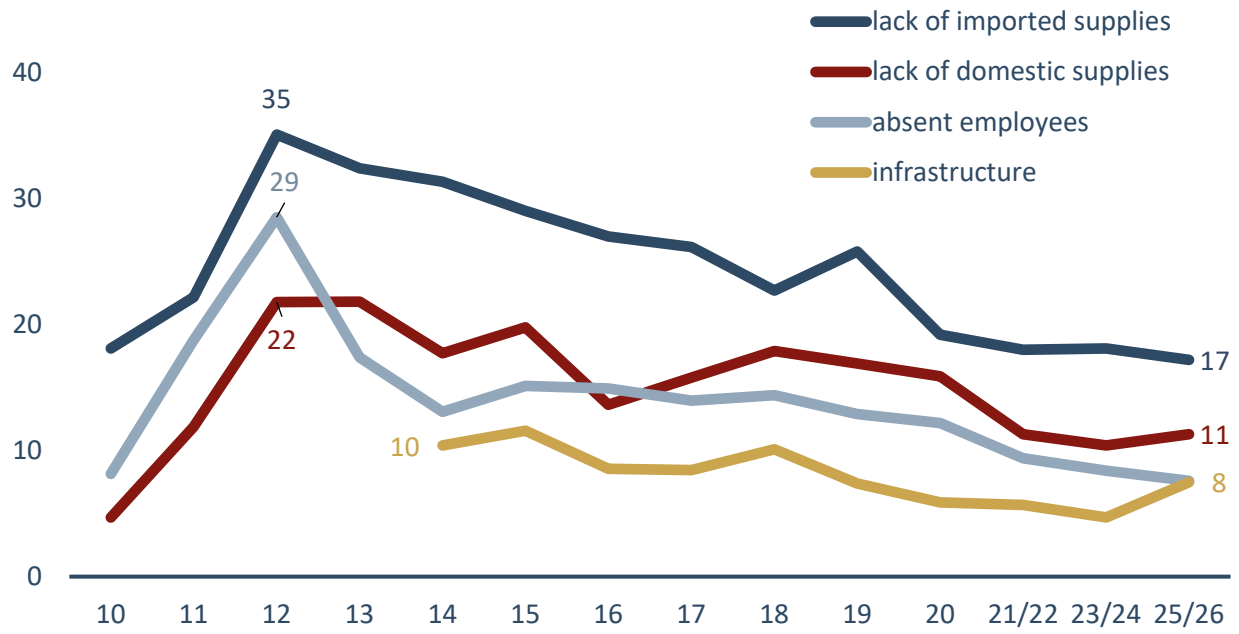
The percentage of German companies which expect the coronavirus pandemic to have strong effects on their business processes in spring/summer 2020 and in the years 2020/2021; results by calendar week



However, even if the overall situation of many companies does not improve, the factors determining the economic effects of the COVID-19 crisis have changed over the weeks and shifted from the supply to the demand side issues. When the COVID-induced economic crisis began, supply-side restrictions were most worrisome. Looking at China at the beginning of the year, many companies feared that well-established value chains could be endangered as suppliers were forced to cease production. The lack of international intermediates was the most important factor, although the focus has since shifted from Chinese to European imports. Furthermore, domestic value chains were also in a precarious state for a number of companies. The difficulties for employees to get to offices or factories (due to school closings, quarantine, public transport safety problems) were also relevant in the beginning of the crisis but are less important today, similar to infrastructure problems. In total, supply-side restrictions and problems in maintaining value chains have declined over the survey period. (See Figure 25.) Companies have resumed operations and have mended value chains where necessary.

Figure 25: Declining Supply-Side Problems[160]

Percentage of German companies with COVID-19 related problems in their value chains; results by calendar week



At the same time, problems on the demand side have proven to be very persistent. After the lack of demand from both domestic and international customers had been identified as a significant issue when the lockdown measures were implemented in March, the share of firms that consider this as a major problem for their business has remained very stable, with a slight tendency to deteriorate at the end of June. (See Figure 26). More than every second a company complains about a decline in domestic demand due to COVID-19.

Therefore, demand-side polices have been the focus of attention during the summer 2020, when fiscal stimulus packages were distributed in Germany and other countries. Although demand for durable goods is especially at risk because the time at which these goods are purchased can be easily postponed, no special programs for cars or other goods have been adopted in Germany. The economic stimulus package includes various elements such as a temporary reduction of the value added tax (VAT) to promote consumption in the second half of 2020 (also for valuable goods) or additional payments to families to increase disposable income in order to spur private consumption. Companies can benefit from better depreciation rules, and municipalities will receive additional funds to maintain their important role as public infrastructure investors. If municipalities were to get into financial difficulties, many public investments would be at risk.

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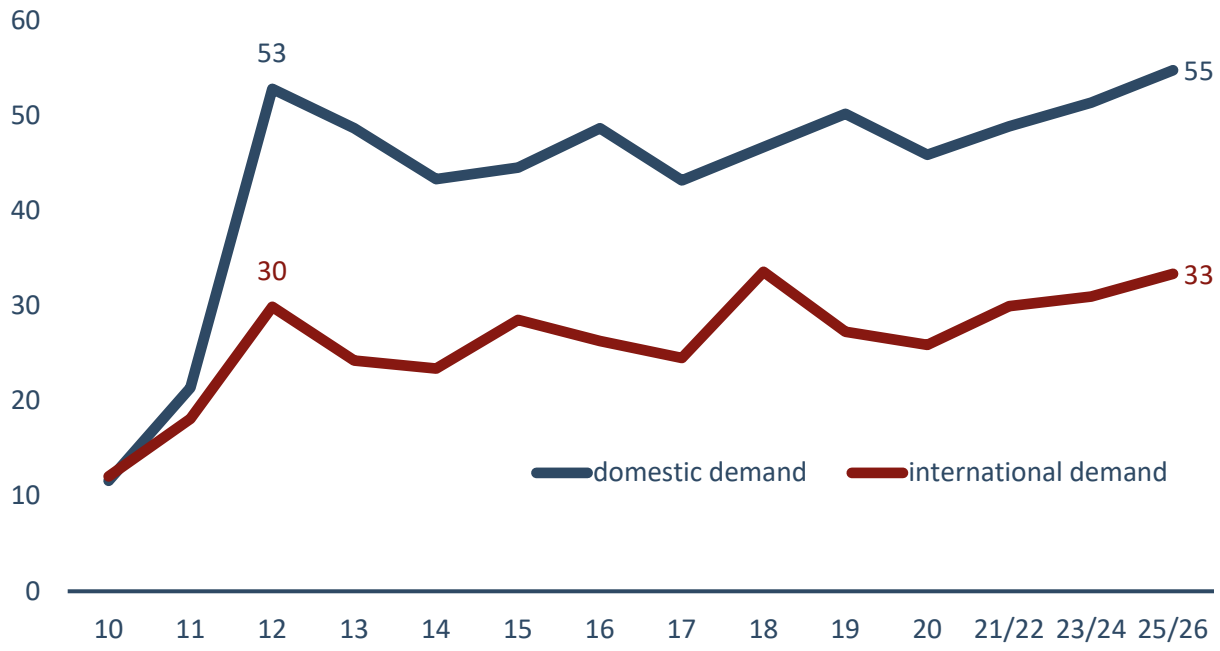
Figure 26: Persistent Demand-Side Problems[161]

Percentage of German companies with COVID-19 related reporting lacking demand; results by calendar week



Urgent Need for Economic Policy

With the coronavirus pandemic and the protective measures subsequently adopted, Germany has been catapulted into an economic crisis that the German Federal Republic has never experienced before. Core sectors were virtually shut down and restrictive conditions continue to apply in many service sectors. Even if the supply-side constraints have been gradually reduced during the phase of opening up the economy and society (Hüther/Bardt 2020), this does not result in an automatic return of production to its former economic capacity. The slump has destabilized consumer and investor confidence. Consumer and business confidence have plummeted and are only gradually

recovering. Deferred purchases tend to be made later, as the prospects for personal income and job security are so bleak. Investments can be postponed if current market developments do not force companies to do so. Public investments can be scaled back, particularly at the local level, to remain viable in the face of collapsing tax revenues and additional government expenditure.

In 2020, the economic downturn in Germany will be almost as severe as in the wake of the financial market crisis of 2008/2009. In the summer of 2020, the forecasts for the decline in real GDP for that year were between 5 and 8 percent: Meanwhile, the consensus has been reduced to shrinkage expectations between 5 and 6 percent. All forecasts assume that there would be no further lockdown in the fourth quarter of 2020 due to the rapidly rising number of infections. Only in this case would there be a good chance that the German economy will regain a foothold and compensate for the economic damage incurred toward the end of 2021 or beginning of 2022.

If the decline in demand continues, the economic downturn would intensify further, deepening and prolonging the already historically severe economic crisis. In this situation, the target of economic policy is to prevent further contraction caused by the loss of demand and, at the same time, to provide new impetus for growth. While the fiscal stimulus package has focused on the demand side, supply-side measures are necessary to foster economic growth. However, the focus must be on stabilizing business investment and therefore on stabilizing companies' growth expectations. This requires a growth program that systematically improves the supply-side conditions for investment in Germany. These include competitive taxes, accelerated approval procedures, and a better digital infrastructure, as well as innovation capacities, particularly for digitization, and reliable framework conditions for decarbonization. Only if companies can reliably expect to be able to produce and operate competitively in Germany with a more climate-friendly production (including necessary infrastructures, reliable cost burdens, and funding opportunities for conversion), will investments be made. In view of the current and foreseeable underutilization of many capacities, there is now a risk of accelerated disinvestment in Germany.

Financial bottlenecks are currently worsening, particularly at the local level, which can lead to a reduction in existing investments. There is already a considerable investment backlog. The public sector can emerge from the current economic crisis and subsequent fiscal constraints if it creates the necessary investments for future growth. An investment program was necessary even before the crisis (Bardt et al., 2019), which has lost none of its relevance, even if part of the fiscal stimulus package also contains medium-term investments that are necessary for future economic growth.

References (Germany)

Bardt, Hubertus/Dullien, Sebastian/Hüther, Michael/Rietzler, Katja, 2019, Für eine solide Finanzpolitik: Investitionen ermöglichen!, IW-Policy Paper 10/2019, Köln

Bardt, Hubertus/Grömling, Michael, Kein schnelles Ende des Corona-Schocks: Ökonomische Einschätzungen deutscher Unternehmen, in: IW-Trends, 47. Jg., Nr. 2, S. 21-41

Grömling, Michael, 2018, Methods and Applications of the IW business survey, IW-Report, Nr. 5, Köln

Hüther, Michael/Bardt, Hubertus 2020, Von der Öffnung des Lockdowns zu neuen wirtschaftlichen Perspektiven, IW-Policy Paper, Nr. 10, Köln

Greece

By: Michail Vasileiadis, Evangelia Valavanioti, and Aggelos Tsakanikas, IOBE[162]

The First Phase of the COVID-19 Pandemic in Greece: Policy Responses and Economic Effects

1. Evolution of the Pandemic and Measures to Protect Public Health and Support Businesses and Households

Greece was one of the first European countries hit by the pandemic, which began at the end of February 2020. Nonetheless, during the first phase of COVID-19 in Greece, its spread was relatively mild. This is mainly due to the fact that precautionary measures to protect public health were taken after the first cases of coronavirus were recorded, since the beginning of March. These measures comprised:

Instructions to citizens from the Ministry of Health (EODY), through commercials in electronic and printed media: stay at home, thorough hand washing, recommendation of mask use in public indoor places, and keeping a distance of 1.5 to 2 meters (specified as of early March 2020).

- Gradual suspension of international flights from 3/9, first from/to Northern Italy;
- Closure of educational institutions of all levels (3/11);
- Closure of entertainment and recreation areas, courts, and gyms (3/13);
- Closure of shopping malls, restaurants, and bars, excluding take-away restaurants and coffee shops (3/14);
- Two-week mandatory house rest for anyone entering Greek territory. Gradual closure of land borders from March 16, first with Albania and Northern Macedonia (3/16);
- Lockdown: closure of the rest of retail stores, with few exceptions (supermarkets, convenience stores, pharmacies, as of 3/18);
- Suspension of hotels operation (3/22);
- Restrictions on the movement of citizens within the country (3/23); and
- Recruitment of medical, nursing, and other health care staff (more than 7,000, of which 3,500 permanent).

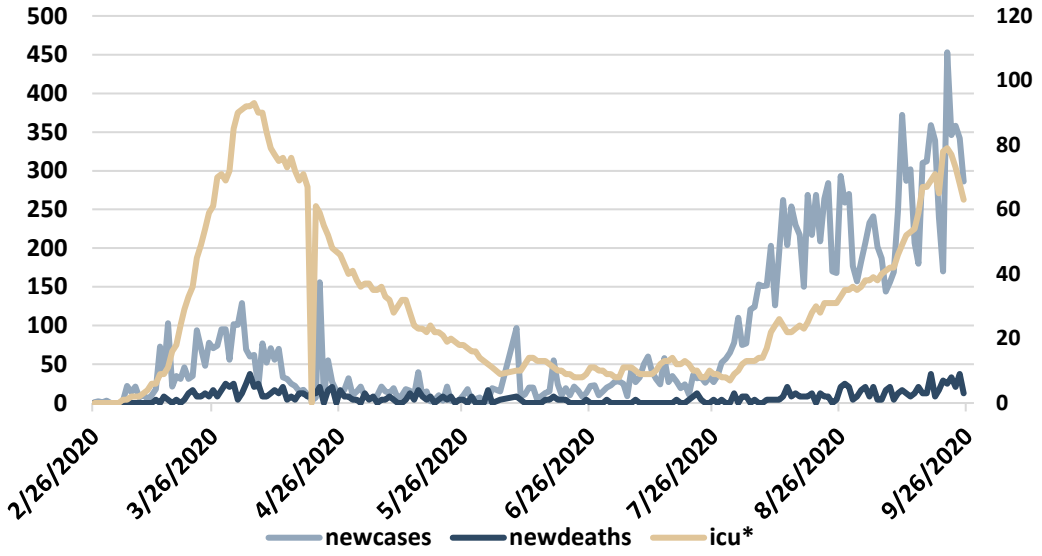
The majority of these restrictions were gradually abolished from May through the end of June. This fact enabled economic activity in the Tourism sector (Accommodation and Food service—NACE Rev.2 sector I), which is one of the most-important for the Greek economy, as it contributes 7 percent of total domestic gross value added and 8.6 percent of total employment. Hotels opened gradually from June 1 (all-year hotels) to June 15 (seasonal hotels). As of July 1, visitors from all the EU countries and the rest of the Schengen countries, with the exception of United Kingdom and Sweden, could come to Greece. Travelers from various countries were also allowed to come, according to the epidemiological characteristics of those countries.

From end-February 2020 up until the latter date, there were 3,409 cases of COVID-19 in Greece and 192 deaths. These numbers brought Greece among the countries that were least-affected during the first phase of the pandemic (spring 2020). (See Figure 27.)

All over Europe, governments responded to the COVID crisis by adopting some instant measures, usually to support employment and restore liquidity. Delays of tax obligations, and financial

assistance to employees and unemployed, are usually some of the measures adopted. In Greece, which was one of the countries that responded quite quickly to the pandemic, the government has adopted specific measures in the above direction. It's estimated that fiscal stimulus measures of 3.6 percent of GDP were implemented, supplemented by other liquidity stimulus and private sector financing measures (IOBE, 2020).[163]

Figure 27: Evolution of COVID-19 Daily Cases, Deaths, Patients in Increased Care Units[164]



In that line of argument, the Greek government proceeded since mid-March 2020 to fiscal, labor-market, and financial interventions in order to support closed businesses, as well as businesses from other sectors affected by the lockdown (in total "affected businesses/sectors" in the rest of the text), but also their employees, unemployed persons, and seasonal workers. Specifically, concerning the first two categories of interventions:

- Extension for four months of the payment of taxes, expiring since March 11, for sectors affected by COVID-19. Suspension of payment for four months of overdue tax debts expiring since the same date, as well as of installments of debt settlements with the state.
- Suspension of employment contracts of part or of all the staff of businesses in affected sectors
- Allowance up to €800 ($937) for employees in companies in suspension of operation, for the period of March 15 to April 30, 2020, depending on the number of days in suspension. Coverage of their insurance costs. Since May, monthly allowance up to €534 ($626).
- Teleworking of part or of all the company staff, for all businesses.
- Extension for four months of the payment period of social security contributions for affected companies, for months February–April 2020.
- Payment of 60 percent of the rent for corporate premises since March 2020, for companies in the catering, tourism, transport, culture, and sports activities sectors. The same measure is effective for persons employed in these businesses.
- Interest rate payments subsidy for five months (from April 1 to August 31, 2020). The measure concerns serviced business loans until 12/31/2019.

Additional fiscal interventions are implemented since end-May through early June 2020. The most significant are:

- Reduction of tax advance in 2021 for businesses with a turnover reduction of at least 5 percent in the first half (H1) of 2020. The discount depends on the fall of the turnover: 5–15 percent = -30 percent; 15.01–25 percent = -50 percent; 25.01–35 percent = 70 percent; >70.01 percent = 100 percent.
- Temporary value-added tax (VAT) reduction (June 1 to October 30, 2020) from 24 percent to 13 percent, in passenger transport, coffee, and non-alcoholic products. VAT discount in cinemas, from 24 percent to 6 percent.
- Temporary reduction over that time period on VAT on tourism services, from a combination of 80/20 (80 percent of 13 percent, 20 percent of24 percent) to 90/10.
- Subsidization of the salaries of employees, at least for the period from June 15 to the end of this year, from an action called "CO-OPERATION," which is funded by the SURE (Support to Mitigate Unemployment Risks in an Emergency) temporary program of the European Commission:

    - All the currently operating companies with a turnover decrease of at least 20 percent from March to the month before the one for which they apply for the action, are eligible;
    - Companies supported by the action can reduce weekly working time by up to 50 percent, either for part or all of their employees;
    - Employees are paid by the state 60 percent of their net salary which corresponds to the time during which they do not work;
    - Subsidy of 100 percent of the insurance contributions for the non-working period from July 1 to December 31, 2020; and
    - Companies that receive support from the action cannot terminate the employment contracts of employees included in it.

As was already mentioned, since mid-March 2020, the Greek government has also proceeded with policy interventions in order to improve the liquidity of businesses and households. In brief, these comprise:

- Deferment of payment of amortization of serviced loans up to 12/31/2019 business loans from businesses in the affected sectors. The deferment concerns amortization payments from March 17 to September 30, 2020.
- Financial instrument "repayable advance," which consists of a financial support by the Greek state, at a low interest rate (below 1 percent). This support is to be returned within a certain period, up until the end of 2025. There is a "grace" period for repayment, up until the end of 2021. The support is granted to businesses considering the monthly fall of their turnover since March 2020 and is not limited to businesses from sectors affected by COVID-19. Specifically, with respect to turnover decline, the eligibility threshold is -10 percent. Up to September 2020, two phases of the repayable advance instrument have been implemented and another one was about to start. During the first phase, 52,500 businesses received financial aid of €602 million ($705 million), and in the second phase 89,700 beneficiaries received €1.26 billion ($1.48 billion). Support in the context of the third cycle will be based on turnover decline during June–July 2020. The program has a budget of approximately €1.1 billion ($1.29 billion), with an interest rate 0.94 percent.

- Interest rate subsidization for bank loans to SMEs affected by the protection measures against the pandemic, from the (state-owned) Hellenic Development Bank (henceforth HDB). With this program, SMEs could get a loan for working capital from a bank, whose interest payments for the first two years of the payback period would be subsidized by the state. The payback period for the loan would be 24–60 months. There would also be a "grace" period of 6 to 12 months, during which only interest would be paid. The program could receive applications during May–mid-June 2020. Applications totaling 10,700 were submitted, concerning loans of €1.4 billion ($1.64 billion), of which 10,150 benefited from the program, concerning loans of €1.29 billion ($1.51 billion).
- COVID-19 Business Guarantee Fund, also provided by HDB. This fund will guarantee bank loans for working capital. Specifically, guarantees will cover 80 percent of 40 percent of the total portfolio of new loans to SMEs by each bank and 80 percent of 32 percent of the new loans portfolio to large companies. The loans concern working capital and can be granted until December 31, 2020. Available guarantees amount to €1 billion ($1.16 billion) and the estimated maximum liquidity leverage is €3.5 billion ($4.1 billion).
- State subsidy of loan installments of mortgages of individuals for nine months. The relevant e-platform for applications opened in March 8, 2020. In order for someone to be eligible for the program, their monthly wage should have fallen by 10 percent (for a wage <€1,000 ($1,160)) to 30 percent (for a wage> €2,000 ($2,320)) during April–May 2020 compared to January–February 2020. Subsidies are a percentage of loan installments: 90 percent during the first quarter of subsidization, 80 percent in the second quarter, and 70 percent in the third quarter. However, subsidies cannot exceed €600 ($700) per instalment. Non-performing mortgages are not excluded from the program, but their holders will receive smaller subsidies (up to €500 ($585) per instalment). As this is a relatively recent program, there is no information on its implementation progress.

The above actions can be extended, in terms of funds available and period of application, relative to the developments with respect to the pandemic.

During June 2020 and most of July, the daily number of new COVID-19 cases and deaths fluctuated at low levels, between 10–60 and 0–4 respectively. (See Figure 27.) Since end-July 2020, both these numbers are on a steep upward trend. On September 21, the highest number of new cases since the beginning of the spread of the pandemic in Greece was recorded (453) and on September 24, the highest number of new deaths (9), for second time after April 4. Subsequently, Greece entered the second phase of the pandemic. Despite this fact, the spread of the pandemic in Greece is fairly limited in comparison to other countries with the same or smaller population. These developments led the Greek government since end-July 2020 to the adoption of new measures in order to protect public health. The main difference of these measures with those during the first phase is that they are imposed at the regional level, even in certain towns or villages. Such measures are:

- Ban on open bars and restaurants from 11 pm or 12 pm to 7 am;
- Ban on open convenience stores from 12 pm to 5 am;
- Maximum number of persons per table in restaurants (four or six, in the case of close relatives);
- Ban on concerts and theatrical shows in open and closed spaces;
- Mandatory COVID-19 test 72 hours in advance for travelers from certain countries;

- Mandatory use of masks in retail trade stores, all closed public spaces and, in all open public spaces;
- Ban on the movement of citizens from 12 pm to 6 am.

Summarizing, from the previously presented policy interventions it emerges that the Greek government monitors epidemiological conditions at the regional and city level and respectively adapts public health protection measures. Various fiscal and financial interventions have been implemented to support businesses and employment affected by these measures. However, these measures had their toll on economic activity, as will be shown in the following section of the report. Furthermore, fiscal and financial interventions significantly deteriorated the fiscal balance and are expected to weigh on the balance sheets of banks.

2. The Impact of the First Phase of the Pandemic of COVID-19 to the Greek Economy

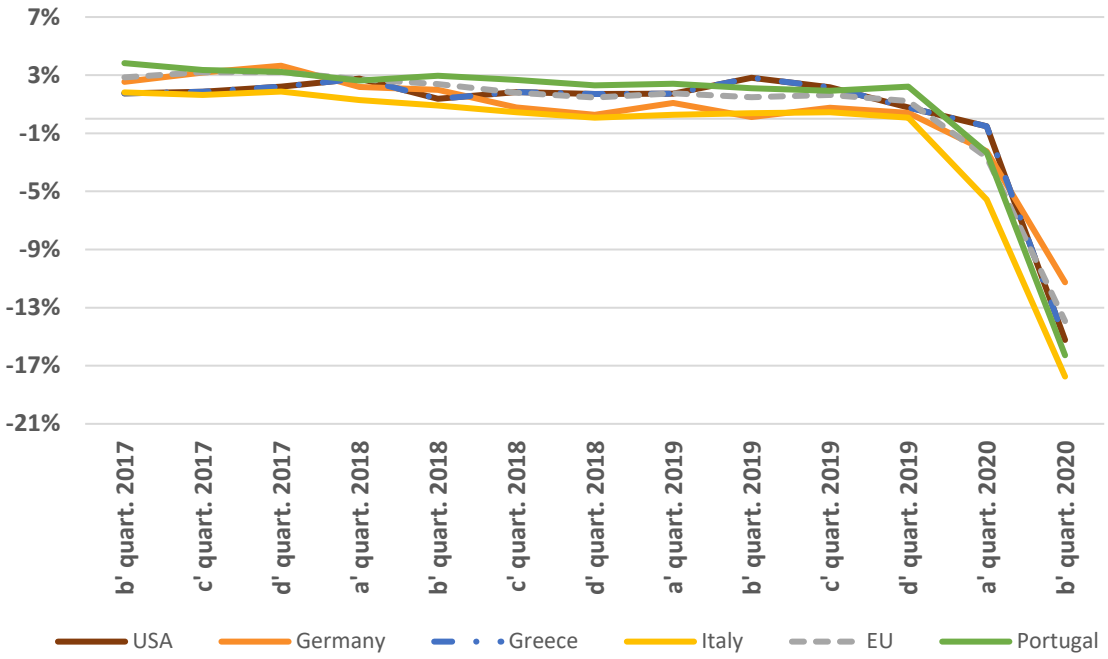
Data on economic variables available during the preparation of this report enable the evaluation of the effects of COVID-19 on GDP, sectoral economic activity, investment, unemployment, current account balance, etc. in Greece because of the first phase of the pandemic.

Specifically, on one hand, GDP in Greece declined in Q2/2020 by 15.2 percent, which was the fifth steepest fall among EU countries for this period. On the other hand, the GDP fall in Greece during Q1/2020 was among the mildest in the EU. (See Figure 28.) Also, the recession in Q2/2020 in Greece was not significantly deeper than the EU average (13.9 percent), as in some of EU's biggest economies (Spain, France, Italy) GDP fall was worse than in Greece. Accordingly, during H1/2020, GDP in Greece was 7.9 percent lower than H1/2019, a fall of the same magnitude as that in the United States, whereas GDP in the EU shrank by 8.3 percent.

Recession in the second quarter came mainly from the fall of households' consumption, by 11.2 percent. Public consumption: -3.2 percent in the second quarter; despite the interventions of the state to support businesses and households against the impact of COVID-19, public consumption was 3.2 percent lower y-o-y in Q2/2020. This trend is owed to the fact that extraordinary public spending concerning businesses is registered under the Public Investment Programme (PIP) and is included in gross fixed capital formation. Furthermore, extraordinary pre-election spending in Q2/2019 led to a base effect for the same period of 2020.

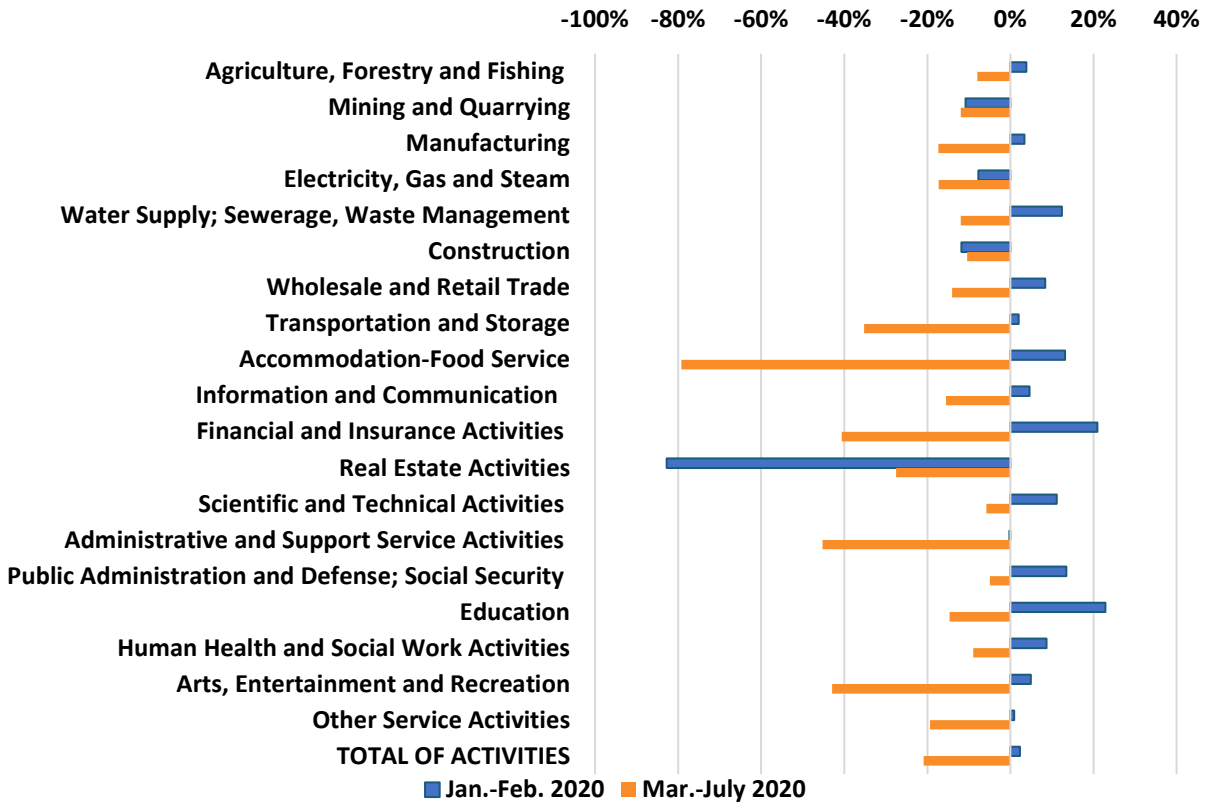
The second defining factor of the recession in Q2/2020 was the sharp decline in exports, by 32.1 percent. It came mainly from fewer exports of services (-49.4 percent) than fewer exports of goods (-15.4 percent). On the side of imports, the fall was milder, 17.2 percent, and came mainly from imports of goods (-15.3 percent), although the decline of imports of goods was stronger (-25.7 percent), as the volume of the former is bigger. Accordingly, the current account balance worsened, as will be shown next in this section. The drop in investments did not exceed 9 percent, due to transfer payments for COVID-19 through the previously mentioned PIP.

Figure 28: Greek GDP Y-o-Y Rate of Change[165]



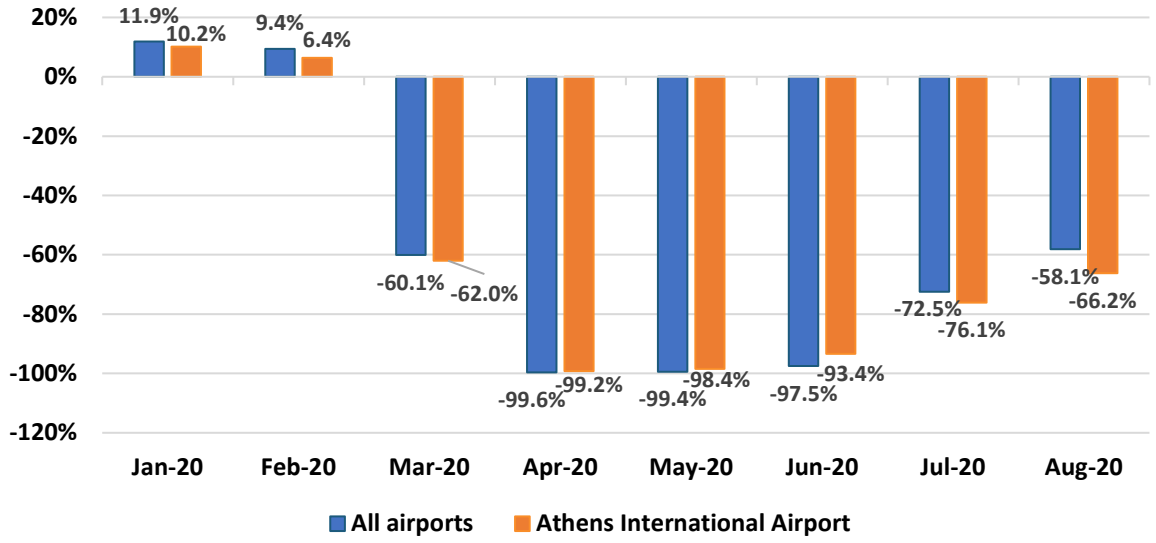
Regarding trends in economic activity (turnover) at the 1-digit sector level during the first period of the spread of the pandemic in Greece and globally and right after it (March-July), as was expected, many of the most negatively affected activities were those that were suspended or restricted because of the public health protection measures. The turnover in the Tourism sector fell by 79.2 percent during March-July 2020, whereas during the first two months it exhibited a significant increase (13.2 percent). Activity in Administrative and Support service activities and in Arts, Entertainment, and Recreation shrank by 45.3 percent and 42.9 percent respectively. Financial/Insurance activities and Transportation/Storage sectors followed with respect to decline of turnover (-40.6 percent, -35.3 percent). On the contrary, Public Administration and Defense; Social Security and Scientific and Technical Activities sectors exhibited the mildest fall in turnover (-4.9 percent and -5.8 percent). (See Figure 29).

Figure 29: Change in Turnover, Per NACE Rev.2 1-Digit Sector[166]



There are signs of continuing pressures on activity of the Tourism sector, which, as was already mentioned, is one of the most important for the Greek economy. Specifically, the steep drop in international arrivals in airports continued during July–August, that is during the two most-significant months for the sector. (See Figure 30.) Although the fall de-escalated in these months, it stood at 66.2 percent in August for Athens International Airport, whereas the average decline in all Greece's airports in the same month was 58.1 percent. These trends imply significantly reduced receipts from tourism compared to 2019.

Figure 30: Change in International Arrivals to Airports[167]



The deterioration of the travel balance is the main cause of similar developments in current account balance. During the period from January to July 2020, its deficit widened by €5.2 billion ($6.1 billion) compared to the same period a year ago, reaching €7.8 billion ($9.1 billion), stemming exclusively from the services balance, whose surplus shrank to €3 billion ($3.5 billion) from €10.8 billion ($12.7 billion). (See Figure 31.) On the contrary, the goods balance improved by €2.6 billion ($3.1 billion), as its deficit decreased from €13.6 billion ($15.9 billion) to €11.0 billion ($12.9 billion). The surplus of the travel balance fell by €6.8 billion ($8 billion), to €759 million ($889 million), which accounts for 86.5 percent of the change in the services balance. Another 12 percent of the deterioration originated from the transportation balance. (See Figure 32.) On the goods balance side, 70.2 percent of the deficit reduction came from the goods balance excluding shipping and oil.

Figure 31: Current Account Balance, Including Goods and Services Balances[168]

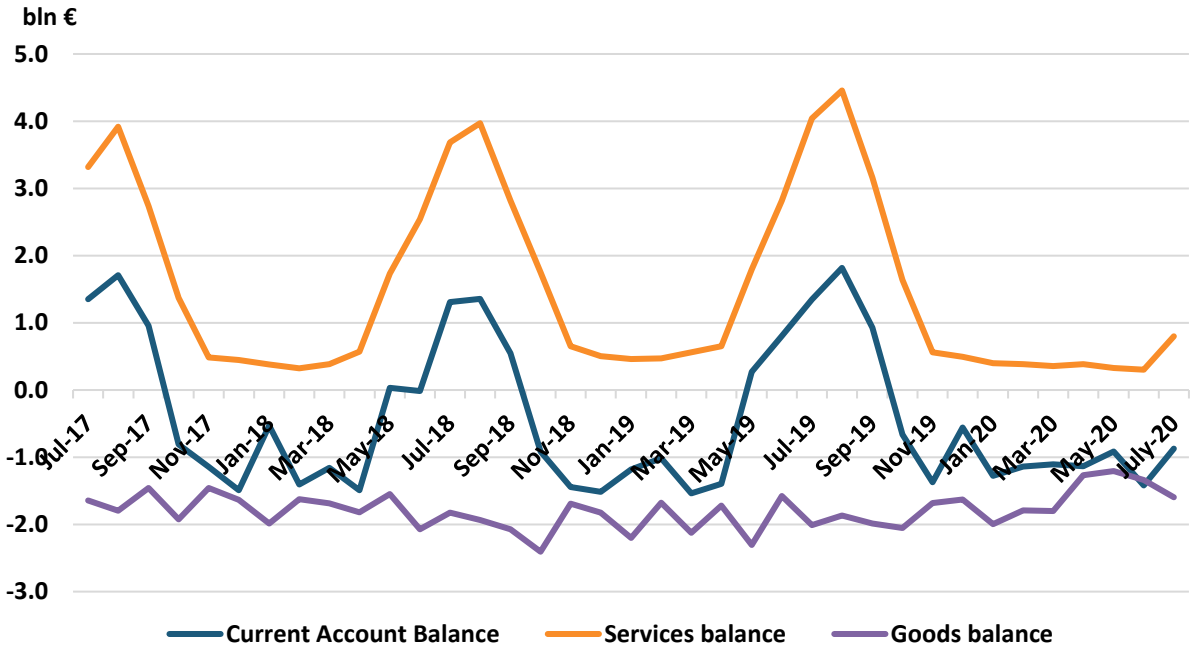
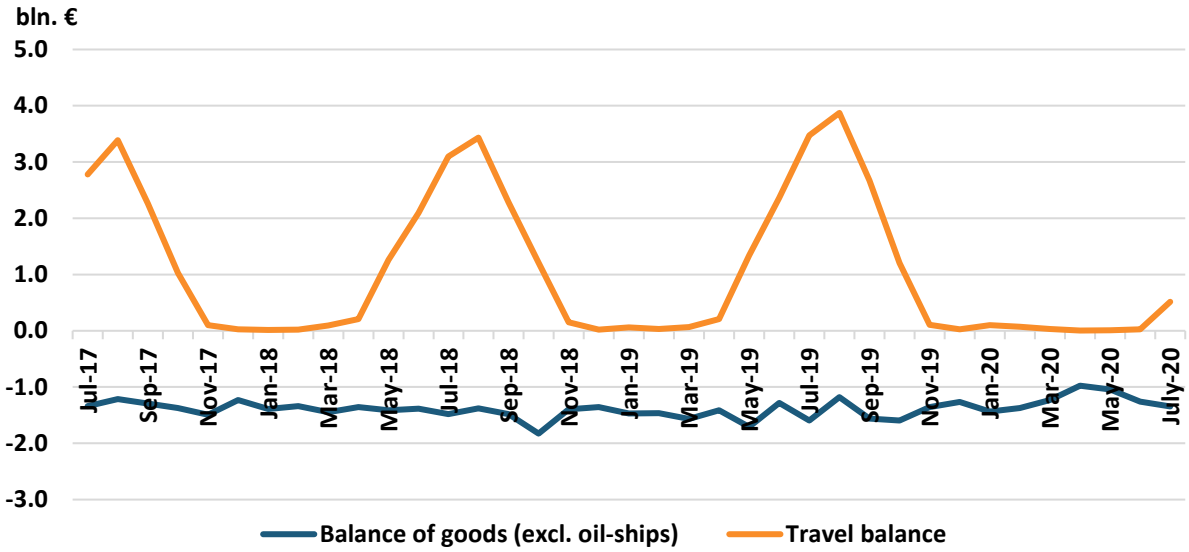


Figure 32: Current Account Balance: Balance of Goods and Travel Balance[169]



The suspension of activity in many sectors, the suspension of international passenger transports, globally, and the overall uncertainty about the evolution of the pandemic impacted the domestic labor market. Although these developments are expected to strengthen unemployment, nonetheless, uncertainty also increased the number of persons not looking for jobs (non-active population). The labor force was thus reduced, which technically led to an escalation of the unemployment rate.

Specifically, the number of persons employed decreased in Q2/2020 by 112,400 compared to the same period of 2019. But the number of unemployed (-36,700) did not increase, as non-active population increased by 121,000. (See Figure 33.) Because of these changes, the labor force fell by 149,200. Consequently, the unemployment rate stood at 16.7 percent in Q2/2020, 0.5 percentage points higher than Q1/2020 and 0.2 percentage points below Q2/2019. (See Figure 34.) Indicatively, in case the increase in non-active population was half that in Q2/2020 and another 60,800 persons were added to the unemployed persons and the labor force, the unemployment rate would rise to 17.7 percent.

The unemployment rate in Greece remains the highest in the EU, with Spain following at 15.5 percent and Croatia afterwards, with a much smaller rate (8.6 percent).

Figure 33: Persons Employed, Unemployed Persons, Labor Force Survey (Y-o-Y Change)[170]

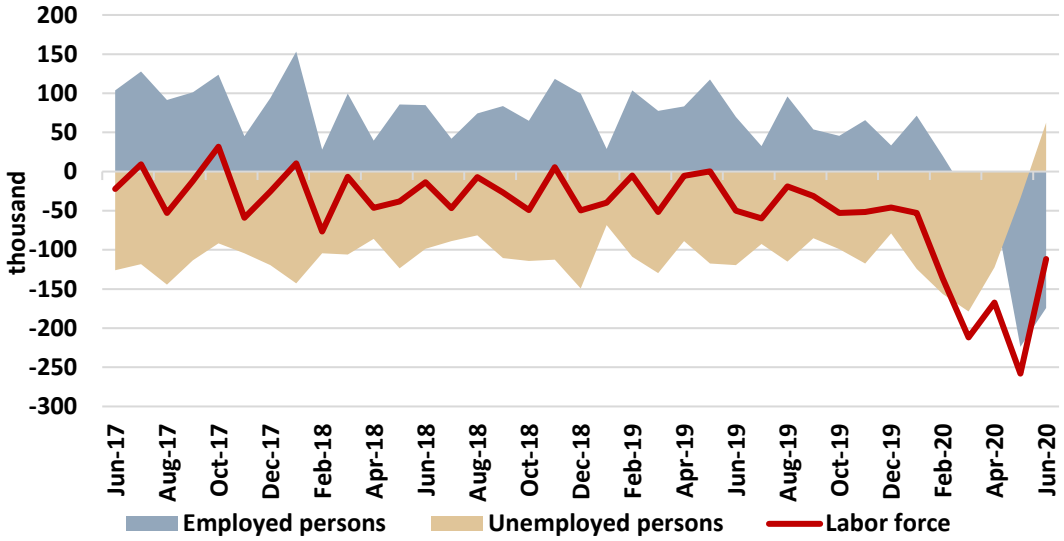
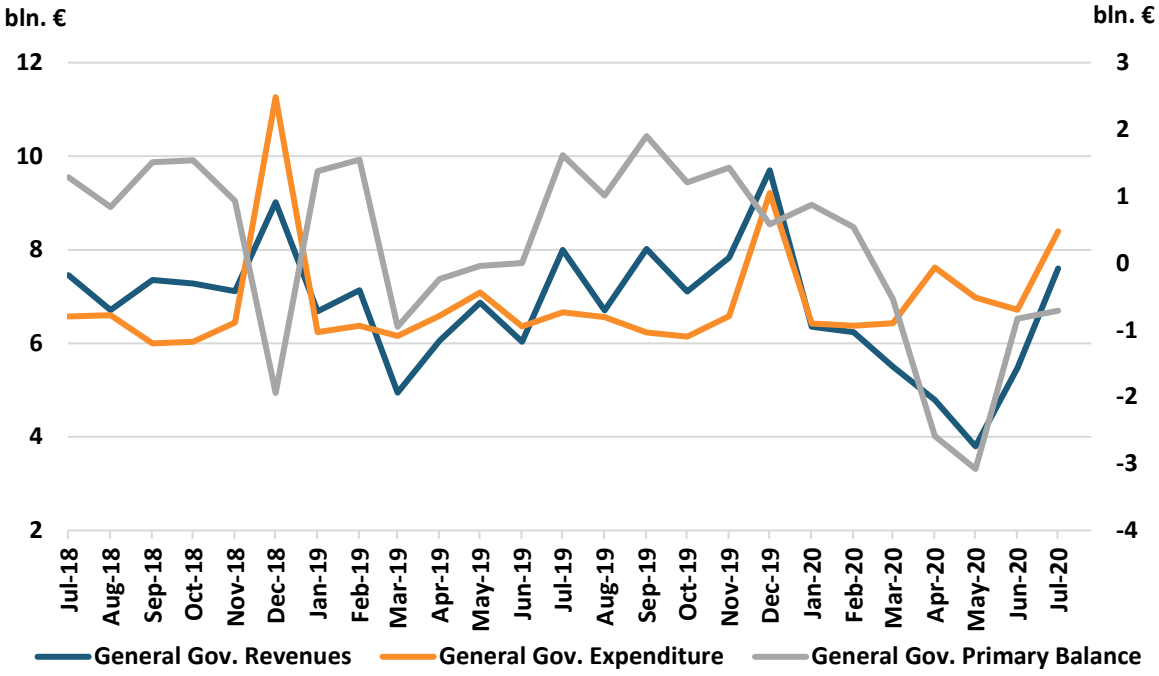


Figure 34: Unemployment Rate and Number of Unemployed Persons[171]

The abrupt fall in economic activity and policy interventions to support businesses and households weighed respectively on the two sides of the fiscal balance, revenues, and expenditures. During the January–July 2020 period, the general government primary balance was negative, by €6.3 billion ($7.4 billion), instead of a surplus of €3.3 billion ($3.9 billion) in the same period of the previous year.)[172] (See Figure 35.) This deterioration was mainly the result of much lower revenues, by €6 billion ($7 billion), a trend that highlights the effect of decreased economic activity on public finance. The fall in indirect taxation receipts, by €3.5 billion ($4.1 billion), is the main cause of this decline. Revenues from privatizations are €1.2 billion ($1.4 billion) lower and those from income taxation are €664 million ($778 million) below the 2019 level. During the same period, primary expenditures were €3.3 billion ($3.9 billion) higher than a year ago, due to extraordinary spending in order to tackle the implications of the pandemic.

Figure 35: General Government Revenues-Expenditure-Primary Balance[173]



The above trends in core economic variables in Greece depict the very strong negative impact that the pandemic already had on the country's economy and society. Nonetheless, during the first half of 2020 these were not different in GDP terms than the EU average. But, as the Greek economy is a more tradable, services-oriented economy, mainly toward tourism services, the adverse effects are expected to be more pronounced in H2/2020. The effects of Q2/2020 are considered indicative of those of a prolonged second phase of spread of the new coronavirus, in Greece and globally, as well as of any other subsequent phase with such characteristics. In such case, the prolongation of already-implemented fiscal and financial interventions, at the country and EU level, will be required, as well as probably the introduction of some new ones. But these will further increase pressures on the fiscal balance and the balance sheets of banks.

3. Some Empirical Evidence of the COVID Crisis in Greek Firms

In order to actually examine the short-term effects of this crisis to the Greek entrepreneurial system, the Foundation for Economic and Industrial Research (FEIR/IOBE) designed and implemented a questionnaire-based empirical survey during the period of May–July 2020. Responses were collected through postal mail or through email and the contact person was the chief executive officer of the company. The sample included firms from four major sectors: Manufacturing, Retail Trade, Construction, and Services. Sampling is representative across the country from the four sectoral areas of the economy. The final dataset to be used in the analysis includes 234 firms that provided reliable responses and employ about 245,000 employees, which is rather significant for the total employment in the private sector of the country.

It should be stressed that half of the firms surveyed are large firms (above 250 employees), while only one-quarter have below 50 employees. This means that the sample reflects the views of the more-sizeable part of the Greek productive system, taking into consideration that almost 90 percent of Greek firms employ fewer than 10 employees. In terms of sectoral representation, almost

half of them come from the manufacturing sectors (45 percent), while 10 percent are construction firms. The remaining firms in the sample are 30 percent business services and 15 percent from retail trade.

The questionnaire included questions related to the qualitative and quantitative effect that the pandemic crisis and the lockdown had on the firms' operation. Additionally, our aim was to determine the firms' actual reaction strategies to the crisis. Furthermore, the questionnaire included questions for the qualitative assessment of the measures that were introduced by the government to mitigate the economic effect of the crisis. It should be stressed that most of the firms in the sample continued their operation during lockdown, since only retail was forced to shut down by law. (See Figure 36.)

On the other hand, almost half of the manufacturing firms, as well as retail trade and construction firms have decreased their working hours. It is also worth mentioning that approximately two out of three constructions firms have reduced their working hours, while at the same time about 3 percent of the whole sample responded that their working hours have increased. (See Figure 37.) Even if one focuses on the subsample of the firms that have continued their operation with some adjustments due to the pandemic of coronavirus, most of them have not changed their working hours (77 percent).

Figure 36: Business Continuation During the Recent Crisis (Percent of Firms)[174]

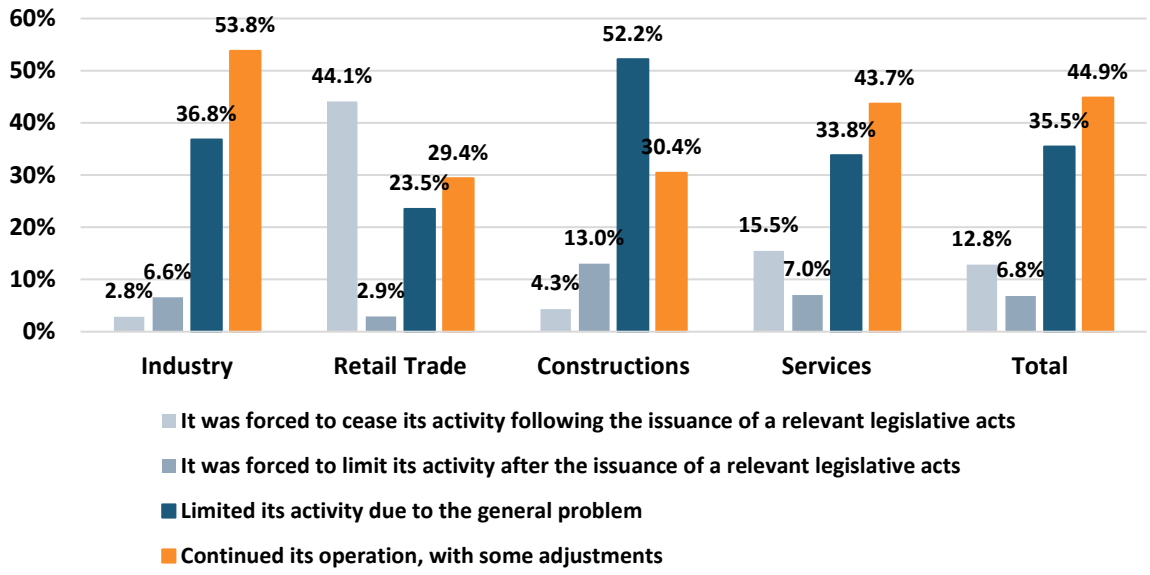
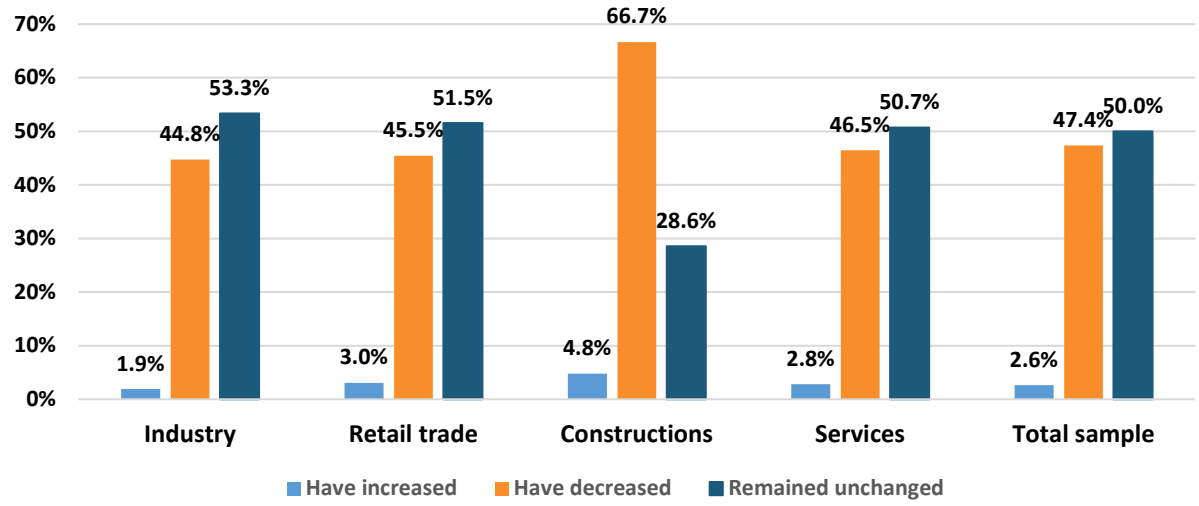


Figure 37: Impact on Working Hours (Percent of Firms)[175]



Of course, most of the firms suffered from declining sales. (See Figure 38.) But there was on average 10 percent of firms that reported that their sales increased. It is interesting to note that these firms come from IT Services, Health Services, and Food Manufacturing sectors.

Industry, retail trade, and services firms have been directly affected by the cancellations or restrictions of customers' orders. At the same time, part-time teleworking has become important mostly in industry and services. Industry, trade, and construction firms seem to have been directly affected by the fact that suppliers find it difficult to supply the products that are necessary for the businesses operation.

Figure 38: Impact of the Crisis on Sales (Percent of Firms)[176]

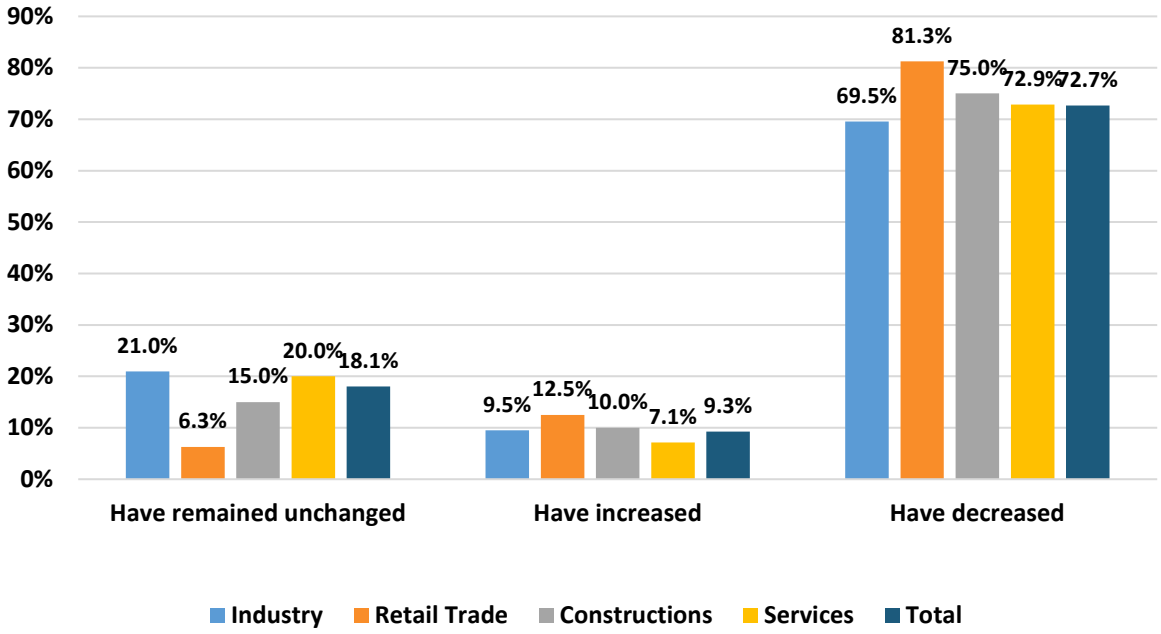


Table 3: Operational Changes Due to the Crisis (Percent of Firms)[177]

Percent of firms that…	Industry	Retail trade	Constructions	Services
Have been directly affected by the new operating regulations	12%	24%	9%	24%
Have been directly affected by the fact that suppliers find it difficult to provide products/services that are necessary for the business	34%	38%	43%	18%
Have been directly affected by cancellations or restriction of orders	54%	44%	30%	52%
Have adopted new health and safety regulations for its employees	58%	65%	43%	63%
Have applied remote working for all employees (full-time teleworking)	3%	-	4%	13%
Have applied remote working for some employees (part-time teleworking)	34%	24%	17%	35%
Have applied rotating work	10%	15%	13%	10%
Have not made particular changes, except some additional health-protection measures for the employees	26%	26%	35%	7%

In another section of the survey, participating firms were asked to assess the measures that were introduced by governments to mitigate the impact of the crisis. (See Table 3.) Among other measures, the Greek government suspended VAT and other tax obligation payments including social security contribution payments for businesses, self-employed individuals, and sole proprietorships affected by pandemic. Furthermore, a 25 percent discount on tax and social security contribution obligations (excluding VAT) has been granted to self-employed individuals, freelancers, and firms affected by the pandemic.

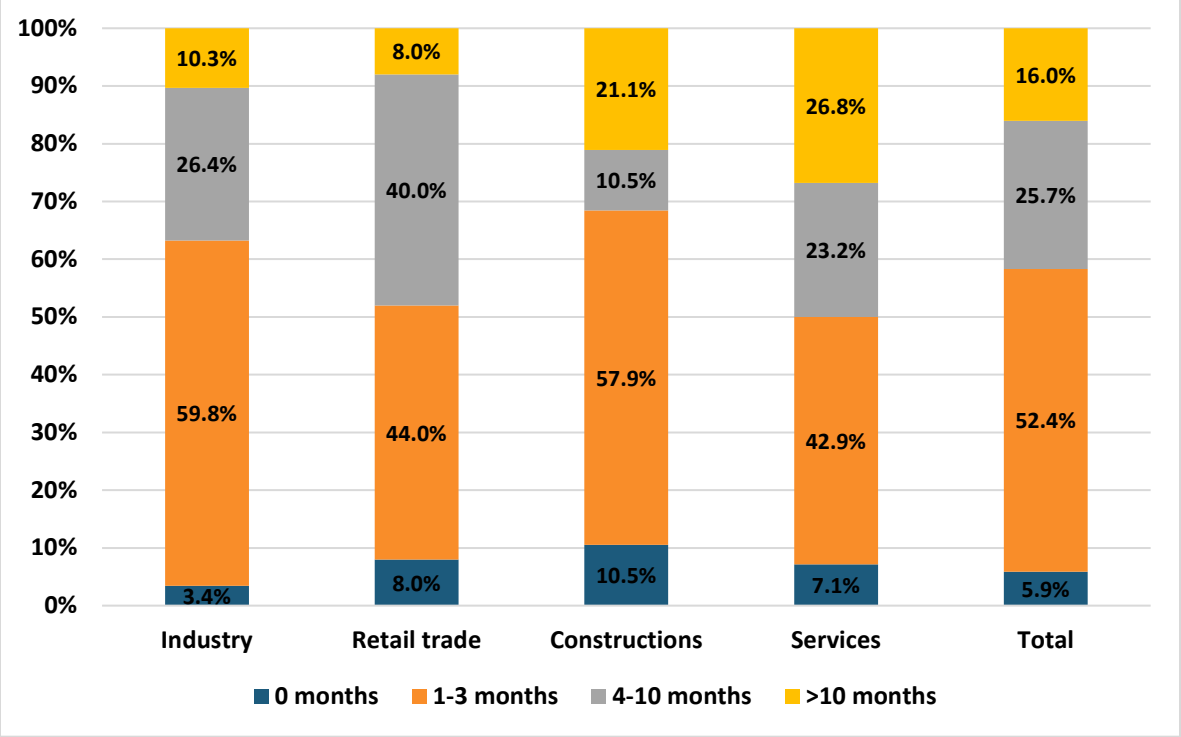
On Table 4 a ranking of the measures that were implemented across sectors is shown. Firms assessed more positively monetary measures that direct financing of either employees' cost or social contributions. But there are some sectoral differences. In constructions, the 25 percent tax discount was the most popular measure followed by the suspension of tax payments. On the other hand, payment of 60 percent of the rent of commercial property was ranked quite high, especially by firms of retail trade.

Table 4: Assessment of the Government Measures (Average on a 1–5 Likert Scale)[178]

	Total sample average	Industry	Retail trade	Constructions	Services
Coverage of insurance deductions to the beneficiaries of an allowance of 800 euros	4.13	4.01	4.35	4.09	4.23
Payment of 800 euros per employee	4.09	4.00	4.41	4.08	4.08
Suspension of tax payments (VAT, DOY debts, debt settlement installments) and insurance liabilities	3.98	3.82	4.39	4.27	3.92

25 percent discount on other tax and insurance liabilities	3.97	3.71	4.21	4.41	4.09
Business financing through guarantees and European funds	3.86	3.76	4.17	3.91	3.85
Suspension of loan arrears until September	3.59	3.51	3.63	3.64	3.67
Payment of 60 percent of the rent of commercial property	3.48	3.11	4.10	3.63	3.69
Refundable deposit	3.47	3.42	3.59	3.32	3.56
Suspension of checks by 75 days	2.91	2.46	3.72	3.43	3.03

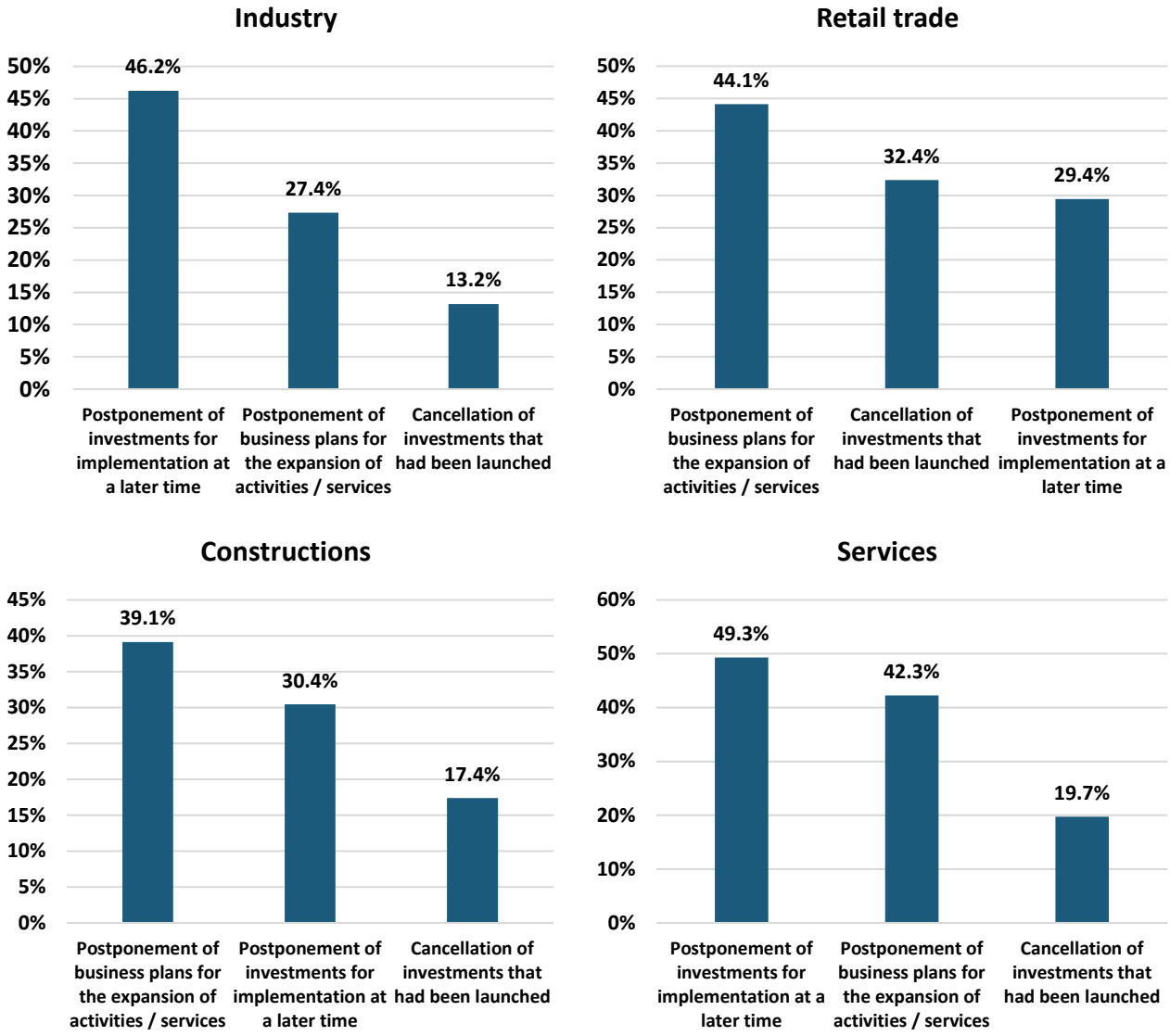
Figure 39: Liquidity Constraints (Percent of Firms)[179]



Another important issue that was explored in the survey was liquidity constraints. Firms were asked to provide a rough estimation of their liquidity (operating capital) based on number of months. More than half of the sample responded that their liquidity reserves could last up to three months, while only 6 percent of the firms responded that they did not have enough liquidity to continue operating. Constructions and retail trade firms seem to face the most significant constrains, while firms from manufacturing sectors seem to be in a safer position. (See Figure 39).

Finally, firms assessed a list of possible changes that the crisis urged them to follow. (See Figure 40.) The effect on investments seems to be the most important results of the crisis, which was rather well-expected. The less-disappointing result that stems from the survey is the fact that investments are postponed rather than cancelled.

Figure 40: Top Three Decisions Taken in Your Business Due to the COVID-19 Crisis (Percent of Firms That Responded Positively)



Based on the previously mentioned findings, we notice that measures that have been adopted to address urgent short-term challenges and that relate to financial support in the form of tax deferrals, wage support, loan guarantees, etc. seem to work for everyone and are positively assessed by firms from all sizes and sectors. But the post-COVID era will require more intense digital-transformation processes and swift adaptation to new technologies and operating methods. Hence Greece still needs to implement structural policies to support the country's resilience to the crisis and its swift adaptation to this new environment.

Honduras

By: Guillermo Peña Panting, President of the Board of Directors, Fundación Eléutera

The Health and Economic Ravages of the Coronavirus in Honduras

A Brief Overview of Events

In Honduras, the lockdown began on March 16. With this, the closure of the economy was total in its first phase, creating not only an environment of uncertainty at all levels, but also control by the government sector regarding the cancellation of the constitutional guarantees of Hondurans by restricting their mobility and production by separating economic activities into the essential and non-essential.

At first, the growth of confirmed positive cases was quite slow; however, this grew rapidly as the months that passed, resulting in the collapse of hospitals, especially in Tegucigalpa, the country's capital.

As a clinical mechanism, the provision of outpatient and hospital treatment protocols was implemented to intervene in the early stages of the virus infection or, in more complex cases, in both scenarios. The government provided both the general public and the health care centers with the indicated medications by a team of internists from the north of the country.

At this time, the decrease in hospital occupancy has been significant as well as the decrease in deaths from COVID-19; however, it is considered that there has been an under-registration of cases due to the few tests that are carried out daily and the uncertainty of the date of the update of the data that is presented on a daily basis.

Despite the data reported by the government, observers consider that the number of tests carried out on a daily basis are not enough to give a clear picture of the situation in Honduras, since there is no certainty of the actual number of positive cases.[180]

So far, the infections according to official data have added up to 64,814 with 2,023 confirmed deaths. It is important to note that Honduras is currently experiencing not only a critical situation due to COVID-19, but also due to dengue fever, a situation that has not been controlled. There are 17,790 registered cases.

Economic Sectors Begin to Recover

Regarding the economy, Honduras had been reporting the second highest economic growth rate in Central America, being surpassed only by Panama. In 2017, GDP grew by 4.8 percent, in 2018 by 3.7 percent, and in 2019 by 2.7 percent.[181]

But the situation in 2020 is radically different as a result of the mobility and production restrictions caused by the pandemic, as GDP is projected to fall between 2.9 percent and 3.9 percent and the Honduran economy registered a contraction of 10 percent in the first half of the year, according to data from the Central Bank of Honduras.[182]

The economic activities that have reported the most contraction so far are hotels and restaurants (46.4 percent), private construction (33.9 percent), manufacturing industry (22.6 percent), transportation and storage (18.1 percent), and commerce (13.2 percent).

Until mid-September, the Ministry of Labor reported the closure of 950 companies, of which 75 percent are from San Pedro Sula (the country's industrial capital) and Tegucigalpa.[183]

Regarding unemployment, this government office also reports more than 160,000 suspensions—and in San Pedro Sula alone, it is estimated that some 70,000 jobs have been lost.

However, the telecommunications sector reports a growth of 4.2 percent and, as of June, sectors such as livestock, fishing, food processing, especially those related to flour, have begun to report growth as well.[184]

State Intervention

The implementation of 163 care centers as the first point of contact for patients with a moderate health situation has helped to decongest the main hospitals, with much controversy over government funds managed without transparency but with much support from the private sector, these centers have managed to serve a significant part of the population, avoiding the overflow of care centers.[185]

This model is a great opportunity for the decentralization of the health system, and it is the communities and municipalities that can provide better assistance without saturating the main hospitals in the cities or being an obstacle to providing good assistance to taxpayers.

On the other hand, the relief to the productive sector has been a measure that, although it has many areas for improvement, has redeemable points. Fundación Eléutera had an impact on this decree by approving our proposal for the legal recognition of meetings of executives, partners, and the like through virtual platforms, as well as electronic signatures and the digitization of tax processes.[186]

So far there have been no clear economic measures that can provide effective relief in the short or medium term, beyond subsidies to specific sectors, and it is also worth noting that there has been no coherence observed in the implementation of closing and reopening measures. This has had a serious impact on the productive sector since public transport continues not to operate and this has increased the operating expenses of the companies and made their reopening even more complicated.

Currently in Honduras citizen mobility remains highly restricted; as the day assigned to be able to circulate to bank, supermarket, and other authorized commerce sectors is limited to the last digit of the citizen's ID.

Activities in parks are not allowed, nor are meetings of more than 10 people, but the tourism sector is gradually opening up, as well as national and international flights.

Starting Over With Better Rules and More Transparency

Three of the highest costs that businesses face today are energy, taxes, and personnel pay.

Honduras urges simple processes, clear rules, and open markets. This is thanks to the pandemic which has increased the sense of urgency to take safety measures of all kinds. Fundación Eléutera has placed even more emphasis on the importance of creating a system that allows entrepreneurs

to have a faster bankruptcy process, with which they can start over without more economic losses than they have already had and reactivate the generation of jobs.

Added to this is a flexible and adaptable market, since now more than ever the rigidity and high cost of job creation in Honduras must cease to be an obstacle for employers and employees.

Regarding energy, currently at Fundación Eléutera we have done very strong work in opening up the Honduran energy market, which opens this sector to competitiveness, which not only improves the service and gives it stability, but also reduces prices, directly impacting on the development of the country, and reduces one of the highest costs for companies.

Strengthen and Decentralize the Health System

Resuming the implementation of stabilizing units and primary care centers for COVID19 patients, we consider it is a measure that should serve as an example of the decentralization of the health system, since it has not only taken pressure off of patients from the main hospitals, but it has also resulted in better service to citizens.

This model should continue to be implemented with the active participation of local governments, which would strengthen the country's health network.

Also, in terms of health, Fundación Eléutera is promoting a public policy reform so that experimental treatments are a real option for patients with complex health conditions. This experience is based on what we have lived with COVID-19 since it is a constant application of experimental treatments, and it has been proven on a large scale how they have saved lives. This needs to reach patients with cancer, autoimmune diseases, psychiatric conditions, etc., and thus the power to decide on their health and well-being is returned to the patient and the doctors.

Reduce the Digital Gap That Affects Educational Coverage

Regarding education, it is a big pending task for the government of Honduras, since due to the deficiencies that a significant part of the population suffers, it is projected that one million children could be left out of the system as a result of the economic crisis generated by the measures imposed by the pandemic.[187]

Therefore, the broadband plan that the government has been working on would be essential to reduce the educational gap that is becoming larger and larger—and although it is true that many sectors of the country don't even have electricity, this plan will incentivize some progress to be made in creating the minimum infrastructure so that education reaches all those who need it.[188]

The digital gap can not only be seen as a technological problem, but also as a social and economic complexity that limits the capacities of new generations to be able to enter new learning, health, and production processes.

Honduras, like other countries in the region, must begin to walk along the path of computer resources and not see them as mere devices or instruments, but as a way to face the crisis before, during, and after the pandemic.

It's time to permanently adopt virtuality in the form of "hybrid education," in such a way that this modality is combined with the professional training that the younger generations will need for the eventual labor market that awaits them, which will have a high percentage of virtuality adopted from the lessons learned during the COVID-19 contingency months.

Strengthening the Logistics Chain

In Honduras, the implementation of the Authorized Economic Operator has recently begun, as a trade facilitation mechanism through the strengthening of the logistics chain by certifying companies that comply with standards that guarantee the safety of commercial processes and operations.[189]

This is a very significant advance for Honduran logistics, especially in these times when commercial exchanges need to be facilitated as much as possible without neglecting security for all those involved.

One aspect of improvement that this implementation has is that the entire logistics chain is involved since so far it is only applied to importers and exporters, but to truly ensure the entire chain, the involvement of all actors is needed.

Now, more than ever, Honduras has seen that it needs agile borders, and a safe and efficient logistics chain, since the lives of many people can depend on truly free and efficient trade. That is why Fundación Eléutera promotes that the Customs Union between Central American countries is strengthened and expanded more and more, and just as between Honduras and Guatemala, it is already a reality that little by little it expands its coverage, even between the other countries.

This Customs Union not only covers merchandise, but also the labor market and the processes becoming increasingly agile for professionals to further open their horizons and labor markets to be enriched with diversity.

Indonesia

By: Muhamad Ikhsan, Senior Researcher, Paramadina Public Policy Institute

COVID-19 And Its Impact on the Indonesian Economy

Introduction

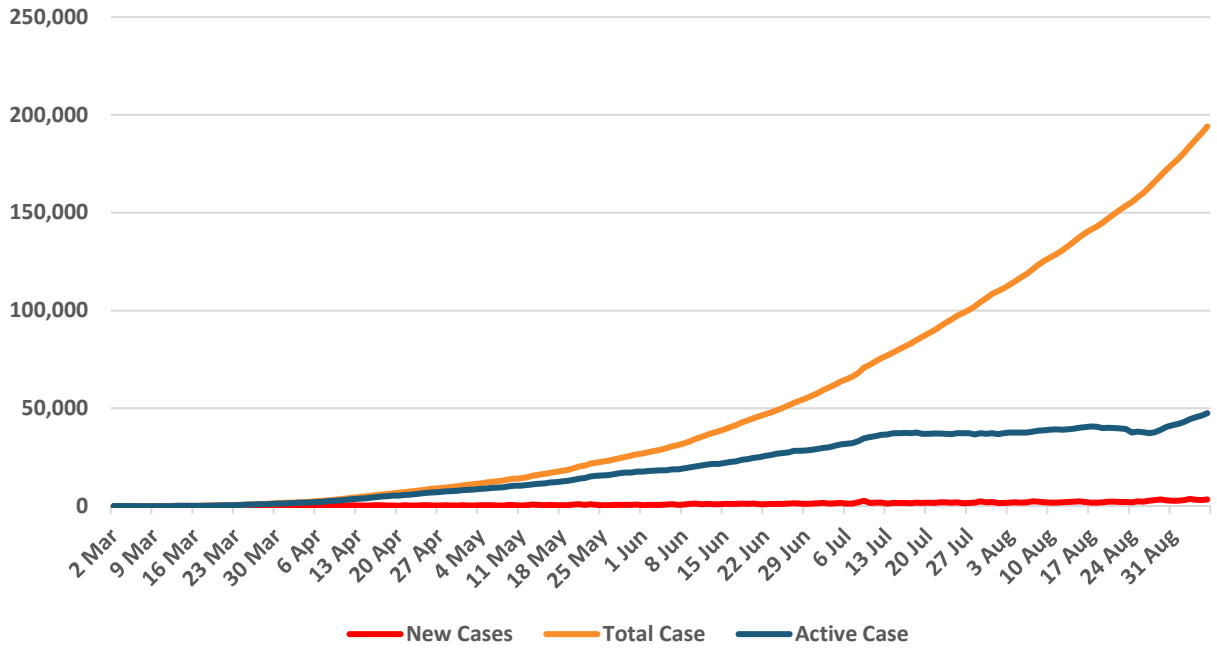
The world has encountered a serious global public health challenge in this 21st century caused by deadly diseases and virus infections (e.g., influenza, H1N1, H5N1, SARS CoV, MERS CoV, and Ebola). Although the 20th century had also witnessed fatal diseases such as HIV and Spanish Flu 1918, the case of novel COVID-19 has expressed our lack of preparedness given its sudden and rapid spread which left many governments around the world unprepared.[190]

In Indonesia—the fourth most-populous country in the world—public health experts had predicted that the national suffering would be greater and over a longer period when compared with other less-populous countries. However, the Government of Indonesia (GoI) seemingly underestimated the scope and breadth of COVID-19 in the beginning phase, as indicated by statements of high-ranking officials from the Ministry of Health and critics from experts in public health salient on the early phase of pandemics on February this year.[191] When the novel coronavirus SARS-CoV2 hit mainland China severely during the end of 2019 up to February 2020, Indonesia had reported no cases of infection at all.

Only on March 2 did President Joko Widodo report the first confirmed two case of COVID-19 infections in Indonesia. As of September 6, the country had reached 194,109 confirmed cases, with 138,575 cases recovered, 8,025 fatalities, and 3,444 new cases.[192] This short report provides an analysis of the impact of COVID-19 to the Indonesian economy, the policy choice carried out by the GoI emphasizing economic recovery, and responses from private sectors toward the pandemic—our focus mostly trying to illustrate innovation taken by private/business entities in order to adapt to a COVID-19 economy.

Figure 41 depicts active COVID-19 cases in Indonesia from early March (March 2) up to the end of August (August 31), new cases, total cases, and active cases.

Figure 41: Indonesian COVID-19 Cases, March to End of August 2020[193]



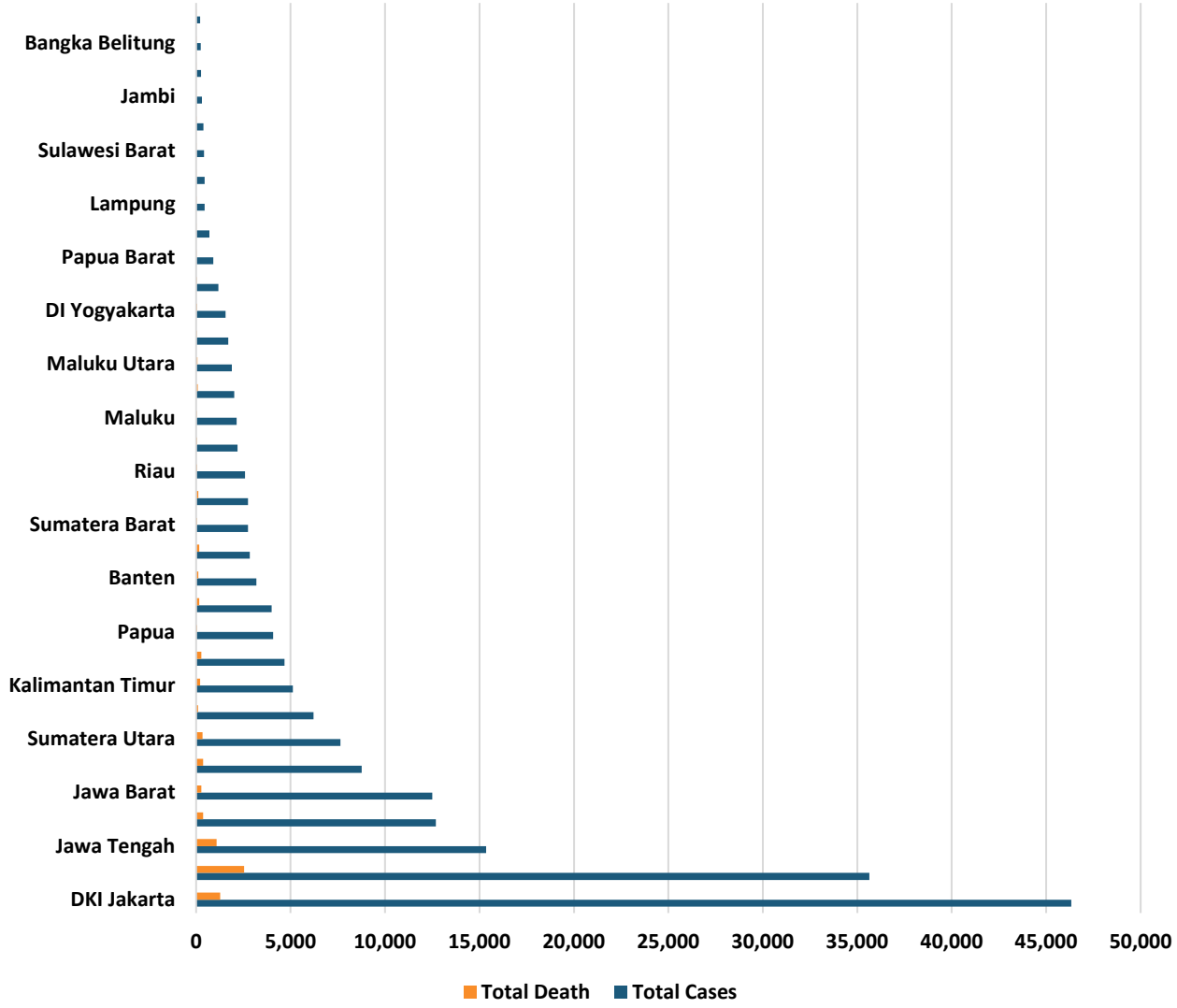
Looking at Figure 41, one may easily infer that Indonesian COVID-19 cases will still increase in the future. At the time of this writing, cases of COVID-19 had not been benign in Indonesia by any means. As a matter of fact, GoI had already introduced the term "new normal" to ease more restrictive measures post the large-scale social restriction (PSBB) policy in early April 2020.[194]

Some of this large-scale social restriction included, but is not limited to, restrictions to non-essential economic activities and people's movement, in order to contain the virus. Several measures were enacted including closure of schools and workplaces, sharp curtailing of religious activities, halting of non-essential public activities (concerts, imposing restriction on hotels and other lodging, etc.), and limiting public transportation services. Restrictions on foreigners entering Indonesia were also imposed to prevent any further transmission of the virus from abroad.

Figure 42 illustrates the distribution of total cases and total deaths as per September 6, 2020 across the 34 provinces in this archipelagic country. In early September, 57 percent of Indonesia's confirmed cases were from Java, the most-densely populated island in the archipelago.

Top 5 ranks of total confirmed cases happened in Jakarta, East Java, Central Java, and West Java. One other province was in the top-5 rank: South Sulawesi. The same situation of total deaths has been similar to total cases, more than 60 percent (65 percent) of Indonesia's death cases were from Java Island—Jakarta, East Java, Central Java, and West Java.

Figure 42: Number of COVID-19 Cases in Indonesian Provinces as of September 6, 2020[195]



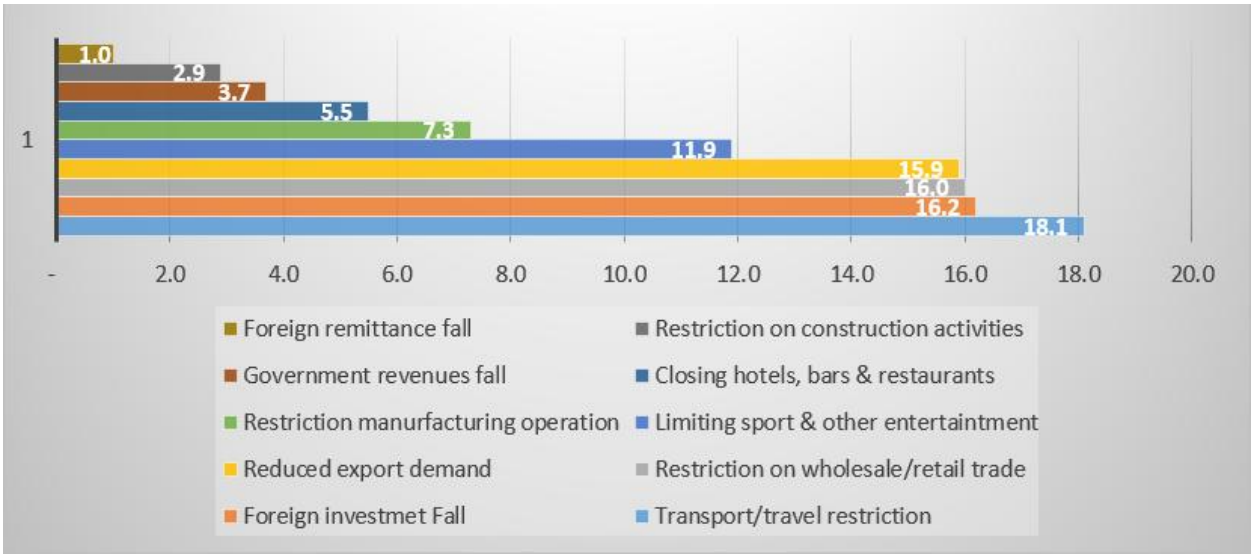
COVID-19 From a Consumer and Business Perspective

COVID-19 has impacted businessed from two perspectives (supply and demand side) at the same time. For the supply side impacting business and workers, for the demand side impacting consumers that deepen it into recession. This recession was intentional and unavoidable. But what is not unavoidable is long-term damage that containment policies are doing to the economy.[196]

In Indonesia, the industry that has been most impacted due to the pandemic is the tourism industry. As reported by Indonesian Hotel and Restaurant Association (PHRI), the industry has lost about $1.5 billion due to the coronavirus outbreak since January this year. Moreover, the Indonesian Travel Agent Association (Astindo) reported that there was relatively no income for travel agents since February 2020.[197] According to data from Indonesian statistics, foreign tourism dropped by 64 percent from March year on year.[198] Tourist arrivals from China, an important source of tourism for Indonesia, experienced the sharpest decline, falling 97 percent year on year, with the number of tourists from Hong Kong down by 96 percent.

However, using a more-rigorous approach, for example using Social Accounting Matrix (SAM) multiplier effect, finds different sectors have different impact with regard to GoI policy of Large-scale Social Restriction.[199] Based on the impact simulation, industries highly impacted by the PSBB policy are manufacturing, transportation-storage-cargo, and tourism. The contribution of restrictions and shocks to GDP losses during the PSBB lock down by impact channel in percentage of total GDP losses, are illustrated in Figure 43:

Figure 43: Indonesian SAM Multiplier Result of COVID-19 Lockdown[200]



Some key findings of the economic indicator post-lockdown: First, the national GDP is estimated to fall by 24 percent during period of lockdown; second, external sector shocks reduced export demand, lowered remittance, and decreased foreign investment, contributing around one-third of total GDP losses; third, national poverty is expected to jump by 13 percentage points, and an additional 36 million people will fall into poverty during the four-week lockdown period.[201]

Given the current situation, the International Monetary Fund (IMF) has released its projections for future Indonesian economic growth, predicting a contraction of only 0.5 percent by the end of 2020.[202] This growth contracted from 5 percent actual economic growth in 2019 and projected to 8.2 percent by the end of 2021. However, one has to bear in mind that the COVID-19 pandemic should be able to be tamed, and the health crisis should be fixed first as a necessary condition of economic recovery if Indonesians want to achieve economic growth in 2021. Otherwise, when the pandemic situation persists, economic forecasts will be revised again after considering policy taken by GoI.

Business Perspective

The impact of the coronavirus pandemic on Indonesian business sectors was assessed with the regular business survey conducted by Department Statistics—Bank of Indonesia, Indonesia Central Bank.[203] General findings from the report, depicted in Figure 44, that "results of the Business Activity Survey (SKDU) indicate that business activities declined in the second quarter of 2020. This is reflected in the weighted net balance (WNB) of -35.75 percent in the second quarter of 2020, contracting deeper than -5.56 percent in the first quarter of 2020. The decline in business activity occurred in all economic sectors with the deepest decline in the manufacturing sector,

trade, hotels and restaurants, and services. This was mainly due to reduced demand and supply disruptions due to the COVID-19 pandemic."

Figure 44: Impact of the Pandemic on Indonesian Business Sectors[204]

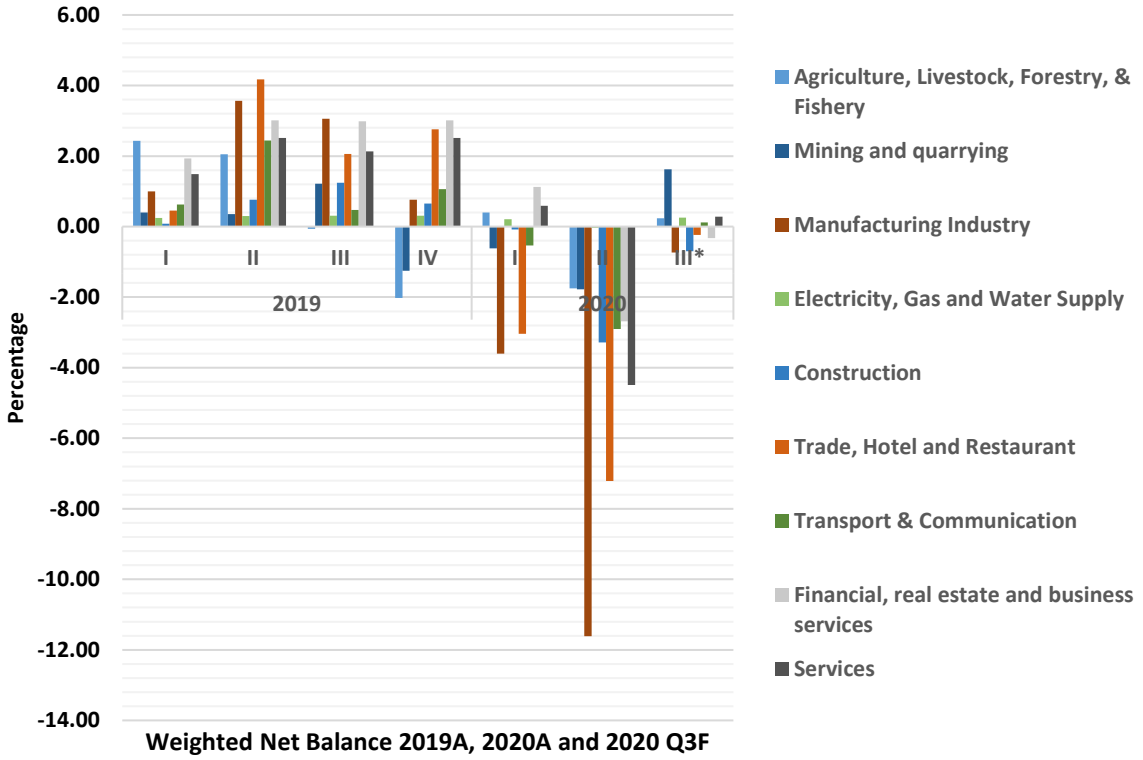


Figure 45, Figure 46, and Figure 47 highlight business owner responses to financial conditions and liquidity issues, their earnings, and their experiences with access to credit based on the central bank survey. It was conducted since the first quarter of 1993. In the second quarter of 2020, the number of SKDU respondents reached 3,259 business actors scattered throughout Indonesia and were selected by purposive sampling.

Figure 45: Financial Condition and Liquidity 2018–2020 (Quarterly)[205]

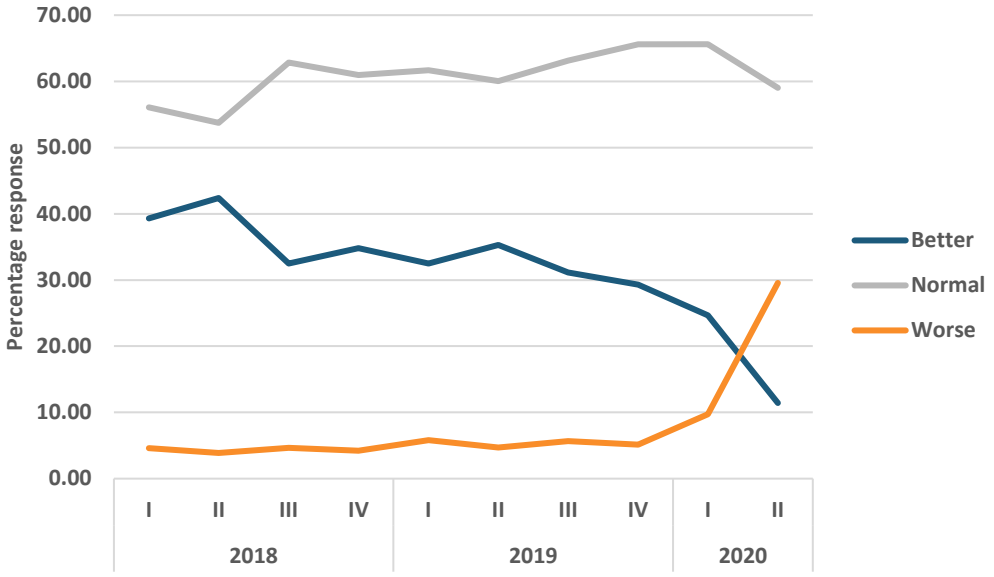


Figure 46: Earnings from Business Activities of Indonesian Firms, 2018–2020 (Quarterly)[206]

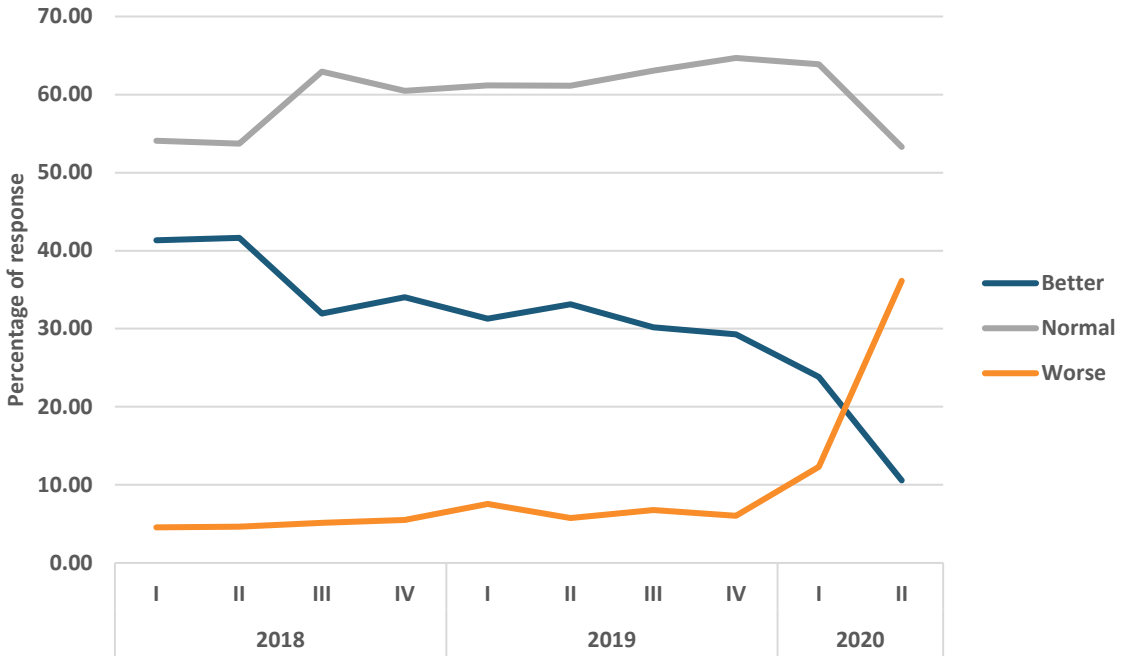
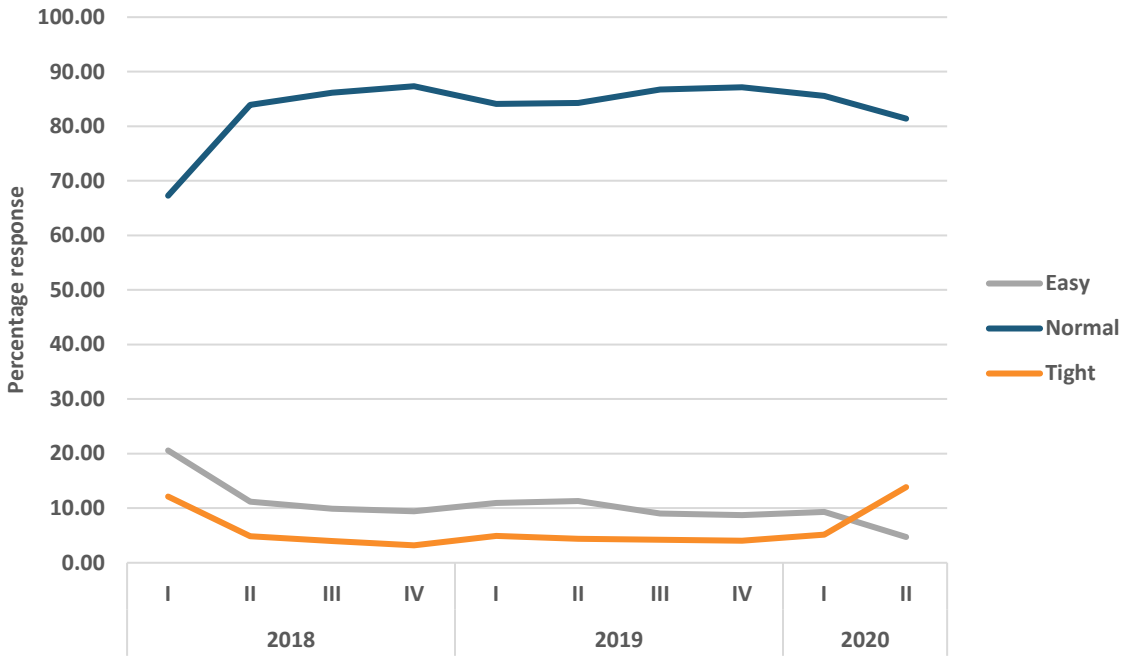


Figure 47: Indonesian Businesses Access to Credit Over Past Three Months, 2018–2020[207]



Despite the difficulty encountered by business owners in the third quarter of 2020, respondents predicted that business activities would increase, supported by improvements in all sectors, with a Weighted Net Balance touch figure of 0.52 percent. Analysts expect business activity to start increasing especially in the services sector, especially in the government administration sub-sector, driven by various central and regional government programs in the context of countermeasures to COVID-19.

Based on the Indonesian Statistics Survey (2020), there are three options for business owners after following COVID-19 protocols: 1) 82 percent survey respondents were applying physical-distancing measures; 2) 81 percent of business owners were preparing hand sanitizers and other health-based equipment; and 3) 85 percent of respondents were requiring their consumers to use masks. Indonesian businesses have worked steadily to adapt to the COVID-19 protocol issued by the GoI.[208] Several business owners already tried to utilize the Internet and online promotion.

Consumer Perspective

We argue that in order to understand the current consumer perspective on COVID-19, one should focus on the consumer survey, conducted by the central Bank of Indonesia. The survey aims to determine consumer confidence regarding current economic conditions, which is reflected in the level of consumption of respondents and consumer expectations of future economic conditions.

The survey covers two indexes: first, Consumer Confidence Index is a simple average of the Current Economic Condition Index and the Consumer Expectation Index. The Current Economic Condition Index includes consumer confidence regarding current income, and timeliness of purchasing durable goods and availability of employment, comparing current conditions versus 6 months ago.

Second, the Consumer Expectation Index includes consumer confidence regarding consumer expectations of the 6-month economic conditions that will be compared to today, including income expectations, conditions (business world) of the Indonesian economy in general, and lastly job availability.

The Consumer Confidence Index is a simple average of the Current Economic Condition Index and the Consumer Expectation Index. Consumer Confidence Index is obtained from the results of the Bank Indonesia consumer survey, which has been conducted since October 1999. The survey was conducted on approximately 4,600 households from the middle- to upper-class economy, income of IDR 1 million and above, who were randomly selected by stratified random sampling in 18 cities.

The Bank of Indonesia's consumer findings state that consumer confidence in economic conditions had slightly improved from the previous month, although it was still in the pessimistic zone (below 100). Consumer optimism regarding the forecast for economic conditions in the next 6 months is still quite strong, although not as high as the previous month. (See Figure 48.) Nevertheless, when we scrutinize consumer optimism by checking Consumer Expectation Index, the survey finds that "Consumer Expectation Index for Economic Conditions on month of August 2020 weakened to 118.2. This figure was lower than previous July 2020 at 121.7, in line with more limited expectations on income, job availability and business activities." (See Figure 49.)

Figure 48: Indonesian Consumer Confidence Index, 2018–2020[209]

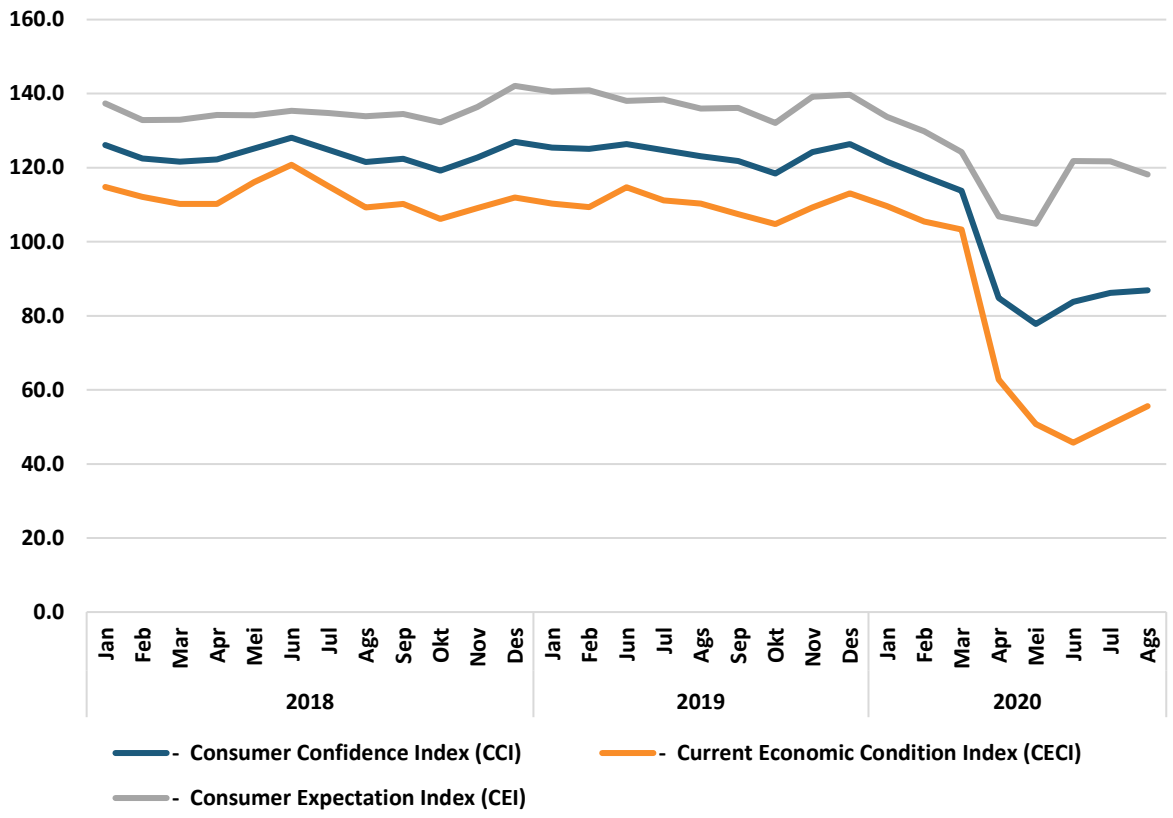
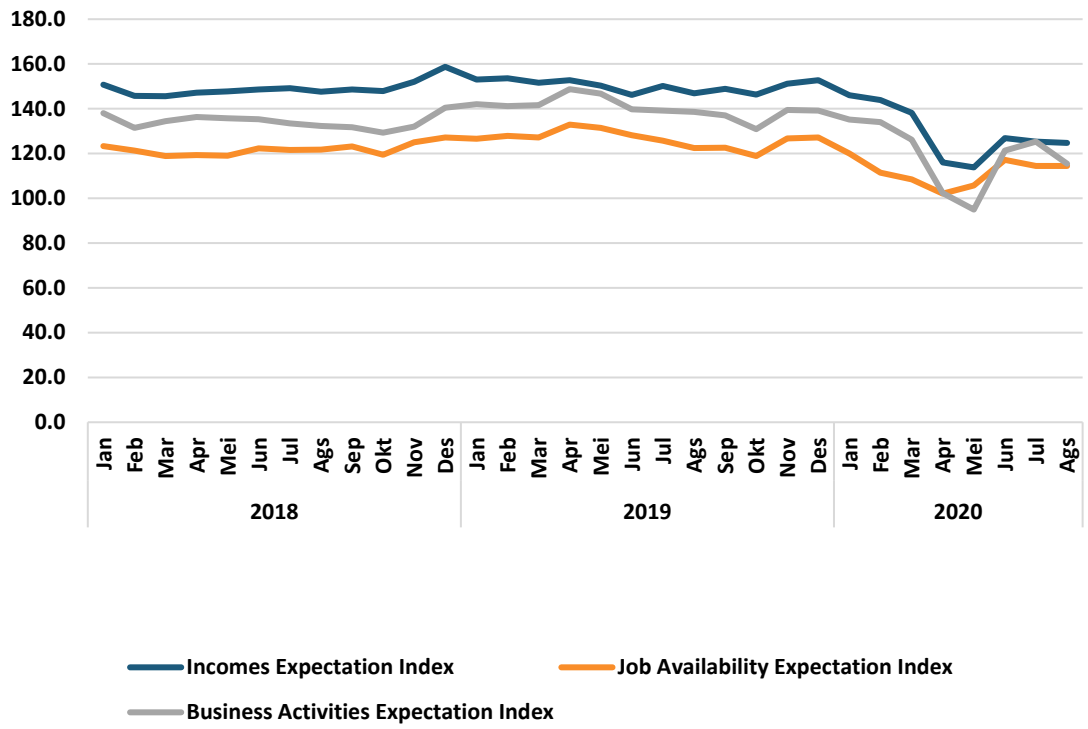


Figure 49: Indonesian Consumer Expectation Index, 2018-2020[210]



The Indonesian COVID-19 pandemic is still far from ending by any means. By looking at descriptive data, this monograph considers new cases, total cases, active cases, and the spatial distribution of the virus. We also depict descriptive data from business and consumer perspectives as well as assess impact of COVID-19 to their business, pocketbooks, and future income as well. Indonesia has never experienced the kind of pandemic at full scale like COVID-19. However, we are cautiously confident with working together among the governments, civil society, and think-tanks, not to forget business sectors, Indonesian could pass and tame the spread of the virus on one side; investing the health sector and reform its economy to be more prepared with challenges in the near future.

Italy

By: Eleonora Mazzoni, Director, Innovation Department, I-Com with Pietro Paganini, Co-Founder and Curiosity Officer; Giacomo Bandini, Director General; and Stefano Sartorio, Research Analyst and Project Manager, Competere

The Italian Response to the Coronavirus Pandemic

Introduction

The COVID-19 pandemic has rapidly spread in Italy, the first Western nation to be massively hit, and the country's national health system has never had to face so hard a challenge. Meanwhile, the economic and social context was also put under great pressure. In the following paragraphs we analyze the Italian health and economic response to the COVID-19 crisis.

1. The COVID-19 Pandemic in Italy and the Threats to the National Health Service

The latest updated data (September 8, 2020) registered 280,153 confirmed cases of COVID-19 in Italy from the beginning of the epidemic (January 29, 2020) with 35,563 deaths, while there have been 210,801 recoveries or dismissals.[211] (See Figure 50 and Figure 51.) During the peak of the pandemic, Italy's number of active cases was one of the highest in the world, with a medium rate of 588 deaths per million population. According to the Ministry of Health, at the end of August an increase in new cases was reported for the fifth-consecutive week with a cumulative incidence in the last 14 analyzed days (period August 17 to 30) of 23.68 per 100,000 inhabitants, up from the period of July 6 to July 19, and similar to the levels observed at the beginning of May. In the same month, with the analyses of the results from the epidemiological national survey, it was estimated that nearly 1.5 million Italians had been infected by SARS-CoV-2 since the beginning of the pandemic. With the slow and progressive relaxing of restrictive measures, the number of cases sharply declined between the beginning of May and the first two weeks of August, but, thereafter, due to the increased movement of people inside and outside Italy during the summer, a significant number of COVID-19 outbreaks were again identified leading to an increase in new daily registered cases of infection. The median age of cases diagnosed in the last week is 32 years, showing a circulation occurring more frequently in younger adult age groups, due to an advanced reopening of activities (including places of aggregation) and an increased mobility. According to cumulative data, the mean age is 58 years.[212] Health workers were significantly exposed to the COVID-19 risk and, according to the latest update of cumulative data (September 9), 11 percent of health workers have been affected by the virus out of total COVID-19 cases.

Figure 50: Cumulative Number for 14 Days of COVID-19 Cases per 100,000 Population[213]

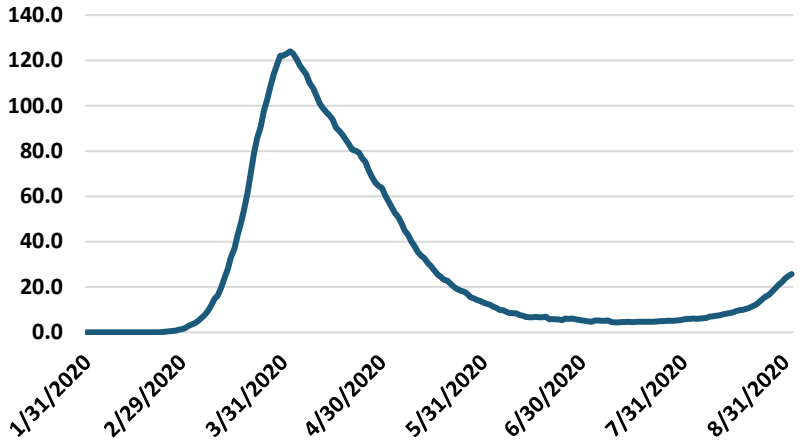
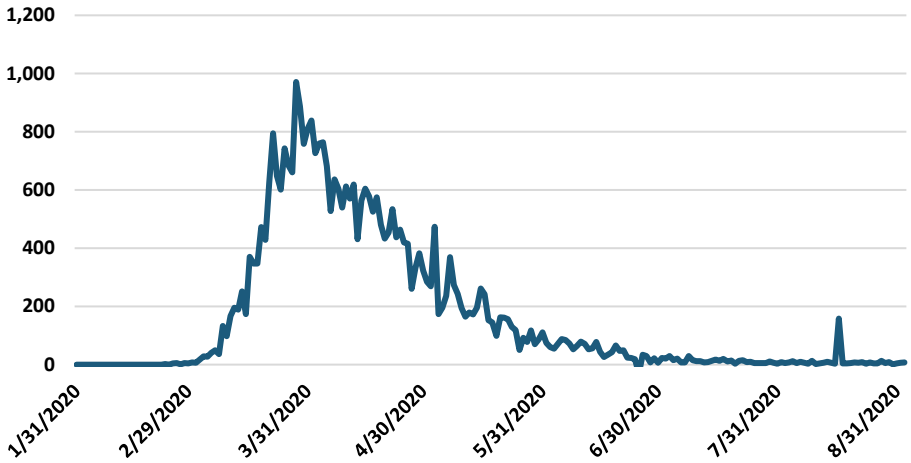


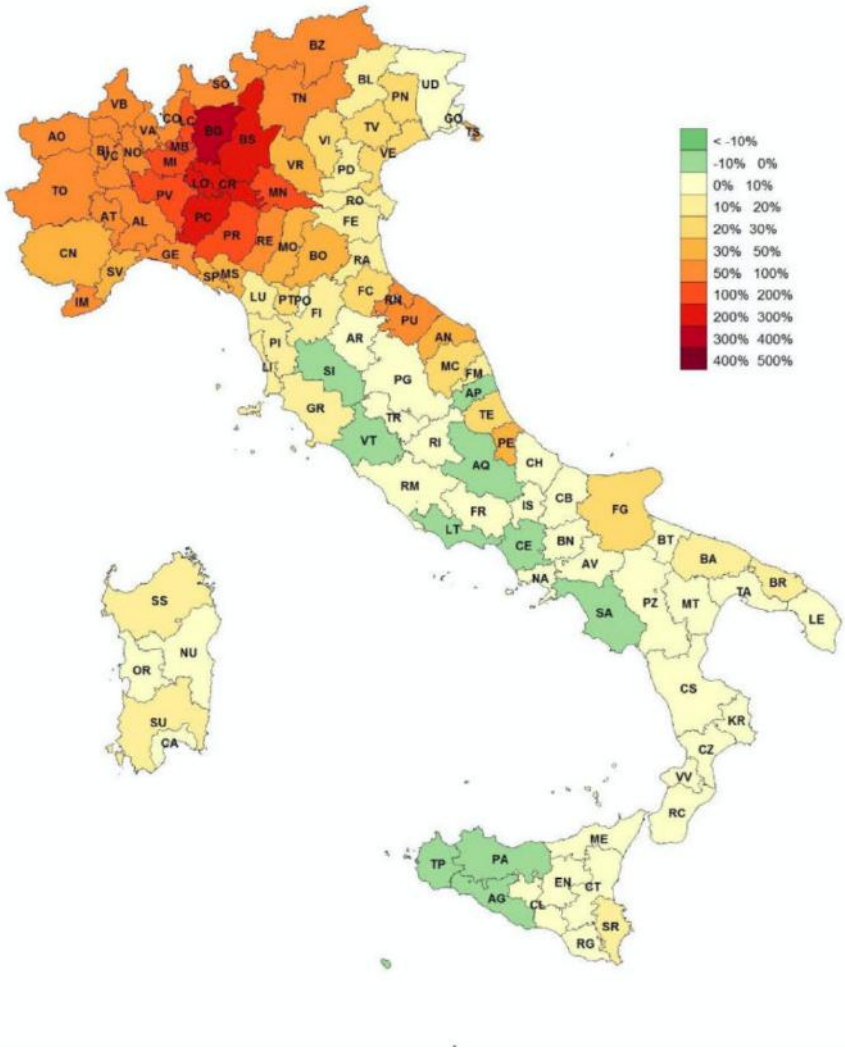
Figure 51: New Registered Daily Deaths Due to COVID-19 in Italy[214]



The increase in new daily cases in the latest weeks is also connected to the increased testing capacity in the country, which has led to a significant increase in daily tests and throat swabs. The latter results in a constant rate of between new registered COVID-19 cases and performed swabs, which is at present around 1.3 percent, far from the more than 40 percent registered during the peak of the epidemic in the second half of March. However, this is an increase if compared with the values observed during the months of June and July which were permanently under the 1 percent threshold.[215] According to the scientific society and to the experts of the Scientific Committee working with the Italian government, the situation is under control but requires, on the one hand, a strengthening of the testing capacity in the country in order to perform 400,000 throat swabs per day and, on the other hand, supporting correct citizen behavior. This increased capacity will require a great public resources investment and will have to be clearly addressed to schools, border officials, and public administration workers. Indeed, during September, Italian schools opened for the first time after the lockdown and, together with other working activities, increased interaction will become unavoidable. According to the latest updated data, in the week from August 25 to September 1, 2020, the weekly rate of new swabs recorded the highest values in the northern regions (17.6 per 1000 habitants in Friuli

Venezia Giulia, 17.2 in Veneto, and 15.1 Emilia Romagna) while the lowest value was recorded in Sicily (4.28).[216] On average, in Italy, a value of 9.94 is recorded with an increase on the precedent week in which the registered value of new swabs per 1,000 habitants was 8.02. According to the positivity index on tests carried out, 1 new test subject out of 43 is positive. Figure 52 shows how different the effects of COVID-19 have been among the various Italian regions. The figure, elaborated by INPS (the national social security institute), compares the general death rates at a provincial level in Italy registered in the period from the March 1 to April 30, 2020 (the epidemic peak), with the general death rates estimated in a baseline as the average of daily deaths occurring in the years 2015 to 2019 weighted with the resident population (thus in absence of the epidemic).[217] It can be seen that in many provinces in central and southern Italy, the mortality rate had even fallen with respect to the baseline despite the spread of the virus. Meanwhile, the northern part of Italy registered an increase in the mortality rate of more than 50 percent, and in some cases, mainly in the region Lombardy, between 100 percent and 400 percent.

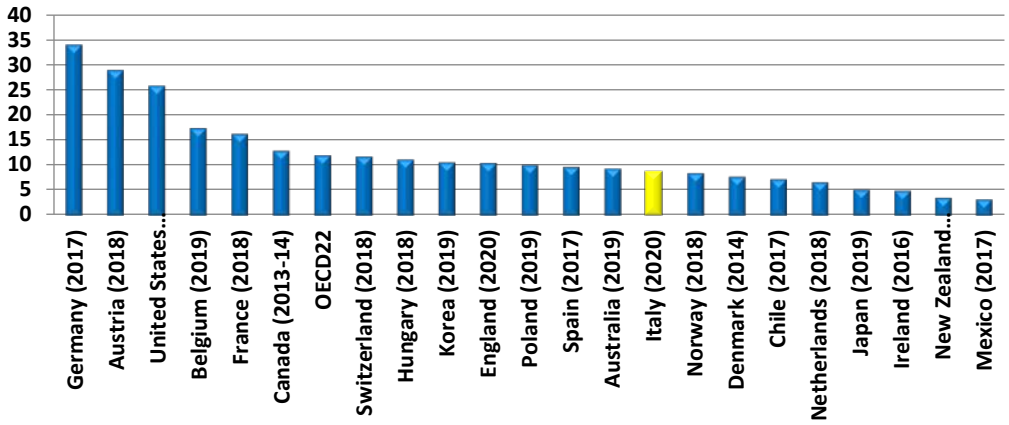
Figure 52: Percent of Deaths at the Provincial Level Recorded in the Period From March 1 to April 30, 2020 With Respect to a Four Year Baseline for the Same Period[218]



The coronavirus outbreak has rapidly progressed globally, and Italy, as one of the main pandemic hotspots, may provide some hard lessons. When on January 30, the World Health Organization (WHO) declared the COVID-19 outbreak a public health emergency of international concern, the Italian government banned air traffic from China and, the following day, declared a six-month state of health emergency, entrusting the Civil Protection Department with the responsibility for the coordination of interventions necessary to deal with the emergency nationwide. The first case of pneumonia due to SARS-CoV-2, without exposure abroad, was diagnosed in northern Italy (Lombardy) at the end of February. Within a few days, several COVID-19 cases were confirmed in surrounding areas, including a number of critically ill patients. Meanwhile, another cluster of patients with COVID-19 was simultaneously identified in Veneto, an Italian region bordering on Lombardy. At the end of February, the Ministry of Health ordered a mandatory supervised quarantine of 14 days for all individuals who had come into close contact with confirmed cases and, thereafter, the government imposed increasingly strict physical distancing measures, starting with the closure of 10 municipalities in Lombardy and Veneto. On February 23, the Ministry of Health suspended all public events and closed facilities of any nature open to the public in five regions in northern Italy (e.g., schools, gyms, public places). Subsequently, lockdown measures were extended to the national level, through several decrees enacted by the President of the Council of Ministers, closing schools (March 5), banning public events (March 9), limiting movement of people except for proven work needs or situations of necessity (March 11, national lockdown ordered), and suspending all retailing and business activities, with the exception of essential goods and production activities strategic or relevant to the management of the crisis (March 22). The national lockdown, with exception of some retailing and business activities, was prolonged until May 3.

The continued increase in SARS-CoV-2 transmission has placed tremendous pressure on the health care system and overburdened hospitals and territorial care, both unprepared to respond to the sudden increase in demand due to the spread of the infection. The peak of the epidemic occurred at the beginning of April. However, since then, the effect of the above-mentioned proactive measures has become evident, and a flattening of the contagion curve trajectory and a reduction in the number of new cases can be observed, with a consequent lightening of the pressure on hospitals and intensive care wards. Nevertheless, the progressive reduction in the pressure on the health system has also resulted from a number of measures introduced by the Italian government in order to strengthen the National Health Service (NHS, in Italian, SSN, or Servizio Sanitario Nazionale) and to the commitment both of doctors and of the scientific community to improve treatment efficacy. To understand the different measures put in place to face the COVID-19 threat and the related critical issues, the organization of the National Healthcare Service needs to be explained. The Italian NHS is regionally based, with local authorities responsible for the organization and delivery of health services, leaving the strategic leadership to the Italian government. Over the last 10 years, the NHS has suffered financial cuts that should have gone hand in hand with an important restructuring of public assistance, leading to a greater efficiency through the strengthening of the local health systems. However, the latter has never been completed and, where actions were taken in this direction, they were not uniform among the different Italian regions, thus creating huge differences in being able to answer to the demand for assistance and treatment. (See Figure 53.) This has led to shortcuts in the entire governance of the system, leading to an increase in private health care expenditure and the privatization of health care services and to an increase in patient mobility between regions, de facto competing for better health service management and supply.

Figure 53: ICU Beds per 100,000 Inhabitants[219]



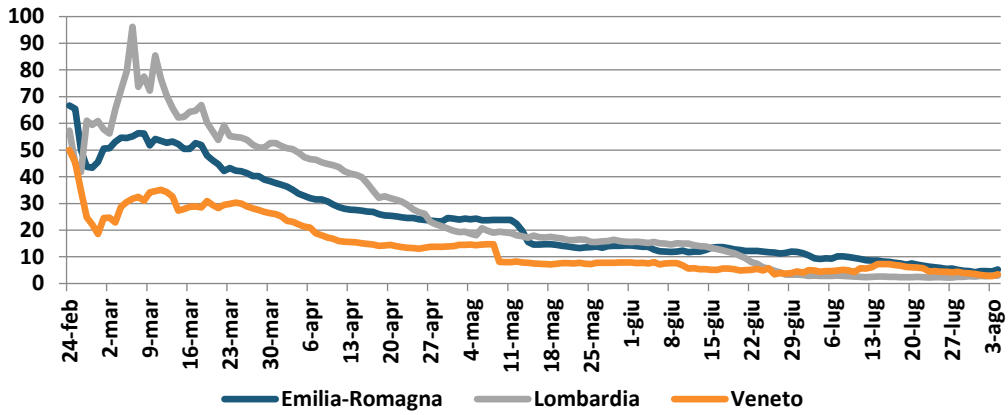
2. The National Response to Managing the Epidemic

The national response to contain the COVID-19 epidemic came in the form of a series of decrees from the Presidency of the Council of Ministers progressively extending counter-measures, with the Italian Prime Minister taking over some responsibilities from the regions and autonomous provinces, being in charge of implementing health care but ill-prepared to face a national emergency. With these decrees, the national lockdown was extended until May 3, 2020 and, thereafter, the restrictive measures were progressively removed. However, only during the month of June were many of the restrictive measures relaxed, with the exception of schools to be reopened in September. The last decree (September 7, 2020) confirmed, among the measures to contain the contagion in this phase of coexistence with the virus, the obligation to wear masks while in closed spaces and every time it is impossible to maintain a physical distance. Moreover, it establishes the rules to follow for public transport and the closing of stadiums and discos to the public, and, as well, a list of countries defined at risk from where entry into Italy is forbidden.

Concerning the health response, the approaches taken by the Italian regional health systems to the COVID-19 emergency fell into three broad types: a hospital-based model, a territorial-based model, and a combined hospital-territorial model. The first type places the main emphasis on the role of hospitals, with a relatively low level of community testing. This has been associated with substantial pressure on hospitals and, particularly, ICU (intensive care unit) beds. In Lombardy, an average of 50 percent of those diagnosed with COVID-19 have been admitted to hospital, and once considering the duration of stay in ICUs, the ratio of patients treated in ICUs to those treated at home has been twice as high in Lombardy than in Veneto, Emilia-Romagna, or Piedmont (the other three regions more hit by the emergency). This also means that daily occupancy of ICU beds has exceeded 100 percent, compared to Emilia-Romagna, the second-most severely affected region, where the occupancy rate was 38 percent during the epidemic peak. An interesting Italian case study on the value of a territorial response may be provided by the Veneto Region, which probably benefited from an early but circumscribed outbreak.[220] (See Figure 54.) In this region, proactive case and contact investigation, testing, and quarantine or home isolation, along with an organised home care for mild cases, were the cornerstones of the territorial response strategy that was based on a well-established network of public health and primary care services. Veneto has reported higher rates of coronavirus testing and home isolation and lower rates of hospital admissions and fatalities, in comparison to other Northern Italy regions impacted by the outbreak. Veneto opted for a strict containment of the outbreak and

piloted mass testing in selected areas, whereas Lombardy reported high transmission and disease rates and strengthened its hospital services to meet a massively increased demand for hospitalization and intensive care unit beds.[221] Nationwide, coordinated partnerships between the private and public sector have been created increasing the health care system's ability to deal with patients, especially COVID-19 victims.

Figure 54: Hospitalized COVID-19 Patients Out of Total Positives, by Region (%)[222]



2.1 Main Actions Undertaken in Support of the Health System

The extraordinary containment measures launched through the various government decrees have been the only possible emergency strategy to avoid the collapse of the national health system. Meanwhile, the government has also intervened, introducing different measures, both financial and organizational, to strengthen the NHS in order to improve its ability to face the crisis. With the decree-law No. 18 of March 17, 2020, containing measures to strengthen the NHS and economic support for families, workers, and businesses, new resources of about €3.2 billion ($3.72 billion) were allocated to respond to the health emergency. The decree provides for an increase of €1.41 billion ($1.64 billion) for 2020 in the level of state financing for national health needs and an increase of €1.65 billion ($1.92 billion) in the fund for national emergencies. A total of €250 million ($290 million) is earmarked to increase the resources allocated for overtime remuneration of health care personnel directly employed to fight the epidemiological emergency, and €100 million ($116 million) for recruiting self-employed professionals, including medical students enrolled in the final and penultimate year of specialization. The decree also authorizes the regions, autonomous provinces, and health care companies (ASLs) to enter into agreements for the purchasing of health services exceeding the spending threshold provided by the current legislation for an expenditure of €240 million ($280 million) in 2020. In addition, the setting up of health care areas, even of a temporary nature and as an exception to the requirements for authorization and accreditation, has been permitted. For this purpose, €50 million ($58 million) was allocated, a sum included in the already-programmed fund for health care construction and technological modernization. Moreover, funding for companies manufacturing medical devices and personal protective equipment paid through Invitalia was activated, for a spending authorization of €50 million ($58 million) for the current year.

The decree also contains new rules regulating clinical trials for drugs and medical devices, with reference to patients affected by the virus, as well as the compassionate use of drugs still in their trial phase. The measures are intended to improve the ability to coordinate and analyze the available scientific evidence and are applicable until the end of the state of emergency. In particular, the decree makes it possible for the Italian Medicines Agency (AIFA) to access all data relating to experimental studies and compassionate use, with exclusive reference to patients affected by COVID-19. It also identifies the Ethics Committee of the National Institute for Infectious Diseases-IRCCS "Lazzaro Spallanzani" as the only national ethics committee for the evaluation of the above-mentioned trials, with the right and duty to express the relevant opinion, therefore at a national level, taking into account the assessment of AIFA's technical-scientific advisory commission. This will overcome the critical issues that usually characterize the evaluation of clinical trials in Italy: the non-uniformity of the evaluation criteria, the excessive number of ethical committees, and the excessive bureaucracy. This is an unprecedented move leading to collaboration and partnership between institutions, research structures, and centers and pharmaceutical companies opening the door for a new study and research model which, appropriately regulated, will serve to define the rules and procedures of clinical trials and of the Ethics Committees of the post-COVID-19 phase. It will be based on three fundamental variables: the speed, the simplification of the procedures (without ignoring the rigor of the evaluations), and the essentiality of the objectives and end points, which refer to mortality and the duration of treatment.

To overcome the bottlenecks created by the emergency, Italian regions have been called on to activate specific regional operations centers, with the appropriate personnel and equipment for tele-monitoring and tele-medicine, linked to the territorial services and the emergency-urgency system, in order to ensure the coordination of health and social-health territorial activities, as implemented in the regional plans. In line with these measures, integrated home care has been strengthened, thus helping to reduce the use of institutionalized forms of assistance and care (long stays and hospitalizations).

In May, having passed the most critical phase of the emergency, with decree-law No. 34, then converted to Law No. 77 of July 2020, other health services related to emergency measures were added, such as the extension of treatment plans and the duration of medical prescriptions. Moreover, the decree contains programmatic measures including funds to strengthen local health care and reorganize the hospital network. About €430 million ($500 million) has been allocated for the recruitment of health personnel, while the Emergency Fund has been increased by €1.5 million ($1.75 million) for the year 2020. Last but not least, in order to increase and support scientific research, the government has provided facilitation for the use of health data, allowing, for example, the National Institute for Statistics (ISTAT) to also process sensitive personal data in order to carry out statistical surveys and analyses aimed at understanding the Italian economic, social, and epidemiological situation. In order to improve the availability of data, the electronic health record system has also been enhanced to facilitate the collection of data and digital documents of a health and socio-medical nature generated by present and past clinical events concerning patients.

The last interventions were introduced in August with decree-law No. 104 providing standards for the normalization of waiting lists for health care services. To this end, the National Health Fund for 2020 has been increased by a further €478 million ($556 million), accessible to all regions and autonomous provinces that have submitted a Regional Operational Plan for recovery to the Ministry of Health and the Ministry of Economy and Finance.

3. The Economic Consequences of the Pandemic in Italy

As already mentioned, in order to stop the spread of COVID-19, the Italian government on March 2, 2020, published a decree suspending all industrial and commercial activities, with certain exceptions for "essential activities." The suspension directive applied to the whole of Italy and was effective from March 23 until May 3, 2020. An extension of the list of "essential activities" was communicated in early April 2020. Exceptions to the decree's provisions included only the access to the premises of the companies of those activities that had been suspended for maintenance, supervisory, cleaning activities, and for the payments management. Following the lockdown measures, in March, 72 percent of the 6,000 firms surveyed reported to be directly affected by the situation mainly due to a huge drop in demand, problems along the supply chain, and transport/logistics issues.[223] One-third of respondents estimated a decrease in revenues above 15 percent, and an additional 18 percent of firms anticipated a drop of 5 to 15 percent. Many companies reduced or halted their productions and, following the decree-law "March 22, 2020," were forced to shut down all non-core or strategic production activities.

The latest economic forecasts issued by the Bank of Italy (BoI) for the year 2020 show that the baseline projection points to GDP contract by 9.5 percent on average this year, followed by a gradual recovery over the next two years (4.8 percent in 2021 and 2.4 percent in 2022).[224] (See Table 5.) The worse scenario elaborated by the BoI in the last macroeconomic bulletin takes into consideration the resurgence of COVID cases next autumn. In that case, Italy's GDP is expected to decrease by 13.1 percent this year with a slow recovery in 2021 and 2022 (respectively 3.5 percent and 2.7 percent).

However, after falling very sharply in the first half of the year (by about 15 percentage points overall), GDP is projected to return to growth in the second half, largely owing to the fading of the effects of the containment measures. The negative repercussions of the pandemic on international trade, tourist flows, and households' and firms' behaviors appear to be persistent and are likely to hold back aggregate demand over the entire forecasting horizon. At the end of 2022, GDP is projected to remain about 2 percentage points below the level recorded in the fourth quarter of 2019.

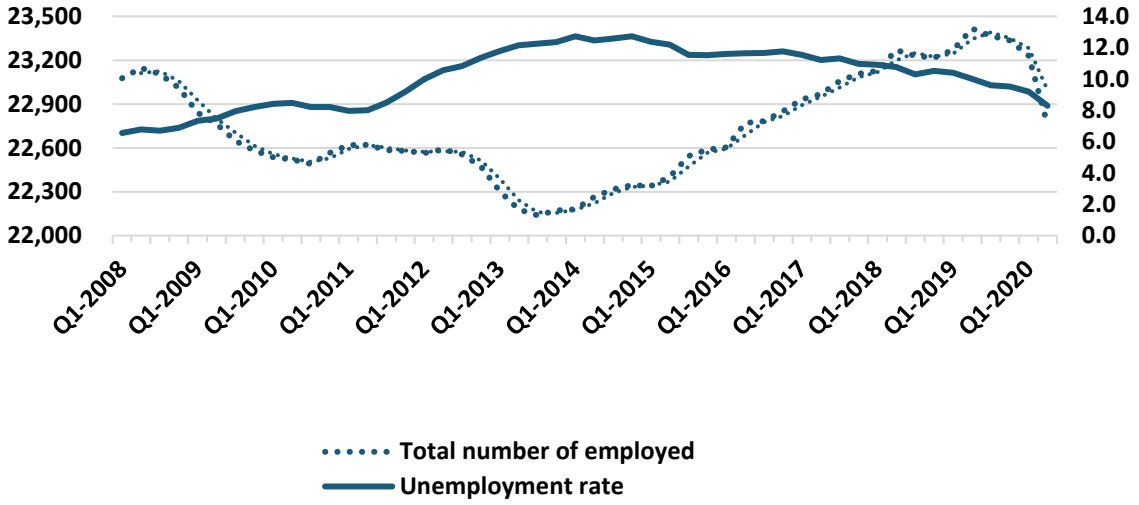
Table 5: Macroeconomic Projections by the Bank of Italy (Baseline + Severe Scenarios)[225]

	Baseline Scenario			Severe Scenario		
	2020	2021	2022	2020	2021	2022
GDP	-9.5	4.8	2.4	-13.1	3.5	2.7
Household consumption	-9.9	4.8	1.5	-13.1	4.1	2.1
Government consumption	0.9	0.6	1.8	1.1	0.4	2.4
Gross fixed investment	-18	7.3	6.5	-19.5	-1.4	7.4
Exports	-16.2	7.6	4.3	-20.3	4.8	3.9
Imports	-15.9	8.3	4.5	-17	4.5	6.2

As a consequence of the lockdown, employment is projected to decrease by about 12 percent in 2020 in terms of hours worked, and then to recoup about three-quarters of the fall over the next two years. (See Figure 55.) The number of persons in employment decreased by 500,000 units since February 2020, also due to the extensive use of wage supplementation. Use of this measure appears to have been during the second quarter of the year, involving about 3 million full-time-equivalent employees. Under the current legislation, the use of wage supplementation

is expected to be more moderate in the last quarter of the year and to realign with pre-pandemic levels at the end of the forecasting scenario. According to Istat and BoI estimations, "[Th]e job-seeking activities could begin to intensify in the second half of 2020 despite a persistent weakness in labor demand. Such developments would lead to an increase in the unemployment rate, which would average around 11 per cent in 2020 and would continue to grow in the next two years, to around 12 percent."[226]

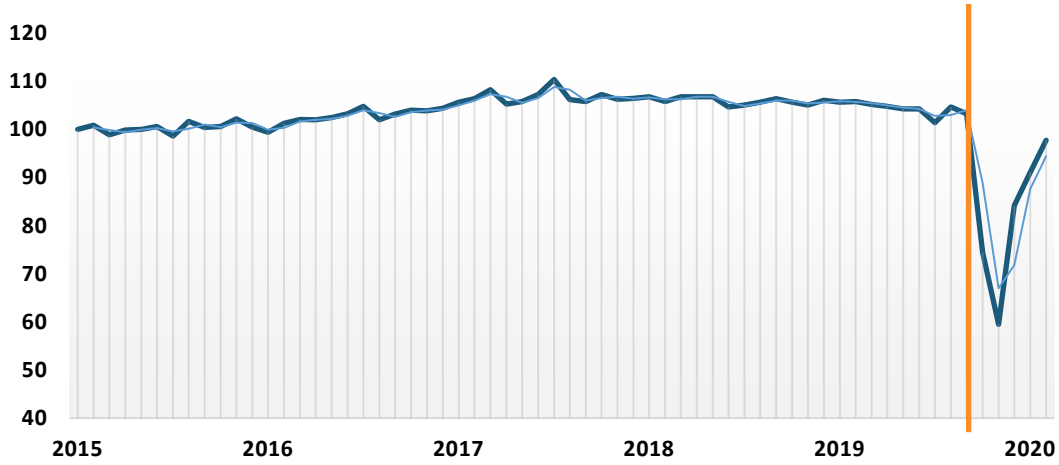
Figure 55: Total Number of Employed (Left Axis) + Moving Average and Unemployment Rate (Right Axis)[227]



After declining in the first quarter (-8.4 percent compared with the previous year), industrial production registered another sharp fall in April (-19.1 percent compared with the previous month), reflecting the lockdown of "non-essential" activity. (See Figure 56.) With the gradual easing of the lockdown, industrial activity began to grow again in May and June, (by 40 percent compared with April), but still almost 25 percent below the levels prior to the spread of the epidemic.

The epidemic affected particularly the demand for goods and services, as reported by most of the firms, both domestic and foreign. Furthermore, the obstacles to the procurement of raw materials and workforce availability were major factors of the production drop.

Figure 56: Industrial Production Index (Base 2015 = 100) + Moving Average (Red Line Indicates the Implementation of Lockdown Measures)[228]



In the first quarter of 2020, the volume of exports of goods and services fell by 8 percent compared with the previous quarter. The primary cause must be identified in the lockdown of non-essential activities, which tend to be more export-oriented, and to a general decrease in foreign demand.

Goods sales declined by 4.7 percent, with consequences for all the main outlet markets (apart from the United States) and all sectors. Food, chemical, and pharmaceutical segments were the only ones to register better performance during the considered period. Exports to markets outside the euro area contracted less noticeably, thanks to the improvement in export-weighted price competitiveness. Exports of services fell much more markedly (-21.8 percent), mainly because of lower demand for tourism services.

After the sharp fall recorded in April, exports to non-EU markets rose by 37.6 percent in May, compared on a monthly basis. Despite this, they were one-third lower than the levels observed prior to the spread of the epidemic. On average, in the second quarter, manufacturing firms' assessments of foreign orders were at their lowest level since the time series began.

The current account surplus was €5.5 billion ($6.4 billion) in the first four months of 2020, decreasing by €1.7 billion ($2 billion) compared with the same period a year earlier.

Before the pandemic, the Italian economy was already in a perilous state, having yet to recover from the sharp double-dip recession in 2009-10 and 2012-13. Its public finances were under heavy pressure even before the pandemic; and mounting a fiscal response to the decline in aggregate demand will create even greater strain, with public deficit and public debt over GDP expected to rise in 2020. The current recession has featured a surge in household savings that reflects growing fears for the future. There is therefore a serious and justifiable concern that the outbreak may have long-lasting and highly damaging consequences.

After COVID-19, the productivity sickness that has plagued Italy for the past quarter of a century risks worsening in the "new normal," unless high-growth start-ups find a more favorable ground to flourish on.

4. The Economic Policy Response to the COVID-19 Economic Crisis

To counter economic downturns during the COVID-19 pandemic, the Italian government issued three sets of measures through the Cura Italia Decree, the Liquidity Decree (Decreto Liquidità), and the Relaunch Decree (Decreto Rilancio).

4.1 Decreto Cura Italia "Cure Italy Decree" (DL 18/2020): Allocated Amount €25 Billion

Published in the Official State Gazette (Gazzetta Ufficiale della Repubblica Italiana) on March 17, 2020, it was converted in Law (L 27/2020) on April 24, 2020. The decree suspends all industrial and commercial activities, with certain exceptions for "essential activities." It's the first significant intervention in support of the Italian economic system, businesses, and families implemented by the government. The main objectives of this measure are:

- Increasing the financial capacity of the National Health System, the Civil Protection (a special Department of the Prime Minister Cabinet for emergency and national security), and other public bodies involved in the emergency;
- Supporting employment and worker income;
- Stimulating financial credit and loans through the banking system and the use of a central guarantee fund. The European Central Bank has a pivotal role in this regard. The Pandemic Emergency Purchase Program (PEPP) of €1.350 billion ($1.57 billion) aims at lowering borrowing costs and increase lending in the euro area; and
- Providing the deferral of taxes and social security payments.

The government and EU measures' goal in this situation is to maintain consumption in the eye of the pandemic recession by sustaining the internal demand. By focusing on credit expansion measures and low interest rates, these measures ought to preserve the psychological and economic situation of Italian citizens.

Regarding the health care system, the decree provided special resources (€1.41 billion, $1.64 billion) to reinforce the medical personnel and equipment of the National Health Service to address COVID-19 epidemic. Additional resources (up to a total of 250 million euros) have been earmarked in order to remunerate the overtime work by health care staff (employed by National Health Service bodies) directly employed in anti-COVID-19 activities. The portion of current health funding for 2020 was increased by €100 million ($116 million) to enroll doctors, physicians, and nurses under several atypical forms of contract (freelance, retired personnel).

5. Economic Stimulus Measures

Concerning the fiscal measures implemented by the Italian government to prompt an economic stimulus amid the COVID-19 pandemic, moratoriums on payment slips and executive assessments, customs executive assessments, tax injunctions by local authorities and executive assessments by local authorities have been put off.

A tax credit is being granted, for the year 2020, equal to 50 percent of the expenses incurred for the sanitation of working environments and tools. The tax credit is reserved for businesses, art, or professional activities up to a maximum amount of €20,000 ($23,265) for each beneficiary, and a total limit of €50 million ($58 million). A tax credit equal to 60 percent of the rent for the month of March was also granted to shops and boutiques. Other measures

include the introduction of tax incentives for donations, in cash and in kind, made to fund the containment and management of the epidemiological emergency by COVID-19.

The operativity of the Solidarity Fund for first home purchase-mortgages to self-employed workers and freelancers who have suffered a fall in turnover of more than 33 percent compared to the last quarter of 2019 was extended for nine months following the closure or restriction of their activities in implementation of the measures adopted for the coronavirus emergency.

The measures in support of work mainly concern special rules on social shock absorbers. Several procedural simplifications have been introduced (i.e., exemptions from additional contributions for ordinary payroll integration and ordinary allowances required for suspension or reduction of work).

A bonus of €100 ($116) was awarded to employees, public and private, with a total income not exceeding €40,000 ($46,530) who, during the health emergency period, continued to work at their workplace in March 2020. All self-employed workers, seasonal workers, and other forms of work under stress due to the restrictive measures that followed the health emergency were granted a financial transfer of €600 ($768) for the month of March.

Following the suspension of educational services for children, public and private employees are granted leave, either continuous or split, for a total of no more than 15 days, if they have children not older than 12 years (or even older in the case of severely disabled children), with an allowance equal to 50 percent of the salary and with recognition of the notional contribution. As an alternative to the previously mentioned benefits and under the same conditions, workers will be able to benefit from a voucher for the employment of baby-sitting services up to a total maximum limit of €600 ($700), raised to €1,000 ($1,160) for employees in the health sector (public and private), as well as for employees of the state police and for staff in the security, defense, and public aid sector employed for the epidemiological emergency. A total of €85 million ($100 million) was given to schools in order to implement the distance learning; and €10 million ($11.6 million) was used by educational institutions to promote the use of e-learning platforms and to immediately equip themselves with digital tools useful for distance learning. A further €70 million ($81.4 million) was used to make digital devices for distance learning available to less-affluent students on free loan. The remaining €5 million ($5.8 million) was used to train school staff. Approaching the environmental and energy issues, a series of deadlines relating to waste management was provided. With regard to energy, suspension of payment terms for invoices and payment notices was issued for electricity and gas supplies for the municipalities most affected by the COVID-19 epidemic.

5.1 Decreto Liquidità (DL. 23/2020) – Allocated Amount €400 Billion ($465 Billion)

Published in *Gazzetta Ufficiale della Repubblica Italiana* on June 6, 2020, it was converted in Law (L 40/2020) on June 5, 2020.

The conversion of the Decreto Liquidità (April 8, 2020) into law made a number of changes, including providing €200 billion ($232 billion) to all Italian companies affected by the pandemic. It includes measures that are intended to assist businesses by providing loan guarantees, government assumption of non-market risks, and certain targeted tax relief.

The main measures included in this decree are related to the facilitation of access to credit (loans) and the guarantee by the government on them of 100 percent or 90 percent, depending on the amount of the loan.

- 100 percent guarantee for loans not exceeding 25 percent of revenues up to a maximum of €25,000 ($29,000), without any creditworthiness assessment. In this case, the banks will be able to grant the loans without waiting for the go-ahead from the Guarantee Fund;
- 100 percent guarantee (of which 90 percent is state and 10 percent Confidi) for loans not exceeding 25 percent of revenue up to a maximum of €800,000 ($930,000), without any evaluation of creditworthiness;
- 90 percent guarantee for loans up to €5 million ($5.82 million), without performance appraisal; and
- Support for liquidity and exports is also included (through the Guarantee fund and the public agency SACE) in the form of loans.

Extension of tax and social security payments is also very important. The fiscal deadlines have been deferred during the pandemic. This extension was in particular directed to the subjects who, due to the coronavirus, have had a reduction in turnover equal to:

- At least 33 percent for revenues/fees under €50 million ($58 million); or
- At least 50 percent above this threshold.

Moreover, for those enterprises residing in the municipalities most affected by the health emergency, a temporary VAT suspension is applied.

Concerning the Golden Power mechanism, the regulatory shield to prevent Italian companies in strategic sectors from being acquired by foreign capital, it was reinforced allowing the state to intervene whenever there are acquisitions of shareholdings of just over 10 percent within the EU.

5.2 Decreto Rilancio (DL 34/2020): Allocated Amount €55 Billion ($64 Billion)

Published in the *Gazzetta Ufficiale della Repubblica Italiana* on May 19, 2020, it was converted in Law (L 77/2020) on July 17, 2020.

The decree includes measures that are intended to assist businesses by providing loan guarantees, government assumption of non-market risks, and certain targeted tax relief. The decree extended the list of "essential activities" provided originally by the previous one.

A non-repayable grant is allocated to businesses, self-employment and agricultural income earners, and freelancers, with a turnover in the last tax period of less than €5 million ($5.8 million). The amount of the contribution varies in relation to turnover, with a minimum value of €1,000 ($1,160) for individuals and €2,000 ($2,325) for partnerships and corporations.

The tax credit regarding the renting of real estate for non-residential use was confirmed. It was applied for the months of March, April, and May, for some people carrying out businesses, art, or professional services, with revenues or fees not exceeding €5 million ($5.8 million).

Various interventions to strengthen the capital position of small and medium enterprises were put in place. In addition to the refinancing of the SME Guarantee Fund for 2020 for €3.95 million ($4.6 million), in the decree are provided:

- Tax credit for investments in Italian companies that have suffered a reduction in revenues;

- Tax credit on losses recorded in 2020; and
- A Fund for the support and relaunch of the Italian economic and productive system, called the SME Equity Fund, aimed at subscribing to newly issued bonds or debt securities of medium sized companies, under the legal conditions.

Regarding another social security measure, the "emergency income" was introduced for the month of May (that has been requestable until July 31). It provided an extraordinary support for households in economic need after the epidemiological emergency by COVID-19.

In order to strengthen services and projects to support home care for disabled and dependent people, and for the support of their careers, a fund for non-self-sufficient people was increased by €90 million ($105 million).

The state guaranteed of up to €5 million ($5.8 million) for small and medium-sized businesses, through the Central Guarantee Fund for SMEs, providing a guarantee, free of charge, for a single enterprise, up to €5 million ($5.8 million), aimed at financing operations. The decree brings:

- €100 million ($116 million) in additional resources for Invitalia's Smart & Start program, which would otherwise have ended its funds in September; and
- €200 million ($232 million) for the Ministry of Economic Development's venture capital support fund, €10 million ($11.6 million) in vouchers for the purchase by start-ups of support services and a tax deduction increased to 50 percent for individuals investing in innovative start-ups and SMEs (directly or through venture capital funds).

The decree contains a number of measures aimed at providing economic support to local and regional authorities, with the aim of coping with the reduction in revenue linked to the economic crisis, as well as facilitating the payment of their trade debts. Among the most important provisions is the creation of a fund with an endowment of €3.5 billion ($4.1 billion) for the year 2020, which is intended to provide municipalities, provinces, and metropolitan cities with the necessary resources to carry out their fundamental functions in relation to the possible loss of local revenues connected to the COVID-19 emergency.

In order to contain, in state schools, the epidemiological risk in relation to the start of the 2020/2021 academic year, the Ministry of Education established in the estimates of the Ministry of Education the Fund for the epidemiological emergency from COVID-19, with a budget of €378 million ($440 million) in 2020 and €600 million ($700 million) in 2021.

6. Conclusions

The political economy of the pandemic has proven rather complex. COVID-19 has brought about an unprecedented concentration of powers in the hands of the government. The role of the state in the economy, as regulator, owner, and facilitator, has grown in a matter of weeks, sometimes reflecting broader European trends, sometimes reflecting a deep-rooted suspicion toward market mechanisms. The long-term implications for the labor market—likely to be devastating, especially for low-educated and informal workers as well as young people and women—and the economic uncertainty led to a focus more on demand-side interventions rather than supply-side ones. The policies implemented by the Italian government to contrast the negative impact of the pandemic aimed primarily at sustaining consumption and employment. Despite the (announced) intention of presenting a structural package of measures to relaunch investments in the country, the intervention on the supply side relied mainly on credit guarantees and various tax measures. Innovation and technology were almost excluded by the major actions taken by the government.

Italy's role in the EU was also challenged by the reluctant position shown by the so called "frugal" countries (Netherlands, Austria, Denmark, and Sweden) to extend mutual support to Italy. Even though a €750 billion ($872 billion) package of grants, loans, and guarantees to be partially financed by EU taxes and an extension of EU budget have been approved, the future of the EU remains uncertain, torn between the completion of political and economic union and the possibility of it imploding. Finally, the economic impact of the coronavirus in Italy will depend on the duration and the extent of the second wave of contagion in the country and the institutional responsiveness in the disbursement and allocation of funds, especially the mutual ones of the European Union (Recovery Fund and EU Budget provisions). This will determine—from both demand and supply sides—the order of magnitude of economic impact of COVID-19 for Italy. Should the situation not escalate further and remain stable, Italy is likely to have the chance for a faster recovery and even a major role in the international arena. But should the situation escalate, a different economic and fiscal policy discussions are likely to dominate the next years.

Jordan

By: Jordan Strategy Forum

COVID-19 & Jordan: Health & Economic Narrative

Introduction

The shock of COVID-19, along with its political, economic, and social ramifications, has taken Jordan by surprise amidst the already-existing complicated and overlapping political and social circumstances. These circumstances include a high unemployment rate (19 percent of the workforce), rising debt-to-GDP ratio (96.6 percent by the end of 2019), deteriorating public trust in the government and parliament, as well as the lack of investors' confidence in the investment environment.[229] Such circumstances also include organizational chaos within general management, bureaucratic complications, and political overlaps that blur the government's development vision. In addition, one should not forget the ongoing instability and conflicts in the region and their implications.

To contain the virus, Jordan took, by mid-March 2020, strict health measures. These measures kicked off with the issuance of a Royal Decree approving the Cabinet's resolution to enact the Defiance Law.[230] Accordingly, the government announced a full lockdown.[231] This measure resulted in a complete interruption of the economic production cycle (the supply chain) accompanied by unprecedented public management in the Kingdom. Accordingly, the government got deeply involved in managing the tiniest details of people's lives, economy, and the relationships between economic entities, while at the same time enjoying unprecedented community consensus and trust by all categories of society (parliament, professional associations, and civil society organizations) to assume such critical responsibility.

The strict fiscal measures successfully contributed to truncating the spread of the virus. Indeed, Jordan had the lowest number of registered COVID-19 cases among Arab countries. Three months after announcing the full lockdown, Jordan recorded 1,008 cases, with an average of 95 cases per one million residents, in addition to nine fatalities.[232]

Jordan's success in managing the health aspect of the crisis notwithstanding, economic challenges have now come to the fore. The government has managed such challenges by means of a set of resolutions and orders issued under the Defense Law.

The Central Bank of Jordan (CBJ) issued a number of resolutions aimed at enhancing market liquidity and providing the private sector with low-cost credit facilities to ensure its business sustainability after the crisis. Furthermore, the CBJ reduced the minimum reserve ratio on bank deposits from 7 percent to 5 percent, postponed loan installments for individuals and affected companies, and reduced interest rates.[233] In addition, the government issued a defense order to establish a fund for private-sector donations to support the Ministry of Health's efforts, and opened a donation account at the CBJ to help day laborers and the informal sector.[234] A number of additional defense orders were issued to regulate litigation, labor, and wage issues.

This paper aims to analyze Jordan's response to COVID-19 and its economic repercussions. It is difficult, if not impossible, to provide clear results regarding the impact of the crisis. Indeed, the

absence of sufficient official data that reflects the period of the COVID-19 crisis, and the vagueness associated with the nature of the crisis, make such an exercise impossible to achieve. However, the same overall trends before and after the onslaught of COVID-19 could be observed.

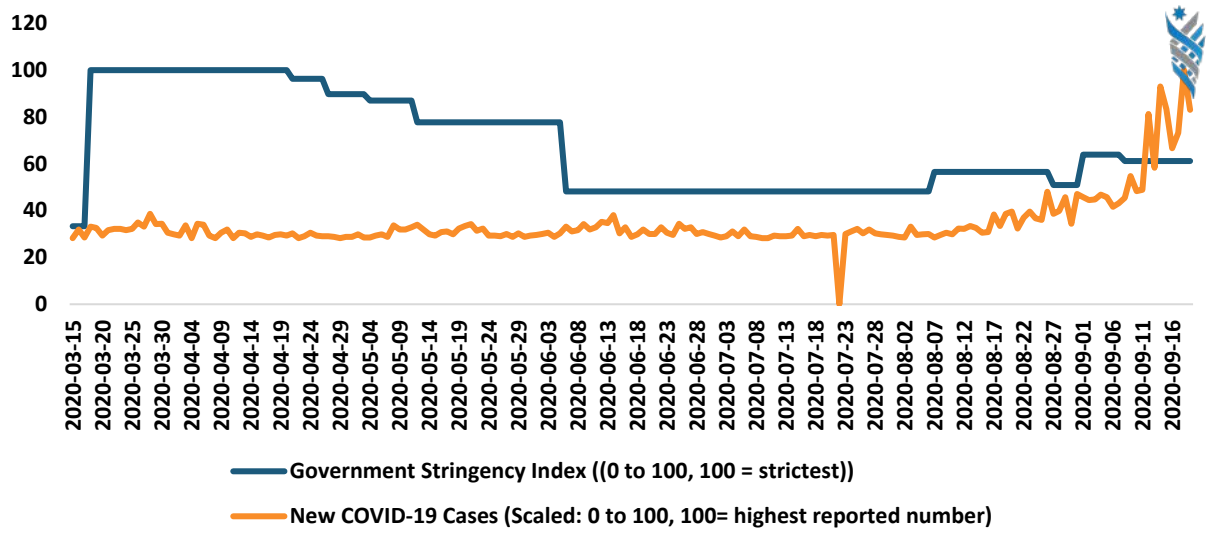
1. Jordan's Health Sector Response

On March 16, 2020, the Jordanian government announced a full lockdown of the country, whose purpose was to truncate the spread of the pandemic after the first 26 confirmed cases. At the time, there were, little if any, global practices upon which the government could rely on in its response plan. After multiple iterations, the government successfully minimized physical human interactions (otherwise known as social/physical distancing) by digitizing education, promoting telecommuting and online financial services, organizing door-to-door delivery of bread, and providing limited time windows in which citizens could acquire their groceries. It is worth noting that the government has also imposed a mandatory quarantine for all arrivals to Jordan, placing them in prestigious hotels at the nation's expense for 14 days.

Within the context of the above-mentioned measures, Jordan became the first out of 13 countries in the world that had the highest government response stringency. In fact, Jordan was the first country in the world to attain a perfect score (100/100) on the Oxford COVID-19 Government Response Tracker's Stringency Index, and sustained it for 34 days, which is the sixth-highest period in the world in terms of the longevity of the lockdown.[235] (See Figure 57.) These efforts translated to a large decrease in the number of cases in the country, deeming the government's measures successful.

It is worth noting that COVID-19 reporting in Jordan differentiates between local cases confirmed and cases among arrivals. This strategy is quite essential in order to reflect the reality of the COVID-19 status, in addition to ensuring the safety of all economic activities. The effectiveness in the government response is evident when one compares the Government Stringency Index with Jordan's epidemiological curve: The gap between the two curves shows that the measures taken by the government have been more than sufficient to control the proliferation of the virus.

Figure 57: Government Stringency Index vs. Reported Cases per Day (Scaled)



The benefits of stringent measures notwithstanding, they have been detrimental to the Jordanian economy, as well as to the well-being of Jordanian citizens. Indeed, stringency might force the government to compromise between economic and health challenges on an iterative basis. Having said that, the gap was reversed in September, leading the government to voice its concern over the epidemiological status, followed by the closures of restaurants and cafés, as well as limiting gatherings to 20 people. On September 20, 2020, the government announced that COVID-19 had officially reached the outbreak stage in Jordan.

In comparison to other countries around the world, the Jordanian government's response to the pandemic has been exceptional at both the regional and global level. Jordan ranked 35th globally and 7th regionally in total tests per-thousand citizens, performing approximately 1.06 million tests through September 20. (See Figure 58.) Jordan is also the 24th-least country out of 163 countries when it comes to the Death-to-Case Ratio. (See Figure 59.) This is attributed to the efforts led by the personnel of the health sector and first responders. Some have argued that the relatively low median age of Jordan's population (23.5) has also helped in avoiding a high death-to-case ratio. However, in this category, Jordan has significantly outperformed 39 out of the 47 countries with a median age of 23.5 or lower. (See Figure 60.)

Figure 58: Total Tests per Thousand Citizens (Through September 2020)

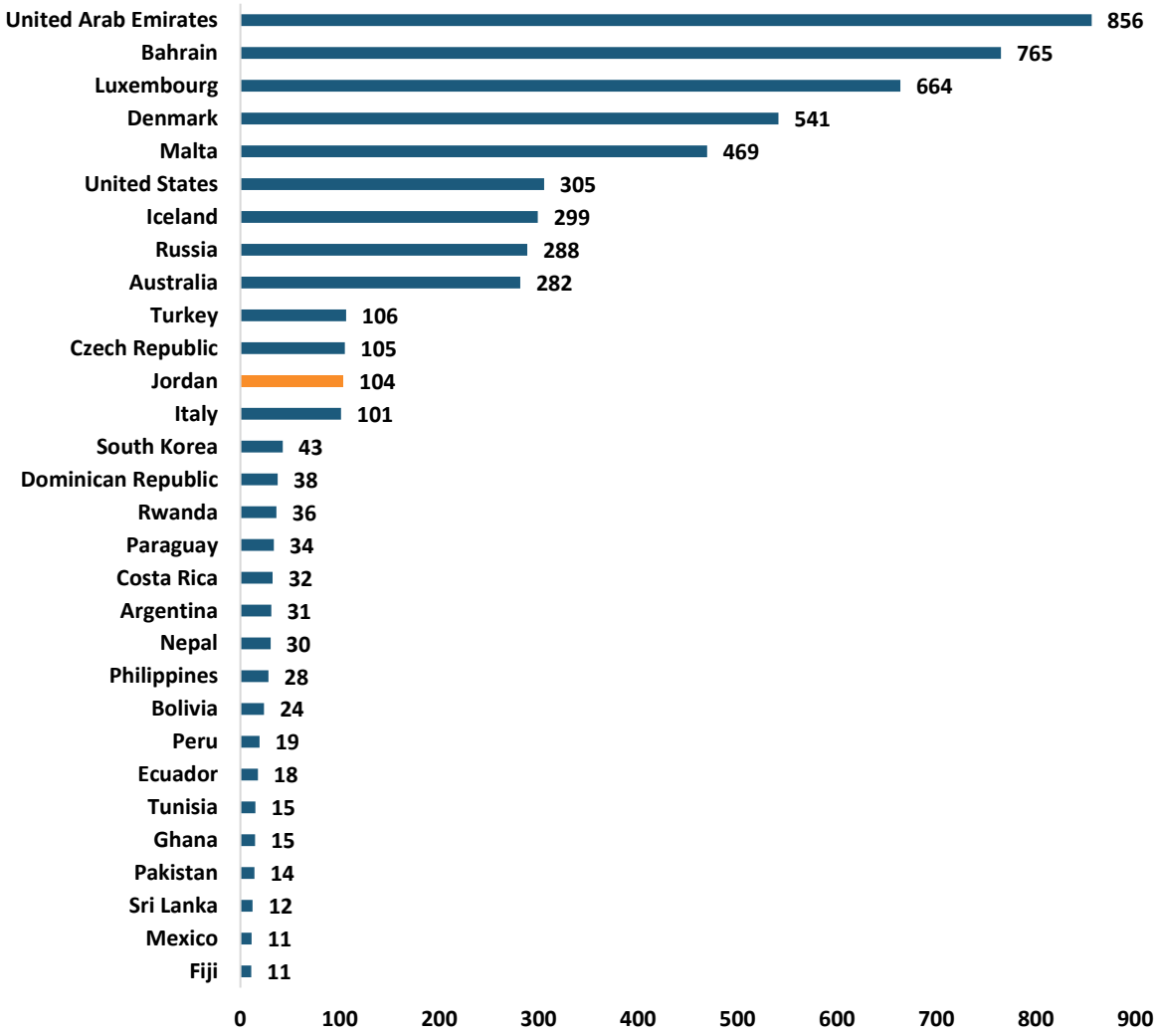


Figure 59: Death-to-Case Ratio in the Arab World and Globally (Through September 19)

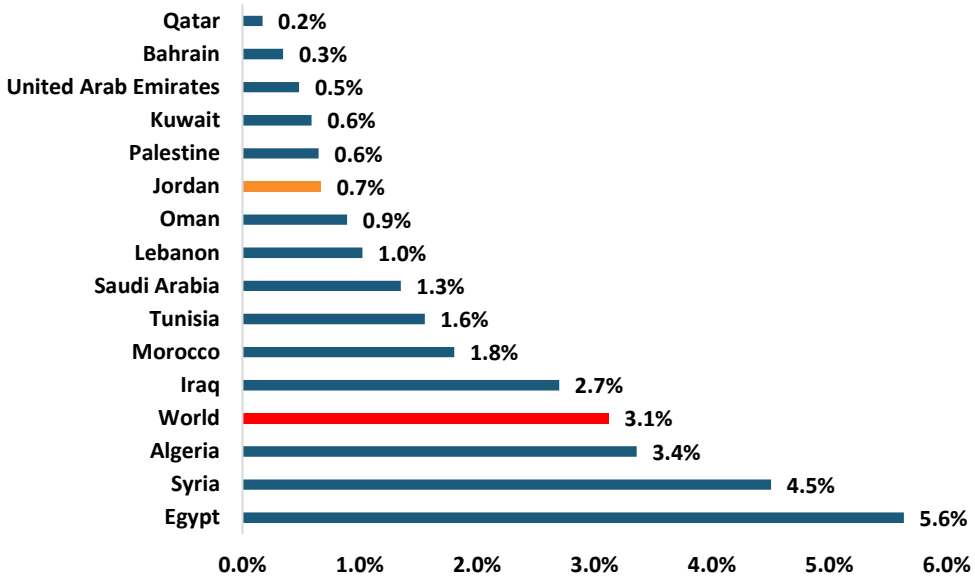
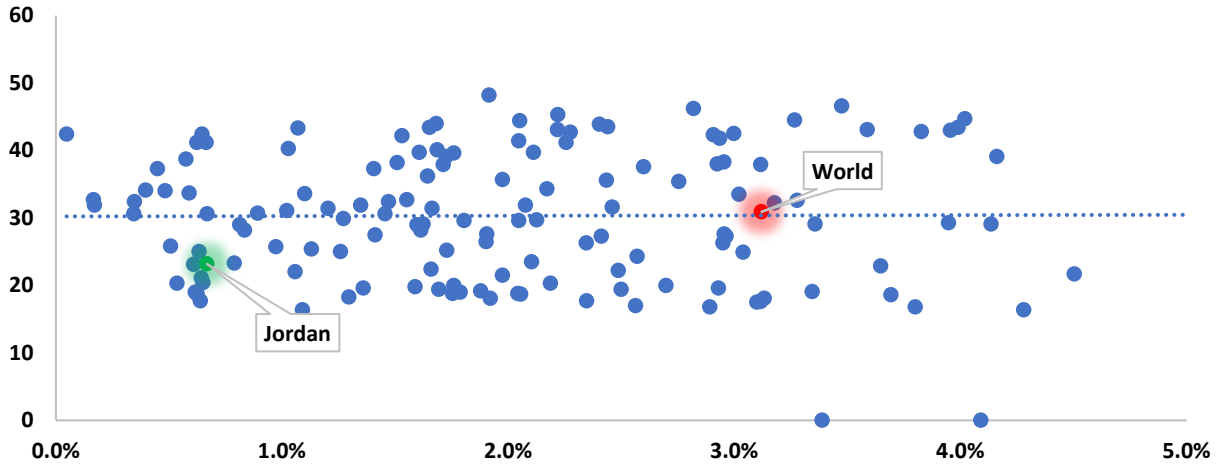


Figure 60: Death-to-Case Ratio vs. Median Age



It is necessary to note that negligence of the few can be severly deleterious or destructive in the epidiomological status of countries such as Jordan. Out of 198 countries and territories, Jordan has the 82nd-highest population density with 109 citizens per square kilometer. In addition to the quasi-highly populated areas, many of the mannerisms and customs of the Jordanian culture necessitate physical interactions among citizens. With this in mind, Jordanians are highly susceptible to transfering the virus quite rapidly, potentially leading to a higher than average R_0 (reproduction number that quantifies the number of infected indivuals per human interaction). In fact, on one alarming instance in September, 1 infected individual transferred the virus to 13

people, which is approximately five times the normal rate of infection when considering an R_0 of 2.4 (a standard number for pandemic forecasts).

The epidiomological curve is currently experiencing an unprecedented rise due to gatherings in funerals and weddings, rendering Jordanians concerned and uncertain as to whether the previous measures taken by the government have gone in vain, where the curve has not been flattened, but rather prolonged.

2. Economic Repercussions

The pandemic resulted in negative economic repercussions that affected the Jordanian economy in two different dimensions. The first dimension represents the external impact resulting from shutting down airports and international trade, disruption of global production chains, and the decline in global demand for goods and services. The second dimension is concerned with the results and effects that emerged due to government measures to truncate the spread of the pandemic.

The full lockdown of the country that lasted for about three months stopped the production cycle (supply chain) in the economy and interrupted the demand chain. The interruption of both chains occurred due to two main reasons. First, the curfew paralyzed the purchasing process in the market. Second, the significant cash flow decline in the private sector and the loss of income for day laborers and the informal sector extended the economic decline. In turn, such declines have led to a deterioration in the purchasing power of a large segment of society. In addition, these declines weakened the private sector's ability to purchase production requirements, pay salaries, and cover businesses' fixed expenses.

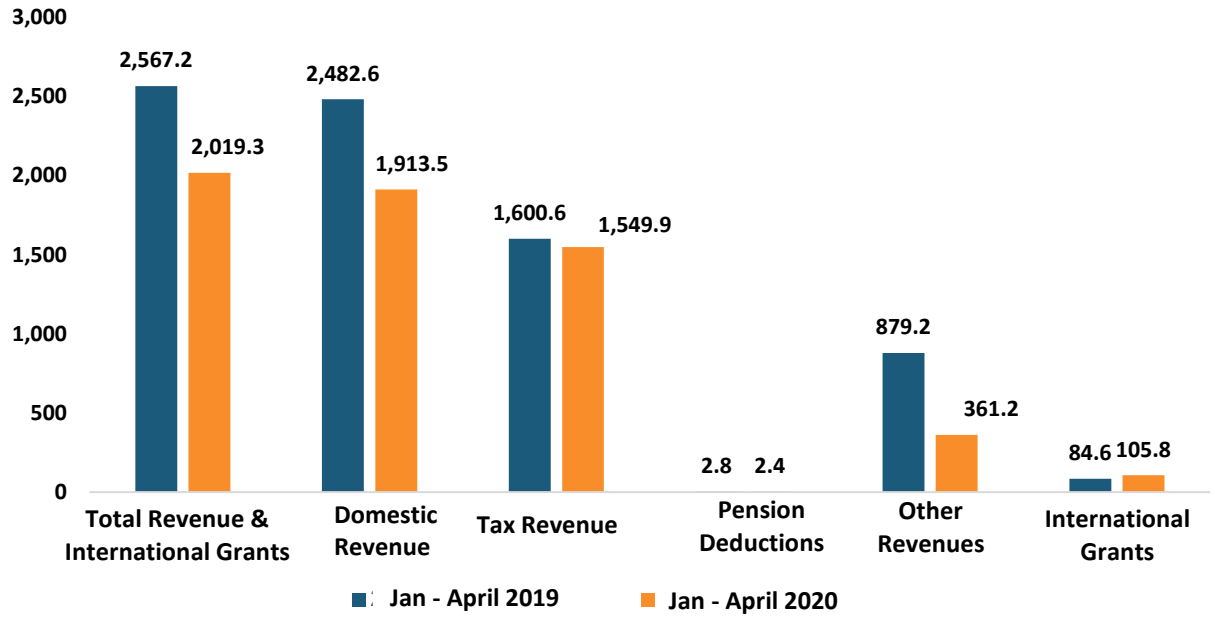
The economic response to COVID-19 was based on three main axes, namely fiscal and monetary policy, working policy, and investment policy. The main objective of these policies was to maintain economic stability on one hand, and avoid the closure of operating companies and exiting the market on the other.

The aforementioned issues have negatively affected the overall performance of the economy, public finance, and the labor market. The International Monetary Fund (IMF) expects a 3.7 percent contraction in Jordan's GDP by the end of 2020.[236] Furthermore, the Jordan Economic Forecasts report, issued by The Economist Intelligence Unit, indicates that the Jordanian economy is likely to contract by -5 percent, and unemployment to hit the 25 percent mark.[237] Regardless of the variation in these estimates, the effect of COVID-19 on economic growth will be negative during 2020, and this will have negative repercussions for several issues including public finance and debt, and the labor market and unemployment within the regulated and non- regulated private sectors.

In terms of public finance, the pandemic increased the financial burden on Jordan's general budget. Naturally, this is due to the increase in public spending and decrease in public revenues. The deterioration in tax revenues is likely to be a serious blow to public finance. Indeed, the fact that 68.5 percent of total tax revenues emanate from sales taxes, the fall in the purchasing power of Jordanians and the resultant decrease in their spending is likely to reduce sales tax revenue significantly.[238] Within this context, it's worth noting that public finance in Jordan suffers from lack of efficiency in tax collection due to tax evasion.

The data collected from the Ministry of Finance indicates a decrease of local revenues from JD 2.48 billion ($3.5 billion) during the first quarter of 2019 to JD 1.91 billion ($2.69 billion) by the end of the first quarter of 2020. (See Figure 61.) This decrease, as previously indicated, is the result of the decline of real estate sales tax revenues by 65.3 percent.[239] Such a decline is due to the cessation of real estate sales in Jordan during the lockdown. Other revenues will decline during the current and future years due to the decline in cash liquidity and market uncertainty.

Figure 61: Total Revenue Variation in the First Third of 2020 Compared to the First Third of 2019 (Billion Jordanian Dinar)[240]



In view of the declining government revenues and the increasing debt burden resulting from the crisis, the government will resolve to finance the increasing deficit by means of debt. The digital forecast models of the Economist Intelligence Unit indicate that the general budget deficit in Jordan during 2020 will reach 13.4 percent of GDP, which will inevitably lead to a rising debt-to-GDP ratio of 114.7 percent in 2020 and of 123.3 percent in 2020.[241]

These figures indicate the possibility of a rise of expenditures for debt servicing in Jordan, which constitutes a burden on the government's public finances and hinders the government's development expenditures. This may exacerbate the slowdown of economic growth and decrease the quality of public services.

As far as the labor market is concerned, the unemployment rate is expected to reach 25 percent due to a combination of internal and external factors.[242]

Internal Factors

1. The 2020 contraction in the national economy and the expected modest growth rates afterwards.

2. The decrease in the demand for goods and services in the Jordanian market and its negative implications to the private sector's liquidity.

   Within the context of the previously mentioned internal factors, it's worth noting that small and medium-sized enterprises are the primary employer for Jordanians, as they accommodate about 60 percent of the Jordanian workforce.[243]

3. The Jordanian labor market already suffered from a number of structural problems prior to the COVID-19 crisis. Such problems include inadequacy of skilled labor, limited employment opportunities generated by the Jordanian economy, and the presence of large numbers of expatriate workers in the Kingdom.

External Factors

1. The global economy's contraction and the decline in economic growth in countries that employ Jordanian expatriates (especially the Arab Gulf states) will have serious implications. Indeed, some Jordanians are likely to lose their employment abroad and return back home in search of work. This will only exacerbate the already-high unemployment rate in the country.

2. The pandemic will accelerate digital transformation processes both locally and globally, and will encourage the adoption of artificial intelligence applications and Fourth Industrial Revolution technologies. Together, these trends will increase structural unemployment in Jordan and the world. The demand for labor is likely to decline, whereas workers need to acquire new skills to keep pace with the market requirements and obtain jobs.

In terms of international trade, the balance of payments in Jordan is expected to be negatively affected by the crisis. The factors that may contribute to exacerbating the trade deficit are three-fold. First, the decline in Jordanian expatriates' remittances by 5.9 percent in the first quarter of 2020 compared to the first quarter of 2019.[244] Second, the suspension of tourism activities and exports, as tourism expenditures in Jordan accounted for about $5.6 billion in 2019 and is a major source of foreign currency in Kingdom. Third, the receding global demand will naturally lead to a decline in the demand for Jordanian goods and services exports due to the tendency of countries to adopt policies that enhance the immunity of their production chains instead of efficiency policies, which requires dependence on domestic production rather than imports.

3. Conclusion (Expectations, Opportunities, Recovery, and Recommendations)

It is difficult, if not impossible, to provide clear forecasts regarding the impact of the crisis. Indeed, the absence of sufficient official data that reflects the period of the COVID-19 crisis, and the vagueness associated with the nature of the crisis, make such an exercise impossible to do. However, while the overall repercussions of the COVID-19 crisis cannot be attributed to the crisis alone, the virus will exacerbate a set of structural challenges facing Jordan prior to the crisis.

The Jordanian economy is likely to suffer from rising unemployment and public debt rates. In addition, the private sector will find it more difficult to grow and expand during the coming two years. However, to enhance the economy's resilience and stimulate sustainable and inclusive growth, all relevant stakeholders should seize the opportunity and adopt some structural reforms that were needed even before the crisis.

The opportunities for a sustainable recovery lie in Jordan's ability to carry out the following:

1. Create an attractive environment for investment and make Jordan a regional center for food and agricultural industries and digital services.

2. Implement major investment projects in partnership with the private sector.

3. Strengthen the ICT sector's ability to keep pace with global developments related to artificial intelligence and demands for technological innovations.

4. Encourage the sectors that managed to live through the crisis, such as agriculture, pharmaceuticals, and food, to work on increasing their efficiency and productivity and enhancing their added value and hence, increase their exports.

In view of this, Jordan must reconsider its political, economic, and societal priorities to not only overcome the COVID-19 repercussions, but also to learn important lessons for the future.

The Economic Impact

1. Examine and restructure the public sector with the aim of streamlining public sector institutions by means of reintegrating entities for the purpose of reducing expenditures and eliminating disguised unemployment within the sector. This will contribute to reducing the current expenses, thus creating more fiscal space that enhances capital expenditure and economic growth.

2. Review legislations and procedures regulating private businesses with the aim of facilitating and expediting procedures for the purpose of creating a global competitive environment that attracts foreign investments and enables economic growth.

3. Expedite tax reforms by means of countering tax evasion and expanding the base of taxpayers by means of reducing tax evasion and encouraging informal sector enterprises to operate within the formal sector.

The Health Aspect

1. The government should consider stricter fines and penalties for non-complying individuals and establishments.

2. Given that the country is on the verge of the flu season, the government should encourage and subsidize the flu shot for Jordanian citizens. This would be an important step toward

diminishishing the necessity to carry out massive numbers of PCR tests, given the high similarity between the symptoms of the two viruses.

3. In light of the surge in cases, the government should study the feasibility of imposing self- and house-quarantines for asymptomatic COVID-19 carriers to alleviate overloading the health sector, and prioritizing the provision of the limited number of hospital beds (approximately 14,000) for patients who are in dire need.

4. The Jordanian government should constantly monitor the gap between the Stringency Index and the scaled number of cases, and adjust its policies vis-à-vis the sufficiency of health services to accommodate new cases, as well as the potential economic repercussions precipiated by partial and full lockdowns.

Korea

By: The Korea Institute for Industrial Economics and Trade (KIET)

Korea's Health and Economic Response to COVID-19

1. Current Situation Regarding COVID-19

Korea's first COVID-19 case was confirmed on January 20, 2020. The total number of confirmed cases remained low at 30 with a daily increase of fewer than 10 until February 17. Korea seemed quite safe from a wide spread of COVID-19. But the COVID-19 situation took a dramatic turn the next day when authorities found that the 31st patient confirmed on February 18 hid that she had had symptoms and kept going to church and that she had refused to take the COVID-19 test despite repeated requests from her doctor. On February 19, the number of new cases started to surge, particularly among the followers of the religious group which the 31st patient belonged to, mostly in the southwestern city of Daegu. The total number of confirmed cases spiked to 7,513 as of March 10, second only to China.

The COVID-19 curve stabilized with the average daily number of new cases of 6.4 in the first week of May. When people started to come back from summer holidays and some of those that participated in a large gathering of anti-government protests started to show symptoms in mid-August, the number of new cases began surging again. The average number of new cases per day ratcheted up to 304.4 from August 16 to 31. The daily average dropped to 126.6 new cases in the whole of September. As of September 30, 2020, the number of confirmed cases in Korea stood at 23,812, and 2,322,999 tests had been taken since the outbreak. (See Table 6.)

Table 6: Average Daily Confirmed Cases Per Week, August 16 to September 29[245]

	Aug 12-18	Aug 19-25	Aug 26-Sep 1	Sep 2-8	Sep 9-15	Sep 16-22	Sep 23-29
Average daily confirmed*	154	310.6	317.3	176.4	133.9	100.7	84.7

2. Public Health Policy Response: COVID-19 Control Measures

With the outbreak of COVID-19, the Korean government quickly employed the "3Ts" measures of testing, tracing, and treating to flatten the curve without resorting to lockdown measures and a complete shutdown of borders.

Korea had a bitter experience during the Middle East Respiratory Syndrome (MERS) outbreak in 2015, which resulted in 185 infections and 39 deaths, recording a fatality rate of 38.6 percent, leading to a political backlash against the government for its ineffective, laggard response. It also alerted the whole nation to the urgent and critical importance of having the right preventative measures and diagnosis technology in place.

Of the post-MERS measures, two have particular importance and relevance to Korea's response to COVID-19 in 2020. First, the Korean government allocated a larger budget to R&D projects. In

2017, the R&D budget for diagnosis technology amounted to 28.6 billion Korean won ($250 million). This helped the growth of diagnostic companies and boosted their technological competitiveness. Second, the Emergency Use Authorization System was introduced which paved the way for rapid on-site application of testing and diagnosis procedures. Now Korea can test up to 20,000 persons per day. It also enables the government to respond quickly with the IT-based 3Ts of tracing, testing, and treating and other isolation measures including drive-thru and walk-thru screening stations, access to credit card and bank records, CCTV footage, and GPS data to assess the movements of the infected. It leaves a question of intrusion of privacy which Koreans do not seem much irate about as they view that securing the nation's public health is much more important than sacrificing privacy a little. The government has provided official COVID-19 briefings twice per day and sent out SMS updates several times a day as and when necessary to get the public fully informed of new developments in and around their neighborhoods.

Quick and resolute political leadership at the national and local government levels was a determining factor in tackling the further spread of COVID-19, particularly the surges linked to the religious group from mid-February to April and the gathering of anti-government protesters in August.

Most importantly, coupled with the availability of competent and devoted medical personnel, Koreans have well observed the basic public health measures—wear a mask, wash hands, and keep social distancing—to help flatten the COVID-19 curve quickly after the surges in March–April and August.

Against this background, Korea became the first country to safely and effectively hold a general election on April 15 after the global outbreak of COVID-19.

3. Policy Response to the COVID-19 Economic Crisis

3.1 Economic Situation

Signs of the COVID-19-inflicted economic difficulties were already showing up in late January and early February. In the first quarter, South Korean GDP declined by 1.3 percent and in the second quarter it fell another 3.2 percent, thrusting the Korean economy into a technical recession for the first time since 2003. It was the steepest decline since 1998 when the Korean economy was hardest hit by the Asian financial crisis of 1997–98.

Major economic indicators declined further in the second quarter.

- Private consumption declined by 6.4 percent in the first quarter but bounced back to 6.5 percent in the second half on the back of the emergency disaster relief assistance (cash payments) disbursed to all citizens that started in May and ended in August. The composite consumer sentiment index inched up from June to August. But as the relief assistance was being consumed, private consumption contracted 6 percent in July. (See Table 7.) A second round of relief assistance is being prepared to boost both consumption and economic sentiment.

- Exports and imports shrank 20.3 percent and 16.1 percent, respectively, in the second quarter. The third quarter saw a decline of 3.2 percent. Exports rose 7.7 percent in September led by semiconductors, machinery, automobiles, electronics, batteries, pharmaceutical and health

care products, etc. Korea's relative success in containing COVID-19 has helped boost exports of medical supplies and pharmaceuticals. Exports of health care products including test kits, hand sanitizers, and antibiotics increased 27 percent in the first half of 2020.

- Industrial production fell 3.5 percent and manufacturing contracted 7.4 percent in the second quarter.

Table 7: Korean Business Consumer Index and Composite Consumer Sentiment Index, January to September 2020[246]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
BSI	76	65	56	52	49	51	59	66	77.1
CCSI	104.2	96.9	78.4	70.8	77.6	81.8	84.2	88.2	79.4

The OECD presented a growth forecast of -1.0 percent for the Korean economy in its latest forecast in September, as compared to -4.5 percent for the global economy. The Korean economy is estimated for the smallest reversed growth among OECD members. The Korea Development Institute and the Bank of Korea (BOK) predicted a fall of 1.1 percent and 1.3 percent, respectively.

3.2 Four Rounds of Fiscal Stimulus Packages

To counter the economic fallout from COVID-19, the Korean government has announced four rounds of supplementary budgets this year, the highest number of supplementary budgets for the first time in 59 years, since 1961. The government debt has increased by 6.8 percent to 43.9 percent of GDP as of now from 37.1 percent of GDP in 2019.

1) The First Supplementary Budget, KRW11.7 trillion, March 17, 2020

The emergency cabinet meeting adopted, on March 4, the draft stimulus package for minimization of negative impact on the nation and early containment of COVID-19. The government draft was approved by the National Assembly on March 17, releasing the first supplementary budget of KRW11.7 trillion ($10 billion), 0.6 percent of Korea's GDP. Roughly half was earmarked for providing emergency support to SMEs and the self-employed. The self-employed account for 24.6 percent of total employment (World Bank, 2020), which is much higher than that of the United States (6.2 percent), Japan (10.1 percent), and the OECD average (16.4 percent). KRW4.6 trillion ($3.9 billion) was allocated for expanding policy finance to provide ultra-low interest loans to SMEs. Another 10 percent was secured for providing assistance to small business owners and the self-employed. One-tenth of the budget was earmarked for providing support to Daegu and the Gyoengbuk Province that were hardest hit by the spike in confirmed cases of the COVID-19 linked to the religious group starting in mid-February.

The business community, while welcoming the stimulus endeavor, voiced the need for a bigger package, given the quick and serious economic downturn caused by COVID-19. The head of the Korean Chamber of Commerce and Industry proposed the stimulus package be quadrupled. A bolder approach was called for on the Korean government by the international community. On the contrary, the Korean government maintained the conservative stance over the fiscal position.

2) The Second Supplementary Budget, KRW12.2 trillion, April 30, 2020

The National Assembly approved the second round of the supplementary budget of KRW12.2 trillion ($10.4 billion) on April 30, 2020. It was designed mainly to pool resources for emergency disaster relief assistance scheduled for cash disbursement from May 4 through August 31.

3) The Third Supplementary Budget, KRW35.1 trillion, July 3, 2020

The third supplementary budget was approved at the National Assembly on July 3. The budget of KRW35.1 trillion ($30 billion), equivalent to 14 percent of GDP, is the largest ever supplementary budget. Starting from July 6, KRW10 trillion ($8.7 billion) was injected to more spending to help employers pay workers on leave, job creation and unemployment benefits, and expanding the social safety net. KRW10.4 trillion ($9 billion) was earmarked for support measures to reinvigorate the economy. Of the KRW10.4 trillion, KRW3.2 trillion won ($2.7 billion) was aimed at boosting domestic demand, exports and local economies; KRW2.4 trillion ($2 billion) was to provide for supporting development of COVID-19 vaccines and strengthening of disaster prevention measures; and KRW4.8 trillion ($4.2 billion) was to be directed at contributing to the new policy initiative of the Korean government, the "New Deal," to lay the foundation for renewed growth post COVID-19, particularly in such areas as the Digital New Deal, Green New Deal, and employment protection.

4) The Fourth Supplementary Budget, KRW7.8 trillion, September 22, 2020

A half of the fourth supplementary budget, KRW3.9 trillion ($3.4 billion), will be used for support measures for SMEs and small business owners who have been hardest hit by the second surge in the confirmed cases since mid-August. The measures include emergency liquidity injection and a management stabilization fund, among others.

KRW1.8 trillion ($1.6 billion) will be provided for family care and childcare for 6.7 million children under the age of 15 years as well as for online learning assistance. KRW1.5 trillion ($1.3 billion) will be allocated to 240,000 more workers whose job security is under threat of COVID-19. Emergency livelihood assistance will be offered to 550,000 low income households that are not eligible for the existing livelihood assistance program.

3.3 Monetary and Macro-Financial Policy

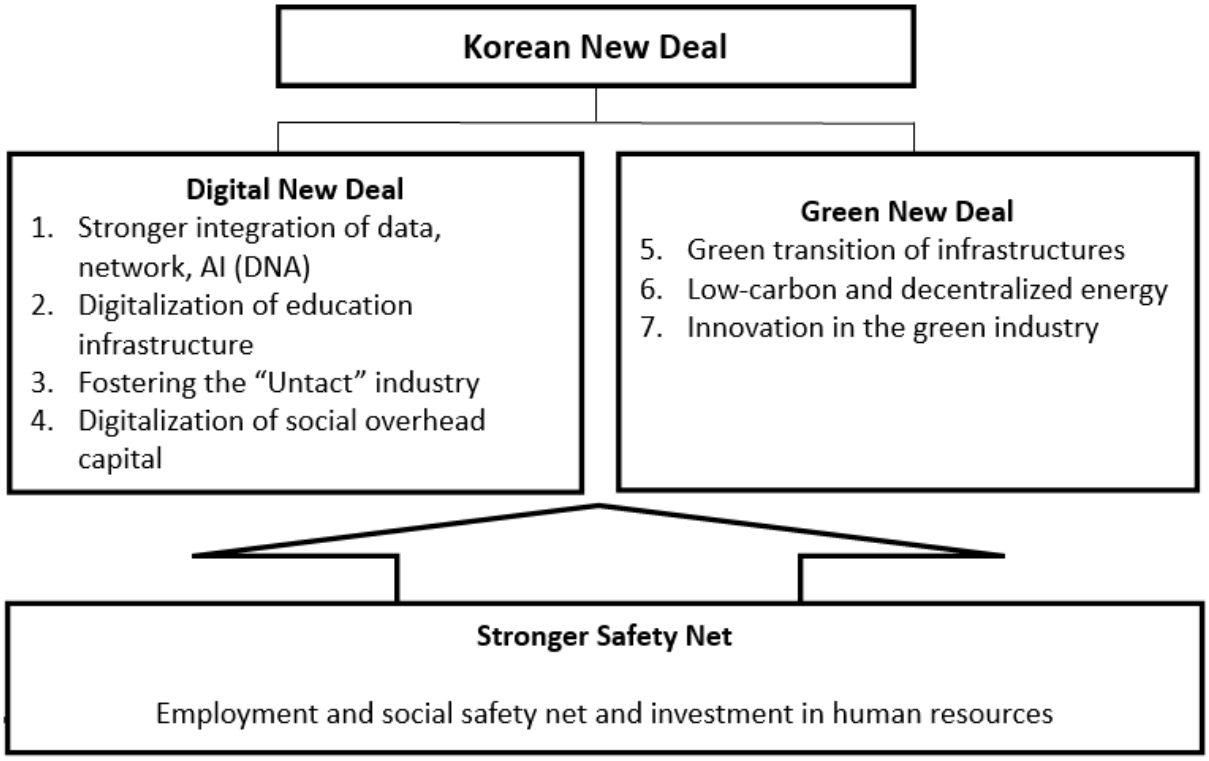
The Bank of Korea (BOK) has also taken a number of measures for economic and financial stability in the face of the COVID-19 pandemic, as follows, among others.

- Cut the policy interest rate to 0.5 percent from 1.25 percent before the COVID-19 pandemic;
- Opened a bilateral swap line with the U.S. Federal Reserve for $60 billion;
- Expanded the liquidity supply of Korean Won through purchase of Korean Treasury Bonds (KRW8 trillion ($7 billion), with KRW5 trillion ($4.4 billion) purchases to be completed by end-2020);
- Increased the ceiling of the Bank Intermediated Lending Support Facility by a total of KRW18 trillion ($15.7 billion, about 0.9 percent of GDP) and lowered the interest rate to 0.25 percent from 0.5–0.75 percent in order to augment funding for SMEs;
- Expanded the list of eligible participants of Open Market Operations to include select non-bank financial institutions, certain bonds from public enterprises and agencies, and government guaranteed mortgage-backed securities issued by the Korea Housing Finance Corporation; and
- Eased collateral requirements for net settlements in the BOK payments system.

4. Prospects and Preparation for Post COVID-19

The Korean New Deal was introduced as a national economic strategy to support a speedy recovery from the COVID-19 pandemic and accelerate its shifting toward a digital and eco-friendly economy in response to low growth and economic polarization. Its three main objectives are job creation, promotion of a digital and green economy, and structural changes. (See Figure 62.)

Figure 62: Graphic Depiction of the Korean New Deal



Toward this end, KRW160 trillion won ($139 billion) will be injected starting in 2020 to be completed in 2025, with a view to creating 1.9 million jobs during the period. While the Korean New Deal presents an ambitious vision to transform Korea into a first-mover economy from a fast-follower economy, into a low-carbon economy, and into a more inclusive society, it's missing detailed action plans to support the vision.

For example, with Korea being the seventh-largest trading nation in the world, keeping a stable global/regional supply chain is a critical national task. Nonetheless, the new initiative is missing any substantial discussion on this, thus it needs to focus on efficient ways to secure a stable global and regional supply chain which the COVID-19 pandemic, coupled with the intensifying U.S.-China competition, has further destabilized. Not a word on necessary labor adjustment in the changing economic structure is found in the new initiative, either.

On issues that are essential to the transformation of the economy into a digital, green, more sustainable, and balanced one, rounds of policy discussions involving the government, legislature, and the civil society must be organized to address such issues in each of the three focus areas that have direct relevance to the success of the Korean New Deal, going forward.

References (Korea)

International Monetary Fund, "Policy Responses to COVID-19," https://www.imf.org/en/Topics/imf-and-COVID19/Policy-Responses-to-COVID-19#R

Kwang Kim, Kyung-sook Lee and Jaemyung Lee, "South Korea's COVID-19 response: hard lessons on saving lives," DEVPOLICYBlog and The Asia Foundation, June 9, 2020, https://devpolicy.org/south-koreas-COVID-19-response-20200609-1/
Ministry of Economy and Finance, Republic of Korea, "Monthly Economic Indicators," https://moef.go.kr

Ministry of Economy and Finance, Republic of Korea, "Korea's Health and Economic Response to Pandemic," June 11, 2020, http://english.moef.go.kr/

Ministry of Science and ICT, Republic of Korea, "How We Fought COVID-19: A Perspective from Science & ICT," August 5, 2020, http://msit.go.kr

National Disaster Management Headquarters, Ministry of Health and Wealth, Republic of Korea, http://ncov.mohw.go.kr

The Bank of Korea, "BOK Response to COVID-19 for Economic and Financial Stability," http://www.bok.or.kr/portal/main/contents.do?menuNo=201061

The World Bank Group, https://data.worldbank.org

Timothy W. Martin and Dasl Yoon, "How South Korea Successfully Managed Coronavirus," The Wall Street Journal, September 25, 2020, https://www.wsj.com/articles/lessons-from-south-korea-on-how-to-manage-COVID-11601044329

Troy Stangarone, "COVID-19 Pushes South Korea Into Recession," The Diplomat, August 3, 2020, https://thediplomat.com/2020/08/COVID-19-pushes-south-korea-into-recession/

Latin America

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The COVID-19 Response of Latin American Nations

Introduction

The coronavirus disease (COVID-19), caused by the new Sars-Cov-2 virus, has strongly impacted global economic and health care systems. In view of this situation, it has become crucial for the highest authorities to adopt public policies to mitigate the effects of the pandemic on health, productive activities, employment, and the living standards of the global, and Latin American, population.

The various containment measures adopted around the world to stop the spread of the disease have had a strong negative impact on major economies around the world. The fall in real gross domestic product (GDP) in the Organization for Economic Co-operation and Development (OECD) area was the largest since records began. It is estimated that the wealth of the OECD economies fell by 9.8 percent between April and June, a contraction far greater than the 2.3 percent fall recorded in the first quarter of 2009 when the financial crisis of those years was at its peak and which must be added to the contraction already seen, although less so, in the first quarter of 2020, when the pandemic was just beginning.

The advantage of the Latin American region was that the virus arrived slightly later than in the rest of the world, more precisely on February 26, 2020, when Brazil reported its first case. It could be said that the region had a certain amount of time to anticipate the arrival of the disease and to draw up public policies to mitigate the effects of the indiscriminate spread of the virus, but this was not the case; except for a country such as Uruguay, the results have not been good and the management of the pandemic has not been successful. In fact, the region has become the new world epicenter of the pandemic and the economic impact on the region is worse than the global average: According to the calculation of the Economic Commission for Latin America and the Caribbean (ECLAC), a fall of 9.1 percent is expected for this year, which will bring the GDP to similar levels as in 2010. Unemployment is estimated at 13.5 percent and poverty at 37.5 percent. Under this scenario, the countries of the region that foresee the most brutal falls in economic activity will be Argentina, Brazil, and Peru (with the exception of Venezuela, because of its particular case). And those who will experience the least dramatic falls will be Paraguay, Guatemala, and Uruguay.

Although the management in general has not been successful, there is an important variability in the deaths and infections in the different countries, as well as in the economic impact that the crisis has had, which is why it is of vital importance to have access to the data on the applied policies, because these can partially explain this variability.

This study analyzes the policies applied by 10 Latin American countries (Brazil, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay, and Venezuela) as well as the evolution of the number of confirmed cases per one million inhabitants and the number of confirmed deaths per one million inhabitants. The Government Stringency Index was used as the main focus of the

study. This index, calculated by the Oxford COVID-19 Government Response Tracker (OxCGRT), is composed of nine metrics: school closures, workplace closures, cancellation of public events, restrictions on public gatherings, closures of public transport, stay-at-home requirements, public information campaigns, restrictions on internal movements, and international travel controls. A higher score in the index indicates a stricter government response (i.e., 100 = strictest response). If policies vary at the subnational level, the index is shown as the response level of the strictest sub-region. This index simply records the strictness of government policies. It does not measure or imply the appropriateness or effectiveness of a country's response. A higher score does not necessarily mean that a country's response is "better" than that of others lower on the index. All the countries deployed during the month of March public information campaigns which, as of September 2020, are still in force, so this will be the only one of the nine variables whose evolution over time will not be analyzed. The Google Mobility Index uses anonymized data provided by apps such as Google Maps to produce a regularly updated dataset that shows how people's movements have changed throughout the pandemic. These figures will show the effectiveness of the restrictions imposed by the governments and the efficacy of the compliance by the population of the public policies implemented. It is important to note that the scope of this mobility index could be extremely biased to upper-middle class and rich individuals, thus not providing a real perspective, especially in Latin American countries with large parts of their population without access or adequate use of this technology.

Brazil

In the case of Brazil, one of the fundamental aspects that should be highlighted is the diversity of the measures taken in the different states of the federal system; the situation was not the same in each of them and very different policies coexisted within the country's borders. The impact of the crisis on the country's GDP interannual fall was estimated at 11.7 percent by August 2020. The index on which this study is based takes the strictest measures taken in the country, regardless of their diversity. The total number of confirmed infections per million inhabitants in Brazil is 21,443.74 and the total number of confirmed deaths per million inhabitants is 645.80 (as of September 22, 2020). The highest score on the Stringency Index was 81.02 and is currently 72.69. Regarding specific measures:

School closures: Schools were closed on March 12 for all levels.

Workplace closures: On March 13, the policy of job closure was only recommendations; on March 17, closure was required for all but key workers; on June 1, the situation changed to "required for some."

Cancellation of public events: On March 12, public events were cancelled.

Restrictions on public gatherings: On March 14, restrictions were applied which are in the 100 to 1,000 categories; on March 18, the limits were in the 10 to 100 categories; from April 25, the restriction is in the less-than-10 categories.

Stay-at-home restrictions: On March 13, the policy was to recommend not to leave the house; on May 5, measures requiring individuals to not leave the house with exceptions for daily exercise, grocery shopping, and "essential" trips were adopted.

Public transport: On March 19, public transport services were recommended for closing (or reduced volume); on March 21, they were required closing (or to prohibit most from using it).

Restrictions on internal movement: On March 17, restrictive movement measures were applied.

International travel controls: On March 13, a policy of entry quarantine from high-risk regions was adopted; on March 19, the policy changed to a ban on high-risk regions; on March 27, total border closure was declared; on July 29, the policy changed to "screening."

Testing policy: On January 23, the government adopted the policy of testing only for those who both 1) have symptoms and 2) meet specific criteria (e.g., key workers, admitted to hospital, came into contact with a known case, returned from overseas); on May 25, that policy changed to testing of anyone showing COVID-19 symptoms.

Contact tracing: No tracing policy until August 24, from there on were comprehensive tracing (all cases).

Income support: Since April, the Brazilian government provides subsidies that represent less than 50 percent of workers' salaries.

Debt and contract relief: On March 17, the government declared narrow relief.

Mobility: The change in time spent in residential homes reached a 20 percent increase and then returned to a 5 percent increase. Time spent in grocery and pharmacy stores went down 30 percent, and then recovered up to 5 percent from normal levels. For workplaces, this process showed a 45 percent reduction and a -5 percent stabilization. For retail and recreation, this process showed a 70 percent reduction and a -30 percent stabilization. For parks, this process showed a 60 percent reduction and a -30 percent stabilization. For transit stations, this process showed a 60 percent reduction and a -30 percent stabilization.

Bolivia

The total number of confirmed cases per one million population in Bolivia is 11,221.25, while the total number of confirmed deaths per one million population is 655.7 (as of September 22, 2020). The impact of the crisis on the country's GDP was estimated at an 8.11 percent decline as of August 2020. As previously mentioned, Bolivia together with Peru had the highest levels in the Stringency Index, both reaching 96.30.Now Bolivia's index is at 81.48. Regarding specific measures:

School closures: On March 12, all schools were declared closed.

Workplace closures: On March 18, the closure of all workplaces was recommended; on March 22, the measure was required for all but key workers; from June 26, the measure is required for some.

Cancellation of public events: On March 12, all public events were cancelled.

Restrictions on public gatherings: On March 12, such restrictions were set at "more than 1,000" category; from March 17, the limit was set at "fewer than 10 people" category.

Stay-at-home restrictions: On March 17, citizens were required to not leave their homes with exceptions for daily exercise, grocery shopping, and "essential" trips; on June 20, it was required they not leave the house with minimal exceptions (e.g., allowed to leave only once every few days, or only one person can leave at a time, etc.); from June 24, the initial statement was reversed.

Public transport: On March 16, the measures were placed in "required closing (or prohibit most using it)."

Restrictions on internal movement: From March 21, there is restricted internal movement.

International travel controls: On March 13, Bolivia adopted a "ban on travelers from high-risk regions"; on March 31, a total border closure was declared; from September 1, the policy is "screening."

Testing policy: From April 7, Bolivia adopted a policy to test only for those who both 1) have symptoms; and 2) meet specific criteria (e.g., key workers, admitted to hospital, came into contact with a known case, returned from overseas).

Contact tracing: No tracing policy implemented.
Income support: Since April, subsidies have been granted representing less than 50 percent of workers' salaries.

Debt and contract relief: On March 31, narrow relief was declared; from July 1, there is no relief.

Mobility: The change in time spent in residential homes reached a 40 percent increase and then returned to a 15 percent increase. Time spent in grocery and pharmacy stores went down 80 percent, and then recovered up to -55 percent from normal levels. For workplaces, this process showed an 80 percent reduction and a -40 percent stabilization. For retail and recreation, this process showed a 90 percent reduction and a -60 percent stabilization. For parks, this process showed an 80 percent reduction and a -60 percent stabilization. For transit stations, this process showed an 85 percent reduction and a -70 percent stabilization.

Chile

Chile has had a careful handling of the pandemic; its numbers are not exactly good, but the number of deaths carries a reasonable relation to the number of infections. The total number of confirmed infections per million inhabitants is 23,407.78 and the total number of confirmed deaths per million inhabitants is 643.33 (as of September 22, 2020). The interannual fall in Chile's GDP was calculated at 14.1 percent by August 2020. The Chilean government was especially fast and efficient in implementing public policies. An example of this was that the country quickly implemented a regional system that put into action measures in each region instead of national broad actions, with all of this coordinated by the central unitarian government. Its highest score on the Stringency Index was 89.35 and it currently stands at 83.30. Regarding specific measures:

School closures: On March 15, schools were declared closed, and this measure is still in force today.

Workplace closures: On March 16, the closure of workplaces was required, except for essential workers. Five days later, the closure was required only for some jobs, and in May it returned to the initial state of only essential workers.

Cancellation of public events: On March 16, public events were cancelled.

Restrictions on public gatherings: : On March 16, a restriction was adopted that falls into the category of 100–1,000 persons; on March 25, the restrictions were increased and the country entered category 10–100; on May 15, the restriction was further intensified by entering the category of fewer than 10 persons; on August 10, the country entered category 10–100 again.

Stay-at-home restrictions: On March 25, measures requiring people to stay at home were implemented with exceptions for daily exercise, grocery shopping, and "essential" trips; on May 15, this measure was intensified (e.g., people allowed to leave only once every few days, or only one person can leave at a time, etc.).

Public transport: On July 3, the category required closing (or prohibit most from using it) was adopted.

Restrictions on internal movement: On March 25, internal movement was restricted, adopting the highest category of the scale.

International travel controls: On March 18, a policy of entry bans from high-risk regions was adopted; on August 1, a total border closure was declared.

Testing policy: A policy of testing anyone showing COVID-19 symptoms was adopted on March 26.

Contact tracing: Since March 30, there has been a policy of comprehensive tracing (all cases).

Income support: From April to June 16, the government provides subsidies that represented less than 50 percent of workers' salaries, as of June 16, they represent more than 50 percent of workers' salaries.

Debt and contract relief: On March 27, the government declared narrow relief; since August the situation is broad relief.

Mobility: The change in time spent in residential homes reached a 25 percent increase and then returned to a 20 percent increase. Time spent in grocery and pharmacy stores went down 45 percent, and then recovered up to -30 percent from normal levels. For workplaces, this process showed a 55 percent reduction and a -35 percent stabilization. For retail and recreation, this process showed a 70 percent reduction and a -50 percent stabilization. For parks, this process showed a 65 percent reduction and a -55 percent stabilization. For transit stations, this process showed a 65 percent reduction and a -50 percent stabilization.

Colombia

The total number of confirmed cases per one million population in Colombia is 15,141.34 and the number of confirmed deaths per million population is 479.47 (as of September 22, 2020). Colombia is a unitarian country able to implement policies at a national level, moving apart from

cases like the federal Brazilian system. The impact of the crisis on the country's GDP interannual fall was estimated at a decline of 15.7 percent as of August 2020. The maximum number reached in the Stringency Index was 90.74, currently standing at 62.04. Regarding specific measures:

School closures: On March 16, all schools were declared closed.

Workplace closures: On February 24, closure of all workplaces was recommended; on March 25, this was required for all but key workers; on April 14, this was required for some; on April 27, this was required for all but key workers; on May 6, this was required for some; on July 14, this was required for all but key workers; on September 1, workplace closures for all was recommended once again.

Cancellation of public events: On March 12, all public events were cancelled.

Restrictions on public gatherings: On March 12, the ban on public meetings was set at the 100 to 1,000 people category; on March 17, the ban was set at the 10-100 people category; on April 24, the ban was set at the fewer than 10 people category; from September 1, the ban has been set at 10 to 100 people category.

Stay-at-home restrictions: On March 25, it was required that citizens not leave the house with exceptions for daily exercise, grocery shopping, and "essential" trips; from September 1, there are no such measures.

Public transport: On March 25, policymakers placed public transport in the "recommended closing (or reduce volume)" category.

Restrictions on internal movement: On March 25, measures restricting internal movement were declared; from September 1, there are no such measures.

International travel controls: On March 12, a policy of quarantining travelers from high-risk regions was implemented; on March 23, the policy changed to a ban on travelers from high-risk regions; on March 25, a total border closure was declared.

Testing policy: From January 31, Colombia's policy is to test anyone showing COVID-19 symptoms.

Contact tracing: On March 26, a policy of limited tracing (only some cases) was adopted; on April 3, this changed to comprehensive tracing (all cases).

Income support: From April, Colombia began granting subsidies that represented less than 50 percent of workers' salaries.

Debt and contract relief: On March 17, broad relief was declared.

Mobility: The change in time spent in residential homes reached a 30 percent increase and then returned to a 15 percent increase. Time spent in grocery and pharmacy stores went down 60 percent, and then recovered up to -30 percent from normal levels. For workplaces, this process showed a 70 percent reduction and a -35 percent stabilization. For retail and recreation, this process showed an 80 percent reduction and a -55 percent stabilization. For parks, this process

showed a 70 percent reduction and a -40 percent stabilization. For transit stations, this process showed an 80 percent reduction and a -50 percent stabilization.

Ecuador

Ecuador's performance in managing the pandemic has not been good. The confirmed positive cases of COVID-19 per one million inhabitants are 7,181.92, the total confirmed deaths of COVID-19 per million inhabitants is 628.86 (figures as of September 22). The drop in Ecuador's GDP estimated by ECLAC for the year 2020 is a 9 percent interannual fall but the current figures are estimated to be much higher. (An example of this could be the case of Argentina, which initial estimates began at 7 percent and ended up at 19.1 percent.) Specifically, there were numerous national and international reports of corpses being dropped in the streets by their own families because of the inability of the government to manage the health and funerary services properly.

The country's highest score on the Stringency Index was 93.52 during the second half of March and all of April, which gradually fell to its current level of 58.33. Let us remember that this Index indicates how strict the government's response to the pandemic was, not the quality of the response. Regarding specific measures:

School closures and cancellation of public events: On October 13, schools were declared closed and public events banned for more than 250 people.

Workplace closures: The agriculture, livestock, and animal care industry, as well as the export chain, neighborhood shops, markets, and supermarkets, continued their activities as usual. So did banks and financial institutions, hospitals, clinics, and pharmacies as well as digital home delivery platforms and all media related to telecommunications. Then on March 17, a state of emergency was declared, in which public services were closed except for health, security, risk services, and those that, due to an emergency, the ministries decided to keep open. On June 19, new activities were enabled in relation to the restriction on employment, a situation which remains in place to this day.

Restrictions on public gatherings and internal movement: The March 17 state of emergency measures also included a ban on meetings, with a limit set by OurWorldInData of between 10 and 100 people; a curfew; suspension of inter-provincial transport; domestic flights; and a ban on unauthorized private cars. As regards the ban on meetings there was a change on July 23, when this measure was intensified, resulting in a ban on any meeting of more than 10 people. On September 14, 2020, this measure was reversed to return to the original condition declared in March.

Stay-at-home restrictions: The stay-at-home measure that required citizens not to leave the house with exceptions for daily exercise, grocery shopping, and "essential" trips, which had been taken on March 17 lasted until September 14; as of this day there are no more stay-at-home-related measures.

Public transport: Concerning the internal mobility measure mentioned above which required that public transport be closed or banned for most of those who use it, this was changed on July 24, from that date a state of reduction of the volume of passengers was adopted, but not a ban; it is currently being followed at this stage.

International travel controls: It should be remembered that Ecuador, like many other Latin American countries, did not take swift action in closing international borders. It was only on March 5, with the state of the pandemic already advanced in the rest of the world, that a total closure of borders was decided. This measure was revoked on June 1, and its borders are now open.

Testing policy and contact tracing: The most important point in the government's package of measures and actions to be considered is the testing and tracing of infections. The Ecuadorian state was deficient in this area; in March it adopted a policy of testing anyone showing COVID-19 symptoms with limited contact tracing, which failed to control the virus.

Income support: Since April, Ecuador has been providing a subsidy that covers less than 50 percent of the wage loss of workers. It should be noted that an economy like Ecuador's has a large number of its workers in the informal sector. An International Labor Organization (ILO) report presented in June 2018 estimates that 47.5 percent of the economically active population works in the informal sector.

Debt and contract relief: With regard to the provision of debt or contract relief to citizens during the COVID-19 pandemic, Ecuador has been in the category of broad relief provided by OurWorldInData since March 17, the day the state of emergency was declared.

Mobility: The change in time spent in residential homes reached a 35 percent increase and then returned to a 15 percent increase. Time spent in grocery and pharmacy stores went down 65 percent, and then recovered up to -15 percent from normal levels. For workplaces, this process showed an 80 percent reduction and a -30 percent stabilization. For retail and recreation, this process showed an 85 percent reduction and a -30 percent stabilization. For parks, this process showed an 80 percent reduction and a -30 percent stabilization. For transit stations, this process showed an 80 percent reduction and a -45 percent stabilization.

Mexico

Mexico has 5,433.69 total confirmed cases per one million inhabitants and 571.59 total confirmed deaths per million inhabitants (as of September 22, 2020). Mexico has a semi-federal system that also combines a variety of national and local policies. It's important to remember that the president of the country specifically insisted on waiting to implement stronger policies instead of automatically setting up hard lockdown measures. The impact of the crisis on the country's GDP was estimated as a 17.3 percent decline as of August 2020. The maximum number reached in the Stringency Index was 82.41, that number today stands at 67.13. Regarding specific measures:

School closures: On March 23, schools were declared closed.

Workplace closures: On March 26, workplaces were required for all but key workers; on June 1, this was required for some; on August 20, this was required for all but key workers; on September 11, this measure was required for some.

Cancellation of public events: On March 24, all public events were canceled.

Restrictions on public gatherings: On March 24, restrictions were set at the 100 to 1,000 people category; on March 30, the restrictions were set at the 10-100 people category.

Stay-at-home restrictions: On March 30, citizens were required to not leave the house with exceptions for daily exercise, grocery shopping, and "essential" trips; on September 11, it was recommended to not leave except for these reasons.

Public transport: On March 30, policymakers placed public transport in the "recommended closing (or reduce volume)" category.

Restrictions on internal movement: On March 24, the Mexican government recommended movement restrictions; on March 30, measures restricting internal movement were declared.

International travel controls: On February 28, the policy was "screening"; on March 21, the policy changed to ban travelers coming from high-risk regions.

Testing policy: From April 6, Mexico's policy is testing only for those who both 1) have symptoms; and 2) meet specific criteria (e.g., key workers, admitted to hospital, came into contact with a known case, returned from overseas).

Contact tracing: On February 28, a "limited tracing (only some cases)" policy was adopted.

Income support: No income policy implemented.

Debt and contract relief: No relief policy implemented.

Mobility: The change in time spent in residential homes reached a 20 percent increase and then returned to a 10 percent increase. Time spent in grocery and pharmacy stores went down 28 percent, and then recovered up to -7 percent from normal levels. For workplaces, this process showed a 50 percent reduction and a -26 percent stabilization. For retail and recreation, this process showed a 60 percent reduction and a -30 percent stabilization. For parks, this process showed a 50 percent reduction and a -30 percent stabilization. For transit stations, this process showed a 60 percent reduction and a -35 percent stabilization.

Peru

Peru has 23,441.09 total confirmed cases per one million population and 954.57 total confirmed deaths per one million population (as of September 22 , 2020), the highest by far in the region. The maximum number reached in the Stringency Index was 96.30, the highest number of the countries analyzed, with the closest country Bolivia, for whom that number today stands at 85.19. As with Ecuador, there were numerous national and international reports of corpses having been dropped in the streets by their own families because of the inability of the government to manage the health and funerary services properly. The impact of the crisis on the country's GDP was estimated at a 30.2 percent decline by August 2020. Regarding specific measures:

School closures: On March 12, all schools were declared closed.

Workplace closures: On March 16, offices were closed for all but key workers; from May 1, the measure is "required for some."

Cancellation of public events: On March 12, all public events were cancelled.

Restrictions on public gatherings: On March 12, restrictions on public gatherings were set to the "100 to 1,000 people" category; on March 15, the restrictions set at "fewer than 10 people" category.

Stay-at-home restrictions: On March 15, citizens were required to not leave the house with exceptions for daily exercise, grocery shopping, and "essential" trips; on March 18, it was required to not leave the house except for minimal exceptions (e.g., allowed to leave only once every few days, or only one person can leave at a time, etc.); on May 11, the initial statement was reversed.

Public transport: On March 15, policymakers "recommended closing (or reduce volume) for public transport"; on May 1, the measures changed to "required closing (or prohibit most using it)"; on July 1, the measures were placed in "Recommended closing (or reduce volume)"; from July 24, the measure moved to "required closing (or prohibit most using it)."

Restrictions on internal movement: On March 14, the government recommended movement restrictions; from March 15, the government restricts movement.

International travel controls: On March 6, the policy was "screening"; on March 11, it changed to "quarantine travelers from high-risk regions"; on March 16, a total border closure was declared.

Testing policy: On January 31, the policy was testing only for those who both 1) have symptoms; and 2) meet specific criteria (e.g., key workers, admitted to hospital, came into contact with a known case, returned from overseas); on April 10, that changed to testing of anyone showing COVID-19 symptoms; on June 2, the policy changed again to testing only for those who both 1) have symptoms and 2) meet specific criteria (e.g., key workers, admitted to hospital, came into contact with a known case, returned from overseas); from July 3, the policy is testing of anyone showing COVID-19 symptoms.

Contact tracing: On March 6, a policy of "limited tracing (only some cases)" was adopted; from June 9, "comprehensive tracing (all cases)" measure remains in force.

Income support: On March 16, the Peruvian government began to provide subsidies representing less than 50 percent of workers' salaries.

Debt and contract relief: On March 18, broad relief was declared.

Mobility: The change in time spent in residential homes reached a 40 percent increase and then returned to a 20 percent increase. Time spent in grocery and pharmacy stores went down 70 percent, and then recovered up to -35 percent from normal levels. For workplaces, this process showed an 80 percent reduction and a -45 percent stabilization. For retail and recreation, this process showed an 85 percent reduction and a -60 percent stabilization. For parks, this process showed an 80 percent reduction and a -45 percent stabilization. For transit stations, this process showed a 90 percent reduction and a -60 percent stabilization.

Paraguay

The total number of confirmed cases per one million population in this country is 4,803.35 while the total number of confirmed deaths per one million population is 94.78 (as of September 22, 2020). The numbers are good, the number of deaths is low and is consistent with the number of

infections. The impact of the crisis on the country's GDP was estimated at a slight 3.9 percent decrease as of August 2020. In the Stringency Index Paraguay reached 94.44 at its highest point, now it is at 81.48. Regarding specific measures:

School closures: On March 10, all schools were declared closed; from July 5, the measure is "required (only at some levels)."

Workplace closures: On March 13, workplace closures were required for all but key workers; from May 25, the measure is "required for some."
Cancellation of public events: On March 10, all public events were cancelled.

Restrictions on public gatherings: On March 10, restrictions on public gatherings were set at the "10 to 100 people" category; on March 21, the restrictions were set at the "fewer than 10 people" category; on June 15, the restrictions were set at "10 to 100 people" category; from July 20, the restrictions were set at the "fewer than 10 people" category.

Stay-at-home restrictions: On March 10, it was recommended that citizens stay at home; on March 17, it was required that citizens not leave the house, with exceptions for daily exercise, grocery shopping, and "essential" trips; on April 9, it was required that citizens not leave the house with minimal exceptions (e.g., allowed to leave only once every few days, or only one person can leave at a time, etc.); on May 25, it was required to not leave the house with exceptions; then on June 10, policy changed to "not leave the house with minimal exceptions"; and finally on June 25, policy changed again to "not leave the house with exceptions."

Public transport: On March 21, policymakers placed public transport in the "required closing (or prohibit most from using it) category"; on April 9, it was placed in "recommended closing (or reduce volume)"; from August 25, there are no measures.

Restrictions on internal movement: On March 16, the government restricted internal movement; on May 25, the government recommended movement restriction; from June 15, there is no restriction on movement.

International travel controls: On March 16, Paraguay banned travelers from "high-risk regions"; on March 24, a total border closure was declared.

Testing policy: On March 7, the policy was testing only for those who both 1) have symptoms; and 2) meet specific criteria (e.g., key workers, admitted to hospital, came into contact with a known case, returned from overseas); on March 20, that policy changed to testing of anyone showing COVID-19 symptoms; on 2 June changed again to testing only for those who both 1) have symptoms and 2) meet specific criteria (e.g., key workers, admitted to hospital, came into contact with a known case, returned from overseas)

Contact tracing: On March 7, a policy of "comprehensive tracing (all cases)" was adopted; on March 20, the policy changed to "limited tracing (only some cases)"; from June 2, the policy is again "comprehensive tracing (all cases)."

Income support: Since March 31, the Paraguayan government granted subsidies representing less than 50 percent of workers' salaries.

Debt and contract relief: On April 1, broad relief was declared.

Mobility: : The change in time spent in residential homes reached a 30 percent increase and then returned to a 15 percent increase. Time spent in grocery and pharmacy stores went down 50 percent, and then recovered up to -10 percent from normal levels. For workplaces, this process showed a 60 percent reduction and a -10 percent stabilization. For retail and recreation, this process showed a 70 percent reduction and a -25 percent stabilization. For parks, this process showed a 65 percent reduction and a -35 percent stabilization. For transit stations, this process showed an 80 percent reduction and a -40 percent stabilization.

Uruguay

Uruguay has had, without a doubt, a great handling of the pandemic. The number of confirmed cases and deaths per million inhabitants has been very low (554.74 confirmed cases and 13.24 confirmed deaths as of September 22, 2020, the lowest number of proportional deaths by far in the region) and the measures restricting individual freedoms were lax in many cases. Uruguay's demographic characteristics are also peculiar, and a very good policy of tracing infections was adopted. The impact of the crisis on the country's GDP interannual fall was estimated at 10.6 percent by August 2020. Uruguay's highest Stringency Index was 72.22, currently at 29.63, the lowest in the region. Regarding specific measures:

School closures: On March 14, schools were declared closed; on June 1, this measure was required only for some levels, and from July 11 it became only a recommendation.

Workplace closures: On March 15, it was recommended that workplaces be closed, on July 10, these measures were withdrawn and then the recommendations came back into force from August 3, until today.

Cancellation of public events: On March 13, public events were cancelled; on June 27, this measure was removed; since August 17, a recommendation to cancel these events is in force.

Restrictions on public gathering: At no time were there any restrictions of this kind.

Stay-at-home restrictions: On March 13, it was recommended not to leave the house; on April 2, restrictions were established not to leave the house with exceptions for daily exercise, grocery shopping, and "essential" trips; on April 13, it was again recommended, since July 10, there are no such measures.

Public transport: On March 27, the category "Recommended closing (or reduce volume)" was entered; as of July 10, there are no measures

Restrictions on internal movement: On March 13, restrictions on movement within the country were recommended; from April 1, for 12 days a restriction on internal movement was applied; on April 13, there was a return to a policy of recommendation and from July 10 there are no such measures.

International travel controls: On March 13, the migration policy was to establish a quarantine on travelers from high-risk regions; on March 16, a ban on travel from high-risk regions; on March 24, a total border closure was declared and from July 5 there is a policy of quarantining individuals from high-risk regions.

Testing policy: As of March 13, the policy was testing only those who both: 1) have symptoms and 2) meet specific criteria (e.g., key workers, admitted to hospital, came into contact with a known case, returned from overseas); from June 25, there is open public testing (e.g., "drive-through" testing available to asymptomatic people).

Contact tracing: From March 15, "Limited tracing (only some cases)" apply.

Income support: On March 18, subsidies began to be granted that represented less than 50 percent of workers' salaries; from July 31 to date, the amount of the subsidy represents more than 50 percent of workers' salaries.

Debt and contract relief: Since March 19, the country has been in the broad relief category.

Mobility: The change in time spent in residential homes reached a 20 percent increase and then returned to a 5 percent increase. Time spent in grocery and pharmacy stores went down 40 percent, and then recovered up to -5 percent from normal levels. For workplaces, this process showed a 50 percent reduction and a -5 percent stabilization. For retail and recreation, this process showed a 65 percent reduction and a -20 percent stabilization. For parks, this process showed a 70 percent reduction and a -40 percent stabilization. For transit stations, this process showed a 60 percent reduction and a -30 percent stabilization.

Venezuela

The case of Venezuela is very particular, in that its figures represent excellent numbers, but are far from representing the reality of the situation. The pandemic has found Venezuela to be a country that is experiencing a deep economic, social, and political crisis and that does not have the necessary resources to tackle the virus. The dubious official figures show 2,371.75 confirmed cases per one million inhabitants and 19.52 confirmed deaths per million inhabitants (as of September 22, 2020). Most international experts agree that the numbers coming out of the Venezuelan government should not be trusted, not only for their inconsistency but also because of the Venezuelan government's long track record of false claims and statistics. The impact of the crisis on the country's GDP was estimated at a 32.8 percent decline as of August 2020. The highest Stringency Index was 87.04 and is currently at 82.41. Regarding specific measures:

School closures: On March 16, schools were declared closed.

Workplace closures: On March 16, the measure was for workplaces to be required to be closed for all but key workers; on June 2, this was changed to required for some; on June 22, it became required again for all but key workers; and as of August 23, it is in the "required for some" category.

Cancellation of public events: On March 12, all public events were cancelled.

Restrictions on public gatherings: On March 12, the ban on public meetings was set at more than 1,000 people; on March 17, the category was set at 10–100 people; from May 13 the restrictions were conceived in the category of fewer than 10 people.

Stay-at-home restrictions: On March 13, it was required that citizens not leave the house, with exceptions for daily exercise, grocery shopping, and "essential" trips; on June 15, it became a

recommendation; and seven days later it returned to the previous situation (required with exceptions), which applies today.

Public transport: On June 2, public transport was placed in the required closing (or prohibit most from using it) category; on June 15, no measures were in place; seven days later the previously declared category was returned; as of July 22, a recommendation for closing (or reduce volume) applies.

Restrictions on internal movement: On March 13, measures restricting internal movement were declared; on June 2, they were removed, going to recommendations only; from June 22, internal movement was restricted again.

International travel controls: On March 12, a ban on receiving travelers from high-risk regions was adopted; and on March 18, a total border closure took effect.

Testing policy: On February 10, a testing policy was announced to test only those who both: 1) have symptoms and 2) meet specific criteria (e.g., key workers, admitted to hospital, came into contact with a known case, returned from overseas); on May 8, the policy changed to open public testing (e.g., "drive-through" testing available to asymptomatic people)

Contact tracing: No contact tracing policy implemented.

Income support: No income policy implemented.

Debt and contract relief: On March 22, a broad relief policy was declared.

Mobility: The change in time spent in residential homes reached a 20 percent increase and then returned to a 15 percent increase. Time spent in grocery and pharmacy stores went down 45 percent, and then recovered up to -15 percent from normal levels. For workplaces, this process showed a 50 percent reduction and a -25 percent stabilization. For retail and recreation, this process showed a 65 percent reduction and a -30 percent stabilization. For parks, this process showed a 55 percent reduction and a -30 percent stabilization. For transit stations, this process showed a 65 percent reduction and a -40 percent stabilization.

Conclusion

Due to the number of countries; the complexity, variability, and volatility of the measures; and the fact that the situation is analyzed over a period of more than six months, it's extremely difficult to draw generalized conclusions for the region. Each case is full of complexities that are impossible to cover one by one, so the comparative analysis is based on some very general characteristics. That said, we can establish some guidelines for further analysis.

Although many of the measures appear to be similar between countries, we conclude that those countries that established concrete plans, with little variation in measures, had more-effective management of the pandemic. Another of the central points that we can note in this analysis is the different testing and infection tracking policies established by the different countries. Those countries that established swift border and travel restrictions; case and risk groups isolation; extensive testing policies; and that together established a comprehensive contact infection tracking policy, were able to manage the pandemic situation more successfully, obtaining as a result a lower

number of deaths and infections per one million inhabitants, as well as a lower negative impact on the country's economy, as shown by the cases of Uruguay, Chile, and Paraguay.

Previous and external factors also affected the result of the policies. Large and federal countries such as Brazil find it harder to implement coherent policies, while smaller unitarian ones such as Uruguay showed a faster and more-effective response, although there where exceptions. A lack of a good health infrastructure was a determinantal factor in skyrocketing death figures in cases such as Peru, and better economic conditions helped alleviate the impact of restrictive measures over the economy. A poor government structure presented complex health management situations in countries such as Ecuador and Perú, and an efficient state organization allowed Chile to control the crisis smoothly and smartly. Other factors such as previous levels of international travel and connectivity also affected the speed and time of onset of the pandemic in each country, limiting the ability of governments to respond and prepare.

Draconian measures such as anticipated, restrictive, and long lockdowns have shown to be of little use under a scenario in which a vaccine has not been able to be developed and applied, as many predictions foretold since the beginning of the pandemic. Argentina, as an example of a country that initially underestimated the problem and then overreacted with the longest lockdown in the world, has shown that it only pushed forward the infection and disease curve, now reaching the rest of the countries assessed regarding COVID-19-related deaths per million inhabitants (318 deaths per one million inhabitants on September 24 and increasing to the 450–650 presented by many countries). Argentina's policy largely failed, leaving its economy under a total collapse, with a 19.1 percent GDP drop and a tired society under unrest that starts to loosen its compliance in the moment it's most needed.

The findings require further analysis in the future, but we believe that this is a good start to point the way forward for research. Any serious research that deepens these findings will help us to better navigate through the undesirable potential pandemic situations that are likely to come our way in the future. If that is the case, countries will need to have good public policies and the necessary resources to be able to deal with the situation effectively, protecting the health, the economy, and all aspects of the people who may be affected.

References (Latin America)

- Benitez and Others, 7 Aug 2020, Social Science Research Network, "Responses to COVID-19 in Five Countries of Latin America" - https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3663292
- Our World in Data, Coronavirus Pandemic (COVID-19) Statistics and Research, Hannah Ritchie, Esteban Ortiz-Ospina, Diana Beltekian, Edouard Mathieu, Joe Hasell, Bobbie Macdonald, Charlie Giattino, and Max Roser, Oxford University - https://ourworldindata.org/coronavirus
- Policy Brief: The Impact of COVID-19 on Latin America and the Caribbean, JULY 2020, United Nations - https://www.un.org/sites/un2.un.org/files/sg_policy_brief_COVID_lac.pdf
- Google COVID-19 Community Mobility Reports - https://www.google.com/COVID19/mobility/
- COVID-19 Projections Using Machine Learning - https://COVID19-projections.com/
- Web News Articles:
    - https://www.expreso.ec/actualidad/economia/ecuador-ciegas-mercado-informal-88316.html
    - https://www.telam.com.ar/notas/202006/474540-ocde-caida-pbi-mundial.html
    - https://cincodias.elpais.com/cincodias/2020/08/26/economia/1598436281_876829.html
    - https://www.defensa.gob.ec/el-presidente-lenin-moreno-decreta-estado-de-excepcion-en-ecuador/
    - https://www.bbc.com/mundo/noticias-53438543
    - https://www.eltelegrafo.com.ec - http://tinyurl.com/y6v597e3
    - https://www.cronista.com/economiapolitica/Como-se-compara-la-caida-de-la-economia-Argentina-con-Chile-Uruguay-y-Brasil-20200922-0059.html
    - https://www.cronista.com/internacionales/Coronavirus-inedita-caida-del-PBI-en-la-OCDE-afecto-a-Espana-y-Mexico-mas-que-al-resto-20200826-0017.html
    - https://cnnespanol.cnn.com/video/economia-paises-america-pandemia-afectados-perspectivas-buenos-aires/
    - https://www.infobae.com/america/agencias/2020/08/28/un-indicador-refleja-una-caida-de-la-economia-boliviana-del-8-hasta-junio/
    - https://www.totalnewsagency.com/paraguay/economiapy/fitch-solutions-estima-caida-del-4-del-pib-para-el-2020

Mexico

By: Mónica Vierna, Francisco Gonzalez, Carolina Agurto, and Raúl Abreu, Fundación IDEA

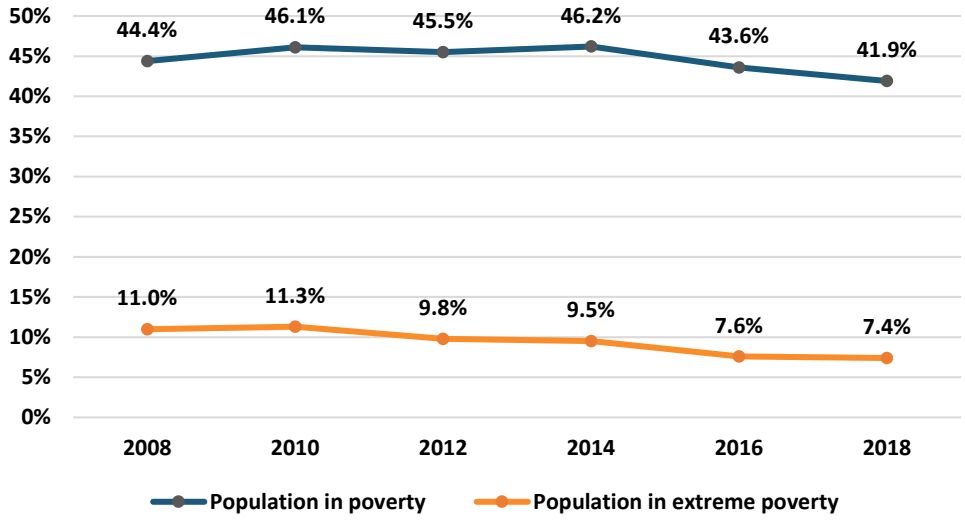
Mexico's Response to the Coronavirus Pandemic

1. Introduction

Even before the COVID-19 crisis began, Mexico was already experiencing high levels of social vulnerability. Even though 83.8 percent of Mexican families were nominally affiliated to public or private health institutions in 2018, most of the coverage was concentrated in urban centers. About 30 percent of municipalities are marginalized geographically, where coverage remains limited.[247] As of 2018, more than three million people did not have physical access to health services, a situation which has particularly affected people in poverty.[248] Compared with industrialized countries' provision of health services, Mexico lags behind. In 2015, the number of doctors per 1,000 inhabitants was 2.4, whereas the OECD ratio was 3.4. The number of nurses per 1,000 inhabitants was 2.8, whereas the OECD ratio was 9.[249] The vulnerabilities associated with an underdeveloped health care system are exacerbated by a high incidence of comorbidities. In 2018, 96 million Mexicans were overweight or obese, 8.6 million had diabetes, and 15.2 million had hypertension.[250]

The prevalence of people living in poverty reinforces social vulnerability. Although the rate has declined in recent years, 4 out of 10 Mexicans live in poverty. In 2018, Mexicans living in poverty and extreme poverty accounted for 41.9 percent and 7.4 percent of the total population, respectively. From 2008 and 2018, these percentages decreased by 2.5 and 3.6 percentual points.[251] (See Figure 63.)

Figure 63: The Mexican Population in Poverty and Extreme Poverty 2008 to 2018 (%)[252]



Furthermore, in 2018, 56.7 percent of Mexican workers were employed in the informal economy. The population that works in this sector, which represents 22.5 percent of the country's GDP, does not have access to social security or other labor provisions.[253]

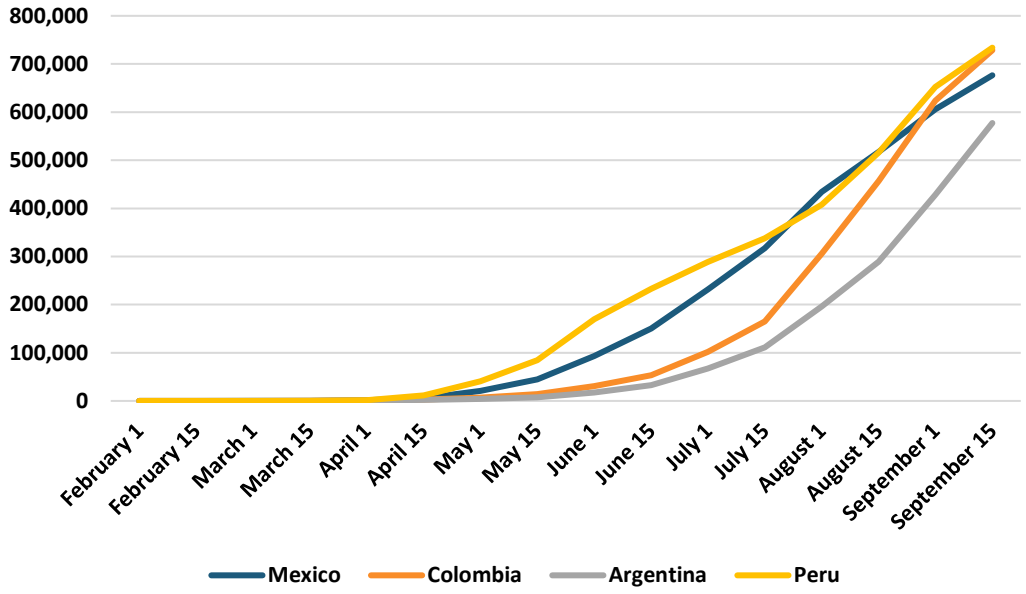
All of these factors have influenced, as well as limited, the government's ability to respond to the COVID-19 pandemic. The next sections examines the COVID-19 pandemic's impact on Mexico and the government's health and economic responses.

2. Health Impact and Responses

Although it is too soon to estimate the long-term effects of COVID-19, information about the immediate impact of the virus on the health of the Mexican population is already available. By September 18, 2020, there were 684,113 coronavirus cases in Mexico, resulting in 72,803 deaths since the beginning of the outbreak.[254]

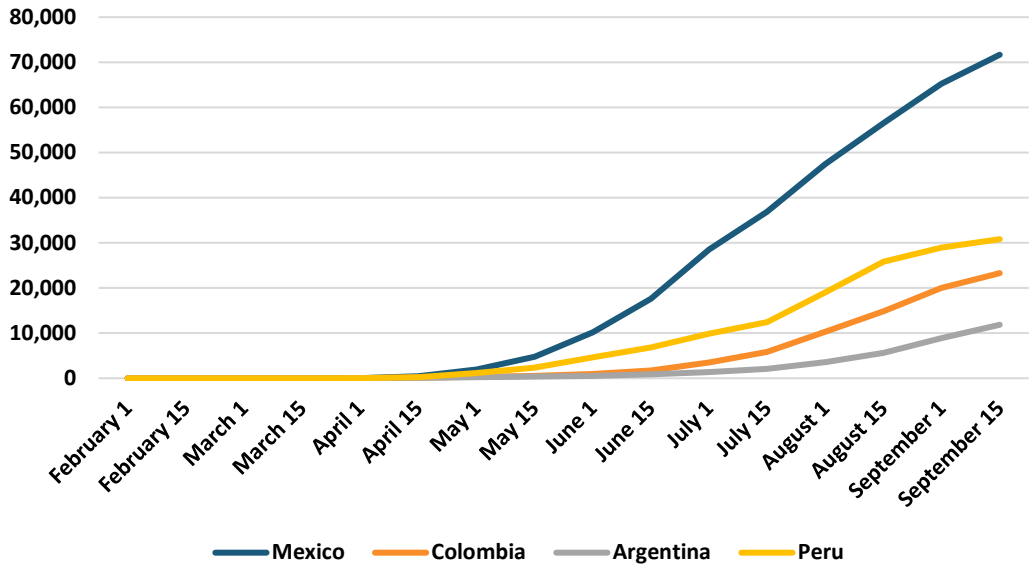
While the growth of cases was exponential at the beginning of the summer, it has started to decline since August. In comparison with other Lain American countries, Mexico has identified fewer COVID-19 cases than countries with less than half of Mexico's population, such as Colombia and Peru. (See Figure 64.)

Figure 64: Number of COVID Cases in Four Latin American Countries[255]



Although Mexico has proportionally fewer confirmed COVID-19 cases, it has significantly more deaths than do Argentina, Colombia, or Peru. (See Figure 65.) Mexico's mortality rate concentrates on the most vulnerable segments of the population, such as the poor, the elderly, and those with disabilities and comorbidities. For example, 71 percent of Mexicans who died because of COVID-19 had not completed studies beyond elementary education, and 46 percent were retired, unemployed or had an informal job.[256] In addition, 7 out of 10 of the people who died of COVID-19 had comorbidities.[257]

Figure 65: Number of COVID Deaths in Four Latin American Countries[258]



2.1 Public Health Responses

The Mexican federal government imposed different public health measures to prevent the spread of COVID-19 and mitigate the impact caused by the pandemic in Mexico. Among these interventions are the following:

- The Mexican government invested 3,243 billion Mexican pesos ($144 million) hiring 44,247 doctors and nurses. The government also provided training to more than 36,611 health practitioners by May 2020.[259]
- The Ministry of Health signed an agreement with private hospitals, in which private hospitals agree to provide 50 percent of their beds to be used by public institutions.[260]
- The government developed guidelines and protocols to mitigate, prevent, and respond to COVID-19. Some of these guidelines have the objective of increasing the provision of health services for the Mexican population, for example:
    - Guidelines for hospital reconversión;[261] and
    - Guidelines for temporal health care centers and mobile hospitals implementation.[262]
- Mexico's federal government has carried out campaigns to inform the population about the pandemic and the measures that they should follow, such as social distancing and the use of face masks. For example, "*Quédate en casa*" is a campaign that encourages Mexicans to stay at home and to wash their hands regularly, have their windows open, and disinfect frequently-used objects and surfaces.[263]

Although the Mexican government implemented the measures mentioned previously, the Pan American Health Organization (PAHO) recommended that Mexico's federal as well as regional governments deliver a well-coordinated message.[264] PAHO also pointed out that this is particularly relevant for Mexico, provided that it is one of the countries with the highest COVID-19 mortality rates in the American continent.[265] As a response, Mexico's Ministry of Health has expressed

concern that some states have not followed the federal government's measures and have not provided consistent information about the number of cases and deaths.[266] It's also a concern that state governments have not adapted their hospitals to provide enough health services as expected.

The Mexican Health Ministry established that only those who have severe COVID-19 symptoms should get tested; and the people who do not have symptoms should only monitor themselves.[267] In Mexico, the testing rate is 65 tests per one million inhabitants. This ratio is far below the mean for Latin American and Caribbean countries (305) and the average of another 89 countries studied by the United Nations (UN) (769). This difference suggests that Mexico is not performing enough tests to control the outbreak properly. It also indicates that the real number of COVID-19 cases could be much higher than the number of confirmed cases.[268] That means many people do not know if they are infected, do not receive treatment, and risk spreading the virus on to others. This possibility leaves the poor and indigenous populations in a particularly vulnerable situation.[269]

Finally, Mexico is collaborating with other countries in the research and development of a COVID-19 vaccine. Some of the efforts that Mexico is making in this field are the following:

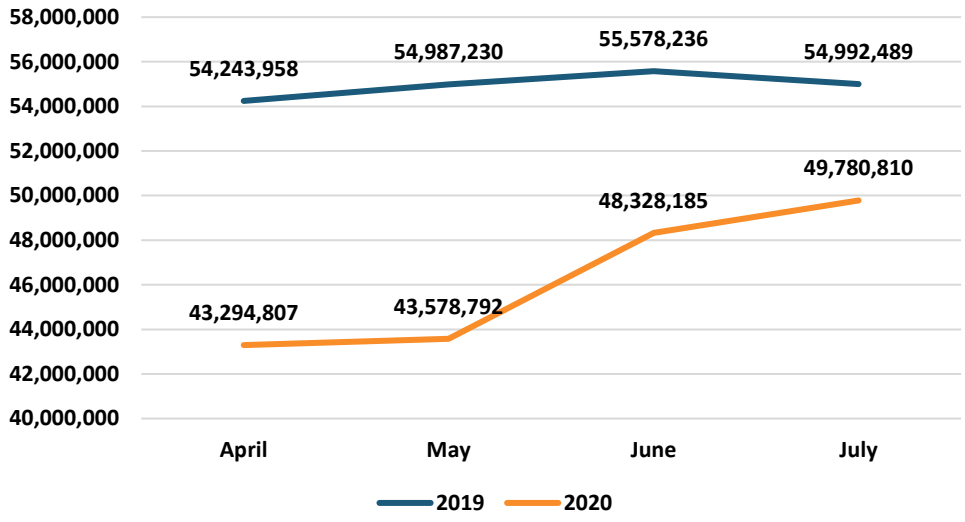
- In April, Mexico participated in a proposal made by the UN to guarantee access to medicines, vaccines, and medical equipment. The country also provided €1 million ($1.16 million) to contribute to vaccine research.
- Mexico is participating in three research protocols to develop a vaccine: the Coalition for Epidemic Preparedness Innovations (CEPI), GAVI Vaccine Alliance, and the World Health Organization (WHO).[270]
- Mexico, along with Argentina, is working with the vaccine that AstraZeneca is currently developing. In this agreement, both countries also agree to distribute the vaccine throughout Latin America and the Caribbean. Once the vaccine is approved, Mexico and Argentina would produce approximately 150 and 250 million doses, respectively.[271]

3. Economic Impact and Responses

It is expected that the most vulnerable segments of Mexico's middle class will experience substantial impoverishment. According to CONEVAL estimates, in 2020, COVID-19 could push 20 million Mexicans into multidimensional poverty, bringing the total to 71 million (roughly 56 percent of the total population).[272] That would be 14 percentage points higher than the proportion of people in poverty during 2018 (41.9 percent). In particular, CONEVAL estimates that the size of the population that is experiencing income poverty could increase by more than 7 percent. In other words, about 9 million additional people will not have enough resources to afford the basic food basket and essential goods and services as a result of the COVID-19 pandemic.[273]

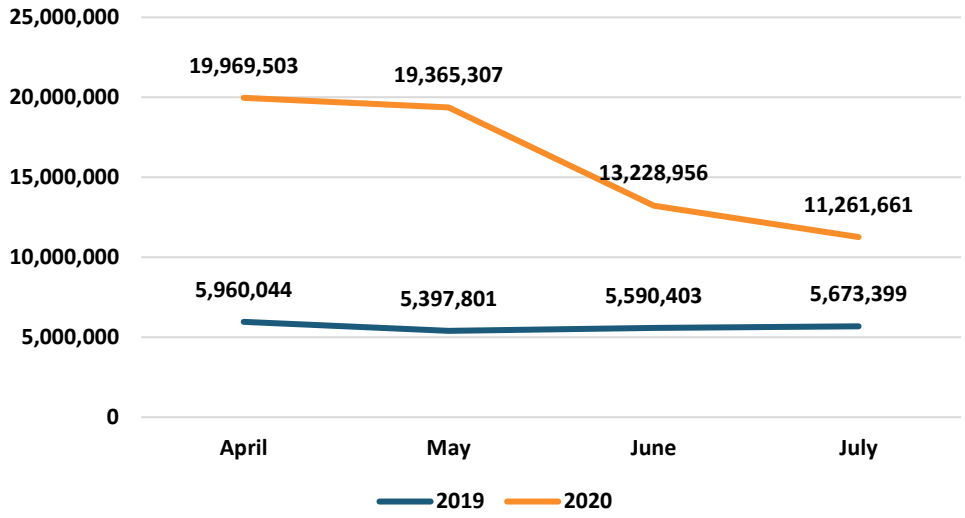
Regarding employment, between March and April, the pandemic increased the number of unemployed Mexicans by over 12.5 million.[274] From April 2019 to April 2020, the number of employed people decreased by 20 percent. However, in the following months, these amounts started to converge: in July 2020, the number of people employed was 9.5 percent less than in July 2019. (See Figure 66.)

Figure 66: Number of People Employed in Mexico in April, May, June, and July 2019–2020[275]



Additionally, the number of people not economically active that are available to work has increased significantly between 2019 and 2020.[276] Nonetheless, during the second half of 2020, the number has decreased by 43.6 percent, which points to a slow recovery of the jobs lost previous to and during the beginning of the COVID-19 pandemic. (See Figure 67.)

Figure 67: Number of People Not Economically Active and Available to Work in Mexico in April, May, June, and July 2019–2020[277]

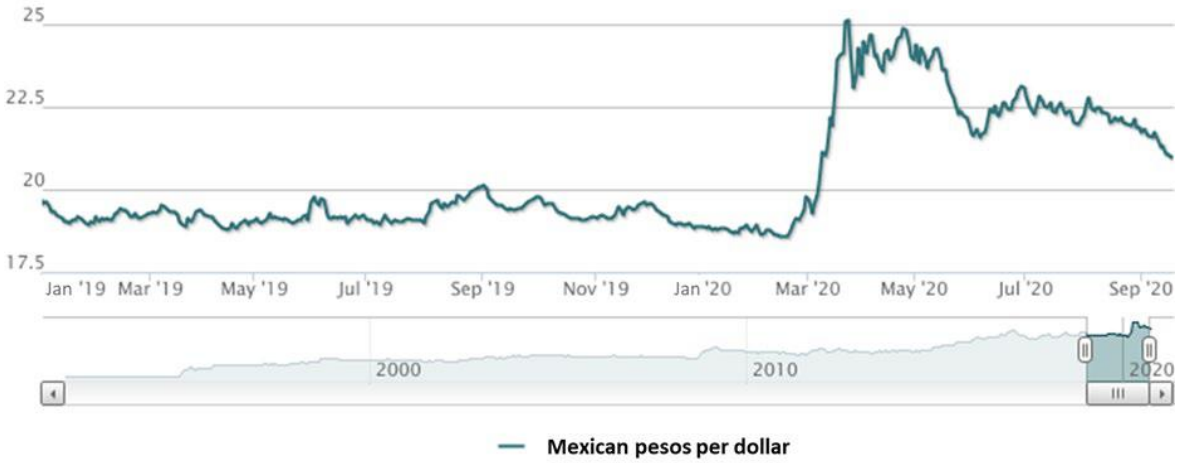


Another significant impact of the pandemic to the Mexican economy is made clear by the low economic activity of the country's major sectors. Since the suspension of non-essential activities according to the *Jornada nacional de sana distancia*, in the second quarter of the year, the *Indicador Global de Actividad Económica* (Global Indicator of Economic Activity) has decreased month after month. In the period between March and April, the indicator presented the greatest drop in history from one month to the next (17.3 percent). The drop was the result of a decrease in industrial activity (-25 percent) and the services sector (-14 percent), two of the most important

economic sectors in the country.[278] Although the economic activity has slowly regained its standing after some of the non-essential activities were deemed as essential and allowed to resume, the effects of the temporary halt of these sectors will have significant and long-lasting effects on the country's economy.

The Mexican peso's exchange rate has also been under pressure. During 2019, the exchange rate was relatively stable; the average was 19.26 Mexican pesos per dollar. However, in March 2020, after the COVID-19 outbreak began in Mexico, it increased by 24.3 percent. After that month, the exchange rate remained higher than the previous year, but during the last months, it has been decreasing. On September 18, the exchange rate was 20.97 Mexican pesos per dollar. (See Figure 68.)

Figure 68: Mexican Peso Exchange Rate, 2019-2020[279]

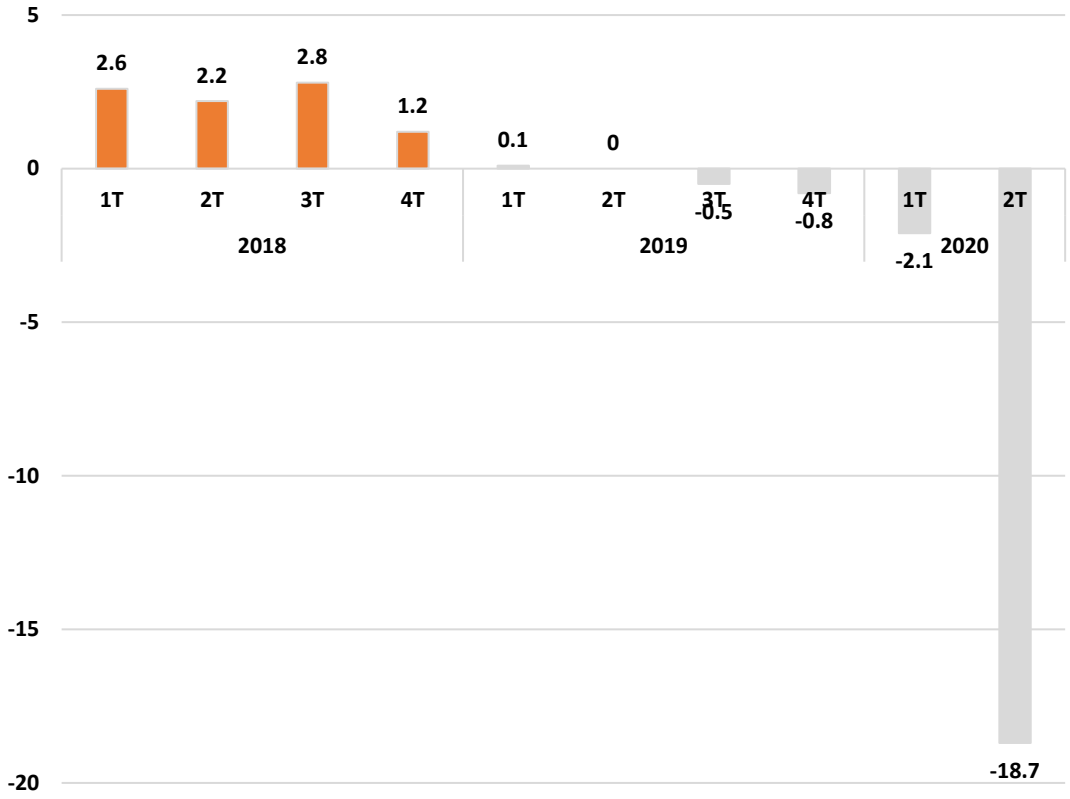


Moreover, the pandemic has also impacted businesses. In this regard, 93.2 percent of Mexican companies registered at least one type of consequence due to COVID-19:

- 91.3 percent of these businesses experienced a reduction in their income;
- 72.6 percent were affected by the decrease of the national demand; and
- 33.9 percent suffered from a lack of inputs for their products.[280]

Finally, Mexico's GDP has had a significant contraction in the second quarter of 2020. (See Figure 69.) During this period, the GDP decreased by 18.7 percent compared to the same period last year. Also, the OECD estimates that Mexico's GDP could decrease by 10.2 percent in 2020, compared to the previous year.[281] The organization stated that the negative outlook is exacerbated due to the combination of COVID-19's spread and the high levels of poverty and labor informality.

Figure 69: Mexico's GDP Seasonally Adjusted 2018-2020 (Percent Variation in Comparison With the Same Period the Previous Year)[282]



3.1 Fiscal Measures

To restart the country's economy and mitigate COVID-19's impact on Mexican workers and businesses, Mexico's federal government has implemented a range of economic measures. Among these measures, the government has established standards that would help companies to return to work after the lockdown. The government has also implemented financial and technical support for Mexican employees and micro, small, and medium enterprises (MSMEs).

Standards for the Reactivation of the Mexican Economy

To reactivate the Mexican economy responsibly, the federal government has promoted a regional traffic light-like system that indicates the risk level of the pandemic.[283] The colors specify which economic, educational, and social activities may resume, contingent on the public health outlook. In particular, the traffic light colors set the following standards:

- Red: Essential activities and the construction, mining, and transportation equipment manufacturing sectors;
- Orange: Non-essential activities at 30 percent building occupancy and strict social distance measures; and
- Yellow and green: Essential and non-essential activities at their full capacity, with prevention measures.[284]

The communication and coordination between the federal government and the state governments regarding this system consist of the following steps:

1. The Ministry of Health shares the traffic light system indicators to the states.
2. Every week, the Ministry of Health sends the observed data of these indicators for each federal entity to the states. The state government reviews this data and returns the corresponding comments and observations.
3. After the federal government and the state governments reach an agreement, the Ministry of Health publishes the traffic light results.[285]

Economic Support

The federal government has developed a series of programs to provide financial support to micro-businesses and independent workers, planning to grant 25,000 Mexican pesos ($1,110) to beneficiaries to be repaid in three years. The programs are being implemented in three stages: the identification and approval of beneficiaries, the validation of beneficiaries' information and funding, and the repaying of the funds. At this time, the program is on its second stage, and has begun validating the beneficiaries' information and disbursing funds.[286]

Platforms for MSMEs Commerce

The federal government has implemented two platforms that support local trade and exports for MSMEs affected by the pandemic:

- *Mercado Solidario*, is a virtual space that allows people to find local markets and make transactions with MSMEs.[287]
- *E-Ruedas de Negocios*, is a platform that provides wider commercial opportunities to small and medium exporting companies. Through this platform, Mexican companies can have business meetings with potential buyer companies from a variety of markets. This platform also provides virtual workshops about accessing specific markets and also electronic and sustainable commerce.[288]

Credits and Microcredits

As part of the economic responses to COVID-19, the federal government has created new credit programs and modified existing ones to help MSMEs and the Mexican population. In particular, the government developed one microcredit for small family businesses (*Tandas para el Bienestar*) and modified three federal credit programs (FONACOT, FOVISSSTE, and INFONAVIT). These changes provide extraordinary support, defer payment terms, and introduce discounts, as well as forbearance.[289]

Ministry of Treasure and Public Credit policies

The Ministry of Treasure and Public Credit has implemented policies to provide flexibility for loan repayment targeted to individuals as well as businesses.[290] These policies partially or fully deferred capital payments or interests up to four months (with a possible two months extension).[291] Also, this institution extended the tax declaration deadline for individuals. However, it has not implemented this flexibility for corporations.[292]

3.2 Monetary Policy

Monetary policy in Mexico as a response to the pandemic has consisted of providing liquidity to improve domestic markets performance, enforcing credit channels in the economy, and promoting an organized functioning of the Mexican debt and exchange markets. The monetary policy goal is to prevent the credit institutions' pro-cyclic behavior and to build the conditions that allow financial intermediaries to provide funding to the economy.

Some examples of the monetary measures implemented by the Mexican Central Bank (BANXICO) are:

- Reduce the interest rate and establish special criteria for credit risks;
- Increase of liquidity during operational times to boost financial markets and payment systems;
- Promote the orderly brokerage of government and corporate securities markets;
- Strengthen credit channels by providing resources to bank institutions to grant credit to Micro-SMEs and individuals affected by the pandemic; and
- Encourage and support financial institutions to ease the payment of credit cards, defer credits, and extend payment schemes for insurance premiums.[293]

Altogether, the policies established by BANXICO will contribute 750 billion Mexican pesos ($33.3 billion), which represents 3.3 percent of the 2019 GDP.[294]

4. Recommendations for the Future

Further analysis is necessary to evaluate whether the health, social, and economic measures implemented in Mexico will suffice to cover the needs of the population and to mitigate the impact of COVID-19 effectively. However, with the information available at this date, experts have identified the following recommendations to improve the country's conditions, particularly those of vulnerable populations:[295]

Short-run Recommendations

- The response should be comprehensive and consider different vulnerabilities, including the lack of access to health, food, adequate home conditions, potable water, and an income level that allows people to acquire essential goods and services.[296]
- The federal, state, and municipal governments must work in a coordinated manner to strengthen the existing efforts and maximize their positive impact.
- The federal government should provide more resources to strengthen states and municipalities' health services.
- The three levels of government should work together to provide temporary subsidies to cover essential services for the most affected people.
- To reduce the vulnerability of people who work in the informal sector, the Mexican government should reinforce microcredits such as *Tandas para el Bienestar*, through the extension of the expiration period and the provision of credit for personal consumption. Furthermore, the

government should provide financial assistance to informal workers that have lost their source of income during the lockdown period.

- The government should provide unemployment insurance to support workers that have lost their jobs due to the pandemic.
- Companies should be encouraged and supported to develop payroll protection programs that aim to keep as many formal employees as possible.
- MSMEs should have their social contribution payments deferred.
- The government should develop a program to support small businesses such as restaurants with the payment of rent and other basic fixed costs.[297]

Long-run Recommendations

- The federal government should invest in improving the access to health through an increase of available infrastructure, human and physical resources, and medicines, especially in places that present conditions of vulnerability.[298]
- The three levels of government must develop new institutional coordination mechanisms and shared information systems for low-income population programs to facilitate the identification of the most vulnerable segments of the population for further contingencies.
- Mexico should consolidate social and risk protection to the population by establishing the following:
    - Robust institutions focused on supporting people in poverty;
    - A minimum universal retirement and disability pension; and
    - Unemployment insurance and a minimum solidarity floor.[299]

5. Closing Remarks

The unprecedented nature of the COVID-19 global pandemic and the already-prevalent social and economic vulnerabilities in Mexico have posed a difficult challenge for the Mexican government. Despite the government's efforts to provide support in the face of the pandemic, there are aspects of its response that have been criticized as failing to avert the spread of the virus and the current number of deaths. Those aspects can be summarized as follows:

- Due to an austerity-oriented policy, the government decided not to incur public debt necessary to equip the public health service, provide sufficient public testing, and mobilize emergency funds required to handle the pandemic across the country.[300]
- The government's communication strategy about the importance of sanitary measures and social distancing has been clear and based on scientific facts, especially during the second half of 2020. However, the administration has been widely criticized for its initial refusal to recognize COVID-19 as a threat to the country earlier in the year.[301]
- The federal government's response was also characterized for its lack of coordination with state governments, which was evident in the states' decision to impose additional and often contradicting measures to those mandated by the federal government and preventing an efficient response to the pandemic.[302]

Just as the impact of the COVID-19 pandemic is yet to be determined, the full extent of responses that the country can and will apply to mitigate and avert the consequences of the crisis is yet to be discovered. The Mexican government is running out of time to articulate policies that have the scale to significantly mitigate the health, social, and economic crises that the country faces. While it's understandable that there are political and fiscal trade-offs for the local and federal administrations to implement effective policies, it should be self-evident by now that the risk of not meeting this challenge will have a crippling effect on the people and the economy for years to come.

Poland

By: Burak Turgut, Center for Economic and Social Research

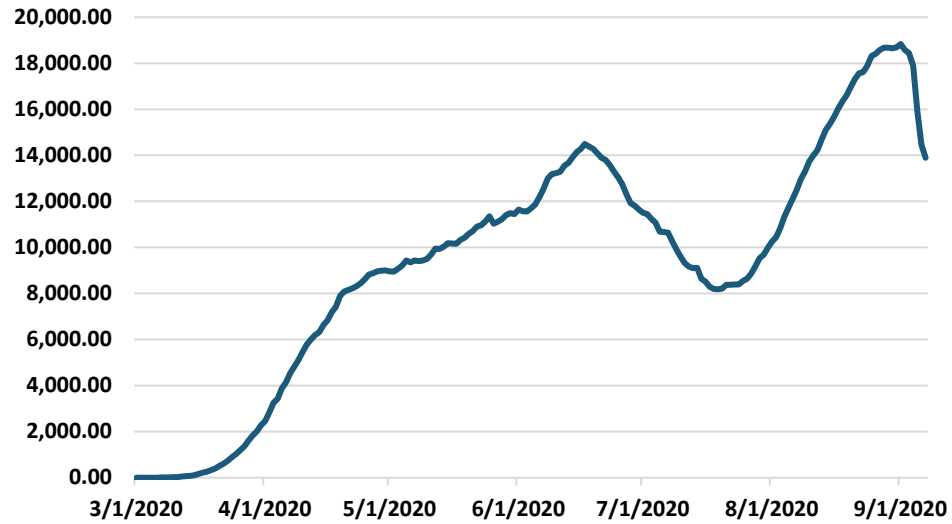
Poland: A COVID-19 Update

Introduction: Development of the Pandemic in Poland

The first confirmed case in Poland was announced on March 4, 2020, and the number of active cases (new cases less recovered cases and deaths) has increased gradually until mid-June when it started falling. (See Figure 70.) In the meantime, starting in mid-March, the government closed borders and introduced lockdown measures such as cancellation of all mass events, closing schools, and restrictions on accommodation and catering services. The restrictions were gradually lifted in late April and May 2020. However, the number of active cases mounted in August and reached its peak on September 1, 2020. Since then the trend has reversed.

It is difficult to assess whether the number of active cases will continue to decline or will reverse again in the fall and winter, as several factors may affect both the potential increase and decline of cases. On the one hand, September saw the reopening of schools and usually, the fall and winter coincide with the onset of the flu season. On the other hand, health authorities and other officials may already have more experience in dealing with the disease.[303] In particular, the government introduced more granularity in zoning and lockdowns of the affected regions, put into effect new restrictions on flights from certain countries on a temporary basis subject to renewal, introduced the minimum 1.5-meter distance between pedestrians rule, and required compulsory mask-wearing if this distance cannot be maintained. As of September 9, 2020, the number of losses due to the COVID-19 per one million people was 57 in Poland, a considerably low number relative to that of most developed countries. However, the number of tests per one million of 76,790 is also considerably lower than in other developed countries.[304]

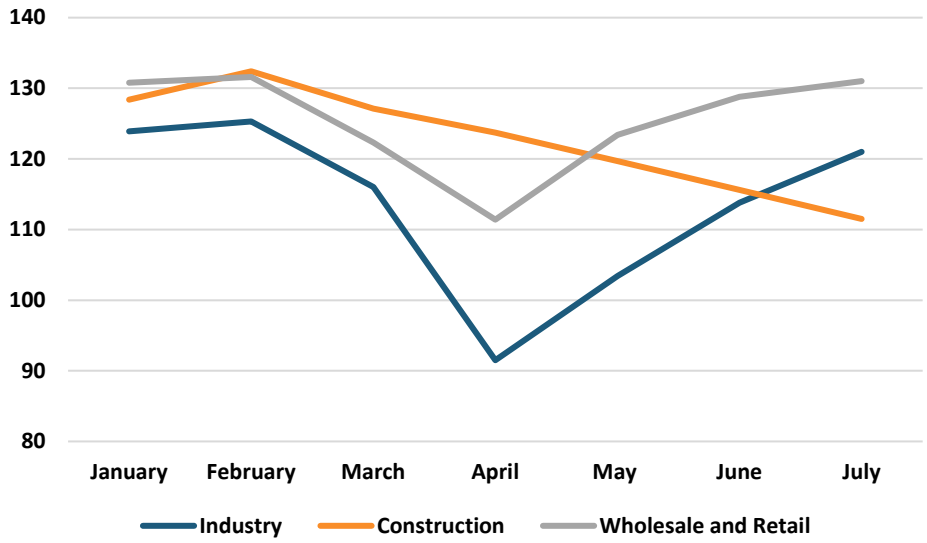
Figure 70: The Number of Active Cases in Poland[305]



Economic Impact

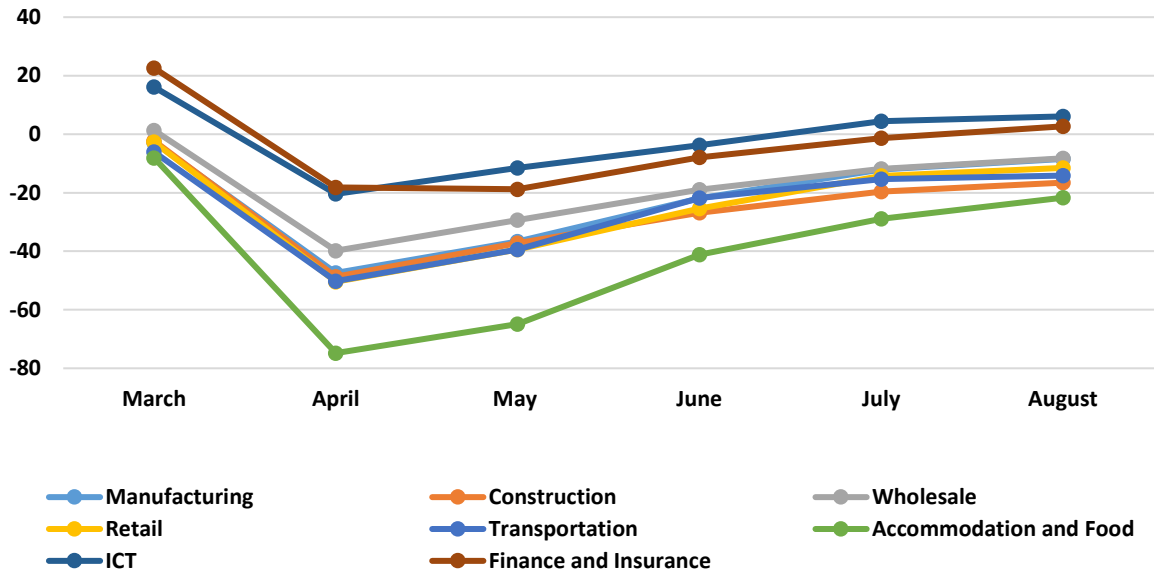
Like other countries' in the world, the Polish economy also suffered from the unprecedented COVID-19 epidemic.[306] The GDP contracted by 0.4 percent in the first quarter and 8.9 percent in the second quarter. The 10.8 percent shrink of household consumption and 11.4 percent drop in fixed investment contributed to the plunge of GDP in the second quarter even though government consumption increased and the contribution of net exports was positive (since the drop in imports was faster than the drop in exports mainly because of investment goods collapse.) Figure 71 shows that production in industry and turnover in wholesale and retail trade dropped in March and April (in some manufacturing sectors the drop was substantial, e.g., transport equipment, which experienced a 79 percent decline year over year) but started gradually recovering and restored to the pre-pandemic levels. In contrast, production in construction has been continuously decreasing since February. If the trends continue, as shown in Figure 71, the recovery in industry and trade will have had a positive effect on GDP in the third quarter, whereas the construction sector will have had a negative impact.

Figure 71: Sectoral Analysis of the Economic Impact of COVID-19 (Monthly Average of 2015 = 100)[307]



The Polish Statistical Office has measured the business tendency across eight sectors and constructed an index to assess the business conditions in Poland. Figure 72 shows the results of these surveys since March 2020. The business conditions were the lowest in all sectors in April except the financial sector, which was worse off in May. Despite a recent rebound, the sentiment of the business environment remains below that of the pre-pandemic period.

Figure 72: The Business Tendency Index[308]



The business tendency surveys also contain a question related to the scale of the effects of the COVID-19 crisis. The sum of a "serious" and "a threat to company's stability" responses to this question as a percent of total answers is presented in Figure 73. In all sectors except transportation, the share of the firms that experience serious negative effects of the COVID-19 were the largest in April, and this share has been decreasing gradually since then. Similarly, the share of the firms that expect serious negative effects of the COVID-19 pandemic decreased from 80 percent to 40 percent, on average, indicating an improvement in expectations. However, in some sectors like construction and accommodation, the expectations did not improve between July and August.

Figure 73 examines the developments in the enterprise sector since the beginning of the pandemic and point to the stabilization in the manufacturing and trade sectors as well as improving business conditions and expectations. This, in turn, will likely have led to a partial recovery in the Polish economy during the third quarter. However, the same figures also suggest that there is a decreasing trend of production in construction and the share of firms that experience and expect serious negative effects of COVID-19 still constitute approximately 40 percent. Coupled with the uncertainty surrounding the expected active cases in the upcoming fall and winter, all these facts can put a halt on the growth and investment and eventually on economic recovery over the longer term.

Figure 73: The Negative Effects of the Coronavirus Pandemic and Its Impact on Business Activity[309]

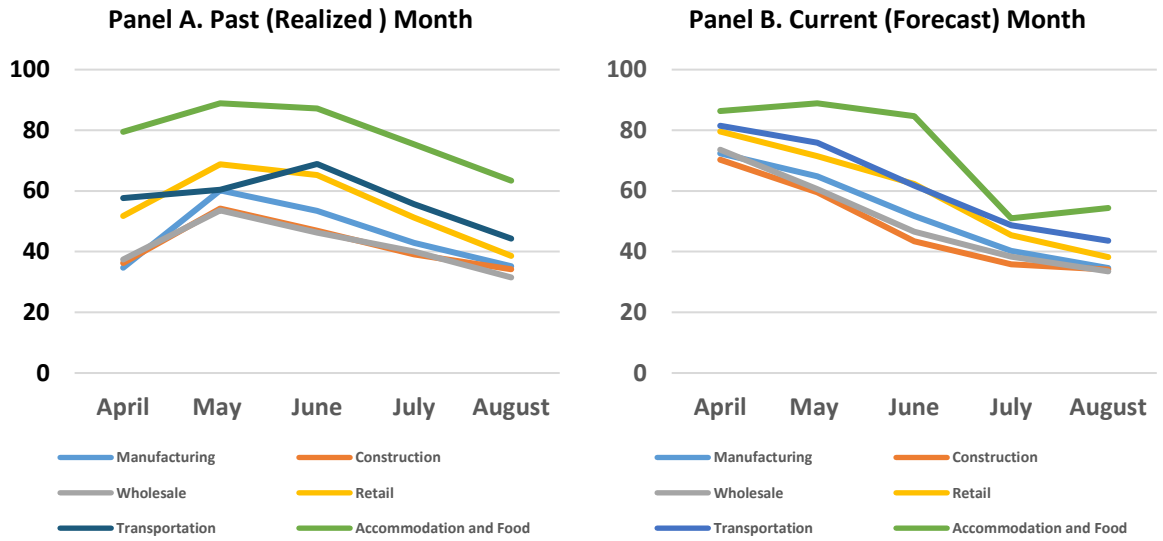


Figure 74: The Current and Leading Consumer Confidence Index in Poland[310]

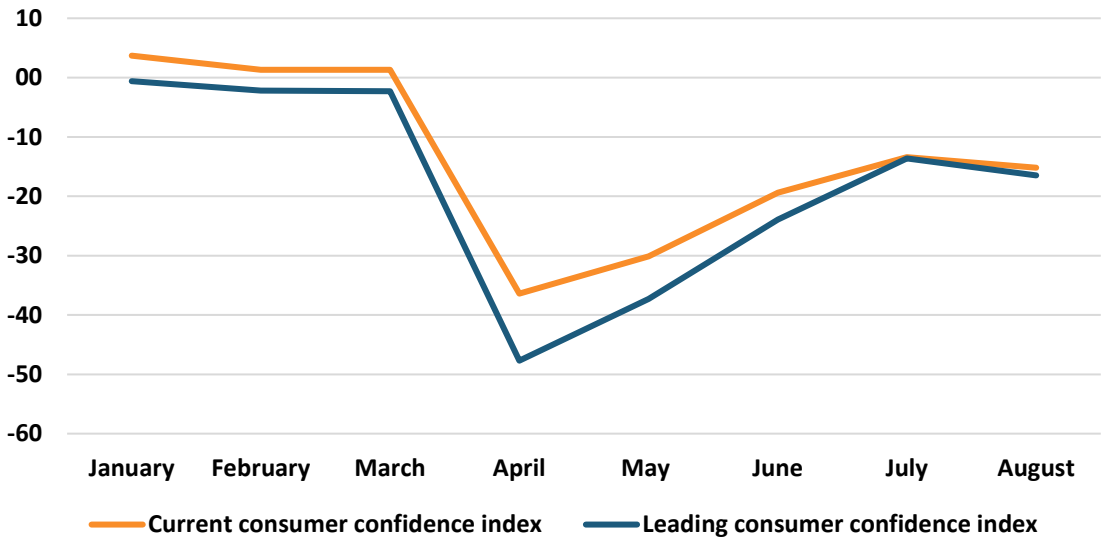


Figure 74 shows the change in the current and leading consumer confidence indicators relative to the base period. Both indices experienced a sharp drop in April and stayed negative, but with a gradually increasing trend until August similar to the business tendency indices noted. However, the consumers' pessimism about the future of the economy deepened in August. If the pessimism continues this trend, consumers will avoid spending which will negatively impact the economic recovery. Hence it is important to closely monitor the changes in consumer confidence and design the policy tools based on these changes.

Labor Market

The number of employed persons at the end of the second quarter of 2020 was 2.7 percent lower than at the end of the first quarter of 2020 and the unemployment rose from 5.4 percent to 6.1 percent between March and July, according to the figures published by the Polish Statistical Office.

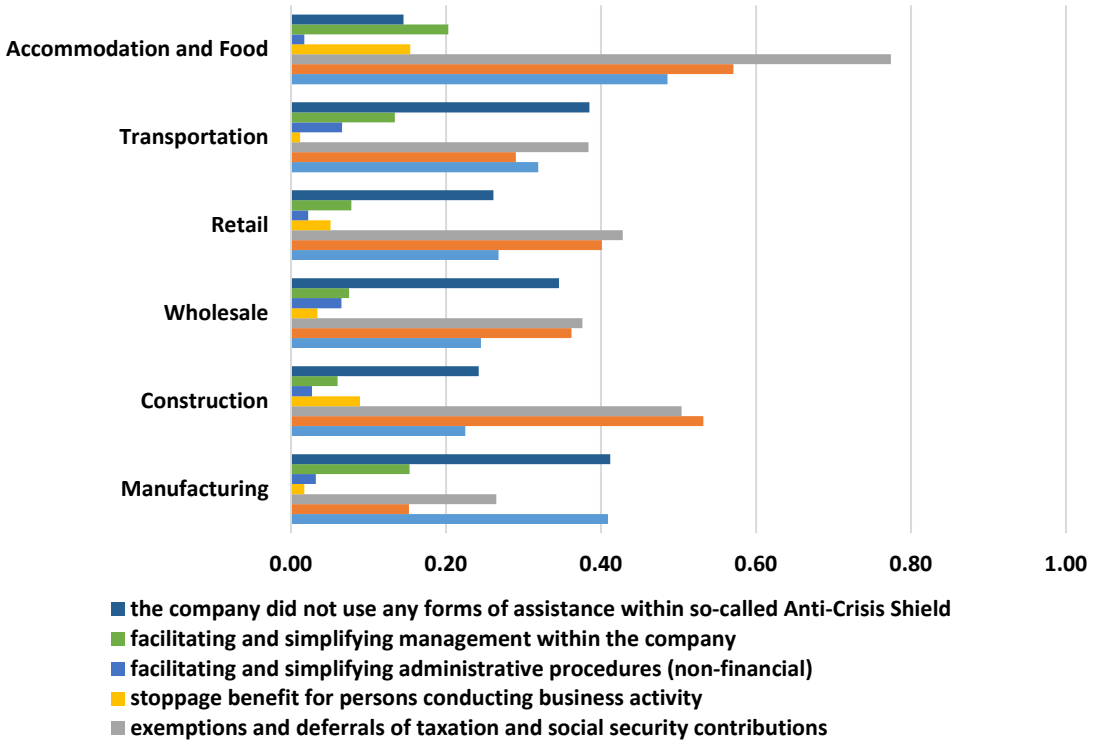
This suggests that the contraction in the labor market has not yet fully materialized. However, a novel study—Diagnoza.plus—initiated by several Polish research institutions, by directly surveying the labor force in a representative fashion, found the actual share of workers who lost their job as 9.8 percent in April and 8.7 percent in June.[311] The main reason behind the large gap between the official and Diagnoza.plus unemployment rates in March is that people who lost their job in March were unable to register as unemployed with public employment services. The gap shrank in June thanks to government assistance which helped businesses and enabled them to maintain their employees via co-financing of salaries and wages and which also provided financial support to the self-employed. Moreover, the ease of lockdowns allowed businesses and workers from certain sectors to return to their workplace. On the other hand, Diagnoza.plus shows that around 30 percent of working individuals experienced a decrease in their income as of June 2020 due to reductions in working hours and unregistered payments in some cases. Overall, the impact of COVID-19 on the Polish labor market is mixed; the unemployment rate did not spike as it did during the Great Recession (increased more than 2 percent between October 2008 and March 2009) but between 30 percent to 40 percent of employed people experienced a drop in their renumeration in the second quarter of 2020.

Economic Policy

In addition to the health measures, the Polish government introduced economic policy responses to alleviate the negative impact of COVID-19 on the economy. As of August 27, 2020, these responses include budgetary changes estimated at PLN 104 billion ($26.4 billion, which represents 4.6 percent of Polish GDP), new credit guarantees and micro loans for entrepreneurs estimated at PLN 75 billion ($19 billion, or 3.3 percent of GDP), and PLN 100 billion ($25.4 billion, or 4.5 percent of GDP) liquidity program for businesses to be financed by the Polish Development Fund.[312] The key measures of these responses are social security contributions, wage subsidies, increased guarantees for the loans taken by medium and large companies, additional loans from micro firms, increased unemployment benefits, interest rate subsidies, and public investment supports.

Figure 75 provides survey results that show the share of respondent firms by sectors that used government assistance through August 2020. One sees that in all sectors except manufacturing loans, subsidies, and other financials constitute the most used assistance form. The salary surcharges and exemption of taxes and social security contributions are the other most-used forms of assistance. These results suggest that the economic turmoil associated with the COVID-19 pandemic deteriorated the financials of the firms that forced them to use one or more types of financial assistance.

Figure 75: The Forms of Assistance and Facilitation Within the So-called "Anti-Crisis Shield" Usage by Sectors[313]



The monetary policy was also actively used to stabilize the economy. The National Bank of Poland (NBP) reduced its policy interest rate by 140 basis points (bps) to 10 bps from March 17 to May 28, 2020. The NBP also provided liquidity to banks by reducing the required reserve ratio and has started purchasing treasury securities on the secondary market to provide liquidity to the government. The NBP has purchased PLN 103.3 billion ($26.1 billion, or 4.6 percent of Polish GDP) in Treasury and government guaranteed securities by September 10.

What's Next for Polish Economic Policy?

While it's difficult to quantify the impact of the fiscal and monetary policies implemented as a response to COVID-19 on the economy, as there is no clearly observable counterfactual, these policies seem to be supporting the recovery of the Polish economy and preventing massive layoffs and business closures. However, the uncertainty related to the active cases in the upcoming months poses a risk to the Polish economic recovery and the labor market. In case of a sharp increase in the active cases, consumer confidence may deteriorate, which would cause a further drop in private consumption and a continued slowdown of economic activity. Such an increase in active cases would deteriorate business confidence, employment, and investment as well. Hence the current policies would need to be extended to support the supply and demand side of the economy. On the other hand, even without a sharp increase in the active cases, investment-friendly policies are required to be implemented to motivate fixed investment and to ensure robust long-term economic growth, as private investment has been lagging behind for several recent years. These policies are not limited to, but may include, lowered tax rates or tax allowances for investments, accelerated depreciation deductions, and faster approval procedures. The sector-

specific policies can also play an important role in stimulating investment. The manufacturing and constructions sectors constitute more than 80 percent of the fixed investment in Poland. Hence investment incentives designed for these sectors might be particularly important to trigger the fixed investment over the upcoming months.

There are, however, limits to active fiscal policy. The fiscal expansion in the first two quarters of 2020 alone led to an increase in the debt of the public sector by 20.7 percent in nominal terms. While the reduction of debt prior to the crisis was substantial (from 54.4 percent of GDP in 2016 to 46.1 percent in 2019), the introduction of social transfers and cuts in tax rates (a lower income tax rate and tax cuts for SMEs) have increased the structural deficit in the economy, while the potential to further increase revenue through improvements in tax collection seems to be largely exhausted. The government temporarily suspended the rules to finance the fiscal stimulus, however, the constitutional debt thresholds (the threshold of 55 percent of GDP forbids, inter alia, running a deficit in the following year and the one of 60 percent requires implementation of a plan of debt reduction and forbids deficits in the budgets of local governments) may become binding soon, which would require either a wide political consensus or a painful adjustment to the fiscal policy stance.

South Africa

By: Chris Hattingh, Free Market Foundation

The Impact of COVID-19 on South Africa: Ever Widening Cracks

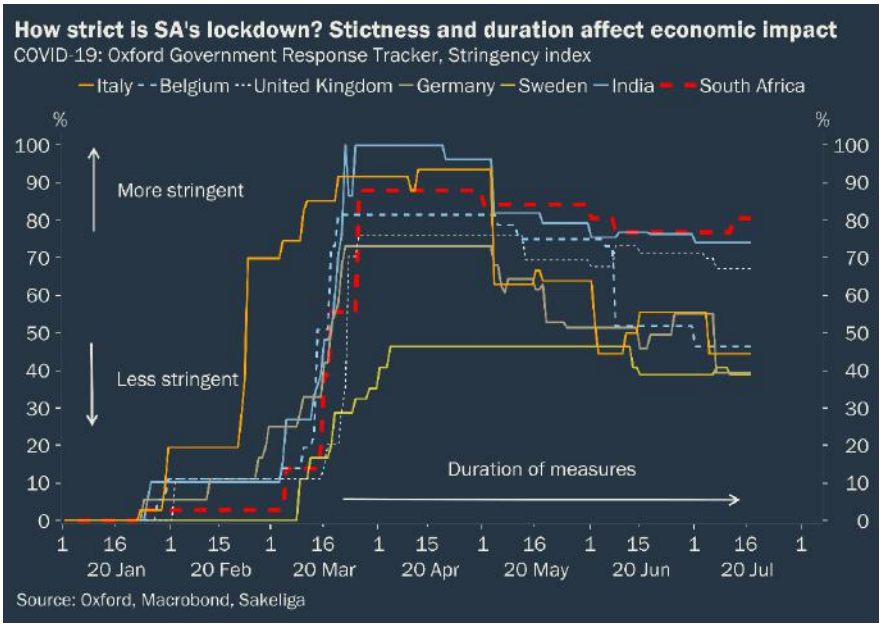
Introduction

The South African-government-imposed COVID-19 lockdown—and the accompanying regulations—have battered an economy coming into the new decade already on its knees.[314] A lockdown that began on March 27, 2020 has been marred by irrational regulations (such as a ban on the sale of certain clothing items) and government missteps, which have added more fuel onto the fire of societal discontent with government action generally.[315]

The path of hard lockdown was ostensibly chosen to give the health care sectors (public and private) added time to adequately prepare facilities and resources before the expected flood of positive cases. By June, it became clear that the time 'bought' at the cost of economic and social activity had been wasted, specifically in the public health care sector.[316] Almost every area of economic activity was suspended—there was no case-by-case approach, no sense of nuance or agility and adaptability. Using the metric of increased capacity, and the continued ban on tobacco and alcohol, it's clear that the lockdown failed to achieve that for which it was implemented. From an employment and economic point of view, the choice of hard lockdown has only made people's lives and prospects all the more difficult.[317]

South Africa's lockdown has been especially severe. An 8pm–5am curfew was imposed (as of August 5, the curfew was changed from 10pm–4am; a few weeks later, 12am–4am); the sale of tobacco products was banned (lifted on August 18); the sale of alcohol was banned, then rescinded, then reintroduced again (lifted on August 18); and e-commerce was suspended.[318] Research by the University of Cape Town's Research Unit on the Economics of Excisable Products (REEP) on the impact of the ban on cigarette sales supports the ever-growing opinion that the ban on tobacco products failed both from the practical perspective that people would smoke less (the illicit tobacco market flourished since the introduction of the ban) and to reduce the spread of COVID-19.[319] The harshest lockdown in the world is steadily undermining South Africa's economic potential. (See Figure 76.)

Figure 76: How Strict Is South Africa's Lockdown?[320]



The economy was in a brittle state before the novel coronavirus hit our shores. For nearly every year of the past five years, economic growth had slowed, barely moving the needle.[321] The decade from 2000 to 2010 was the country's worst ever on record—registering an average of just 1.35 percent economic growth. The country's credit rating was downgraded to junk by all three of the major ratings agencies.[322] Before the virus, more than ten million people were unemployed.

A study by the National Income Dynamics Coronavirus Rapid Mobile Survey (NIDS-CRAM) found that "approximately three million people lost their jobs over the lockdown period, representing an 18 percent decline in employment."[323] The number of people without work will likely continue to climb in coming months (Genevieve Quintal thinks as many as seven million), especially in the restaurant and tourism sectors—two crucial pillars of the economy, and two that have been hit especially hard by the government's lockdown regulations.[324] First quarter GDP decreased by 2 percent, the third consecutive quarter of economic decline. This decrease occurred before the lockdown.[325] It would not be a shot in the dark to predict that GDP will continue downward for at least the next 12 months. Economist Mike Schussler predicts that the country's GDP declined in the second quarter of this year between 42 to 52 percent.

In late July, it was announced that the country had received $4.3 billion from the International Monetary Fund (IMF) to assist in the fight against COVID-19 and to aid the ailing economy.[326] This IMF loan can be added onto the $304 million loan secured from the African Development Bank (ADB).[327] It bears noting that the news of the IMF loan was met with some relief, some concerns regarding the country's "sovereignty," but mostly a resignation that large chunks of it could be looted by unscrupulous elements in the government. The effects of over a decade of corruption and looting—the decade of "state capture" which began under former President Jacob Zuma—will linger over anything the government does for many more years.

While the aforementioned loans could be used to provide some short-term relief to ailing businesses, one must keep in mind the broader picture of South Africa's economic struggles:

According to Bloomberg, the country "lost more in tax revenue in the first three-and-half months of its fiscal year than it borrowed from the IMF and the ADB combined."[328] The serious drop in tax revenue collection is the result of the lockdown path the government adopted: hard-lockdown. It is clear that the government's chosen strategy of hard lockdown was not the correct path.

Health vs. the Economy: The Negative Effects of Accepting a False Dichotomy

The South African government's COVID-19 strategy greatly damaged the economy and will affect the country's potential recovery for the foreseeable future.

The rules and regulations that were implemented entailed the virtual suspension of all economic activity. Business activity was classified as either "essential" or "non-essential."[329] This ignored the reality that businesses, entrepreneurs, and all the various supply chains are interwoven in the South African economy. The arbitrary distinction also ignored the fact that every business, no matter how big or small, is particularly essential to its owners and employees, and also often to its customers. The steps the government adopted to "flatten the curve" have harmed the country's economic prospects—a harsh economic environment always and everywhere entails increases in poverty, hardship, and starvation. Through hampering even meager economic growth through arbitrary and irrational regulations, the government may well have harmed South Africans' health in its mission to fight COVID-19.[330]

Restrictions on freedom of movement and people's freedom to trade raised early questions—and serious concerns—regarding the government's chosen strategy path.[331] Small businesses, including corner shops and restaurants that already struggled greatly in the country's suppressed economic environment, were closed, and people forced to remain in their homes. Only those whose work was designated "essential" by the government were allowed to engage in daily travel.

During the early months of lockdown (South Africa's lockdown operates according to five levels, with Level 5 being the strictest) the sale of alcohol products was banned and more than 118,000 jobs in the alcohol industry have been lost as a result.[332] Richard Rushton, Distell chief executive officer, pointed out that R206 million ($11 million) in taxes was lost for every day that the alcohol ban continued. The taxes lost add further pressure on to the fiscus and will make it more difficult for the state to provide basic services to people in underprivileged communities.

The narrow view that governments had to choose between people's health on the one hand, and the economy on the other, betrayed a misunderstanding of the vital importance of economic activity. Whether on a large or small, neighborhood scale, economic activity is the process by which people engage with each other in a peaceful way, exchange goods, services, skills, and time, and look for ways to create value and wealth for themselves, their families, and their communities. To suspend economic activity nationwide shows a fundamental lack of understanding of just how much movement (physical and digital) takes place on a daily basis—and how exceedingly difficult it is to get the motor turning again once it has been switched off. People, businesses, and industries are interconnected—the smallest restriction (never mind the restrictions imposed through lockdown) have far-reaching negative ripples.[333]

South Africa serves as an unfortunately excellent example of the false dichotomy that drove so many governments to summarily restrict economic freedom; the belief became entrenched that the country had to choose between people's health, or their economic wellbeing—with no possibility that the two could be linked.[334] Mark Heywood wrote that using the lockdown to buy the health care sector time missed that people's health is the result of numerous factors:

> To save tens of thousands of lives we were prepared to disrupt a whole economy: the welcome message seemed to be that lives, not money, counts. However, this betrayed a one-dimensional understanding of the right to health by the president and his advisers. Health is not like Covid-19. It cannot be isolated in a test tube from its social and economic determinants.[335]

Those who have lost their jobs—jobs upon which they and their families depended—are currently experiencing great emotional turmoil. We cannot discount the negative physical and psychological effects of the government's hard lockdown policy. Many South Africans will suffer from increasing hunger, depression, poverty, and an inability to pay off debt. Suspending all economic activity (and preventing those sectors that could still operate somewhat, such as e-commerce) directly affects people's quality of life—and over the long term, life itself.[336]

Solidarity Fund and IMF Loan: Failing to Stimulate the Economy

The main economic pillar of the government's support for the down-beaten economy was a R500 billion ($28.5 billion) "stimulus package."[337] Following the lead of governments around the world, most notably the United States, the South African government decided to take the stimulus path. This stimulus, however, was lower than it could have been, had the fiscus not already been under so much pressure. The package, intended by government to be its main tool in providing some measure of relief for struggling businesses, is not reaching intended recipients quickly enough. Lack of planning, and ineffective implementation often trips up the loftiest of South African government proposals and plans. On just the emergency funding procured to aid the "anti-COVID-19" fight, a Special Investigations Unit was established to investigate allegations of corruption in contracts involving said funding. Already deals amounting to R2.2 billion ($125 million) are under investigation.[338]

Part of the R500 billion package was a R200 billion ($11.4 billion) scheme intended to assist businesses in paying salaries and rent. As of 10 August, "only R13.26 billion [$758 million] or 6.6% has been paid out."[339] Katharine Child details that this means only 23 percent of 39,677 applicants received assistance. Further, according to analysis by research house Intellidex, the scheme came "too late" to be effective, and once implemented, many businesses decided not to apply because the lending criteria and conditions were too strict. Indeed, it turns out that a more effective step (and something that could have been implemented much faster) was the decision by banks to grant payment holidays, giving at least some businesses time to weather the storm. And even here, one has to bear in mind that these may result in more debt accrued over the long run.

South Africa's tourism sector is one of its greatest social and economic strengths. This makes it all the worse that the government enacted a top-down approach that suspended all tourism-related enterprise, and did not allow for businesses to implement appropriate COVID-19 measures while retaining some measure of business activity.[340] From a broad lockdown perspective the government could have looked at those sectors (such as tourism and e-commerce) that could still have operated—and provided businesses in those sectors with the necessary education and recommendations to remain as COVID-19 free as possible.

The nationwide hard lockdown meant that most businesses had to suspend operations. Smaller players in the tourism and hospitality sector (upon which thousands of South Africans depend for an income), do not have the cash reserves of the bigger hotel chains. The country's restaurant and tourism industries are gems in the country's economic crown, and they have been hit especially hard. While these businesses are allowed to operate again now, it is within such narrow confines as to be virtually meaningless for averting further job losses. While the Department of Tourism promised to provide support, it "only had enough resources to help 4,000" out of 7,284 valid applications for assistance.[341]

After about two weeks of increasing calls to open the economy, the South African Chamber of Commerce and Industry on August 12 , added its voice, "Whilst the imposed lock down has had a devastating effect on the economy and livelihoods, the benefit to the public health care is not as clear, given the exponential rise in positive cases, hospital admissions and mortality numbers in this period."[342] On August 15, President Cyril Ramaphosa announced that the country would move to Level 2 within a few days—this shows that civil pressure can be effective in influencing the government of the day to reassess some of the regulations and plans it had initially adopted. However, the unfortunate reality is that the move to allow more economic activity will come too late to truly make a difference for the country's overall economic fortunes. In the wine industry alone, over 430 wineries and grape producers (who employ around 21 000 people) are expected to go out of business in the next 18 months.[343]

Another pillar of the government's "stimulus" and supportive approach to suffering businesses was the allocation of R40 billion ($2.28 billion) to the Temporary Employer/Employee Relief Scheme (TERS). To date, R39.7 billion has been paid to around 9 million workers.[344] While this support will be welcomed, payments have been extremely slow to process, and any extension of the scheme will only help those who can hang on—others will simply have to go without, and make other plans to survive.

The South African government cannot spend its way out of this crisis, and it cannot stimulate real economic growth that can only come with economic activity, capital accumulation, and investment. The country is very quickly running out of fiscal runway (a runway that was already incredibly short because of corruption and ill-considered policy choices before the pandemic). In mid-August, South African Reserve Service Commissioner Edward Kieswetter revealed that the country lost R86 billion ($4.9 billion) in tax revenue, as a result of the lockdown. Part of this decline was the loss of R7 billion ($400.1 million) from the alcohol ban, and R3 billion ($171.4 million) from the cigarette ban.[345] After news broke that the tobacco ban would be lifted, Telita Snyckers, author of *Dirty Tobacco: Spies, Lies and Mega-Profits*, said that the "ban has introduced smokers to illicit suppliers… the illegal market is here to stay."[346] The massive strain on the South African fiscus, the bans on tobacco and alcohol products, and the billions lost in terms of tax revenue, baffles anyone trying to make sense of how the government aims to address its shortcomings, while still providing some measure of welfare for poorer people.

The stimulus package will become untenable, and ultimately meaningless, without economic growth to bolster the government's tax revenue. The government is very quickly running out of

money to assist businesses. Necessary pro-economic growth structural reforms must be adopted if the country is to experience meaningful transformative progress and growth.

The Rule of Law Undermined

The rule of law as a concept aims to guide the spirit in which laws are written and implemented. As opposed to authoritarian governments where the rule of *man* dominates, and laws are haphazardly applied—with massive scope for ministerial discretion—societies infused with the rule of *law* see a more equal application of law, and a situation where no one, regardless of station, is above the law. When an emergency arises, there comes great pressure on governments to quickly implement necessary emergency powers, and in some cases some rights taken for granted might be suspended or limited.

South Africa is a prime example of the dangers when emergency powers are assumed, without critical assessment and pushback. The implementation of strict lockdown regulations on some people only has undermined civil respect and observance of the regulations. The militarization of the lockdown, and excessive use of force by the Army and Police Service, have been matters of great concern throughout the lockdown period.

A major flashpoint in the gradual disillusionment with the lockdown regulations was the government's decision to allow minibus taxis to operate at 100 percent capacity—but to keep restaurants, religious gatherings, and other societal gatherings severely restricted.[347] For laws to be respected, they must be seen as reasonable and sensible (these ingredients form part of the rule of law). The government's apparent buckling to the pressure of the taxi industry evoked much outrage in wider South African society, and served to further undermine the government's lockdown posture.[348] The longer the lockdown endures, and the more people suffer economically, the more such apparent differences in applying regulations will drive people to resist and, in an increasing number of cases, simply ignore the regulations.

The perception that there is one justice system for the politically connected, and a different system for citizens, has been borne out by the level of police brutality that has been meted out on South Africa's poorer people. Where some South Africans could continue working from home, millions of others have to travel every day for work. With the lockdown they were confined to their tiny corrugated iron shack homes, expected to adhere to the same strict social-distancing rules as those who live in spacious suburban houses. Informal traders—entrepreneurs who constitute the backbone of South Africa's informal economy—rely on daily foot traffic, and this was cut off almost instantaneously.

Violent incidents by the South African Police Service and South African National Defence Force marred the initial months of lockdown. Violent actions by police members against citizens reportedly more than doubled since the start of lockdown on March 27.[349] Writing in May 2020, Ferial Haffajee noted that "11 people had died in police action between March 26 and May 5."[350] The alleged murder of Collins Khosa at the hands of soldiers was one of the major flashpoints in the government's treatment of citizens under lockdown. At a media briefing on May 15, Minister of Police Bheki Cele said that 230,000 people had been arrested for violating lockdown regulations. Through implementing unrealistic—and unnecessary—regulations, the government

ensured that people would behave in "illegal" ways by simply going about their daily lives as they had not even 30 days earlier.
Tying in with the aforementioned R500 billion ($29.5 billion) stimulus package, government's selective support for some players in the hotel and tourism industry further undermined the spirit of the rule of law. Early in April, the Department of Tourism announced that establishments with a higher Broad-Based Black Economic Empowerment (B-BBEE) score would receive assistance to mitigate the negative effects of the pandemic.[351] This announcement led to great outcry regarding preferential treatment by the state—and will in all likelihood lead to lower tax compliance from certain sectors in the future.

There is growing concern that the government will keep in place at least some of the regulations and restrictions that it implemented to fight the pandemic. The establishment of the extra-constitutional National Coronavirus Command Council (NCCC) is the best example of a concrete step the government took ostensibly to pool its resources and management of its anti-pandemic resources, but which has not engaged in civil discourse and transparency in any meaningful way.[352] Whether the NCCC still exists after lockdown (and in what form) is something on which all South Africans should keep a keen eye.

Radical Steps Needed in the Post-COVID-19 World

The science underpinning the lockdown has been shown to have many holes—and both advisors to the government and citizens have struggled to make sense of the adopted approach, as well as the reasoning behind it, as a result. Midway through July, senior members of the Ministerial Advisory Committee (MAC) pushed for the Minister of Health, Zweli Mkhize, to publish the details of more than 70 advisories drafted for government by the MAC. It was reported that members of the MAC became frustrated because they felt the "lack of transparency is complicating the fight against the virus because the public is increasingly questioning the rationale behind regulations."[353] Professor Francois Venter, head of the Ezintsha Health Unit at the University of the Witwatersrand, pointed to some of the inconsistencies in the regulations, saying: "You can attend church but not your family dinner. You can get in a crowded taxi at 6am but not drive at 10pm. Public health is about trust, transparency and consistency, we are not seeing this."

It should not come as a surprise that the South African government made this many missteps in managing the COVID-19 pandemic. Inefficiency and corruption are buzzwords commonly associated with the national administration—and COVID-19 has served to highlight many deficiencies and shortcomings.[354]

Given the disparities between different income and race groups in the country, it is puzzling that the government did not consider the potential areas of friction, expecting everyone to stay locked in their homes—whether they could work from home or not. Most notably, the long-lasting bans on alcohol and tobacco products wreaked havoc on investment and potential growth: "Between SA Breweries (SAB), Heineken and Consol Glass, more than R13 billion [$743 million] in investment has been pulled."[355] These investments represent thousands of jobs, and even though the South African government finally relinquished on the bans, the economic damage has already been done.[356]

South Africa's debt is "projected to peak at close to 90% of GDP in 2023/04."[357] An untenable trajectory by any reasonable standard, the ballooning wages of public servants in South Africa need to be radically pared back—if not, crippling debt repayments are the country's future. Given the continued strictness of the lockdown, it is reasonable to presume that GDP "growth" will be suppressed at least until the end of this year. According to Claire Bisseker, "Economic activity is likely to have contracted by more than 30% [quarter over quarter], which would be a record."[358] Were South Africa to not adopt the necessary pro-growth policies, and undertake to drastically cut government spending, the country will likely enter a sovereign debt crisis within the next five years. Such a crisis means ever-increasing interest rates and higher inflation—all of which would hit poorer South Africans the hardest.

Policies that undermine security of property, business confidence, and the country's general investment environment must be abandoned as quickly as possible. Chief among these is expropriation without compensation (EWC). The touted changes to section 25 of the South African Constitution to bring about a regime of EWC will undermine the property rights of *all* South Africans, and undo progress that has been made in the area of land reform and restitution since the dawn of democracy in 1994. For the country to stand any chance of drawing the necessary investment after the pandemic—to bring about noteworthy economic growth—property rights must be respected and strengthened.[359]

Kizito Okechukwu, co-chairperson of the Global Entrepreneurship Network (GEN) Africa, wrote that, "the difference between prosperity and poverty is property. Nations prosper when private property rights are well-defined and enforced."[360] South African citizens, and foreign companies and investors, need to know that their property and investments will be secure from arbitrary seizure; without the necessary capital investment and accumulation, there will not be the transformative level of job creation the country desperately needs.

Terence Corrigan of the Institute of Race Relations has pointed out that land reform does not appear to be a budgetary priority for the government—despite the rhetoric around expropriation without compensation, and how serious the government is about rectifying the injustices of the past.[361] The February 2020 budget of the Department of Agriculture, Land Reform, and Rural Development was cut by around R2.4 billion ($137 million). That South Africa should move swiftly to administer restitution, underpinned by the rule of law, is without question; but EWC, and the concomitant diluting of property rights, is not the correct tool to fix this problem.

Coupled with protecting private property rights, the South African government should take the lead on implementing the African Continental Free Trade Area (AfCFTA). Alexander C.R. Hammond, policy advisor at the Institute of Economic Affairs, wrote that, "Within five years of its implementation, the AfCFTA aims to remove more than 90 percent of tariffs on goods traded between member states."[362] Intra-country trade is vital to provide access to more goods and services, and can lead to lower costs of said goods and services. The temptation for isolationism will be strong after the pandemic, but countries must resist this pull if they are to maintain relatively open borders, reap the benefits of specialization, and have access to more markets for their own products and skills.[363]

Hammond points to the massive potential of the AfCFTA: "if the AfCFTA were successful in achieving their tariff-abolishing goal, intra-African trade could increase by more than 53 per cent in just a few years." The first few months after countries lift their lockdowns could arguably be a pivotal time in Africa's economic history—the AfCFTA could be exactly the boost the continent needs to lead the economic recovery and growth of the entire globe. As Hammond mentions, "This boost in trade would add billions to Africa's economy and help undo a sizable chunk of the estimated $37-79 billion the pandemic will likely cost the continent." Improving conditions for trade—and not isolating oneself from neighbouring countries—will aid countries in recovering from the devastating effects of their lockdowns.[364] Countries will only add to their economic and societal woes if they do not embrace trade and pursue new global supply chains to ensure they are more resilient to future shocks.[365]

The unfortunate cherry on top of the South African government's bungling of lockdown regulations was perhaps best summed up when the Department of Basic Education froze the school feeding scheme—upon which 9 million of the country's 20 million children depend for sustenance. After the Pretoria High Court ruled against Minister Angie Motshekga and eight provincial education heads, Rob Rose captured the whole lockdown mess when he wrote, "It's yet another devastating ruling laying bare how badly the government has fumbled its role during the lockdown."[366]

The COVID-19 virus was an unprecedented threat to people's health, and 'normal' way of life. Through the implementation of a hard lockdown, the South African government has shown the dangers of presuming politicians and bureaucrats know with complete certainty how 50 million individuals must act —and that consequences must be the measure by which we measure policies and interventions, and not on the intentions thereof (however noble they may be). No matter how grave a perceived threat may be, the guiding lesson must be that economic and individual freedom enable people to innovate, to meet challenges, and to recover better after a crisis has passed.

South Africa—and its government especially—stands at a crucial point in its story; a seminal moment, when the right, pro-freedom changes will put the country on the path to recovery and long-term prosperity.[367] A return to mere "normal" will not solve the country's economic problems. In the last week of September, new research released by the National Income Dynamics Coronavirus Rapid Mobile Survey (NIDS-CRAM) indicated, "Between 2009 and 2019, SA created 2.4-million jobs. Early indications are that in the past four months, we have lost as many as 2.8-million."[368] Such devastation illustrates that hard lockdowns are not correct policy for weaker economies. A hostile, rigid labor environment, a fluctuating electricity supply, increasing taxes, affirmative action policies, and uncertainty regarding property rights were just some of the elements that constituted "normal" before COVID-19. No country can succeed with those policies at play, never mind try to progress out of an unprecedented pandemic.[369] The country's first decade of the new century was marked by mass looting of state resources and growing social discontent. COVID-19 pushed the country to the brink, but if the right policies are adopted the next decade will be one of progress and upliftment.

United Kingdom

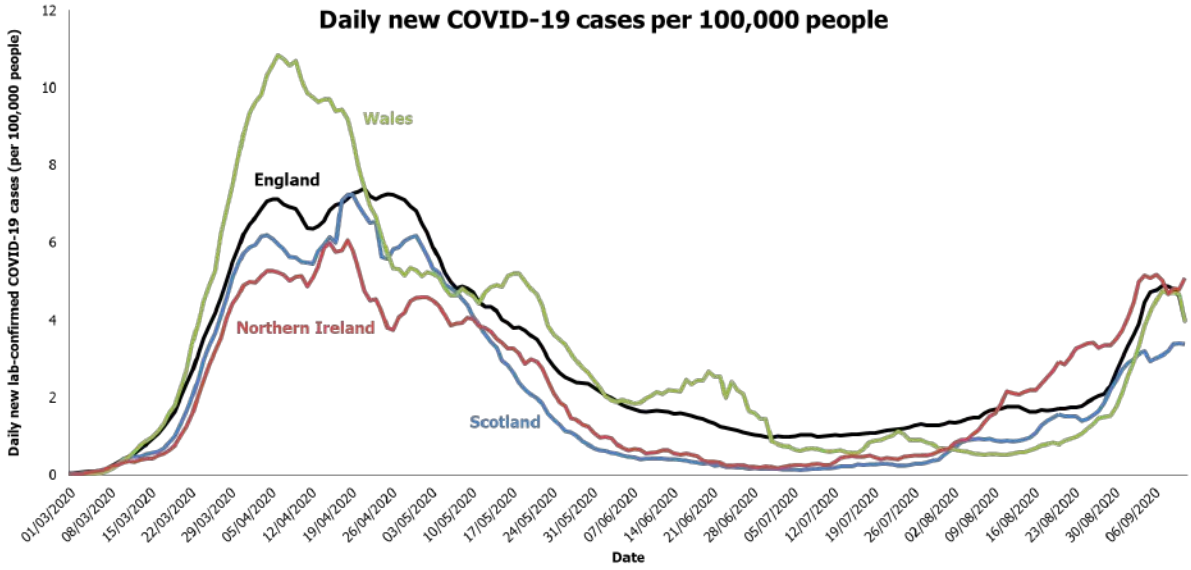
By: Kai Weiß, The Hayek Institute

United Kingdom Coronavirus: Pandemic, Public Health and Economy

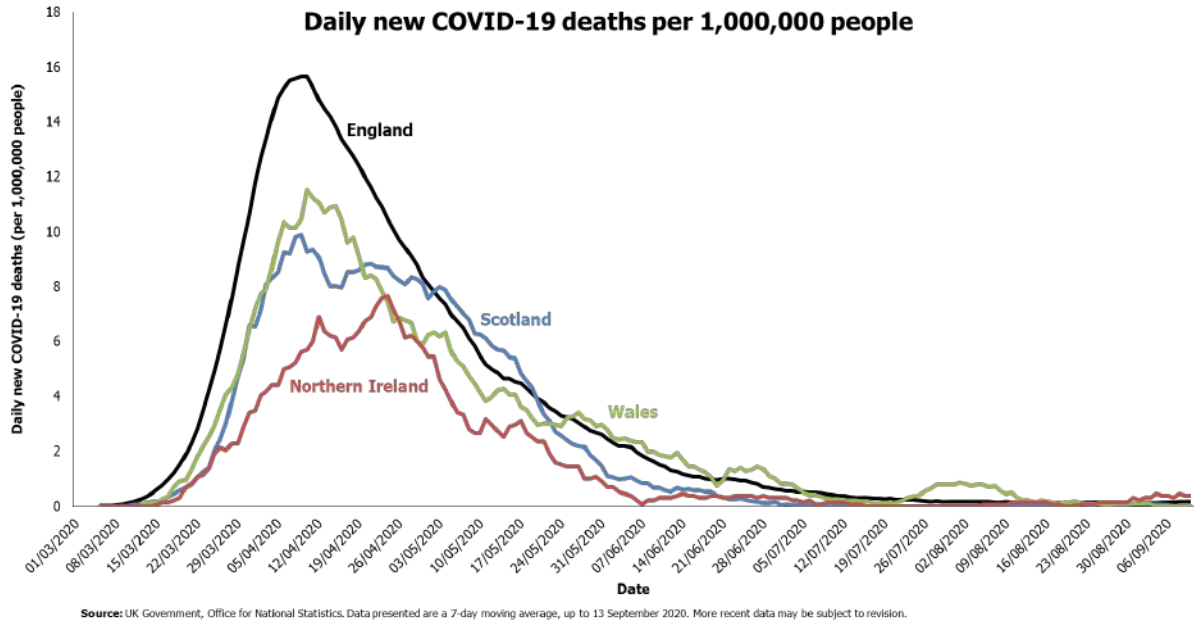
1. The Pandemic in the United Kingdom

The United Kingdom recorded its first cases of COVID-19 in York, England, on January 30, 2020, and its first death from the disease at a care home on March 2. Cases rose considerably in mid-March, during which time contact-tracing was abandoned, and continued to rise into the first half of April. (See Figure 77.) The country entered lockdown on March 23.

Figure 77: Daily New COVID-19 Cases and Deaths Per 100,000 British Citizens



Source: UK Government, Scottish Government, Public Health Wales, Northern Ireland Statistics and Research Agency, Office for National Statistics. Data presented are a 7-day moving average, up to 15 September 2020. More recent data may be subject to revision.



According to data collected from the U.K. government, daily new cases peaked on April 8 in Wales, April 17 in Northern Ireland, April 20 in Scotland, and April 22 in England. The United Kingdom's aggregated daily new deaths peaked on April 8 (1,071 deaths), and its aggregated daily new cases peaked on April 22 (5,484 cases).

Using a seven-day moving average (7DMA) of daily new cases, the first wave ended on July 1, 2020, when the United Kingdom recorded a 7DMA of 575 daily new cases. Restrictions were eased during the months of July and August. The 7DMA of daily new deaths fell below 10 on August 11, and reached a low of 7.1 on August 19.

Cases have risen since then as the United Kingdom has entered a second wave. The 7DMA of daily new cases breached 1,000 on August 8, 2,000 on September 1, and 3,000 on September 5. Recent weeks have witnessed a reintroduction of restrictions, especially in areas where the virus is thought to be more prevalent. However, the 7DMA of daily new deaths has not risen so substantially, breaching 10 only on September 9.

At the time of writing (September 17), the United Kingdom has recorded 378,218 cases and 41,683 deaths. The United Kingdom does not publish data on its number of recovered patients.

2. Public Health Interventions

Public health is a devolved competency: The executives of the Scottish Assembly, Welsh Senedd and Northern Irish Assembly can administer separate public health regulations and travel advice to the UK government, which applies regulations for England.

Early Interventions

In late January, the Foreign and Commonwealth Office (FCO) advised against all travel to Hubei, and later against all but essential travel to mainland China. The government organized repatriation flights for British citizens in Wuhan. Over the course of February and March, travel advice was later updated for South Korea, Iran and Italy, with recommendations for quarantines and advice against

all but essential travel. The FCO advised against all but essential international travel from March 17.

From early March, washing hands regularly was more frequently encouraged, as well as covering mouths and noses when coughing or sneezing. Schools with confirmed COVID-19 cases were temporarily closed for deep cleaning.

Lockdown

The first major shift in public health policy came on March 12, when the UK government abandoned contact-tracing. The new advice required anyone with a new continuous cough or fever to self-isolate for seven days. Testing was rationed only to those who had contact with a confirmed case.

On March 16, Prime Minister Boris Johnson advised against non-essential travel and contact with others. Households with symptoms were asked to self-isolate. The government advised against large gatherings. The following day, all National Health Service (NHS) England non-urgent operations were postponed.

The closure of schools, except for vulnerable children and children of key workers, was announced on March 18. Cafés, pubs, and restaurants were forcibly closed from March 20, soon followed by nightclubs, theatres, cinemas, gyms, and leisure centres.

On March 23, Johnson announced the start of the UK's lockdown in a television broadcast watched by 27.1 million people. A stay-at-home order, to be reviewed every three weeks, was issued, except for essential purchases, essential work, medical needs, care for others, and one hour of exercise per day. All non-essential businesses were ordered to close, alongside libraries, places of worship, playgrounds, and outdoor gyms. Gatherings in public of more than two people from different households was banned. The government adopted the slogan "Stay Home, Protect the NHS, Save Lives."

During the height of the pandemic, from March 25, a "Clap for Our Carers" took place at 8:00pm each Thursday, in which households across the country applauded from their doorsteps for health care workers on the virus's frontline. A 99-year-old veteran fundraised over £32 million ($41 million) for the National Health Service, Britain's socialized health care system, by walking 100 laps of his garden.

Easing of Restrictions

In England, restrictions began to be eased from May 10. A new "Stay Alert, Control the Virus, Save Lives" slogan was unveiled. The government advised that those who could not work from home should return to work and removed the time limit on outdoors exercise.

The government's communications were roundly criticized as being mixed and opaque, with a majority of the public saying that its messaging was not clear. This was reinforced a few weeks later amid national disagreement over whether Dominic Cummings, the Prime Minister's Chief Adviser, had broken the law by driving to Durham in March while displaying viral symptoms.

Garden centres and outdoor sports courts were reopened on May 13. Outdoor gatherings of six were allowed from June 1. Non-essential shops were permitted to reopen on June 15. Pubs, restaurants, hairdressers, cinemas and theme-parks followed suit on July 4.

Wherever there has been an outbreak of new cases, the government has introduced local measures. On June 30, non-essential shops and schools were closed in Leicester, and planned loosening of restrictions were cancelled. New restrictions were also placed in Greater Manchester, east Lancashire and parts of West Yorkshire from July 31, and in much of the North East of England on September 17.

Contact tracing resumed in England and Scotland on May 28. On June 3, the UK Foreign & Commonwealth Office (FCO) announced a 14-day quarantine for international arrivals. It later allowed exemptions to dozens of countries and territories, which are reviewed on at least a weekly basis. The devolved executives have issued their own separate recommendations for international travel, which has led to some confusion where they have differed substantially from the FCO's advice.

On July 20, the UK government signed a deal for 30 million doses of the BioNtech/Pfizer vaccine, and 60 million doses of the Valneva vaccine. It had previously ordered 100 million doses of the AstraZeneca vaccine being developed in Oxford, and later ordered 30 million doses of the Janssen vaccine and 60 million doses each of the GSK/Sanofi and Novavax vaccines.

On August 1, shielding programmes—through which more than two million vulnerable people were advised to remain at home—ended in England, Scotland, and Northern Ireland. Wales ended its programme on August 16. Schools reopened for the autumn term in Northern Ireland on August 24, and the majority of schools elsewhere in the country a week later.

After a rise in infections, the "Rule of Six" was introduced from September 14, under which people in Britain are limited to meeting in groups no larger than six, excluding in work and educational settings.

3. Notable Public Health Interventions

Notable health interventions pertain to testing, hospital and ventilator capacity, PPE supplies, face coverings, contact-tracing apps, care homes, and an anti-obesity campaign.

Testing

Before mid-March, anybody who displayed COVID-19 symptoms was advised to call the non-urgent NHS helpline. Those who had been in contact with a confirmed case or had travelled to an area with a known outbreak were eligible for testing.

The UK did not ramp up capacity sufficiently in time to keep up with demand, nor did it effectively trace contacts of lab-confirmed cases. By the time that contact tracing was abandoned on March 12, up to 10,000 Britons were estimated to be carrying the virus, even while there were fewer than 600 lab-confirmed cases.

After March 12, testing was slowly increased. For weeks, Public Health England (PHE), the executive agency of the Department of Health and Social Care (DHSC) responsible for public health, refused the help of the private and independent sector to increase testing capacity, preferring to rely on centralized NHS laboratories.

PHE later refused to undertake mass community testing to determine the virus's prevalence, so the task was reassigned to the Office for National Statistics (ONS). In mid-August, the government announced that PHE would be abolished and replaced with the National Institute for Health Protection (NIHP).

In April, the UK government said it would aim to "carry out" 100,000 tests daily by the end of the month. It claimed to reach 122,347 tests in the closing twenty-four hours. This announcement was criticized because it counted tests at the point of dispatch, even though these tests may not have been used, let alone processed, within the month.

Testing problems were especially pronounced in Wales. At one point, Wales was completing one-hundredth of England's tests despite having one-eighteenth of its population. In late April, the Welsh government scrapped an unambitious testing target for 5,000 daily tests after failing to meet it and then refused to set further targets altogether. (A leaked report found that it required up to 17,000 daily tests for effective contact-tracing.) The Chief Executive of Public Health Wales also testified that she was "not familiar" with the government's initial target.

For much of the pandemic, Wales directed test samples from North Wales on a daylong trip to Cardiff because it refused to send them to an English mega-lab an hour away in Cheshire. The Welsh government sent elderly patients back to their care homes without testing them because there were not enough tests to go around. It only expanded testing to all care home residents and staff on May 16, three weeks after England.

In September, testing problems resurfaced as demand rose following an increase in the infection rate. In the week of September 9, only 14 percent of tests were processed within twenty-four hours. A considerable number of bugs were spotted in the online booking system for tests. It was reported that there were no tests available in any of England's top ten hotspots, but prospective patients could access local tests if they inputted a non-local postcode into the booking system.

Hospital and Ventilator Capacity

In anticipation of a surge in demand for NHS beds, in March 2020 the UK Government announced the construction of several 'NHS Nightingale Hospitals' that would relieve overwhelmed existing hospitals. These were placed in large exhibition halls or conference spaces. Seven were built in England: in London, Birmingham, Manchester, Washington, Harrogate, Exeter, and Bristol. It was an impressive feat to have so many hospitals built in so short a time, but they proved of little use. Only a handful of the hospitals admitted patients before they were all placed on stand-by after sufficient capacity was reached in other hospitals. London's Nightingale Hospital received merely 54 patients.

The UK had a similarly effective response to its ventilator shortage. It was estimated that the NHS was short of 10,000 ventilators required to treat hospitalized patients. Therefore, the government asked manufacturers and medical device companies to switch their productions to ventilators, and received over 14,000 devices in return.

The government also renovated a hangar at Birmingham City Airport as a makeshift mortuary with a capacity for 1,500 bodies. The facility received bodies as early as April 7. Similar conversions took place at two disused RAF hangars in Oxfordshire.

PPE Supplies

In early April, over half of doctors surveyed by the British Medical Association said that they had shortages, or no supply, of adequate face masks.

Although the shortage of personal protective equipment (PPE) was felt across Europe, it was likely exacerbated by government policies. As with testing, a crisis of centralization afflicted the government's procurement of PPE. The DHSC ordered hospital trusts not to draw their own deals with local manufacturers, preferring to rely on larger orders from fewer suppliers. Risibly, a much-awaited scheduled shipment of 400,000 surgical gowns from Turkey was delayed by several days, then were impounded after failing to meet medical standards.

Face Coverings

During the early stages of the pandemic, public health officials continually warned that there was limited benefit of wearing masks. As well as a lack of evidence promoting their benefit, the experts feared that public purchases of masks were impeding supplies to workers in patient-facing roles.

From July 24, new regulations in England rendered it compulsory to wear face coverings in public transport, most indoor shops, and public spaces, with fines of up to £100 (about $130) for rule-breakers. Exemptions were made for children under 11 and individuals meeting certain medical requirements. Before the change, Britain had lower rates of mask-wearing than comparable countries, a fatal shortcoming that has been blamed on previous official advice.

Contact-tracing Apps

In March, the government planned the creation of a digital app that would facilitate contact tracing. In trials, the centralized app failed to register nearby iPhone devices, and it was feared that it had a drained battery. On June 18, the government announced it would adopt the Apple-Google model, a decentralized model which had already been adopted by other countries and yielded more efficient results. The contact tracing app is expected to be launched on September 24, several months after its launch was first promised. Meanwhile, the abandoned 'NHSx' app cost the taxpayer almost £12 million ($15.4 million) in development.

Care Homes

In the pandemic's preparatory stages, Scottish ministers transferred over 900 elderly hospital patients to care homes, most of them untested. Sixty percent of Scottish care homes have since reported cases of COVID-19. At one point, the country's proportion of viral deaths from care homes was twice that of England; more deaths were reported in Scotland's care homes than in its hospitals.

Anti-obesity Campaign

On July 24, Johnson unveiled a new anti-obesity campaign, ostensibly aimed to improve the nation's health given the risk factor that obesity presents for the novel coronavirus. The campaign included a prohibition on "junk food" television adverts before 9:00pm and 'buy one get one free' deals.

Because there is no legal definition of 'junk food'; the proposed ban is believed to include all fruit juice, raisins, hummus, and cheese. It is likely to hurt the hospitality industry, exacerbating the pressures already applied by the pandemic.

4. Economic Responses

The United Kingdom has introduced a wide and varied set of responses to the economic damage wrought by the global pandemic.

March Budget

The first budget of Rishi Sunak, Chancellor of the Exchequer, was unveiled on March 11, 2020. For the NHS, it promised a £5 billion ($6.4 billion) emergency response fund and a £6 billion ($7.7 billion) increase in NHS funding over five years. This was coupled by a £500 million ($640 million) hardship fund for English councils and an entitlement to statutory sick pay for all those advised to self-isolate.

Coronavirus Loan

On March 17, the government announced it was making available £330 billion ($422 billion) in government-guaranteed loans to businesses in order to survive the pandemic amounting to 15 percent of the UK's GDP. Alongside the loan was a three-month mortgage holiday for homeowners and a £3.2 million ($4.1 million) emergency support package for rough sleepers (i.e., homeless citizens), which was supplemented with an additional £105 million ($134 million) in June.

Furlough Scheme

On March 20, the government established a furlough scheme, officially known as the Coronavirus Job Retention Scheme. Under the original plans, the government would grant employers 80 percent of each furloughed worker's salary, up to a total of £2,500 ($3,200) per employee per month. The scheme was backdated to the start of March. A similar support scheme was later implemented for self-employed workers.

On May 12, the government announced it would extend the furlough scheme until the end of October. It later announced that the scheme would be tapered down until then, as Table 8 shows.

Table 8: UK Furlough Scheme

Month	Government contribution	Employer contribution
March, April, May, June, July	80 percent of wages, up to £2,500 cap	None
August	80 percent of wages, up to £2,500 cap	National insurance and pension contributions
September	70 percent of wages, up to £2,190 cap	10 percent of wages and national insurance and pension contributions, up to £2,500 cap
October	60 percent of wages, up to £1,875 cap	20 percent of wages and national insurance and pension contributions, up to £2,500 cap

At the end of the scheme, the government will offer:

- £1,000 ($1,280) for every furloughed employee retained until at least the end of January;
- £1,500 ($1,920) for every unemployed 16- to 24-year-old offered a "high-quality" six-month work placement; and

- £2,000 or £1,500 ($2,560 or $1,920) for every under-25 or over-25 apprentice given work until the end of January.

Up to the week of August 16, 9.6 million jobs had been furloughed by 1.2 million employers, costing £35.4 billion ($45.3 billion). The first tranche of the self-employment scheme, which closed on July 13, cost a more palatable £7.8 billion ($10 billion).

Eat Out to Help Out

During the month of August, meals sold in participating restaurants on Mondays, Tuesdays, and Wednesdays were subsidized by the Treasury. The Treasury covered the cost of half of the meal, up to a maximum subsidy of £10 ($12.80) per meal, with no limit on the number of meals or people covered per meal. The scheme was known as "Eat Out to Help Out" (EOTHO).

The scheme, assisted by a cut in the rate of Value Added Tax (VAT) for eateries from 20 to 5 percent, brought monthly inflation to a five-year low of 0.2 percent in August. Footfall in restaurants remained down on 2019 levels from Thursdays to Sundays, but in each day of EOTHO, they were above those levels—with a 216 percent increase in footfall on the last day of the scheme.

EOTHO was popular with voters, which supported extending the scheme into September. A number of restaurants, such as the Pizza Pilgrims chain, announced they would continue the scheme, financing the discount themselves.

Nonetheless, half of those surveyed warned that they would dine out less than they did once the scheme was withdrawn. If they are true to their word, this suggests that the scheme could only provide a temporary boost to the hospitality sector, which will be among the hardest hit from impending restrictions.

In total, EOTHO cost the taxpayers £522 million ($667 million) for at least 100 million meals. The increased footfall required businesses to de-furlough workers, so it is likely that EOTHO saved a considerable sum from the furlough scheme, though almost certainly nowhere near enough to offset its cost.

Public Sector Wage Increases

On July 21, the government announced that almost 900,000 public sector workers would receive an above-inflation pay increase of up to 3.1 percent, financed from existing departmental budgets.

Recovery Plans

On June 30, Johnson unveiled a 'New Deal' to stimulate the country's economic recovery. The proposal amounted to a £5 billion ($6.4 billion) investment plan for hospitals, road networks, schools, town centres, and prisons. A reform of planning laws was later announced to streamline and simplify the process for approvals and appeals; this looks set to become one of the largest reforms of planning laws since the landmark Town and Country Planning Act, 1947.

Vaccine Funding

By March 6, the government had released £91 million ($116 million) in funding for research into a vaccine and rapid diagnostic tests. A further £42.5 million ($54.4 million) was announced on April 21 for clinical trials of vaccines developed at the University of Oxford and Imperial College London.

Monetary Responses

At a special meeting on March 19, the Monetary Policy Committee (MPC) of the Bank of England voted to cut the Bank rate to 0.1 percent and increase its holdings of UK government and corporate bonds by £200 billion ($255 billion). The Bank rate has remained at 0.1 percent since. On June 18, the MPC voted to increase its bond-buying programme by £100 billion ($128 billion).

5. Future Action Recommendations

The following enumerates a set of immediate and longer-term policy recommendations to foster British recovery from the pandemic.

Immediate Lessons From the Pandemic

At the level of public health decision-making, the pandemic exposed the problems with centralized approaches, especially in the procurement of testing kits and PPE. This was facilitated by a crisis of accountability at the top of public-sector executive agencies, which ought to be streamlined together into a more manageable structure, just as the newly created NIHP will deal with the previous competences of PHE and associated contact-tracing operations.

Hospitals should also be encouraged to keep their local partnerships with businesses and local communities, as one report from local trusts recommends. To avoid the confusions and competition for similar resources provided by devolution, a new charter could be established that facilitates better joint public communications between the government in Westminster and the devolved executives. A similar arrangement of more carefully planned devolution is likely to be required in England, where local lockdowns led to acrimonious relationships between local and national politicians.

Economic Recovery

The UK's GDP fell by a record 20 percent in April, following growths of 2.4 percent, 8.7 percent, and 6.6 percent in May, June, and July respectively. Nevertheless, output remains 11.7 percent below its level in February. In large part thanks to the success of the furlough scheme, the unemployment rate has remained unaffected, hardly rising from 3.9 percent in the first three months of the year to 4.1 percent between May and July. Notwithstanding this, there persists a net outflow of payrolled employees in the economy. The claimant count has also increased by over 120 percent since March.

The Bank of England has suggested that the UK can no longer expect a V-shaped recovery, as some had forecasted during the start of the pandemic. Indeed, it seems as though the country can expect further economic downturns while it reintroduces restrictions in response to rising cases over the course of the next few months. This suggests that the economic fundamentals underlying the British economy should be expected to change, such that the mid- and post-pandemic world may look considerably different to the pre-pandemic one.

That undermines the rationale of the furlough scheme, which is to ensure that a temporary shock does not lead to the loss of otherwise viable jobs. Furthermore, the longer that employees are kept furloughed, the more likely that their jobs will no longer be viable in the post-pandemic world. The tapering off of the furlough scheme should therefore continue as planned, while a broadened and more generous safety net could ensure that the scheme's withdrawal does not leave anyone destitute—such as phasing the scheme into Universal Credit.

Nonetheless, reassuringly, early indications suggest that businesses are not concerned about the end of the scheme, given that unemployment has not risen substantially even as employers' contributions have risen.

Still, the emphasis for the recovery should be on expanding growth and jobs, as quickly as possible. Thus, as far as possible, tax rates should not be increased in the foreseeable future —and instead could be temporarily decreased to kickstart the economy, just as the reduction in VAT may have done for the hospitality sector in summer.

A more medium-term priority will be to tackle the debt that the pandemic will leave in its wake, which in June 2020 surpassed the size of the economy for the first time since 1963, and in August 2020 exceeded £2 trillion ($2.56 trillion).

In response, legislation should be passed to enshrine legal limits on future spending. The triple lock on pensions, which ensures that pensions rise at least in line with inflation, could be reformed to reduce the cost of social security and improve intergenerational fairness. At a time of declining wages across the rest of the economy, and given the UK's new debt, the aforementioned increase in public sector wages seems likely to prove mistimed.

To attract inward investment, the banking licenses of other developed countries could be automatically recognized, and immigration restrictions loosened to bring bright students and entrepreneurs to Britain. As the government has already highlighted, a key player could also be the reform of Britain's chronically bottlenecked housing market, through re-evaluating outdated designations of greenbelt land and reducing vetoes to new developments.

Finally, to make the debt more manageable, the UK ought to move away from index-linked gilts, and provide debts with longer maturity dates.

Integration of Technological Innovation

Already, the UK has been experimenting with new technologies that can permit a smoother transition to the medium-term socially distanced economy. In May, the government announced the fast-tracking of e-scooter legislation, permitting rented e-scooters to be driven on public roads for a trial period. Similar legislative reform should be an immediate priority for other areas where existing technologies can greatly benefit consumers, such as the use of licensed drones for restaurant deliveries.

For many workers, remote working looks set to be a staple in life for the foreseeable future. Improving Britain's broadband connectivity should therefore be prioritised in the coming months, especially in rural communities and left-behind regions outside the South of England. The government should be forthcoming on where a planned £5 billion ($6.4 billion) investment into connections will fall, and to accelerate and cheapen the rollout of broadband, it should allow competitors to BT's Openreach to build the network infrastructure.

This greater digital inclusion should extend beyond households to encompass businesses too. British firms lag behind European counterparts in their adoption of digital technologies. The government should facilitate greater peer-to-peer learning, and raise awareness of available grants for firms that integrate technology into their businesses.

Globally, the UK is the fifth-largest digital exporter. In the longer term, as the pandemic revitalises digitalization across the world, UK digital services and tech start-ups are forecasted to grow their exports by more than £8 billion ($10.2 billion) between 2019 and 2025.

The pandemic has catalysed Britain's diagnostic testing and clinical research capabilities. The UK is believed to be carrying out among the most tests in Europe, while it hosts several leading contenders for the coronavirus vaccine. This primes the UK into a good position should it wish to develop as a global leader in these fields, already helped by its world-class universities.

Similarly, technological innovation can be tied to new greentech jobs, such as by developing the UK as a world leader in autonomous electric vehicles.

Role in Global Economy and Supply Chains

Needless to say, the pandemic will play a secondary role in any reconfiguration of Britain's place in the global economy and supply chains, with the primary role played by the ongoing negotiations of Britain's withdrawal from the European Union.

In particular, whether a UK-EU deal can be achieved before the end of the transition period on December 31, 2020 will determine the level of trade barriers that Britain faces to the European Union, which remains its largest trading partner.

Supply chains are expected to become more localised following the pandemic. This would be a mistake: while globalized supply chains can render economies more vulnerable to global shocks such as a pandemic, they also enable more efficient production.

Therefore, Britain's global economic interests are best served by continuing to negotiate free trade agreements with countries outside the European Union, such as the agreement reached with Japan in September, through which Britain will benefit from tariff-free trade on 99 percent of exports with Japan. The government expects the agreement to provide a £1.5 billion ($1.92 billion) boost to the UK economy.

In the early months of the pandemic, both the UK's imports and exports witnessed considerable decreases in value. Crucially, the ONS noted that the degree of reduction in trade with specific countries depended on the restrictions that they imposed. This suggests that the reopening of trade will be dependent on which countries ease their restrictions, and for how long, rather than merely the UK's policy.

6. Conclusion

The novel coronavirus pandemic in the United Kingdom is far from over. As Britain prepares to grapple with a second wave, it requires deeper introspection into the public health measures that it has previously adopted, especially given the nation's multiple mistakes. Furthermore, the country faces a series of challenges to ensure that its economy is prepared, both for the medium term in which restrictions are likely to be intermittently imposed, and the longer-term recovery and resettlement once the virus is defeated.

Nonetheless, the urgent need to stimulate economic growth offers an exciting opportunity to fix Britain's longstanding malaises, ranging from its housing market to its internet connectivity.

United States

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Evaluating the U.S. Public Health and Economic Response to the Coronavirus Pandemic

Introduction

The ever-evolving nature of the coronavirus (COVID-19) pandemic is such that any depiction of its current status remains relevant for days, or merely hours. Recent and current data regarding the state of the pandemic in the United States present one particularly disturbing message: It is far from over. According to the Centers for Disease Control (CDC) COVID Tracker, which at the time of this report reflected statistics as of October 21, 2020, the number of U.S. citizens infected with COVID-19 has surpassed the 8 million mark.[370] The number of new cases reported daily in the United States continues to exceed 60,000 daily, and the CDC reports over 220,000 total deaths as of October 21.[371] As of that day, America's seven-day moving average of global infections hit new highs, with America's average daily infection rate back over 60,000 citizens, with fatalities in the vicinity of 1,000 daily.[372] Shockingly, nine months into America's coronavirus crisis, cases are currently increasing in nearly 75 percent of the country.[373]

These statistics provide an overview but fail to reflect the virus's impact on a nation as geographically and demographically diverse as the United States. As any distribution map indicates, the effects of COVID-19 vary significantly across the country, with initial spikes in the Northeast beginning to ease. At the same time, the South and West struggle under a barrage of new cases, and the Midwest remains an active hotspot. Although public health and safety remain top of mind for policymakers, the U.S. government cannot ignore the impact of the virus on the economy. Despite federal measures to ease the effects of the economic downturn, including $800 billion in small business aid, $293 billion in cash relief payments, and $268 billion in expanded unemployment insurance, the United States saw a nearly 7 percentage point increase in unemployment from July 2019 to July 2020.[374]

Under the federal government, regional variations in demographic composition and population density warrant localized guidelines for pandemic response and recovery in lieu of a cohesive national strategy. Nevertheless, delegating responsibility from the federal to the state level, into counties, cities, and businesses, has sewed chaos and confusion. Local officials often lack the resources needed to make informed decisions regarding public health and economic recovery, and guidance from higher levels has often come too late or been rife with mixed messaging. The effect upon U.S. citizens is accordingly divisive and disorienting. A survey performed by the Pew Research Center found that only 18 percent of American respondents felt that the pandemic had left the nation more united than before. Meanwhile, merely 47 percent thought that the federal government has handled the pandemic well, making the United States one of only two countries among 14 polled with a minority of respondents supporting their governments' policies.[375] And, according to a recent Axios-Ipsos Coronavirus Index, 39 percent believe the federal government is making the country's recovery from the pandemic better, while 60 percent say it is making it worse.[376]

And with the United States positioned as one of the top-five worst performers in *Foreign Policy's* COVID-19 Global Response Index, questions arise regarding America's capacity to successfully navigate the coronavirus crisis.[377] In this regard, this briefing provides an overview of the federal

government's public health and economic policy reaction to the pandemic. The paper also analyzes the state of the pandemic and the approach followed by states in each major region of the United States—namely the Northeast, the South, the Midwest, and the West—to address it.[378] Concluding remarks unpack a set of policy recommendations for a safe and sustainable national recovery.

The Federal Response

From a public health perspective, the U.S. response to the coronavirus pandemic has been deficient, though not for lack of access to resources or knowledge. National Institute of Allergy and Infectious Diseases (NIAID) Director Anthony Fauci notes the United States faces "the worst coronavirus outbreak in the world."[379] Julia Marcus, an infectious-disease epidemiologist at Harvard Medical School, commented recently that "the U.S. has fundamentally failed in ways that were worse than I ever could have imagined."[380] The U.S. administration seems to have failed to grasp the seriousness of the crisis at and before the beginning. For instance, in 2018, the Trump administration dissolved the National Security Council directorate at the White House tasked with preparing for a pandemic.[381] Further, the U.S. substantially reduced its presence in the global health community, leaving an empty seat on the Executive Board of the World Health Organization (WHO), before formally announcing its withdrawal from the entity in July 2020. [382] Other changes include reducing staff and funding from international CDC offices, including the China office.[383]

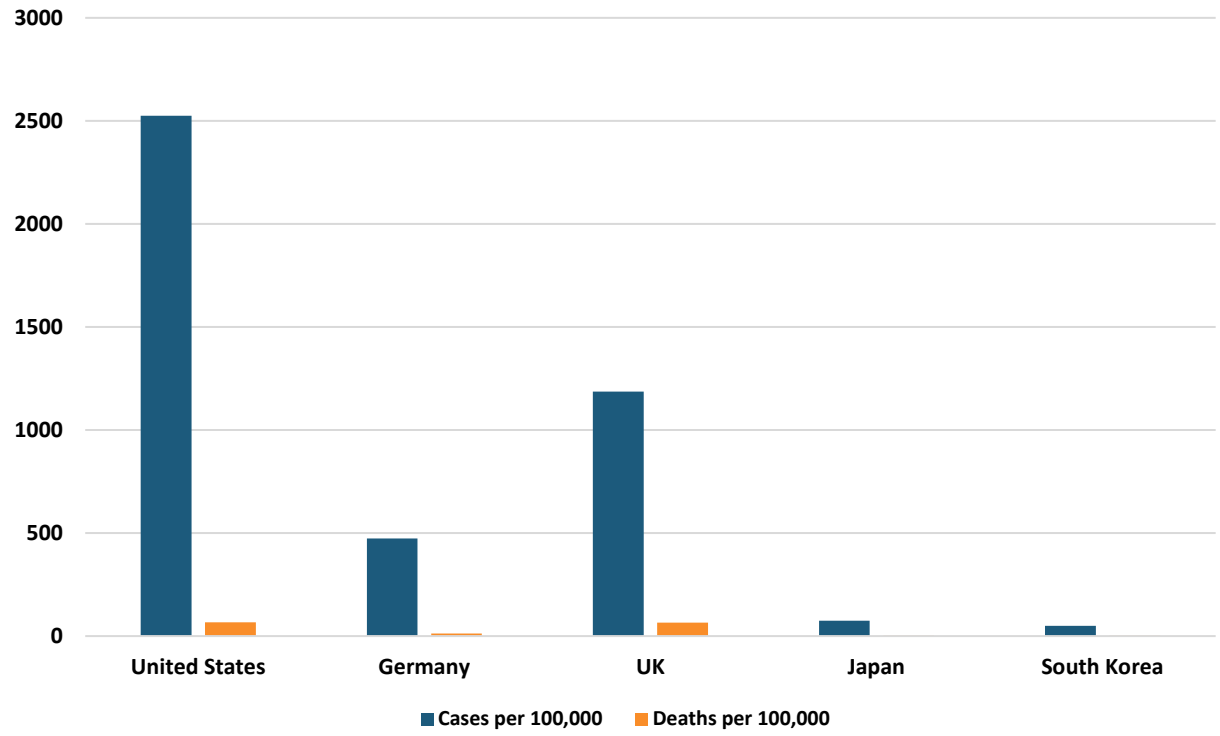
The White House failed to act upon early warnings and advice from U.S. intelligence agencies, the Department of Health and Human Services (HHS), and veteran health crisis coordinators even as the virus reached the United States in January and began to spread. Disagreement and tension between President Trump and the CDC, generally considered an international authority in the public health arena, led the agency to be almost completely stifled during the height of the pandemic in America. In three months during Spring 2020, in which roughly two million Americans tested positive for COVID-19, and over 100,000 died, the CDC conducted a total of zero press conferences and its exhaustive set of guidelines for reopening were rejected by the White House.[384] Meanwhile, mixed messages on the necessity of mask-wearing in public spaces left many U.S. citizens doubtful of their efficacy and unwilling to comply. On March 31, the CDC website insisted that masks were only necessary for sick people or those caring for the sick. Still, by July 14, the agency indicated that "cloth face coverings are a critical tool in the fight against COVID-19."[385] Further, tensions among health authorities continued to escalate as Trump advisor Peter Navarro denounced Director Fauci, and Trump publicly lambasted Deborah Birx, head of the White House Coronavirus Task Force.[386]

An alarmingly under-developed digital health care infrastructure system prior to the pandemic meant that the CDC's phones and faxes received the vast majority of publicly reported cases without any clinical context or relevant demographic information like age or race. Much of the data received is inputted and organized manually, slowing down attempts to contact trace and distribute self-quarantine guidance. The paralysis further aggravated when the CDC rolled out flawed testing kits in early February.[387] Commercial and state labs could not interfere because they had no approval to run their own tests.[388]

Meanwhile, President Trump conducted press conferences with misleading claims about the U.S.'s superior per-capita testing rates, indicating in May that America led in testing when it ranked 39th on the list.[389] By the middle of October, the United States held the fifth-highest per capita testing rate in the world, with 412.87 tests given per 1,000 citizens.[390] Despite increases in testing capabilities, current statistics demonstrate that the pandemic is far from under control. As the *Wall Street Journal's* Gerald Seib noted in an August 10 article, the lack of a national testing strategy has probably been the U.S. federal government's biggest failure in this crisis.[391]

Using the most recent data available from the *New York Times* Coronavirus Database, the chart below depicts a drastic difference between the per-capita case rate in the United States and its counterparts in Europe and Asia.[392] (See Figure 78.)

Figure 78: Comparison of Per Capita COVID-19 Case and Death Rates by Country as of October 22, 2020[393]



Where the federal response has been most effective from the public health side has been in supporting efforts to develop coronavirus therapeutics and vaccines. Most notably, Operation Warp Speed (OWS), a collaboration led by several government agencies including HHS, CDC, the Food and Drug Administration (FDA), the National Institutes of Health (NIH), and the Biomedical Advanced Research and Development Authority (BARDA), and the Department of Defense (DOD) seeks to deliver 300 million doses of a safe, effective vaccine for COVID-19 by January 2021.[394] OWS has announced support for almost $10 billion in funds supporting the development of or making purchase commitments (pending proof of efficacy) for coronavirus vaccines or therapeutics, including the following notable commitments:

- $2 billion to support the advanced development, including clinical trials and large-scale manufacturing, of Sanofi and GlaxoSmithKline's investigational adjuvanted vaccine (July 31);
- $1.95 billion for the large-scale manufacturing and nationwide distribution of 100 million doses of Pfizer's vaccine candidate, which began Phase 3 clinical trials on July 27 (July 7);
- $1.6 billion to support the large-scale manufacturing of Novavax's vaccine candidate (July 7);
- $1.2 billion for AstraZeneca's candidate vaccine, being developed in conjunction with the University of Oxford (May 21);
- $1 billion to support the large-scale manufacturing and delivery for a Johnson & Johnson candidate vaccine (August 5);

- $955 million for Moderna's candidate vaccine, which is now in Phase 3 clinical trials (April 16 & July 27); and
- $450 million to support the large-scale manufacturing of Regeneron's COVID-19 investigational anti-viral antibody treatment, REGN-COV2 (July 7).

Another significant development is the FDA's creation of a special emergency program to evaluate possible coronavirus therapies, the Coronavirus Treatment Acceleration Program (CTAP). CTAP is currently tracking over 570 potential coronavirus therapeutics in the development phase, including 270 that are currently undergoing clinical trial review.[395] Thus, from the public health perspective, the administration's response has been stronger in supporting the development of coronavirus testing, therapeutics, and vaccine technologies than it has been in working with states to develop comprehensive strategies and mechanisms to halt the virus's spread.

Compared to the public health response, the federal government's (here including Congress and the Trump administration) fiscal and monetary policy responses to the economic downturn instigated by the coronavirus pandemic has arguably been more robust. As of August 2020, three major pieces of fiscal legislation exist: The $483 billion Paycheck Protection Program and Health Care Enhancement Act, which includes forgivable small business loans and funding for hospitals and testing facilities; the $2.3 trillion Coronavirus Aid, Relief and Economic Security (CARES) Act, which finances individual tax rebates and unemployment benefits, food safety nets, funds to prevent corporate bankruptcy, and international assistance; and the $8.3 billion Coronavirus Preparedness and Response Supplemental Appropriations Act, which combined with the Families First Coronavirus Response Act provides support for virus testing, paid sick leave and emergency leave, food assistance, and expanded unemployment insurance.[396] The Federal Reserve has also conducted large-scale purchases of U.S. Treasury securities since March, with projections forecasting that the bank's portfolio size will double that of the 2008 financial crisis and stand at almost 50 percent of the value of annual economic output in the United States.[397] To put these efforts into perspective, as a percentage of annual U.S. GDP, the federal government's economic stimulus response to the 9/11 crisis equated to 3 percent of U.S. GDP and took 24 months to inject that into the economy. In terms of the 2008–2009 Great Recession, economic stimulus (largely in the form of the American Recovery and Reinvestment Act) equaled about 15 percent of annualized U.S. GDP and took over a year to inject into the economy. In contrast, a 22-day period amid the COVID pandemic saw a combined fiscal and monetary response (e.g., CARES Act, Federal Reserve injection of liquidity, etc.) equivalent to 30 percent of U.S. GDP.[398]

However, despite the Federal Reserve's actions and the magnitude of federal contributions like the CARES Act, which itself was equivalent to 11 percent of U.S. GDP, the Bureau of Economic Analysis reported that the U.S. economy contracted at an unprecedented annual rate of 32.9 percent between April and June 2020.[399] With the virus still very much on the rise in much of the United States and business restrictions remaining necessary for public safety, it is difficult to predict with certainty how the nation's economy will recover over the ensuing months and years. Optimistic economists forecast a V-shaped recovery curve, meaning customers will quickly return to purchasing previously underutilized goods, and services and the economy will soon pick up where it left off. However, more likely is a U-shaped or even an L-shaped recovery, meaning business will return to normal over a longer period or may never return to pre-pandemic levels based on altered consumer habits. If the U.S. economy is unable to adapt to the demands and trends of the "new normal"—for example, digitization and automation in critical sectors such as education, health care, transport, and manufacturing—these more pessimistic predictions may play out.

The Northeast (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont)

The Northeast was one of the most severely impacted areas of the United States after the coronavirus spread in the country in January. Through March and April, the Northeast saw extremely high case numbers, deaths, and hospitalizations, with single-day fatality rates peaking at 800 and daily hospitalization rates exceeding 18,000 people.[400] To date, the region remains the most hard-hit in America in terms of deaths per capita: CDC records indicate that New Jersey, New York, Connecticut, Massachusetts, and Rhode Island collectively reported 61,000 total deaths as of July.[401] However, the Northeast stands in sharp contrast to its state in the early months of the pandemic. Despite some initial pushback, state governments in the region primarily responded with aggressive lockdown policies and substantial investments in tracing and testing. Their efforts have not been in vain; today, states in the Northeast report some of the lowest hospitalization and death rates in the country, with 6 of the United States' 11 flat or falling case levels belonging to states in the region. Data from the Johns Hopkins Coronavirus Resource Center indicates that Northeast states boast some of the highest testing rates in the country, while the COVID Tracking Project shows low and declining daily case rates in the region.[402] After the initial surge in the tri-state area, the subsequent success of Northeast states' pandemic policy is due in part to support from citizens, who have expressed their appreciation for effective governmental leadership through high approval ratings and have largely abided by mask-wearing, social-distancing, and self-quarantining guidelines without too much complaint.

While strategies for public health and economic recovery vary by state, several common threads across the region stand out. In one instance of collaboration across state lines, the governors of Connecticut, New York, New Jersey, Rhode Island, Pennsylvania, and Delaware enacted a multi-state council in April to craft a region-wide framework for reopening the economy.[403] One health expert, one economic development expert, and a chief of staff represent each state's interests on the council. The cooperative strategy has yielded several essential tools, such as a regional supply chain for personal protective equipment and testing materials. Partnerships between state governments, academic institutions, and the private sector have also proven effective from a public health standpoint. In Connecticut, one such collaboration with Yale University yielded important research regarding antibody development, while a joint initiative between the state and Quest Diagnostics quintupled daily testing capacity in April.[404] In New York, the Mount Sinai Health System established a new Artificial Intelligence (AI) center to integrate data science in diagnosis and treatment of COVID-19 and to improve the usage of hospital resources like bed capacity and intensive-care equipment.[405] States in the Northeast have also demonstrated an ability to adjust to jarring changes in the job market. In March, New Jersey worked to mitigate unemployment with the development of a first-of-its-kind job portal to connect unemployed workers with open positions at grocery and retail chain stores. As of July, the platform boasts 53,464 job openings from over 1,000 companies.[406] Other Northeast states have demonstrated an ability to craft creative solutions for economic recovery even as businesses remain operable on limited or virtual bases. In Pennsylvania, Philadelphia's #Five4Fifty campaign stimulates the local economy through the encouragement of consumption of small businesses' goods and services.[407]

The region's coronavirus policy response accounts for errors and miscalculations, with New York standing out. A lack of sufficient concern and preparation from public officials at the beginning of the pandemic translated to inadequate health care resources at the height of the disease's spread in the state. Hospitals lacked in training staff, isolating infected patients, transferring patients, and procuring adequate supplies of critical resources as case numbers multiplied.[408] As of June, data from Johns Hopkins University indicated that the number of patients dead from COVID-19 in

New York state accounted for 7 percent of the world's deaths and 27 percent of deaths in the United States.[409] The state's economy sustained a similar blow. With roughly 1.5 million New Yorkers unemployed and only $3.8 billion of the federal government's $2.2 trillion March stimulus allocated to the state, New York faces substantial losses in tax revenue and drastic budget cuts in the years ahead.[410]

The South (Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia)

The timeline of the coronavirus pandemic in the U.S. South tells a vastly different story than that of the Northeast. With three distinct divisions, roughly 126 million people, and a total of 17 states, the South is geographically vast, culturally diverse, and politically opinionated. In the early days of the virus's spread across the United States, the region saw slower growth in new case rates than the Northeast, which surpassed 10,000 cases by late March. However, as new cases declined in the New York metropolitan area after peaking near 20,000 at the beginning of April, the COVID Tracking Project's graphs in the South trended in the opposite direction. New daily cases exceeded 10,000 in the first week of June and exploded from there, reaching nearly 47,000 new cases on July 17.[411] Daily deaths in the South currently account for more than half of all daily deaths from COVID-19 in the United States, and 61 percent of currently hospitalized COVID-19 patients are in the South.[412] While the Northeast peaked at 317 cases per one million people in early April, the South reached 315 cases per one million people in July. The region's current crisis stems from a general lack of consensus over economic and public health policy as well as populistic views of individual freedom, which conflict with admonitions of mask-wearing and social distancing. The South, predominantly led by Republican governors who stressed the importance of economic recovery, was slow to order lockdowns and swift to rescind them. In South Carolina, the statewide stay-at-home order lasted less than one month between April and May, and the state saw massive increases in new cases in the weeks following the order's reversal.[413] Mask-wearing mandates have not fared much better; conservative leaders voice conflicting views on the efficacy and justice of enforcing any such policy, and in some cases, like that of North Carolina, local authorities have refused to uphold statewide mask mandates on the grounds that they contravene American values.[414]

Conflicting messaging from upper-level leadership and defiance from local officials defines the nature of pandemic policy in the South, where individual liberty and public safety seem to stand at odds. Even those concerned with prioritizing public health lack the resources to do so when crafting policy for the economy's reopening. Florida's Republican Governor Ron DeSantis delegated authority to the mayors, but as Miami Beach Mayor Dan Gelber found, local offices have little access to the insight of public health experts, and the state's Department of Health was mostly unresponsive.[415] Motivated by fears of losing crucial revenue from tourism, a major industry in Southern states like Texas and Florida, governors have set lax restrictions and eased existing ones in the hopes of encouraging "normal" economic activity. In Texas, an initial plan to reopen in phases beginning on May 1 quickly gave way to complaints from bar and entertainment venue owners, who convinced Governor Greg Abbott to allow "soft openings" just two weeks after the plan came about.[416]

However, a few creative policies stand out as positive indicators of attempts to generate economic productivity in safe and effective ways. In Virginia, Texas, Tennessee, Maryland, and Arkansas, governors issued executive orders relaxing regulations or providing funding for the expansion of telehealth services, a move that simultaneously provides continued or new employment

opportunities and serves and spurs innovation in industries like health care.[417] Small business relief funds have also been an integral and effective part of Southern policymakers' response to the economic downturn from COVID-19. Alabama's $100 million Revive Alabama grant program, Maryland's $190 million relief fund for small businesses and nonprofits, Mississippi's Back to Business small business grant program, and Texas' partnership with Goldman Sachs for a $50 million loan fund represent examples of such policy.[418] In a Kurzarbeit-like effort to create a safety net for furloughed workers or those with reduced hours, Georgia implemented an emergency rule allowing workers to make up to $300 a week without reducing weekly benefit amounts.[419]

Conflicting messaging and unwillingness from upper-level authorities to mandate public health measures like mask-wearing and social distancing have prolonged and worsened the pandemic in the South. Seven states in the region have seen overall growth in newly reported cases over the last two weeks, while the rest have seen roughly the same levels of daily new cases, according to a *New York Times* database.[420] Though White House guidance offers criteria for states to reopen based on a "downward trajectory" of cases over two weeks, many of these states have continued to reopen regardless of the data. Continued overburdening of the health system in the South may undermine the goal of economic recovery that the area's largely conservative governors, eager to reopen as soon as possible, hope to achieve.

The Midwest (Indiana, Illinois, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin)

The Midwest, a region encompassing 12 states and roughly 68 million people, has seen some of the lowest case rates of the pandemic in the United States. That said, trends indicate that an initially slow spread has given way to a sharp increase in daily cases since the beginning of July, with numbers continuing to climb in the region even as they level off or decline in the Northeast, South, and West.[421] The area has one of the lowest overall test rates, though 5.3 percent of daily tests were returned positive as of the last week of July, and daily new cases officially surpassed 10,000 for the first time on July 24, making it the last region to hit that mark. Epidemiologists attribute the development to increased travel, especially from the South, as summer vacations commence. According to Dr. Anthony Fauci, these signs indicate that the Midwest will likely be the next region to see a significant surge in coronavirus cases.[422] Though states in the Midwest began reopening their economies along the same timeline as elsewhere in the country, this late surge in cases has forced policymakers in the region to reevaluate their strategies.

In a move similar to that of the Northeast, seven Midwestern governors banded together to form a regional alliance for economic reopening on April 16. Four factors informed the group's decisions on whether or not to reopen: greater testing and tracing capabilities, increased health care capacity for potential resurgence, development of best practices for socially distant workplaces, and sustained control of new case and hospitalization rates.[423] Unified policymaking has proven to be a useful tool across the region, as seen with the introduction of a mask-wearing mandate in Minnesota, Ohio, and Indiana in late July. Governors of the states involved cited CDC guidance, following the examples set by existing mask mandates in Illinois, Michigan, and Kansas. That said, public health could have better prioritized mask-wearing in Ohio in earlier months. Before the statewide mandate, mask-wearing was required only in certain high-risk counties, even as the state saw increases in cases, deaths, and hospitalizations through June and July.

In terms of economic recovery, several states in the Midwest have made progress in establishing and utilizing online platforms for conducting business, education, and health care. Illinois launched an online job portal in June, granting free access to online training courses and job openings to all residents. Indiana's two new websites, BeWellIndiana and PPE Marketplace,

provide mental health resources and enable small businesses to request personal protective equipment from the state. Iowa, in preparation for virtual education in the autumn, utilized $26.2 million in federal emergency relief to expand broadband access for remote learning. Missouri followed suit with $3.05 million in grants awarded to 16 broadband development projects to bring high-speed Internet access to its more rural jurisdictions.[424] Michigan's governor issued an executive order for the expansion of telehealth services in the state and signed legislation for the permanent increase of access to telemedicine care and remote patient-monitoring services. Nebraska has launched the Test Nebraska initiative, an online public-private partnership to assess and track Nebraskans' health with online surveys. South Dakota also expanded access to telehealth and launched an online platform for technical training programs and certifications through the state's four technical colleges.[425] In addition, nearly every Midwestern state has launched programs to provide support and relief to small businesses through grants and loans.

The West (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming)

Rounding out the regions of the United States is the West, home to 13 states and approximately 76 million people. Though it is the largest by geographic area, with populations scattered more sparsely than in the Northeast, the West has seen alarming spikes in daily COVID-19 case counts since mid-June, around the same time in which the Midwest and the South began to experience similar increases. Between June 14 and July 6, daily new cases in the West rose from 70 to 188, and the number of currently hospitalized patients nearly doubled, reaching 12,500 and continuing to climb.[426] Spikes in popular tourist destinations, including Arizona and California, saw corresponding declines in market demand by as much as 9.9 percent in late June, and several states rolled back reopening plans that were already underway.[427] In California, a 20 percent increase in daily cases in one week in early July forced restaurants, bars, museums, and other businesses to shut down just days after reopening.[428] Oregon and Arizona also instituted restrictions or reversals regarding their reopening strategies in light of increased case counts. The blame for these late-stage surges goes back, once more, to a lack of clear messaging or enforcement of a cohesive policy for virus response and control. Despite statewide recommendations for a cautious, phased-in approach to reopening, many counties in California opened bars and restaurants amid pressure from patrons and business owners, even as cases continued to rise. In several counties, sheriffs directly defied state rules and flouted the governor's social-distancing regulations.[429] For some states, like Montana and Idaho, recent increases in case counts need not be cause for significant concern, because small and dispersed populations mean overall numbers remain low. But a lack of interstate cohesion in policymaking can easily enable a small outbreak to turn massive as the virus travels without regard for borders.

Five Western states—California, Colorado, Nevada, Oregon, and Washington—formed an interstate alliance for pandemic policymaking in mid-May, making the West the last region to do so. The so-called Western States Pact, acknowledging the regional implications of disease spread, developed a reopening framework based on four common goals: protecting vulnerable populations at risk for severe disease, ensuring adequate access to resources and care for the sick, mitigating the non-direct health impacts of COVID-19 upon disadvantaged communities, and protecting the general public by ensuring that business reopenings are coupled with the development of a system for testing, tracking, and isolating.[430] Most of the states in the group committed to a four-phase reopening plan, though aforementioned violations of statewide guidelines have caused states to pause or move backward. Across the region, methods of providing economic relief and recovery have varied widely. States reliant upon a normally robust tourism industry, like Alaska, have attempted to regain some of their lost profits with summer travel deals for residents; the

northernmost state's Show Up for Alaska initiative incentivizes tourism with discounted activities and accommodation offerings.[431] Recognizing the need for strong digital platforms, Arizona committed grant money to telehealth service expansion, partnered with Cisco to install public WiFi access points in at-risk communities, and developed a job training and career counseling website for individuals seeking employment.[432] California followed suit with a $30 million grant for the provision of hot spots, computers, and Internet service in high-need households across the state. Colorado's Office of eHealth Innovation requested and received a $7.9 million federal match for the development of health information exchange infrastructure and other critical health innovations.[433] Idaho and Montana also committed state funding to the expansion of telehealth coverage for their residents.

Testing rates have gradually increased in the West, and the region now reports the second-highest number of daily tests per region in the United States. Still, the corresponding 8.1 percent positive response rate indicates that much remains ahead from a public health policymaking standpoint. In one example of a collaborative effort, Arizona partnered with universities and private-sector health care companies to generate significant increases in testing capability across the state. That said, Arizona remains at the top of the list of states whose consistently high rates of new cases indicate the lack of an organized public health strategy. Meanwhile, some states have recognized the importance of tools like AI and data analytics in health care resource distribution. In California, home to several of America's leading high-tech innovation hubs, initiatives like the Chan Zuckerberg Biohub have developed models for quantifying undetected COVID-19 cases and their public health consequences on a global scale.[434] Washington State's Department of Health, in collaboration with Microsoft, created an online dashboard to utilize AI for increased timeliness and accuracy of data reporting to the public.[435] The state's involvement in the effort means that data from local health jurisdictions and labs can be accessed and organized more efficiently.

Moving Forward

There is no single prescriptive formula for coronavirus recovery in the United States. The public health and economic implications of the pandemic are massive, multifaceted, and likely long-lasting. A greater national effort to produce uniform pandemic policy is essential to avoid past mistakes in virus response as well as to move forward in an effective and sustainable manner, in particular, when relating to a comprehensive and coordinated national testing strategy. Such an approach should prioritize the development of rapid, cheap in-home remote coronavirus testing kits. Health and safety must be a vital driver of all government decisions, especially those that involve plans to reopen state economies. This includes mandating mask-wearing in public spaces (where social distancing is not possible) and enacting more aggressive closures of nonessential businesses, such as bars, in regions with rising cases despite pushback. States should commit greater effort to form and maintain regional coalitions for policymaking, as decisions made in one state are integral to the success of all neighboring states. Messaging from high-level authorities must be clear, transparent, and fact-based: When delegating power to local authorities, officials should understand, inform, and hold themselves accountable to science-based federal or regional directives. The public health implications of a continued lack of ability to generate cohesive policy are impossible to quantify. Despite the lack of information around the end date for the pandemic, the virus's resurgence, or the projected number of COVID-19 deaths expected in the months and years ahead, one reputable projection places the number of total U.S. deaths at over 230,000 by November 1, 2020.[436] If the United States cannot establish control over the pandemic, some studies estimate the number of fatalities will reach as much as 400,000 by January 2021.[437]

The coronavirus pandemic is novel and unprecedented, so methods for response and recovery must be as well. There exists a great opportunity for the United States to build upon existing trends to create a strong foundation for the future of the digital economy.[438] This means doing away with barriers to the automation of business and creating policy space for firms to transition to remote functioning. The foundational platforms that support digital transformation—including universal broadband, AI, mobile payment platforms, and 5G—require the support of state and federal policymakers if the digital economy is to grow in sectors such as education, government, health care, manufacturing, and transportation. As states continue to see spikes in case rates from attempts to reopen too early, legislators must recognize the utility and the safety inherent in building up mechanisms for the digitization of the workplace and online consumption of goods and services. On a local level, this might look like a series of open innovation efforts: One McKinsey report recommends greater financial investment in research and development and education, open and publicly available data networks, and challenge grants or competitions to attract and sustain innovators.[439] Some states have already begun to take steps in the right direction. The expansion of broadband access, enhancement of Internet quality, augmentation of telehealth services, and support of virtual professional and educational opportunities are strong starting points in state response to COVID-19. But without a greater commitment to the same initiatives at the national level—and clear communication around policy in general—the United States risks falling even further behind as the rest of the world begins to recover.

Conclusion

The coronavirus pandemic has tremendously disrupted the global economy and society. It has infected over 41 million of the world's citizens and led to over 1 million fatalities, and while the vast majority who have been afflicted with this terrible disease have recovered, many will unfortunately endure lasting health complications, and countless lives have been irrevocably disrupted, or lost forever.

In 2009, in the midst of the Great Recession, Barack Obama's Chief of Staff Rahm Emanuel famously commented that, "You never want a serious crisis to go to waste." And, in the coronavirus pandemic, we have a crisis that makes the Great Recession look like child's play. Thus, while the pandemic has tremendously disrupted lives in 2020, this volume of country case studies has looked to paint a brighter picture for the future, noting that a number of countries are using this crisis as an opportunity to enact structural reforms that will hopefully position their economies and public health systems for a better future. Across nations, such examples include efforts to redouble deployment of digital infrastructure such as high-speed broadband Internet and next-generation mobile networks as well as to make greater embrace of digital applications such as e-government, telemedicine, tele-education, intelligent transportation systems, and contactless payments. Many nations, states, and regions are using the crisis as an opportunity to sweep away regulations that impede the deployment of digital technologies, whether automated grocery checkout, robotic automation, or restrictions on drones and autonomous vehicles. There's also hope that the hundreds of billions of dollars that nations are collectively investing toward developing vaccines, therapeutics, and diagnostics for the coronavirus will lead to longer-term progress across various facets of biomedical innovation, including in clinical trial design, rapid detection systems, and new approaches and technologies toward developing vaccines. Before the coronavirus, it took researchers on average 14 years to develop a new vaccine; with the coronavirus, researchers are looking to compress this timeline to less than a year and a half.

The coronavirus has challenged cherished notions of individual liberty vis-à-vis the interests of public health, nowhere more so than in the United States. Policymakers must be attentive to both considerations, although America's Declaration of Independence placed the values of "Life, Liberty, and the Pursuit of Happiness" in that order, precisely because one can't have the second two without the first. Citizens likewise need to recognize that their actions and behaviors have direct consequences and spillovers in controlling the spread of this virus (or not) and that they bear a responsibility to the safety of themselves and their families, as well as to others. The governments who have performed best during this crisis are those that have taken it quite seriously, had honest and frank conversations with their citizens regarding the health and economic challenges posed by the coronavirus, and been truthful and forthright with their citizens about the actions and behaviors that are and will be needed to overcome it.

As noted in the introduction, the economic, public debt, and global trade impacts of the coronavirus will be felt well into 2021 and beyond. Global policymakers will need to be creative and innovative in their approaches to restoring the global economy. Funding innovation and R&D (across all sectors, not just biotechnology) must remain a priority, no matter how constrained federal budgets become, for it will be those technologies and innovations springing from basic and applied research that will be critical to restoring the long-run economic growth trajectory and developing the industries, enterprises, and jobs of tomorrow. Likewise, market-based, rules-governed, private enterprise-led global trade—in full accordance with the foundational WTO tenets of non-discrimination, national treatment, and reciprocity—will be essential to creating economic

opportunities for citizens throughout the world and maintaining the global supply chains so essential to the production of scores of advanced-technology products.

In conclusion, global cooperation is needed now more than ever to effectively respond to the economic and public health challenges the coronavirus will wreak into 2021 and beyond. It's incumbent that all nations be completely forthright with international organizations and the global public about public health data as it pertains to the coronavirus, including knowledge about its sources. At the same time, with scores of companies throughout the world investing their own billions (of dollars) into innovating coronavirus solutions, it's important that their intellectual property rights be respected, with the understanding however that solutions (therapeutics, vaccines, etc.) when they come will be made available to the world's citizens on a reasonable basis.

How the global community responds to this crisis will set the course for how the rest of this century unfolds: as one of greater collaboration among nations, or one where global economy and society become increasingly fractured along ideological, political, and regional lines. The members of the Global Trade and Innovation Policy Alliance call upon global policymakers to choose the more-enlightened path.

Endnotes

1. Terrence P. Stewart, "COVID-19 news cases over last 14 days pass 5,000,000 for the first time on October 22," *Current Thoughts on Trade*, https://currentthoughtsontrade.com/2020/10/22/covid-19-new-cases-over-last-14-days-pass-5000000-for-first-time-on-october-22/.
2. World Health Organization, "WHO Coronavirus Disease (COVID-19) Dashboard," (accessed October 22, 2020), https://covid19.who.int/table.
3. Ibid.
4. Ibid.
5. Ibid.
6. Ibid.
7. *The Economist*, "The pandemic has caused the world's economies to diverge," October 8, 2020, https://www.economist.com/leaders/2020/10/08/the-pandemic-has-caused-the-worlds-economies-to-diverge.
8. *The Economist*, "The peril and the promise," October 8, 2020, https://www.economist.com/special-report/2020/10/08/the-peril-and-the-promise.
9. International Monetary Fund, "World Economic Outlook-October 2020: A Long and Difficult Ascent" (IMF, 2020), https://www.imf.org/en/Publications/WEO/Issues/2020/09/30/world-economic-outlook-october-2020.
10. Ibid.
11. Ibid.
12. Ibid.
13. *The Economist*, "The peril and the promise."
14. World Trade Organization, "Trade shows signs of rebound from COVID-19, recovery still uncertain," news release, October 6, 2020, https://www.wto.org/english/news_e/pres20_e/pr862_e.htm.
15. Ibid.

16 World Trade Organization, "Second Quarter 2020 Merchandise Trade," (WTO, September 23, 2020), https://www.wto.org/english/res_e/statis_e/daily_update_e/merch_latest.pdf.

17. World Trade Organization, "Trade shows signs of rebound from COVID-19, recovery still uncertain."
18. International Monetary Fund, "Database of Fiscal Policy Responses to COVID-19), https://www.imf.org/en/Topics/imf-and-covid19/Fiscal-Policies-Database-in-Response-to-COVID-19.
19. Ibid.
20. Ibid.
21. Ibid.
22. "A Joint Declaration on the Importance of Collaboration, Open Trade, and Innovation in Tackling COVID-19" (Geneva Network et al., 2020), http://www2.itif.org/2020-collaboration-open-trade-innovation.pdf.
23. Source: Based on Worldometers
24. Ibid.
25. Source: Based on AFIP
26. https://www.worldometers.info/coronavirus/country/austria/
27. https://info.gesundheitsministerium.at/dashboard_Hosp.html?l=en

28. https://info.gesundheitsministerium.at/dashboard_Hosp.html?l=en
29. https://tradingeconomics.com/austria/gdp-growth
30. https://www.oenb.at/isaweb/chart.do
31. https://en.wikipedia.org/wiki/Economy_of_Austria
32. https://www.wifo.ac.at/news/tourismusanalyse_mai_bis_juli_2020
33. http://www.oecd.org/economy/austria-economic-snapshot/
34. https://www.wifo.ac.at/news/tourismusanalyse_mai_bis_juli_2020
35. https://www.wifo.ac.at/news/bip-rueckgang_von_125_im_ii_quartal_2020_gegenueber_dem_vorjahr
36. https://www.wifo.ac.at/news/bip-rueckgang_von_125_im_ii_quartal_2020_gegenueber_dem_vorjahr
37. https://de.statista.com/statistik/daten/studie/1114740/umfrage/persoenliche-wirtschaftliche-folgen-der-corona-krise-in-oesterreich/ ; https://de.statista.com/statistik/daten/studie/1110141/umfrage/einkommensverlust-durch-die-corona-krise-in-oesterreich/
38. http://de.statista.com/statistik/daten/studie/1125525/umfrage/aenderung-des-eigenen-konsumverhaltens-nach-der-corona-krise-in-oesterreich
39. http://de.statista.com/statistik/daten/studie/1133914/umfrage/entwicklung-der-privaten-schulden-in-oesterreich
40. https://www.wifo.ac.at/news/bip-rueckgang_von_125_im_ii_quartal_2020_gegenueber_dem_vorjahr
41 https://www.csh.ac.at/csh-policy-brief-6-2020-resilience-austrian-supply-chains/
42. https://de.statista.com/statistik/daten/studie/1118022/umfrage/wertschoepfungsverlust-infolge-der-corona-krise-in-oesterreich-nach-bundeslaendern/
43. https://de.statista.com/statistik/daten/studie/1118036/umfrage/wertschoepfungsverlust-infolge-der-corona-krise-in-oesterreich-nach-branchen/
44. http://de.statista.com/statistik/daten/studie/1119082/umfrage/betroffenheit-von-unternehmen-durch-die-corona-krise-in-oesterreich
45. https://de.statista.com/statistik/daten/studie/1125568/umfrage/umsetzung-der-unternehmenshilfen-in-der-corona-krise-in-oesterreich/
46. https://news.wko.at/news/oesterreich/Verlaengerung-der-Corona-Kurzarbeit-ab-1.-Oktober-2020.html#:~:text=o percent20Die percent20derzeit percent20geltende percent20Corona,2021 percent20verl percentC3 percentA4ngert percent20(Phase percent203).
47. https://news.wko.at/news/oesterreich/Verlaengerung-der-Corona-Kurzarbeit-ab-1.-Oktober-2020.html#:~:text=o percent20Die percent20derzeit percent20geltende percent20Corona,2021 percent20verl percentC3 percentA4ngert percent20(Phase percent203).
48. https://news.wko.at/news/oesterreich/Verlaengerung-der-Corona-Kurzarbeit-ab-1.-Oktober-2020.html#:~:text=o percent20Die percent20derzeit percent20geltende percent20Corona,2021 percent20verl percentC3 percentA4ngert percent20(Phase percent203).
49. https://www.ams.at/unternehmen/personalsicherung-und-fruehwarnsystem/kurzarbeit
50. https://www.wko.at/service/corona-hilfspaket-unternehmen.html
51. https://news.wko.at/news/wien/Haertefall-Fonds:-Jetzt-startet-Phase-2.html
52. https://www.wko.at/service/corona-hilfspaket-unternehmen.html#heading_1__Welche_weiteren_Unterstuetzungsmassnahmen_gibt_es_f_r_Unternehmen_
53. https://www.vienna.at/oesterreichs-schulden-stiegen-erstmals-seit-2016-an/6662734

54. https://iiasa.ac.at/web/home/resources/publications/IIASAPolicyBriefs/pb26.html
55. https://www.tt.com/artikel/17322498/corona-krise-trifft-branche-hart-brutale-auslese-in-der-autoindustrie
56. https://www.who.int/docs/default-source/searo/bangladesh/COVID-19-who-bangladesh-situation-reports/who-COVID-19-update-32-20201005.pdf?sfvrsn=9ac41c99_2
57. https://albd.org/articles/news/33190/COVID-19:-Bangladesh-Situation-Report
58. https://www.who.int/docs/default-source/searo/bangladesh/COVID-19-who-bangladesh-situation-reports/who-COVID-19-update-32-20201005.pdf?sfvrsn=9ac41c99_2
59. https://reliefweb.int/sites/reliefweb.int/files/resources/nprp_COVID-19_v6_18032020.pdf
60. https://albd.org/articles/news/33190/COVID-19:-Bangladesh-Situation-Report
61. https://www.who.int/docs/default-source/searo/bangladesh/COVID-19-who-bangladesh-situation-reports/who-COVID-19-update-32-20201005.pdf?sfvrsn=9ac41c99_2
62. https://www.thedailystar.net/opinion/perspective/news/COVID-19-why-bangladesh-could-be-amongst-the-worst-affected-during-pandemic-1887775
63. https://bigd.bracu.ac.bd/study/effect-of-COVID-19-on-rmg-sector-and-trade-union-efforts-to-mitigate-fall-out/
64. https://www.thedailystar.net/business/news/unprecedented-bailout-package-the-way-1885042
65. https://www.thedailystar.net/business/news/unprecedented-bailout-package-the-way-1885042
66. https://www.aljazeera.com/videos/2020/04/07/COVID-19-bangladesh-hospitals-forced-to-turn-away-patients/
67. https://www.thedailystar.net/opinion/human-rights/news/COVID-19-and-the-rohingya-refugee-crisis-1887787
68. https://www.bbc.com/news/world-asia-52227924
69. https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1003144
70. https://www.imf.org/en/Topics/imf-and-COVID19/Policy-Responses-to-COVID-19#A
71. Anatomy of the Stimulus Package in Bangladesh. Nature Public Health Emergency Collection, 1-4.
72. https://www.orfonline.org/expert-speak/how-bangladesh-is-addressing-the-COVID19-pandemic-65601/
73. https://tbsnews.net/coronavirus-chronicle/how-logical-globes-claim-rolling-out-vaccine-december-142108?fbclid=IwAR2u77GAxAkUFW7sxcbEh7SN3xoV7FGC-c1nky9ARBU9RUf4C0VUsyVPsHM
74. https://www.bea.gov/
75. https://www.bls.gov/news.release/pdf/empsit.pdf
76. https://covid.cdc.gov/covid-data-tracker/
77. https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/COVID19CountyDataTable.aspx
78. https://news.berkeley.edu/2020/07/22/california-child-care-system-collapsing-under-covid-19-berkeley-report-says/
79. https://www.labormarketinfo.edd.ca.gov/file/lfmonth/countyur-400c.pdf
80. http://cbrtcfj.cmail19.com/t/ViewEmail/j/522106CD9C97FEE02540EF23F30FEDED/385BE6A1546658ADC68C6A341B5D209E
81. https://edd.ca.gov/newsroom/unemployment-august-2020.htm
82. https://news.berkeley.edu/2020/07/22/california-child-care-system-collapsing-under-covid-19-berkeley-report-says/

83. https://www.mercurynews.com/2020/05/15/housing-advocates-breathe-sigh-of-relief-after-californias-coronavirus-budget-cuts/
84. https://www.kpbs.org/news/2020/jun/30/californias-budget-has-billions-cuts-close-deficit/
85. https://www.sfchronicle.com/bayarea/article/San-Francisco-projecting-budget-shortfall-as-high-15169360.php
86. https://www.mercurynews.com/2020/04/07/san-jose-projects-budget-shortfall-of-110-million-due-to-coronavirus/
87. https://centerforjobs.org/ca/job-reports/june-2020-jobs-report#covid-19-and-the-state-economy
88. https://covid19.ca.gov/roadmap/
89. https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/COVID19CountyDataTable.aspx
90. https://abc7news.com/california-county-watch-list-counties-on-covid-watchlist-ca/6265270/
91. https://www.gov.ca.gov/category/executive-orders/page/5/
92. https://www.hcd.ca.gov/grants-funding/active-funding/homekey.shtml
93. http://www.dof.ca.gov/budget/COVID-19/
94. http://www.dof.ca.gov/budget/COVID-19/Federal_Stimulus/
95. https://edsource.org/2020/california-legislature-approves-state-budget-here-are-the-highlights-for-education-funding/634806
96. https://collegecampaign.org/higher-education-budget/#:~:text=Highlights%20of%20the%202020%2D21%20Higher%20Education%20Budget%20Agreement&text=%241%20billion%20in%20cuts%20to,federal%20aid%20is%20not%20provided.
97. http://www.dof.ca.gov/budget/COVID-19/
98. https://edd.ca.gov/Newsroom/unemployment-july-2020.html
99. https://bizfedlacounty.org/blog/alerts/surveyfindings/
100. https://www.calrest.org/news/covid-19-restaurant-letter-governor-gavin-newsom-and-state-legislature
101. https://smallbusinessmajority.org/sites/default/files/research-reports/COVID-19-CA-small-business-opinion-poll.pdf
102. https://www.forbes.com/sites/adammillsap/2020/07/24/california-begins-battle-against-independent-contractors-gig-economy/#fe7089cc14fa
103. https://www.ibank.ca.gov/small-business-finance-center/
104. https://lao.ca.gov/Publications/Report/4215
105. https://www.mercurynews.com/2020/07/29/san-francisco-will-put-ceo-tax-on-the-ballot-this-november/
106. https://www.sfchronicle.com/bayarea/article/San-Francisco-voters-will-find-13-ballot-measures-15479654.php
107. https://www.bizjournals.com/sanfrancisco/news/2020/08/20/sf-chamber-taxes-viewpoint.html; https://www.sfchronicle.com/bayarea/article/SF-Mayor-Breed-unions-in-standoff-over-250-15444194.php
108. https://www.bizjournals.com/sanfrancisco/news/2020/08/24/pebblebrook-ceo-jon-bortz-hotel-policy.html
109. https://www.latimes.com/opinion/story/2020-07-16/proposition-13-proposition-15-property-tax-revolt

110. https://ballotpedia.org/California_Proposition_15,_Tax_on_Commercial_and_Industrial_Properties_for_Education_and_Local_Government_Funding_Initiative_(2020)
111. https://ballotpedia.org/California_2020_ballot_propositions
112. https://www.yelpeconomicaverage.com/yea-q2-2020.html
113. https://sanfrancisco.cbslocal.com/2020/07/27/covid-19-reopening-survey-finds-pessimism-mounting-among-san-francisco-bay-area-small-business-owners/
114. https://www.forbes.com/sites/rohitarora/2020/06/30/which-companies-did-well-during-the-coronavirus-pandemic/#65322b077409
115. https://www.marketwatch.com/story/silicon-valley-economy-remains-strong-100-days-into-coronavirus-compared-to-other-industries-2020-06-26
116. https://www.bls.gov/news.release/prod2.nr0.htm
117. https://www.spokesman.com/stories/2020/may/22/the-tech-industrys-shift-to-remote-work-will-forev/
118. https://www.flexjobs.com/blog/post/companies-switching-remote-work-long-term/
119. https://www.cnn.com/2020/05/22/tech/work-from-home-companies/index.html
120. https://business.ca.gov/industries/high-tech/#:~:text=Business%20Establishments%202-,High%20Tech,any%20other%20state%20since%202010.
121. https://www.pwc.com/us/en/moneytree-report/assets/pwc-moneytree-2020-q2.pdf
122. https://www.cbinsights.com/research/report/venture-capital-q2-2020/
123. https://www.cbinsights.com/research/report/venture-capital-q2-2020/
124 . https://www.cbinsights.com/research/report/venture-capital-q2-2020/
125. https://www.pwc.com/us/en/moneytree-report/assets/pwc-moneytree-2020-q2.pdf
126. https://pitchbook.com/blog/the-most-funded-vc-companies-in-june-2020
127. https://www.gov.ca.gov/wp-content/uploads/2020/04/Task-Force-on-Business-and-Jobs-Recovery.pdf
128. https://www.latimes.com/california/story/2020-08-12/newsom-defends-economic-recovery-efforts-task-force-coronavirus
129. https://www.mercurynews.com/2020/08/03/att-to-provide-11000-hotspots-to-san-jose-students-without-internet/
130. https://www.govtech.com/network/California-Gov-Signs-Order-to-Spur-Broadband-Improvements-.html
131. https://cafwd.org/reporting/entry/compromise-on-broadband-bills-necessary-to-address-californias-digital-cris
132. https://www.bls.gov/web/laus/laumstrk.htm
133. Source: Central Bank of Chile.
134. Source: Chilean Statistics National Institute.
135. Source: An Investment Bank.
136. Author's own elaboration with National Institute of Health of Colombia data.
137. The EEA includes EU countries and also Iceland, Liechtenstein, and Norway. It allows them to be part of the EU's single market.
138. Source: ECDC
139. ECDC, Rapid risk assessment, Coronavirus disease 2019 (COVID-19) in the EU/EEA and the UK – eleventh update: resurgence of cases 10 August 2020

140. https://www.ecdc.europa.eu/en/about-uswhat-we-do/ecdcs-mission
141. Article 168 of the Treaty, points 1, 2, 6 and 7
142. https://ec.europa.eu/info/sites/info/files/covid19_-_eu_recommendations_for_community_measures.pdf; https://ec.europa.eu/info/sites/info/files/covid19_-_eu_recommendations_on_testing_strategies_v2.pdf; https://ec.europa.eu/info/sites/info/files/background_commission_recommendations_on_health_systems_resilience.pdf
143. The European Union Solidarity Fund (EUSF) was set up to respond to major natural disasters and express European solidarity to disaster-stricken regions within Europe. The Fund was created as a reaction to the severe floods in Central Europe in the summer of 2002.
144. The Innovative Medicines Initiative (IMI) is a public-private partnership between the European Commission and the pharmaceutical industry, represented by the European Federation of Pharmaceutical Industries and Associations (EFPIA), which aims to improve health by accelerating the development of innovative medicines and patient access to them, especially in areas where there is an unmet medical or social need.
145. https://ec.europa.eu/info/live-work-travel-eu/health/coronavirus-response/overview-commissions-response_en#supporting-research-for-treatment-diagnostics-and-vaccines
146. European Commission, COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL AND THE EUROPEAN INVESTMENT BANK - EU Strategy for COVID-19 vaccines
147. European Commission, European Economic Forecast Summer 2020, Institutional paper n. 132, July 2020.
148. Source: Authors' elaborations on Eurostat data.
149. Ibid.
150. Ibid.
151. https://ec.europa.eu/info/business-economy-euro/doing-business-eu/jobs-and-economy-during-coronavirus-pandemic_en.
152. https://ec.europa.eu/info/sites/info/files/factsheet_1_en.pdf.
153. https://ec.europa.eu/info/sites/info/files/2020mff_covid_recovery_factsheet.pdf.
154. https://ec.europa.eu/info/sites/info/files/economy-finance/ssi-factsheet.pdf.
155. https://ec.europa.eu/info/sites/info/files/economy-finance/investeu-factsheet.pdf.
156. Annexes to document COM(2020)408 final of 28.5.2020, modified on 29.5.2020.
157. Source: Johns Hopkins University, IW
158. Source: IW business survey (spring 2020); Bardt/Grömling (2020)
159. Source: IW business survey (spring 2020); Bardt/Grömling (2020)
160. Source: IW business survey (spring 2020); Bardt/Grömling (2020)
161. Source: IW business survey (spring 2020); Bardt/Grömling (2020)
162. Head of Research at the Macroeconomic Analysis & Policy Unit, FEIR-IOBE; Research Associate, Macroeconomic Analysis & Policy Unit, FEIR-IOBE; Associate Professor, National Technical University of Athens (NTUA), Director of Laboratory of Industrial and Energy Economics, NTUA, Head of Entrepreneurship Observatory, FEIR-IOBE
163. http://iobe.gr/docs/economy/en/ECO_Q1_2020_REP_EN.pdf.

164. Source: National Public Health Organization (https://eody.gov.gr/en/).
165. Sources: National Accounts, Eurostat & OECD.
166. Source: Hellenic Statistical Authority.
167. Sources: Civil Aviation Authority, Athens International Airport.
168. Source: Bank of Greece
169. Ibid.
170. Source: Labor Force Survey, Hellenic Statistical Authority.
171. Source: Labor Force Survey, Hellenic Statistical Authority.
172. Overall General Government balance excluding interest payments
173. Source: Bulletin on General Government Budget, Ministry of Finance
174. Total sample: 234 firms (industry:106, trade:34, constructions: 23, services:71).
175. Question: Total working hours in your business was increased, decreased or remained unchanged, Total sample: 230 firms.
176. Question: Sales during the crisis (March- May 2020) were increased, decreased total working hours in your business was increased, decreased, or remained unchanged, Total sample: 234 firms.
177. Question: Which of the following changes have occurred in your business due to the COVID-19 crisis (multiple answers).
178. Responses based on a Likert Scale from 1 to 5 (1 no useful, 5 very useful) was used to rank the answers.
179. Question: Based on the current situation, how long do you estimate the liquidity reserves last for your business to continue to operate?
180. https://covid19honduras.org/.
181. https://www.bancomundial.org/es/country/honduras/overview.
182. https://proceso.hn/2020/08/22/la-economia-de-honduras-se-contrajo-un-10-en-primer-semestre-por-covid-19/.
183. https://www.laprensa.hn/sanpedro/1407864-410/mas-de-900-negocios-han-cerrado-operaciones-por-crisis.
184. https://proceso.hn/2020/09/05/algunas-actividades-economicas-comienzan-a-recuperarse-en-honduras-en-medio-de-la-pandemia/.
185. https://tnh.gob.hn/2020/08/10/190-brigadas-medicas-y-163-centros-de-triaje-operan-con-fondos-de-fuerza-honduras/.
186. https://www.tsc.gob.hn/biblioteca/index.php/leyes/901-ley-de-auxilio-al-sector-productivo-y-a-los-trabajadores-ante-los-efectos-de-la-pandemia-provocada-por-el-covid-19.
187. https://www.radiohrn.hn/un-millon-de-alumnos-desconectados-de-sistema-podrian-convertirse-en-generacion-perdida-en-honduras.
188. https://digitalpolicylaw.com/honduras-acelerara-la-implementacion-del-plan-de-banda-ancha-frente-al-covid-19/.
189. https://www.aduanas.gob.hn/aduanas-honduras-trabaja-en-la-implementacion-del-operador-economico-autorizado-oea/.
190. Djalante, Riyanti *et al* 2020. Review and Analysis of current responses to COVID-19 in Indonesia: Period of January to March 2020 in *Progress in Disaster Science,* 6: page 1-9.

191. See for instance several media reporting: https://www.theguardian.com/world/2020/feb/14/indonesia-coronavirus-academic-harvard-marc-lipsitch and https://www.thejakartapost.com/news/2020/02/12/its-insulting-indonesia-criticizes-us-study-concerns-over-no-coronavirus-cases.html.
192. https://kawalcovid19.id/ and https://nasional.kompas.com/read/2020/09/06/15514501/update-bertambah-3444-kini-ada-194109-kasus-covid-19-di-indonesia?page=all
193. Source: Kawalcovid19.id
194. Pradesha, Angga *et al* 2020. The Cost of COVID-19 on the Indonesian economy: A Social Accounting Matrix (SAM) Multiplier Approach; Olivia, Susan, John Gibson and Rus'an Nasrudin 2020. A Survey of Recent Developments: Indonesia in the time of COVID-19 in *Bulletin of Indonesian Economic Studies* 56 (2), 143-174.
195. Source: Kawalcovid19.id
196. Baldwin, Richard 2020. https://voxeu.org/article/supply-side-matters-guns-versus-butter-covid-style
197. Djalante, Riyanti. *Op Cit,* page 6
198. https://www.bps.go.id/pressrelease/2020/05/04/1714/jumlah-kunjungan-wisman-ke-indonesia-maret-2020-mencapai-470-90-ribu-kunjungan-.html
199. Pradesha, Angga, *Op Cit*, page 4
200. Source: Pradesha, Angga et al 2020: page 6
201. *Ibid,* page 1
202. IMF 2020. https://www.imf.org/external/pubs/ft/weo/2020/01/weodata/index.aspxv
203. Bank Indonesia 2020. Newest Survey of Business Owners Second quarter 2020 August (in Bahasa): https://www.bi.go.id/id/publikasi/survei/kegiatan-dunia-usaha/Pages/skdu-triwulan-II-2020.aspx and survey of consumers August 2020 (in Bahasa): https://www.bi.go.id/id/publikasi/survei/konsumen/Pages/SK-Agustus-2020.aspx
204. Source: Bank of Indonesia 2020, page 1
205. Ibid.
206. Ibid.
207. Ibid.
208. BPS (2020): https://www.bps.go.id/publication/2020/09/15/9efe2fbda7d674c09ffd0978/analisis-hasil-survei-dampak-covid-19-terhadap-pelaku-usaha.html
209. Source: Bank of Indonesia 2020
210. Ibid.
211. Ministry of Health, COVID-19 situation in Italy, http://www.salute.gov.it/portale/nuovocoronavirus/homeNuovoCoronavirus.jsp?lingua=english
212. COVID-19 integrated surveillance: the main national data, Epicentro ISS, Istituto Superiore di Sanità
213. Source: Author's elaboration on Italian Ministry of Health data.
214. Source: Author's elaboration on Italian Ministry of Health data.
215. Authors' calculations on public data
216. ALTEMS, Analisi dei modelli organizzativi di risposta al COVID – 19, https://altems.unicatt.it/altems-COVID-19
217. INPS, May 2020, Analisi della mortalità nel periodo di epidemia da COVID-19
218. Source: INPS

219. Source: OECD.
220. Various authors, April 2020, Suppression of COVID-19 outbreak in the municipality of Vo, Italy, see https://www.medrxiv.org/content/10.1101/2020.04.17.20053157v1
221. I-Com analysis on Department for civil protection data, see http://opendatadpc.maps.arcgis.com/apps/opsdashboard/index.html#/b0c68bce2cce478eaac82fe38d4138b1
222. Source: Author's elaboration on Civil Protection data.
223. The survey was published by CNA (one of the largest SMEs association of Italy).
224. Bank of Italy, Macroeconomic projections for the Italian economy - July 2020, Economic Bulletin n.3, 13 July 2020.
225. Source: Authors' elaborations on Bank of Italy data.
226. Istat, Nota trimestrale sull'occupazione, 18 settembre 2020.
227. Source: Authors' elaborations on Istat data.
228. Ibid.
229. Al-Ajlouni, Laith. "Could COVID-19 push Jordan to the edge?", Middle East Institute: 30 March 2020; Investors' trust survey – sixth round, Opinion Poll, Jordan Strategy Forum: 10 Feb 2020
230. "Royal Decree approves Cabinet decision to proclaim Defence Law". The Royal Hashemite Court. Retrieved on 17 March 2020 from: https://bit.ly/306IIfj
231. "Curfew begins in Jordan and sirens sounds" Roya News. Retrieved on 21 March 2020 from: https://royanews.tv/news/209136
232. "COVID-19 in Jordan". Google news. Retrieved on 07 July 2020 from: https://news.google.com/COVID19/map?hl=en US&mid=/m/03__y&gl=US&ceid=US:en
233. "The Central Bank of Jordan allows re-scheduling of loans and postponing installments due to COVID-19". The New Arab. Retrieved on 15 March 2020 from: https://bit.ly/303KcRV
234. "Jordan Issues Defense Order 4 to Deal with Corona Repercussions". Asharq Al-Awsat. Retrieved on 31 March 2020 from: https://bit.ly/2ARIryA
235. https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker
236. "Jordan's page on International Monetary Fund website". International Monetary Fund. Retrieved on 29 June 2020 from: https://www.imf.org/en/Countries/JOR
237. "Jordan Economic Forecasts report". The Economist Intelligence Unit. The Economist newspaper: June 2020
238. "Amended Income Tax Law (Sep 2018) in the context of fiscal policy in Jordan" Policies Paper. Jordan Strategy Forum: 15 Sep 2020. Retrieved from: https://bit.ly/3gQD0PR
239. General Government Finance Bulletin May 2020. Jordan Ministry of Finance
240. Source: General Government Finance Bulletin issued by the Ministry of Finance
241. Jordan's Economic Forecast Report, June 2020, The Economist Magazine's Economic Intelligence Unit.
242. Ibid
243. Rania Sarayreh, "Small and medium enterprises accommodate 60 percent of workers," Al-Ghad, 10/12/2019
244. "The decline in Jordanian expatriates' remittances due to the COVID-19 and oil crises," Al-Araby Al-Jadeed 6/21/2020, Retrieved on https://bit.ly/3enMIYn
245. Source: Ministry of Health and Wealth; author's calculations.

246. Source: The Bank of Korea
247. CONEVAL. (2018). Resultados de pobreza en México 2018 a nivel nacional y por entidades federativas.
248. Observatorio Nacional de Inequidades en Salud. (2019). Primer Informe Sobre Desigualdades en Salud en México.
249. CONEVAL. (2018). Estudio diagnóstico del derecho a la salud.
250. PISA Farmacéutica. (April, 2020). Personas con comorbilidades, los más vulnerables ante el COVID-19. https://www.pisa.com.mx/personas-con-comorbilidades-los-mas-vulnerables-ante-el-covid-19/.
251. CONEVAL. (2018). Resultados de pobreza en México 2018 a nivel nacional y por entidades federativas.
252. Source: CONEVAL
253. Ana Karen García. (December, 2019). La economía informal generó 22 de cada 100 pesos del PIB de México en 2018. El Economista. https://www.eleconomista.com.mx/economia/La-economia-informal-genero-22-de-cada-100-pesos-del-PIB-de-Mexico-en-2018-20191216-0033.html.
254. Center for Systems Science and Engineering (CSSE) at Johns Hopkins University. (2020). COVID-19. https://coronavirus.jhu.edu/map.html.
255. Source: Johns Hopkins University.
256. Miranda P. (May, 2020). Covid afecta vida laboral de personas con discapacidad. El Universal. https://www.eluniversal.com.mx/nacion/covid-afecta-vida-laboral-de-personas-con-discapacidad.
257. Navarro, M.F. (June, 2020). 70 percent de fallecidos por Covid-19, con hipertensión, diabetes u otra enfermedad. Forbes. https://www.forbes.com.mx/fallecidos-covid-hipertension/.
258. Source: Johns Hopkins University
259. Lidia Arista. (May, 2020). México ha contratado a 44,247 médicos y enfermeras para enfrentar al COVID-19. Expansión Política. https://politica.expansion.mx/mexico/2020/05/12/mexico-ha-contratado-a-44-247-medicos-y-enfermeras-para-enfrentar-al-covid-19.
260. Secretaría de Salud. (April, 2020). Sector Salud suscribe convenio con hospitales privados para hacer frente a la pandemia. https://www.gob.mx/salud/prensa/105-sector-salud-suscribe-convenio-con-hospitales-privados-para-hacer-frente-a-la-pandemia-de-covid-19.
261. Mexican Government. (2020). Lineamiento de Reconversión Hospitalaria.
262. Mexican Government. (2020). Lineamientos de implementación de Centros de Atención Temporal COVID-19 (CAT-COVID19) y Hospitales Móviles (EMT).
263. Mexican Government. Quédate en casa. https://coronavirus.gob.mx/quedate-en-casa/..
264. Redacción Animal Político. (July, 2020). OPS pide a México coordinación entre gobierno federal y estados para enfrentar el COVID. Animal Político. https://www.animalpolitico.com/2020/07/ops-mexico-coordinacion-gobierno-federal-estados-covid/.
265. Victor Chávez (July 2020) OPS a México: se deben coordinar el gobierno y los estados contra el COVID-19. El Financiero. https://www.elfinanciero.com.mx/nacional/ops-a-mexico-se-deben-coordinar-el-gobierno-y-los-estados-contra-covid.
266. Redacción Animal Político. (July, 2020).https://www.animalpolitico.com/2020/07/ops-mexico-coordinacion-gobierno-federal-estados-covid/
267. Matt Rivers. (May 2020). En México no habrá pruebas masivas de coronavirus y esta es la razón de las autoridades. CNN. https://cnnespanol.cnn.com/2020/05/18/en-mexico-no-habra-pruebas-masivas-de-coronavirus-y-esta-es-la-razon-de-las-autoridades/.

268. UNDP. (2020). Desarrollo Humano y COVID-19 en México: desafíos para una recuperación sostenible.
269. United Nations. (August, 2020). En México hacen falta más pruebas de COVID-19 y los pobres tienen doble riesgo de morir. Noticias ONU. https://news.un.org/es/story/2020/08/1479332.
270. Forbes Staff. (August, 2020). 7 claves de la participación de México en la vacuna contra COVID-19. Forbes. https://www.forbes.com.mx/noticias-7-claves-participacion-mexico-vacuna-covid-19/.
271. Secretaría de Relaciones Exteriores. (August 2020). México anuncia alianza estratégica para la producción de la vacuna contra COVID-19. https://www.gob.mx/sre/articulos/mexico-anuncia-alianza-estrategica-para-la-produccion-de-la-vacuna-contra-covid-19-250178?idiom=es.
272. Inter-American Development Bank. (2020). ALC post COVID-19 Retos y Oportunidades.
273. Redacción Animal Político. (May, 2020). COVID-19 dejará 9 millones más de pobres en México y volverá vulnerables a quienes no lo eran. Animal Político. https://www.animalpolitico.com/2020/05/covid-19-pobreza-mexico-coneval/.
274. Cristian Téllez. (July, 2020). COVID-19 deja sin trabajo a 12.5 millones de personas en México en *El financiero*. https://www.elfinanciero.com.mx/economia/12-millones-de-mexicanos-perdieron-su-salario-en-abril-por-suspension-laboral.
275. Source: Encuesta Telefónica de Ocupación y Empleo, INEGI.
276. The number of people not economically active that are available to work is composed of: People who are available to work but are not looking for a job because they believe that they cannot find one and

    People who are available to work but are not looking for a job anymore
277. Source: Encuesta Telefónica de Ocupación y Empleo, INEGI.
278. Gerardo Esquivel. (July, 2020). Los impactos económicos de la pandemia en México. Banxico.
279. Source: Banco de México.
280. Cristian Téllez. (July, 2020). Solo 7.8 percent de las empresas recibió apoyo por COVID-19. El Financiero. https://www.elfinanciero.com.mx/economia/covid-19-afecto-al-93-de-las-empresas-mexicanas-segun-encuesta-de-inegi.
281. Forbes Staff. (September, 2020). OCDE prevé mayor caída del PIB de México para 2020. Forbes. https://www.forbes.com.mx/economia-ocde-prevision-pib-mexico-2020/.
282. Source: INEGI/
283. Mexican Government. (June 2020). Nueva normalidad. https://www.gob.mx/covid19medidaseconomicas/acciones-y-programas/nueva-normalidad-244196.
284. Mexican Government. Semáforo COVID-19. https://coronavirus.gob.mx/semaforo/.
285. Jorge Monroy, Camila Ayala (June 2020) Federación y estados llegan a acuerdos sobre semáforo Covid. El Economista. https://www.eleconomista.com.mx/estados/Federacion-y-estados-llegan-a-acuerdos-sobre-semaforo-Covid-20200602-0147.html.
286. Mexican Government. (June 2020). Apoyos financieros a microempresas y trabajadores independientes. https://www.gob.mx/covid19medidaseconomicas/acciones-y-programas/apoyos-financieros-a-microempresas-y-trabajadores-independientes.
287. Mexican Government. (June 2020). Mercado Solidario. https://www.gob.mx/covid19medidaseconomicas/acciones-y-programas/mercado-solidario.
288. Mexican Government. (June 2020). E-Ruedas de Negocios. https://www.gob.mx/covid19medidaseconomicas/acciones-y-programas/e-ruedas-de-negocios.
289. Mexican Government. (June, 2020). Medidas Económicas. https://www.gob.mx/covid19medidaseconomicas.

290. Mexican Government. (June, 2020). Apoyos SHCP. https://www.gob.mx/covid19medidaseconomicas/acciones-y-programas/apoyos-shcp.
291. There is not further information about the effectiveness period.
292. CONEVAL. (2020). La política social en el contexto de la pandemia por el virus SARS-CoV-2 (COVID-19) en México.
293. Enrique Provencio. (2020). Política económica y Covid-19 en México en 2020. Revista de Economía de la UNAM.
294. BANXICO (April 2020) Medidas adicionales para promover un comportamiento ordenado de los mercados financieros, fortalecer los canales de otorgamiento de crédito y proveer liquidez para el sano desarrollo del sistema financiero. https://www.banxico.org.mx/publicaciones-y-prensa/miscelaneos/ percent7B1E8E5322-7086-9563-570C-412659ECB292 percent7D.pdf
295. CONEVAL (2020) La política social en el contexto de la pandemia por el virus SARS-CoV-2 (COVID-19) en México.
296. Ingrith Carreón (May 2020) El derecho a la salud en México y los recursos en el sector ante el COVID-19. Animal Político. https://www.animalpolitico.com/blog-invitado/el-derecho-a-la-salud-en-mexico-y-los-recursos-en-el-sector-ante-el-covid-19/
297. Gerardo Esquivel. (Julio 2020). Los impactos económicos de la pandemia en México.
298. Ingrith Carreón (May 2020) El derecho a la salud en México y los recursos en el sector ante el COVID-19. Animal Político. https://www.animalpolitico.com/blog-invitado/el-derecho-a-la-salud-en-mexico-y-los-recursos-en-el-sector-ante-el-covid-19/
299. Monetary transfer to people who live in poverty as a non-exclusion strategy. The difference between minimum solidarity floor and citizen's basic income is that the former allows people with higher incomes to reject this support; in those cases, the most vulnerable populations would receive the corresponding allowance.
300. Victor Sancho. (September 2020). México ha tenido respuesta débil ante la pandemia: reporte. El Universal. https://www.eluniversal.com.mx/mundo/mexico-ha-tenido-respuesta-debil-ante-pandemia-reporte.
301. León Krauze. (March 20202). México no está listo para el coronavirus y las acciones de AMLO lo confirman. The Washington Post. https://www.washingtonpost.com/es/post-opinion/2020/03/18/mexico-no-esta-listo-para-el-coronavirus-y-las-acciones-de-amlo-lo-confirman/.
302. Redacción Animal Político (July 2020). OPS pide a México coordinación entre gobierno federal y estados para enfrentar el COVID; Mexican Government. (April 2020). Exhorta Gobernación a autoridades estatales y municipales a no aplicar medidas restrictivas de los derechos de las personas por COVID-19. Secretaría de Gobernación. https://www.gob.mx/segob/prensa/exhorta-gobernacion-a-autoridades-estatales-y-municipales-a-no-aplicar-medidas-restrictivas-de-los-derechos-de-las-personas-por-covid-19?state=published.
303. https://www.euronews.com/2020/08/27/coronavirus-autumn-and-winter-pose-a-tricky-situation-for-europe-who-warns
304. https://www.worldometers.info/coronavirus/country/poland/
305. Source: https://www.worldometers.info/coronavirus/country/poland/.
306. https://ourworldindata.org/covid-health-economy
307. Source: Eurostat short-term business statistics, seasonally and calendar adjusted data, volume index.
308. Source: Polish Statistical Office Business Tendency Surveys.
309. Source: Polish Statistical Office Business Tendency Surveys.

310. Source: Polish Statistical Office Consumer Tendency Surveys.
311. Diagnoza.plus is a survey-based study to provide an almost real-time measure of the Polish labour market. Until now, two rounds of an e-survey have been performed in April and June and these surveys are based on the National Labour Force Survey (NLFS) performed by the Polish National Statistical Office (GUS) to ensure comparability of the results.
312. https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19#P
313. Source: Polish Statistical Office Business Tendency August 2020 Survey.
314. Editorial: That the economy could have been worse off is no consolation, Business Day, 2 July 2020.
315. T-shirt policing? DA says Patel's new clothing laws plucked from 'Alice in Wonderland', The Citizen, 13 May 2020; Improper planning, poor execution: Why we are facing a Covid-19 storm, News24, 3 July 2020.
316. Time in lockdown has been wasted, Free Market Foundation, 10 June 2020.
317. South Africa nears the point of no return, BusinessTech, 12 August 2020.
318. South Africa's Lockdown Is Especially Severe, Foundation for Economic Education, May 24 2020.
319. Tobacco producers welcome new research confirming that cigarette ban has failed, Mail & Guardian, 31 July 2020
320. Oxford, Macrobond, Sakeliga
321. Editorial: Cyril's pretend-pretend recovery, Financial Mail, 30 July 2020.
322. Apocalypse just now: Can SA's economy still be saved?, Financial Mail, 6 August 2020
323. Report reveals shocking number of job losses in South Africa during lockdown, BusinessTech, 15 July 2020.
324. State of disaster now a disaster of a state, Business Day, 13 August 2020.
325. First quarter GDP falls by 2% as recession continues, Fin24, 30 June 2020.
326. The IMF's $4bn loan for South Africa: the pros, cons and potential pitfalls, Daily Maverick, 30 July 2020.
327. South Africa secures R5 billion virus loan from African Development Bank, BusinessTech, 23 July 2020.
328. South African Lockdown Tax Loss Exceeds Value of Two Virus Loans, Bloomberg, 1 August 2020.
329. Essential services hit a snag with lockdown website registrations, IOL, 27 March 2020.
330. Economic damage and job losses a greater threat to SA than Covid-19, Business Day, 6 July 2020.
331. Civil liberty during a state of disaster or emergency in SA, Free Market Foundation, April 2020.
332. The hidden cost of South Africa's coronavirus bans, BusinessTech, 3 August 2020.
333. South Africa's lockdown is especially severe, Free Market Foundation, 1 June 2020.
334. 'Hunger crisis is growing, emergency food aid is dwindling' - new Western Cape report, News24, 25 July 2020.
335. Covid-19 Emergency & Lockdown: What went wrong and what will it take to fix it?, Daily Maverick, 29 July 2020.
336. The real cause of excess deaths in SA | PANDA, Centre For Risk Analysis, 12 August 2020.
337. SA's great big stimulus stumble, Financial Mail, 6 August 2020.
338. How 'Covidpreneurs' are looting billions from South Africa's emergency funds, BusinessTech, 27 July 2020.

339. Fewer than 10,000 businesses helped by scheme intended to assist 700,000, Business Day, 10 August 2020.
340. The lock down suffocates one of SA's biggest assets, Sakeliga, 31 July 2020.
341. State of disaster now a disaster of a state, Business Day, 13 August 2020.
342 SA's business confidence levels improve, but are still well below 2019 levels, Fin24, 12 August 2020.
343. Wine industry: Ban lifted a little too late, Moneyweb, 18 August 2020.
344. State of disaster now a disaster of a state, Business Day, 13 August 2020.
345. Big tax losses due to alcohol and cigarette ban in South Africa, MyBroadband, 14 August 2020.
346. Cigarette sale ban will leave lasting, criminal legacy – former Sars lawyer, Cape Talk, 17 August 2020.
347. It's official: minibus taxis may be 100% full from today, but trains only 70%, Business Insider South Africa, 22 July 2020.
348. Mbalula spells out new taxi regulations, Daily Maverick, 16 July 2020.
349. Pandemic policing: South Africa's most vulnerable face a sharp increase in police-related brutality, 24 June 2020, Atlantic Council.
350. Cele downplays police violence – says 'police are not sacrificial lambs', Daily Maverick, 23 May 2020.
351. Support for ailing tourism sector will be guided by BEE, says minister, Business Day, 7 April 2020.
352. Is the NCCC legitimate? Erin Richards, Free Market Foundation, 13 May 2020.
353. Scientists plead for Covid-19 transparency: 'The social contract with government is broken', News24, 19 July 2020.
354. Covid-19 tender corruption 'a major blow for healthcare workers', City Press, 2 August 2020.
355. Guilietta Talevi: How to make R13bn in investments vanish, Financial Mail, 6 August 2020
356. Will Coronavirus Kill Off South Africa's Wine Industry?, Forbes, 25 July 2020.
357. Lebogang Mokoena: The cigarette that broke South Africa's back, Financial Mail, 3 August 2020.
358. GDP growth: SA slips deeper into the hole, Financial Mail, 2 July 2020.
359. Security of Property Rights in South Africa, Free Market Foundation, February 2020.
360. Opinion: Prosperity, property rights are linked, IOL, 30 July 2019.
361. Budget shows just where land reform features in priorities, Daily Friend, 7 August 2020.
362. How Africa can bounce back from Covid-19, 1828, 3 July 2020.
363. Covid-19 a huge hit to African economic growth: Free trade can soften the blow, Daily Maverick, 15 July 2020.
364. The Coronavirus Is Not a Good Argument for Protectionism, Cato Institute, 25 March 2020.
365. Global lessons for supply chains from the Great Lockdown, Business Day, 2 July 2020.
366. Rob Rose: The most shameful moment of SA's lockdown, Financial Mail, 20 July 2020.
367. The ANC will struggle to keep economic promises to the IMF after its 'Rubicon' moment, Business Maverick, 29 July 2020.
368. How SA lost a decade of jobs in four months, Financial Mail, 30 September 2020.
369. Government's post-Covid-19 reconstruction & recovery plan exposes factional paralysis and lack of capacity, Daily Maverick, 17 August 2020.

370. Centers for Disease Control and Prevention (CDC), "CDC Data Tracker: United States COVID-19 Cases and Deaths by State", (Atlanta: CDC, 2020), https://covid.cdc.gov/covid-data-tracker/#cases_casesinlast7days

371. Ibid.

372. Joel Achenbach and Jacqueline Dupree, "U.S. tops 60,000 daily coronavirus infections for first time since early August," *The Washington Post*, October 15, 2020, https://www.washingtonpost.com/health/2020/10/15/coronavirus-cases-surging/.

373 Erika Edwards, "CDC warns of 'distressing trend' in Covid-19 cases as country heads into fall," *CNBC*, October 21, 2020, https://www.nbcnews.com/health/health-news/cdc-warns-distressing-trend-covid-19-cases-country-heads-fall-n1244196.

374. https://www.npr.org/2020/05/15/854774681/congress-has-approved-3-trillion-for-coronavirus-relief-so-far-heres-a-breakdown https://www.ncsl.org/research/labor-and-employment/national-employment-monthly-update.aspx

375. Richard Allen Greene, "US and UK are bottom of the pile in rankings of governments' handling of coronavirus pandemic", *CNN*, August 27, 2020, https://www.cnn.com/2020/08/27/world/global-coronavirus-attitudes-pew-intl/index.html.

376. https://www.ipsos.com/en-us/news-polls/axios-ipsos-coronavirus-index

377. https://globalresponseindex.foreignpolicy.com/

378. U.S. census bureau

379. Noah Higgins-Dunn, "The U.S. has the worst coronavirus outbreak in the world: 'The numbers don't lie,' Dr. Fauci says," *CNBC,* August 5, 2020, https://www.cnbc.com/2020/08/05/dr-fauci-agrees-the-us-has-the-worst-coronvirus-outbreak-in-the-world-the-numbers-dont-lie.html.

380. Ed Yong, "How the Pandemic Defeated America", *The Atlantic,* August 4, 2020, https://www.theatlantic.com/magazine/archive/2020/09/coronavirus-american-failure/614191/.

381. https://apnews.com/ce014d94b64e98b7203b873e56f80e9a

382. Ibid.

383. Ibid.

384. Ibid.

385. Centers for Disease Control and Prevention (CDC), "CDC calls on Americans to wear masks to prevent COVID-19 spread", (Atlanta: CDC, 2020), https://www.cdc.gov/media/releases/2020/p0714-americans-to-wear-masks.html.

386. https://www.usatoday.com/story/opinion/todaysdebate/2020/07/14/anthony-fauci-wrong-with-me-peter-navarro-editorials-debates/5439374002/

Amanda Holpuch, "Trump calls Birx's dire warning on widespread coronavirus in the US 'pathetic'," *The Guardian*, August 3, 2020, https://www.theguardian.com/world/2020/aug/03/trump-birx-pathetic-criticism-nancy-pelosi-coronavirus-comments.

387. https://www.washingtonpost.com/investigations/2020/04/03/coronavirus-cdc-test-kits-public-health-labs/?arc404=true

388. https://www.sciencemag.org/news/2020/02/united-states-badly-bungled-coronavirus-testing-things-may-soon-improve

389. Ibid.

390. Lori Robertson and Eugene Kiely, "Testing, By the Numbers", *Factcheck.org*, May 12, 2020, https://www.factcheck.org/2020/05/testing-by-the-numbers/.

391. Gerald Seib, "Coronavirus Testing Still Not Making the Grade," *The Wall Street Journal*, August 10, 2020, https://www.wsj.com/articles/coronavirus-testing-still-not-making-the-grade-11597069076?mod=hp_featst_pos3.

392. "Coronavirus Map: Tracking the Global Outbreak", *The New York Times*, August 5, 2020, https://www.nytimes.com/interactive/2020/world/coronavirus-maps.html.

393. Data obtained from the New York Times Coronavirus Database.

394. U.S. Department of Health and Human Services, "Fact Sheet: Explaining Operation Warp Speed," news release, August 7, 2020, https://www.hhs.gov/about/news/2020/08/07/fact-sheet-explaining-operation-warp-speed.html#:~:text=Operation%20Warp%20Speed%20(OWS)%20aims,(collectively%20known%20as%20countermeasures).

395. U.S. Food and Drug Administration, "Coronavirus Treatment Acceleration Program (CTAP)," https://www.fda.gov/drugs/coronavirus-covid-19-drugs/coronavirus-treatment-acceleration-program-ctap.

396. International Monetary Fund (IMF), *Policy Responses to COVID-19,* (Washington, DC: IMF, 2020), https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19#U.

397. Nick TIimraos and Jon Hilsenrath, "The Federal Reserve Is Changing What It Means to Be a Central Bank", *The Wall Street Journal*, April 27, 2020, https://www.wsj.com/articles/fate-and-history-the-fed-tosses-the-rules-to-fight-coronavirus-downturn-11587999986?mod=searchresults&page=1&pos=19.

398. John Pitzer, Managing Director at Credit Suisse (Remarks at SIA Event: Big Opportunities, Looming Challenges: The State of the U.S. Semiconductor Industry, July 9, 2020), https://www.semiconductors.org/events/big-opportunities-looming-challenges-the-state-of-the-u-s-semiconductor-industry/.

399. Anneken Tappe, "US economy posts its worst drop on record", *CNN,* July 31, 2020, https://www.cnn.com/2020/07/30/economy/us-economy-2020-second-quarter/index.html.

400. Ellen Barry, "U.S. Northeast, Pummeled in the Spring, Now Stands Out in Virus Control", *The New York Times*, July 22, 2020, https://www.nytimes.com/2020/07/22/us/coronavirus-northeast-governors.html.

401. Ibid.

402. Johns Hopkins University of Medicine, All State Comparison of Testing Efforts (Testing Totals, Testing Weekly Change; accessed July 28, 2020), https://coronavirus.jhu.edu/testing/states-comparison; The COVID Tracking Project, Compare One Region to All Others (Daily Tests by Region, Daily Cases by Region; accessed July 28, 2020), https://covidtracking.com/data/charts/compare-one-region-to-others.

403. Rachel Treisman, "Northeast: Coronavirus-Related Restrictions By State", *NPR*, July 28, 2020, https://www.npr.org/2020/05/01/847331283/northeast-coronavirus-related-restrictions-by-state.

404. Ibid.

405. Elliot M. Kass, "Mount Sinai Center Developing AI to Help Diagnose, Treat Covid-19", *The Wall Street Journal*, July 16, 2020, https://www.wsj.com/articles/mount-sinai-center-developing-ai-to-help-diagnose-treat-covid-19-11594891800?mod=searchresults&page=2&pos=16.

406. Governor of New Jersey, "Press Release", May 6, 2020, https://www.nj.gov/governor/news/news/562020/20200324a.shtml.

407. Wan-Lae Cheng, Cameron Davis, et al., "Lessons from the past on how to revive the US economy after COVID-19", *McKinsey & Company*, June 18, 2020,

https://www.mckinsey.com/industries/public-sector/our-insights/lessons-from-the-past-on-how-to-revive-the-us-economy-after-covid-19#.

408. Shalini Ramachandran, Laura Kusisto, and Katie Honan, "How New York's Coronavirus Response Made the Pandemic Worse", *The Wall Street Journal*, June 11, 2020, https://www.wsj.com/articles/how-new-yorks-coronavirus-response-made-the-pandemic-worse-11591908426.
409. Ibid.
410. Margaret Besheer, "As New York Looks to Heal From Coronavirus, Its Economy Falls Ill", *Voice of America*, April 16, 2020, https://www.voanews.com/covid-19-pandemic/new-york-looks-heal-coronavirus-its-economy-falls-ill.
411. The COVID Tracking Project, Compare One Region to All Others.
412. Ibid.
413. Arian Campo-Flores, Rebecca Ballhaus, and Valerie Bauerlain, "Behind New Covid-19 Outbreaks: America's Patchwork of Policies", *The Wall Street Journal*, July 9, 2020, https://www.wsj.com/articles/us-policy-covid-19-coronavirus-outbreaks-california-texas-florida-arizona-11594134950?mod=hp_lead_pos6.
414. Ibid.
415. Ibid.
416. Elizabeth Findell, Brianna Abbott, and Eliza Collins, "The Coronavirus Sutge in Florida, Arizona, Texas Isn't the Same as New York's Crisis", *The Wall Street Journal*, June 26, 2020, https://www.wsj.com/articles/coronavirus-surge-in-south-and-west-looks-different-from-norths-11593203105.
417. Rachel Treisman, "South: Coronavirus-Related Restrictions By State", *NPR*, July 28, 2020, https://www.npr.org/2020/05/01/847415273/south-coronavirus-related-restrictions-by-state.
418. Ibid.
419. Ibid.
420. "Coronavirus in the U.S.: Latest Map and Case Count", *The New York Times*, August 6, 2020, https://www.nytimes.com/interactive/2020/us/coronavirus-us-cases.html#hotspots.
421. The COVID Tracking Project, Compare One Region to All Others.
422. Matthew S. Schwartz, "Midwest Could See Surge in COVID-19 Cases Unless States Are More Careful, Fauci Warns", *NPR*, July 28, 2020, https://www.npr.org/sections/coronavirus-live-updates/2020/07/28/896152597/midwest-could-see-surge-in-covid-19-cases-unless-states-are-more-careful-fauci-w.
423. "Midwest Governors Announce Plan to Coordinate on Reopening of Economy", *NBC 5 Chicago,* April 16, 2020, https://www.nbcchicago.com/news/coronavirus/midwest-governors-announce-plan-to-coordinate-on-reopening-of-economy/2256936/.
424. Rachel Treisman, "Midwest: Coronavirus-Related Restrictions By State", *NPR*, August 5, 2020, https://www.npr.org/2020/06/11/847413697/midwest-coronavirus-related-restrictions-by-state.
425. Ibid.
426. The COVID Tracking Project, Compare One Region to All Others.
427. Peter Grant, "Summer Rise in Covid-19 Hot Spots Derailing Hotel Recovery", *The Wall Street Journal*, July 21, 2020, https://www.wsj.com/articles/summer-rise-in-covid-19-hot-spots-derailing-hotel-recovery-11595332801?mod=searchresults&page=1&pos=19.

428. Allison Prang and Tawnell D. Hobbs, "California Pulls Back on Reopening Amid Surge in Coronavirus Cases", *The Wall Street Journal*, July 13, 2020, https://www.wsj.com/articles/coronavirus-latest-news-07-13-2020-11594628843?mod=searchresults&page=2&pos=15.
429. Ibid.
430. Nikku D. Khalifian, "The 'Western States Pact' and a Phased/Staged Approach to Reopening States in Response to COVID-19", *The National Law Review*, May 15, 2020, https://www.natlawreview.com/article/western-states-pact-and-phasedstaged-approach-to-reopening-states-response-to-covid.
431. Rachel Treisman, "West: Coronavirus-Related Restrictions By State", *NPR*, July 30, 2020, https://www.npr.org/2020/05/01/847416108/west-coronavirus-related-restrictions-by-state.
432. Ibid.
433. Colorado Governor Jared Polis, "Colorado Receives Federal Fund Match for Telemedicine Health Innovation Projects," May 6, 2020, https://www.colorado.gov/governor/news/colorado-receives-federal-fund-match-telemedicine-health-innovation-projects.
434. "The New Frontier", Chan Zuckerberg Biohub, accessed August 3, 2020, https://www.czbiohub.org/.
435. "Current Status in Washington State", Washington State Department of Health, accessed August 3, 2020, https://www.doh.wa.gov/Emergencies/Coronavirus.
436. Institute for Health Metrics and Evaluation (IHME), Covid 19 Projections (Total deaths; accessed August 4, 2020), https://covid19.healthdata.org/united-states-of-america.
437. https://thehill.com/policy/healthcare/515090-key-model-predicts-400000-coronavirus-deaths-in-us-by-january
438. Robert D. Atkinson, Doug Brake, Daniel Castro, and Stephen Ezell, "Digital Policy for Physical Distancing: 28 Stimulus Proposals That Will Pay Long-Term Dividends" (ITIF, April 2020), https://itif.org/sites/default/files/2020-digital-policy-physical-distancing-proposals.pdf.
439. Cheng, Davis, et al., "Lessons from the past on how to revive the US economy after COVID-19."

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