The COVID-19 Pandemic and Its Impact on the Global Economy: What Does It Take to Turn Crisis into Opportunity?

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Abstract

The COVID-19 pandemic broke out at a time when there were heightened uncertainties in the global economy. Understanding these uncertainties provides an important background for analyzing the impact of the pandemic on the global economy, assessing the effectiveness of policy measures in combating the pandemic and reviving the global economy, and predicting the trajectory of the economic recovery in the post-pandemic era. We analyze how COVID-19 would likely deepen an existing malaise in the global economy, and what could be done to address these problems while managing the economic recovery. We argue that three fundamental factors that could lead to a solid recovery in the post pandemc era are structural reform, new technology and re-integration. They could be managed by instituting a new “global social contract.” Supported by strong public policies at all levels, especially at national level, these three factors could bring about the salvation of the global economy as it recovers or re-emerges from the pandemic crisis.

Key words: COVID-19, economic recovery, global recession, global social contract

JEL codes: F01, F50, I18

I. Introduction

On 31 December 2019, Wuhan Municipal Health Commission of China reported a cluster of cases of pneumonia in Wuhan, Hubei Province. A novel coronavirus was eventually identified. On 11 March 2020, the World Health Organization (WHO) made the assessment that COVID-19 could be characterized as a pandemic (WHO, 2020). The pandemic hit Europe and Americas hardest, measured by the number of confirmed cases (Figure 1).
The health crisis not only caused a tragically large number of human lives to be lost, but also dealt a heavy blow to market confidence and economic activity. The magnitude and speed of contraction in economic activity that followed was unlike anything experienced in our lifetime. Rising fears and a global economic shutdown caused financial markets to seize up and plummet. Globally, stock markets crashed from their record highs and reported their largest one-week declines since the 2008 global financial crisis (GFC). Oil prices in the US turned negative for the first time on record after oil producers ran out of space to store the oversupply of crude left by the coronavirus crisis and after the failure of negotiations between Saudi Arabia and Russia to try to curtail production, triggering an historic market collapse, which left oil traders reeling. The price of US crude oil crashed from US$18 a barrel to –US$38 in a matter of hours, as rising stockpiles of crude threatened to overwhelm storage facilities and forced oil producers to pay buyers to take the barrels they could not store. The market crash underlined the impact of the coronavirus outbreak on oil demand as the global economy slumped (Figure 2).

The International Monetary Fund (IMF) called the economic crisis sparked by COVID-19 the Great Lockdown and projected that global growth in 2020 would fall to –3 percent, on the assumption that the pandemic and the required containment peaks in the second quarter for most countries in the world and would recede in the second half of this year. It is a downgrade of 6.3 percentage points from January 2020, a major revision over a very short period. It makes the Great Lockdown the worst recession since the Great...
Depression, and far worse than the GFC, in which global growth fell by –0.1 percent year on year. This is a truly global crisis as no country is spared. For the first time since the Great Depression, both advanced economies and emerging market and developing economies are in recession. This year, growth in advanced economies is projected at –6.1 percent; emerging market and developing economies with normal growth levels well above advanced economies are also projected to have negative growth rates of –1.0 percent in 2020, and –2.2 percent if China is excluded. Income per capita is projected to shrink for over 170 countries (IMF, 2020).

Emerging markets and developing economies faced additional challenges, with unprecedented reversals in capital flows as global risk appetite waned, while coping with weaker health systems and more limited fiscal capacity to provide support (IMF, 2020). Emerging market capital inflows dramatically declined as risk aversion led to a rapid flight of capital from emerging-market assets. For the seven days ended 25 March, redemptions from emerging-market bond funds were more than 3 percent of total assets. The outflow was nearly unprecedented in size, eclipsed only by the 3.7 percent outflow during the last week of the GFC in October 2008. The speed with which the most recent activity occurred was notable—emerging-market bond funds had reported net inflows every week of 2020 until the first week in March (Figure 3) (Davis, 2020).

Source: FRED Database.
The COVID-19 pandemic, a once-in-a-century event, broke out at a time when there were heightened uncertainties in the global economy at the turn of the second decade of the 21st century. Understanding these uncertainties provides an important background for analyzing the impact of the pandemic on the global economy, assessing the effectiveness of policy measures in combating the pandemic and reviving the global economy, and predicting the trajectory of the economic recovery in the post-pandemic era.

First, the Chinese economy, the second largest economy in the world, grew at the slowest pace since reform started four decades ago. Second, there was a “synchronized economic slowdown” in all the major economies in the world ten years after the GFC. Third, international trade was no longer a key engine for global economic growth as deglobalization has continued. Fourth, the rate of growth in productivity, especially in all the major economies, has continued to fall. Fifth, deflation has become a norm in the global macroeconomic setting and macroeconomic policies, especially monetary policies, in all major economies have become ineffective in boosting economic growth. Sixth, there has been an alarmingly high increase in global debt levels resulting from fiscal expansion and debt financing measures across different countries, rich and poor. Seventh, as a result, there are growing financial fragilities in the global financial system and instability in the international commodities markets. Finally, income inequality is increasing across many countries in the world, putting much pressure on government policies for carrying out structural reform, including the maintenance of an open economy.

In this study, we identify four major challenges caused by COVID-19 and explore potential ways to address these challenges. The paper is organized as follows. In Section II, we review how COVID-19 impacts economies and worsens several pre-existing
conditions in the global economy, thus posing major challenges for future growth in the absence of strategic adjustment and policy reform. In Section III, we examine what type of reforms will be required to boost productivity and lift growth after the COVID-19. We discuss how a crisis like the COVID-19 could create an opportunity for policy reform and innovation, which could become a foundation for long-term prosperity in the world. Section IV draws conclusion and offers some policy suggestions.

II. COVID-19: A Twin Crisis for Health and the Economy

While the pandemic impacts almost every individual, business, government and institution in a unique way, a crisis such as this tends to expose the weakest parts and links in an economy and a society and wreaks havoc on them. COVID-19 worsens several pre-existing conditions in the global economy and poses greater challenges to the more vulnerable parts of the global economy. These pre-existing conditions, such as rising debt levels, may become chronic and damaging for a long period of time if no major actions are taken to address them. Here we identify and discuss these challenges in detail.

1. Secular Stagnation May be Deepened

In the past two decades, four prominent trends in global economic performance have arisen: (i) rates of growth in economic activity in the advanced economies have declined, most notably during the first decade of the millennium (Lo and Rogoff, 2015); (ii) total factor productivity (TFP) growth has been slowing since before the GFC. The growth in TFP has been very sluggish across the Organisation for Economic Co-operation and Development (OECD) economies and in major emerging economies since prior to the GFC and there has since been little sign of resurgent growth (Figure 4) (OECD, 2012; Autor et al., 2017); (iii) there has been a lack of private investment returns as well as a declining rate of private investment growth in the advanced economies since the 2000s; (iv) there is a declining trend in global bond yields for all maturities and low real interest rates (Figure 5); (v) there is weak inflation or near-deflation despite significant monetary easing. These trends are inter-related. Slower rates of growth in private investment demand results in lower real interest rates, and they slow the uptake of embodied technology and hence the growth of TFP. The decline in the TFP growth rate, in turn, slows down economic growth and the growth in inflation.

Summers (2013, 2014, 2016) argued that the combination of these trends suggest a revival of “secular stagnation,” a long-term economic slump in the global economy. Summers went on to argue that it may have become all but impossible to boost growth by using the conventional tools of lowering interest rates to encourage more investment.
and consumer spending. The answer, he argued, was for governments to spend more instead.

Figure 4. Total Factor Productivity, Selected Economies, 1970–2017

Source: Penn World Tables, international comparisons of production, income and prices, version 9.1.
Notes: TFP is the portion of output change not explained by the quantities of inputs used in production and is reported at constant national prices (2011=1). We have normalized the data to set TFP in 1970 at unity.

Figure 5. Real Equilibrium Interest Rates, 1972Q1–2020Q1

Source: Holston et al. (2017) and New York Fed. This figure is based on updated estimates of the model described in Holston et al. (2017).
The pandemic may cause the pattern of “secular stagnation” to deepen, and the longer the pandemic lasts, the more severe the pattern may become. During the pandemic, uncertainty has risen and consumer and business confidence has dropped significantly. Businesses and individuals have become more risk-averse and have tightened their belts to save more during and after the pandemic. This could persistently weaken private consumption and dampen private investment, reducing aggregate demand. This could result in a downward spiral that is hard to stop using conventional policy instruments such as monetary and fiscal methods.

2. Income and Wealth Inequality May Rise
Globally, income inequality between countries has decreased over the past three decades in relative terms as income levels in several developing economies have caught up with those in developed economies, whereas income inequality within countries has shown considerable heterogeneity. Most prominently, in the advanced economies there has been a trend for new income and wealth to be generated entirely by high-level professional and capital-owning households (Piketty, 2014) (Figure 6). Furthermore, current data also suggest that global wealth inequality is substantially wider than income inequality (UNCTAD, 2018).

Figure 6. Gini Coefficients in Selected Economies (1978–Latest Year Available for Each Economy)
Due to the shutdown in economic activity by governments to contain the spread of the COVID-19 virus, growth slowdown has hit many economies hard. Governments in developing countries are often more constrained in their fiscal capacity because of the weak taxation revenue base and high level of public debt, and therefore may have less ammunition to combat the economic downturn than governments in developed economies. Data from the IMF Policy Tracker (IMF, 2020) suggest that poorer countries will have an urgent need for international help, as most richer countries already have robust efforts in place. Of the nations with a fiscal plan in place and GDP per capita of US$10,000 or more, 45 out of 55 have fiscal spending plans of 1 percent of GDP or more including grants and loans; of the countries with GDP per capita lower than US$1,000, only 29 out of 69 of them have fiscal spending plans of 1 percent of GDP or more. This gap between rich countries (along with a few emerging markets) and the rest of the world in their resilience to crises is therefore wide.

If developing economies experience greater contraction in economic activity than their developed counterparts, we may see a reversal in the decline in between-country inequality. We may also be likely to see a rise in within-country inequality as the economic conditions of low-income households tend to be most negatively affected during an economic downturn. The two impacts combined may cause inequality to rise both within and between countries. We may see more rapid development in automation and digitization of production tasks due to the need to adapt to new work modes under the pandemic. Social distancing requires production activities to rely less on workers gathering in facilities or offices and more on Internet-based remote work. This could cause automation, digital and Internet technologies to replace certain types of labor more rapidly. As repetitive and routine work tends to be more easily replaced and is often performed by low-income earners, further replacement of these roles by new technologies could cause income inequality to rise further.
The rise in income and wealth inequality within countries has resulted in discontent and a lack of belief in the promised benefits of globalization, and a rise in nationalism in some advanced economies. Furthermore, rising income and wealth inequalities will further increase excess saving, reduce long-term real interest rates and aggregate demand, thereby deepening the secular stagnation pattern.

3. Global Trade and Investment May Contract

The information and communication technology shock of the 1990s led to a rapid expansion in global supply chains, with an increasing number of parts and components being imported, especially by emerging economies for processing and re-export (Baldwin, 2011). The resulting increases in the back-and-forth trade in components led to measured trade racing ahead of national income. This transition to a world where production was increasingly internationally fragmented in the long 1990s is compatible with the higher long-run trade elasticity for that period. Since before the GFC, however, world trade growth has been losing momentum relative to world GDP growth. The decline in the long-term responsiveness of trade with respect to income in the 2000s may well be a sign that the technology shock of the 1990s has been absorbed and that the process of international production fragmentation has slowed down (Constantinescu et al., 2015).

Constantinescu et al. (2015) found that the global trade slowdown is structural rather than cyclical. They estimated the relationship between trade and income in the past four decades and revealed that long-term trade elasticity rose sharply in the 1990s, but declined significantly in the 2000s, even before the GFC. These results suggest that trade is growing slowly, not only because of slow GDP growth, but also because of a structural change in the trade-GDP relationship in recent years. They further found that a key driver of structural change over the 2000s was the slowing pace of international vertical specialization, which accounts for between one-quarter and one-half of the decline in import growth from the 1990s to the 2000s.

Another factor that is unfavourable for global trade is the on-going US–China trade conflict since March 2018. This conflict adds to the policy uncertainty in international trade markets and further damps trade activities. In times of heightened economic uncertainty, firms cut foreign orders more strongly than domestic ones because inventory costs are higher for foreign inputs, leading to trade contraction (Novy and Taylor, 2014), and trade policy uncertainty limits firms’ entry into export markets due to sunk export costs associated with firms’ entry and trade decisions (Handley and Limão, 2015).
After the outbreak of COVID-19, there has been a reflection on the trade-off between the efficiency and the resilience of the global value chains (GVCs) (Galston, 2020). A debate has been started to evaluate whether GVCs are the best way to structure global trade in the future (Goldberg, 2020). For example, Alfaro and Faia (2020) argued that the prevailing economic paradigm behind GVCs suggests that firms should outsource to the countries with the lowest overall costs and firms could potentially source particular intermediate inputs from only one country. Outsourcing, the fragmentation of production and lengthening of value chains, has allowed for a finer division of labor and greater gains from specialization across countries. Just-in-time management practices also dictate holding minimal inventories to improve profits. These outcomes are efficient assuming sourcing from a particular country involves minimum risk as compared with sourcing from many countries. There is, however, a growing list of events that are overlooked by risk managers, ranging from natural disasters, to geopolitical, technological, contractual, or demand factors.

In these circumstances, a specialized GVC represents a “trade fragility” and that the paradigm behind the GVC needs to be re-assessed. It is argued that production networks will therefore become more diversified, rather than clustered. The network should also rely on trusted nodes. In contrast, Goldberg (2020) argued that trade source diversification, while reducing production efficiency, will not help much in reducing risk under events such as a pandemic, because competition for goods is no less at local level (between states, cities and even hospitals) than between countries. Goldberg (2020) therefore argued that restructuring the GVC to diversify trade sources is not the solution to security and, instead, building global resilience is the key.

Economists have various projections on China’s engagement in GVC post COVID-19. Some argue that China will continue to be an important player in it because the division of labor across borders has already been formed around the world, and the cost to change this division of labor is very large. As this pandemic crisis is global, there would still be a risk in whichever country a firm places its production facilities. As China is the first country to emerge from the pandemic and China’s manufacturing industry is the first to recover and resume work after the outbreak, China’s position with regard to GVCs may even strengthen. Others argue that GVCs are going to be transferred out of China on a large scale due to the tariff increase under the US–China trade conflict and the impetus to diversify trade activities away from China after COVID-19. Menon (2020) estimated that, for total manufacturing, the domestic value added in China of Chinese exports to the US is 15 percent. Transferring these activities out of China to avoid increased tariff makes sense as long as competitor locations can
carry them out at less than 170 percent of the costs.¹

The double whammy of US tariff hikes and the diversification motive after COVID-19 may therefore cause production activities to move out of China.

4. Rising Debt and the Inability of Monetary Policy to Stimulate Growth May Cause Financial Fragility

Prior to the outbreak of COVID-19, there was a growing wave of global debt since the GFC (Kose et al., 2020). Waves of debt accumulation have been a recurrent feature of the global economy over the past 50 years. In emerging and developing countries, there have been four major debt waves since 1970. The first three waves ended in financial crises—the Latin American debt crisis of the 1980s, the Asia financial crisis of the late 1990s, and the GFC of 2007–2009. A fourth wave of debt began in 2010 and total debt reached US$55 trillion in 2018, making it the largest, broadest and fastest growing of the four. Between 2010 and 2018, total debt climbed to an all-time high of roughly 170 percent of GDP, a 54 percentage point increase since 2010 and the fastest gain since at least 1970. The debt increase has been very rapid in China (equivalent to more than US$20 trillion) and was particularly acute in emerging and developing countries after the GFC. The rest of the increase was broad based—involving government as well as private debt—and observable in almost every region of the world (Figure 7).

While debt financing can help to meet urgent development needs, such as basic infrastructure, much of the current debt wave is taking riskier forms. There are concerns that governments are not as effective as they need to be in investing the loans in physical and human capital. In fact, in many developing countries, public investment has been falling even as debt burdens have been increasing. In comparison with conditions prior to the 2007–2009 crisis, many emerging and developing economies have been growing more slowly, even though debt has been growing faster. Slower growth has meant weaker development outcomes and slower poverty reduction.

¹Menon (2020) found that a 25 percent tariff hike justified such a costly move of relocation production out of China because, first, whenever there is foreign value added or imported inputs, the nominal tariff has to be adjusted by a factor equal to the reciprocal of the domestic content share. To illustrate using an oft-cited example, Low (2013) estimated that only about 10 percent of a US$425 “Made in China” jacket sold in the US actually accrues to China. Unless the cost of moving production out of China was 250 percent ([1/0.1] × 25 percent) more than paying the 25 percent tariff, the shift would therefore make economic sense. This is ten times the margin implied by the nominal tariff rate. The same principle applies to the location of production by US firms exporting to the Chinese market, where they face retaliatory tariffs.
Figure 7. Debt to GDP Ratio of General Government, Nonfinancial Corporate and Household in Selected Economies, 2006–2018

a. General Government Debt

b. Nonfinancial Corporate Debt, Loans and Debt Securities

c. Household Debt, Loans and Debt Securities

Source: IMF Fiscal Monitor Database.
The simultaneous build-ups in public and private debt have historically been associated with financial crises that resulted in particularly prolonged declines in per capita income and investment. Emerging and developing economies are already more vulnerable on a variety of fronts than they were ahead of the last crisis: 75 percent of them now have budget deficits, their foreign currency-denominated corporate debt is significantly higher, and their current account deficits are four times as large as they were in 2007. Under these circumstances, a sudden rise in risk premiums could precipitate a financial crisis, as has happened many times in the past (Mian and Sufi, 2014; Mian et al., 2015; Kose et al., 2020; Wolf, 2020).

To prevent a credit crunch and severe unemployment and to maintain the livelihoods of individuals negatively impacted by the economic shutdown resulting from COVID-19, governments in various nations have adopted both expansionary fiscal and monetary policies to prevent a slew of job losses and bankruptcies (Table 1). These policies are aimed at keeping temporarily closed companies in business, workers on the payroll, and vulnerable households solvent. Those economic measures fall into three categories: support for households; support for business and employment; and support for the financial system. Australia has made the largest and fastest injection of economic support the country has ever seen. An AU$70 billion JobKeeper program covers 70 percent of the median wage and is close to a replacement wage for many working in those sectors most affected, like hospitality and retail. Unemployment benefits have been doubled with the introduction of a temporary coronavirus supplement for jobseekers. This is in addition to temporary cash-flow support to help small and medium-sized businesses keep operating, pay their bills and retain staff. The Reserve Bank of Australia and the Australian Office of Financial Management have made US$105 billion available to support lending to businesses from both bank and non-bank lenders. Government has also partnered with the banks in a US$40 billion small and medium-size enterprise (SME) loan-guarantee scheme.

Denmark announced that it will cover 75 percent of affected companies’ payroll with the condition that they maintain their workforce during the closure. The United Kingdom will cover up to 80 percent of the salary of workers if companies keep them on their payroll. South Korea is providing wage and rent support for small merchants. Emerging markets like Thailand, Indonesia and South Africa are providing direct relief to affected industries and SMEs and are increasing cash support for vulnerable households (IMF, 2020). These measures are like war-time emergency measures and rely on “war finance” (Dell’Ariccia et al., 2020; James, 2020). Consequently, global debt and the associated risks are heightened further. For developing countries with a high share of foreign currency-denoted debt, the flight to safety and the apparent riskiness of developing economies could lead to currency depreciation, debt default and even financial crisis in these developing
economies. The sudden cessation of economic activity will also exacerbate countries’ underlying macroeconomic vulnerabilities. As a result, a continuous growth in debt or external shock could trigger a debt crisis. This would in turn force harsh budget cuts to social spending and other programs, without which countries will fail to prosper.

Table 1. Immediate Fiscal Response Measures to Combat COVID-19 and Current Public Debt to GDP Ratio

| Government/Institution | Fiscal response (US$ billion) | Public debt to GDP ratio (%) | Fiscal response to GDP ratio (%) |
|------------------------|------------------------------|-----------------------------|---------------------------------|
| Germany                | 800                          | 61                          | 20.50                           |
| United Kingdom         | 481                          | 84                          | 16.60                           |
| Spain                  | 219                          | 98                          | 15.60                           |
| Austria                | 196                          | 30                          | 13.70                           |
| Denmark                | 46                           | 28                          | 13.00                           |
| United States          | 2,300                        | 105                         | 11.00                           |
| Australia              | 137                          | 30                          | 11.00                           |
| Canada                 | 57                           | 85                          | 6.00                            |
| China                  | 560                          | 61                          | 4.00                            |
| European Commission    | 480                          | 80                          | 2.60                            |
| Italy                  | 49                           | 137                         | 2.30                            |
| France                 | 49                           | 100                         | 1.80                            |
| Japan                  | 4                            | 237                         | 0.10                            |
| IMF                    | 1,000                        | NA                          | NA                              |

Source: Authors’ construction based on data from IMF Policy Tracker and latest information published by national governments.

Notes: This table presents the “immediate fiscal response measures” adopted by countries in response to COVID-19, which include additional government expenditures on medical resources, hiring of personnel, subsidies to SMEs, public investment and cancellation of certain taxes and social security tax. These measures will immediately lead to the deterioration of the government budget, and there will be no direct compensation in the future. Table 1 in general does not include other “deferred measures,” such as allowing businesses and individuals to postpone tax payment. If other delaying measures are considered, the scale of fiscal policy stimulus will be greater.

The mammoth scale of central government intervention casts a long shadow over the debt burden and raises questions about how to share the burden of its repayment in the future. One possible scenario is that the burden will be passed disproportionately to future generations, which will spark debate over inter-generational fairness. Another solution will be to monetize the debt, that is to allow central banks to buy up large amounts of new government debt, which may indirectly set off inflationary pressures. In the longer run, additional inflation of this kind can also serve to shrink the debt burden. A third possibility is to address the challenge through increase in taxation. The fourth way is to enhance productivity growth and boost growth to expand the tax base. It is well known that national debt is sustainable when the real interest rate is lower than economic growth. The current real interest rate on debt is low (Figure 8). Although it is predicted
that the global economy will continue to experience low real interest rates for a long time, one cannot rule out the possibility that real interest rates will eventually rise in the future, thus increasing the repayment burden. To make the debt sustainable and affordable, maintaining productivity growth, which drives economic growth in the long run, would therefore be increasingly important for all economies.

Figure 8. Government Bond Yields, 1990–2020

Sources: Australian rate, from the RBA (rba.gov.au/statistics); European rate, from European Central Bank (sdw.ecb.europa.eu); Japanese rate, from Federal Reserve Economic Data, St. Louis Fed.; US rate, from Federal Reserve Economic Data, St. Louis Fed.
In terms of monetary policies, central banks have acted quickly and forcefully in responding to the pandemic, and the boundaries between fiscal and monetary policies have become blurred as debt may become monetized. The US Federal Reserve was among the first to act, cutting rates to near zero, by 150 basis points in one early-March move, and rapidly escalating purchases of government securities, mortgage paper and other assets, with no upper limit. The European Central Bank (ECB) was initially cautious but added €1 trillion (US$926 billion) in credit facilities. The People’s Bank of China (PBOC) expanded re-lending and re-discounting facilities by RMB1.8 trillion (US$256 billion) and lowered bank reserve requirements to facilitate greater lending to businesses. The Bank of Japan (BOJ) delivered a three-part rescue package that committed to purchase Japanese government bonds (JGB) without limit, triple the amount of corporate bond and commercial paper purchases, and fund commercial bank lending to SMEs (Sheng, 2020). Unconventional monetary policies (UMP) started from the GFC as a tool to expand central bank balance sheets by direct funding of government, corporate and bank debts. By the end of 2018, global central bank assets were US$30 trillion (Sheng, 2020) (Figure 9). As central banks ramp up buying all types of assets including funding SMEs, they may have implicitly become the largest underwriter of credit risk, which could cause significant moral hazard built into investor expectations. Unconventional monetary policy is only a temporary measure to ease the pain of the crisis and does not address the uncomfortable but necessary structural adjustments needed to jolt the economy out of the unsustainable pattern of high debt, high underemployment, low productivity growth, low investment returns, and slow income growth.

Figure 9. Unconventional Monetary Policies Comparison: Index of Total Assets Held by the FED, BOJ, BOE and ECB, December 2003–April 2020

Source: Authors’ construction based on data from the FRED Database.
Notes: FED, Federal Reserve Bank of the US; BOJ, Bank of Japan; BOE, Bank of England; ECB, European Central Bank.
III. What Is Required to Emerge Strongly from the Crisis?

A crisis can create a window for making reforms and can set in motion institutional and policy changes that would have been hard to push through in normal circumstances. There is a possibility to make the best of the worst. The global economy has been in weak state and several fundamental problems have persisted after the GFC. The current crisis may be an opportunity to gather society-wide support, political will and courage to overcome political obstacles and address these problems to drive long-term growth. Here we discuss a few opportunities that arise from the pandemic and propose three key reforms for future growth.

First, we argue that structural reforms that aim at boosting economic dynamism and the business environment is fundamentally important. Fiscal and monetary measures have already been deployed to combat the economic downturn even before the pandemic hit; however, with the heavy debt burden and the inability of UMP to boost investment, structural reforms are required to sustain economic growth in the long run. The backdrop to the COVID-19 shock was a decade-long weakness in business capital expenditure in OECD economies, seemingly due to low expectations of future income growth and over-reliance on unorthodox central bank stimuli such as UMP. This caused a vicious downward cycle, exacerbated by the fact that such stimulus measures allowed inefficient or even insolvent firms to continue to operate, worsening resource allocation problems in the economy. Low business expenditure reduced trend growth, which further lowered investment. Therefore, for countries that have excessive regulations, subsidies, licensing regimes, trade protection or other obstacles, it is important to implement structural reforms to help shorten the time to recovery and create confidence that the recovery can be strong and sustained.

After reviewing structural reforms that are under consideration in various economies, we find that they could point to various issues to be addressed and directions for reform (such as taxation, financial and banking systems, infrastructure, education and training, federal-state relations, industrial relations and labor market flexibility, energy supply and cost, competition, and regulations and government bureaucracy more generally, i.e. cutting red tape), depending on which are the most severe growth constraints faced by different economies. Despite the differences in different countries, we could see that the structural reforms across economies share one common theme, that is, to boost economic dynamism, and to unleash the force of “creative destruction” as an economic and job creation engine. In Australia, after the outbreak of COVID-19, Prime Minister Scott Morrison made it clear that the government plans to make reforms to support the eventual economic recovery. He was quoted as saying that his team
were “looking at all options with fresh eyes” after the Reserve Bank of Australia’s governor, Philip Lowe, urged policymakers to seek inspiration to boost productivity. In India, Prime Minister Narendra Modi emphasized the need for new structural reforms and expedite work on infrastructure projects to revive the economy reeling under the impact of the coronavirus-induced lockdown. He stressed the need to strengthen major structural reforms undertaken in the past and new structural reforms in the areas of corporate governance, credit markets and infrastructure (PTI, 2020).

The supply-side reform in China is an excellent example of a structural reform that aims to enhance resource allocation and economic dynamism. The State Council of China explains that supply-side structural reform aims to support economic growth through productivity improvements and tax reduction. In recent years, when trying to revive confidence and boost business activity, Chinese stimulus measures did not rush to inject fresh liquidity into the economy. Instead, structural reform measures such as deleveraging, credit loosening and tax cuts were made, mainly targeting the private sector. Private business accounts for more than 80 percent of China’s urban employment and over 60 percent of the country’s GDP. Good implementation of supply-side reform could therefore release huge pent-up demand in this particularly important sector of the economy (State Council of People’s Republic of China, 2019). In April 2020, after the outbreak of the COVID-19 and its severe blow to the Chinese economy, the Chinese government emphasized the importance of improving resource allocation through market means for five factors: land, labor, capital, technology and data. Guaranteeing equal access to factors of production by different market players and promoting factor allocation in accordance with market rules, market prices and market competition can help maximize efficiency and enhance economic vitality and innovation (People’s Daily, 2020). In the recently concluded National People’s Congress (NPC) and the Chinese People’s Political Consultative Conference (CPCC), the importance of implementing the above reforms was emphasized.

Another major reason why structural reforms are essential is that the huge fiscal rescue packages meant to prevent firms from liquidity and solvency crisis may cause the emergence of more zombie firms if governments failed to withdraw the economic support in time. Zombie firms are insolvent firms that continued to receive bank lending with banks hoping that the borrower might be bailed out by the government in the event of severe repayment difficulties, thereby contributing to the softening of budget constraints on enterprises (Berglöf and Roland, 1995). Zombie firms may divert scarce economic resources away from more productive firms. While the rise of zombie firms has been happening for a while across major economies (McGowan et al., 2018), the fiscal expansion in reviving the economy during the COVID-19 is very likely to worsen...
the situation. Furthermore, it is the largest and strongest firms that are most likely to survive the crisis, and post COVID-19, we may be faced with a market structure that hosts large firms with strong market power.

To be able to exit from the fiscal rescue policy in an orderly way and to minimize the moral hazard risk that inefficient firms rely on government subsidy to survive and to prevent large firms from thwarting competition, structural reforms that lower entry and exit barriers and level the playing field for competition are crucial. It is important to improve the mix of taxes and spending along with other market structures in a way that enhances competition and/or productivity. These initiatives will shore up private capital expenditure and help the economy rebound and recover with vigor.

Second, we argue that continued investment in research and development (R&D) activities for new technologies will be crucial to increase productivity and better meet future public health or climate change challenges. Innovation and technological breakthrough have the potential to significantly boost productivity through creative destruction and resource reallocation towards more efficient industries and firms. The subsequent productivity growth would be the key to sustain long-term global growth and raise living standards for humankind. Sustaining R&D investment and exploring ways to use R&D resources effectively is particularly important because there is evidence to suggest that innovation has recently become harder. The flip side of this observation is that to sustain innovation and productivity growth, more R&D investment will be required. Bloom et al. (2020) found that research productivity is falling sharply. Taking the US aggregate number as representative, research productivity halves every 13 years: new ideas are becoming harder to find. Just to sustain constant growth in GDP per person, the US must double the amount of research effort every 13 years to offset the increased difficulty of finding new ideas. This pattern is observed in medical research as well. There is evidence that antimicrobial resistance has been rising (Ventola, 2015). Evidence from the US suggests that biomedical research spending has been rising in the three decades, and yet major drug and biological product submissions to the US Food and Drug Administration has been falling.

The Chinese government is taking advantage of this crisis to boost its innovative activities. In March 2020, the Standing Committee of the Political Bureau of the Communist Party of China Central Committee called for accelerated “new infrastructure” projects in seven areas. They include 5G, ultra-high-voltage power facilities, inter-city transport, vehicle charging stations, big data centers, artificial intelligence and the industrial Internet. The “new infrastructure” refers to new public facilities that serve the needs of new industrialization, as opposed to traditional infrastructure construction such as railways, roads and airports. In the first quarter of
2020, fixed asset investment dropped –16.1 percent year on year and the decline was 24.5 percent in January/February. In China, government-led investment in conventional infrastructure has declined for years and investment in new infrastructure has the potential to bring in private investment and boost economic growth in the long term.

Third, we argue that global economic cooperation and integration are fundamentally important for fighting the virus and reviving the global economy, despite the recent setback in globalization. This requires, foremost, that the world community should find ways of enhancing “trust” that are not just built on good will but also on the recognition that we are facing common threats such as the virus and diseases, and common challenges such as the environment and climate change, poverty reduction and the need to achieve equality. To do so, society as a whole should create a new “global social contract,” initiated and instituted through the United Nations framework. This global social contract could be built upon the recent call to establish a social contract between the rich and the poor, the old and the young, and between today and tomorrow within a nation, to address social tension and to enable states to adapt to new situations (Köhler, 2016; IPSP, 2018; Bussolo et al., 2019). The global social contract is aimed at building trust between different countries and economies, and so it is different from the focus of Bussolo et al. (2019) and IPSP (2018) which is about social contracts within countries. This new global social contract will enhance trust and mutual respect between people and nations and serve as a foundation for future global cooperation to face global challenges to society because such a contract transcends differences in ideologies, geopolitical considerations and narrow definition of “national interests.” This new global social contract will enable countries to re-engage in and more effectively reform multilateral cooperation and frameworks that are of long-term benefit to society, including global prosperity and stability, disarmament, climate change and sustainable development. The spirit of this global social contract can be seen in China’s President Xi Jinping’s call for “a community with shared future for mankind” (Xinhua News, 2020).

As COVID-19 spreads, the geopolitical tension between China and the US has intensified. Mutual accusations about responsibility for the pandemic and tit-for-tat media expulsions have brought relations to a dangerous low. China is offering its resources and experience in handling the virus to build relationships with other countries. In contrast, the US is as yet absent from any international leadership (Gyngell, 2020). The tension is a continuation of the US–China trade conflict, which started in March 2018. The phase-one trade deal was reached on 15 January 2020, but uncertainties remain as to how both countries will implement the agreement given the pandemic crisis. Multilateral institutions have also become weak. From climate change and pandemics to the world trading system, some of the most important rules-
based systems and technical organizations such as the WHO have become caught up in the China–US geopolitical tension. The G20 has also proved itself unable to mount an effective response to the pandemic. Another development is that the shock to the global supply chains seems to have led to more calls for greater self-sufficiency and less reliance on global value chains in various countries. It is perhaps fair to say that COVID-19 has done more to close borders, reverse globalization, decouple supply chains and marginalize multilateral institutions than the most fervent efforts of the world’s populist nationalists. As COVID-19 is a global pandemic and requires global action, if all countries including the US and China collaborate in the fight by avoiding duplication of research and sharing research tasks in the effort to find a vaccine, the world community may be able to find the vaccine faster, which would benefit all the people of the world.

How could we overcome these tensions and identify common ground to achieve the collaboration and agreement that is strongly needed to combat a pandemic attacks all human beings alike? To identify the solution, we should recognize that the established democracies are being destabilized by populism and extremism, because the lower middle class is reeling from relative decline in income when faced with technological change and globalization, and expresses its frustration (Bussolo and Fleurbaey, 2019). There are socio-economic underpinnings to the recent unrest, especially the changing nature of inequality, the ineffectiveness of the current redistribution policies, and the sense of exclusion and marginalization perceived by some. The answer to these struggles does not lie in curbing globalized economic activities or rejecting technological innovation, because these are the sources of the long-term growth that ultimately determines people’s living standards. Instead, what is needed is an adaptation of key institutions to the new challenges. By focusing on distributional tensions between groups and persistently low social mobility, a clearer view of the deep economic transformations emerges.

Bussolo et al. (2019) proposed a set of three principles: (i) move toward equal protection of all workers, no matter what their type of employment, while promoting labor markets’ flexibility; (ii) seek universality in the provision of social assistance, social insurance and basic quality services; and (iii) support progressivity in a broad tax base that complements labor income taxation with the taxation of capital. These three suggestions are for creating a social contract within a nation. When we expand the social contract to the global level, the issues and tensions will be more complex and will clearly require more dimensions and considerations to be taken into account. We think this will be an area worth more creative thinking and more in-depth and original work.
IV. Conclusion

The global economic contraction starting from the first quarter in 2020 (and after) may well be described as history’s first deliberate “lockdown recession.” The widespread lockdowns to prevent the spread of the virus, especially in the major economies of the world, halted economic activity ranging from transport, trade and manufacturing to services, leading to a substantial contraction in economic activity and rising unemployment. The policy measures used to deal with the crisis are those commonly used in economic downturns or recessions, including injecting liquidity into the economies through low interest rates and quantitative easing to minimize the risk of financial system breakdown, giving money to people in time of financial distress, and providing tax reductions for businesses and households, etc. However, unlike other economic and financial crises, there was a requirement that the spread of the virus be contained first, and a key lesson can be learned from the Chinese experience, which shows that economic recovery has been based on the successful containment of the virus.2

We argue in this paper that there are three other more fundamental factors that need to be considered to achieve a solid and strong recovery in the post-pandemic era: the role of new technology, structural reform and re-integration. New technology, structural reform and re-globalization (integration), to enable the global economy to recover or re-emerge from this pandemic crisis, need to be supported by strong public polices at all levels, especially at national levels. This is so not just in the phase of recovery from this crisis, but, rather, it should persist throughout the post-pandemic era. The rising income inequality and nationalism in many parts of the world recently reflect the fact that, despite rapid global economic growth which brought prosperity to many countries in recent decades, public policies, especially with regard to income inequality and health care, are unquestionably inadequate.

Emphasizing the role of public policy is not simply the adoption of government actions aimed at giving money away, or taxing the rich and helping the poor, but it is part of the implementation of a new global social contract that enables all countries involved to recognize the common interests and challenges of humanity such as development, poverty reduction, climate change and the welfare of future generations, and follow the principles of fair competition and the respect for the interests of others. The COVID-19 pandemic, the once-in-a-century event, is providing us with an opportunity to think more deeply about our future and to act more wisely in making choices moving forward.

2A challenge for China is to prevent the ‘second wave’ of the virus from occurring.
The best hope for the global economy and thereby the welfare of the people in the post-pandemic era is for countries not to pull further apart through the forces of disintegration and isolation, but to come together even more closely through the positive forces of cooperation and integration.

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