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THE GLOBAL ECONOMIC CRISIS: IMPLICATIONS AND PROSPECTS

Report

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EXECUTIVE SUMMARY

The longer-term consequences of the COVID-19 pandemic for the global economy are coming into focus. The pandemic is now recognised as having constituted the largest synchronised fall in global GDP in modern history, although its impact was quickly mitigated by governments which were guided by lessons learned from the global financial crisis in 2009. This time, governments have far more swiftly introduced stimulus programmes to counter recessionary forces. The European Union, for instance, facilitated joint debt issuance and created conditions for a powerful fiscal response to the crisis. The United States acted with very large spending packages to sustain demand and maintain income and employment. Massive government spending, however, has generated extraordinary levels of public debt. There are concerns that this could eventually trigger inflation. Prices have indeed begun to rise and interest rates may eventually follow—a trend that would have important negative consequences particularly for highly leveraged developing countries. Moreover, it is not yet clear how this mass of debt will ultimately be financed. This will remain a compelling challenge for hard-pressed governments over the medium and longer-term.

There is clearly an element of systemic competition that has emerged during the current crisis, and this competition has an important strategic dimension. Several authoritarian actors have instrumentalised the pandemic partly to discredit democratic governance. China, for example, has incorporated the fight against COVID-19 into a broader national narrative of its “peaceful rise” and systemic superiority. It has sought diplomatic and public relations leverage from its contributions to the global fight against COVID-19. Countries that managed to contain the disease have also kept their economies more or less functioning, and this has invariably conferred a degree of strategic advantage. Meanwhile, the capacity to vaccinate populations quickly and to help other countries vaccinate has become a kind of diplomatic currency. Those leaders who have discounted the virus altogether have invariably learned that the disease does not follow political diktats.

The world appears slated to return to growth in 2021 albeit on a lower trajectory than was envisioned before the crisis. But there are several potential downside risks that might lead the global economy to underperform. These include: ongoing bottlenecks to global vaccination production and distribution, public anti-vaccination sentiments, the emergence of drug resistant strains of the COVID-19 virus and renewed infection surges. Debt defaults precipitated by rising interest rates could precipitate a financial market panic, which could spread rapidly given the huge debt burdens governments have assumed. Economies impaired by the recession have had to cope with shrinking tax bases and new borrowing requirements. On the upside, a ramping up of vaccination schedules could hasten the onset of so-called herd immunity, rapidly restore investor and consumer confidence, unleash pent-up demand, and thereby hasten a demand-led recovery. But developing countries require access to vaccines or this optimistic outlook will be undermined. The persistence of low interest rates and low inflation could lengthen the period in which governments are positioned to provide essential monetary and fiscal support to national economies as the green shoots of recovery take root. But there are now signs that a benign period of low interest borrowing may end sooner than was initially hoped.

I. INTRODUCTION

1. 2020 was a disastrous year for the global economy. A pandemic struck all corners of the world, triggering a swift and synchronised global economic shutdown affecting almost all commercial sectors. This precipitated one of the most significant and swiftest global economic declines ever registered (Hassler, 2021). But the situation could have been much worse had governments not responded with alacrity to the economic crisis.

2. Authorities throughout the world have had to cope with extraordinary medical challenges, provide support to vulnerable populations, fight the recessionary impacts of the crisis, and lay the groundwork for eventual recovery. This has proven to be an extreme challenge to state capacity. Government policymakers have effectively been compelled to make a great leap into the dark, although the lessons of the 2009 financial crisis have loomed large and informed policymaking. Drawing from that difficult experience, OECD governments bet that only massive infusions of government capital could sustain national economies until vaccines were developed and distributed to millions of people. So far, it seems as if this bet was a good one, even if the global vaccination effort has only just begun.

3. There are still compelling uncertainties at play. Rolling out comprehensive vaccination initiatives across the world is proving to be a massive and highly fraught undertaking. New variants of COVID-19 are emerging and complicating preventive responses. As long as a critical mass of vaccinations have not been delivered, the virus is very likely to continue mutating, and this will infuse the recovery with a degree of uncertainty and risk and could undermine it. The financial and logistical barriers to carrying out global inoculation programmes are proving more daunting than originally imagined. In an age in which disinformation and conspiracy theories are often given as much weight as objective facts, in part, because of dynamics of the internet and those willing to exploit medical misinformation for political and economic advantage, sustained and informed public information campaigns have been essential. But some governments have only conducted these half-heartedly or, even worse, flirted with demagogic anti-science. Overtly nationalist policies have also hindered international cooperation at critical junctures, and a serious problem of global equity in terms of vaccine access has clearly emerged.

4. But there have been success stories amidst the tragedy. Defying all predictions, authorities approved several revolutionary vaccines less than a year after the initial outbreak and then moved to mass inoculation programmes. These vaccines have cut a pathway out of this crisis. The April IMF Global Economic Outlook accordingly forecasts a stronger recovery in 2021 and 2022 compared to its previous forecast, with growth now projected to hit 6% in 2021 and 4.4% in 2022 (IMF, 2021). But the global economy has also suffered permanent damages or scarring, and many economies have been knocked off the growth paths along which they were moving prior to the crisis. Still, swift government action meant that the level of scarring was much lower than it had been in 2008 (Hassler, 2021).

5. The crisis has nonetheless dealt a harsh blow to commercial life. Firms must bear a range of daunting adjustment costs with adverse productivity impacts. Weakened education systems and school closures have undermined human capital formation, and this will undercut productivity over the longer term. Reduced funding for basic research has impaired scientific development with adverse implications for innovation (IMF, 2020). Again, this scarring phenomenon would have been worse had governments not responded with massive counter cyclical spending programmes. Still, some of the damage is permanent and millions are now at risk of never regaining lost jobs or the income levels that they once enjoyed (IMF, 2021). This poses compelling economic, social, and educational policy challenges to governments and parliaments.

6. The crisis has placed the greatest burdens on those living in poverty, the working class, and less skilled workers who have suffered the highest levels of job loss. Women, young people, and ethnic minorities have also suffered inordinately. The IMF estimated in January 2021 that globally roughly 90 million people will fall into extreme poverty in 2020-2021, rendering the achievement of the millennium development goals even more elusive (IMF, 2021). The pandemic's disproportionately adverse impact on a range of vulnerable groups has posed serious social, public health and economic challenges. For example, those working in the hospitality and tourism, delivery, retail, and basic care sectors have disproportionately lost work or faced exposure to illness. Because social distancing can be very difficult for those conducting this kind of work, these workers have been particularly vulnerable either to lockdown induced job loss (when judged non-essential) or to on-the-job contagion (when essential). One UK labour market study suggested that borrowing requirements have increased substantially for those who had been hardest hit in the labour market, including the lowest income quintiles and minority ethnic groups (Crossley et. al, 2021). According to recent IMF analysis, women and the young have been hit particularly hard because they are overrepresented in many of these sectors (IMF, 2020). By contrast, many of those working in knowledge-intensive sectors have rather seamlessly transitioned to remote work.

II. FISCAL AND MONETARY POLICY RESPONSES AND CONCERNS ABOUT DEBT AND INFLATION

7. It is striking how quickly and decisively governments responded to the shock of the pandemic. The rapid response was shaped by lessons learned from the initial failure to respond adequately to the financial shocks that originated on Wall Street in 2008-2009. At that time, many governments and Central Banks did not immediately appreciate the degree to which shocks on this scale would fundamentally alter the normal workings of national economies and cause permanent damage. This miscalculation made that crisis deeper and longer than it should have been. The lesson learned in 2009 was that when the world economy falls into deep recession, normal assumptions about government economic policymaking are no longer operative. Massive government intervention becomes essential as markets seize up and fail to function in conventional ways.

8. In retrospect, Europe confronted increasingly apparent structural difficulties which challenged its capacity to respond quickly to the crisis. A significant part of the problem lay both with the natural fragmentation precipitated by different national responses and policies, the limited powers of the European Union, particularly on the fiscal front, and a strong anti-inflationary bias in European policy making that induced what might be called intervention hesitation. While many EU member countries were integrated in the European single currency system, fiscal policy remained largely outside the purview of European institutions. The European Central Bank (ECB) was unable to issue debt, and there was strong reluctance among member states to move in that direction. The crisis also suggested that the Euro area did not perfectly conform to Robert Mundell's notion of an optimum currency area, given divergences in productivity and natural inflation rates (Eichengreen, 2014).

9. Indeed, many economists argued that a European single currency could not remain viable if a greater level of fiscal integration were not first achieved. Without the capacity to engage in continent-wide countercyclical spending and transfer payments, there was a real risk that significant shocks could bring the entire edifice crashing down. This almost happened during the 2009 crisis as several member states experienced financial collapse while European governments debated the implications of fiscal union and felt legally hampered from engaging in a rapid fiscal response to the crisis. As an integrated fiscal and monetary union, the United States never had to confront this particular dilemma, and its system of stabilisers and transfers kicked in to help battle the worst impacts of the financial crisis. This is interesting because on balance, the United States

has a less developed welfare system than does Europe. But it compensated for this deficiency, through a high level of market integration, constitutionally constructed fiscal union and in the case of the current crisis, massive emergency spending to prop up demand and employment.

10. Washington quickly pumped liquidity roughly equal to 13% of GDP into the U.S. economy. A significant share of this went to suddenly illiquid low-income households with a relatively high propensity to spend—disbursements that had a relatively powerful multiplier effect. While U.S. GDP fell by roughly 9%, government transfer payments rose by 10% through unemployment benefits, social security payments and a range of special support programmes for distressed companies. Unemployment benefits were also topped up, although that initial benefits programme ended in July 2020 (Furman, 2021). As intended, these transfer payments provided a vital boost to consumer confidence and demand and thereby added essential stimulus to an economy under shock.

11. The United States has enjoyed a degree of leeway to embark on countercyclical fiscal policy because of its capacity to borrow on global capital markets at relatively low interest rates. A key question today is whether these conditions will hold in the future. In 2009, the U.S. debt stood at 50% of GDP. By the time President Biden took office, that figure had jumped to 100% of GDP. The difference between the situation in 2020 and 2009, however, is that while the interest rates on ten-year bonds in 2009 stood at roughly 2%, by 12 January 2021, they had fallen to a highly advantageous rate of -0.93, which obviously made borrowing extraordinarily cheap (U.S. Department of Treasury). Low U.S. interest rates significantly reduce the cost of public borrowing and thus the expense associated with massive emergency government spending. A key question now is how long these low rates will endure. There are mounting concerns that the era of cheap money is now set to end.

12. The change of Administration in Washington has had myriad policy implications, although the emphasis on deficit spending initiated by the Trump Administration will certainly endure in 2021. The Biden Administration, however, seems poised to deepen multilateral cooperation as a tool for digging out of the current crisis. In the eyes of some analysts, this shift in U.S. policy enhanced the prospect for coordinated fiscal responses to this global crisis. U.S. allies and many of its partners have welcomed U.S. leadership on this front, not simply out of old habits, but also because there is no other country in the world that can play this role. Although China has recovered far more quickly than other major economic players, for countless reasons, it is not seen as a suitable global economic leader ready or willing to fill the shoes long worn by the United States. Indeed, there are mounting concerns about China's predatory policies that are antithetical to the interests of democratic, free-market societies. The hope and expectations so vividly expressed at the June 2021 G7 Summit is that the United States and its allies and partners in Europe and Asia will now seek to orchestrate a coordinated fiscal and monetary response coupled with greater cooperation across a policy spectrum that includes global public health measures, trade, support for developing countries and environmental investment to help put the world economy back on a sustained growth path (Furman, 2021).

13. Although governments around the world are rightly focused on keeping national economies afloat, there are many concerns about how rapidly accruing debt will be managed as the pandemic begins to wane. In Japan, which has nearly twice the debt-to-GDP ratio of the United States, high debt for years did not push up interest rates, and there was a degree of optimism in Europe and the United States that interest rates had been partly delinked from debt levels, at least for the most developed countries. That optimism is now beginning to wane.

14. Some economists, policymakers, and politicians alike now caution against the continued accrual of debt obligations, at least on the scale of the past year. The looming question is when governments should take the foot off the pedal. There are legitimate concerns that acting too hastily in this regard could cause national economies to seize up just as recovery begins. But if

interest rates were to rise, this would have a similar impact and would immediately spill over to leveraged developing countries which would see their debt burdens soar were global interest rates to rise precipitously.

15. But this concern must be balanced against the possibility that overspending could render debt financially unsustainable. There is currently a heated debate among economists about the nature of recent price rises. Some like Paul Krugman have minimised the matter, suggesting that short-term bottlenecks and other transitory factors have driven prices upwards as the pandemic recession began to end. They argue that price rises have only been apparent in a narrow band of goods, but after production ramps up and supply chains are reinvigorated, these prices will be bid down as bottlenecks clear (Krugman, 2021). But there are some economists who now detect more worrying long-term structural forces driving rising prices. The Former U.S. Treasury Secretary and noted economist, Larry Summers, argued in late spring of 2021 that the United States had, for all intents and purposes already emerged from the COVID recession and was on the cusp of its highest rate of growth in decades. Job openings are at record highs, and unemployment will soon fall below 4%. He described this as a vindication of the aggressive fiscal and monetary policies the United States adopted in the face of the pandemic. But he is now concerned about overheating. Summers sees the \$2 trillion-plus in savings that Americans accumulated during lockdown, significant Federal Reserve debt purchases, historically low interest rates, nearly \$3 trillion in fiscal stimulus and inexorably rising stock and real estate prices as drivers of price rises that could soon begin to feed into price expectations. Indeed, he notes that the consumer price index rose at a 7.5% annual rate in the first quarter of 2021, and inflation expectations were rising at the fastest pace in a generation. Summers suggests that U.S. fiscal expansion has gone too far and believes that the Fed now needs to begin to focus on inflation concerns (Summers, 2021). Fed Chair Jerome Powell, in fact, has said that The Federal Reserve expects inflation will climb to 3.4% this year, higher than the central bank's previous forecasts, while also projecting for the first time that there could be two interest rate hikes in 2023 (Siegel and Stein, 2021).

16. Another economist, Glen Hubbard, worries that long-term labour market problems in the United States are being addressed with expansionary fiscal policy which cannot resolve long-term structural problems. He sees problems in U.S. and global supply chains as contributing to the price problem. Delivery delays have contributed to rising prices and added new uncertainties to global commerce (Brooks, 13/5/ 2021). Hubbard suggests that monetary and fiscal policies are not going to solve these structural issues but could trigger more price rises (Tett, 18/5/2021). Along these lines, it is important to note that even China has recently confronted rapidly rising consumer prices as its economy boomed and production bottlenecks emerged—including the recent shutdown of one critical port facility due to a COVID-19 outbreak. Although China is not in a position to pass on inflation through money markets, it can do so through goods markets as it is such a critical exporter (Hale, 2021).

17. Any substantial U.S. interest rate rise would not only slow U.S. recovery, it would have a global impact and if sufficiently dramatic could trigger a debt crisis in more vulnerable, highly leveraged, and thus interest rate sensitive economies. Sustained inflation in a globally consequential economy like the United States would invariably push up bond yields and thus make it ever more expensive for emerging economies like Brazil and South Africa to sell debt. Over the course of the COVID-19 recession, many of the richest countries were paying very low rates to borrow money needed to weather the storm. This was not the case for less developed countries (Wheatley, 2021).

18. The pathway between maintaining demand and avoiding excess and sustained inflation is likely to be narrow and harrowing. Governments will, of course, need to wean economic actors and consumers gradually off emergency government support systems. Indeed, timing is everything. In Europe, the President of the ECB, Christine Lagarde, has warned governments and central banks not to cut stimulus just as the recovery begins. She said that even the spectre of inflation should

not deflect decision makers to maintain spending levels. Lagarde has acknowledged that recovery will, in part, be driven by “expected pent-up demand”, and her concern is that prematurely tightening monetary policy just as this demand begins to express itself could kill the recovery. It is worth noting that in December 2020, the ECB increased the size of its emergency bond-buying programme by €500bn to €1.85tn, (Stiglitz, 2020). Central bankers remain concerned that a price surge could accompany any unleashing of pent-up demand. The challenge will lie in finding a safe moment to begin to ease off the monetary and fiscal accelerators. The ECB now forecast that consumer price inflation in the eurozone will reach 1% this year and 1.4% by 2023, still substantially below the ECB target inflation rate of slightly under 2%.

19. While governments have engaged in massive deficit spending, some households have moved in the opposite direction, in part, because spending opportunities in the midst of lockdown are limited. European household savings, for example, increased substantially during the crisis as demand for many goods and services plummeted once the crisis began and consumers moved to hedge against uncertainty. The savings of those lucky enough to remain active in the labour market have helped societies to mitigate somewhat the fall of aggregate savings due to higher government spending and the dissaving's of those who have lost income and been compelled to draw down their own reserves (Crossley et.al., 2021). Although higher savings rates reduce consumption, they also provide a foundation for longer-term capital formation.

20. Throughout the crisis, rising unemployment and reduced income have slowed consumption, and lockdowns and shuttered businesses like travel and restaurants have clearly also been a factor. Reduced consumption initially asserted downward pressure on prices, which the ECB characterised as temporary. But prices began to rise in the United States as lockdowns ended, demand soared, and supply bottlenecks became evident. After years of very low inflation, the U.S. Federal Reserve suddenly came under pressure to tighten loose monetary policy after data revealed that U.S. consumer prices rose at the highest rate since 2008 in the 12 months to April 2021. So far, the Fed has stuck with its low interest rate policy but there are questions about how long it will hold out. Bottlenecks in labour markets have emerged as growth returns (Financial Times, 2021). This has triggered a discussion in the United States about when income supplements and special unemployment benefits should be lessened or eliminated. Alaska, Iowa, Mississippi, and Missouri unilaterally ended a \$300-a-week benefit programme in June, arguing that these programmes have become a disincentive to work now that the economy is recovering. Other states have decided to continue distributing special COVID unemployment benefits (Gonzalez et.al. 2021).

III. TRADE

21. The last four years have been characterised by a steady erosion of global trade, the rise of new trade barriers and renewed public scepticism about the economic virtues of trade. In 2019, global trade grew slower than GDP. In 2020, global GDP will have likely fallen by 5.2% compared to the previous year, while trade will likely have decreased by 13.4% over the previous year. This decrease is clearly linked to the recessionary impact of the coronavirus pandemic, but rising trade barriers have only made matters worse (Statista, 2020).

22. The public discussion about trade and its contribution to growth and well-being had also taken a turn for the worse in many countries in recent years. Patently false notions that trade deficits can be corrected through the imposition of tariffs and quotas have gained political traction. Economists know that trade deficits essentially operate in an inverse relationship with national savings. If a country pursues policies that reduce national savings, this will generally be reflected in rising ratio of imports to exports. Tariff policy will have only a marginal impact on a country's trade position unless, of course, a country opts for pure autarchy and essentially shuts down trade, which, if perfectly executed, would lead to a perfectly balanced trade account—zero exports and

zero imports. But in the real world, governments that oversee rising budget deficits, for example, through unfunded tax cuts while reducing their commitment to the multilateral trading system, placing a greater degree of stress on bilateral trade arrangements rather than globalised exchange, and imposing new tariffs and quotas on trading partners, not surprisingly are very likely to experience rising trade deficits (Roberts, 2021). They will also impinge on their growth potential. The challenge now will be to revivify multilateral and regional trading systems in ways that generate global growth and encourage equitable returns. There are signs that G7 governments are now embracing a more liberal approach to trade with important reservations in areas like strategic goods trade. This implies a shared recognition that revitalising trade relations will be a key to long-term economic health.

IV. ECONOMIC CONDITIONS IN THE UNITED STATES

23. The COVID-19 public health and economic crisis has revealed gaps in U.S. resilience that officials will need to address over the coming years. The United States entered the crisis with a deficit to GDP ratio of 5%, a figure that had more than tripled before President Joe Biden began his term of office due to tax cuts and unprecedented emergency spending linked to fighting the COVID recession. Deficits further increased with the massive stimulus package that the Biden Administration introduced (Stiglitz, 2020). The Administration's economics team, led by Treasury Secretary Janet Yellen, came to office arguing that there was little remaining space for monetary policy to bolster the economy due to historic low interest rates. She and others in the Administration prioritised fiscal policy to act as the economic workhorse until a genuine recovery is underway. Low interest and inflation rates simply made fiscal stimulus more affordable.

24. As of January 2021, an estimated four million Americans had been out of work for 6 months or more as compared to 2.1 million Americans in September 2021 (Pymnts.com). Much of this burden fell on women. In December 2020, for example, women accounted for more than 111% of jobs lost that month. In other words, the U.S. economy had shed a net 140,000 jobs according to the U.S. Labour Department, but women lost 156,000 jobs overall, while men gained 16,000 jobs. Between February 2020 and January 2021, women lost a net of 5.4 million jobs, or 55% of the more than 9.8 million U.S. jobs lost since February. Almost 40% of women who were unemployed in December had been jobless for six months or more.

25. The longer the unemployed are out of work, the more likely it is that their wages will be lower once they do return to the labour market (Aspan, 2021). Although the full impact of the crisis had been mitigated by massive intervention through the stimulus package, including in the Cares Act and other measures, many smaller businesses have gone bankrupt or vastly reduced their operations. Critical sectors of the economy, like the commercial property, oil and gas, tourism, hotel, restaurant, airline, travel, and entertainment industries all confronted a grave crisis, and sectoral crises were a primary engine of job loss.

26. The Trump Administration and the U.S. Congress recognised the overwhelming need to inject significant amounts of cash into the economy quickly, including large payments to households in terms of cash grants extended through the ambitious Cares Act, which President Trump signed into law in March 2020. It included an unemployment insurance component to bolster consumer spending at a moment when consumer demand was collapsing. The \$600 weekly benefit was purposefully large and was a central factor in preventing the U.S. economy from spiralling into an even deeper recession. This significant cash injection went to those with a higher propensity to consume, and this, in turn, helped sustain income levels and critically needed consumer demand. A second significant cash injection was passed into law at the end of 2020.

27. The Biden Administration has built its policies on these programmes. On 11 March 2021, President Biden signed a \$1.9 trillion economic stimulus bill, the American Rescue Plan Act of

2021, which aimed to hasten recovery from the COVID-19 pandemic and the recession it had unleashed. Among the many provisions of this massive spending bill were expanded unemployment benefits with a \$300 weekly supplement through 6 September 2021; \$1,400 direct payments to individuals; emergency paid leave for over 100 million Americans; a 15% increase in food stamp benefits; an expanded child tax credit, an earned income tax credit, three tax increases on large corporations and wealthy individuals; grants to small businesses; \$350 billion to help state, local, and tribal governments bridge budget shortfalls and mitigate the fiscal shock; \$130 billion for schools and roughly \$40 billion for colleges and universities; \$21.6 billion for the Rental Assistance Program; \$10 billion for the Homeowner Assistance Fund; \$50 billion to the Federal Emergency Management Agency for vaccine distribution and assistance; \$47.8 billion on COVID-19 testing, mitigation, and transmission prevention; \$30.5 billion in grants to public transit and commuter rail agencies across the country to mitigate decreases in ridership and fare revenue; and an extensive array of support programmes for business (The White House, The American Rescue Plan).

28. Now, as the U.S. economy moves into a recovery phase, policymakers will be increasingly focused on ensuring that there are compelling incentives that make work more attractive than unemployment. Finding the correct balance will be politically and technically challenging, and divergent policies at the state level may eventually yield valuable insights on how best to transition from economic crisis into recovery.

29. As this report has indicated, the crisis has had a significant impact on U.S. labour markets, and there are real concerns about enduring structural unemployment. There will be serious economic, social, and political implications if jobs are not created for younger Americans coming out of this recession. This may require fundamentally new approaches to labour market challenges in the United States including new training and education initiatives to better prepare workers for a rapidly transforming economy. These efforts would aim to assist those who have lost jobs and need to requalify for new ones. Wage insurance programmes might also come into play as these can help older workers who lose jobs but must cover essential costs like mortgage payments, child costs etc. Older workers are less likely to benefit from fundamental retraining programmes, and these insurance schemes can help top up income if new employment options are less well paid than jobs lost due to restructuring. Programmes like these help maintain incentives to work even in labour markets permanently recast by global competition and technological change.

30. The Biden Administration and many in Congress are intent on bolstering infrastructure investments. This is driven both by problems linked to long-term underinvestment in critical infrastructure and the challenge posed by overreliance on strategic rivals like China in some sectors—a condition that private markets alone have failed to solve. It is noteworthy that on 8 June, the U.S. Senate passed an industrial policy bill that would generate very significant funding for investment across a range of critical technological sectors. One goal of the legislation is to provide alternative supply chains to those currently relying on Chinese-manufactured microchips and other critical technologies. The bill can be understood as a legislative response to China's comprehensive industrial policies most recently expressed in the "Made in China 2025" project. Nineteen Republicans and 49 Democrats supported the bill which, if eventually signed into law, could mark a watershed in U.S. government-industrial relations. It is very significant that shared concerns about China helped build the coalition to support this bill. The House of Representatives is now examining several proposals on the same theme (Farley, 2021).

31. Large-scale public or private-public finance investments could indeed help create new jobs, in some instances in transformative emerging sectors, at a time when many jobs in more obsolete industries have permanently vanished as a result of the COVID-19 crisis and swift technological and economic change. Knowledge investment poses another long-term challenge in the United States. The world-renowned U.S. university system, long seen as a critical source of American economic competitiveness, has suffered serious revenue falls during the current crisis. This

potentially poses a long-term challenge to the national economy and to its capacity to generate paradigm altering technological change and other knowledge breakthroughs. Major research institutions of enormous long-term importance to the U.S. economy will likely need significant support to continue to play this essential role in keeping the United States on the leading edge of technology change. These are matters that have consumed the U.S. policymaking community in 2021. Although there are political disagreements over what constitutes critical infrastructure there seems to be broad agreement that a change of direction is needed. At the time of writing, several competing infrastructure funding plans are on offer in the U.S. Senate.

32. U.S. states and local governments are also in a very difficult position as the crisis has deprived them of tax revenue needed to underwrite critical local services including schools, police, public health institutions, support for the most vulnerable and essential infrastructure. Following the 2009 crisis, studies revealed that a fiscal crisis at state and local levels had shaved off .6% of GDP over the ensuing five years (Furman, 2021). Many states confront an unprecedented financial crisis precisely when the burdens on those states have never been greater. How this crisis is met remains a critical political challenge for U.S. leaders at the federal, state, and local levels. Some U.S. states, for example, confront balanced budget requirements which curtail their capacity to borrow when revenues collapse. As previously mentioned, the Biden Administration advanced a significant spending programme to ensure that state and local governments could continue to carry out functions essential to public health, social comity, long-term investment, and economic recovery. In May, it began to disburse \$350 billion to states to underwrite extra pay for essential workers, and invest in sewer, water, and broadband among other things (Rappeport, 2021).

33. The premature abandonment of government-led countercyclical fiscal and monetary measures could unnecessarily undercut a nascent economic recovery. The Biden Administration has begun to reassess a range of existing trade policies, although some elements of the previous Administration's policies could endure. During President Biden's visit to Brussels, EU and U.S. trade negotiators settled several outstanding trade disagreements that were challenging a long-standing trade and investment partnership. Leaders established a Cooperative Framework for Large Civil Aircraft, agreed to resolve differences on measures regarding steel and aluminium by the end of the year and created an EU-US Trade and Technology Council. On both sides of the Atlantic trade is generally understood as an agent of growth and development. But there have been persistent concerns that recent disputes might undermine the multilateral trading order and the role of the United States and Europe in leading it.

34. There are nonetheless an array of concerns about how other actors are operating in this trading order, and China is a particular concern. The pandemic has revealed trade-related strategic vulnerabilities arising out of overreliance on imports for medical equipment and pharmaceuticals that both Congress and the Administration seem intent on addressing. These can be added to an array of concerns about China's mercantilist approach to trade, its poor record in protecting of intellectual property and the potential use of its 5G systems for intelligence gathering.

35. In late February, President Biden signed an order directing federal agencies to conduct an intensive study of potential vulnerabilities in the industrial supply chain for such important inputs as rare-earth metals and pharmaceuticals. The Administration has accordingly laid out a two-phase programme that would produce a report on four key categories of products; the second phase, lasting a year, would examine whole industrial sectors, from defence to energy to transportation (Washington Post Editorial Board, 2021). China is a particular concern in this regard, and leaders in both parties seem to agree that more control needs to be exercised over trade with that Asian power. This could create new trading opportunities with other Asian states that are more respectful of international trade law. But it would also have costs which would have to be absorbed both by consumers and producers relying on Chinese inputs. There is also a potential for transatlantic friction over differing approaches to China. Washington, for example, has been critical of the EU's recent investment deal with China and has had an extended dialogue with a number of European

governments about China's role in rolling out 5G networks in the continent. Several of these differences were aired at the June 2021 G7 Summit meeting in the United Kingdom. It is noteworthy that the European Union has begun to rethink its relationship with China and has frozen a proposed trade deal with that country. This rethinking is also unfolding at the national level as well. Italy, for example, has begun to cool to the idea of Chinese investment in strategic industries and is recalibrating its bilateral investment relationship accordingly (Johnson et.al., 2021).

36. Finally, sustainable U.S. economic recovery will not be possible if COVID-19 is circulating through that society at unmanageable levels. The Biden Administration has pushed for stronger and more comprehensive federal measures to curtail the spread of COVID-19, advanced the rollout of vaccines to the broader public, aligned government messaging with the medical consensus and supported global vaccination initiatives, including President Biden's promise to provide 500 million vaccines to the lowest income countries through the first half of 2022, largely through the COVAX facility (White House Fact Sheet, 2021). The rate of vaccination in the United States was significantly higher than in Europe in the first half of 2021, although the gap is now closing as vaccines have become more available in Europe and due to anti-vaccine sentiments in certain sectors of the American public which have complicated the Biden Administration's efforts to vaccinate 70% of the population by July 2021. This has become a particular concern as new and more contagious and virulent variants of COVID could continue to strike economies whose workers and consumers are not vaccinated at sufficient rates (Durkee, 2021). Resistance to vaccines, of course, is not a uniquely American problem. Recent polls, for example, suggest that France has the same rate of vaccine hesitancy (31%) as the United States while only 14% of UK citizens and 7% of Canadians express hesitancy about vaccines. Overcoming this hesitancy thus represents a serious shared public health challenge for many allied countries (Durkee, 2021).

V. ECONOMIC CONDITIONS IN EUROPE

37. The eurozone's GDP contracted by a historic 6.8% in 2020, but the latest European Commission forecasts are for 4.3% growth in 2021 and 4.4% in 2022 (Financial Times, 2021) The European Commission suggests that while some member states can expect their economic output to return to pre-pandemic levels by the end of 2021, others might have to wait significantly longer due to structural scarring (European Commission, 2021). Real GDP is projected to remain below its 2019 level at the end of 2021.

38. In autumn 2020, the eurozone economies showed strong signs of recovery as governments had relaxed lockdowns across the continent throughout the summer. Growth approached 13% in the third quarter of 2020 (IMF, 2020). But the onset of a second wave of infections and fears of a third wave significantly lowered growth expectations for the first quarter of 2021. Persistent uncertainty linked to initial delays in the production and distribution of vaccines as well as reported virus mutations continued to weigh heavily on the economic outlook. Surveys on business activity from early 2021 showed that while U.S. entrepreneurs were increasingly optimistic, their European counterparts had grown more pessimistic than they had been at the end of 2020 (Chazan, 2021). This outlook began to shift in late spring as the rate of vaccinations picked up significantly and European infection rates, unsurprisingly, began to fall. This has made it possible to ease lockdowns.

39. While the pandemic has struck every European country, its impact on national economies differs significantly from one country to another. The IMF warns that the pandemic could deepen already pronounced regional disparities on the continent (IMF, 2020). As was the case during the 2008 financial crisis, regions with lower GDP per capita rates, higher unemployment and lower productivity have suffered disproportionately from the pandemic-related economic crisis, thereby widening the gap with more prosperous regions of the continent. Low investment and incomplete

structural reforms in some countries have long contributed to low productivity growth and competitiveness gaps. These problems predated the COVID-19 pandemic, but the crisis has clearly exacerbated the challenge. The European Commission has noted, for example, that regions heavily reliant on tourism have been particularly struck by the crisis (Fleming and Khan, 2021).

40. European institutions have taken unprecedented steps to temper the impact of the economic fallout. In March 2020, the Commission suspended the Union's deficit rules by triggering the escape clause and allowing member states to open the fiscal floodgates without fear of repercussion from Brussels (Smith-Meyer, 2020). Since then, governments have agreed on a series of stimulus programmes designed to strengthen member state economies, sustain demand and employment, and avoid scenarios akin to what transpired during the 2009 eurozone crisis when fiscal and monetary rigidities gravely exacerbated the recession. In July 2020, EU heads of state and government announced a € 750 billion recovery programme, Next Generation EU, which the European Parliament subsequently approved (Taylor, 2021). The recovery plan is financed through joint debt issuance, a significant historical first for the EU. It is the largest stimulus package ever financed through the EU budget. But it is more than that, as it also aims to affect permanent structural changes leading to a greener, more digital, and more resilient Europe. If it is seen as successful, the effort could also generate support for a permanent fiscal capacity in Brussels (IMF, 2020). But this is hardly a settled issue, and fiscal union is not, by any means, the inevitable end of this set of initiatives.

41. A substantial part of the programme's funds will be disbursed to member states as grants. Other elements include the Temporary Support to Mitigate Unemployment Risks in an Emergency (SURE), providing loans of up to € 100 billion to member states, a crisis support credit line that is available through the European Stability Mechanism (ESM), and a Pan-European Guarantee Fund that enables the European Investment Bank (EIB) to increase lending to European businesses – with a particular focus on SMEs (IMF, 2020). Meanwhile, the European Central Bank (ECB) has engaged in a massive asset purchase programme with a total envelope of € 1,850 billion (European Central Bank, 2021).

42. Discussions on the recovery programme have also revealed persistent divisions within the Union. Despite the initial opposition from the so-called "Frugal Four", Austria, Denmark, the Netherlands, and Sweden, (later the "Frugal Five", with Finland joining), to elements of the programme, a compromise was ultimately forged. Led by France and Germany, member states authorised the European Commission to borrow funds to support efforts to sustain economies coping with a pandemic-induced crisis. Some have characterised the agreement as yet another advance in European integration insofar as it demonstrated a capacity to undertake shared fiscal measures to compliment efforts on the monetary side (Nussbaum and Jennen, 2020). Others have argued that this is not the moment to focus on institutional development as such, as this distracts attention from the central crisis. In any case, it is not clear whether this foray into fiscal federalism will lead to a new competence or if it is a one-off response to an emergency.

43. EU efforts have unfolded in parallel with EU member states' effort to develop national recovery programmes. National fiscal packages vary significantly in size, ranging from 6.4% of GDP in Greece to 48.7% in Italy (Credit Suisse, 2020). Many governments have focused on financing short-term work programmes while providing income support to employees compelled to work reduced hours. These programmes, combined with previously operative automatic stabilisers, help explain why unemployment rates have increased only slightly in the eurozone throughout 2020. While in the United States unemployment rose by 3.5% in October 2020 (compared to 2019), unemployment rates in the eurozone increased by only one percentage point in the same period (IMF, 2020). Both the OECD and the IMF have counselled governments to ensure that the recovery is well underway before phasing out these programmes (Sandbu, 2020).

44. Germany has played a key role in forging European responses to the crisis. It notably moved off its traditional default position of fiscal rectitude to pump liquidity into the economy to sustain both German and European economic activity during the deepest moments of the crisis. The government introduced a €1.3tn programme of subsidies and grants to businesses, along with a €130bn stimulus package. To do this, the government suspended constitutionally mandated limits on the budget deficit. The Finance Minister, Olaf Scholz, proposed new borrowing of €180bn for the 2021 budget after the country took on €218bn of debt in 2020, the highest level of German public debt in the post-war period. Germany's national debt rose from close to 60% of GDP to 70% last year, compared to overall eurozone government debt rising from 84% of GDP to almost 100% in the same period (Arnold, 2021). The government has promised to begin paying down these new debts in 2023 and to reinstate its long sacrosanct debt brake in 2022. The timing and speed of this return will be a matter of political debate. Those hewing closer to traditional fiscal orthodoxy have expressed concerns that German payments to economic actors have been overly generous and worry about distorted incentives and price signals (Chazan, 2020).

45. Germany enjoyed strong growth in the last three months of 2020, despite a surge in coronavirus infections. Manufacturing orders, industrial production, retail sales, employment and exports all rose, pointing to that economy's enduring resilience. This relatively strong performance defied expectations. Germany outperformed other European economies, fuelling fears in some circles that the pandemic might deepen existing imbalances in the eurozone. In contrast, France and Italy were forecast to undergo sharper falls in economic performance. For 2020 overall, Germany's GDP fell by 4.9%, compared to France's 8.1% decline (Eurostat Data Browser, 2021). German exports surged in the last quarter of 2020, and the growth of its exports to a growing China doubled. German exports to the United Kingdom also rose as British firms stockpiled German producer goods in anticipation of Britain's departure from the European Union, with all the uncertainties that move has entailed. A sudden surge in COVID-19 infections in December, however, triggered more lockdowns in Germany, and this slowed the economy again in the first quarter of 2021 (Romei, 2021). Indeed, Germany contracted sharply in the first quarter of 2021, with GDP falling 1.7% quarter-on-quarter after expanding 0.5% in Q4 2020. This was due to a surge in COVID-19 cases that triggered a series of costly containment measures (Lammersen, 2021).

46. Paris has welcomed Berlin's evolving position on fiscal policy in the face of a global economic recession. The French government recognises the value of budgetary constraints as registered in the Stability and Growth Pact for membership in the European single currency system, but it also has argued that these rules should be suspended when a deep crisis strikes Europe. The block needs to "take into account reality" as French Finance Minister Bruno Le Maire put it with regards to the bloc's Stability and Growth Pact (Mallet and Abboud, 2021). More generally, French officials see the crisis as confirming elements of a French critique of the old Washington Consensus. French President Emmanuel Macron, in fact, called for a "new consensus" on global economics at the annual Davos meetings in late January (Chazan et al., 2021). He suggested it was time to break with the old neo-liberal "Washington Consensus" and acknowledge the essential role played by public sector in national economic life. This stance accords with others in Europe and North America calling for a larger state role, particularly in both nourishing and regulating sectors too important to be driven by market factors alone. This is an argument that is developing some traction on both sides of the Atlantic.

47. In 2021, France, Belgium, Italy, Spain, and Greece are expected to have accumulated more than double the debt-to-GDP ratio formally permitted by the convergence criteria fixed in the Maastricht Treaty (Taylor, 2021). The Spanish economy has taken the greatest hit in the eurozone during the pandemic-induced recession. Its GDP shrank by 18.8% in 2020 followed by Italy (8.9%), Greece (8.2%), France (8.1%) and Croatia (8.0%) (Eurostat, 2021). Like several other southern European states, Spain's tourist and hospitality sectors have an outsized weight in GDP, and these have been among the worst affected industries in the current crisis (Arnold and Romei, 2020). The

IMF has noted that the gap between higher and lower-income households has widened to a greater degree in southern European countries like Spain and Italy than it has in France or in Germany (IMF, 2020). This disparity will pose both economic and political challenges even after the continent returns to growth. The Italian government, led by the former head of the ECB Mario Draghi, is now charged with disbursing the almost €200bn that Rome will receive from the European recovery fund (Roberts, 2021). This is the largest share of that fund to be allocated to a member state, and the hope is that public administration reforms will be undertaken to ensure effective disbursement (Sanderson, 2021).

48. According to the Office for National Statistics in 2020, the United Kingdom's GDP fell by 9.9% in 2020, largely as a result of lockdowns and falling demand (Partington, 2021). This represented the single greatest fall in annual GDP since 1709. But Britain's highly successful vaccination campaign, and accommodative fiscal and monetary policies triggered a swift reversal, and the economy is now expected to grow by 5.7% in 2021 according to the National Institute of Economic and Social Research (NIESR, 2021). This forecast reflects a better-than-expected first quarter, a highly successful vaccine campaign that dramatically reduced infection rates, and significant increases in countercyclical spending in the 2021-22 fiscal year contained in the March Budget (Jones, 10/5/21). That the British government and EU were able to agree initial terms for Brexit reduced one of the primary sources of economic uncertainty, although a number of agreements still need to be hammered out in the final settlement, including services trade and rules governing the financial sector, and how to manage the border with Ireland (Editorial Board, FT). In the meantime, the British government is looking to ease its reliance on trade with the continent and, for example, recently announced that it will formally apply to join the Comprehensive and Progressive Trans-Pacific Partnership (CPTPP), one of the largest free trade areas in the world. London hopes that by freeing itself of EU regulations it can better avail itself of global market opportunities (Gov.Uk, 2021).

49. While the pandemic is generating enormous fiscal pressures, it is also exacerbating security risks. NATO Allies have committed to dedicate 2% of GDP to defence budgets and 20% of those budgets to investment. It is important to recognise that defence spending is not a deadweight loss in economic terms. Firstly, national security itself is a precondition to functioning, prosperity-generating markets. In simple terms, investment is fundamentally impaired if a given country must operate in a condition of deep insecurity. Allocating sufficient resources to national and collective defence will thus be fundamentally important to economic recovery. Secondly, defence investment can generate new technologies with commercial applications, some of which are exportable. Doing so creates new business opportunities for companies acting as prime contractors, subcontractors and consumers of new technologies. Defence spending also contributes to national demand and, by extension, to GDP. Finally, in an allied context, defence spending reinforces transatlantic solidarity, a phenomenon that obviously spills over into closer prosperity-generating investment and trade relations among its members (Tybring-Gjedde, 2021).

VI. ASIA'S DISCIPLINED RESPONSE AND LAGGING VACCINATION RATES

50. COVID-19 is the third major health crisis with which East Asian countries have had to cope in the 21st century. Experience gained from responding to the 2003 SARS pandemic and the 2014-2015 MERS pandemic might explain why Asian countries initially managed the COVID-19 pandemic more successfully than Europe and North America. After first restricting information about the spread of COVID-19 in and around Wuhan, Chinese authorities undertook a course correction. They finally acknowledged the serious public health challenge COVID-19 posed, shared the genetic code of the virus with researchers around the world, and employed systems constructed during the earlier crises to contain the spread of the virus. It still has not been forthcoming about the origins of the disease, and this remains a serious concern (Tufekci, 2021). The Chinese public's familiarity with how best to cope with pandemics, including the need for social

distancing and mask wearing, contributed to higher levels of acceptance for restrictive measures in China as elsewhere in Asia (Kheng Khor and Heymann, 2020). Those early restrictions paid off on both the public health and economic fronts, while the decision to share DNA coding facilitated the rapid development of vaccinations which are now seen as the ultimate weapon against this pandemic. But China, like the rest of Asia, is lagging behind in administering vaccines and this remains a key public health, social and economic vulnerability for this vast region.

51. That said, Asia's relative success in controlling the spread of COVID-19 has had important economic implications. In 2020, China's GDP grew by only 2.3%, its lowest rate since 1976. Yet, it was one of the world's only major economies to achieve economic growth last year, (Turkey, which grew at 1.8% in 2020, was another). After its first decline in more than 40 years, China, the world's second largest economy, expanded by 6.5% in the last quarter of 2020 while achieving its highest trade surplus ever recorded for December (Hale et al., 2020). Its economy then grew a record 18.3% in the first quarter of 2021 compared to the same quarter in 2020. This represented the largest expansion of GDP since 1992 (Harriban, 16 April 2021). China's surprisingly rapid economic recovery has had a positive spillover impact on other Asian economies, particularly in export-driven economies like Japan and South Korea. Beijing's trade surplus was bolstered by soaring demand for Chinese manufactured medical equipment (up 13%) and for consumer goods (laptop exports went up 54.5% and furniture exports rose 27.5% to take two examples). China's factories continued churning out product, while many competitors shut down due to national lockdowns (Mitchell and Yu, 2021).

52. While there has been very legitimate criticism of Beijing's efforts to squelch information about COVID-19 in the pandemic's early months, the Chinese government can nevertheless be credited for introducing effective policies to contain the virus and sharing the genetic code of COVID-19 with researchers all over the world, thereby facilitating critical work on vaccines. New cases in China have remained at very low levels since late spring of 2020, while Western societies largely failed to contain the spread of the disease and were obliged to embark upon costly and extended economic lockdowns because of the catastrophic spread of disease. But this success story should not be exaggerated. China claimed that this narrative utterly vindicates its model of political-economic management. Most Western democracies beg to differ, and it should not be surprising that at the June NATO Summit, heads of governments identified China as a strategic competitor whose "stated ambitions and assertive behaviour present systemic challenges to the rules-based international order" (NATO, 14/2021). China has indeed managed to exploit the economic slowdown in other producer countries to seize market share across an array of industries, so the challenge is not only geostrategic but also economic in nature (Hale et al, 2020).

53. China's strong economic position is reflected in myriad indicators. It attracted \$154bn in foreign investments over the course of 2020, and this drove up equity prices on China's booming stock market (Hale and Yu, 2021). On the heels of the U.S. withdrawal from the Trans-Pacific Partnership (TPP), it has now concluded a Regional Comprehensive Economic Partnership with neighbouring states, which collectively account for a third of global GDP (Credit Suisse, 2020). China has also signed a new investment treaty with the European Union that some in Washington warn could drive a wedge between the United States and its allies. The treaty, which should lower barriers for European companies seeking to invest in China, has yet to be ratified by national legislators, but EU officials have highlighted important Chinese concessions, including its newly announced commitment to ratify International Labour Organization (ILO) conventions against the use of forced labour (Brunsden et al, 2020). This would, of course, be welcome, although there is scepticism that China would fully carry this out in regions where forced labour is used as a tool of political oppression.

54. Beijing has begun a concerted campaign to make the world forget its own initial negligence at the beginning of the pandemic. It now claims, in direct contravention to a welter of evidence, that the virus did not originate in Wuhan or even in China itself. Of course, any systematic effort to

undermine ongoing forensic investigations to establish the origins of a pandemic would impede global efforts to understand the phenomena at play and to undertake corrective measures. The last thing the international community needs is a multinational war of misinformation on this deadly virus. The fastest path to reinforcing resilience lies in an honest reckoning of mistakes made, and this holds for all countries that have made missteps throughout this brutal pandemic (Freymann and Stebbing, 2020).

55. The Biden Administration is encouraging its allies to increase pressure on Beijing on matters related to perceived predatory economic behaviour including intellectual property violations, its provocative military posture, espionage, and human rights violations in Hong Kong, Xinjiang and elsewhere. Public perceptions of China have hit new lows, not only in the US, where, according to a recent Pew Research poll, 73% of Americans hold unfavourable views of China, but also in Germany, France, Spain and elsewhere in Europe (Credit Suisse, 2020). In the United States, Australia and the United Kingdom, discussions on the vulnerability of critical infrastructure such as 5G networks to espionage have inspired a raft of restrictions to reduce reliance on Chinese technology in these systems. Other European countries are poised to adopt similar restrictions, but there is no consensus on the matter.

56. Indeed, despite concerns regarding Beijing's transparency during the outbreak of the pandemic, last year's crackdown on pro-democracy movement in Hong Kong and recurring reports of human rights violations in Xinjiang province and elsewhere, China remains an integral element of the global economy and has become an engine of growth even during the current pandemic. Germany, for example, is generating essential foreign exchange earnings selling in the Chinese market. Chinese technology will likely play an important role both as a supplier and as a consumer across a range of sectors both in developing and advanced markets over the coming decade (Credit Suisse, 2020). The challenge lies in striking a balance between engaging with the positive elements of that economic dynamo while resisting the more threatening ambitions harboured by its leadership. The current crisis has brought some of these challenges into stark relief.

57. China, for example, has incorporated the fight against COVID-19 into broader matters of systemic competition—although it is hardly the only country doing so. President Xi began speaking about Chinese vaccines as a “global public good” as early as May 2020 and launched a policy of some termed “Mask Diplomacy” in which it sought to gain diplomatic and public relations leverage from its contributions to the global fight against COVID-19 (Freymann and Stebbing, 2020). The Chinese government is expected to subsidise vaccines for the export market to facilitate deals such as one that Mexico recently signed with CanSino helping it to secure 35 million vaccine doses (Reuters, 2020). China's leaders see this as a pillar of the country's so-called soft diplomacy and herald it as embodying the country's peaceful rise on the global stage (Euractiv, 2020) (Barigazzi, 2020). Of course, there are beneficial dimensions of these policies, but some clearly aim to undermine democratic solidarity or distract attention from China's more threatening strategic ambitions and persistent human rights violations. Democratic governments must be prepared to discern those policies that serve broader international interests and those zero-sum measures that China believes undermine democratic solidarity to the benefit of its authoritarian vision.

58. Despite a surge in infections at the end of the year, Japan has also laudably controlled the spread of COVID-19 although it so far has registered the lowest vaccination rate by far of any G7 country and the lowest level, at 1.7%, of any OECD country as of early May (Persek, 2021). But Japan has been less successful in insulating itself from the economic fallout of the crisis. Collapsing global demand has struck its export-dependent economy. Japan's real GDP fell by 4.8% in 2020, although its economy was already contracting when the COVID-19 shock hit. This constituted its first contraction since 2009 (BBC, 2021) and its second quarter contraction was its largest since World War II (Solis, 2020). The country rebounded strongly in the second half of the year and now this important export economy stands poised to recover quickly as global trade gathers steam. Tokyo responded to the recession with a massive \$298 billion supplementary

budget, which it financed with a new bond issue. In fact, borrowing accounted for nearly 60% of the national revenue this past year (Economist, 2020). In December, Prime Minister Yoshihide Suga, announced a new \$708 billion stimulus programme, bringing the pandemic-related stimulus to roughly \$3 trillion, a spending package that is roughly two thirds the size of the national economy (Reuters, 2020). Japan's national debt is expected to surpass 260% of GDP in 2025 (Statista, 2021). Clearly, the world's most heavily indebted country will have to delay fiscal reform until markets stabilise.

59. Japanese trade with China has had a salutary impact on an otherwise difficult economic situation. In 2019, China accounted for 24% of Japanese imports and 19% of its exports. Japan significantly outranks China in terms of foreign investments, averaging \$122.4 billion per year since the financial crisis compared with China's \$109.5 billion per year (Solis, 2020). Japanese policymakers, however, have begun to incentivise companies to restore production to Japan itself. In March 2020, then Prime Minister Shinzo Abe announced subsidies of up to \$2 billion to support relocations of factories from China to Japan and other Asian countries (Credit Suisse, 2020). As in Europe and the United States, there are concerns that Japan has become overly dependent on Chinese manufacturing, leaving it strategically and economically vulnerable. Tokyo, however, recognises that China will remain a key global player that cannot be ignored. This insight conditions its approach to China and places a limit on its willingness to constrain its powerful neighbour.

60. Japan continues to champion a liberal free trade order in Asia and was a very strong advocate for the Trans-Pacific Partnership (Solis, 2020). It is looking for a reset in trade relations with the United States after uncertainties emerged following the Trump Administration's decision to withdraw from the TPP. After signing the RCEP agreement and a free trade deal with the United Kingdom in 2020, Japanese officials are also looking to a possible trilateral agreement among Japan, China, and South Korea, although ongoing diplomatic tensions could hamper this effort (Arrington and Yeo, 2019). For fiscal year 2021, Japan's economy is projected to grow by roughly 3.4% (Japan Times, 2021). After postponing the Olympic Games in 2020, Tokyo had hoped that this major event would bolster domestic consumption in 2021. A resurgence of COVID-19 in the country has tempered such expectations as Japan did not allow foreign spectators to attend the games and limited those admitted to the arenas.

61. South Korea's economy shrank by 1% in 2020 but still ranked third in terms of economic growth rate among major economies (Jae-hee, 2021). Its relatively strong performance is partly due both to prompt and effective government efforts to contain the spread of the virus and to its close trading links with China. Like China and Japan, South Korea benefited from lessons learned during the 2003 SARS and the 2014-15 MERS epidemics. Following the SARS outbreak, Seoul reformed its public health infrastructure, strengthened command-and-control mechanisms, and developed enhanced capacities for the mass production of test kits to prepare for future crises (Kheng Khor and Heymann, 2020). As of 25 May 2021, Korea had registered only 1,938 COVID-19 related deaths (Worldometer, 2021).

62. The government's primary objectives for 2021 are recovery and resurgence. Over the past year, legislators have passed four supplementary budgets worth 3.5% of South Korea's 2020 GDP. 70% of this is debt-financed, and the public budget and overall public debt is projected to approach 50% of GDP by 2022. Fiscal rules had aimed to limit the government deficit to 3% and public debt to 60% of GDP (OECDa, 2020). While public debt levels in South Korea will remain comparatively low, OECD economists warn that the pandemic poses a risk to financial stability, particularly as corporate debt has soared (OECDb, 2020). Private households and small and medium enterprises (SMEs) are heavily leveraged. This threatens to exacerbate disparities between South Korean industrial champions like the Samsung Group, South Korea's largest company, and SMEs, which enjoy less state support and confront greater hurdles in the global economy.

63. Samsung Electronics, the world's largest producer of microchips, smartphones, and flat screens, has profited from increasing demand for consumer electronics throughout 2020. The company estimated that its profits hit \$8.2 billion in the last quarter of 2020. LG, another South Korean tech giant, saw profits rise sixfold in the same period. LG and Samsung are immensely important for South Korea's export-driven economy. Samsung Group's revenues alone accounted for 12.5% of the country's GDP in 2019 and 12% of corporate tax revenue (Jung-a and White, 2020). Employment levels for women in South Korea are relatively low, and the gender wage gap is the highest in the OECD. The current crisis is likely to exacerbate these gender-driven income disparities (OECD, 2021).

VII. THE CHALLENGE FOR DEVELOPING COUNTRIES

64. The situation for developing countries in the face of the global recession is fundamentally different than for developed countries. Less developed countries have generally lacked the financial depth, the credit worthiness and lower borrowing costs to handle the financial implications of this recession. Many are bereft of the medical infrastructure needed to cope with the pandemic, although, fortunately, a range of poorer countries, notably in Sub-Saharan Africa have so far suffered significantly lower infection rates than in Western countries. But they have hardly escaped the economic fallout.

65. International lending institutions, including the World Bank and the IMF, have created a range of programmes to help these countries weather the economic storm, including debt repayment restructuring, concessional financing, and grants. But those packages have not stopped the ineluctably adverse economic consequences of this recession for poor countries. UN Secretary General António Guterres has said that ultimately \$35bn will be needed to assist the poorest people in 2021. According to the United Nations, an estimated 235 million people will require humanitarian assistance in 2021, 40% more than in 2020. This is almost entirely linked to the COVID-19 pandemic and its economic fallout (United Nations Global Humanitarian Overview).

66. Achieving the UN's Development Goals has become a far more daunting challenge due to the current global crisis. The World Bank announced that 2020 marked the first annual rise of the global poverty rate after more than two decades of decline (Ghani, 2021). The pandemic has driven close to 100 million people into extreme poverty (defined as an income, less than US\$ 1.90 per day), with another 50 million at risk in 2021 (Shameran, 2020). UNDP has outlined one scenario in which 251 million additional people could fall into extreme poverty by 2030, leaving 1.1 billion people in extreme poverty worldwide. It suggests that targeted investments in social protection and welfare programmes, governance, digitalisation, and environmental resilience could help these countries counteract the longer-term negative impacts of the current recession. The World Food Programme (WFP) registered a doubling of people that either experienced hunger or lived on the edge of hunger last year (WFP, 2020). Children have suffered the worst consequences. UNICEF reports that 463 million children were deprived of formal education due to school closures last year. This loss of human capital formation will penalise developing countries for decades (UNICEF, 2020).

67. Nonetheless, many governments have sought to mitigate the adverse impact on income of the crisis. Brazil and Lebanon, for example, were able to push out temporary income supplements to sustain demand, while Columbia established a digital payment system that ensured that public income support resounded immediately in the greater economy (Rutter, 2020). Unfortunately, politically orchestrated misinformation campaigns about the virus in some countries like Brazil and elsewhere have tended to exacerbate the public health challenge while sadly, unnecessarily, and undemocratically polarising national societies (Ricard and Medeiros, 2020).

68. The situation in India has been particularly worrying and the consequences have been global. After months of relatively low infection rates, India experienced an explosion of cases in April and May 2021 after lockdowns had ended and mass political and religious gatherings were once again permitted. The rapid spread of the disease was also linked to the emergence of the so-called Delta variant of the COVID-19 virus, which was first detected in Maharashtra in October 2020. Skyrocketing caseloads quickly overwhelmed India's health system and death rates soared over the spring, although the rate of infection has since slowed considerably. As of 29 June, India had registered 30,316,897 cases and 397,668 deaths although experts suggest that there is a serious problem of underreporting in that country (Worldometer, India, 2020). Moreover, the Delta variant has spread globally and will continue to challenge undervaccinated regions and countries unless innovative ways to spot and stop the spread of new variants are developed and adopted. This will ultimately require more data; improved and widespread testing; and better integration of genomics, informatics, and public health (Agrawal, 2021).

69. The COVID-19 pandemic has caused significantly less deaths per capita in low- and middle-income countries than in some of the richest parts of the world (Ghani, 2021). Sub-Saharan Africa, for instance, initially avoided massive shocks to its economies comparable to the eurozone or North America. With 14% of the planet's population, this region initially only accounted for 3% of known cases and deaths related to the virus. Africa is also the least vaccinated continent, and this leaves it vulnerable over the longer term. There is also a problem of underreporting COVID-19 related illness. The IMF estimates that Sub-Saharan economies shrank significantly less than most wealthy economies, and nearly half of the 24 countries that reported growth last year were in that particular region (The Economist, 2021).

70. Experts are nevertheless deeply concerned about the long-term impact of the pandemic on the broader developing world and are aware that it has widened the income gap between advanced and underdeveloped economies (Martin, 2021). Responding to the challenge has demanded that developing countries reallocate very scarce resources that were already much needed in other domains of public health: The Global Fund, a Geneva-based international organisation that fights AIDS, Tuberculosis and Malaria, estimates that because of COVID-19, 1.5 million more people might have died from these three diseases in 2020 alone – close to the estimated deaths directly linked to COVID-19 (The Global Fund, 2020).

71. It is now very evident that developing countries will endure long waits before they can begin to vaccinate their people comprehensively. A recent article in the British Medical Journal demonstrated that countries representing one seventh of the global population had reserved more than half of the vaccines potentially available (D. So, and Woo, 2020). Beyond the ethical and health arguments for equitable global access to vaccines, there are also convincing economic arguments that the global economy will not recover until the developing world is properly vaccinated. The Director General of the World Health Organization (WHO), Tedros A. Ghebreyesus, has cautioned that unequal access to vaccines in the short run could ultimately cost the global economy US\$ 9.2 trillion (WHO, 2021).

72. The COVID-19 Vaccine Global Access Facility (COVAX) aspires to meet the challenge of global vaccine access. Led by the WHO, the initiative has encouraged donor countries to contribute funding for its Access to COVID-19 Tools Accelerator (ACT). The initial goal is to vaccinate the most vulnerable 20% of recipient countries' populations by the end of 2021 (O. Gostin, et. al, 2021). The distribution of vaccines and test kits to developing countries could cost US\$24 billion in the coming year. In December 2020, however, leaked documents suggested that the initiative was then close to failure due to insufficient funding (Guarascio, 2020). Importantly, the Biden Administration rejoined the WHO soon after the inauguration, and in February, announced that the United States would contribute US\$ 4 billion to COVAX to galvanise international support for its vaccination mission (O'Donnell, and Shalal, 2021). It has called on G7 members and other partners to bring in billions more in resources to support global COVID-19

vaccination, and to target urgent vaccine manufacturing, supply, and delivery needs. In February, the EU doubled its contribution to the COVAX facility bringing its contribution to Eur 1 billion. (European Commission Press Release, 2021).

73. In May, the U.S. Administration also signalled that it would favour waiving intellectual property protections for coronavirus vaccines. India and South Africa have led an effort in the WTO to suspend some of these protections to hasten the distribution of COVID-19 vaccines in poorer countries by allowing a range of local manufacturers in these countries access to trade secrets needed to produce effective vaccines. The Administration continues to defend the core justifications for patent protections but has recognised that the gravity of the current situation could justify a partial suspension. The problem is that the manufacturing of these vaccines is highly complex and even access to the trade secrets is not sufficient to significantly bolster global vaccine manufacturing. Sharing technological know-how and personnel would likely also be needed (Kaplan, et.al. 2021). In June, the White House issued guidelines for sharing 80 million COVID-19 vaccine doses abroad by the end of June 2021 (White House, Fact Sheet, 2021)

VIII. CONCLUSION: PERMANENT STRUCTURAL CHANGES AND GLOBAL GOVERNANCE CHALLENGES

74. The world is slated to return to growth in 2021, but there are many potential downside risks that might lead the global economy to underperform. These include ongoing bottlenecks to vaccination production and distribution, the emergence of drug resistant strains of the COVID-19 virus and renewed infection surges, the premature abandonment of government-led countercyclical fiscal and monetary measures with a resulting fall in liquidity, and a potential global retreat into hyper-nationalist economic and public health policies that would be fated to fail. Debt defaults could precipitate a financial market panic, which could spread rapidly given the huge debt burdens governments have assumed. Slowing economies have led to a shrinking tax base which has only exacerbated the problem. On the upside, a rapid ramping up of vaccination schedules could hasten the onset of so-called herd immunity, rapidly restore investor and consumer confidence, unleash pent-up demand, and thereby hasten a demand-led recovery. A virus caused this recession and containing it is the only way out. The persistence of low interest rates and low inflation could lengthen the period in which governments are positioned to provide essential monetary and fiscal support to national economies as the green shoots of recovery take root.

75. Governments overseeing policies aiming to galvanise economic recovery will also need to focus on a range of longer-term challenges including poverty, inequality, mounting debt, infrastructure, climate-related investments, digitalisation, and education that are all essential to long-term productivity. Synchronising fiscal, monetary, and public health policies globally will increase the likelihood of success (IMF, 2021).

76. There are, however, also mounting inflation concerns in the United States and Europe and a burgeoning debate among economists over the sources of price hikes and whether this problem needs to be addressed now or only after growth and recovery are entrenched. This will require very close monitoring by central banks. They should be allowed to act resolutely if there are signs of overheating or if economic actors are significantly moderating their behaviour due to inflation expectations. It will also be essential to ensure that incentives are in place to get workers back to work. This too will require reductions in emergency income supports that were needed in the midst of the crisis, but which now may be contributing to bottlenecks. Public spending that aims to bolster productivity and critical infrastructure, however, should remain a priority.

77. Developed countries should begin to chart out a pathway to debt consolidation. The IMF suggests that governments find savings by reducing wasteful and poorly targeted subsidies, extending maturities on public debt, and contemplating eventual tax hikes on higher income

brackets and corporations, particularly in those countries where both have carved out privileged low tax benefits that lower income groups do not enjoy (IMF, 2020). Closing loopholes in tax regimes that currently allow companies to avoid taxation will be essential to shoring up public finances over the long run. Governments should work to ensure that OECD recommendations on profit shifting, and digital taxation are globally adopted and fully implemented. In this regard, a June decision taken by G7 heads of government to push a global minimum tax rate of “at least” 15% represents an important first step. Members agreed to measures to counter harmful profit shifting to low tax jurisdictions and ensure that multinationals pay taxes where they operate (Giles, 2021). The OECD has worked on this issue for years and has endorsed the decision.

78. Debt consolidation will eventually require some combination of spending cuts and tax hikes or, failing that, debt monetisation which is, by nature, inflationary. But it will be very important to ensure that the burdens are equitably shared and that the wealthiest strata of society are not somehow exempted from collective sacrifices. Indeed, measures to defend the economic and social interests of those who have been most adversely impacted by this crisis, including elements of the working class, ethnic and racial minorities, women, and children, will be needed. Women and children have suffered disproportionately in the current global economic and public health care crisis. Women do not enjoy the same level of political access as men in much of the world, and this has only exacerbated the problem. More targeted policy and support measures for women and girls are needed to hasten economic recovery and to make it sustainable and equitable (Lyell, 2021).

79. This crisis has been so deep and so consequential that it could well introduce paradigmatic changes in fundamental economic structures. As the global economy begins to recover the global economic landscape may look very different from that which preceded it. Some sectors may never return to the status quo. Government policies will have to account for these changes. Those societies that quickly adjust to altered conditions are more likely to flourish than those that are animated by a reflexive desire to return to the status quo ante or to seal themselves off from emerging global opportunities.

80. National recovery strategies should accordingly aim to rebuild economies in ways that are both open and financially and environmentally sustainable. This will put their societies in the best position to prosper over the long term. Prioritising long-term capital investment, infrastructure, technology research, and education would help put countries on pathways for growth in a rapidly changing global economy. Reducing unneeded subsidies that encourage fossil fuel use, for example, would not only lower government fiscal obligations, but it would also help countries advance the climate agenda and prepare for a new energy paradigm that will generate prosperity, particularly for early movers (Mari, 2020).

81. Finding resources to underwrite education investments will be essential to long-term economic recovery as human capital development is key to long-term prosperity. Education and worker training should be prioritised in national recovery strategies. Efforts will be needed to combat unemployment and underemployment which simply destroy human capital. Creating retraining opportunities should be more systemically integrated into national economic policymaking as this will facilitate the transition.

82. Energy markets seem poised for fundamental change due to government commitments to lower greenhouse gas emissions, technological changes that have slashed the cost of renewable energies, evolving urban infrastructure, public and private investments aiming to encourage non-carbon transportation, and falling business travel, among others. These changes will have important implications for Western countries but could also fundamentally alter the economies of carbon-based energy exporting regions in the Middle East, Russia, the Caucasus and Central Asia. These are changes of important geopolitical significance for which strategic planners must prepare.

83. Although national policies will play a central role in digging out of the current economic crisis, regional and global approaches will be essential to addressing effectively both public health and economic challenges which cannot be contained by national borders. Here too, new approaches will be needed, although many traditional insights on the value of multilateral cooperation, open trading relations, and fiscal and monetary coordination remain instructive. Finding solutions to outstanding trade and technology disputes would hasten a return to robust growth. Among other things, this could be facilitated by finding global solutions to the problem of profit shifting and tax avoidance which have deprived governments of essential revenues while illegitimately freeing an array of companies from their tax obligations. Greater cooperation is also needed to counter climate change, and this must be premised on equitable sharing of adjustment burdens and costs.

84. Although more advanced economies enjoy a modicum of fiscal and monetary leeway to prime the pump for economic recovery, this is not the case for much of the developing world. Sustained global recovery is not possible unless less developed countries also find a pathway to growth. Failure here could trigger far greater instability and humanitarian catastrophe across the world. Wealthier countries will have to help stabilise these countries through a range of economic support policies that will likely include an admixture of public health support, debt relief, smarter and more targeted aid policies, policy development support, and more open trading relations. Working to ensure that vaccines are broadly available in developing countries will be essential to their recovery.

85. Ultimately, the road to global economic recovery will be paved with mass vaccinations. Until the public can gather in safety, normal economic activity will be impossible, and whole sectors of economic life will function sub-optimally. The best investment governments can make today lies in insuring comprehensive and rapid vaccination programmes that aim to develop collective immunity to COVID-19. In an age in which disinformation and conspiracy theories are often given as much weight as the truth, concerted public information campaigns promoting the value for vaccines will be essential. Fully funding the COVAX facility which aims to support vaccination programmes in developing countries will be essential. Indeed, the threat to health and well-being will not be eradicated until this ambitious and essential global project is completed. It is a fundamental interest of richer countries to ensure that COVAX is fully funded.

86. This pandemic has clearly demonstrated that building resilience in the face of global health and economic shocks is also essential. When hospital systems are designed to run at near full capacity in normal times, they will be overrun in times of pandemic unless emergency supplemental systems can be readily accessed. Public health systems, including disease monitoring and control systems, must have the capacity to be ramped up swiftly in times of public health crisis. The same logic applies to economic support systems. Improvising solutions during a crisis is extraordinarily difficult, costly and can lead to disastrous bottlenecks. As countries emerge from this public health and economic crisis and begin the process of rebuilding, they will need to build in greater resilience so that any future crisis can be dealt with in a more effective and assured manner.

87. Finally, countries like China and Russia have used this crisis to actively denigrate liberal economic models while suggesting that authoritarian-led societies are the wave of the future. This notion has become an increasingly worrying siren song, and it has led some political forces in Western countries down a very dangerous path. The capacity to reform liberal market systems so that they broaden opportunity, revive meritocracy, reinforce democracy, minimise insider corruption, and promise broadly shared welfare at this gravely difficult moment must be stoutly defended. This is a core value of the transatlantic community of nations and defending it must remain a fundamental ambition of this Alliance.

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