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Thematic Brief

A global green new deal for a sustainable recovery and a resilient future

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Note: this brief is based on the Trade and Development Report (TDR). For detailed analysis, figures and model simulations please refer to chapter 3 of TDR 2019.

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1 Introduction

After a year of historic losses there is an understandable urge to return to pre-pandemic times. But the economic policies adopted in the decade following the global financial crisis, contributed, in no small part, to the human and economic toll inflicted by Covid-19 and may still compromise the search for a more resilient future (TDR, 2021).

A sustainable recovery, grounded in the Universal Declaration of Human Rights, including the right to development, and the ambition of the 2030 Agenda, requires policies that restore incomes, boost job-creating investments and strengthen resilience against future shocks. But this is far from sufficient. Complementary policies are needed to simultaneously tackle the malignant rise in inequality and the accompanying slowdown in productivity growth, accelerate the structural transformations to zero-carbon economies, and rebuild the mechanisms of international cooperation and coordination on which inclusive and sustainable outcomes will depend. Such a wide-ranging program was adopted during the Great Depression, when New Deal policies vastly improved economic prosperity and security in the United States. In essence what is needed for today`s highly interdependent world is a global green New Deal.

The recovery from the 2008-09 global financial crisis did see a return to growth but it was fragile and unbalanced. In advanced economies, a combination of fiscal austerity and loose monetary policy favored large corporations in a limited number of sectors leaving many people stuck in less secure employment with stagnant wages, with less access to adequate public services, and ill-prepared for the next shock. In developing countries, dependence on external capital markets and commodity exports engendered a fragile growth trajectory and made it harder to expand higher-value-added sectors.

Despite the promise of world leaders in 2009 at the London G20 to “lay the foundation for a fair and sustainable world economy”, the “new normal” after the crisis did not address the five unsustainable trends deeply rooted in the rules and practices of the hyperglobalized economy: falling wage shares, erosion of public spending, weak investment growth, debt-dependent growth and related stresses and soaring greenhouse gas emissions. As a result, the Covid-19 pandemic struck a world where health care and social protection were weakened, a toxic mix of debt and fossil fuels continued to power economic production (and consumption) and diminished trust weakened the institutions that underpin political stability.

The immediate response to the pandemic’s economic fallout in advanced economies has been a series of “taboo-breaking measures” to keep businesses and households solvent through lockdowns and into recovery, including an extended, and in many cases unprecedented, mixture of government subsidies, loans and spending. Estimates put developed countries’ spending and tax cuts in 2020 at more than 16 percent of GDP with another 11 per cent in loans and guarantees (IMF, 2021). By contrast, international support and coordination has been much less ambitious mostly confined to agreements between leading central banks to keep their currencies stable and financial markets moving. Little cooperation has been extended to developing countries on critical matters such as vaccine rollout and debt relief (TDR, 2021).

Plans for a better recovery hinge on large-scale investments and strong regulatory actions to address the underlying trends that remained untouched after the global financial crisis. Such plans are now on the design table in several leading economies. However, to date, most focus on employing public resources to “de-risk” private investment, a term that applies not only to securitized infrastructure assets but to creating a safe, low-risk investment climate for private investors more generally(Gabor,

2020; Dafermos et al., 2021). This approach draws on the same arguments about the role of financial markets in boosting efficiency and innovation that came to prominence in the 1990s, backstopped by a new generation of financial instruments that promised investors better ways to manage complex risks, enhance trade and portfolio flows and promote real capital formation, supposedly boosting living standards worldwide (Greenspan, 1997). Pursuing this approach (and extending it to the climate challenge) begs an obvious question: why, having largely failed to boost private investment and productivity growth before crashing spectacularly in 2007–2008, should this model offer a plausible (let alone preferred) way to deliver on the ambition of the 2030 Agenda?

Learning from the failures of this model, it is critical for governments across the world to advance a different economic program, underpinned by an active developmental state, an inclusive social contract and an extensive public policy agenda that tackles long-standing inequalities, within and across countries, while addressing the new global threats to a more resilient and secure future. The threat of global warming requires immediate and sustained action to reduce greenhouse gas emissions and stabilize the Earth's climate. Recent studies by the Intergovernmental Panel on Climate Change (IPCC) and the United States Global Change Research Program, among others, have made it clear that if we fail to change course climate change will soon accelerate out of control as will environmental destruction. Indeed, many in particularly vulnerable regions are already facing devastating losses as a consequence of climate-induced disasters(Eckstein et al., 2021). Doing so requires a coordinated investment push that locks in a decarbonization trajectory for the economy, both by investing directly (through public sector entities) and by boosting private investment in more productive and sustainable economic activities. Such an investment push provides the basis on which developmental and environmental challenges can be simultaneously addressed.

A sustainable post-Covid future will therefore need to build back differently using a set of shared principles and common (but differentiated) policies that can help mobilise the resources for a big investment push to repair existing environmental damage and achieve a decarbonized economy, guide a just transition focused on job creation, skill upgrading and strong wage growth and inform government decisions to tax and spend in ways that generate fairer outcomes.

These principles and policies, while necessarily tailored to different national circumstances, are also intended as a basis for working collaboratively at the international level and engaging the active participation of citizens at the local level. State capacities will no doubt need to be strengthened but robust multilateral institutions are also needed to coordinate national and regional policies not by trusting an "invisible hand" but by establishing public protocols to contain trade imbalances, resolve debt crises and ensure financial support and the rapid transfer of requisite technologies to developing countries.

2 Regressive trends in the global economy

The configuration of policies, rules, market dynamics and corporate power, in place before the pandemic led to growing economic inequalities within and between countries. There are exceptions, notably China, where catch-up growth has been prioritized, but the overall pattern of global growth remains highly unequal and early data indicate that, through massive losses of livelihoods and persistent health effects, the Covid-19 pandemic has made inequality worse.

2.1. Falling labour shares

Few global trends are as apparent as the skewing of income distribution: since the 1980s, in all regions and in almost every country, the share of national income accruing to labour has decreased and the profit share has correspondingly increased. In developed countries this redistribution has been generally larger but the trend has been visible in developing countries as well. Widespread wage repression has been caused by decreasing unionization rates, the erosion of social security, growing market concentration and the spread of outsourcing through global value chains (Izurieta et al., 2018; TDR, 2017, 2018), all of which have eroded labour's bargaining power.[1]

Consequently, households' consumption and investment have slowed down, undermining aggregated demand, with negative consequences on business investment and productivity growth, thus reinforcing the downward pressures on wage and employment growth. Financial crises have further undermined labour shares both by depressing employment and by paving the way for export-oriented policies, with the attendant race to the bottom, as the only strategy for long-term growth.

2.2. The erosion of public spending

In most countries, fiscal policy has exhibited a contractionary trend for decades, in some countries spurred by loan conditionalities and structural adjustment requirements, with short-lived episodes of expansion after serious recessions, such as in 2009. Fiscal austerity as of 2010 mostly hit social protection systems (ILO, 2017) and public investment (Oxford Economics, 2017; OECD, 2017; Bhattacharya et al., 2019) with further damage in terms of rising inequalities (Popov and Jomo, 2015; OHCHR, 2013; Perugini et al., 2019), heightened insecurity and diminished prospects for future growth (Ostry et al., 2016). There is also clear evidence that the more severe the austerity measures adopted after the global financial crisis, the more damaging, to lives and livelihoods, the impact of Covid-19 (Storm, 2021).

2.3. Weak investment growth

At least since the 1980s, credit expansion in most countries has taken off without a corresponding accumulation of fixed capital (figure 3.4) indicating that credit has been used to finance speculative activities (Schularick and Taylor, 2012; TDR, 2015: 2). Productive investment has been affected in two ways. As non-financial corporations were able to use credit to fund financial operations, they had a strong incentive to turn away from productive investment because of its long maturity, low liquidity and often lower yields. At the same time, the accumulation of large financial liabilities, fueled by credit, produced financial crises and recessions that discouraged productive investment. Overall, productive investment has not surged globally despite credit expansion, overall increases of profit shares and corporate tax cuts across developed and emerging economies.

Data show that fixed capital investment has contracted. This is particularly striking in developed economies such as the United Kingdom and the United States, but evident elsewhere too. Infrastructure investment has been particularly affected (Bhattacharya et al., 2019) with negative impacts on industrialization in developing countries and productivity growth everywhere.

2.4. Debt distress

Since the 1980s, when deregulated finance grabbed the reins of hyperglobalization, global debt has risen 18-fold from $16 trillion in 1980 to a staggering $281 trillion in 2020 which represents almost 360 per cent of Global GDP (IIF, 2021). Still dominated by private debt (household and corporate debt) now accounting for 165% of GDP, the effect of the pandemic has been to grow government indebtedness to over 100% of Global GDP. The world economy, as measured by GDP growth, grew

less than 8-fold over this period (1980-2019). As growth slowed in 2019, some 43 low-income countries were either experiencing, or at a high risk of experiencing, debt-related distress – a little over double the number in 2013, while 64 developing countries were spending more on servicing their debt than on health services.

Rather than promoting productive and inclusive growth, financial firms have engaged in the trading and production of financial goods through speculative activities, channeled through shadow-banking practices and leading to deeper income inequalities. While the rise of securitization is lionized in some quarters as an indication of the innovative capacity of the sector, in practice the process has proved to be a source of instability. The special link between credit creation and productive activity is broken as credit creation feeds the expansion of finance itself, fueled by speculative excess and the pursuit of assets of diminishing quality, followed by the inevitable defaults by borrowers and falling asset prices.

2.5. The growing stock of atmospheric carbon dioxide

Data indicate that the stock of atmospheric carbon dioxide (CO_2), responsible for global warming, continues to increase (IPCC, 2018). After briefly falling during the onset of the Covid-19 recession, energy-related emissions have quickly recovered to pre-pandemic levels (IEA, 2021) while estimates indicate that less than 20 per cent of recovery spending has been "green" (Oxford University, 2021). So far, market-based attempts at making carbon-heavy investment more costly than green investment have failed (Storm, 2017).

Annual carbon emissions have accelerated in developing countries and seem to have stabilized in developed countries. But on a per capita basis developing countries produce 80 per cent less CO_2 than developed countries. Furthermore, efficiency gains in developed countries are the effect of decades of outsourcing of industrial activities to developing countries (Schröder and Storm, 2020).

The threat of rising temperatures from high levels of atmospheric carbon is in large part due to emissions from the richest people in the world, with the top one per cent accounting for double the carbon emissions of the bottom fifty per cent; while at the firm level the carbon footprint of a handful of giant corporations has dominated the rise of emissions in recent decades (Gore, 2020). There is also ample evidence that climate change has already hit poorer countries and poorer people the hardest (Diffenbaugh and Burke, 2019) with failure to stick to the Paris commitments having an even more devastating impact on the future well-being of those who will contribute the least to the problem (Carleton et al., 2020).

3 Anatomy of a green new deal

To build back differently, governments everywhere need to boost aggregate demand in support of sustainable and inclusive economies using an active mix of fiscal and monetary policies as part of a general expansion of government spending for infrastructure and other investments as well as for the establishment and strengthening of social protection systems, but also employing, whenever appropriate, public employment schemes. Abandoning austerity is a necessary first step in any green new deal.

Significant public investment in clean transport and energy systems is imperative to establish low carbon growth paths and to transform food production for a growing global population as well as addressing problems of pollution and environmental degradation more generally. That wave of green investment would be a major source of income and employment growth, contributing to global macroeconomic recovery. Moreover, there is plenty of evidence that green investment creates more

jobs than comparable brown investments (Pollin, 2015; ILO, 2018) with many, though not all, of the jobs created by green investment local to the area where investment occurs and involve training in new skills.

There are certainly numerous opportunities for investment in energy efficiency and renewable energy supply, many of them already cost-effective at today's prices and in new patterns of high-density urbanism. This implies new configurations of housing, work and public services, connected by more extensive mass transit. A full-scale transition to electric vehicles will also require a more extensive infrastructure of charging stations, and continued progress in reducing vehicle costs. New technologies to produce, store and use renewable energy will be needed to complete the decarbonization of the global economy, along with adoption of more sustainable agricultural practices, tailored to minimize emissions. A just transition will also require big investments in communities that have become dependent on resource-intensive livelihoods and additional international financial support to ensure that the benefits of transition accrue to communities that have disproportionately borne the effects of environmental damage and been excluded from economic opportunities.

Developing countries should take the opportunity to ensure lower conversion costs as they are still building their energy systems. By avoiding carbon-intensive systems, the available resource savings from clean energy may be greater in developing countries. Clean energy is of great potential value to developing countries for another reason. Delivering energy to remote communities via an urban-centred national grid, as is usually done in developed countries, entails the substantial expense of long-distance transmission lines. Developing countries may be able to move directly to more efficient microgrid systems without the sunk cost of running wires far into remote areas.

Regulating financial markets will be essential to steering private finance toward these larger investments in the green economy. Banks can offer the benefits of scale and reach because of their ability to create credit and their modus operandi of forming partnerships with other financiers and investors. But despite the use of taxpayers' money to bail out the banking system and the recognition that current practices work against them serving the productive economy, serious banking reform has not taken place since the crisis. In this context, the potential role of public banking, because it takes the idea of social returns more seriously than private banking and adopts a longer time horizon and more diversified approach to its portfolio management, needs to be scaled-up as part of any green new deal. Even so, significant financial support from the international community will be needed in developing countries to make the transition.

Such investment will also need to be supported by green industrial policies (covering not just manufacturing but all industries, including agriculture and fisheries), using a mixture of general and targeted subsidies, tax incentives, equity investments, loans and guarantees, as well as accelerated investments in research, development and technology adaptation, and a new generation of intellectual property and licensing rules. Specific measures and support will be required in developing countries to help them leapfrog the old, dirty development path of the Global North. In developing countries where industrialisation has stalled or reversed prematurely, expansion of higher-productivity sectors with higher-wage employment, especially manufacturing, remains key to sustained development (TDR, 2020). This requires international support, in the form of investment and regulatory change, and reconsideration of trade and intellectual property regimes to ensure the necessary technology is transferred and avoid a conflict between development and environmental goals (TDR, 2019, 2020)

Raising wages in line with productivity will be key to moving to a fairer society. This is best achieved by fulfilment of labour rights obligations including giving workers a secure and protected voice in their employment conditions, including through organized unions. At the same time, job insecurity also needs to be corrected through appropriate legislative action (including on informal and precarious work contracts, which are often disproportionately held by women, young people and migrant workers) and active labor market measures. And again, more progressive tax policies, including on work income, capital income, corporate income and wealth including property, could help address income inequalities (TDR, 2017) and increase the availability of resources that countries have to invest in public services and a more inclusive economy.

4 What the world economy might look like under a global green new deal

Countries cannot be expected to undertake the required policy programs in isolation. At the global level, a new multilateralism is urgently needed to achieve the 2030 Agenda and, in particular, SDG 10 and to pursue these policy programs in a way that maximizes the effectiveness of national development strategies without creating negative global spillovers to partner nations.

Putting numbers on these principles, landmark estimates indicate that a global green new deal will require investing 1.5-2 percent of GDP globally in renewable energy, both to contain energy consumption and to develop renewable energy supply (Chomsky and Pollin, 2020). This compares to an estimated 0.4 percent of global GDP invested in renewable energy in 2016. Protracted over twenty years, such investment flow is estimated to bring down carbon emissions by 40 percent while allowing for continued global growth and leading to higher employment due to the employment-intensive nature of key tasks required to increase energy efficiency.

Taking into account global feedbacks through a global econometric model indicates that these reference estimates are in the realm of the possible. However, it also highlights the extent to which current policies, state support and multilateral institutions will have to change for the green transition to happen.

International coordination will be key, to counteract the disruptive influence of capital mobility (which can undermine any isolated expansionary strategy), contain current-account imbalances and support the transition to a low-carbon economy, especially in developing countries.

Large and protracted global imbalances are not sustainable because they lead to the accumulation of external debts, a process that frequently ushers in currency crises leading to cuts in domestic spending. External deficits are eventually reduced but at the cost of recession, with lasting consequences in affected countries and on global demand, particularly when contagion occurs. A coordinated alternative, in which domestic spending is maintained in all countries but accelerates faster in surplus countries, can achieve rebalancing with limited national and global cost (TDR, 2014).

Likewise, uncoordinated policies on carbon emissions have failed to stabilize the climate (IPCC, 2018). Developing countries with abundant reserves of fossil fuel will continue to tap these if development depends on them and users are charged market prices (as per international trade agreements) for cleaner technologies. Only multilateral coordination can bring the full value of climate stabilization to bear, promoting technology transfer and investment for a transition to a low (or zero) carbon growth path.

In order to gauge the difference a global green new deal would make we must first consider where business-as-usual (i.e. pre-pandemic) policies will lead.

If, as remains a distinct possibility, countries return to their pre-Covid-19 growth regimes, the global economy from here to 2030 will face slower growth and higher instability. As labour shares across the world continue to trend down, household spending will weaken, further reducing the incentive to invest in productive activities. This will mean lacklustre employment creation and stagnant wages in developed countries as well as slow (or negative) expansion of domestic markets in developing countries. Both outcomes will worsen as governments keep engaging in a global race to the bottom under the umbrella of boosting competitiveness. Aggregate demand expansion will slow down further as governments continue to reduce social protection benefits and abstain from infrastructure investment, which will also make supply constraints tighter. In the meantime, unchecked credit creation will continue to fuel destabilizing financial transaction while failing to stimulate private productive investment. Finally, lacking sufficient investment and international agreement on technology transfer, carbon emissions will continue to increase overshooting the Paris target and posing an existential threat to the most at-risk regions. By projecting pre-Covid-19 policy trends into the future, it is easy to paint a dark picture.

In stark contrast, an internationally coordinated policy package of income redistribution, fiscal expansion and state-led investment, based on robust estimate of the effects of feasible policies, which also responds to standards of transparency and the need for participation on public issues to enhance public trust, may usher in a more dynamic, fairer and greener world economy.

4.1. Income redistribution

Labor shares can be boosted with regulation that supports employees' compensation while limiting profit markups. Raising minimum wages, strengthening collective bargaining institutions and increasing employers' social security contributions are the primary instruments. Data suggest that it is realistic for labour in developed countries to regain by 2030 at least half the income share lost since the late 1990s while shares can grow faster in developing countries to drive up domestic demand more significantly and minimize labour cost competition with developed countries. Although the impact of a global Green New Deal goes beyond the level of economic activity (see sect. 4.3), the latter will be positively affected. Fairer distribution will drive up GDP growth by supporting household spending and business investment, including investment in labour-saving innovation that will raise productivity, supporting a technological "race to the top" instead of the ongoing race to bottom. But international coordination is critical. Without coordination, countries that raise the labour share could, moreover, face the prospect of reduced competitiveness.

4.2. Fiscal expansion

In order to sustain global demand, government spending will have to continue to expand in both developed and developing countries, but the components of spending will play different roles in different contexts. In general, in developed countries, spending on goods and services will have to expand more significantly in order to meet the need for public investment, especially in green infrastructure. An average increase of 2 per cent of GDP is a plausible figure. Government transfers (such as funding of public health-care systems, unemployment benefits, food subsidies, subsidies to production etc.) will also need to increase moderately to meet the needs of ageing populations.

In developing countries, government transfers will have to increase at a faster rate in order to offset protracted austerity and to establish stronger social protection systems necessary to ensure the compliance of states' human rights obligations to fulfill minimum essential levels. Spending on goods and services in these countries will have to continue growing in absolute terms but will have to effectively managed in order to minimize inflationary pressures and pressures on public budgets.

Estimates of government spending multipliers indicate that such an expansion would partially pay for itself by generating higher GDP and (everything else being equal) higher tax revenue. But in all countries, taxation will have a significant role to play to support redistribution – through higher marginal rates of income taxes, both personal and corporate – and to ensure that government deficits are sustainable. Estimates of direct taxation multipliers indicate that a rise in progressive taxation has little negative effect on aggregate demand and, conversely, that tax cuts have little positive effect (which become negligible when they benefit only corporations and the wealthy). More progressive direct taxation is, therefore, compatible with an expansion of government spending and a gradual decline of government deficits in both developed and developing countries. International coordination is as important in this area as it is for redistributive policies, as the possibility of tax competition can easily dissuade governments from raising direct taxes, and tax avoidance and evasion opportunities and inequitable distribution of State ability to tax can erode revenues. Tax exceptions should be revised, and terminated when, for example, their impact contributes to greater inequality. In addition, countries that issue reserve currencies – especially the United States, and to a more limited degree other developed economies which issue major currencies (like Australia, Japan and the United Kingdom) – may combine increases of tax rates with forms of "functional finance" (TDR, 2020: 48) as a means to fund a government spending expansion.

4.3. Emissions and energy transition

Development requires sustained growth of output and demand in both developed and developing regions, implying massive increases in the demand for energy. Therefore, achieving environmental targets requires efforts on three levels: (1) drastic improvements in energy efficiency that can effectively reduce the sensitivity of energy demand to economic growth; (2) cuts to the production of carbon energy, to be partly compensated by higher production of non-carbon energy; (3) technological and financial transfers that support the energy transition. The latter is especially important for developing countries, which are currently projected to grow faster than developed countries in the coming decades but generally lag behind in the adoption of green technologies and often depend on exports of carbon energy to obtain foreign exchange. International coordination is instrumental in in breaking this dependence.

Energy demand

As a share of global GDP, global energy demand has been falling at an average rate of 1 per cent a year since 1970 (in real terms) but it has increased in level. Under a global green New Deal, global GDP growth of 4.7 per cent per year will require energy demand per unit of output to fall by approximately 4.5 per cent per year – ambitious but feasible. Many countries have achieved similar improvements in the past or done better when pressed by oil price increases.

Energy production and carbon dioxide emissions

Shifting energy supply to renewables is the second blade of the scissors that will cut emissions. To reach a minimally acceptable environmental target by 2030, the IPCC proposes a reduction of gross CO_2 emissions of 41 per cent in 2030 relative to 2010, in conjunction with a postulated increase of 21 per cent of total energy production. But scaling up successful country experiences here is not realistic as it would mean halting development.

A more gradual adjustment could feature deceleration and eventually a decrease of carbon energy production, falling from above 18 billion tons at present towards 15 billion tons of oil-equivalent by 2030, and acceleration in renewable sources from 1.5 billion to about 3.5 billion tons. Such a

combination will result in a fall to about 30–32 billion tons of gross CO_2 emissions by, which may or may not overshoot the Paris targes according to the IPCC.

Providing necessary technology and funding

This agenda requires a complex policy mix. The transitions of energy supply and demand require technology sharing and financial support for developing countries. A global transition away from carbon energy will eventually lead to lower oil prices (perhaps after initial increases due to the fiscal and investment push) and dramatic loss of foreign exchange revenues for many developing countries.

Meanwhile, the necessary investment push will require considerable increases in domestic and foreign financing, roughly at rates above 10 per cent per annum for the first five years, slowing down towards 4–5 per cent per annum afterwards.

Finally, while discussing strategies for emission reduction, it is important to note that other sectors, such as agriculture and waste management, play key roles too. Agriculture is a user of energy but also a source of non-energy-related carbon emissions and a critical factor in carbon sequestration. Climate-smart agricultural practices have the potential to reduce the stock of emissions while supporting food security.

5 Conclusion: coordination is key to a sustainable global economy

The strategies available to each country to transition to a fairer, more resilient and sustainable economy will vary over the coming decade. But there are some common elements that lie behind the idea of a green new deal. Returning labor shares to their levels of even the 1990s – a minimalist target - will increase growth between 0.25 and 0.75 per cent per year depending on the country. International coordination is key to ensure buy-in by all countries and to facilitate transmission of demand and productivity effects by enhancing trade and financial networks. Meanwhile, government spending multipliers would also be higher if countries coordinate the fiscal stimulus.

The extent to which private investment is stimulated by the expansion of public spending is also key. Considering that many economies currently experience weak or insufficient demand, the fiscal stimulus will likely result in sizeable increases of private investment and consequently faster productivity growth than if the pre-Covid-19 policies return.

Significant public investment in clean transport and energy systems is imperative to establish low-carbon growth paths and to transform food production for the growing global population, as well as to address problems of pollution and environmental degradation more generally. This will need to be supported by effective industrial policies, using a mix of general and targeted subsidies, tax incentives, loans and guarantees, as well as accelerated investments in research, development and technology adaptation, and a new generation of intellectual property and licensing laws. Specific measures and support will be required in developing countries to help them leapfrog the old and carbon-heavy development path followed by today's advanced economies.

For many countries, constraints to growth often emerge from supply bottlenecks, including lack of foreign finance. Therefore, coordination is key for investment. A coordinated strategy is needed to ensure that no shock triggers capital flights and that trade can compensate for domestic supply deficiencies. Also, a critical limit to productivity growth in many developing countries arises from technology, know-how and sophisticated capital equipment. Coordination to support technology transfers and access to markets is critical.

Trade rules are another external constraint to investment and industrial policy which has heavy consequences for domestic demand growth and, especially in developing countries, structural change. By effectively outlawing many critical forms of industrial and income policies, the international trading systems currently forces countries to adopt a version of export-led growth strategy based on extreme cost reduction, through wage repression, flexibilization of labor market rules and tax cuts. Furthermore, current trade rules enshrine the highest protection for intellectual property rights with great prejudice to north-south technology transfer and no benefit for innovation. The massive investment in technology adoption and overhaul of industrial policies required by a global green new deal are not possible unless trade rules and related dispute settlement mechanisms are overhauled too (TDR, 2021).

Based on available data and countries' policy experiences, and assuming an effective degree of international policy coordination (including South–South cooperation), a policy package of redistribution, fiscal expansion and state-led investment push is projected to yield GDP growth in developed economies 1–1.5 per cent above what can be expected from pre-Covid-19 trends. For developing economies, excluding China, growth gains may be between 1.5 and 2 per cent per annum. Growth above the baseline in China may be more moderate, close to an increase of about 1 per cent per annum.

A global green new deal, as specified above, will increase employment by approximately 13 million jobs in developed countries and 70 million jobs in developing countries (20 million of which would be in China) by 2030. These are relatively small numbers compared to a global labour force projected to reach 3.6 billion. But it is plausible that a globally coordinated strategy centred on state-led investment and social spending would have a substantially larger impact.

All States have an obligation to pursue development that benefits both people and the planet and equitably distributes the benefits thereof. Projections of growth, employment and emissions clearly suggest that decisive efforts are necessary, at the national and international levels, to achieve global growth and development that are sustainable economically, socially and environmentally, and to reimagine humanity's relationship with nature in pursuit of a sustainable future. The policies discussed in this brief are not intended as a definitive blueprint but rather a guide the direction of travel away from the prevailing policy approach that points to another cycle of unsustainable and unequitable growth and a precarious (or worse) future for the planet.

References

Bhattacharya A, Gallagher KP, Muñoz Cabré M, Jeong M and Ma X (2019). Aligning G20 Infrastructure Investment with Climate Goals & the 2030 Agenda. A report to the G20. Foundations 20 Platform. Washington, DC and Boston, MA. (accessed 25 June 2019).

Carleton TA et al. (2020). Valuing the Global Mortality Consequencese of Climate Change Accounting for Adaptation Costs and Benefits. *NBER Working Papers*. (27599):.

Chomsky N and Pollin R (2020). *Climate Crisis and the Global Green New Deal*. Verso.

Dafermos Y, Gabor D and Michell J (2021). The Wall Street Consensus in pandemic times: what does it mean for climate-aligned development? *Canadian Journal of Development Studies*. 15.

Diffenbaugh NS and Burke M (2019). Global warming has increased global economic inequality. *Proceedings of the National Academy of Sciences*. 201816020.

Eckstein D, Künzel V and Schäfer L (2021). Global Climate Risk Index 2021_2.pdf. German Watch. (accessed 7 April 2021).

Gabor D (2020). The Wall Street Consensus July. Available at https://doi.org/10.31235/ osf.io/wab8m.

Gore T (2020). Confronting Carbon Inequality: Putting climate justice at the heart of the COVID-19 recovery. *Oxfam Media Briefing*. 12.

IEA (2021). Global Energy Review: CO2 Emissions in 2020 – Analysis. Paris. (accessed 7 April 2021).

IIF (2021). Global Debt Monitor: COVID Drives Debt Surge - Stabilization Ahead? International Institute of Finance.

ILO (2017). World Social Protection Report 2017–19: Universal social protection to achieve the Sustainable Development Goals.

IMF (2021). Fiscal Monitor Database of Country Fiscal Measures in Response to the COVID-19 Pandemic, April 2021. Washington, D.C.

IPCC (2018). IPCC Special Report on Global Warming of 1.5°C: Summary for Policymakers. Incheon, Republic of Korea. (accessed 27 May 2019).

Izurieta A, Kohler P and Pizarro J (2018). Financialization, Trade, and Investment Agreements: Through the Looking Glass or Through the Realities of Income Distribution and Government Policy? (18):29.

OECD, ed. (2017). *Investing in Climate, Investing in Growth*. OECD Publishing. Paris.

OHCHR (2013). Report on Austerity Measures and Economic and Social Rights. (accessed 10 May 2019).

Ostry JD, Loungani P and Furceri D (2016). Neoliberalism: Oversold? *Finance and Development*. (June):4.

Oxford Economics (2017). Infrastructure Outlook 2017.

Oxford University (2021). Global Recovery Observatory. (accessed 13 April 2021).

Perugini C, Žarković Rakić J and Vladisavljević M (2019). Austerity and gender inequalities in Europe in times of crisis. *Cambridge Journal of Economics*. 43(3):733–767.

Pollin R (2015). *Greening the Global Economy*. MIT Press. Cabridge, MA.

Popov V and Jomo KS (2015). Income Inequalities in Perspective. *Development*. 58(2–3):196–205.

Schröder E and Storm S (2020). Economic Growth and Carbon Emissions: The Road to "Hothouse Earth" is Paved with Good Intentions. *International Journal of Political Economy*. 49(2):153–173.

Schularick M and Taylor AM (2012). Credit Booms Gone Bust: Monetary Policy, Leverage Cycles, and Financial Crises, 1870–2008. *American Economic Review*. 102(2):1029–1061.

Storm S (2017). How the Invisible Hand is Supposed to Adjust the Natural Thermostat: A Guide for the Perplexed. *Science and Engineering Ethics*. 23(5):1307–1331.

Storm S (2021). Lessons for the Age of Consequences: COVID-19 and the Macroeconomy. *Institute for New Economic Thinking Working Paper Series*. 1–53.

TDR (2015). Trade and Development Report 2015: Making the International Financial Architecture Work for Development. United Nations. New York; Geneva.

TDR (2017). Trade and Development Report 2017: Beyond Austerity Towards a Global New Deal. United Nations. New York; Geneva.

TDR (2018). Trade and Development Report 2018: Power, Platforms and the Free Trade Delusion. 11.

TDR (2019). Trade and Development Report 2019: Financing a Global Green New Deal. UNCTAD. New York; Geneva.

TDR (2020). Trade and Development Report 2020: From global pandemic to prosperity for all: avoiding another lost decade. UNCTAD. New York and Geneva.

TDR (2021). Trade and Development Report 2020 Update: Out of the frying pan ... Into the fire? UNCTAD. New York; Geneva.