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The United States can help the IMF to rethink how it lends

The funding powerhouse should encourage the International Monetary Fund to prioritize research into sustainable development.

Last week, the world's economics and finance communities ended their annual meetings — held online this year — on a salutary note. The International Monetary Fund (IMF) proposed a US$650-billion boost to the foreign-currency reserves of countries with financial difficulties, following the deepest global recession in more than a century.

The allocation, known as Special Drawing Rights, enables countries that are low on US dollar reserves to access this and other global currencies to buy essential pandemic supplies, notably vaccines. But its size pales next to the Biden administration's planned $2.3-trillion economic stimulus to reboot the US economy, which has been stalled by COVID-19. As part of this, the administration intends to ask Congress to authorize sizeable increases to the budgets of public agencies. A particular focus will be on strengthening funding and regulatory agencies working in climate change and environmental protection, public health, racial justice and scientific and health research.

In doing so, the government is upending the practice not only of its predecessor, but also of US governments going back some four decades. Most of those governments have tended to restrain public spending, especially that on the infrastructure of the state. The Biden administration has recognized that the lack of such public spending has greatly harmed some of the country's most vulnerable populations. It must now take this message to large global lending agencies such as the World Bank and the IMF. As the largest shareholder, it can and should work with the IMF to help it prioritize lending to research and universities.

Course correction

If the pandemic has taught us one thing, it is that the environment, health care, regulation and research are precisely the sectors that need to be supported if countries are to emerge stronger both during and after the pandemic. They are also essential to meeting the United Nations flagship Sustainable Development Goals (SDGs), aimed at alleviating poverty and achieving environmental sustainability (see page 347). The IMF and its members are all committed to the SDGs, which is another reason why the agency must be helped to adjust its lending criteria to support the know-how needed to achieve the targets.

The pandemic risks putting back most of the SDGs by a decade, according to a UN report published to coincide with the IMF meetings. Take the target to achieve universal primary education by 2030, one of the closest to being met before the pandemic. Schools educating more than 150 million children around the world have been closed for a year, according to data from Johns Hopkins University in Baltimore, Maryland, and UNICEF, the UN funding agency for protecting children's rights. As the pandemic enters its third wave in many places, it is not clear when these children will be able to return to school.

> **"The pandemic risks putting back most of the SDGs by a decade."**

Progress towards affordable access to further and higher education has also been set back. Although many institutions are providing online learning, students from the lowest-income communities tend to lack access to broadband, personal laptops and smartphones, so are often unable to participate in classes. The paradox is that this is happening just as the UN has been recruiting universities to help countries meet their SDG obligations. Several of the world's major university networks, including the Association of African Universities and the Association of Commonwealth Universities, have been encouraging their members to implement SDGs more actively.

Many researchers have been deeply involved in the SDGs since the goals were launched in 2015. Researchers have also been monitoring progress towards the goals, and have been helping countries to meet their individual targets (Z. Xu *et al. Nature* **577**, 74–78; 2020). It is good that universities are being asked to do more. But this is coming at a time when most are facing financial hardship, and when international lenders such as the United Kingdom's Foreign, Commonwealth & Development Office are making sudden and damaging cuts to their support for research partnerships with low- and middle-income countries (see page 353).

Basic needs

When the IMF provides loans, some countries balance the books by cutting public-sector spending, such as on energy subsidies or funding for higher education. When this approach was applied to financially distressed countries in the 1980s, development economists warned that it would damage countries' subsequent economic recovery. They also argued that funding for people's basic needs should be met by the state — as is the case in many high-income countries. Countries in Africa and Latin America suffered greatly under what were called adjustment or stabilization policies — conditions on spending to which countries had to adhere to receive IMF loans.

Richard Jolly, an economist at the University of Sussex near Brighton, UK, and a former deputy head of UNICEF, describes how the organization had become so concerned that it commissioned a two-volume study, *Adjustment with a Human Face*, highlighting how international lending policies were harming the welfare of children and young people. But, at the time, such concerns were up against a different way of thinking: that prosperity can be achieved through lower government spending.

Now, as the pendulum looks to be swinging the other way, the IMF's shareholders, led by the United States, must

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allow the agency to assist countries in meeting the SDGs by lending money to strengthen universities, along with research and policy in regulation and health care.

International policy priorities in finance and economics are entering a new phase, partly as a result of the pandemic. The US government has signalled that it intends to borrow eye-watering sums of money; and that it needs to do so because of its own previous neglect of those parts of the public sector that are essential to achieving sustainable development, racial equity and social justice.

The Biden administration is rightly reconsidering the nation's previous convictions. It must now also work constructively with the IMF and other institutions over which it has influence to help them do the same.

It's time to invest big in COVID drugs

Vaccine development has been a resounding success. But the medicine cabinet should have been better stocked.

The global disruption caused by COVID-19 has been a shock, but not a surprise. For years, researchers have warned that a deadly viral pandemic could bring nations to their knees. They urged governments and pharmaceutical companies to work together on broad-spectrum antiviral drugs — capable of beating a variety of viruses — and to ensure that those drugs were ready for testing in humans when disaster struck.

Influenza viruses, coronaviruses and relatives of Ebola were all considered potential threats. But when the COVID-19 pandemic hit, the medicine cabinet was all but empty. Remdesivir was one of just a few 'shovel ready' antiviral drugs that researchers could quickly put into human testing. In early tests, it showed some success in reducing the time that people with COVID-19 spent in hospital. But other studies have not shown the drug to be beneficial.

Coronavirus vaccines are rightly being celebrated, but antiviral drugs could — and would — have had a crucial, life-saving role. The public sector should have rallied quickly to develop them, as it did for vaccines, but this has not yet happened. Although scientists and companies are starting to make concerted efforts, most governments are not treating this issue with the same urgency as they have vaccines. Unless that changes, the world might remain just as poorly prepared for the next viral pandemic.

The warnings — in the past 20 years alone — have been loud and clear. An outbreak of severe acute respiratory syndrome (SARS) in 2003 prompted calls for more antiviral drug development. But there was little action by funders, partly because the threat subsided. Another warning came a decade later, after an outbreak of Middle East respiratory syndrome (MERS). Again, governments and industry paid little heed. Some drug programmes trundled on, but without proper investment towards a clear goal — the production of drugs that have been safety-tested in people and that could be made ready for fast and decisive clinical trials.

> "Public health requires investments in drugs to counter any pathogen with pandemic potential."

This pandemic could change that. As reported in a Feature on page 340, a number of initiatives are under way to right this wrong. The COVID R&D Alliance, a consortium of more than 20 life-science companies and venture-capital firms from around the world, is aiming to create an organization that will accelerate the development of drugs against coronaviruses. The consortium, which was set up last year, plans to prepare 25 candidate medicines for trials in humans, so that at least some can be ready for larger trials when the next pandemic-causing virus strikes.

The COVID R&D Alliance, and another global project called the Rapidly Emerging Antiviral Drug Development Initiative, are in the process of raising funds from industry and governments. The US National Institutes of Health (NIH) is planning to invest heavily in creating drugs to fight SARS-CoV-2. It is essential that the agency is given the funding to make strategic bets in creating drugs for the next pandemic.

In contrast to these efforts, vaccine development happened at lightning speed when the richest countries agreed to provide funding while vaccines were being developed. Some countries agreed to purchase the resulting vaccines, even if they failed. A similar funding vehicle — one based on both the public and private sectors being willing to take risks — must be considered for antiviral drugs.

There are models for success here. Remdesivir was almost ready to be tested, thanks to the work of researchers backed by an NIH project called the Antiviral Drug Discovery and Development Center. This was launched in 2014 to screen drug libraries for candidates that could inhibit viruses, including influenza and coronaviruses. Remdesivir's effectiveness in animal models was established in 2017. It was tested in people and shown to be safe during an Ebola outbreak in the Democratic Republic of the Congo, Liberia and Guinea. That meant the drug was ready for more widespread human testing should the need arise.

At least twice before, world leaders were warned to build up a medicine chest of ready antiviral drugs. But momentum fizzled out as previous outbreaks ended, and because of a perennial argument between governments and industry over who should contribute what share of the bill.

The pandemic has shown that this was wrong-headed. Public health requires investments in drugs to counter any pathogen with epidemic or pandemic potential; that includes many airborne and mosquito-borne diseases, and, of course, the threat of antibiotic resistance remains. Governments collectively provided around US$90 billion in funding for vaccines in 2020, and some of the work this has funded will help in future pandemics. They must do the same for antiviral drugs, which need to be distributed equitably. The world cannot afford to be caught with an empty cabinet again.