

# Vital for growth measures to include environmental damage

By Vinod Thomas

ONE FLAW in widely used measures of country economic performance is their heavy reliance on short-term GDP growth, ignoring environmental and social impacts. A notable exception is the United Nations' Human Development Index (HDI), combining income per capita with life expectancy and education attainments. The addition of environmental damage to HDI in a new Planetary Pressures-Adjusted Human Development Index (PHDI) represents a huge step forward in growth accounting.

To drive global climate action, however, the PHDI's measure of *per person* impact on greenhouse gas (GHG) emissions should be reinforced – with a country's *total* emissions as well as *per dollar GDP* emissions.

Because the PHDI considers the per person impact, high-income countries, with greater per capita consumption levels, tend to get a lower ranking on the PHDI than HDI. Norway falls 15 positions from the first place (out of 169 countries in 2019) when planetary pressures per person are added; Singapore drops 92 positions from 11th and the United States falls 45 positions from 17th.

The environmental calculus also highlights a conundrum. Policymakers are under pressure to push for higher GDP growth – which for the most part goes with human development. But higher incomes also conflict

severely with ecological damage – unless fundamental changes are made to how GDP is generated.

The PHDI rightly flags the personal responsibility in the sharp rise in global warming. But it falls short of prompting enough action on climate change. Because global warming is driven by total GHG emissions, impacts are largely determined by the top emitters, led by China, the US, India, Russia and Japan. China's total carbon emissions – the main component of GHGs – is 40 times more than Singapore's, while Singapore has a higher per capita.

The size of the economy matters also because country policies influence large swathes of GDP, energy use and carbon emissions. The success of the Paris climate agreements hinges on commitments being met, especially by the big emitters.

That said, total emissions of a country say less about fairness in climate action than the part attributed to an individual. Ranking countries on "total harm" rather than on a per capita basis also gives no allowance for the population size.

Both the per capita and total approaches give important information, but on their own, fall short as policy nudges. A third way to complement the formulation of PHDI is to delineate emissions per dollar GDP. This would put the onus on all economies, but especially the big emitters, to cut pollution.

Expressing harm to the planet as a share of GDP gives the motivation to improve the quality of growth. A country can raise its position by innovating and shifting to a low- or no-carbon path. And there is vast room for such improvement as reflected by differences in carbon intensity of GDP: the United States' emissions/GDP is less than one-fourth of Russia, with Singapore falling in the middle.

Asia has some of the largest emitters, in total (China, India) and per capita terms (South Korea, Japan). The region also has among the best and worst performers in human development, Japan and Singapore being on the higher end and India and Pakistan at the lower end. The region illustrates both the priority to strengthen human development, which is helped by growing economies, and the imperative to avoid rapid growth hastening climate change.

## INVESTING IN HUMAN CAPITAL

The way forward in these circumstances is to continue investing in human capital, but strictly by employing low or no carbon energy sources, such as renewable forms of energy.

Total emissions, by one set of estimates, must fall by half by 2030 and reach net-zero before 2050 to keep global temperature from rising more than 1.5 degrees Celsius. It is encouraging that China has announced car-

bon neutrality by 2060, Japan, South Korea, and the US by 2050. For Singapore, the announced S\$100 billion climate investment should be devoted both to decarbonisation and building climate defences. Climate investments should be frontloaded (that is, make greater efforts the earlier years) because climate damages and mitigation costs are fast accelerating.

The US, the second largest emitter after China, highlights the need for a sharp turnaround in climate policies. With impressive announcements on climate action, the incoming Biden administration will need to push through the Senate several policy U-turns from the positions established by the Trump administration.

Environmental care is a shared responsibility across large and small countries. The new index factoring per person planetary impacts calls on all countries, especially high-income ones with high consumption levels, to reduce their carbon footprints.

To stall climate change, however, all large emitters need to be in the frontline driving decarbonisation. A goal that will resonate with policymakers in big and small economies is to innovate and slash emissions per dollar GDP being produced, with the degree of the cut mapping carbon intensity.

■ The writer, a former senior vice-president at the World Bank, is a visiting professor at the National University of Singapore, and author of 'Climate Change and Natural Disasters'.