



The realist case for combating climate change

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Japan was hit by a spell of unseasonably hot weather in late May. Weather is normally mild in May and that is why many schools hold annual sports events then. However, due to an unusual heat wave this year, hundreds of people across the country suffered heat strokes and there were several fatalities. In northern India, temperatures reached 50 Celsius in early June, causing fears of a severe drought. While it may not be scientific to attribute extreme weather entirely to climate change, it is undoubtedly a pressing challenge that must be addressed.

Countries around the world joined the efforts to combat climate change in the 2015 Paris Agreement. This is a remarkable first step, but it does not mean that the problem has been sufficiently addressed. Each country is free to decide how vigorously it will fight global warming. Even if all countries meet their current targets, we will still fall far short of the agreement's goal to keep the rise in global temperature within 2 degrees from pre-industrial levels.

Why do countries fail to set more ambitious targets? Is it due to the economic interests of greedy adults — as suggested by young protesters calling for more aggressive actions? If “green growth” is brought about by aggressive actions through ambitious targets, there will no doubt emerge new forces that count on new interests to be generated by such growth, and governments will be more willing to set higher targets. If that was the case, the international climate negotiations would not have been so confrontational. However, such rosy picture is not in line with reality.

The reason why governments have difficulty setting far-reaching targets is that there is a strong correlation between economic growth and energy consumption. Mitigation efforts, especially carbon pricing, would inevitably entail costs to their national economies and governments need to address trade-offs between mitigation efforts and other policy objectives. Since Japan's energy prices are among the highest in the

OECD, raising them further by more ambitious actions could damage its industrial competitiveness and cause regressive effects on low-income families.

The only solution to resolving the trade-offs will be innovations for disseminating low-carbon technologies with higher performances and lower costs. Today, coal-fired thermal power generation is often demonized due to its high carbon content. However, even in Germany — hailed as the frontrunner in the fight against climate change — coal accounts for roughly 40 percent of total power generation.

This is partly due to challenges faced by renewable energy in terms of its costs and negative impact on electricity grid stability. It is true that the cost of renewable technologies has been rapidly declining in recent years. However, as the share of variable renewables such as solar and wind grows, more investments for power transmission lines are needed and thermal power plants remain necessary for counterbalancing the unstable power output of variable renewables.

Ruling out the construction of new coal-fired power plants based solely on climate concerns without overcoming the challenges posed by variable renewables could result in prolonged dependence on old, inefficient coal-fired power plants to ensure grid stability, which would result in more emissions due to the failure to replace these old plants with new, more efficient ones. A one-sided view is often the enemy of an effective solution. More importantly, coal is still cheap and abundant throughout the world, and developing countries need an affordable and reliable energy supply to fuel economic growth.

As discussed above, innovation is the key to fighting climate change. This requires a sustained financial flow for innovative low-carbon technologies. Will rapidly expanding ESG investing — investment methods that consider environmental, social and governance factors — make that possible? ESG investing is growing but it is still in its infancy.

For example, the European Union is currently legislating “sustainable finance” for inducing a financial flow to a list of technologies that meet sustainability criteria. But it is a rather complicated exercise to judge which technologies will effectively reduce carbon dioxide emissions.

For example, electric vehicles are deemed emissions-free under EU terms. However, the emissions performance of EVs depends on the fuel mix of power generation. In a

country with a high share of coal in its power generation, the introduction of hybrid cars can cut more CO₂ emissions than EVs in terms of upstream emissions that account for the energy supply's emissions. From the viewpoint of eventual decarbonization in the future, it makes sense to focus on EVs and fuel-cell vehicles whose "tank-to-wheel" emissions are zero. However, we also need to consider the transition from now to then. Whether the elimination of hybrid vehicle from the list of sustainable technologies is truly a sensible strategy deserves careful consideration.

Setting overly simplistic criteria would run the risk of hampering efforts to transition to a low-carbon economy. Social transformation takes time and criteria for evaluating technologies should take this reality into account. It is crucial and challenging how to establish appropriate criteria for encouraging financial flows to businesses actively pursuing low-carbon innovations.

Climate change is a long-term global challenge. It is a difficult issue as well due to free-riding incentives and scientific uncertainties. To overcome such challenges in an economically and environmentally sustainable way, the world must work together to develop innovative technologies and disseminate them at a reasonable cost. We should always bear in mind that climate change is one of the 17 sustainable development goals. If energy use is restricted and energy prices are raised for the sake of a 1.5 degrees target as indicated in the Intergovernmental Panel on Climate Change's scenario, it could cause serious trade-offs with other global agendas such as the eradication of poverty and hunger.

Blaming particular groups and rejecting existing technologies is counterproductive. What we should do is to prepare a policy and a business environment where low carbon technologies can be disseminated at a reasonable cost. This approach is reflected in the long-term strategy on climate change recently published by the Japanese government, which spells out a cost-reduction target for key low carbon technologies.

Japan will host the Group of 20 summit at the end of this month and innovations for low carbon future will be one of the key topics. I hope the G20 heads of state engage in constructive and cooperative discussions and work out a tangible collective action on this crucial issue.