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Decarbonizing Asia and the Pacific: Some Key Issues Countries will be Facing

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Context for Decarbonization

Decarbonization is increasingly driven by economics: overall, low carbon technologies are getting cheaper relative to other technologies (but with exceptions of course)

Sometimes carbon-intensive technologies are locked in by long-term contracts, uncertainties in planning, institutional inertia, weak regulation, lack of up-to-date knowledge about economic considerations, risk-aversion, monopoly power protecting from market competitive forces, etc.

Concessional financing can sometimes help offset obstacles to decarbonization. Countries should be clear which obstacles are being addressed (it will often not be straightforward incremental cost)

International agreements (e.g. UNFCCC, Paris Agreement) can help push decarbonization (including role of NDCs, Long-term Strategies, etc.)

Quid pro quos can be important, i.e. implicit international deals to help with mitigation if helped with adaptation

Sectoral issues matter a lot: e.g. transport, energy, agriculture, urban development

Complementarities of technologies are often important, where some are now cheap and others are not yet (e.g. solar is cheap, medium-duration energy storage is not yet cheap)

Countries are sometimes not sure whether to focus on self-interest in decarbonization or on mutual international interest, mainly because of changing economics

Disruptive Technologies and Decarbonization

Technologies are “disruptive” when they pass below a price point which makes them spread very fast. It is important to note that when existing assets have a lot of technical life remaining (e.g. typical coal power plants in Asia as compared to other regions) those disruptive price points for newer technologies might take a long time to reach (or alternatively the residual value of stranded assets can be relatively high)

That’s known as a “tipping point”, after which a technology rapidly becomes very widespread (e.g. cellphones, solar PV)

Predicting tipping points is difficult, but such predictions need to be factored into long-term planning and technology choice. Maximum knowledge and awareness is therefore vital

Often the public sector is not as good a predictor of disruptive change as the private sector with its international experience, therefore involving the private sector is more important where technology change is disruptive

Concessional Financing and Decarbonization

For developing countries concessional financing is available to support decarbonization (within the context of the Paris Agreement pledging \$100 billion/year from 2020 flowing to developing countries).

Such concessional financing is channeled partly through multilateral climate funds (e.g. Climate Investment Funds, Green Climate Fund), to which multilateral development banks (including ADB) can be an intermediary.

In general, concessional financing is allocated to projects which are transformational and replicable (i.e. catalytic projects).

The financial costs of technologies in such projects can thereby be reduced relative to other technologies and projects, which can obviously influence technology choice and accelerate the global deployment of those technologies. This in turn can reduce the underlying technology costs through economies of scale and technology learning curves. This can help lead to tipping points and disruption.

What is a “Just Transition”?

Transitions away from carbon-intensive economic activity is described as “just” when those who lose something (e.g. jobs) in the transition are adequately compensated. This term is often applied to transitions away from the use of coal specifically, or from fossil fuels more generally.

The improving economics of disruptive non-carbon technologies can help ease the burden of financing just transitions somewhat. Nonetheless financial transfers from developed to developing countries may be justified.

Key considerations in just transitions include how negatively affected communities are compensated, how are physical assets best repurposed, how are human capacities best reskilled/reemployed, how is community identity best preserved, how are transitions best planned/managed/coordinated, how is fiscal balance assured during the transition, and how is reliable energy supply maintained. Transitions away from fossil fuels are more advanced in Europe and The US than in developing countries – there are lessons to be learned about how to do it and how not to do it!

One overarching lesson from transitions: there needs to be a plan that addresses the key considerations in an integrated and transparent manner.

Reconciling Development and Decarbonization

Developing countries generally want to decarbonize in a manner that enhances economic development and doesn't compromise achievement of SDGs.

This can be facilitated by declining technology costs and concessional financing but is likely to need underpinning by macroeconomic analysis and modelling.

An emerging example of how to approach this is manifested in how the World Bank's Country Climate and Development Reports (CCDRs) are supposed to be prepared. They are to be jointly conducted between the country, the World Bank and development partners.

CCDRs are intended to provide countries with a development agenda and financing strategy that reconciles SDGs and decarbonization, underpinned by an economy-wide modelling exercise. CCDRs will be prepared for all developing countries that are World Bank members. For example, in Asia CCDRs for Bangladesh, China, Indonesia, Nepal, Pakistan, and Philippines are currently underway.

Trade, Carbon Border Taxes, and Industrial Decarbonization

Major export markets are moving to tax embedded carbon in imports (for example, the EU plans to impose a carbon border adjustment mechanism. This could be replicated in other markets).

This could make some industrial exports from Asia and elsewhere uncompetitive in those export markets unless those industries decarbonize.

Decarbonizing industry can mean transitioning specific industries away from fossil fuel based industrial processes (e.g. using coal in steel making) and/or transitioning electricity sectors away from fossil fuels to reduce the embedded carbon.

Given that very major investments can be involved, the time to start is probably now.

Some Implications for Asia- Pacific Countries

Decarbonization strategies (including NDCs) could usefully be articulated around the investment implications of the declining costs of specific disruptive technologies (in the energy, transport, and agriculture sectors, carbon-neutral city development, etc.), as well as the other external benefits (e.g. reducing air pollution).

Concessional financing flows are a very important factor in accelerating the deployment of disruptive technologies, underpinned by international climate agreements.

Decarbonization strategies need to factor in the complementarity of certain technologies (e.g. variable renewables such as wind and solar, and energy storage), where some of the technologies are disruptively cheap and other may not be yet.

It is important to formulate an overarching plan for any just transition.

Countries are likely to start facing taxation on embedded carbon in some key export markets, so that remaining competitive will require industrial decarbonization, which generally takes some time.

Some Concluding Remarks

We have looked at the role of disruptive technologies in shaping the economics of decarbonization, of concessional financing in determining the cost of capital in decarbonization, the importance of just transitions, how to ensure that decarbonization is consistent with achieving the SDGs, and how emerging carbon taxation of international trade might shape competitiveness.

Countries need multifaceted strategies for decarbonization, and above all to see decarbonization as opportunity, while mitigating the costs.