A G20 growth agenda: Carbon pricing for financing infrastructures

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The 2°C budget does not leave any leeway

- Cheap and abundant coal is the driver of a „re-carbonisation“ of the energy system in some parts of the world

*All budgets are subject to considerable uncertainty, see Edenhofer et al. (2016)
The challenges for the G20

- Overuse of the global commons
- Underprovision of public infrastructure
Projected cumulative infrastructure demand

2014 US$. trillions

- Telecommunications
- Water & sanitation
- Transport
- Energy

Projected demand 2015-2030

- Low income countries
- Lower middle income
- Upper middle income
- Lower high income
- Upper high income countries

Bhattacharya et al. (2016)
Carbon pricing along common but differentiated responsibilities

- Carbon pricing (with taxes or emission trading systems) is essential because of the oversupply of fossil fuels.

![Graph showing CO2 price over time with different economic conditions labeled as Targeted, Transformative, Operational, and Introductory for Developed and Emerging Economies, along with Subsidies in 2017.](image)
Carbon Pricing in G20 Countries

2005

G20 ETS Tax ETS and Tax Scheduled Considered

Own presentation, based on Worldbank (2016)
Carbon pricing revenues are sufficient to finance universal access to infrastructure except for roads where Africa’s & Latin America’s costs still partially exceed revenues.

Jakob et al. (2016)
Carbon pricing and access to infrastructure – Example of Nigeria

- Expansion of infrastructure can be designed to benefit low-income earners
- Example Nigeria: low-income earners so far severely disadvantaged concerning access to infrastructure

Dorband (2016)
Carbon prices: direct distributional effects

- Low-income earners have a higher percentage of CO₂-consumption
- Direct effect of carbon prices is regressive

Own presentation, based on Grainger & Kolstad (2008)
Carbon pricing and tax reduction – Example of British Columbia

- Introduction of a carbon tax in 2008:
  - Significant decrease of CO₂-emissions
  - Continuous public support
- Use of revenues: reduction of corporation and income tax

Source: left figure: Link, right figure: Link
G20 has to combine climate protection and carbon pricing with the SDG agenda

- Reorienting investment strategies to exploit the significant opportunities of low-carbon, climate-resilient infrastructure
- Transforming finance to be an enabler and driver of change
- Phasing out fossil fuel subsidies
- Price carbon broadly while increasing access to sustainable infrastructure to ensure a just transition towards a low-carbon economy
G20 has to combine climate protection and carbon pricing with the SDG agenda