Basic principles and design: a recap on previous PMR discussions

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Carbon Pricing: Latest Developments on carbon taxes
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PMR carbon tax work stream

- PMR established carbon tax work stream in FY15
  - reflects interest in carbon taxes in a number of Implementing Countries
- Held first carbon tax workshop in Cologne, June 2014
  - Today’s workshop intended to build those earlier discussions
- Key focus of work stream is a design guide for carbon taxes
Tax on GHG emissions: definition and rationale

✓ A tax, which level is directly linked to GHG emissions (usually expressed as ton of CO2 equivalent)

Why taxing GHG emissions?

- Economic efficiency: cost-effective emissions reduction
- Revenues to the government
- Low administrative costs, low evasion rates
- Can have a broad coverage of emission sources but can also be targets
Carbon taxes around the world

- 4% of global emissions subject to a carbon tax
- 18 countries have carbon taxes implemented or scheduled
Long history to learn from
Key design elements of a carbon tax

- Tax base
- Tax rates
- Tax revenues
- Tax administration
- Measures to prevent emissions leakage
Tax base

◆ Coverage of fuels, sectors, and gases that will be taxed

◆ What commodities, products or activities will be taxed?
   - carbon content in fossil fuels, such as coal, natural gas, gasoline, diesel
   - Green-house gas emissions from point sources

◆ At which point of the value chain will it be taxed?
   - **Upstream**: suppliers of coal, at natural gas processing facilities, oil refineries, bulk importers;
   - **Intermediate**: (refined) products sales/imports and electric utilities;
   - **Downstream**: retail sales of fuel for transport and domestic consumption (e.g. British Columbia);
   - **At the stack**: at the point of carbon emissions to the atmosphere.
Tax rates

- Tailored to the intended objectives of a tax
  - Change of behavior or technology targeted?
  - Revenue raising target?

- Rate increase schedules
  - Some countries begin with low rates, and publish schedule for rate increase (British Columbia, France), others increase rates discretionary
  - Real terms increase: what index to use? (e.g. past or expected inflation)
  - Variable rates (e.g. indexed to prices in related emissions trading markets - Portugal)
  - Adjusted to local conditions: e.g. business and capital turnover cycles
Revenue potential of a carbon tax


- Revenues of GHG emissions taxes are still very small compared to direct taxes on income (British Columbia 3% of total revenue, Sweden ~1.5%)

- IMF: Potential revenue can be higher: e.g. 3% of China or India’s GDP assuming US$30/tCo2 tax rate and comprehensive coverage (Coady, et al 2015)

- Trade-off between fiscal stability and environmental effectiveness (erosion of tax base if behaviour is successfully modified), but can be managed
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