State and Trends of Carbon Pricing 2015 report

Objective

Report format has expanded from previous years to target wider audience of public and private stakeholders and also to provide input for COP 21

Chapters

1. **Carbon pricing status and overview.** Updated overview of existing and emerging carbon pricing initiatives around the world—including national, sub-national and corporate activities [coverage, volume, values]

2. **Analysis of the risk of carbon leakage**, and risk mitigations measures applied by national and sub-national CP initiatives.  **NEW!**

1. **Assessment of the rationale for international cooperation** in reaching global climate targets. A review of existing modeling work provides qualitative and quantitative assessment of cost saving and resource transfer potentials through carbon pricing instruments.  **NEW!**
Explicit and Implicit Pricing of GHG Emissions

Revenue neutral or require expenditure

**Implicit** GHG pricing e.g. fuel taxes, feed in tariffs, efficiency & emissions standards,

Reduce government expenditure

Fossil-fuel subsidy removal

Potential to raise government revenue

**Explicit** GHG pricing e.g. emissions trading, carbon taxes
Explicit carbon prices dwarfed by implicit ones

Note: The height of the bars represents the range of effective carbon price estimates found for the different instrument categories; the triangles represent a simple average of these estimates. "Regulations" refers to renewable portfolio standards.
Explicit carbon prices vary

- <US$1/tCO2e - $US130/tCO2e
- 85% priced <US$10/tCO2e
- US$50 billion in value
Both ETSs and carbon taxes are widely used

- **7 GtCO2e covered;**
- **12%** of global GHG emissions
Growing global GHG emissions being priced

- Number of instruments: 38
New carbon pricing initiatives since early 2014

<table>
<thead>
<tr>
<th>Country</th>
<th>Starting year of compliance</th>
<th>Carbon pricing initiative</th>
<th>Share of global GHG covered by carbon pricing initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>2015</td>
<td>carbon tax</td>
<td>10%</td>
</tr>
<tr>
<td>France</td>
<td>2014</td>
<td>carbon tax</td>
<td>12%</td>
</tr>
<tr>
<td>Hubei</td>
<td>2015</td>
<td>pilot ETS</td>
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</tr>
</tbody>
</table>

California and Québec coverage increase from 35% / 30% to **85%**
Expansion of national and subnational jurisdictions putting a price on carbon

39 NATIONAL JURISDICTIONS
23 SUBNATIONAL JURISDICTIONS

emissions covered

ETS implemented or scheduled for implementation
Carbon tax implemented or scheduled for implementation
ETS or carbon tax under consideration
ETS and carbon tax implemented or scheduled
ETS implemented or scheduled, tax under consideration
Carbon tax implemented or scheduled, ETS under consideration
Expansion of national and subnational jurisdictions putting a price on carbon

China and the U.S. two countries with largest volume GHG emissions covered

ETS implemented or scheduled for implementation
Carbon tax implemented or scheduled for implementation
ETS or carbon tax under consideration
ETS and carbon tax implemented or scheduled
ETS implemented or scheduled, tax under consideration
Carbon tax implemented or scheduled, ETS under consideration

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Climate Change
Corporate carbon price engagement is spreading

- In 2015 **437 companies** in all sectors have reported using an internal carbon price, up from 150 in 2014, and 100 in 2013

- Many of these companies operate in jurisdictions without legislated carbon pricing

- Prices range from $1 to $357 per tCO$_2$e

**Note:** Some companies report that a price range is applied as part of a sensitivity analysis, or to take into account projected price increases and regional differences in carbon prices.

**Source:** Author, based on CDP data.
Carbon leakage risk: potential, contained and manageable

- Carbon prices are intended to cause structural transformations and benefit low-emission, efficient firms.
- Carbon prices may distort competition between firms when they differ between jurisdictions.
- Risk of carbon leakage - emission reductions in one country is (partly) offset by increases in emissions elsewhere.
- The risk has not yet materialized on scale, but remains real, through contained to relatively few vulnerable sectors.
- Evidence shows it can be managed with policy design (integrated and complementary leakage prevention measures).
- Leakage risk decrease as global coverage increases.
Risk of leakage mitigated by policy design

Integrated measures (designed within the scheme)

- Free allowances
  - Based on historical emissions
  - Based on industry performance benchmarks (Fixed Sector Benchmarks or Output Based Allocation)
- Exemptions, tax free thresholds
- Output based rebates
- Border carbon adjustments

Complementary measures

- Subsidies to affected sectors to improve technologies
- Support for R&D
- Adjustment of other taxes
International cooperation can reduce the overall cost of achieving climate stabilization goal by 10–70%  

- All countries jointly would anyway benefit from cooperation but... the magnitude and distribution of cost savings will depend on the “de facto” effort sharing arrangement that will emerge from negotiations.

- Cooperation results in substantial cost savings and reduces development asymmetries
  - High-income countries can avoid most costly domestic emission reductions and convert savings into financial transfers to reduce emissions and boost development in low-income countries
  - Resource transfers needed to build stable climate coalitions (incentives to overcome “free-riding”)

- Carbon pricing can enable cooperation by mobilizing financial transfers needed to achieve cost savings
  - Carbon pricing (ETS, tax, offsets) can complement climate finance and achieve scale of transfers much larger than from public spending
Financial transfers can reach **$400 billion** in 2030 and **$2.2 trillion** in 2050.
FASTER principles for successful carbon pricing

F
Fairness

A
Alignment of policies

S
Stability and Predictability

T
Transparency

E
Efficiency and Cost-effectiveness

R
Reliability and Environmental Integrity
State and Trends of Carbon Pricing

Thank you!

https://openknowledge.worldbank.org/handle/10986/22630