Supporting implementation of the NDCs: The role of carbon pricing and fiscal policies

The Triple Win

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Making the Switch
Impact of subsidies

• Primer on Fossil Fuel Subsidies
• Scale of subsidies and different measurements USD 425 billion of consumer and producer subsidies globally
• Impact on SDGs
  • Fiscal space and the economy
  • SDGs
  • Social protection and safety nets
  • Health and air pollution
  • Gender
  • Climate Change
  • Renewables and Energy Efficiency

http://urn.kb.se/resolve?urn=urn:nbn:se:norden:org:diva-4845
Win 1: FFS and budgets

Countries implementing reforms in 2015–2016

‘Making the Switch’ http://urn.kb.se/resolve?urn=urn:nbn:se:norden:org:diva-4845

Graphic: International Institute for Sustainable Development (IISD)
Data from World Energy Outlook 2016, GSI studies and GIZ information
Win 1: FFS and budgets

Source: GSI-IISD, Financing the Sustainable Development Goals through Fossil-fuel Subsidy Reform: Opportunities in Southeast Asia, India and China, 2014
Win 1:

FF taxes and budgets

IMF (2017) Forthcoming
Win 1: FF taxes and budgets

(c) Gasoline

Argentina 7.6
Australia 12.7
Brazil 8.9
Canada 13.3
China 3.3
France 2.8
Germany 6.0
India 2.2
Indonesia 13.4
Italy 6.0
Japan 9.2
Korea 3.1
Mexico 20.6
Russia 7.2
Saudi Arabia 11.7
South Africa 6.5
Turkey 1.8
UK 6.6
US 17.0

(d) Diesel

Argentina 12.0
Australia 14.0
Brazil 16.3
Canada 10.8
China 5.8
France 18.9
Germany 17.6
India 7.8
Indonesia 12.7
Italy 17.3
Japan 8.5
Korea 6.6
Mexico 11.1
Russia 4.6
Saudi Arabia 11.0
South Africa 8.0
Turkey 15.7
UK 13.1
US 8.1

Legend:
- Supply cost
- Global warming
- Local pollution
- Congestion
- Accidents
- VAT
- Consumer price
Win 2: FF Subsidies + SDGs

### Expenditure on fossil fuel subsidies - % of GDP (2013)

- **Bangladesh** - 3.2%
- **India** - 2.5%
- **Nigeria** - 1.3%

### Population with no access to electricity (2013)

- 0%
- 10%
- 20%
- 30%
- 40%
- 50%
- 60%
- 70%
- 80%
- 90%
- 100%
- 38%
- 19%
- 55%

### Population cooking on traditional biomass (2013)

- 0%
- 10%
- 20%
- 30%
- 40%
- 50%
- 60%
- 70%
- 80%
- 90%
- 100%
- 89%
- 67%
- 70%

**Source:** IEA (2013)

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Win 2: FF Subsidies + SDGs

Fossil fuel subsidies represent just under half of the budget needed to fund the clean energy transition. Achieving universal energy access, doubling the share of renewable energy in the global energy mix, and doubling the rate of improvement in energy efficiency by 2030 is estimated to cost USD 1 trillion annually (SE4All, 2016)—savings from subsidies to fossil fuels could help fund this transition.

Climate Change Adaptation and Resilience:
Fossil fuel subsidies represent around 22 times more than 2014 financing of USD 22.5 billion (Merrill, 2016). By 2050 the gap is estimated to be huge at between USD 280-500 billion. (United Nations Environment Programme [UNEP], 2016).

Energy Access Around
1/2 The Gap

Climate Finance:
Fossil fuel subsidies are 6 times larger than the gap to reach the Paris pledge.

Education:
Fossil fuel subsidies are 11 times more than the gap.

Globally annual subsidies to fossil fuels are almost 11 times larger than the funding needed to plug the financing gap for universal education (USD 39 billion) (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2015).

Health:
Fossil fuel subsidies are 13 times more than the gap.

Fossil fuel subsidies are almost 13 times larger than the gap of USD 33.3 billion (2015) needed to finance health care (reproductive, maternal, new-born, child and adolescent health) (Global Financing Facility (2017).

Renewables:
3 times higher than renewable energy subsidies in 2014.

Consumption subsidies of almost USD 500 billion were more than three times higher than renewables subsidies of some USD 140 billion (consisting of USD 114 billion for non-hydro renewables for power generation and USD 24 billion for other sectors, notably biofuels) (IEA, 2016c).

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Win 2: FF taxes and SDGs

Percentage reductions in air pollution deaths from FFS reform and appropriate FF taxation

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage reduction of air pollution deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td></td>
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<tr>
<td>LAC</td>
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<tr>
<td>Advanced</td>
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<td>Emerging Europe</td>
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<td>E. D. Asia</td>
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<td>Com. Of Ind. States</td>
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<tr>
<td>Sub-Saharan Africa</td>
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<td>MENAP</td>
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</table>

Source: Authors’ calculations, based on sources in Appendix Table 2. Note: CIS = Commonwealth of Independent States; ED Asia = Emerging and Developing Asia, LAC = Latin America and the Caribbean; MENAP = Middle East, North Africa, Afghanistan, and Pakistan

Win 3: FFS + emissions reduction

Review of almost 20 studies on the impact of FFS removal
6-8% reductions by 2050
(Schwanitz et al, 2014, and Burniaux & Chateau, 2014)

‘In 2010 a world without subsidies would have had carbon emissions 36% lower than they actually were.’ (Stefanski, 2016)

3% 2020 and 8% 2050
(OECD, 2014 and 2015)
Win 3: FF taxes + emissions reduction

Percentage reductions in CO2 emissions from FFS reform and appropriate FF taxation

Win 3: Making the Switch

SWAPS

Swap Fossil Fuel Subsidies
USD 425 billion
Support Sustainable Energy for All
Swap Diesel and Gasoline Subsidies
Support Public Transport Systems

Swap Kerosene Subsidies
Support Solar Light Systems
Swap Diesel Fuel Subsidies
Support Solar Pumps

Research suggests that removing all fossil fuel subsidies would decrease global carbon emissions anywhere between 6–8 per cent by 2050. Swapping savings into sustainable energy would improve emissions reductions further.
What does this mean in the SDGs?

<table>
<thead>
<tr>
<th>Goal</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Goal 12: Ensure sustainable consumption and production patterns</td>
<td>Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities.</td>
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<td>Goal 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development</td>
<td>Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection.</td>
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</tbody>
</table>
What does this mean in the SDGs?

What does this mean in the NDCs?

<table>
<thead>
<tr>
<th>Inclusion of FFSR in INDC</th>
<th></th>
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<tbody>
<tr>
<td>Egypt</td>
<td>Burkina Faso</td>
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<td>UAE</td>
<td>Ethiopia</td>
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<tr>
<td>India</td>
<td>Singapore</td>
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<td>Ghana</td>
<td>Sierra Leone</td>
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<td>Viet Nam</td>
<td>New Zealand</td>
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<tr>
<td>Morocco</td>
<td>Senegal</td>
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<tr>
<td>China (energy pricing)</td>
<td>Mexico (energy pricing)</td>
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- 40 INDCs use fiscal instruments (including the EU representing 28 countries) **almost 70 countries**.
- 25 clean energy subsidies
- 14 fossil fuel subsidy or energy sector reform

What is actually happening globally?

The drop in fossil-fuel prices and in the value of subsidies has raised prospects for reform; the fall in technology costs has boosted the effectiveness of subsidies for renewables.

What is actually happening globally?

Without the reforms adopted since 2009, the value of fossil-fuel subsidies would have been 24% higher ($117 billion), putting the level of these subsidies at $610 billion in 2014.

What is actually happening globally?

Conclusion?

• Governments and fiscal policies matter
• They shape consumer and investor behavior
• Domestic progress in some countries good but
• Globally no obvious changes in the net increase taxes
• Many governments are still missing out on this triple win

FF SUBSIDIES
• Focus on finishing and cementing the job of fossil fuel subsidy reform within the window of the low oil price
• Focus on ensuring some of the funds go back to investing into renewable energy, energy efficiency and public transport
• Or sustainable development
• Create seed or switch funds to leverage private investment into energy

FF TAXATION
• Chronic undertaxation of fossil fuels, especially coal
• Need to increase the price of fossil fuels through active taxation of fossil fuels using less controversial measures such as VAT than a ‘carbon’ tax
• Use funds for country sustainable development plans and the clean energy transition