Fossil Fuel Subsidy Reform in Mexico

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Why did Mexico have so high fossil fuel subsidies for so long?

• Fossil fuel consumers in Mexico have enjoyed significant **subsidies** for almost a decade. PEMEX as sole producer and importer allowed total control over pricing policy.

• The implicit tax/subsidy is the result of the fixed price minus the opportunity costs of exporting/importing fuels.

• Social relevance and high weight in consumer index, made **stable** prices a policy priority, and choice, for 3 administrations. **Direct public finance adjustment valve.**

• High political sensitivity to abrupt price changes.

• **Policy Response:** Small but steady price increases to close a growing gap. It only stopped whenever intnt prices dropped. In this context Mexico’s **Energy Reform** proposed liberalization, gradual liberalization.
FOSSIL FUEL SUBSIDIES IN MEXICO

- Slow and steady real price increases allowed us to reduce fossil-fuel subsidies, even before the recent fall in oil prices.

Gasoline real prices in Mexico and the US, 1990 – 2015

(base: May 2015)
Not only gasoline.

- Diesel and LPG have also “administered prices”, with total control of imports and production by State owned firms.
- Depending on their initial situation, the increase in international prices coupled with the interest in price stability resulted in similar sized subsidies (10%-20%) over the past decade.
Two fundamental structural changes

• **Energy Reform**
  
  • Gradually, Private sector will be allowed to participate in more activities along the value chain. Franchises, imports, transportation, extraction. (Calendar 2014-2018)

• **(Green) Fiscal Reform.**
  
  • Introducing Mexico’s Carbon tax (US$3.5 per ton)
  • Moving from large net subsidies towards taxing fossil fuels to represent around 1% of GDP.
  • Change toward a per liter fixed excise tax (approved in 2015)
## Introducing Mexico’s Carbon Tax

- **Choice of instruments:** Environmental taxes (Prices) vs Cap & Trade (Quantities)

<table>
<thead>
<tr>
<th>Taxes</th>
<th>Cap &amp; Trade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher certainty on costs,</td>
<td>Higher uncertainty on costs,</td>
</tr>
<tr>
<td>higher uncertainty on outcomes</td>
<td>higher certainty on outcomes</td>
</tr>
<tr>
<td>Collection is easier as it can rely on</td>
<td>Developing deep and liquid markets</td>
</tr>
<tr>
<td>existing capacities and institutions</td>
<td>is a challenge</td>
</tr>
<tr>
<td>General application</td>
<td>Issues of initial, and subsequent, allocations</td>
</tr>
</tbody>
</table>

- In practice, environmental taxes seem to be the most attractive choice for most emerging markets.
### The Carbon Tax – Rates and Revenues

<table>
<thead>
<tr>
<th>Fuel</th>
<th>CO₂ potential (CO₂ per unit)</th>
<th>Tax (US $ cents* per unit of input)</th>
<th>Tax as % of Price</th>
<th>Revenue 2014 (*million US $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural gas</td>
<td>1.94 kg per m³</td>
<td>0.000 per m³</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>LPG</td>
<td>1.69 tons per m³</td>
<td>0.415 per liter</td>
<td>1.02</td>
<td>58.7</td>
</tr>
<tr>
<td>Gasoline</td>
<td>2.27 tons per m³</td>
<td>0.708 per liter</td>
<td>0.80</td>
<td>278.4</td>
</tr>
<tr>
<td>Kerosenes</td>
<td>2.60 tons per m³</td>
<td>0.846 per liter</td>
<td>1.10</td>
<td>28.4</td>
</tr>
<tr>
<td>Diesel</td>
<td>2.64 tons per m³</td>
<td>0.859 per liter</td>
<td>0.95</td>
<td>170.4</td>
</tr>
<tr>
<td>Fuel Oil</td>
<td>3.05 tons per m³</td>
<td>0.917 per liter</td>
<td>1.71</td>
<td>58.6</td>
</tr>
<tr>
<td>Coal</td>
<td>2.37 tons per ton</td>
<td>0.1881 per kg</td>
<td>2.85</td>
<td>0.6</td>
</tr>
<tr>
<td>Petrol Coke</td>
<td>3.27 tons per ton</td>
<td>0.1061 per kg</td>
<td>1.65</td>
<td>24.9</td>
</tr>
<tr>
<td><strong>Total (+others)</strong></td>
<td></td>
<td></td>
<td></td>
<td>620.1</td>
</tr>
</tbody>
</table>

(*Exchange rate for: May 2015)  Source: Estimations by SHCP, CO₂ potentials from CMM, Revenue from SAT
The rationale for environmental taxes.

1. Strategic complement for environmental policy.
2. *Green* revenue (better to tax bads than to tax goods)

- **Choice of instruments:** *Prices vs Quantities* (Weitzman)
  - Quantities (Cap&Trade) give **certainty** to **outcome**, can have **uncertain** **costs**.
  - Prices (environmental taxes) give **certainty** to **costs**, but **outcomes** may **vary**.
  - Descentralized incentives: **wider reaching** than large emittors’ regulation or markets, plus lower implementation costs. -Push and pull-

- **Fiscal policy:** raise revenue with **minimum welfare loss**.
  - Ramsey rule: Low elasticity goods and services.
  - Double dividend: Reduce negative externalities, and less DWL in others.
THE CARBON TAX IN MEXICO

• Part of a broad fiscal reform that was sent to Congress in 2013:
  
  o A fixed amount per ton of CO$_2$ content, for all fossil fuels.
  
  o The tax was set at US$ 5.7 per ton of CO$_2$ (average of most relevant carbon markets: EU-ETS, California, New Zealand).
  
  o Rates are adjusted annually for general inflation.
The Carbon Tax in Mexico

- Tax administration is straightforward:
  - The carbon tax is paid at the production or import stages and can be credited, except for the final sale (similar mechanics to a VAT).
  - Collection and auditing is done by the revenue collection agency (SAT), on the same terms as other excise taxes.
THE CARBON TAX IN MEXICO

• Well received in Congress and was approved with some changes:
  o Lower average carbon pricing (US$3.7 per ton of CO₂).
  o Natural gas was taxed at zero. Argument: cleanest fossil fuel.
  o Only coal used as fuel is subject to the tax.
  o The tax can be paid with internationally-recognized certificates of emission reductions, at market values.

• To comply with international treaties, jet fuel is also taxed at zero (through Executive decree).
Support from domestic think tanks and NGOs was important in media and policy discussions.

Build on previous success. Mexican Congress had approved its Climate Change Law in 2012, where carbon taxes were mentioned as potential instruments.

Having the “greenest” option (natural gas) taxed at zero increases political acceptance (similar to the tax for pesticides, part of the same bill).

Neighbors matter: lower fuel taxes in some neighboring countries reduced maneuvering room.
INTRODUCING THE 2016 GASOLINE AND DIESEL PRICING REGIME

In addition to the approved Excise tax (regular gasoline US$0.25) Mexico would have:

- If international reference prices push domestic price above maximum limit a “negative tax” applies.
- If international reference prices make domestic price fall below lower band and additional countercyclical tax is introduce.

Negative IEPS*

Additional Positive IEPS

Hower, it has a limit. It cannot become a subsidy.
The economic importance of the manufacturing and transportation industry have granted these economic sectors the possibility of claiming partial tax-credits for their use. How large is this effect and its fiscal, environmental and energy efficiency consequences?

What is the indirect effect over other energy subsidies, i.e. electricity, sectoral programs, etc.?

Mexico will not have neither new taxes or increase in the current ones. Despite the negative shock on oil prices macroeconomic stability has been maintained by an array of policies and institutions developed over the past two decades.

It is an opportunity to focus on productivity, including obtaining more value added from energy use.
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