

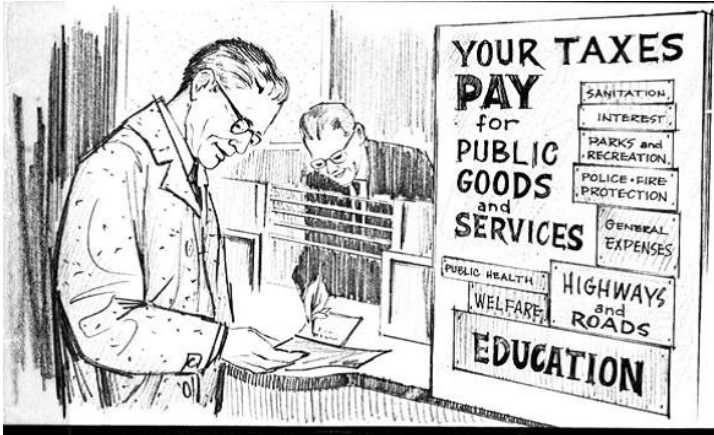
The Design of Tax Incentives: Theory and Practice

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Role of Taxes in a Modern Economy



Raise revenue



Redistribute Income

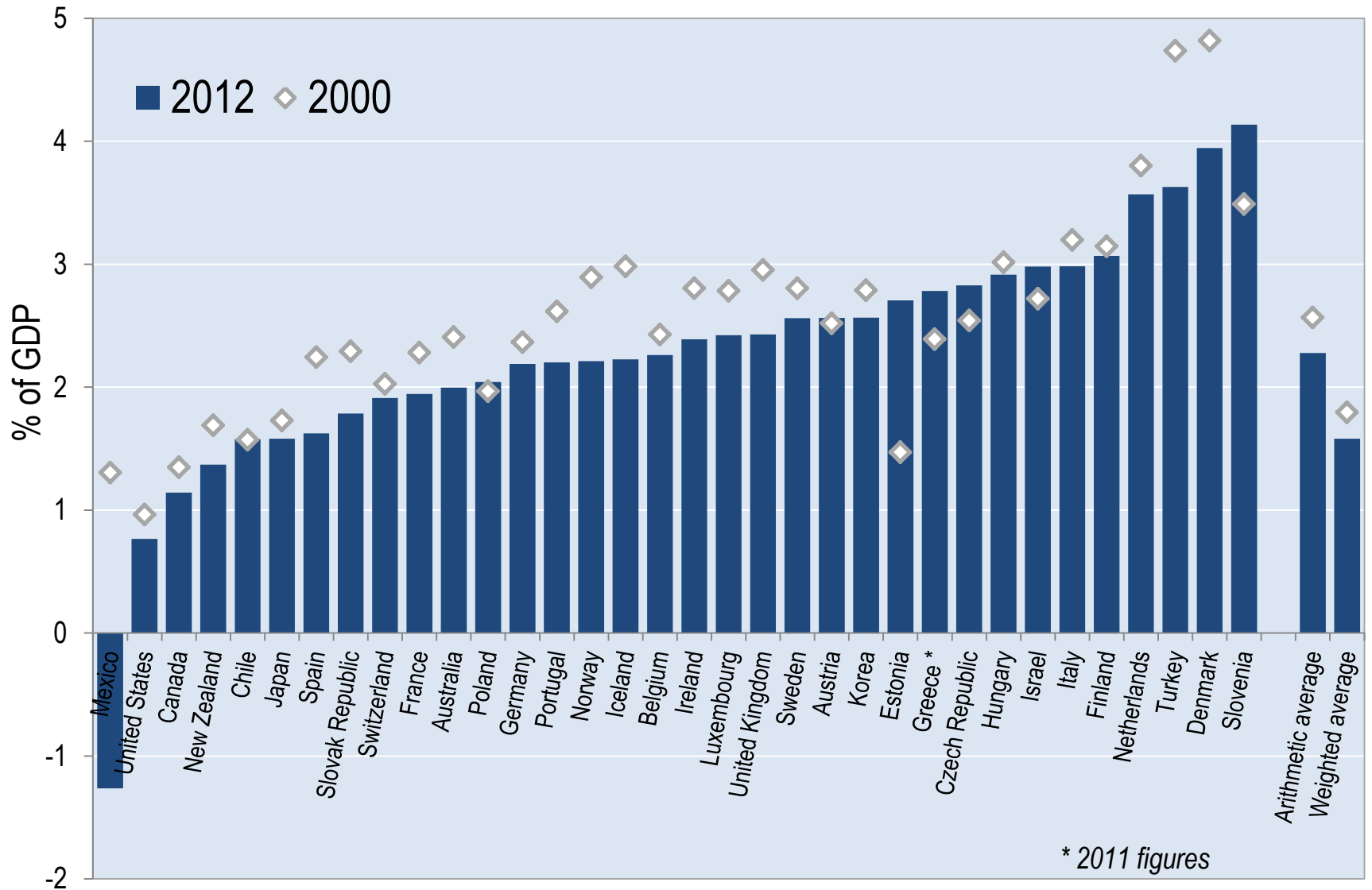


Incentivize behavior

Role of Taxes in a Modern Economy

- Raise revenue
- Redistribute income
- **Influence and incentive particular behaviors**
 1. Tax pollution
 2. Subsidize clean energy
 3. Tax benefits to oil, gas, and coal sectors

1. Environmental Taxes



2. Subsidies to Clean Energy

- [VEETC]
- [Production tax credits for wind and other renewables]
- Investment tax credits for solar, small wind, fuel cells
- Various other subsidies – some expired, some expiring, some exasperating...
- *\$31.5 billion to extend PTC and ITC over 2016-2025 budget window*

3. Subsidies to Fossil Fuels

- Expensing of intangible drilling costs
- Percentage depletion
- Section 199 domestic manufacturing credit
- Expensing of G&G
- Various other currently phased out credits
- *\$49.8 billion over 2016-2025 budget window*

Issues with Subsidies

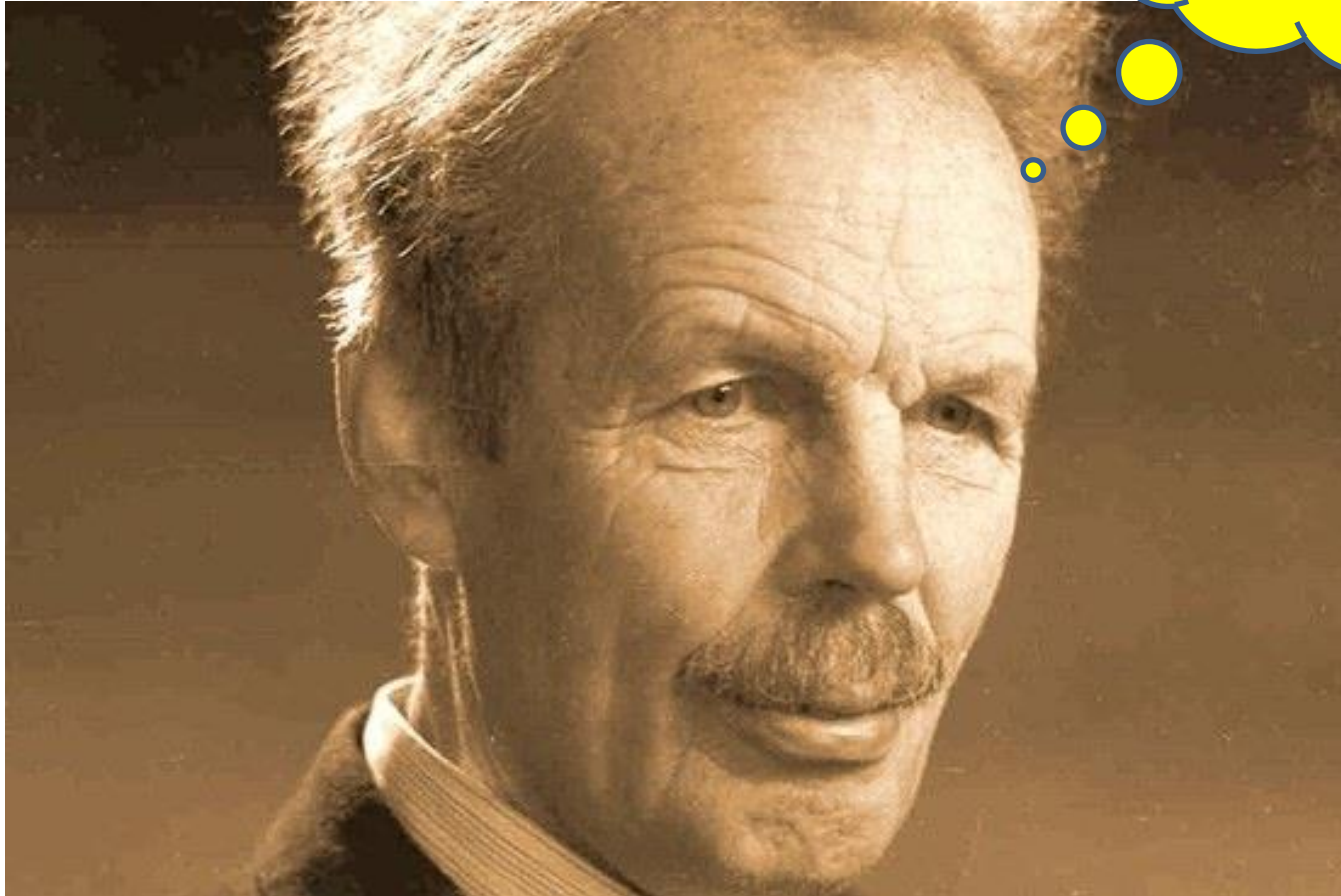
- Lower the cost of energy consumption
 - Shuts off consumer demand response
- Technology neutral subsidies difficult to achieve
 - e.g. PTC for wind versus geothermal
- Subsidies often inframarginal
 - \$0.50 per gallon alternative fuels mixture credit (the black liquor problem)
- Unintended interactions with other policies
 - CAFE and tax credits for hybrid vehicles

Carbon Pricing: A Better Approach

- Raise the price of a pollution causing activity by the value of damages arising from the activity
 - Burning fossil fuels releases carbon dioxide
 - This leads to climate change and damages
 - A price adder ensures that firms and individuals make decisions on the basis of the true social cost of using a resource

Pigouvian Pricing

Cap and Trade or
Carbon Fee? Both
are examples of
Pigouvian pricing!



ARTHUR PIGOU, 1877 - 1959

Carbon Tax

- Cost effective way to reduce emissions
 - Experience suggests pricing can cut cost of reducing emissions in half
 - Harnesses the power of markets and incentives to reduce emissions
- Straightforward to administer
 - Metcalf and Weisbach (2009)
- Raises revenue that can be used to cut taxes
 - Tax “bads” rather than “goods”

Carbon Tax and Fiscal Flexibility

- \$25 per ton tax would net (after offsets) \$1.06 trillion over 2014-2023
 - Rausch, Metcalf, and Reilly (2011)
 - Congressional Budget Office (2013)
- Initial net revenue of \$70 – 100 billion annually
 - Emissions estimated to fall 10 percent over decade
- Estimates exclude value of removing subsidies to clean energy (\$30 – 45 billion over 2015-2024)

Energy Tax Reforms

- ... should start from clearly articulated design goals;
- ... should attempt to align private and social costs of production and/or consumption;
 - Shift from subsidies to Pigouvian taxes
- ... should design energy tax reform in a revenue neutral way.

For More Information



See my website:

http://works.bepress.com/gilbert_metcalf/

