

ENVIRONMENTAL TAX REFORM

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International Monetary Fund

States General of the Green Economy 2015

Rimini, November 3-4, 2015

Major Environmental Costs of Energy



- Carbon emissions
 - Projected warming 3-4°C by 2100
- Local air pollution
 - 3.2 million deaths a year
- Motor vehicles
 - Congestion, accidents, road damage

Plan of Talk



- Case for energy tax reform
- How far are we from efficient prices (global perspective)?

Taxes Should be Center Stage



- Effective at reducing environmental harm
 - If targeted at the right base
- Raise substantial revenues
 - Can be used to reduce taxes on labor and capital
- Balance environmental benefits and costs
 - If taxes aligned with environmental damages

Efficient Taxes: A Closer Look



- Carbon
 - Fuel charge = CO_2 emissions rate \times damage/ton
- Air pollution
 - Fuel charge = emissions rates \times environmental damages/ton
 - Credits for control technologies (e.g., SO_2 scrubbers)
- Vehicle externalities
 - Kilometer-based taxes (e.g., peak pricing on congested roads)
 - Interim: reflect externalities in fuel taxes

Measurement of Environmental Costs



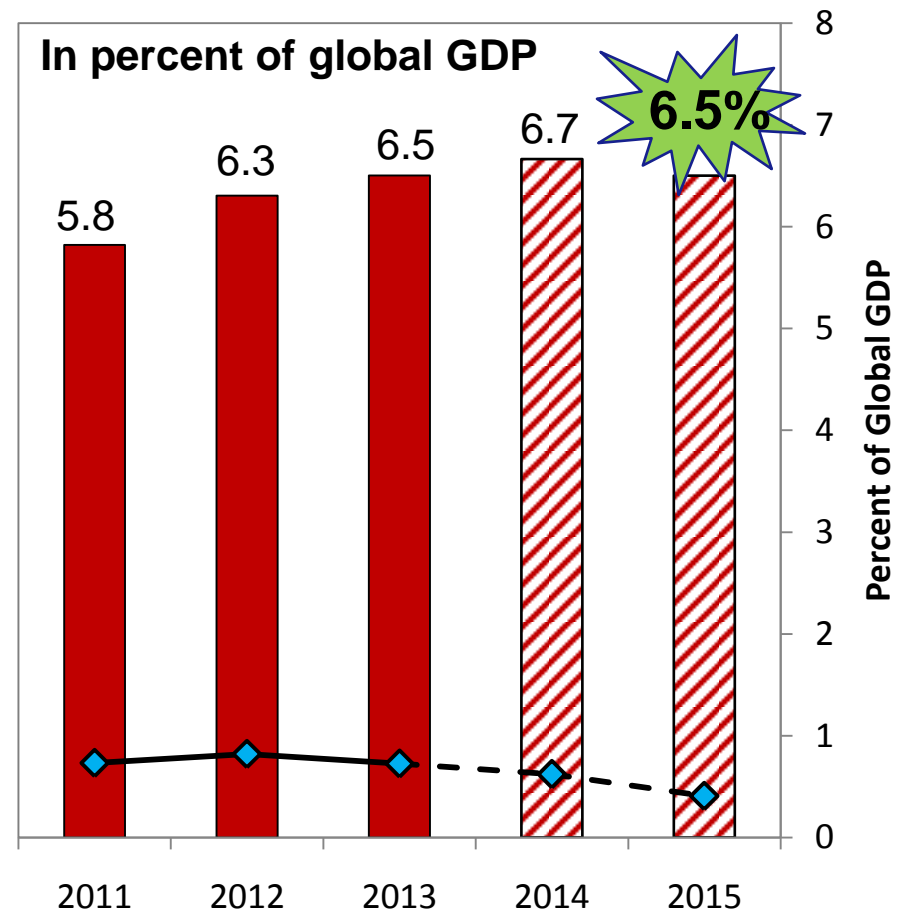
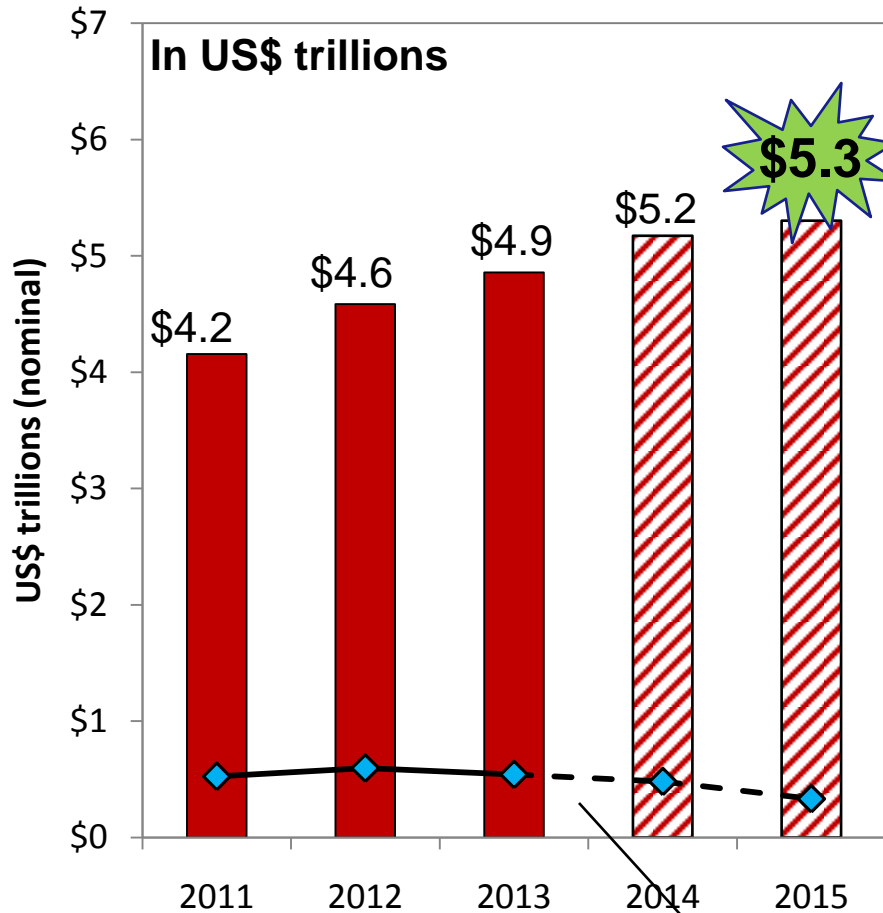
- Environmental costs (> 150 countries)
 - CO_2 : \$35/ton (illustrative value)
 - *Air pollution*: uses country estimates of population exposure to pollution and WHO evidence on exposure/mortality risks
- Environmental costs uncertain
 - Spreadsheet shows implications of other assumptions

How far from Efficient Energy Prices?



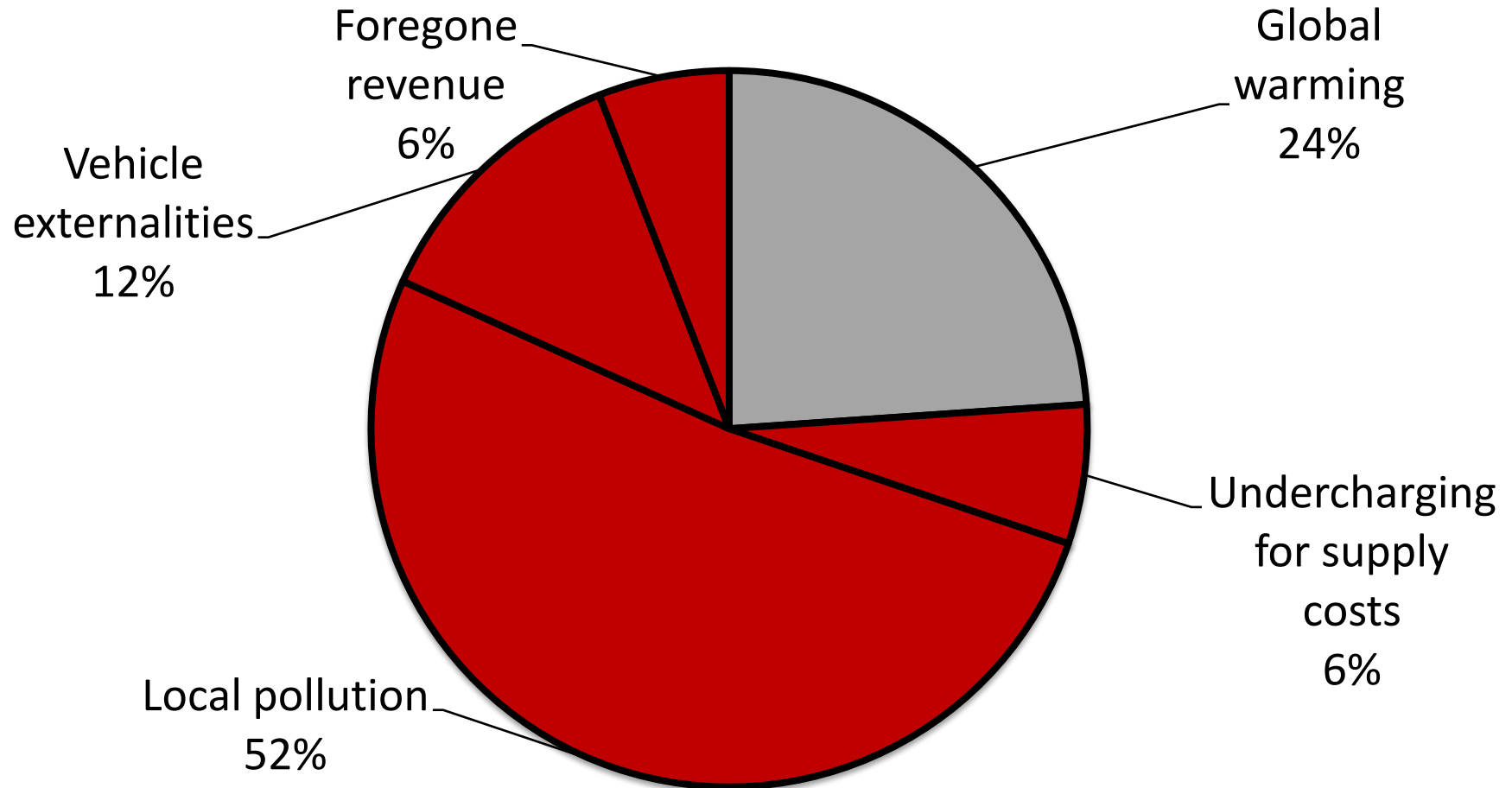
- Measured by energy subsidies, defined broadly
 - Undercharging for supply costs
 - Undercharging for environmental costs

Global Energy Subsidies are \$5.3 trillion

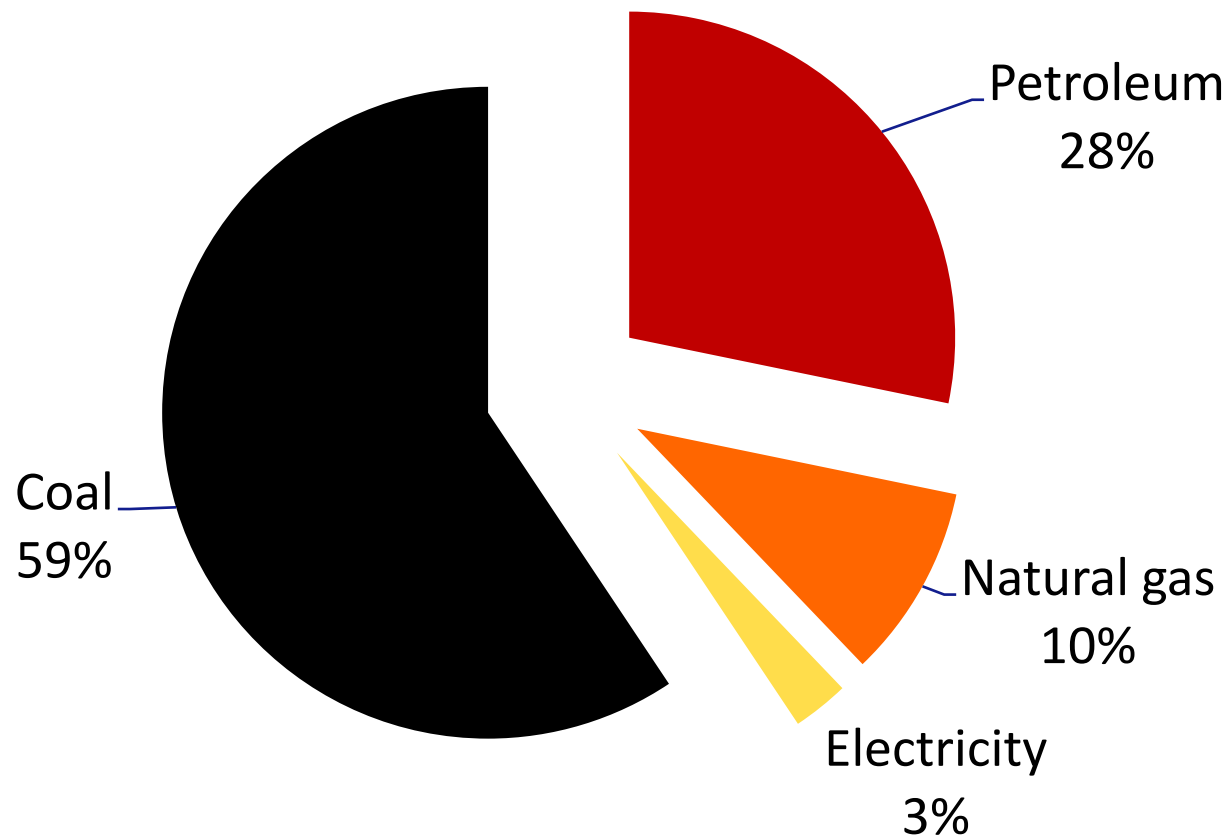


Undercharging for supply costs

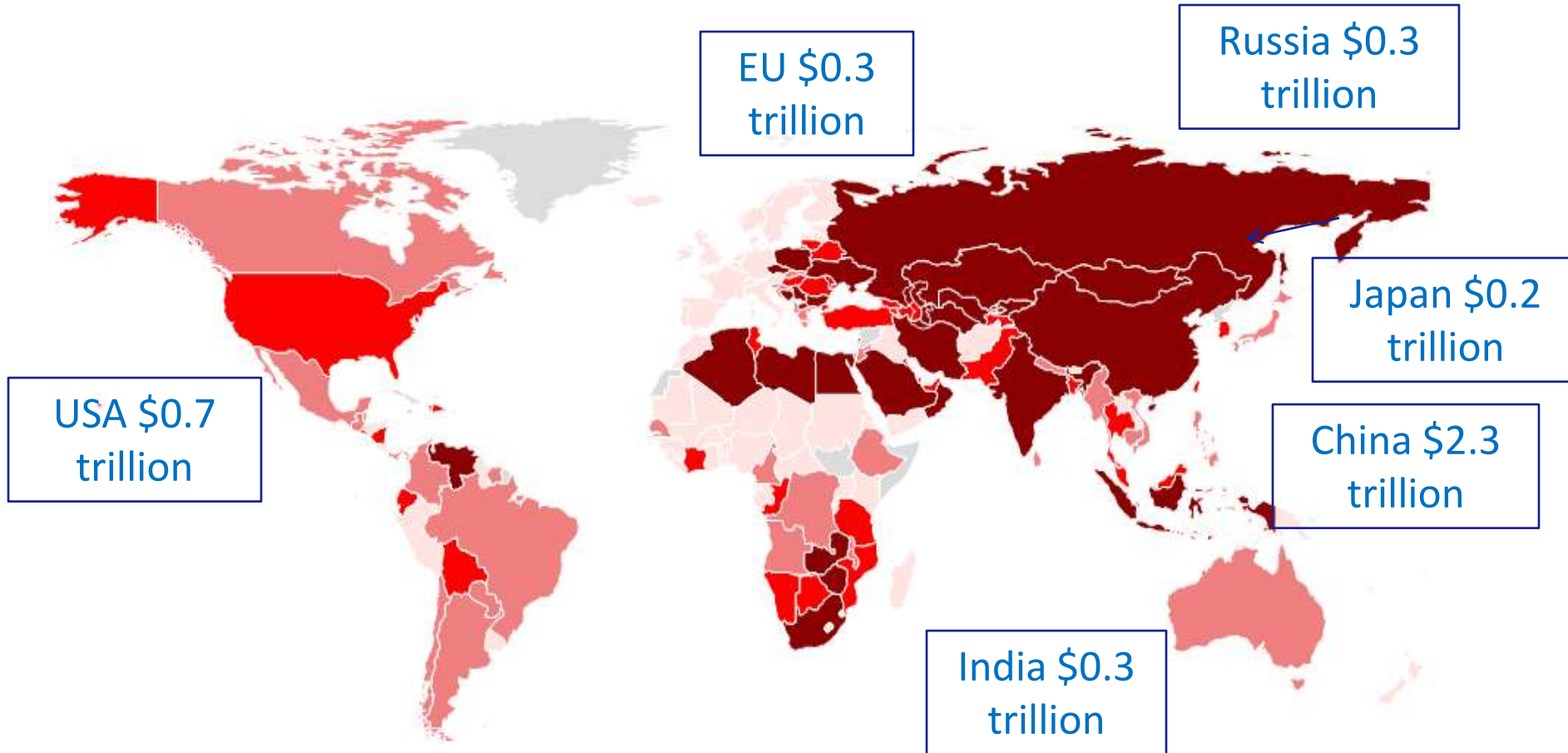
Global Subsidies by Component, 2015



Global Subsidies by Fuel, 2015



Global subsidies by country/region, 2015



Subsidies, percent of GDP

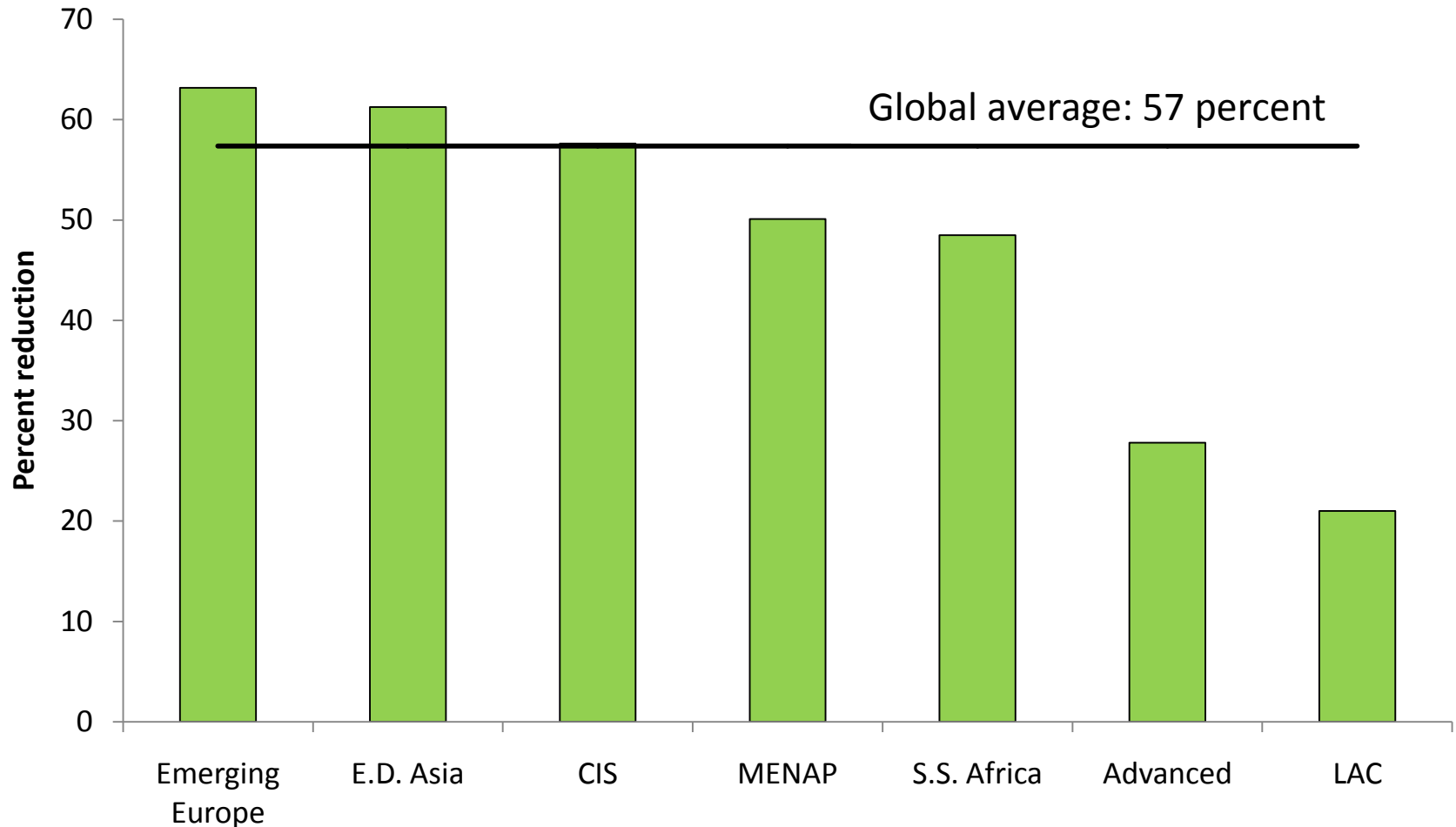
Legend for Subsidies, percent of GDP:

- Data unavailable
- Less than 2 percent
- 2 to 4 percent
- 4 to 8 percent
- More than 8 percent

Energy price reform can generate substantial health benefits...



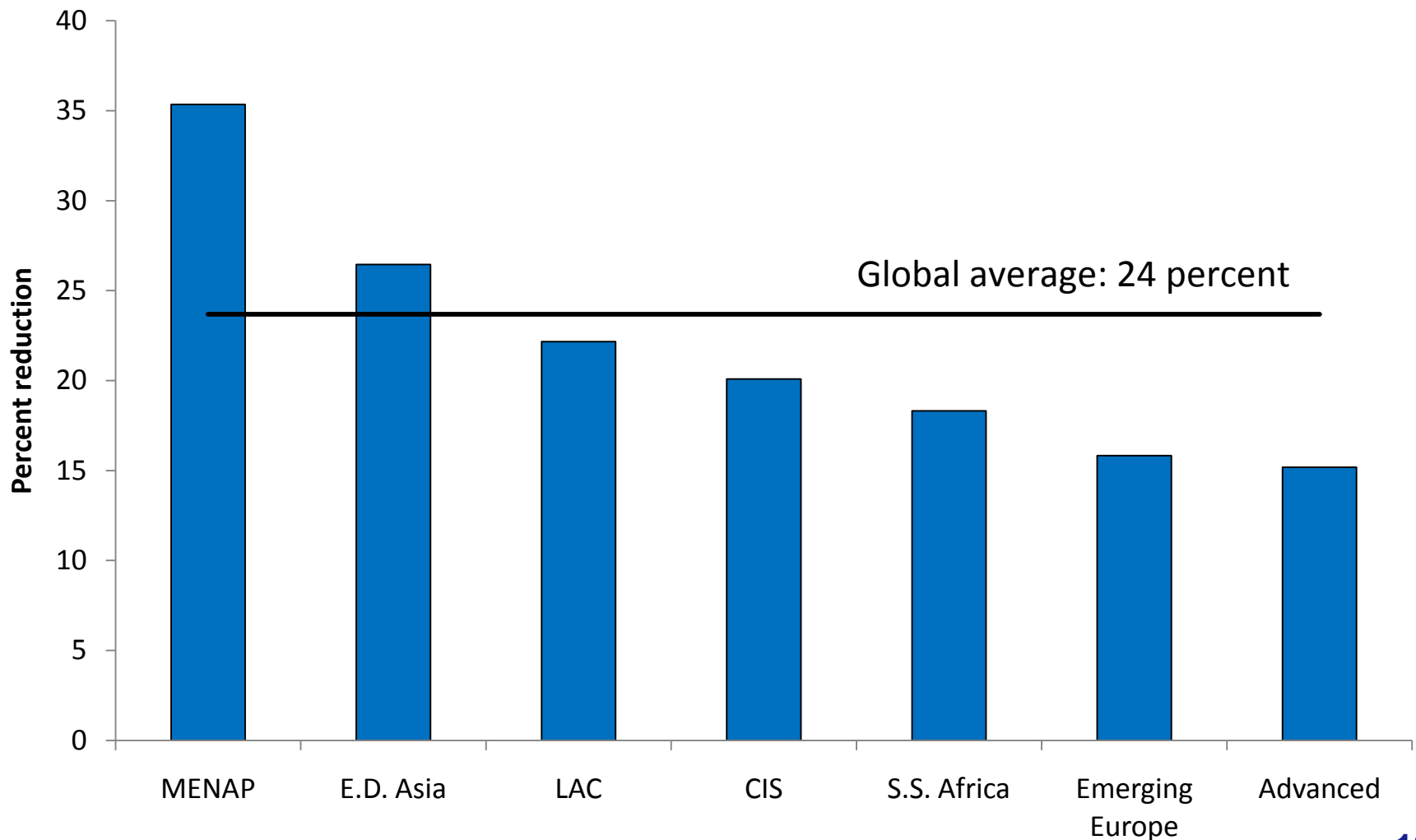
Reduction of fossil-fuel emissions-related deaths, 2015



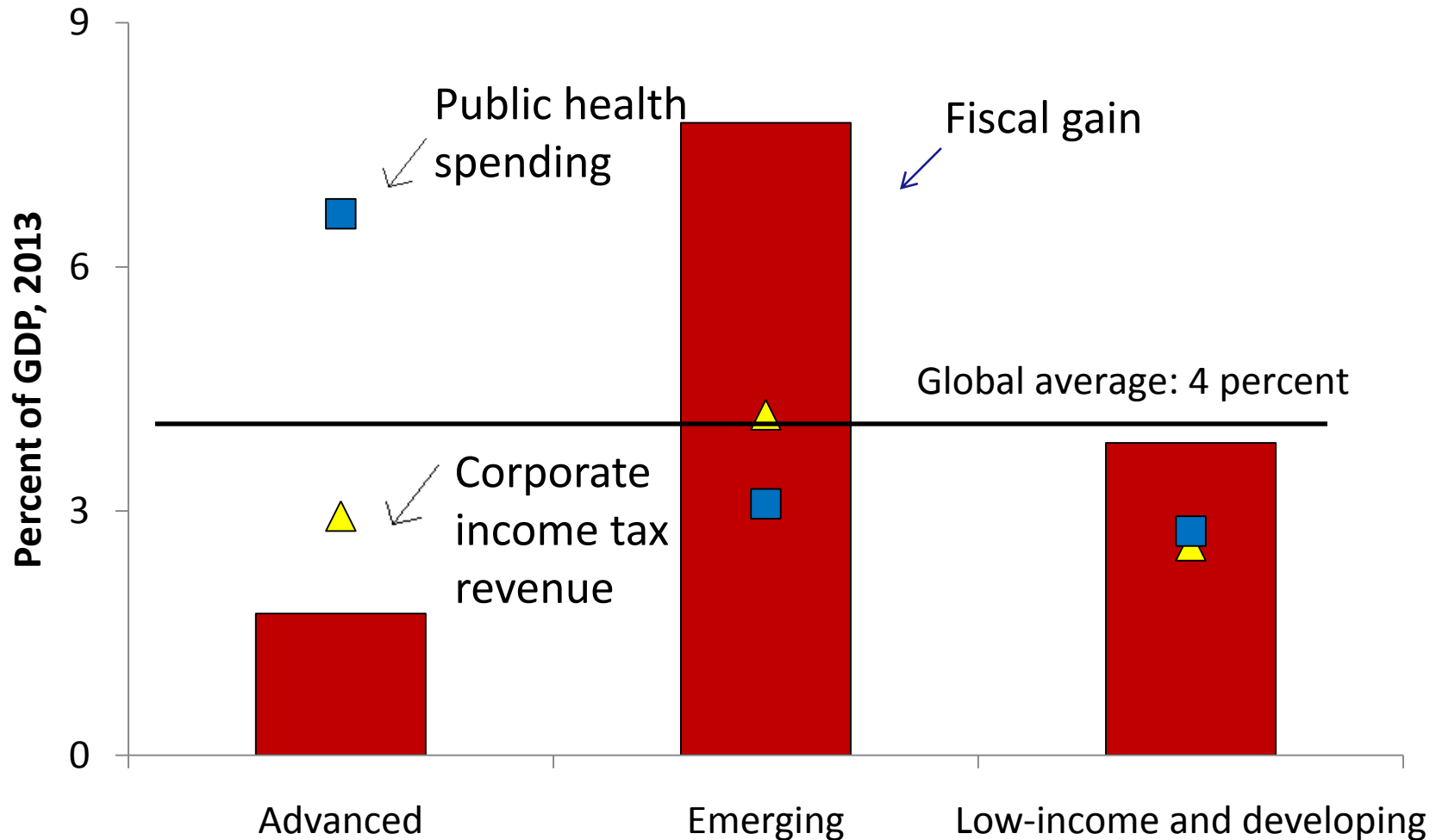
...and carbon emission reductions...



Reduction of fossil-fuel related CO₂ emissions, 2015



...and a significant fiscal dividend

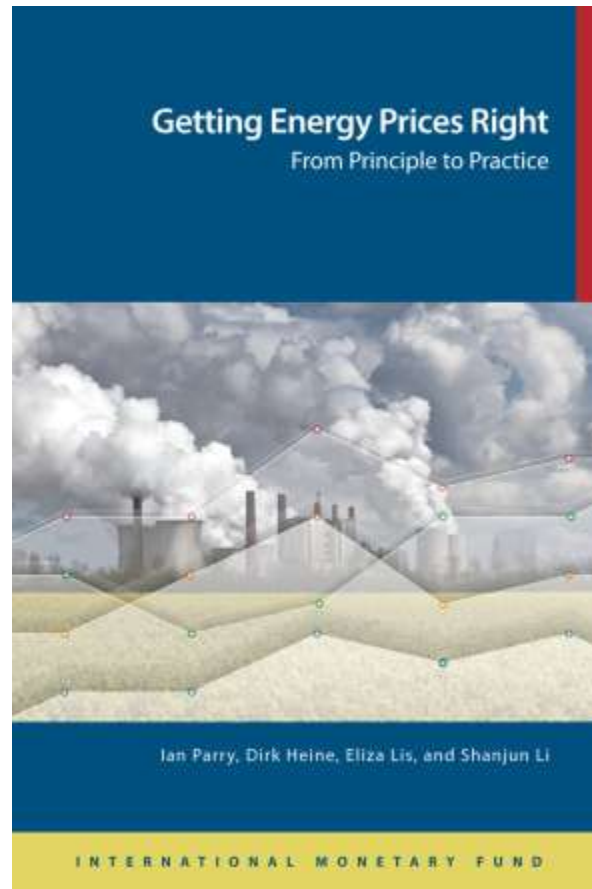
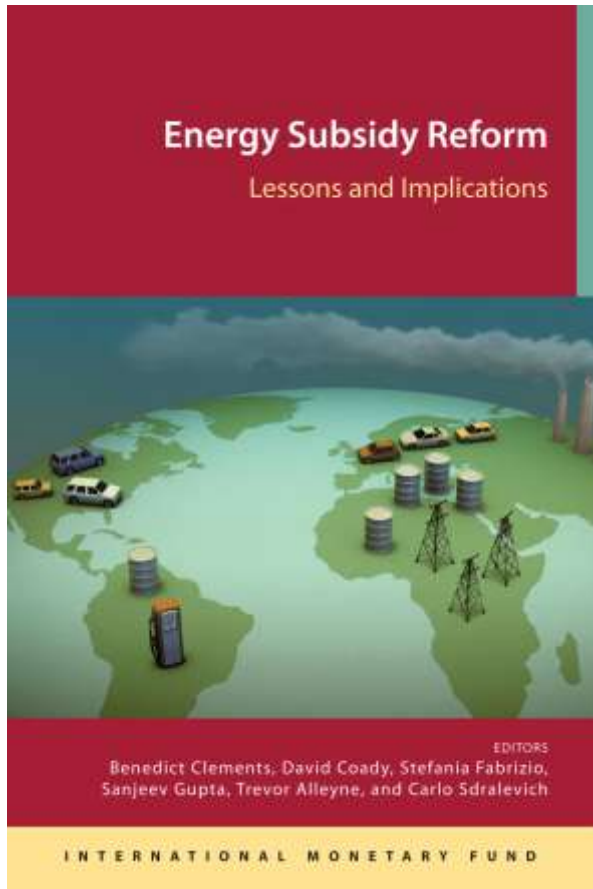


Concluding



- Environmental taxes better than
 - Regulatory approaches
 - Trading systems
- Environmental tax reform
 - Is in countries own interests
 - Contributes to emissions pledges for COP 21
- Finance ministers have key role

For More Information



How Large are
Global Energy
Subsidies?
Working paper,
2015
IMF

A large, semi-transparent IMF logo is positioned at the bottom of the white box.

www.imf.org/environment

www.imf.org/subsidies₁₆