

Making supply side policies economically and socially beneficial in the transition from fossil fuels

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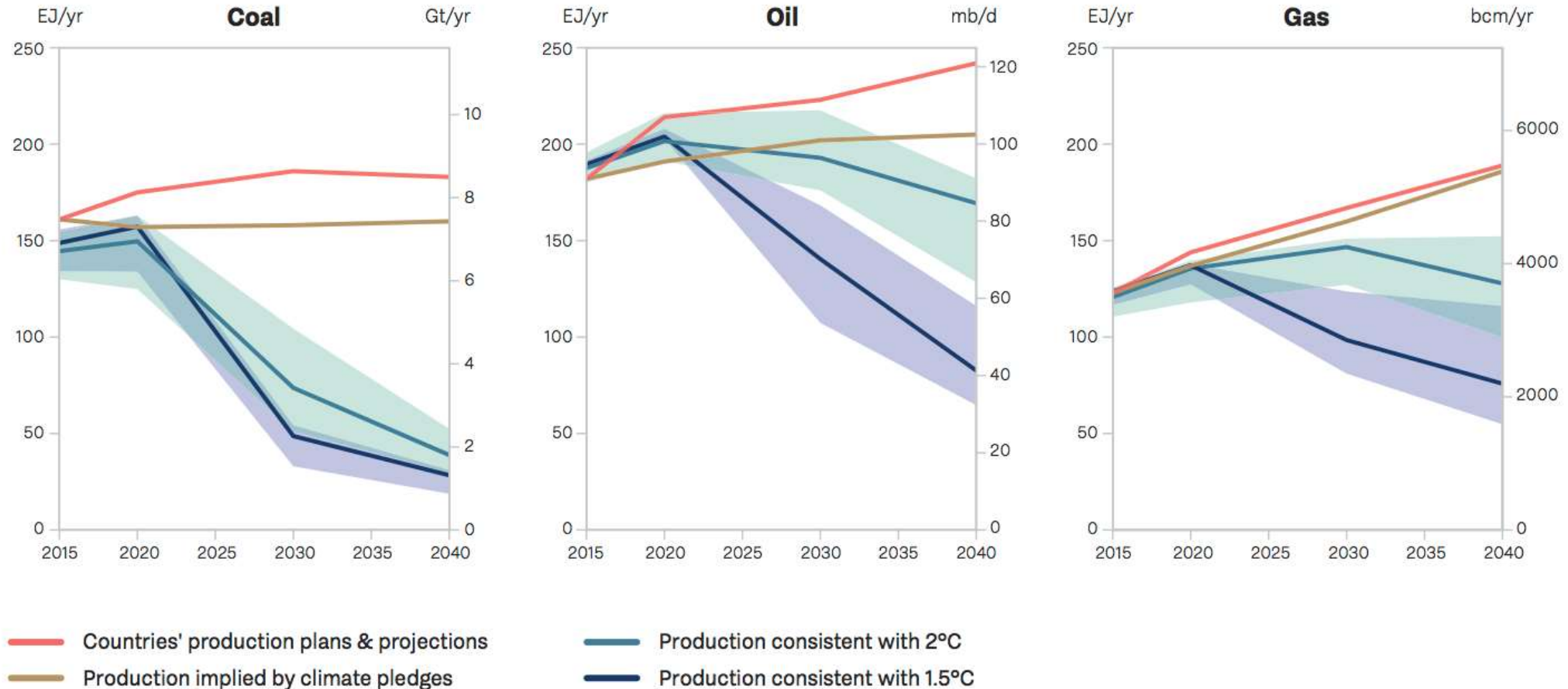
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The “production gap”

The world’s planned/projected fossil fuel production is far higher than the production=consumption consistent with 2d



”Demand-side policy”

Almost all policy to cut greenhouse gas emissions

- Eg ETS, carbon tax, technology standards, REN subsidies...

”Supply-side policy”

Constraining the supply of fossil fuels

Quantity based supply-side policy

- OPEC; 'no new mines'

Price based supply-side policy

- Tax on production/exports of coal/oil/gas



For example, a coal tax (on production / export)

1. Higher prices paid by consumers
2. Lower prices achieved by producers
3. Lower coal use and output
4. Tax revenue to government of coal producing / exporting country

Fundamentals

- Transition away from fossil fuels hurts fossil fuel producers
- A policy approach that gives *producing countries* the rents from taxation/regulation
- To help compensate for economic losses and ease social difficulties

Easing the transition

- Coal mining areas decline
- Structural adjustment is the fundamental political challenge ... \$\$ can help
- Eg coal tax revenue to pay for infrastructure, business development, social programs...
- Helping sunset industries retire



Some magnitudes: Australian thermal coal

- Australia's thermal coal exports:
~200Mt coal/yr → ~500Mt CO₂/yr
- Export value: ~€16b (2018/19)
 - CO₂ emissions valued at EUA price: ~ €24b/year (higher than the fuel price)
- A coal tax of (just) 10% of value would be, approx
 - €3/t CO₂, €8/t coal, €1.6b per year
 - €75,000 per coal worker per year
(~21,000 workers in thermal coal mining; plus contractors, local businesses etc)




Some obstacles

- Unilateral action will (almost) not affect world price
- Need coordination among major exporters/producers
- A “suppliers’ club”?
A “supply side treaty”?

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Coal taxes as supply-side climate policy: a rationale for major exporters?

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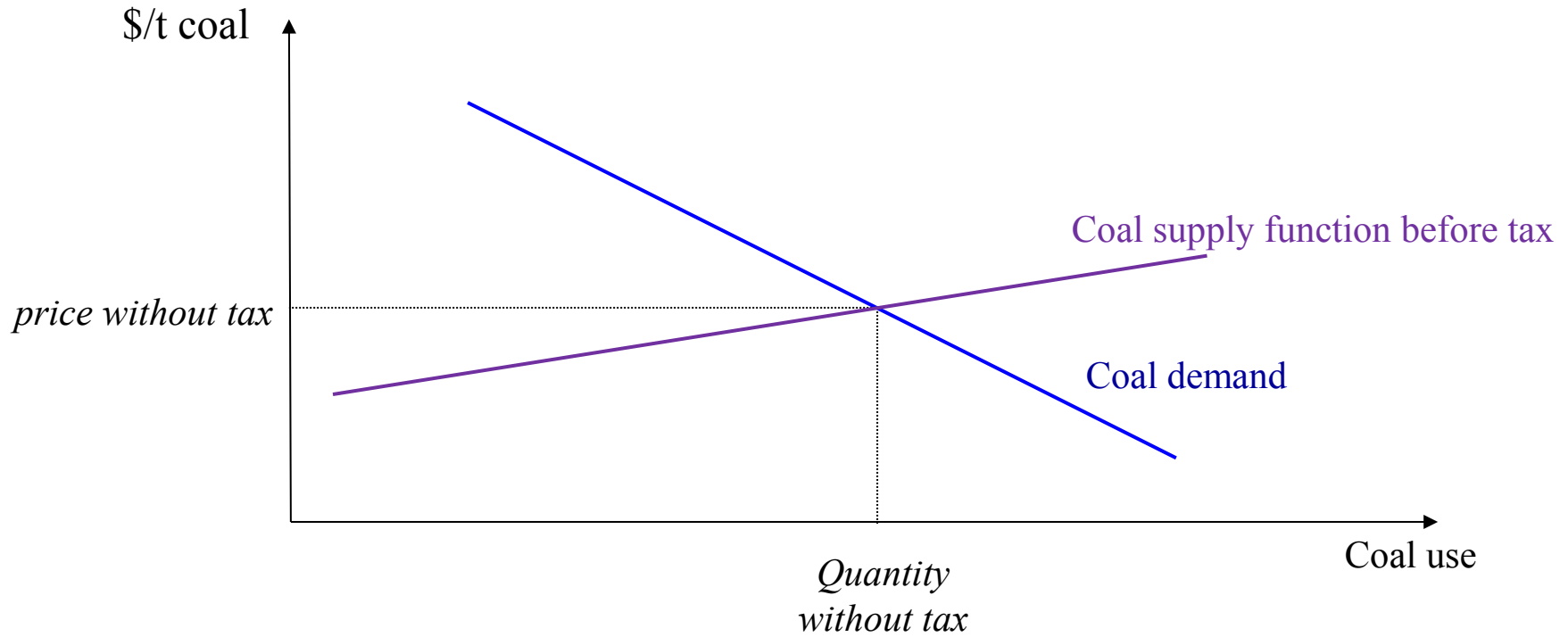
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Abstract The shift away from coal is at the heart of the global low-carbon transition. Can governments of coal-producing countries help facilitate this transition and benefit from it? This paper analyses the case for coal taxes as supply-side climate policy implemented by large coal exporting countries. Coal taxes can reduce global carbon dioxide emissions and benefit coal-rich countries through improved terms-of-trade and tax revenue. We employ a multi-period equilibrium model of the international steam coal market to study a tax on steam coal levied by Australia alone, by a coalition of major exporting countries, by all exporters, and by all producers. A unilateral export tax has little impact on global emissions and global coal prices as other countries compensate for reduced export volumes from the taxing country. By contrast, a tax jointly levied by a coalition of major coal exporters would significantly reduce global emissions from steam coal and leave them with a net sector level welfare gain, approximated by the sum of producer surplus, consumer surplus, and tax revenue. Production taxes consistently yield higher tax revenues and have greater effects on global coal consumption with smaller rates of carbon leakages. Questions remain whether coal taxes by major suppliers would be politically feasible, even if they could yield economic benefits.

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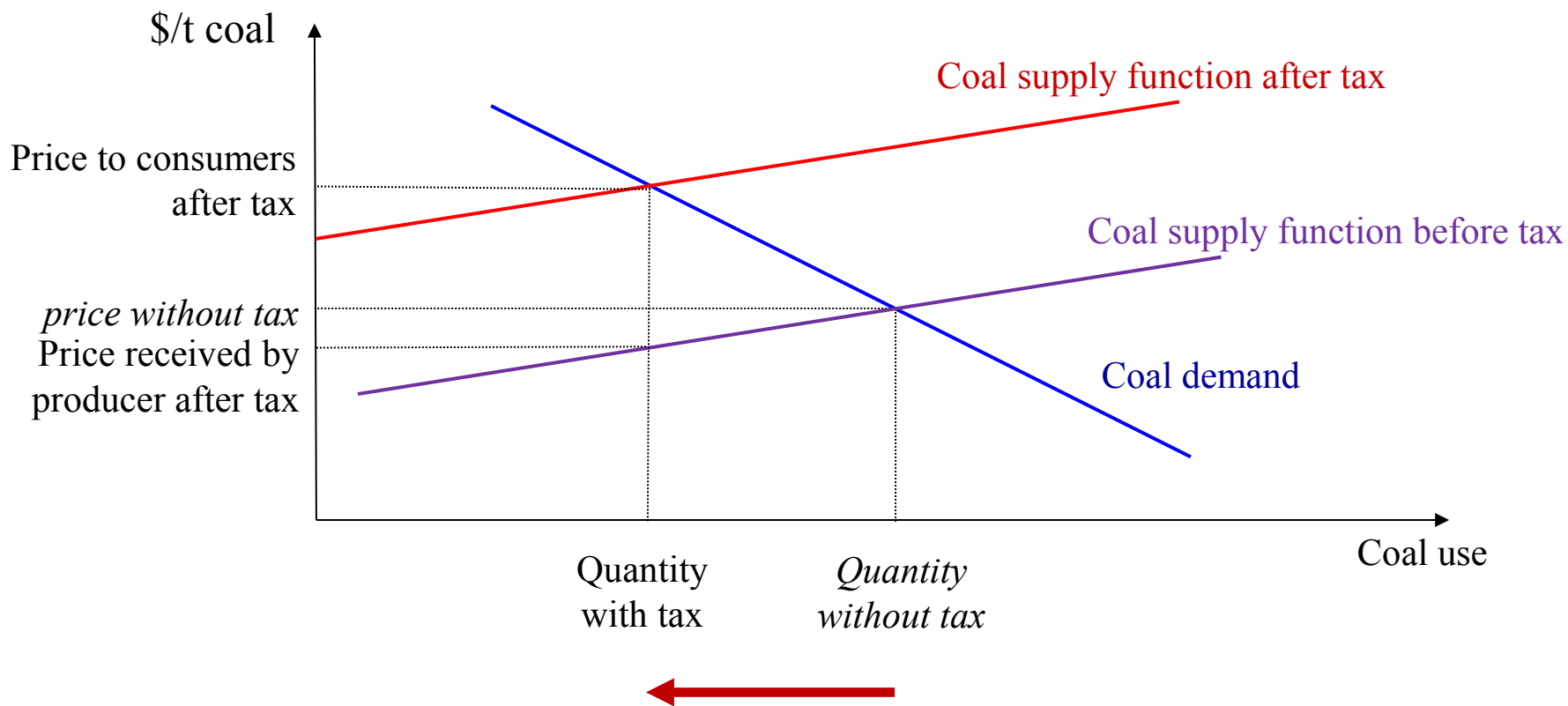


Simple economics of a coal (export) tax





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Simple economics of a coal (export) tax

