Spillover effects of restricting coal consumption and impacts on development

By

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The views expressed are those of the author and do not necessarily reflect the views of UNCTAD.
Spillover effects of restricting coal consumption and its impacts on development

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COP21 and Climate Change

- Limitations on coal usage is expected in long run
  - 30% total supply vs 45% total emissions
- Although non binding, National initiatives may mushroom or be accelerated (China’s ETS in 2017)
- Sentiment changes immediately

‘Coal lobby boss says industry 'will be hated like slave-traders' after COP21’ The Guardian, Dec 2015

‘Traders and industry insiders agree on no rebound anytime soon’ Bloomberg, 21 Jan 2016

- Many investors have moved away from coal
Price slump

Asset value disruption

• Share prices drop (Switch to gas and RES)
• On a permanent downward shift
• More companies bankrupted: Peabody, Arch Coal ($2^{nd}$), Patriot Coal, Walter Energy, Alpha Natural Resources

Restrictions on coal consumption
Necessary but complicated

Interdependency and connection: Spillover effects

Spillover (1): Poverty eradication and Development
E4ALL vs. CC, which is only a part of SDGs

‘social and economic development and poverty eradication are the first and overriding priorities’, Copenhagen Accord (2009)
Spillover (2): Environment

Land reclamation

- Reclamation was often not planned in the past
- Bankrupt companies will have to leave them alone

Source: http://www.in.gov/dnr/reclamation/3507.htm
Spillover (3): Price and Trade
International trading sector will lose

Price slump, Trade diminished
Producers suffer, particular CDDCs

Coal trade by region, NPS (IEA 2015)

China’s demand variability in 2040 is equivalent to global trade
Spillover (4): Energy transition
Coal’s narrowing competitiveness gap with gas and oil

Inter-fossil fuel battle (Fossil fuels prices, US$/mmbtu)

Price will further decline with more restrictions

Spillover (4): Energy transition

Coal’s competitiveness surges but decline against RE

- Subsidy removal
- RES support policies
- Economic development

Delaying the development of coal could be a useful strategy

Average installation costs for rooftop installations (≤10 kWp) in Germany

Source: Fraunhofer ISE (2014)
Spillover (5): Consumption shift (leakage)
Strict controls in one country could crowd out coal to other regions

Global policy coordination is needed

Figure: US Consumption and Net Export
Figure: US Export to Germany

Source: EIA. http://www.eia.gov/coal/data.cfm#summary
Spillover (6): Industry restructuring
Local government, SMEs

China's Coal Demand, various scenarios

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<tr>
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Source: IEA, 2015

Fiscal revenue: Taxes and fees from coal/Total >70%
Implications (1)
Sectoral strategies: 3Rs

• **Retreat**: the leading coal consumers
• **Refrain**: those have under-developed resources will not develop
  o Delayed development is useful for cost comparison
• **Retrofit**: cleaner, although not clean
Implications (2)
Integrated solutions

- Holistic planning
- Coordinated actions
- Coordination among trade, energy and environmental policies within and among nations
  - Commercialization of RES (R&D for lower costs)
  - RE trade facilitation (anti-dumping of REs)
  - Inclusive, equitable and practical policies
- Cost competitiveness rebalance
  - Subsidy (600B) removal, carbon taxes/ETS, green finance
Implications (3)
World's local actions

- National government ownership and leadership
- Capacity building
  - International transfer of cleaner coal technologies
  - Knowledge sharing
  - Resource pooling
Key messages

- **Restrictions on coal consumption are expected**
- **But restriction has significant spillover effects**
  - Development; Environment; Trade; Energy transition; Consumption shift; Industry restructure
- **Multidimensional policy**
- **Sectoral strategies**: retreat, refrain, retrofit (3Rs)
  - Delaying coal development could be a good strategy
- **Integrated solution**
  - Holistic planning and coordinated global actions
  - RE products paradox: higher costs vs anti-dumping
- **World’s local actions**: National ownership and leadership
  - Policy coordination; Cost comparativeness rebalance; Technology transfer; knowledge sharing and resource pooling
Thank you!

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References:
THE 40th IAEE INTERNATIONAL CONFERENCE

Meeting the Energy Demands of Emerging Economies
Implications for Energy and Environmental Markets
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