



Perspectives on China and the Global Coal Market

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Perspectives on China and the Global Coal Market

Forthcoming book *The Global Coal Market*

Mark Thurber and Richard Morse, editors
(Cambridge University Press, 2015)

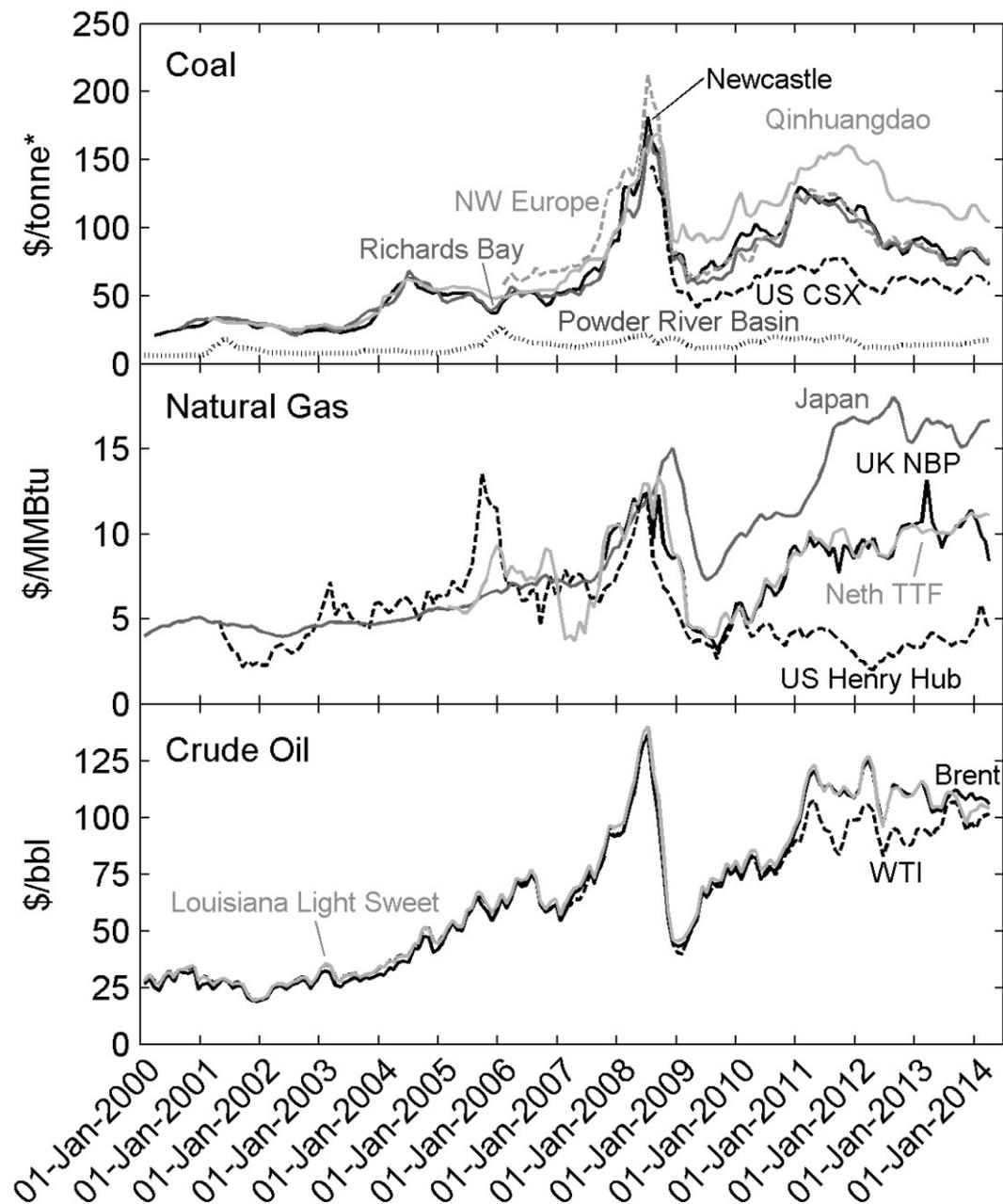
Key factors that shape the global coal market

- How China manages its “coal-power conflict”
- Other countries: Does policy environment increase or reduce coal sector risk?
 - Will India’s coal deficit keep growing?
 - Key exporters: e.g. Indonesia, Australia, South Africa, (USA?)
- Climate policy: explicit, by-default, and looming

Transportation Constraints Shape Energy Markets!

Main issues for each fossil fuel market:

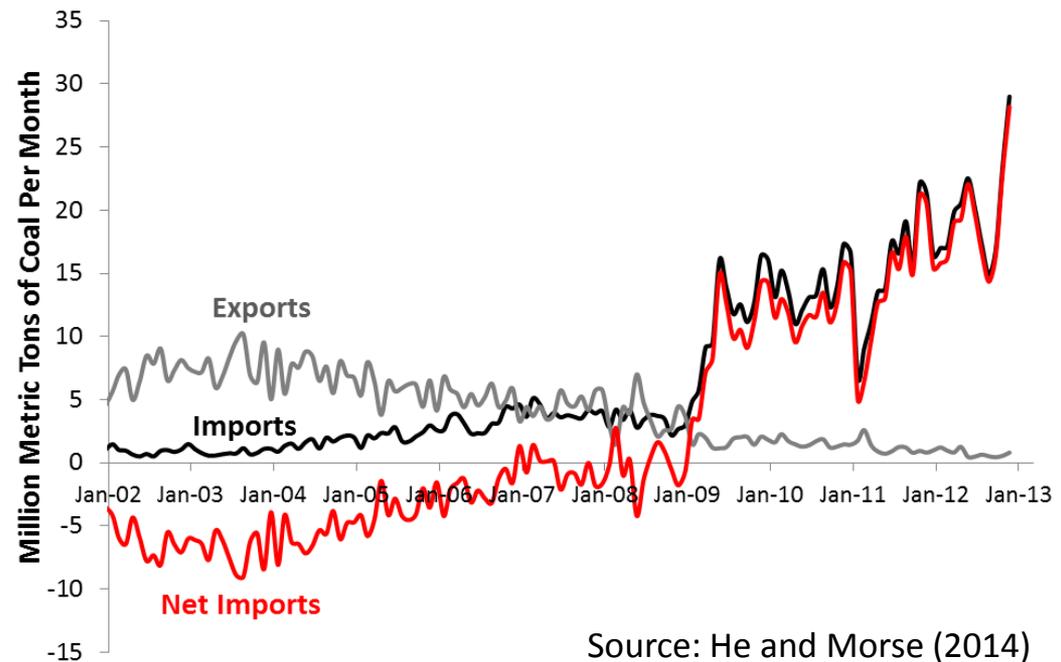
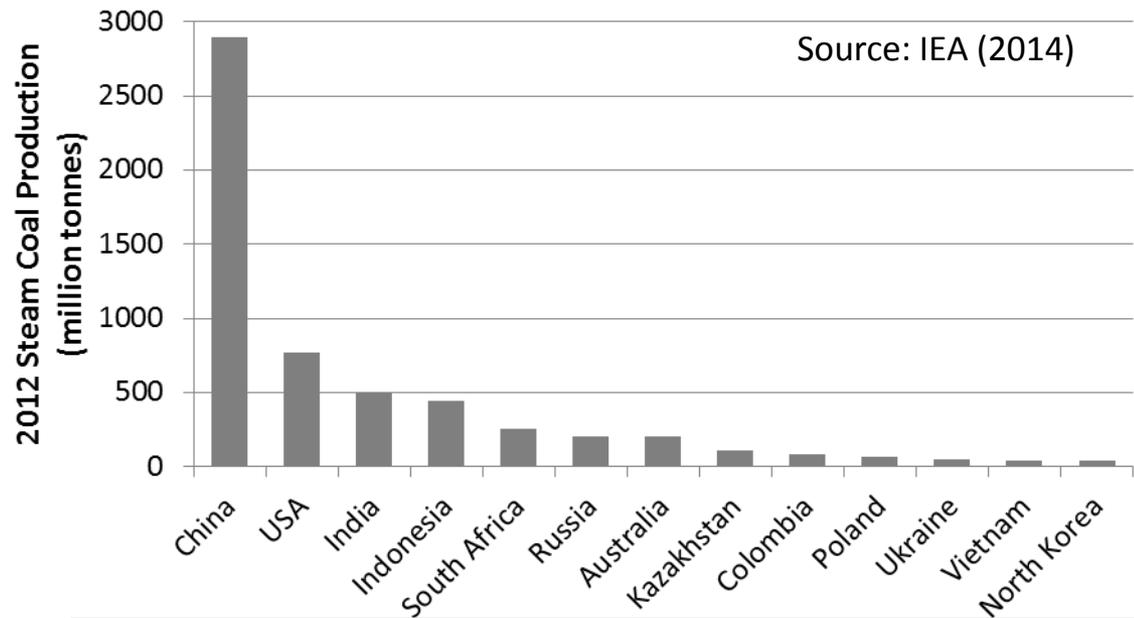
- Coal: Railways and ports (often not competitive markets)
- Natural gas: LNG and pipelines (high cost and risk of developing)
- Oil: In North America, pipelines have lagged upstream changes



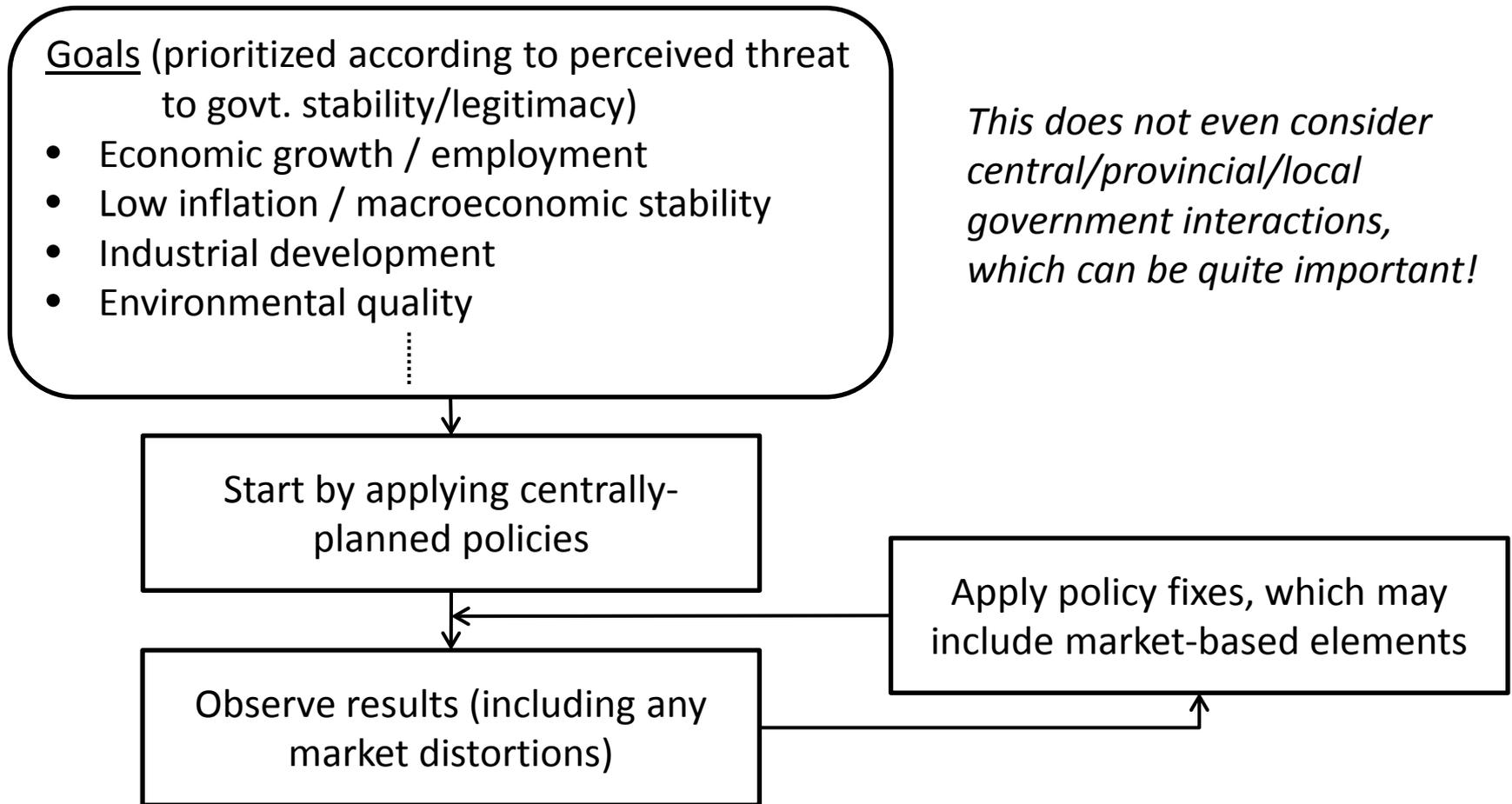
*Coal prices are adjusted for energy content

China's Importance in the International Coal Trade

- China's trade is small as a percentage of its production, but large relative to the global trade (~1300 million metric tons in 2013)



A Highly Simplified Model of Policymaking in China



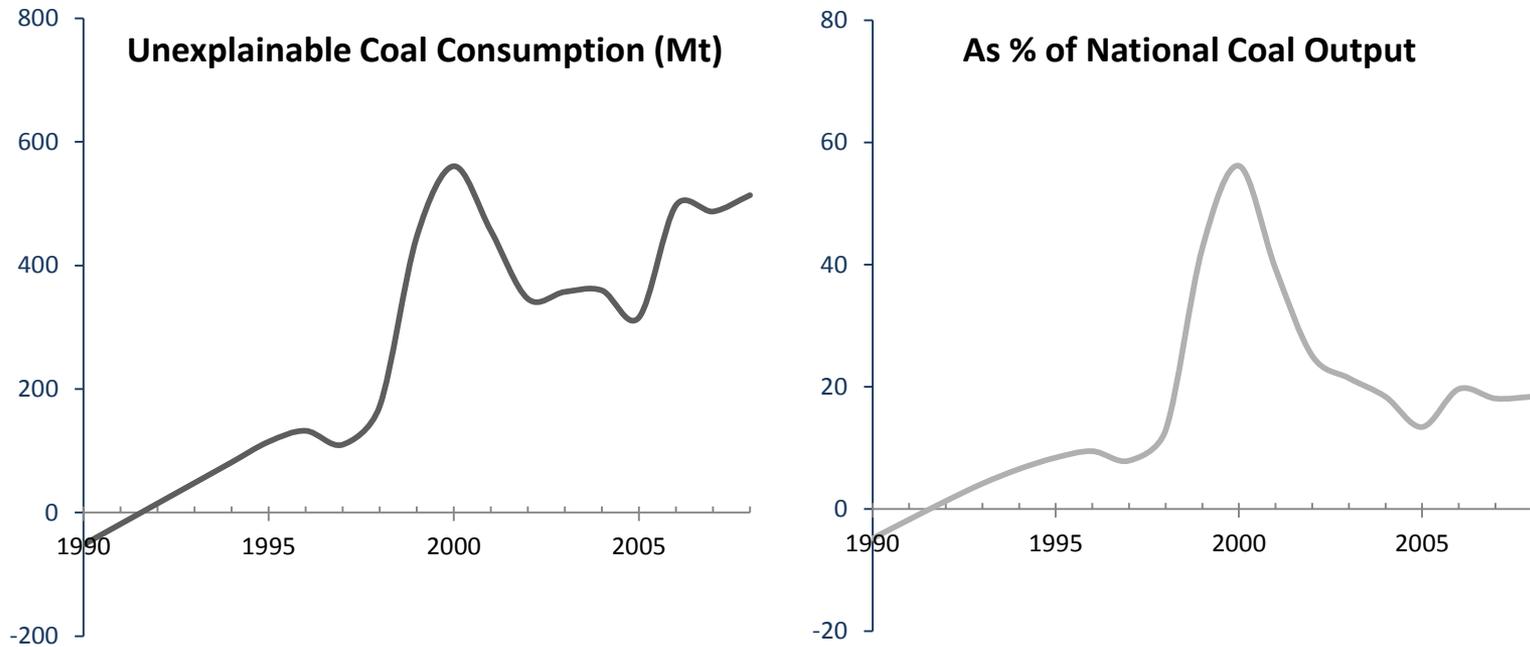
- Government simultaneously trying to optimize on many goals
- Basic orientation towards control / central planning can cause challenges, e.g.:
 - Inability to anticipate all consequences of policies (e.g. shortages)
 - Failure to unlock full positive potential of market forces
 - Friction between planned and market-based policies

A Highly Simplified History of China's Coal Policy

Goals	Time Period	Coal Policy Approach	Specific Policies and Institutions	Problems
Heavy industry development; nat'l defense	1949-1978	Pure central planning	SOE mines dominate, sell all coal at planned low price	Coal shortages => power shortages => slowing economic growth
Economic development; low inflation	1979-1992	Two-tiered market	<u>SOEs mines</u> : sell up to quota at planned price, above quota at market price <u>Town/village mines</u> : sell all coal at market price	Big losses at SOE mines Massive growth of town/village mines
	1993-now	Move to full liberalization of coal market	Restrict town/village mines Transfer major state mines to local govts. Progressively liberalize coal prices	Underreporting of town/village mine coal production Creation of "coal-power conflict"

(for more details, see Peng, *The Global Coal Market*, Chapter 2)

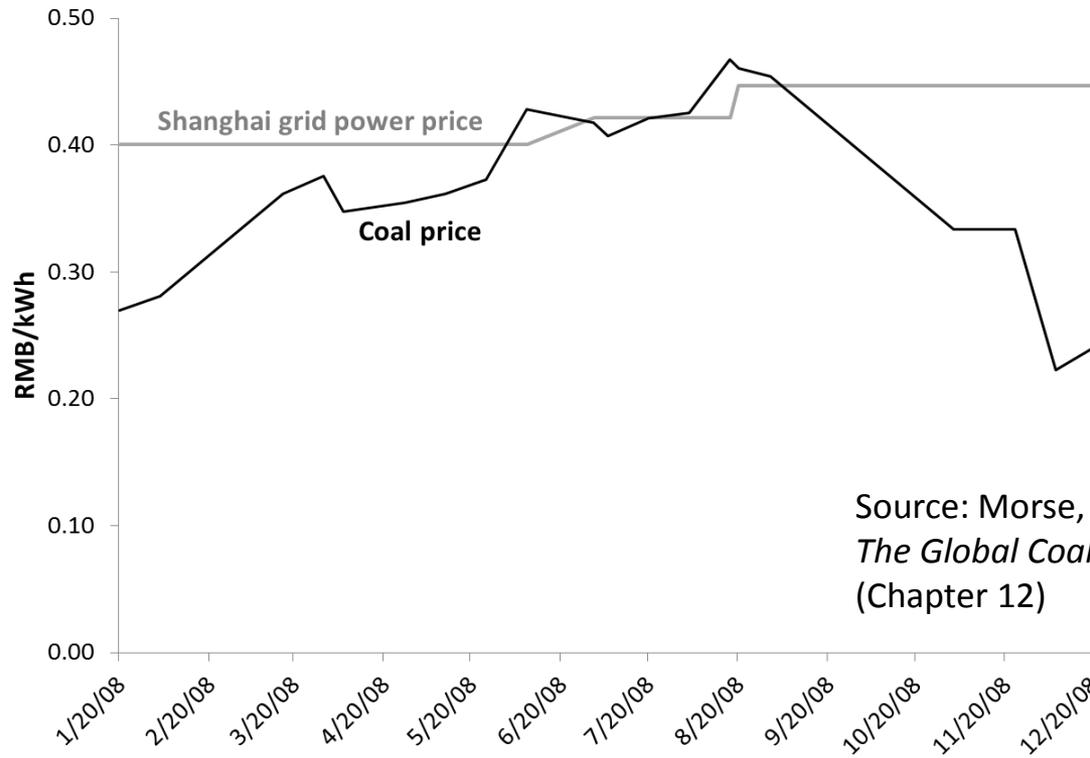
Underreporting of Town/Village Mine Production



Source: Tu, *The Global Coal Market* (Appendix A)

- Town/village mines provide major revenue for local govts.
=> incentive to keep open and not report production
- Any examination of global coal markets needs to grapple with data challenges (and not just in China)

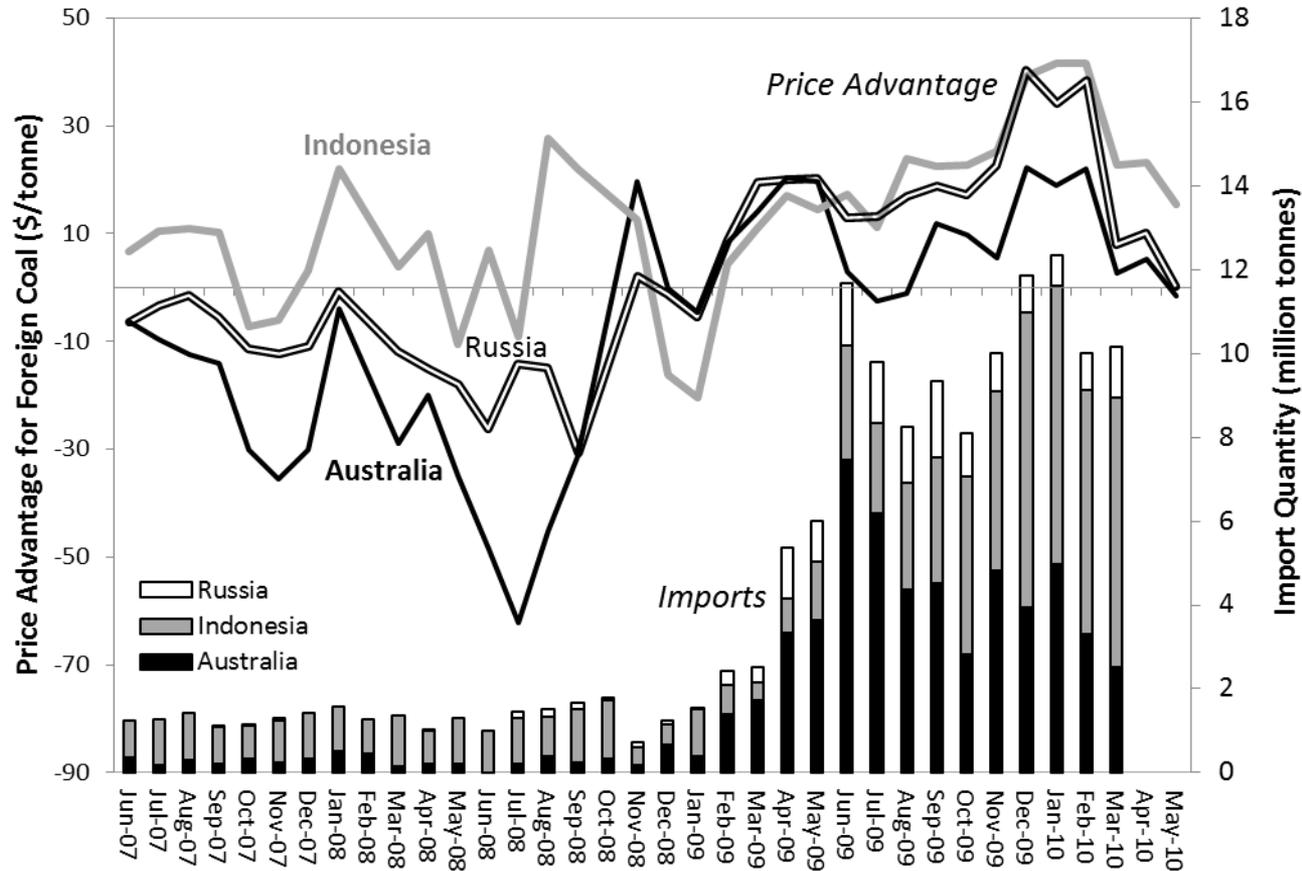
The Coal-Power Conflict



Source: Morse, Rai, and He,
The Global Coal Market
(Chapter 12)

- Government unwilling to let power prices increase much
=> Major losses at power SOEs when coal prices go up
- Coal-power conflict is a conflict between central govt. (controls power SOEs) and local govts. (control and/or benefit from coal mines)
- Coal also much more expensive due to railway monopoly:
“Coal-Power-Rail Conflict”

Strategy #1 for Managing the Coal-Power Conflict: Import to Arbitrage Prices Between Foreign & Domestic Coal



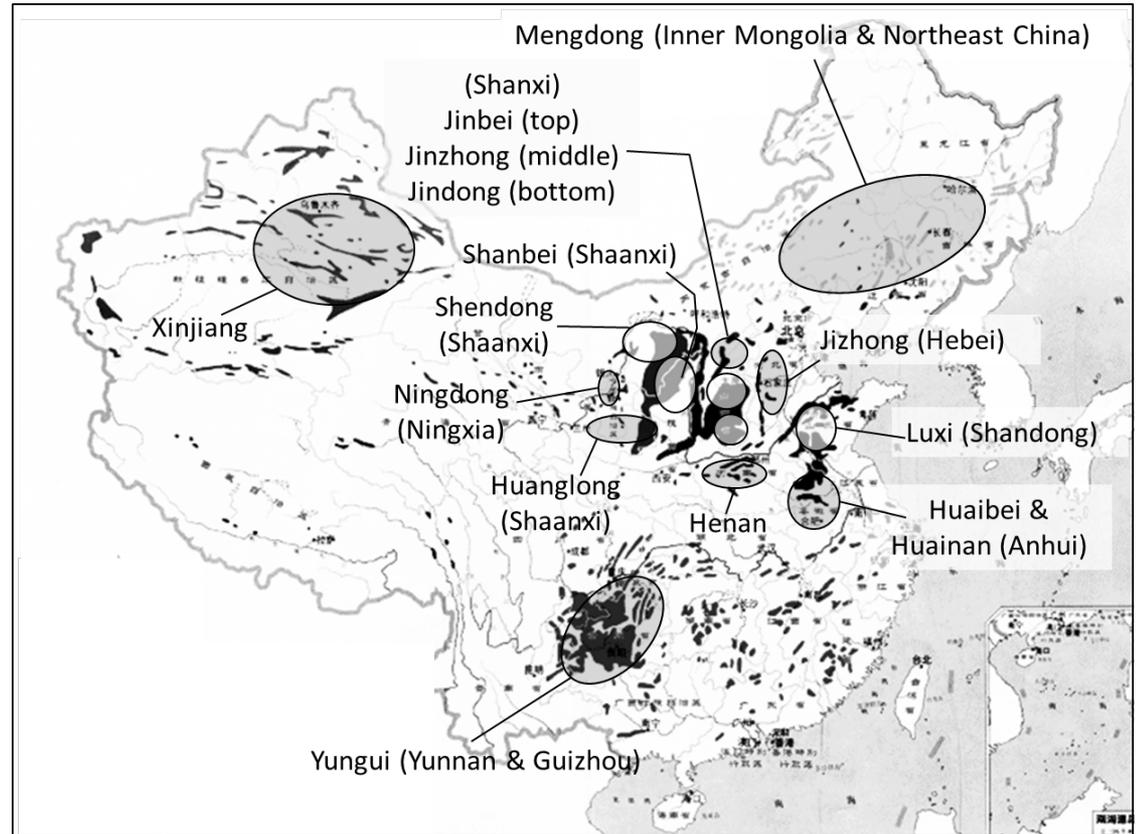
Source: Morse and He, *The Global Coal Market* (Chapter 9)

Key implications:

- China's growing imports do not represent structural deficit like India's
- China's coal policies can have strong impact on global trade

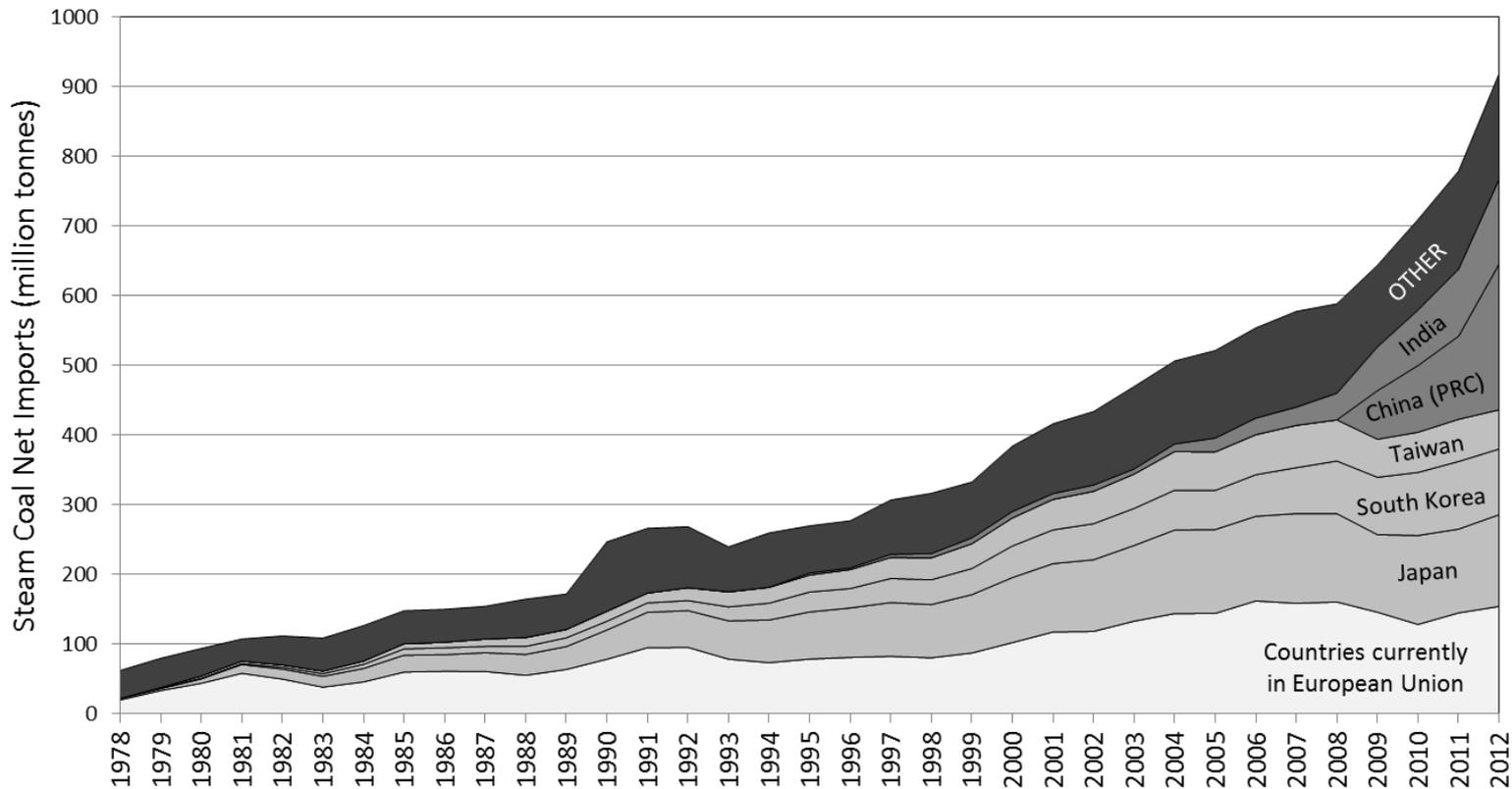
Strategy #2 for Managing the Coal-Power-Rail Conflict: Establish Vertically-Integrated “Coal-Power Bases”

- Shenhua is template:
coal + power + rail
- Implicit philosophy of China’s government:
“Bigger is better”
Believe increases efficiency, safety... and govt. control
- But there are reasons for skepticism too
Didn’t the govt. originally allow town/village mines because big SOEs were not productive enough?



Source: Rui, *The Global Coal Market* (Chapter 3)

India's Coal Deficit



Source: Thurber and Morse, *The Global Coal Market* (Chapter 1), using data from IEA (2014)

Barriers to increased production in India: 1) land acquisition difficulties, 2) challenges facing coal SOE (Coal India Limited), 3) insurgent activity

Challenges for Key Exporters

Indonesia: Possibly deteriorating regulatory climate

- Upcoming Coal Contract of Work (CCOW) expirations
- Interventions at various levels of government
- Domestic market obligation (DMO)

Australia: Uncertainty generated by climate and royalty rules may have contributed to infrastructure investment delays

South Africa: Rail constraints and lack of government focus on coal

USA: Ports in Oregon and Washington to ship PRB coal to Asia facing strong resistance on climate change grounds

Coal industries thrive when governments reduce investment risk, struggle when they increase it (by action or inaction)

The Elephant in the Room: Climate Change

Explicit Climate Policy

- Still too weak (or non-existent) in almost all coal-consuming countries to significantly affect coal markets. (Will USA be an exception?)
- Explicit policies in coal producing countries could marginally affect coal markets (e.g. Australia before carbon tax repeal)

By-Default Climate Policy

- Where explicit policy is lacking, climate battles starting to be fought in local stakeholder processes (e.g. environmental reviews in Oregon and Washington)

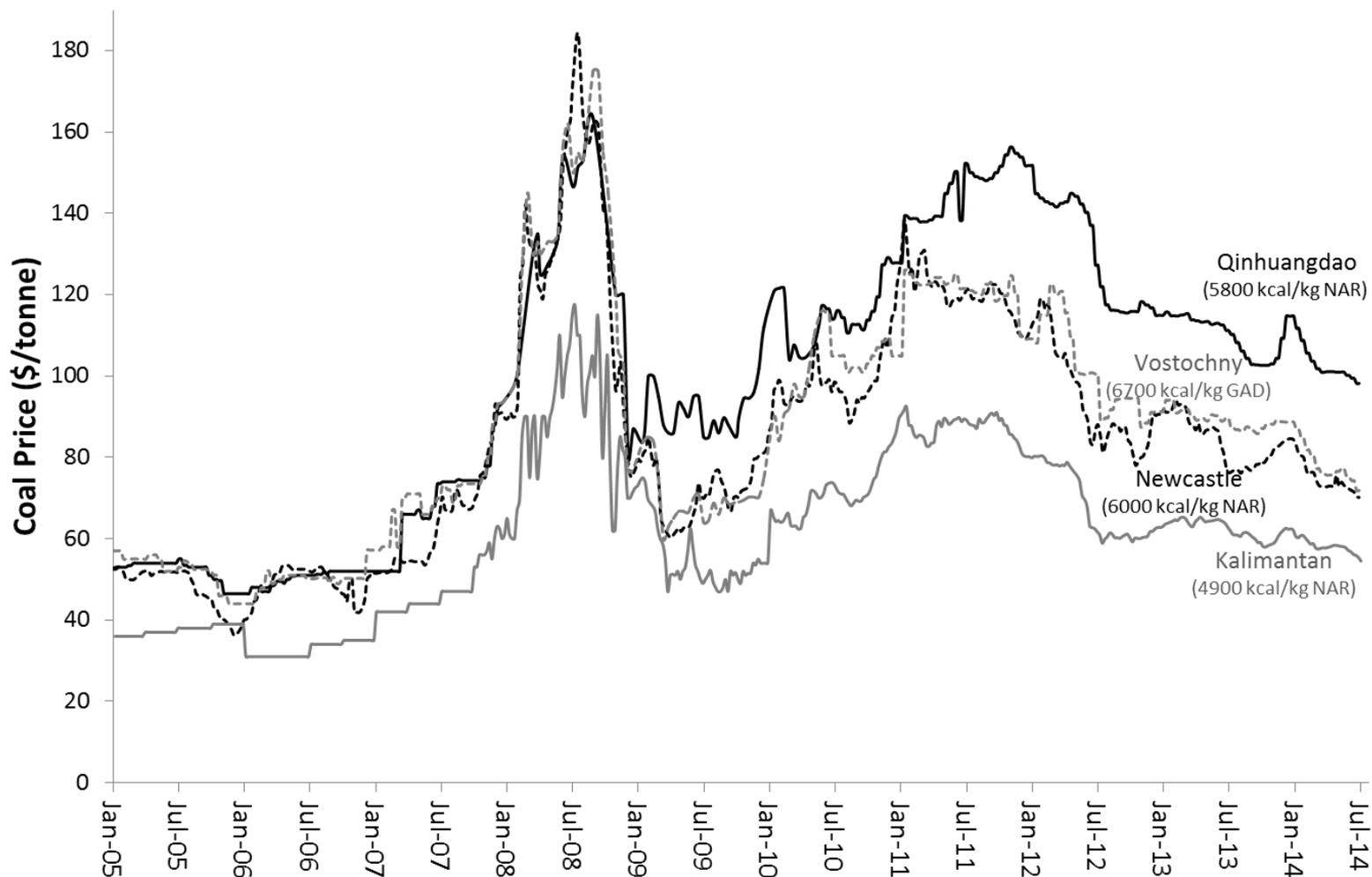
Looming Climate Policy

- Risk of future climate policy may affect current investments
- Creates environment of uncertainty (e.g. Australia's carbon tax repeal does not remove threat that a carbon price will re-emerge)

Carbon capture and storage (CCS) on coal plants has moved very slowly, but Boundary Dam and Kemper projects will be valuable early tests

Thank You

Coal Price Trends



Source: Morse and He, *The Global Coal Market* (Chapter 9), using data from IHS McCloskey