UNIVERSITY OF CAMBRIDGE | Energy Policy Research Group

Prices and trade in global gas & LNG markets

Dr Robert Ritz
Assistant Director, Energy Policy Research Group (EPRG)
Senior Research Associate, Cambridge Judge Business School
Principal, Vivid Economics Ltd., London

ESCP Europe Business School
London, 10 February 2015

Energy Policy Research Group (EPRG)

- **Research centre** based at Judge Business School & Faculty of Economics, University of Cambridge
- **World-leading academic research** in energy and environmental economics, social science and policy
- Supported by research councils, corporate donations, and industry members via the **Energy Policy Forum** (EPF)
- **Research themes**:
  - Energy Regulation and Markets
  - Energy Technology and Innovation
  - Energy Governance and Politics
  - Climate Change Policy
- **Outputs**: Research papers, PhD students, policy advice

Energy Policy Forum (EPF)

Knowledge exchange between EPRG & its members:
Research seminars, international conferences, policy dinners

Corporate Members

Institutional Members

Overview of this talk

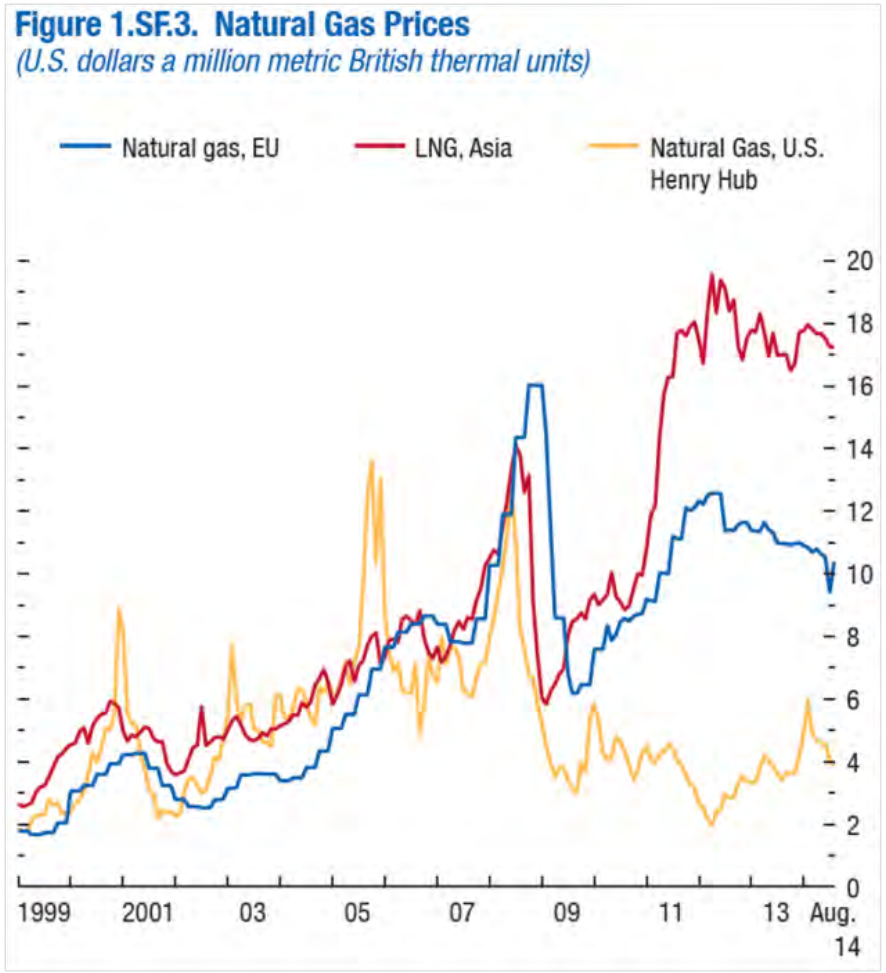
Understanding global gas prices & LNG trade

① Global gas & LNG prices are the result of imperfect competition

② LNG shipping constraints have created further limits to price arbitrage

③ A more “liquid” LNG market may, in parts, be *bad* for security of supply

Global gas prices have diverged – irrationally?



10 years ago: Single global gas price due to LNG trade?

2010s: LNG exporters failing to arbitrage prices?

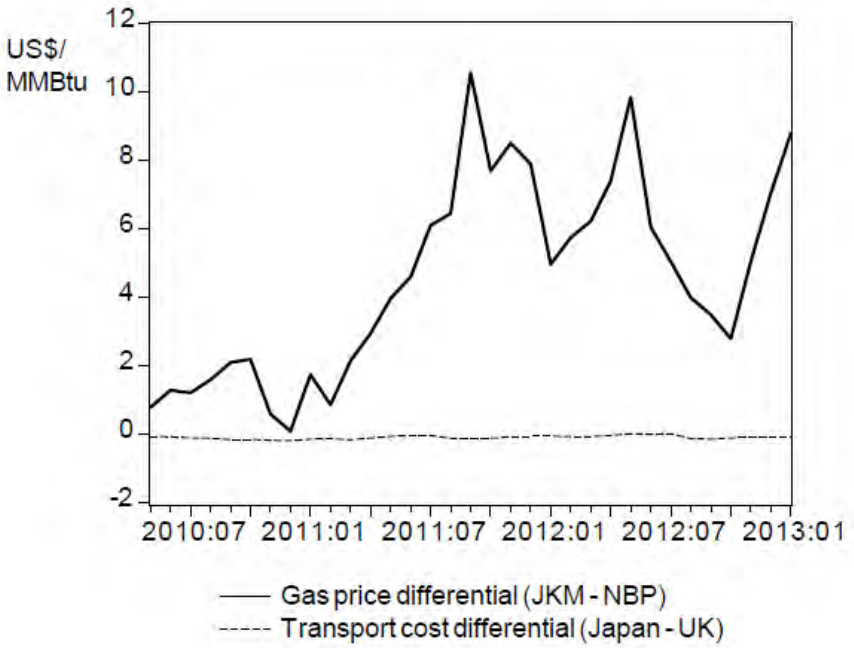
- **Qatar**: "Forgone profit" up to US$100 million per day?
  - Estimates for short-term sales to UK vs Japan during 2011

Source: IMF World Economic Outlook (October 2014)

Imperfect competition explains gas prices

A competitive model fails to explain gas prices…

Key prediction: Netbacks equal across export markets



Source: Ritz, R.A. (September 2014, *Energy Economics*)

… exporter market power rationalizes prices & trade

Exporters with market power recognize impact on prices

- Price sensitivities of demand vary across regional markets

BUT

Market power *not* always bad: raises investment incentives

- Static vs dynamic perspective

LNG shipping creates limits to arbitrage

"Entry barriers to LNG trading are surprisingly high – new entrants ... must have access to cargoes, but the market's liquidity is typically held captive by the LNG liquefaction owners/upstream suppliers"

"Traders must also have access to shipping, via owned vessels or the charter market."

Key role of shipping in the LNG value chain

① Centre of vertically integrated ownership structure

② Does exporter market power raise transport distances?

③ Optimal timing & risk profile of shipping investments

Source: JP Morgan Cazenove – Global LNG (January 2012)

High UK LNG imports projected for 2020s…

Figure 123
Annual supply pattern in No Progression

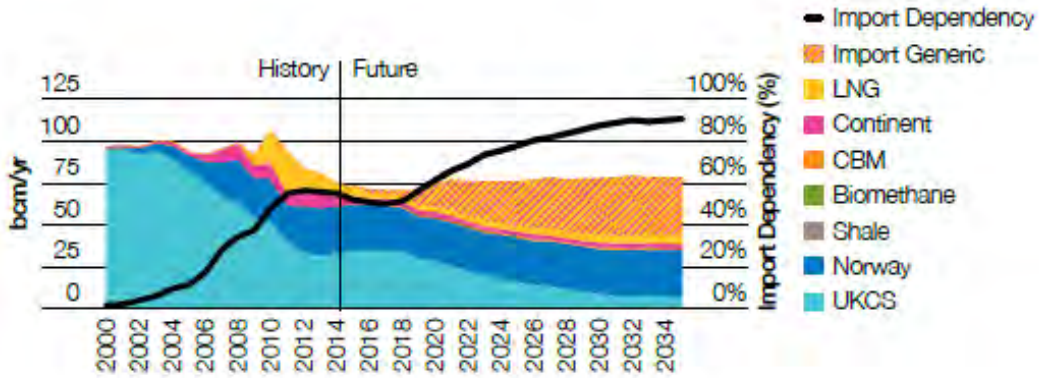
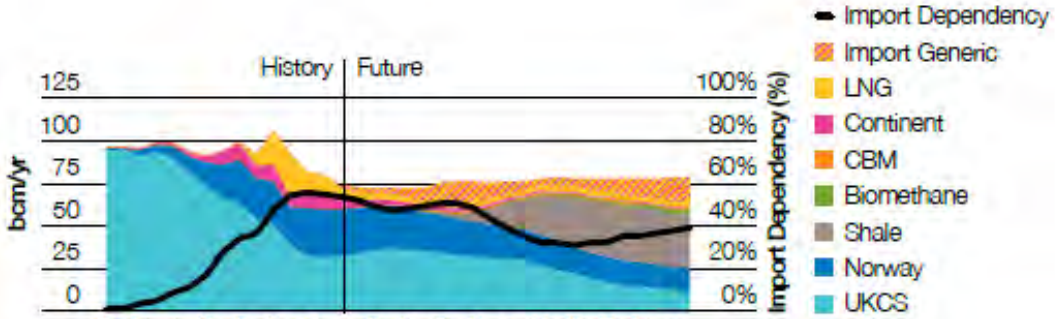


Figure 124
Annual supply pattern in Low Carbon Life

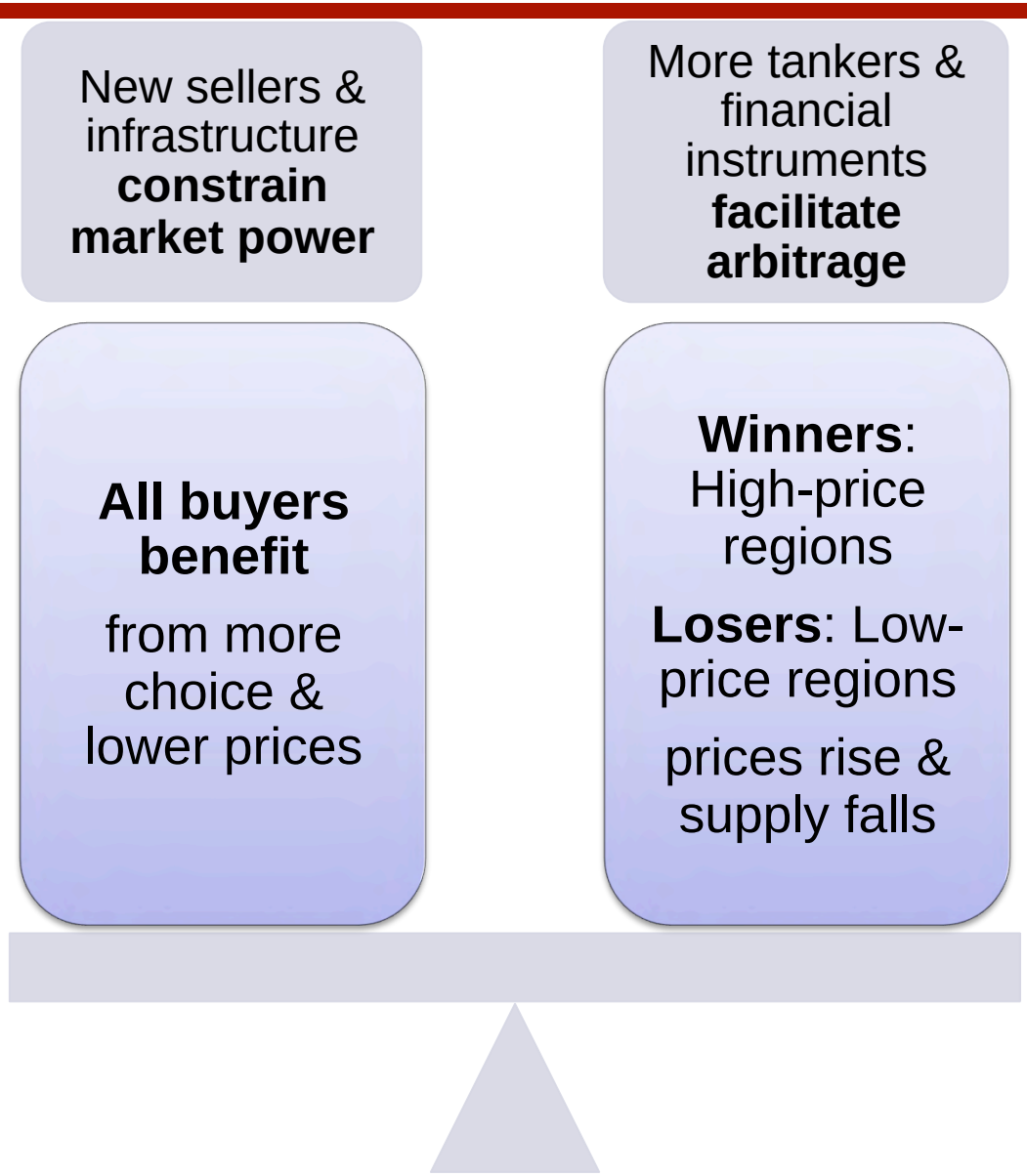


Large-scale new entry across LNG value chain

Fewer concerns about security of supply?

Source: National Grid UK Future Energy Scenarios (July 2014)

More “liquid” LNG market – two-edged sword?



References

Thank you for listening!

Disclaimer: The views expressed here are mine

Feedback welcome:
rar36@cam.ac.uk

References

- Ritz, R.A. (2014), "Price discrimination and limits to arbitrage: An analysis of global LNG markets", *Energy Economics* 45, September 2014, pp. 324–332

- Ritz, R.A. (2015), "A strategic perspective on competition in international gas markets", EPRG Working Paper, in preparation for end of February 2015