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Energy Security and Interdependence

World Oil and European Gas

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Main messages

- "Dependence v Interdependence" is not a very helpful distinction for policy purposes
- Reliance on dominant suppliers is only one determinant of the energy security situation – And energy supplies are not concentrating
- Energy security policies should pay more attention to how the markets work – *and how they cope with supply disruptions* – and less to relations with exporters

Defining the issue

- Conventional wisdom
  - Energy 'dependence' is risky
  - 'Interdependence' is safer – *"We need their energy but they need our money"*

Defining the issue (2)

- Testing the conventional approach
  - Russian gas is a much bigger political problem for Europe than OPEC oil for any country/region
  - Is Europe too dependent on Russia?
    - Lots of talk about "diversifying Europe's gas supply"
  - Should the EU seek more interdependence? How?
    - European gas companies – and some governments – argue that cross-investment would deepen interdependence, increase energy security

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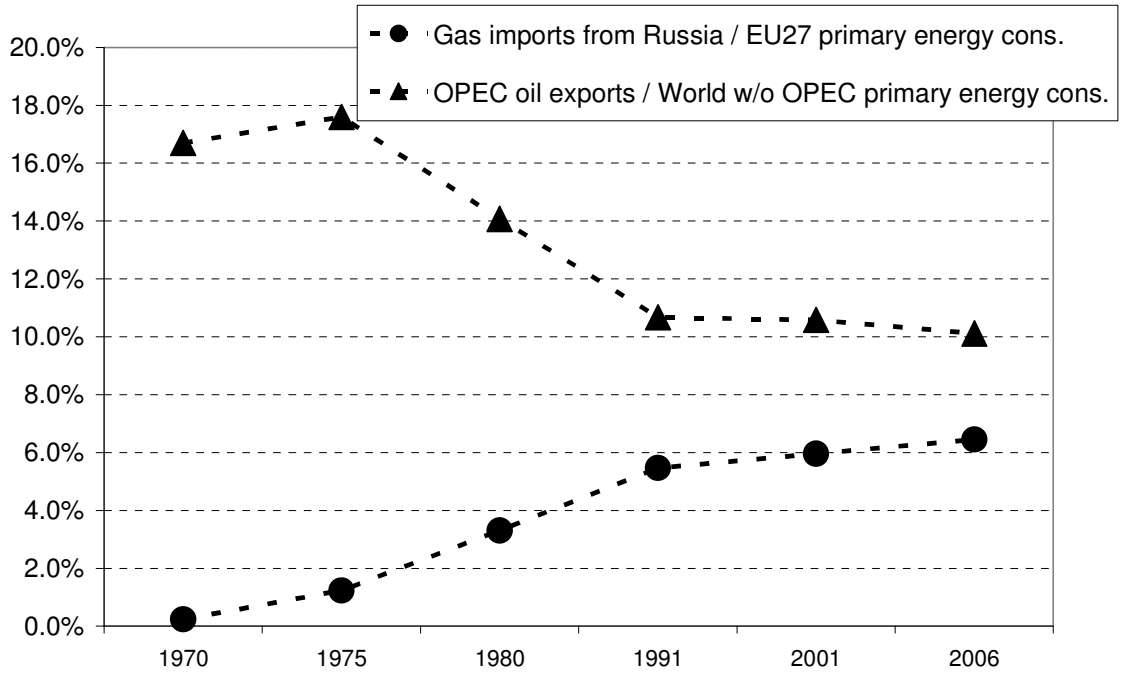
Defining the issue (3)

- Testing the conventional approach (2)
  - World's dependence on OPEC oil is larger than EU's dependence on Russian gas (cf graph)
  - Europe is Russia's only gas export market
  - Does (inter)dependence really matter?



Sources: Gazprom; BP Statistical Review of World Energy

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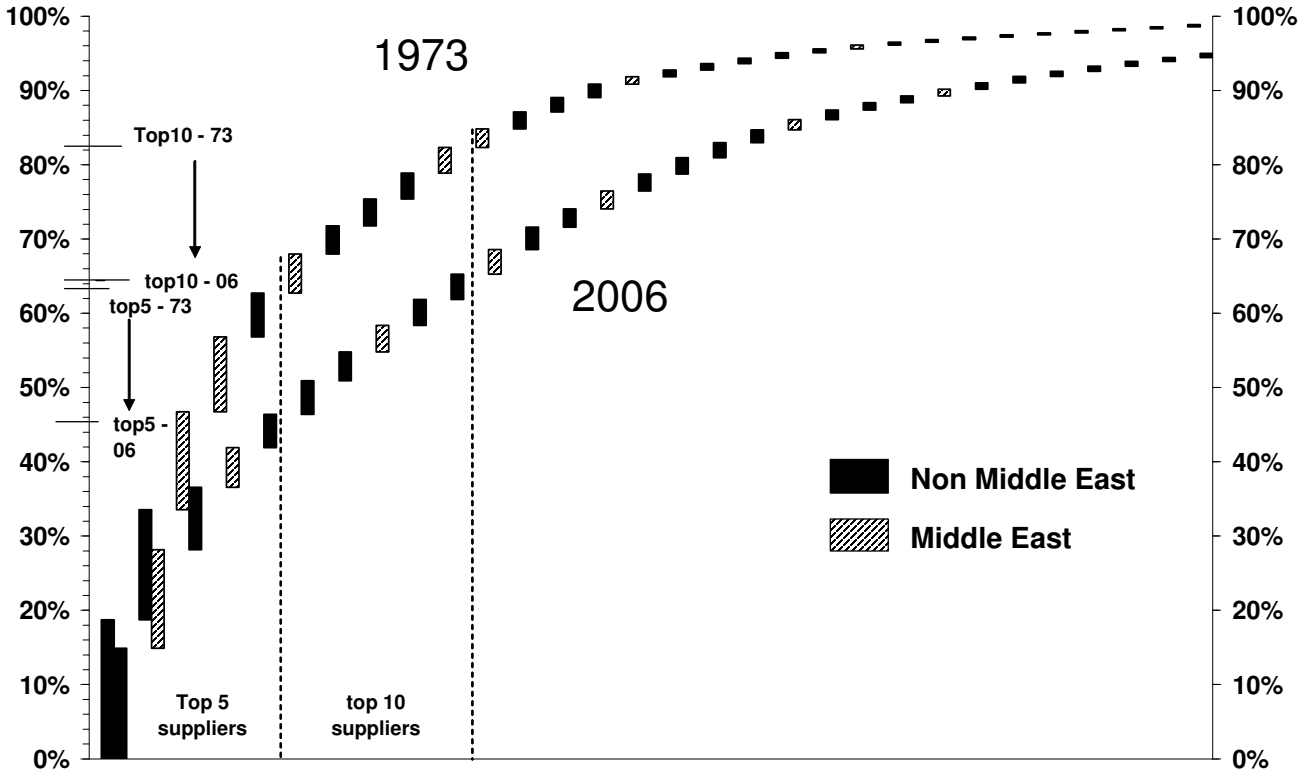
Defining the issue (4)

- Beyond (inter)dependence: 3 important questions
  - General theme: *dominant energy suppliers*
  - Is supply concentrated? concentrating?
  - Do dominant suppliers threaten supply security?
  - Is "energy dependence" politically problematic?

Supply concentration – *1. World oil*

Oil supply is much more diversified in 2006 than 1973



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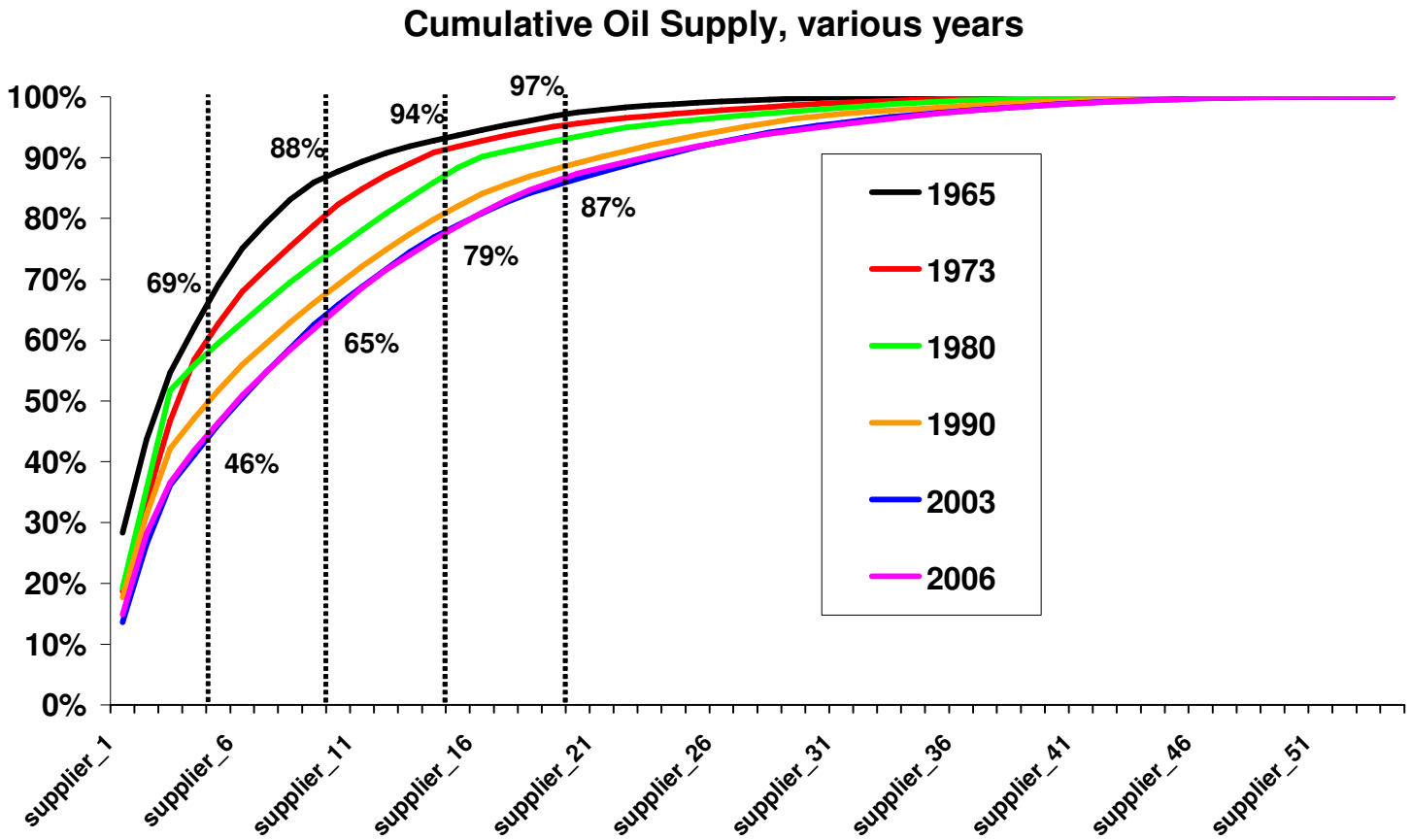
Supply concentration – *1b. World oil*

The diversification trend seems to have stopped – *will it reverse?*



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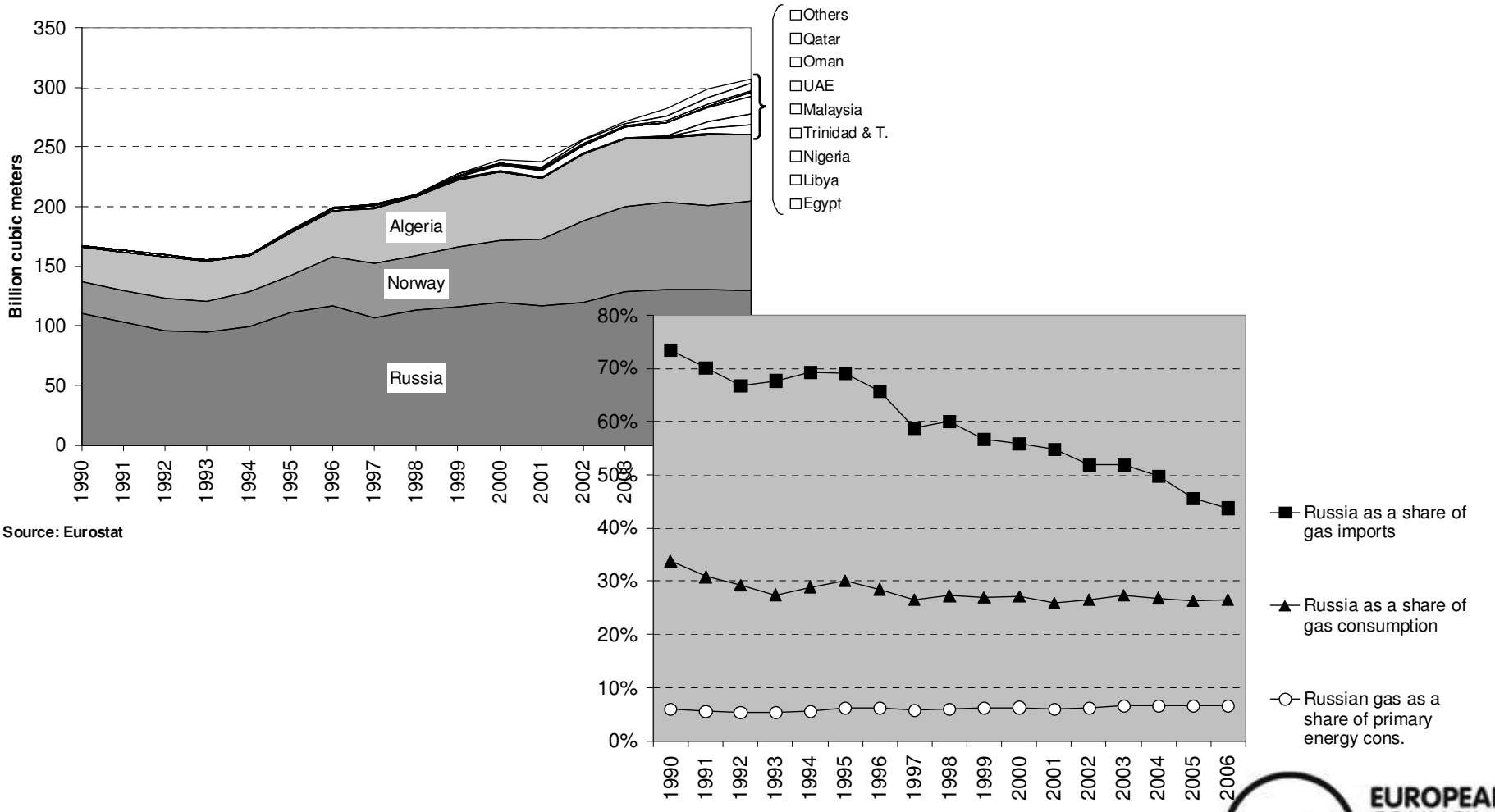
Supply concentration – 2. *European gas*

European gas imports have been diversifying significantly



Source: Eurostat

Source: Eurostat, BP Statistical Review of World Energy

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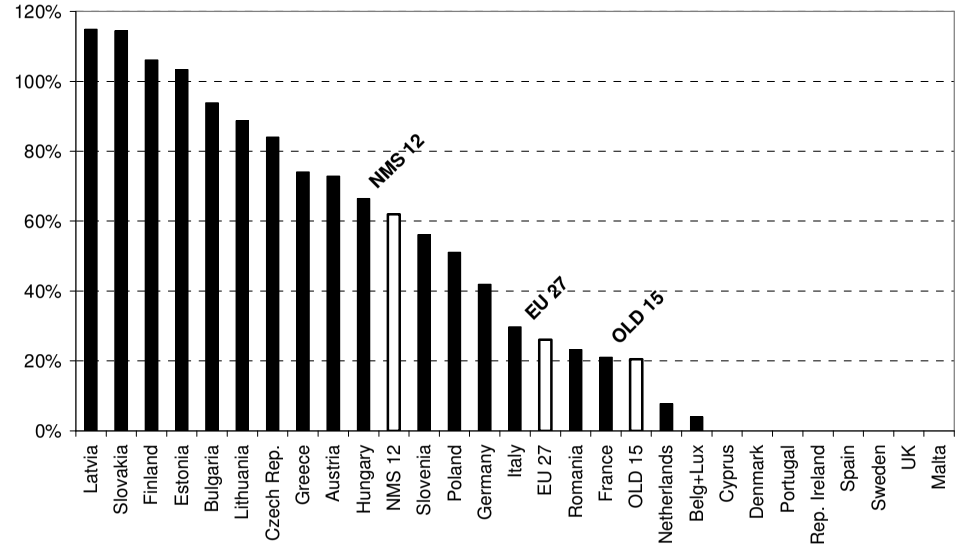
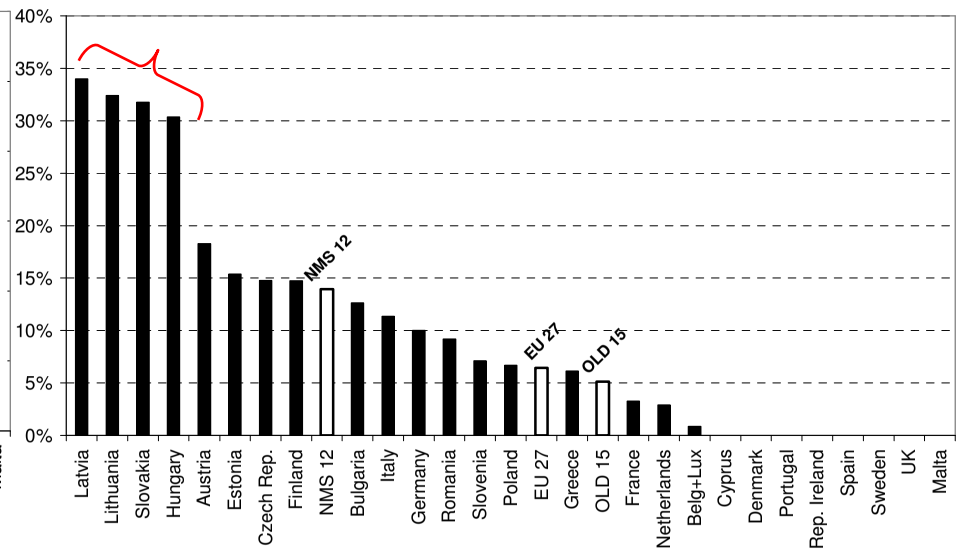
Supply concentration – *2b. European gas*

But some countries in Europe are heavily dependent on Russia



Sources: BP Statistical Review; Eurostat



Sources: BP Statistical Review; Eurostat

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Supply security

- "Do they have an incentive to cut us off?" – *restrictive approach to supply security*
- What happens if supply is disrupted – *more interesting approach*
- Supply security policy -- *minimizing the loss of welfare due to supply disruptions*
  - Ensuring that the market clears – Demand has to be met; Involuntary interruptions are *very* costly
  - Minimizing the cost at which the market clears – What price does it take for supply & demand to balance?

Supply security (2) – *Global oil*

- Global market
  - Supply disruptions trigger global price spikes
  - Bilateral dependence doesn't matter – in most cases
  - Global supply diversity does matter
- Supply security policy
  - No price regulation or import restrictions
  - Emergency storage – better with int'l co-ordination
  - Taxes + R&D support – reduce oil intensity of GDP; promote alternatives
  - Current challenges – China & India not in IEA; Increased supply disruption risk; Scarcity risk

Supply security (3) – *European gas*

- Country specificities determine risks, efficient security policies – For example:
  - Structure of gas supply
    - More storage required if few suppliers / key infrastructure
    - Diversity means greater N-1 resilience
  - Structure of gas demand
    - More storage required if high residential peak demand
    - Industrial / powergen demand more interruptible – backup diesel may be more cost-effective than storage
- Different risks, different instruments
  - Prolonged v. short-lived interruption

Supply security (4) – *European gas (b)*

- Market integration
  - The wider the market, the lower the cost of ensuring supply security
  - An integrated European gas market would increase security for all consumers
    - Polish, Hungarian players can virtually import non-Russian gas from Western Europe (swaps)
    - Interruptible customers in (say) Belgium can help alleviate a supply crisis in (say) Poland
  - "Island" markets (Baltic states) are in a more difficult position

Political implications

- Dominant suppliers may exert market power
- But are they necessarily politically problematic?
- OPEC as a politically benign cartel
  - Has not emerged as a geopolitical force
  - Doesn't link oil-export policy to foreign policy goals
  - Some heated rhetoric (Venezuela) but little action
- Russia as a politically problematic supplier
  - One of the most divisive issues in EU politics
  - Main barrier to EU unity on Russia

Political implications (2)

- Key determinant – *How the market works*
  - Do bilateral relations matter
    - Global oil – No
    - European gas – Yes
  - Is the commodity 'fungible' across the market
    - Global oil – Very high fungibility
    - European gas – Low fungibility
- Making Russian gas more benign means market integration
  - Access to Russian gas would no longer be linked to relations with Moscow
  - Large bilateral import projects would be "europeanised"

Some conclusions

- Oil security risks do exist but are rather well addressed by existing policies – at least in the OECD
- Very little foreign policy implications from "oil dependence"
- Oil is not gas – but looking at global oil is very helpful to understand what's wrong with European gas
- Before rushing to "external energy policy", the EU should build an integrated gas market
  - Benefits of market integration: Enhanced supply security; Russian gas less divisive in Europe