Strategies for “National Gas Companies” in the Atlantic

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Agenda

- Context
- Companies/countries studied
- Methodological structure
- Corporate attributes
- National and Corporate Strategies
- Conclusion

Context

- LNG becoming more important, in the US, EU and Pacific
- Reserves of gas less concentrated than oil, regionally
- But more, nationally
- Small number of players
- Most players are “national oil companies”

Context….cont

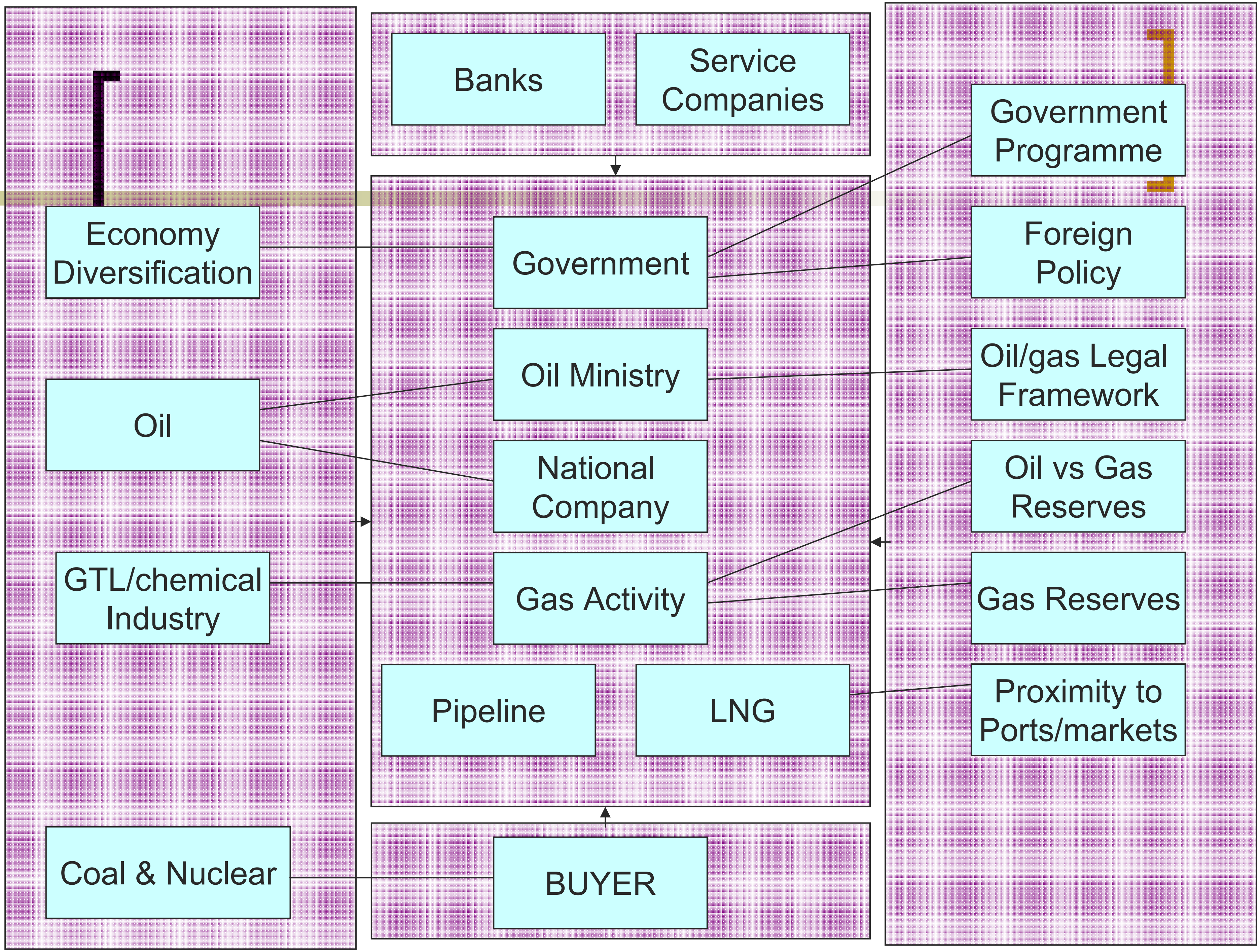
- Unprecedented growth in LNG market
- Fundamental changes in the contractual structure
- Changes in legislative structure in key markets

Countries

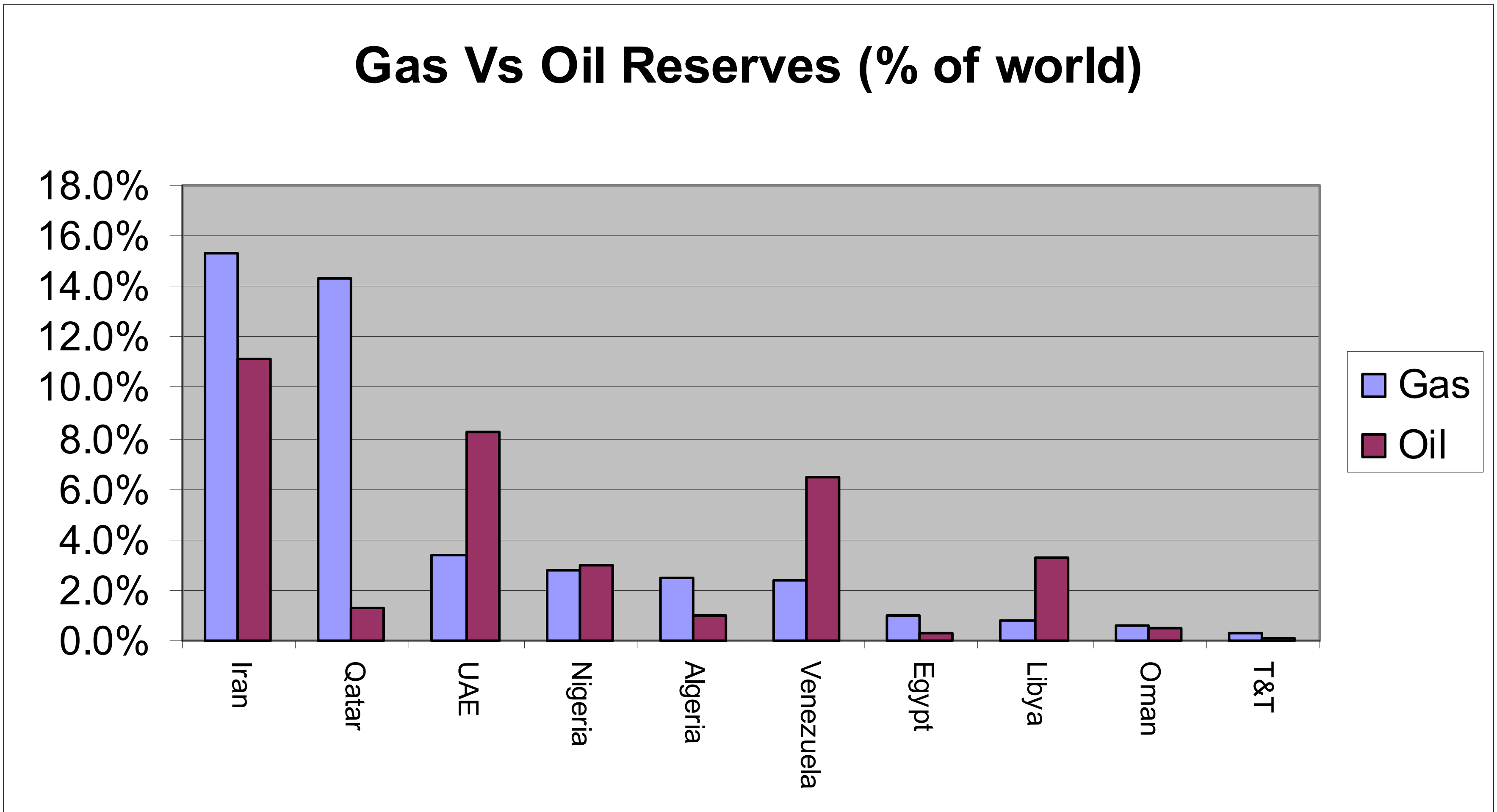
- Algeria
- Egypt
- Iran
- Libya
- Nigeria
- Oman
- Qatar
- Trinidad & Tobago
- UAE
- Venezuela

Methodological Structure

- A modified Porters-5 forces


Banks
Service Companies
Government Programme
Economy Diversification
Government
Foreign Policy
Oil Ministry
Oil/gas Legal Framework
Oil
National Company
Oil vs Gas Reserves
GTL/chemical Industry
Gas Activity
Gas Reserves
Pipeline
LNG
Proximity to Ports/markets
Coal & Nuclear
BUYER

Reserves

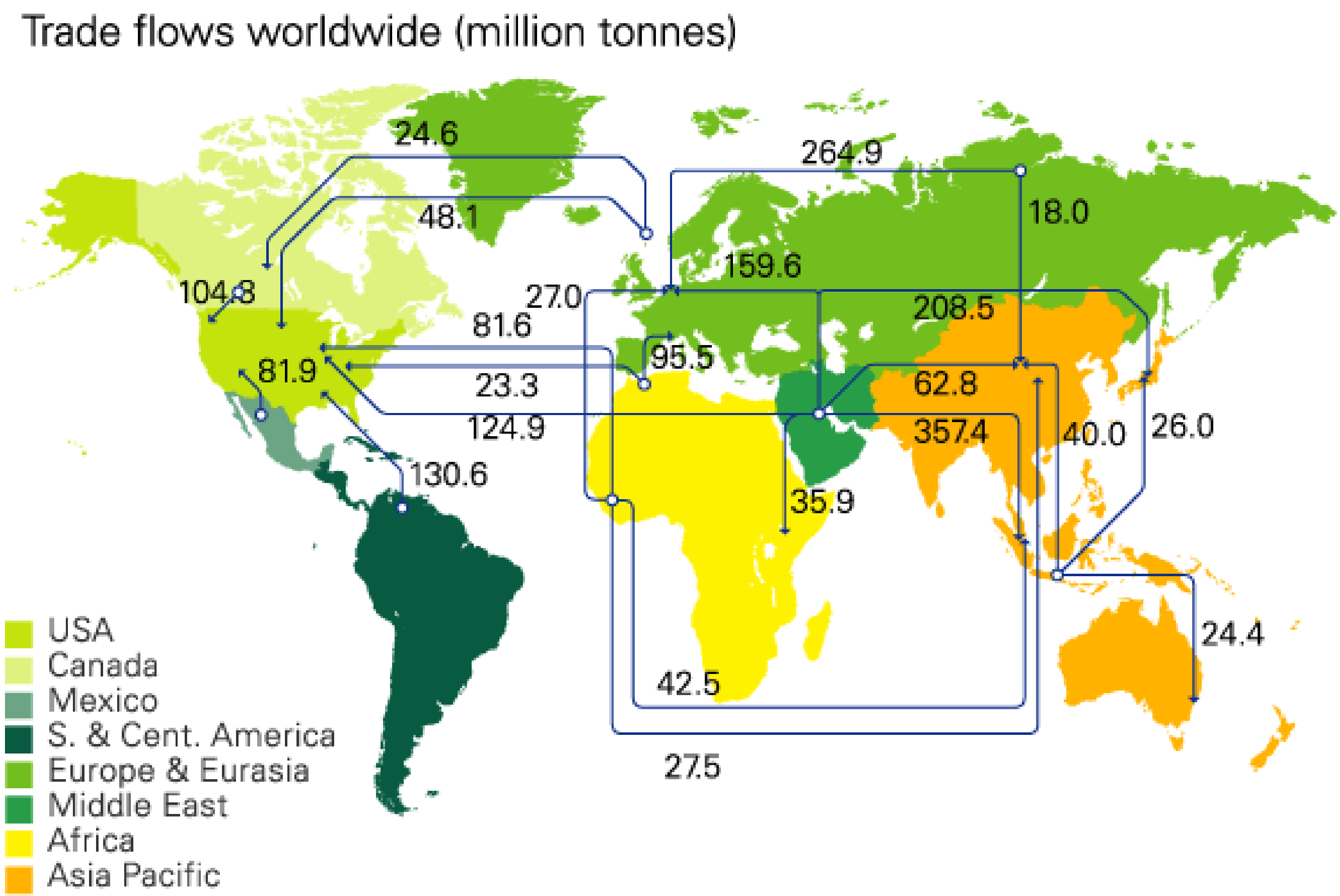


Gas Vs Oil Reserves (% of world)
18.0%
16.0%
14.0%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
Iran
Qatar
UAE
Nigeria
Algeria
Venezuela
Egypt
Libya
Oman
T&T
Gas
Oil

Proximity to markets

	Pipeline	**LNG**
Algeria	Good proximity to West Europe	Europe, also USA
Egypt	Good proximity to Europe and Middle East	Europe, also USA
Iran	Good proximity to India and East Europe	Pacific and Atlantic
Libya	Good proximity to Europe	Europe, also USA
Nigeria	Potential regionally	Europe, also USA
Oman		Pacific and Atlantic
Qatar		Pacific and Atlantic
T&T		USA, also Europe
UAE		Pacific and Atlantic
Venezuela	Potential regionally?	USA, also Europe

On the map

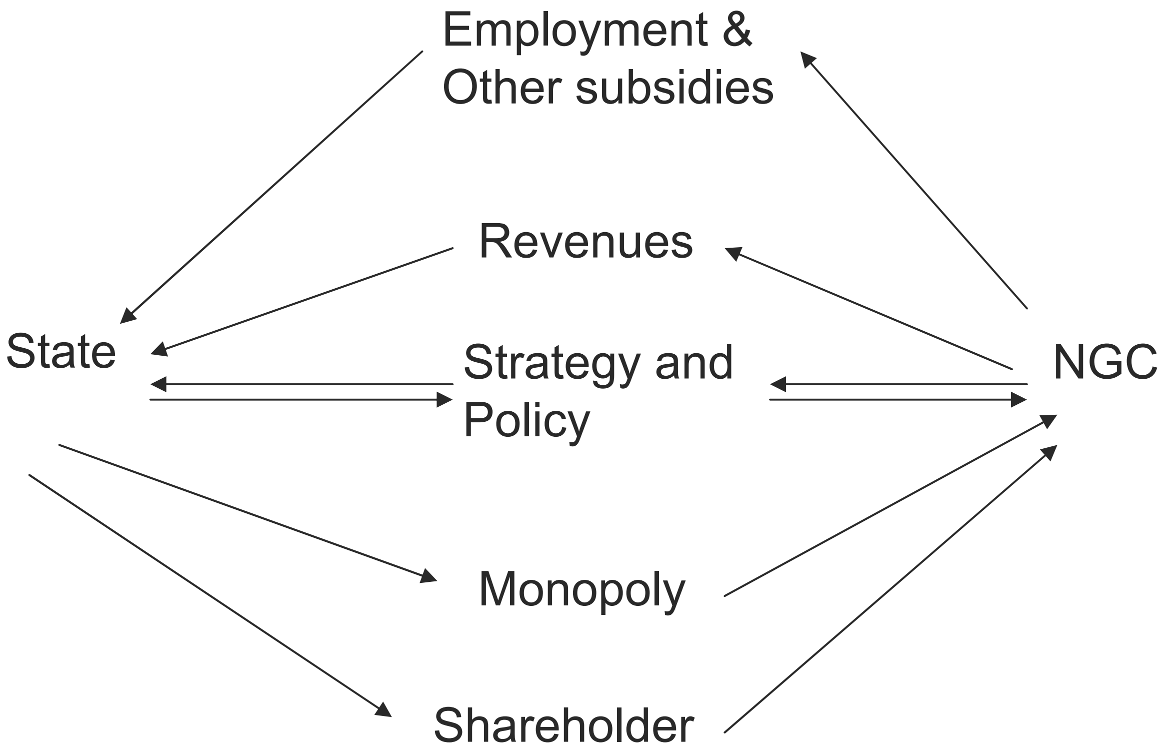


Trade flows worldwide (million tonnes)
24.6
264.9
48.1
18.0
159.6
104.8
27.0
208.5
81.6
95.5
81.9
23.3
62.8
124.9
357.4
40.0
26.0
130.6
35.9
24.4
42.5
27.5
USA
Canada
Mexico
S. & Cent. America
Europe & Eurasia
Middle East
Africa
Asia Pacific

Government & Company

	Importance of the Oil/Gas sector to the Economy	State Ownership of Liquefaction Capacity	NOC	State ownership
Algeria	Export revenues (95%), Fiscal revenue (70%) and GDP (40%)	100%	Sonatrach	100%
Libya	Export revenues (95%) and Fiscal revenue (75%)	100%	NOC	100%
Nigeria	Export revenues (93%) and Fiscal Revenues (80%)	49%	NNPC	100%
Trinidad & Tobago	Export revenues (70%) and Fiscal revenues (25%)	about 5%	NEC/NGC	100%
Egypt	GDP (7%)	about 24%	EGPC/EGAS	100%
Venezuela	Export revenues (75%) and Fiscal Revenues (45%)	N/A	PDVSA	100%
Oman	Fiscal revenues (70%) and GDP (40%)	about 45%	Oman LNG	51%
UAE	Fiscal revenues (63%) and GDP (30%)	about 30%	ADNOC/ADGAS	100%
Qatar	Fiscal revenues (75%) and GDP (31%)	about 65%	Qatar Petroleum (100%), RasGas (70%), RasLaffan(70 %)	
Iran	Fiscal Revenues (45%), Export Revenues (80%)	N/A	NIOC/NIGEC	100%

The national character



Gas rich, oil poor

- Algeria and Qatar
- Important investments over the past decades
- Reaching momentum

Algeria

- Algeria: Sonatrach
- Unique Pipeline/LNG flexibility
- Vertical hedge (UK & US)
  - Reinforce pipeline flexibility
- Cooperation
  - Cooperation with Nigeria in infrastructure
  - Cooperation with Trinidad in Swaps
  - Cooperation with Qatar for vertical hedge?
  - Geographical integration (Peru)
  - Low investment in LNG?

Qatar

- Positioning as a swing producer: Pacific Atlantic?
- Upstream competition with Iran
- BUT:
- Over investment in Liquefaction capacity?
- Over investment in shipping?

Oil Rich, Gas Rich: The Sleeping Giants

- Iran and Venezuela
- Oil reserves high, low historic interest in gas
- Political (and legal) dimensions particularly important
- Low initial market share, coupled with high reserves entails aggressive pricing structure

Sleeping giants…cont

- Once liquefaction capacity investment comes through in Iran, NIOC will have in a 2025 horizon:
  - 2^{nd} Reserves in the world
  - Status as swing exporter of LNG: Pacific/Atlantic?
  - Status of swing exporter of pipeline (India and EU)
  - Important pipeline/LNG flexibility

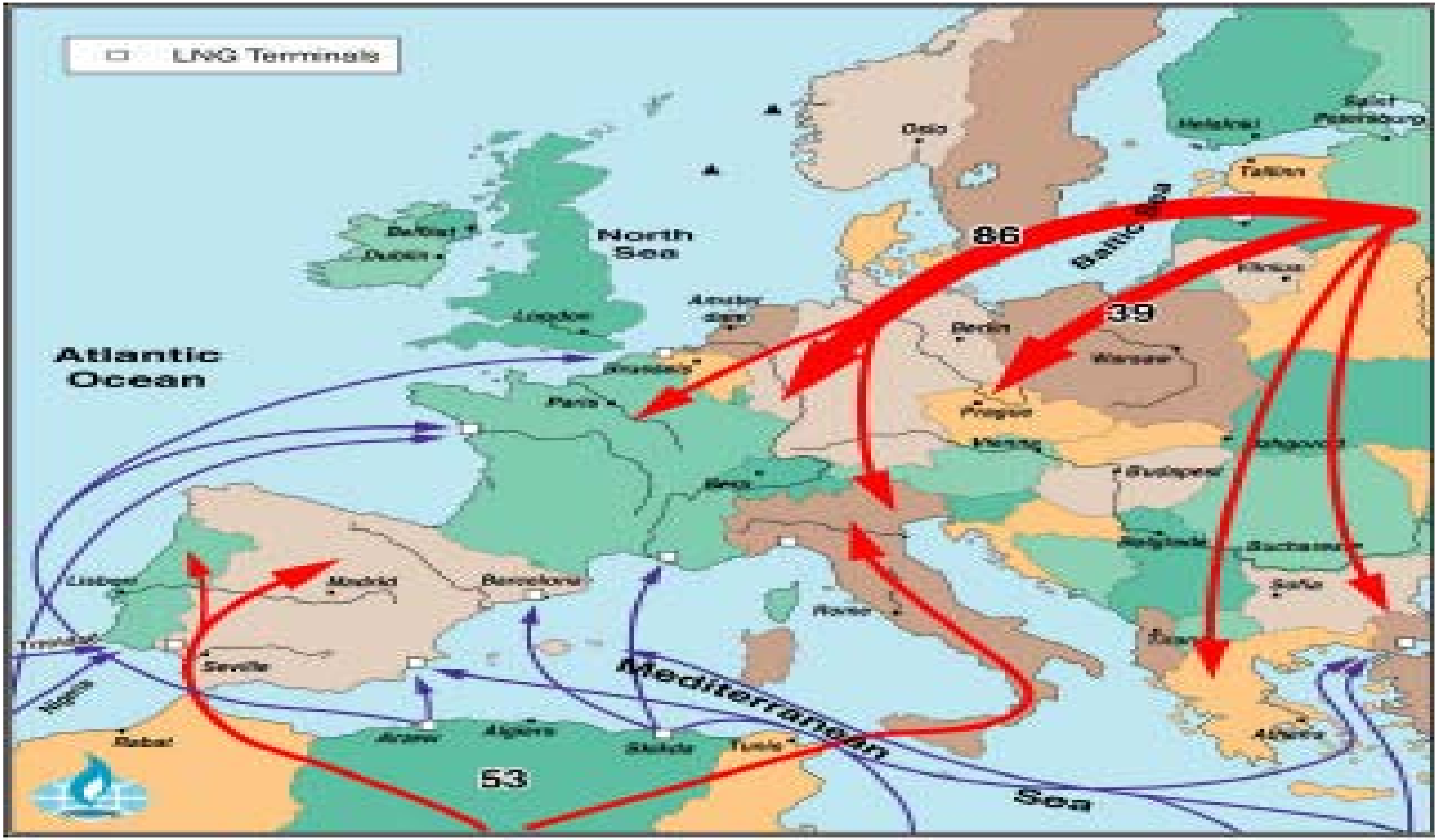
Other strategies: Niche LNG players

- Trinidad & Tobago
- Oman
- UAE

Pipeline/LNG flexibility seekers

- Libya (Greenstream)
- Egypt (Arab Pipeline Project)
- Nigeria (NIGAL)

Existing pipelines

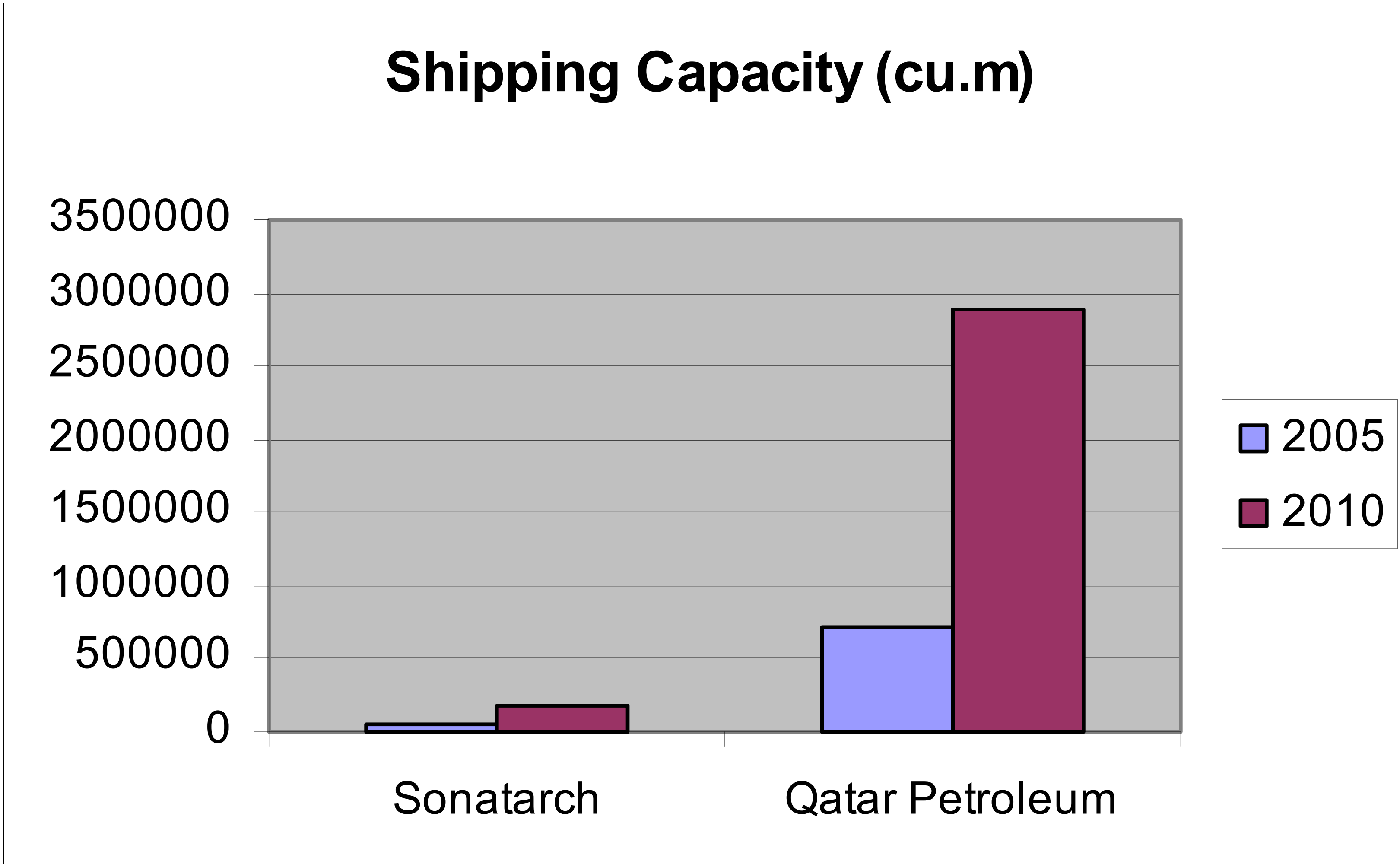


Nigeria: A Med. Pipeline Player?

LNG vertical expansion

- Algeria: Regasification presence in Spain and UK, and capacity booking in the US
- Qatar: Regasification presence in Italy and the UK
- SHIPPING CAPACITY

Shipping Capacity for National Gas Companies



LNG Horizontal Expansion

- Sonatrach in Peru (Camisea) for Pacific market

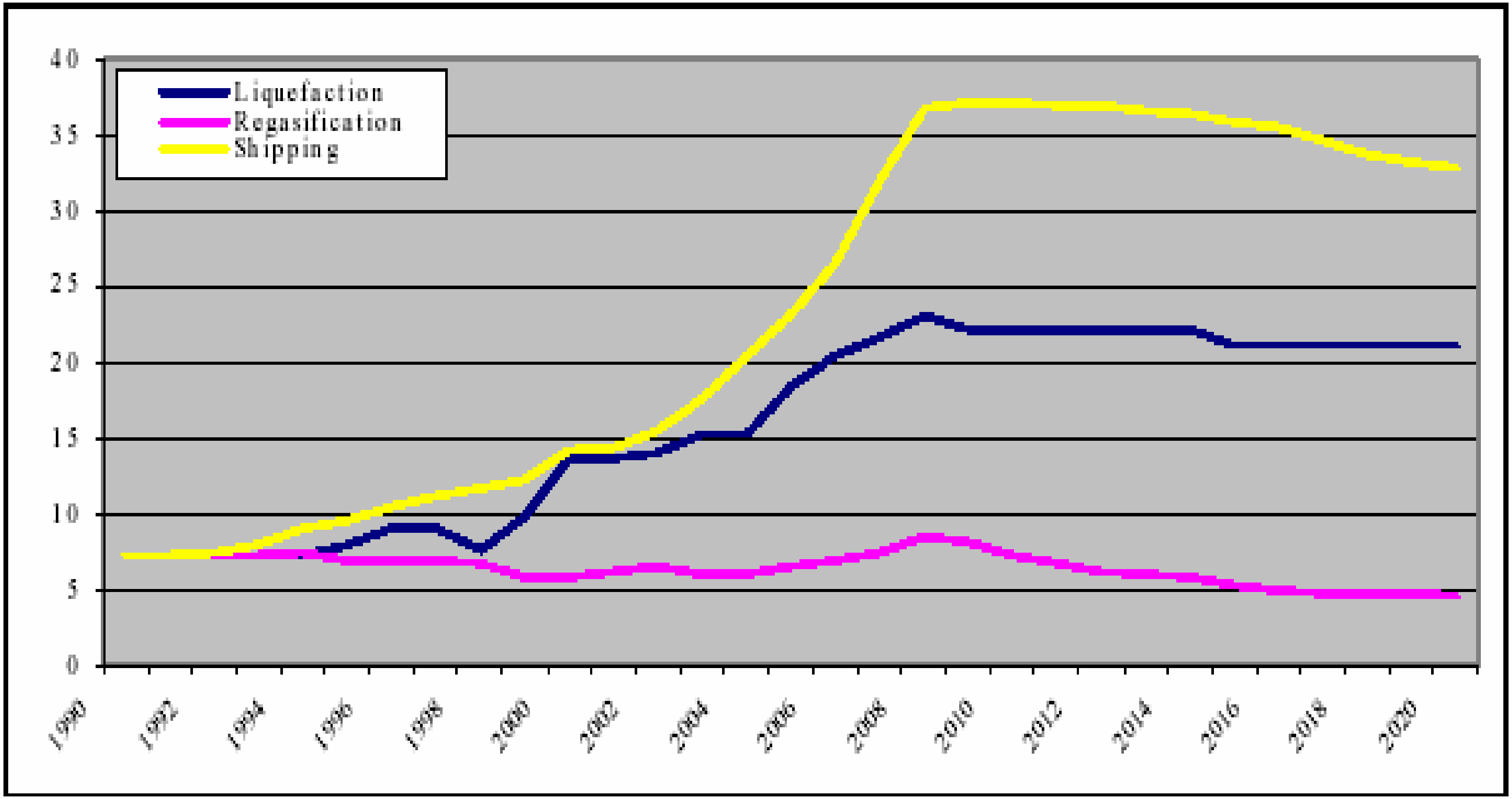
Other substitutes

- CNG - GTL becoming more important
  - Qatar, Iran and Algeria
- Gas intensive industries?
  - Environment concerns
  - Other raw materials (aluminium)

Competitive environment

- Algeria with Libya and Egypt
- Qatar with Oman, UAE
  - Iran in the future (2008?)
- T&T with Venezuela, in the future (2010?)
- Also, is there an over-capacity of liquefaction capacity?

Over-supply of LNG?



Cooperation between NGCs

- LNG projects are capital intensive
- Contracts are more flexible
- Over capacity of production leads to lower prices
- Lower prices means lower margins and lower reinvestments
- Lower reinvestment means lower safetly???
- Should cooperation between NGCs be encouraged?

Cooperation with IOCs

- Complementarity:
- NGCs have the reserves and local expertise
- IOCs have technology and finances

Conclusions

- As upstream markets liberalise in some key producers, with high oil prices and changing gas market fundamentals
- NGCs will become more present as global players rather than national or regional players
- A number of low reserves players will try to maximise revenues from niche markets
- A number of Mediterranean players will seek Pipeline/LNG flexibility

Conclusions

- Gulf players will seek Atlantic/Pacific flexibility
- “Sleeping giants” will enter the market with aggressive pricing to gain market share
- Experienced players will seek vertical hedge through shipping and regasification investment
- And geographical expansion for Pacific/Atlantic markets