



25th world gas conference
"Gas: Sustaining Future Global Growth"

Regulatory Risk Assessment in the Gas Industry

Topic N° 24 . PGCB-7A. Regulatory Issues and Business Cases

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Sensibility to Best Practices and Regulatory Risk Aversion

- The impact of the regulatory framework (governments, regulators and regulatory policy) plays a crucial role in the gas industry and corporate strategies.
- Companies are not just concerned about economic regulation, but regulation and policy extend over many other aspects: technical, administrative, environment, security, innovation...
- Regulatory risk is a key parameter for analysts, rating companies, investors and at the end...

security and quality of energy supply

 CUSTOMERS

The Scenario

- Liberalisation processes in EU since last decade of s. XX have configured a new policy framework but specific for each country
- Regulated activities, mainly those of Gas & Electricity TSOs, and also DSOs, depend on regulation
- Increasing political interference on regulatory processes
- Regulatory risk: main driver of risks for Gas and Electricity TSOs.

Perceptions

- Increased perception of regulatory risk in European energy utilities since the last decade, but increased with the financial crisis scenario and debt crisis
- Some recent examples (Sept 2011)



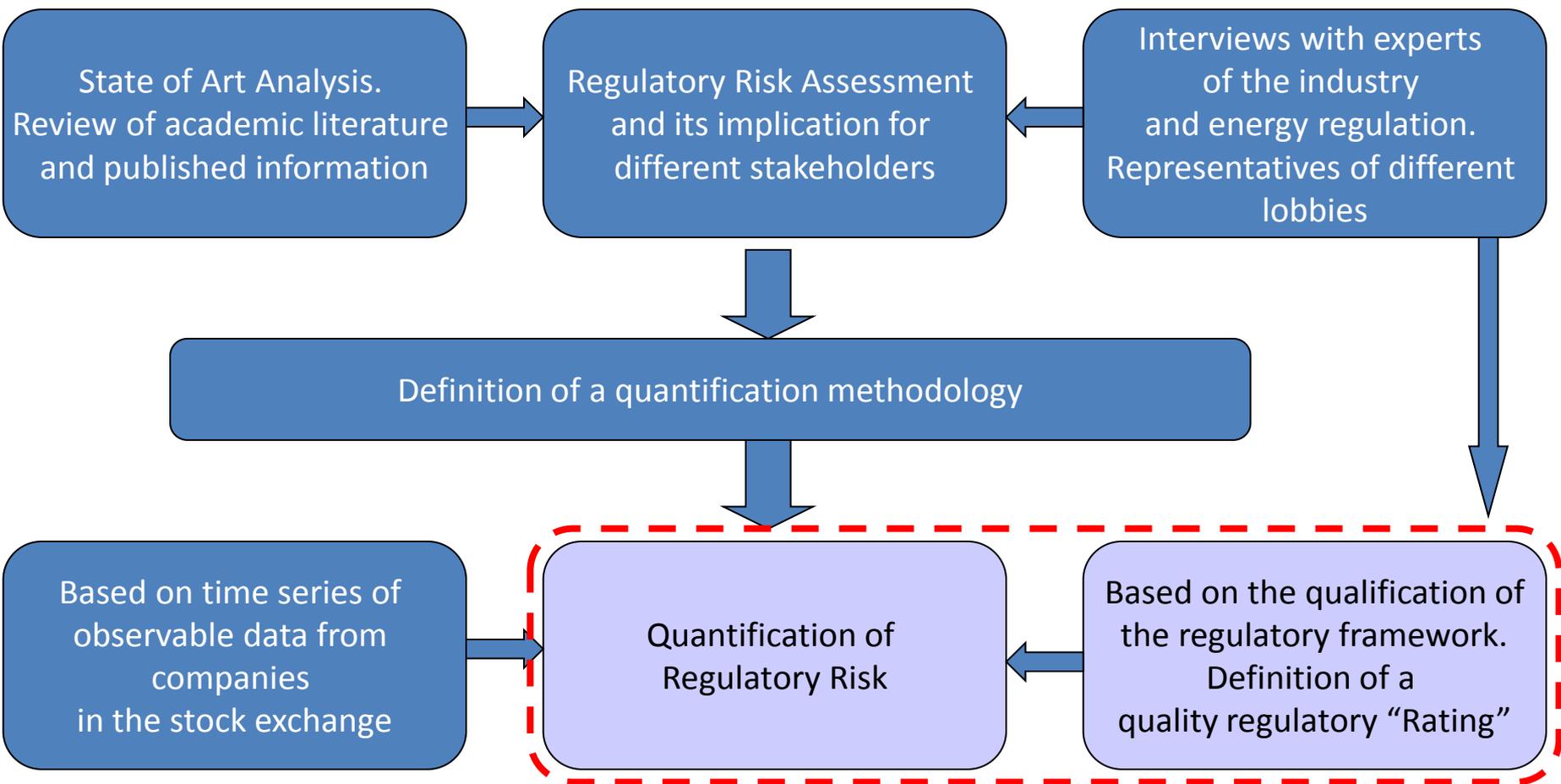
Previous research project: time series

- This paper stems from a previous quantitative analysis of regulatory risk and its impact on regulated energy companies, based on time series analysis (stock markets) and focused on the identification of particular regulatory risk events. Four measurements were created:
 - Moving Variances
 - Moving Betas
 - Moving “Entropy”
 - Entropy
- Results confirmed that there are significant levels of global risk in European TSOs.
- The methodology was consistent and results are robust to changes in the main parameters of the models: differences among regulated companies persisted.
- The proposed measures proved useful to detect and analyse events of regulatory failure and to compare between companies. In particular, entropy measurements confirmed that stock exchange Indexes (diversified portfolios) have a lower significant global risk than regulated energy companies in most cases (depending on the number and degree of diversification of the companies listed, stock markets), while regulated companies have lower global risks than non regulated companies, but in most cases higher than expected.

Global Index of Regulatory Quality

- In this paper a quality index to evaluate the global regulatory framework and to assess the regulatory risk in the gas industry for individual countries is proposed.
- This allows to identify the best regulatory practices.
- It reflects the views of diverse stakeholders.

Overall project methodology



Regulatory Quality Index: methodology

- Definition of a quantitative index
- Measures the degree to which policies, regulations, governments and regulatory institutions of countries are supporting best regulatory practices and minimising regulatory risk
- The index is divided in 5 areas
- Each area is evaluated based on objective indicators: more than 70 identified
- The sources of data are worldwide institutions and organisations, NRAs and governments, gas companies and academic institutions.

Regulatory Quality Index: methodology

The Regulatory Authority for Energy Market

Interdependence, Transparency, Efficiency, Predictability, Effectiveness

Energy Regulation

Judicial Security, and impartiality of the Courts, Security of Property rights, Protection of the investors, Unbundling and property structure of TSOs, Technical Procedures, Regulatory Price controls, Sustainability and Innovation, Consumer protection and PSOs

INDICATORS

Energy Market Structure

Security of Supply, Technical Knowledge, Public sector participation in energy companies, Access to electricity and gas, Quality of Infrastructures, Competition

Economic Freedom

Business and Trade Freedom, Tax pressure, Public Spending, Labour and financial freedom, Investment, Corruption

Government and Political Scenario

Clarity of roles & objectives, Participation, Political intervention, Public Trust, Transparency

Area I: Regulatory Authority for the Energy Market

1	Energy Regulatory Authority
A	Independence
i	Administrative
ii	Financial
iii	Competences
B	Efficiency in the accomplishment of objectives
i	Competences and results
ii	Established control procedures
C	Efficiency
i	Budget and human resources of the regulator
ii	Analysis of the impact of the regulation
D	Transparency
i	Public Consultations
ii	Access to informations. Communication channels
iii	Communication procedures
E	Predictability
i	Participation of different interest groups
ii	Compliance with the regulatory calendar

Area II: Energy Regulation

2	Regulation
A	Legal Security
i	Legal Independence
ii	Impartiality of the Courts
iii	Legal System Integrity
iv	Legal Framework efficiency to contest the regulations
B	Rights and obligations on property and activity
i	Type of energy planning
ii	Restriction in shareholders and voting rights in regulated entities
iii	Investor protection
C	Effective unbundling between activities and structure of energy companies
i	Ownership unbundling and/or legal unbundling
ii	System operation models
D	Technical Management
i	Capacity and congestion
E	Allowed revenues
i	Tariff Sufficiency
ii	Proportionality of allowed revenues models
iii	Existence of regulatory periods and compliance
F	Environmental Impact
i	Specific regulation for the sector
ii	Environmental quality
G	Innovation
i	Incentives to innovative technological developments
H	Consumer protection and Public Service Obligations
i	Protection Level

Area III: Gas Market Structure

3	Structure of the Energy Market
A	Efficient Competition
i	Competition level in wholesale markets
ii	level of energy prices in the industry
B	Public Sector Participation in energy companies
i	level of participation in energy companies
ii	level of participation in network operating companies
C	Energy Accesibility to consumers
i	Energy poverty in society
ii	Energy intensity
D	Energy Security
i	Integration in an international market
ii	Level of energy independency
iii	Degree of supply diversification
E	Technical Knowledge
i	Availability of qualified human capital: scientists and engineers
ii	Patents and utility models in the energy sector
F	Infrastructures
G	Supply Quality

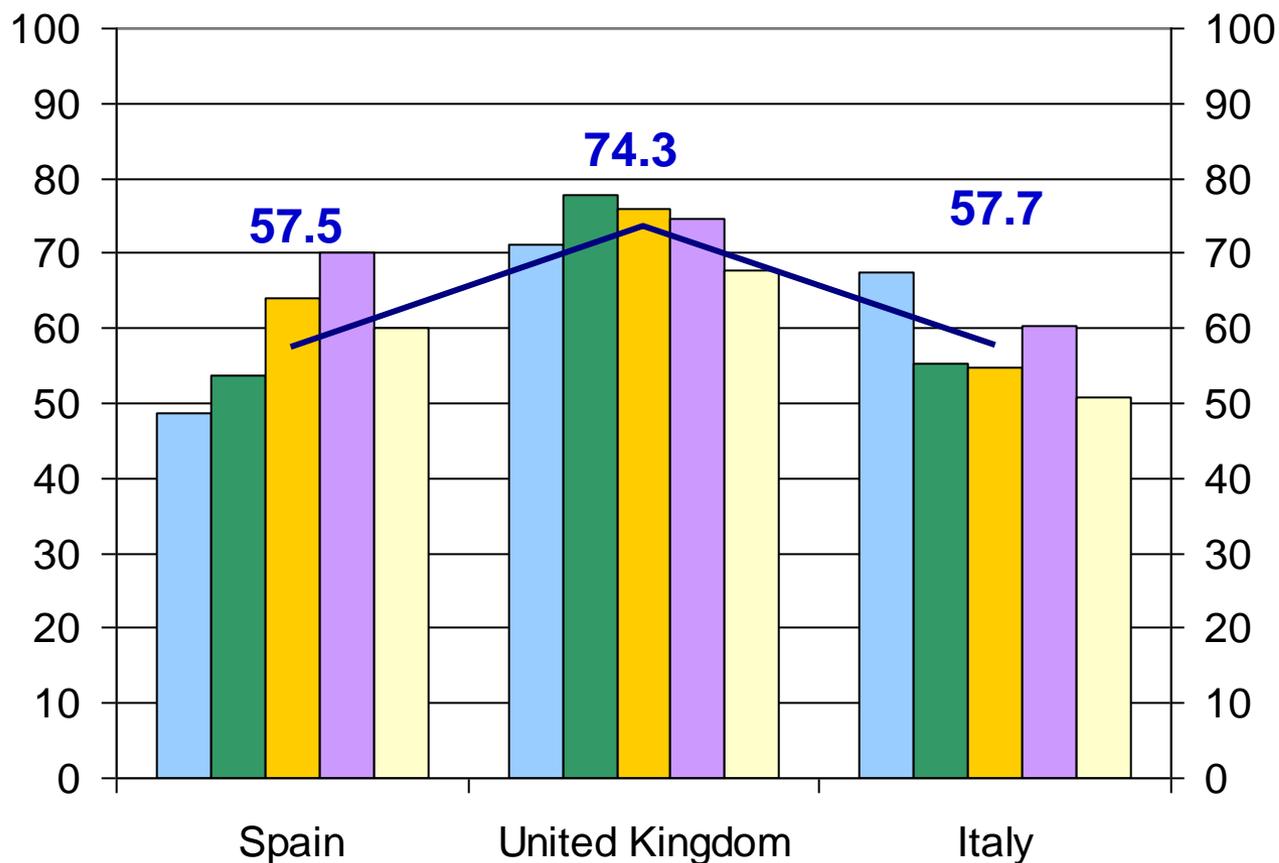
Area IV: Economic Freedom

4	Economic Freedom
A	Entrepreneurial
B	Trade
C	Fiscal
D	Public Expenditure
E	Monetary
F	Investment
G	Financial
H	Property Rights
I	Corruption
J	Labour

Area V: Government and Political Scenario

5	Government Influence and Political Scenario
A	Delimitation of competences between public bodies
i	Bodies with regulatory competences
ii	Degree of shared competences
B	Influence of political parties to name members of the regulatory bodies and regulated companies
i	Appointments
C	Energy Accesibility to consumers
i	Creation or modification of ad-hoc regulation
ii	Adjustment of regulatory cycles to political cycles
D	Trust of the public opinion in politicians
E	Political decision making process
i	Transparency in decision-making processes

Regulatory Quality Index. Results (2010).



Example of recommendations for improvement based on the regulatory quality index: Spain

- Effective communication of energy strategy: confidence and predictability
- Consistency between goals and decision in energy policy and general economic policy
- Clear distinction between energy policy and regulation
- Independency of Regulatory Authorities
- Simplification and coordination of regulations
- Effective Regulation and consultation processes
- Definition of good regulatory practices and conduct codes
- Quantitative analyses for assessing regulatory impact

Conclusions

- Significant differences in gas regulation and policies around the world.
- A rating methodology to qualify the gas regulatory framework for countries and to assess their regulatory risk can be established, providing a fairly objective benchmark.
- Conclusions for the improvement of the energy regulatory framework can be drawn: the global indexes of regulatory quality show the areas where the Authorities can improve and how (benchmark and/or standalone analysis)



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Thank you for your kind attention



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