

Regulatory Decisions and Sector Outcomes: Evaluating the Impact of Infrastructure Regulators

by

Jon Stern

Centre for Competition and Regulatory Policy (CCRP), City University London

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Content of Presentation

The presentation is based on the forthcoming World Bank publication:

“A Handbook for Evaluating Infrastructure Regulatory Systems” by Ashley Brown, Jon Stern & Bernard Tenenbaum), June 2006

Available from June in hard-copy and down-loadable from www.worldbank.org/energy

WB Infrastructure Evaluation Handbook

The handbook covers 3 main topics:

- 1) A full statement for “Best-Practice” Regulatory Governance of the Meta-Principles (3), Principles (10) and Detailed Standards – to provide a Benchmark for the evaluation of regulatory governance;
- 2) The evaluation of infrastructure regulatory agencies’ impact on the performance of the regulated industries and how this relates to regulatory decisions (primarily in the context of electricity); and
- 3) An analysis of “intermediate and transitional regulators” i.e. how best to make progress with infrastructure regulation in difficult institutional environments.

The Handbook also provides various questionnaire tools, literature surveys, etc.

In this presentation, I focus on Topic 2) – evaluating regulatory outcomes and the contribution of regulatory decisions

Regulatory Decisions

- The outputs of regulatory system are *regulatory decisions*
 - Regulatory decisions make up the substance of regulation
- Regulatory decisions can be
 - A positive decision which is formally published (eg a tariff order, issuing a regulatory asset base accounting framework); or
 - A decision not to take an action (eg a decision not to pursue mandated competitive procurement of generation or open-up generation to competition)

Regulatory decisions refer to any action or inaction that materially affects the interests of participants in the regulated sector – consumers, producers and investors.

See Chapter 5 of Handbook for a full discussion

Good Regulatory Decisions

- Good regulatory decisions
 - Protect consumers (current, potential and future) and help establish and maintain sustainable commercial operation
 - Help achieve government policy objectives (eg connection targets, fuel diversity goals, efficiency targets, etc)

Note that good regulatory systems can help reveal inconsistencies in government objectives (eg between ambitious rural access targets and prices based on the costs of urban supply).

Bad Regulatory Decisions

- Bad regulatory decisions can be divided into:
 - a) Sins of Omission (Annex I-A)
 - (Failures to ... investigate and understand cost structures, institute adequate quality of service indicators, define regulatory methodologies, etc)
 - b) Sins of Commission (Annex I-B)
 - (Unreasonably ... setting inappropriate benchmarks, allowing growing divergencies between costs and prices, setting low penalties for serious offences, etc)

*In general, the evaluator should praise good but focus on the bad
– The task is to improve understanding and not to assign blame*

Electricity Industry Outcomes

Regulatory decisions help affect electricity industry performance on the following sets of variables:

- 1) Output and Consumption
- 2) Efficiency
- 3) Quality of Supply
- 4) Financial Performance
- 5) Capacity, Investment and Maintenance
- 6) Prices
- 7) Competition
- 8) Social Indicators

These outcomes may well relate to specified government goals (eg on targets for rural electrification; supply interruptions; prices, subsidies and cost recovery).

(See Annex II for full listing of output measures.)

Regulation and Industry Outcomes

Regulatory decisions are one and only one determinant of industry outcomes

- Regulatory agencies and their decisions are often a relatively minor determinant of sector outcomes.
- Sector outcomes may be more affected by:
 - Poorly designed market structures (California, Ukraine)
 - Inconsistencies in Government policy and/or government unwillingness to allow the regulatory agency to carry out its functions (Russia, India)
 - External pressures (eg macroeconomic and exchange rate crises - Argentina)
- The evaluator should draw attention to these factors and how the regulatory system responded to the difficulties

The Regulatory Evaluator's Motto

Good regulation does not necessarily produce good outcomes for the regulated industry, but bad regulation almost always contributes to bad outcomes.

Evaluating the Contribution of Regulation to Industry Outcomes

The task of the evaluator of regulatory systems is to:

- Identify obviously good and bad regulatory decisions (eg in terms of resolving key issues and improving sector performance)
- Estimate qualitatively and, where possible, quantitatively the impact of key decisions on industry outcomes
- Review the contribution of regulation to the performance of the regulated industry and specific outcomes
- Provide a critical analysis of regulatory performance with recommendations for improvement
- Provide a basis for learning by the regulator, the government, consumer groups, companies, investors and others – including other countries, the World Bank and others.

Objectives of Infrastructure Industry Regulation

A good regulatory system:

- 1) Produces a flow of good regulatory decisions
- 2) Minimises the number of poor or mistaken decisions
- 3) Speedily corrects mistakes
- 4) Does not repeat mistakes or poor decisions
- 5) Implement lessons from best practice regulation in other countries

Periodic evaluation of regulatory agencies (eg every 3-5 years) in terms of their decisions and their effect on industry performance is a key component in achieving a good regulatory system₁

Application of Handbook Methodology

- The Handbook methodology of the contribution of regulatory decisions has been used:
 - i. For a World Bank financed evaluation of infrastructure regulatory decisions by the Jamaican OUR (Office of Utility Regulation)
 - ii. For student MSc assignments

- The initial results of these suggest
 - a) The regulatory decision(s) examined have to be relatively major in order to detect an output impact
 - b) It is necessary to have consistent, long time-series data both for the sector and country in question and (preferably) also for comparable countries
 - c) The suggested list of outcomes identified has proved to be very useful – and has been extended to telecoms and water
 - d) The students found the concepts and tools very useful - and made very imaginative use of them to provide good quality (and, in some cases, excellent) regulatory evaluations

Annex I: Regulatory Sins

A Sins of Regulatory Omission

- No uniform system of regulatory accounts
- No regulatory methodologies in place
- No quality-of-service standards, or seriously ineffective monitoring of regulatory standards
- No monitoring of competitive behavior or market abuse in electricity generation or telecom markets which are intended to operate competitively
- Absence of access charges and rules for industries where there is competition over networks (primarily telecom, electricity and natural gas, but also to a lesser extent, water and railways)
- Failure to adequately address consumer complaints and monitor performance
- Failure to monitor costs

Annex I: Regulatory Sins

A Sins of Regulatory Omission (Cont)

- Failure to provide effective competitive tendering procedures for new capacity
- Failure to take action to raise retail tariffs that are far too low to support financial viability and justifiably necessary levels of investment
- No clear standards for tariff setting for future tariff periods (e.g., absence of clear standards for power purchase costs or distribution costs; no definition of the regulatory asset base)
- No mechanism to relate payment or non-payment of government subsidies into tariffs
- No attempt to make transparent cross-subsidies between customer classes even when the law supports it
- Failure to efficiently target cross-subsidies
- Failure to deal with non-payment issues

Annex I: Regulatory Sins

B Sins of Regulatory Commission

- Setting unrealistic benchmarks for efficiency or operational improvements
- Unreasonably re-opening investment decisions or privatization agreements *ex post* (e.g., following a change of government)
- Setting prices on the expectation that governments will deliver promised subsidies even when it is highly unlikely that governments can or will do so
- Allowing growing divergence between prices and costs
- Creating perverse incentives (e.g., high returns for poor performers; socializing all efficiency gains)

Annex I: Regulatory Sins

B Sins of Regulatory Commission (Cont)

- No differentiation between customer classes (e.g., rural and urban; grid and off-grid) in terms of quality standards
- Establishing low caps on power purchase prices that eliminate incentives to build new generation stations
- Taking emergency decisions that are damaging to long-run market development (e.g., on dispatch of hydro plants, or on limiting exports of electricity or fuel inputs)
- Asymmetry between price caps and price floors

Annex II: Industry Outcomes

Regulatory decisions help affect electricity industry performance on the following electricity sector outcomes:

- 1) Output and Consumption
 - a) Household and business access levels
 - b) Consumption levels and growth rates per head and per unit of GDP
 - c) Levels of unsatisfied demand

- 2) Efficiency
 - a) Productivity levels and growth rates
 - b) Cost levels and changes
 - c) Capacity availability & utilisation; losses (technical and commercial)

Annex II: Industry Outcomes

- 3) Quality of Supply
 - a) Continuity of supply
 - b) Quality of supply and customer service

- 4) Financial Performance
 - a) Financial surpluses and losses, achieved rates of return
 - b) Measures of indebtedness and interest burden

- 5) Capacity, Investment and Maintenance
 - a) Capacity levels and margins
 - b) Levels of investment and share of private and foreign investment
 - c) Levels of Maintenance Expenditure

Annex II: Industry Outcomes

- 6) Prices
 - a) Relationship of prices to full economic costs (including a reasonable rate of return on assets)
 - b) Explicitness, transparency and efficiency of subsidies and cross-subsidies
 - c) Tariff design that promotes technical and economic efficiency in production, fuel use and consumption)

- 7) Competition
 - a) Well-functioning bid auction markets for concessions and IPP contracts with a sufficient number of bidders
 - b) Well functioning generation and supply competition markets

- 8) Social Indicators
 - a) Affordability of supply – particularly for low income consumers
 - b) Impacts on economic development