

Is “Cost-of-Service Plus Incentives” the Best We Can Do?

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Presented by:

William B. Tye
The Brattle Group
1850 M Street, NW, Suite 1200
Washington, DC 20036
202-955-5050
bill.tye@brattle.com

Toby Brown
The Brattle Group
353 Sacramento Street, Suite 1140
San Francisco, CA 94111
415-217-1000
toby.brown@brattle.com

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For the state of current developments in Australia and proposals for reform we have relied chiefly on Biggar (2011), Minister for Energy and Resources (Australia, 2007), Mountain (May, 2011), Wikipedia, “Building Block Model” (May 2011), AEMC (2010 and 2011), Australian Energy Regulator (2010), Littlechild (2009), Littlechild (2008), and information provided directly by the ACCC.

The Bottom Line

- ◆ There seems to be some controversy about how well regulation is working in Australia.
- ◆ There are a variety of alternatives to the “building block” model as practiced in Australia that are now being successfully applied in the U.S. and elsewhere and might provide realistic alternatives to Australian practice in response to complaints.
- ◆ Given the type of current complaints, and the fact that the traditional regulated industries must ultimately be tethered to rate base/ rate of return, these do not represent a radical revision to the “building block” model.

Observations

- ◆ There are a large variety of price control regulations that do not take the form of traditional cost-of-service rate base/rate of return regulation (with various possible incentive mechanisms).
- ◆ However, these alternatives tend to not apply to traditional utility services provided by a capital-intensive supplier of essential services lacking effective competition.
- ◆ Despite the fact that capital-intensive suppliers of essential services lacking effective competition must ultimately be tethered to some form of cost-of-service regulation, the “plus incentives” qualifier leaves a lot of scope for complementary mechanisms to improve on traditional regulatory approaches in a continuum to “light handed regulation.”

Observations, continued

- ◆ A number of concerns have recently been expressed about the cost and effectiveness of regulatory institutions in Australia. If these concerns are valid, many of the proposed solutions can be achieved with “tweaks” to the current procedures.
- ◆ Nevertheless, there is value in looking at regulation as a form of long-term contract in the presence of sunk costs and considering the role of transaction costs in the Coase model. These can provide valuable insights into how regulators should approach problems solved by long-term contracts elsewhere in the economy.

Some Initial Thoughts

- ◆ There is no “incentive-free regulation.” Indeed, it was the perceived perversities of traditional cost-of-service, rate base/rate of return regulation that motivated the search for more explicit, more targeted “incentive regulation.”
- ◆ This is ironic, because if you review Kahn’s (1970) history of the process in the U.S., basing rates on (1) prudent, used and useful, depreciated original cost and (2) a “cost-of-capital” based on risks for comparable firms and meeting the capital attraction standard, etc., was supposed to convert ratemaking to a search for objective facts and free it from the subjectivity and disputes inherent in the prior “fair value” methods in use.
- ◆ When you stop to think about it, there are a large number of price regulation models that do not rely on cost-of-service regulation with rate base/rate of return. Examples are:

Some Initial Thoughts, continued

- Economy-wide anti-inflation controls (e.g., Nixon-era price freezes);
- Industry-wide price controls (e.g., Carter era oil price controls, controls on the price of well-head natural gas, operating ratio regulation of U.S. trucking firms);
- Control of a basket of goods or services by a public utility commission using controls over base prices and indexes (taxicab regulation in many jurisdictions);
- Legally imposed price controls on royalties (such as damage calculations for patent infringement or brokerage commissions on stock sales);
- Contractual agreements on prices such as salary caps for professional sports franchises;
- Contractual settlements of regulated firms that combine elements of cost-of-service and indexed revenue allowances (Trans-Alaska Pipeline System, or TAPS by the U.S. FERC).

Some Initial Thoughts, continued

- Private long-term supply contracts that combine starting prices and allowable price increases (coal supply contracts to utilities, government franchises and concessions, etc).
- Control of prices of government entities without rate base/rate of return revenue requirements by independent commission or by price caps with indexation (U.S. Postal Service).
- Use of allowances based on per unit of throughput for pipelines whose service lives have not ended even though the investments have been amortized (U.S. oil and gas interstate pipelines).
 - Note that these alternatives to cost-of-service regulation tend to have in common;
 - ◆ Often voluntarily agreed upon;
 - ◆ Applicable to numerous firms;
 - ◆ Applied to firms without readily observable costs and asset bases;
 - ◆ Opportunities for arbitration and renegotiation when circumstances change; and
 - ◆ Often applied to firms with numerous competitors.

“Plain” cost-of-service provides *some* incentives in a continuum

- ← **Pure COS**: in theory, rates always equal to cost-of-service
- ← **Canadian COS**: frequent rate cases, forward test-year with true-up
- ← **US COS**: rate cases every few years, historic or forward test-year without true-up, possibly add-on incentives for specific items
- ← **US rate case moratoria**: 3–5 year rate freeze, historic or forward test-year, possibly earnings sharing and add-on incentives
- ← **UK/AUS RPI-X** (or *COS plus*): rates and X-factor to recover a forecast cost-of-service, reset every 5 years
- ← **Price Caps for US/Can Telecom, US Oil pipelines**: company-specific starting point, industry-wide rate trends, (almost) no rebasing
- ← **Pure Performance Based Rates**: in theory, incentives like in competitive markets, Source: Pfeifenberger (2010)

What Complaints Have Been Lodged Against the Present Australian System?

- ◆ Regulatory decisions have been getting longer and more complex.
- ◆ Debates over the cost-of-capital are increasingly arcane.
- ◆ Consumer participation and involvement in regulatory processes remain limited and weak.
- ◆ The appeals processes seem to benefit the regulated firms and slow down the process of implementation of needed action.
- ◆ Overall regulated tariffs are increasing rapidly in some sectors (e.g., electricity).


Utility Regulation and Long-Term Contracts

It has been suggested that there is value in viewing utility regulation as a form of long-term contract, designed to protect sunk investments by both the regulated firm, on the one hand, and the customers, on the other (Biggar, 2009).

See Meyer and Tye's (1988) "Contractual Equilibrium" for U.S. Railroads:

- ◆ Regulatory mechanisms during a transition to deregulation should be designed to facilitate a switch from regulatory decisions (e.g., published tariffs) to contracts (privately negotiated among railroads and customers).

- The biggest obstacle to this transition is the overhang of sunk costs incurred in the prior regulatory regime– (1) possibly “stranded costs” committed by the regulated firm which cannot be recovered in the new more competitive, less regulated regime and (2) “holdup” of captive customers who sank costs in the prior regime based on a belief they would be protected from opportunistic behavior by regulation.
- Making the regulatory regime in the transition account for the effects of sunk costs is achieved by reference to the “contractual equilibrium” that would be negotiated in the absence of sunk costs. This transition encourages all parties to move quickly to a new contractual system rather than drag out the transition process to exploit sunk costs and makes regulatory reform more likely in the first place by reassuring the parties they will be treated fairly in the transition.

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- ◆ Meyer and Tye's proposal for regulatory transitions finds its origins in the observations of Oliver Williamson (1976), Victor Goldberg (1976) and others that regulation is a form of contract.

Regulation as Contracts

More generally, the view of regulation as a form of long-term contract is helpful because it suggests certain lines of inquiry that could be useful:

- ◆ Can we use actual contracts as benchmarks for inferring basic principles in applications to the traditional regulatory process?
- ◆ What scope is there for more explicit use of contracts to commit customers to pay for capacity additions or to provide financing?
- ◆ What scope is there for private arrangements between customers and the regulated firm (negotiated settlements) within an overall framework of regulation?
- ◆ What scope is there for replacing some form of regulation with franchise contracts (Demsetz competition) subject to reopening, arbitration, etc.?

Regulation as Contracts, continued

Given that regulation is a form of long-term contracting, and that protection against opportunism in the presence of sunk costs is one of the primary motivations for contracting (and regulation), principles of contracting can inform regulatory procedures and point the way to possible solutions to current problems.

***Caveat:* Contracts offer similar opportunities for gaming, opportunistic behavior, and breach as does traditional regulation— but the knowledge and incentives are strong to get it right.**

Structural Reforms

Proposals have been made to strengthen the voice of consumer interests in the regulatory process and change the standing and scope of the appeals process. If these are desirable, one must be mindful of not undermining other possible regulatory objectives, such as concerns over increasing complexity and length of the regulatory process.

***Note:* Limiting the substantive scope of appeals could affect the incentives for transparency in the initial regulatory process (See U.S. ICC precedent).**

A Useful Way to Think of the Role of Contracts: The Coase Theorem Approach

Complaints about the performance of the present system seem to fall into two categories.

- ◆ Substantive: Outcomes not Optimal or Desirable
- ◆ Procedural: Decision Making is Slow and not Effectively Representative

Coase focused on the critical role of transaction costs (costs of negotiating and enforcing contracts) in determining optimal legal and contractual outcomes. This suggests two cases for considering these possible categories of problems:

- ◆ Few players, large economic stakes, and relatively low negotiating costs for contracts, and
- ◆ Many players, relatively low economic stakes (per player), and relatively large negotiating costs for contracts.

A Useful Way to Think of the Role of Contracts: The Coase Theorem Approach, continued

The Coase approach suggests taking sunk costs and transaction costs explicitly into account in examining these complaints. In both cases binding contractual settlements can help by:

- ◆ Short-circuiting the process to resolve disputes more expeditiously; and
- ◆ Achieving innovative outcomes more responsive to the parties' needs.

Contracts as a model for regulation can help improve regulation in both cases, but in differing ways depending on the case:

- ◆ For relatively low transaction costs, contracts can either partially supplement regulation or serve as a model for regulation as suggested above.
- ◆ In the high transaction costs world, the initial goal is to reduce unnecessary transaction costs, perhaps through mechanisms such as a Consumer Advocate. Contracts can then possibly serve some of the same benefits as the first case.

A Useful Way to Think of the Role of Contracts: The Coase Theorem Approach, continued

In the world of Coase,

- ◆ For substantive issues, contracts can provide a supplement or partial or full alternative to regulation or a model for efficient regulation, and
- ◆ For procedural issues, transaction costs must be justified by larger benefits of contractual or regulatory outcomes.

Of course, in the world of both regulation and contracts, the chosen framework must balance the assurances the parties need for investment while retaining the flexibility to adjust to changing circumstances over time.

Conclusions

Based on the foregoing and without the benefit of comprehensive personal knowledge of the Australian experience, we can suggest the following:

- ◆ There is extensive experience with price caps in non-utility industries that do not require rate base/rate of return type regulation. They tend to be more likely to be sustainable if the realized rates of return are not readily observable (operating ratio regulation for motor carriers, salary caps for sports franchises, etc.) and where there is no need to recover a substantial sunk investment (i.e., no asset base). (See Trans Alaska counter-example). These mechanisms may replace the concerns with the incentives of cost-of-service regulation with new problems, however.

Conclusions, continued

- ◆ Incentive regulation does tend to be more of a complement than a substitute for traditional approaches because of two paradoxes:
 - Incentives almost always require some kind of regulatory lag and a departure of realized revenue from cost-of-service – enough to be effective without either facilitating politically unacceptable profitability levels or threatening the capital attraction, financial viability, etc. goals of regulation.
 - Lengthening the lag or otherwise increasing the incentives postpones the ultimate objective of passing on benefits to ratepayers, as would happen in competitive markets, and is presumably a regulatory goal.

Conclusions, continued

- ◆ While reliance on the principles of efficient long-term contracts can provide useful insights into regulatory solutions, many of the current concerns in Australia could be resolved with procedural reforms.
 - For example, after one U.S. railroad merger proposal was under review for more than a decade with no end in sight, Congress passed statutory deadlines that required a prompt decision on proposed railroad mergers.

Conclusions, continued

- Cost-of-capital methodologies are finite in their alternatives, the number of “moving parts” of each is limited, and the sources of data well known (Vilbert, *et al.*, *Review of Regulatory Cost of Capital Methodologies, prepared for the Canadian Transportation Agency*, September 2010). The problem is that from application to application, seemingly plausible choices among the alternatives can sometimes have dramatic effects on the results. To prevent endless disputes, U.S. surface transportation regulators prevent “model shopping” by choosing an approach, updating it annually, and inspecting the results for reasonableness on a periodic basis. Of course, regulatory uncertainty and administrative costs are often enhanced because regulators and courts sometimes frame their actions precisely to prevent precedents and preserve future discretion.

Conclusions, continued

- ◆ Proposed restrictions on the grounds for appeals would encounter considerable constitutional objections, certainly in the U.S. If excessive time and cost of regulatory decision making are believed to be a real problem, perhaps one could apply statutory deadlines to the process and lengthen the time period between resets (encouraging decisions meant to last and to anticipate and resolve problems in advance – a “wire your mouth shut” approach to dieting!). Such changes would perhaps have limited application and would undoubtedly have their own unintended consequences.
- ◆ TFP methods do not offer dramatic improvements
 - But can be a useful addition to the “regulatory toolkit,” so collecting the necessary regulatory accounting data is a no-regrets improvement.

One Last Thought

Ideas for incentive regulation are increasingly being proposed for a variety of industries where they have had little previous application, such as health care and education. Perhaps the process could be advanced with more cross-fertilization among experts in the various industries worried about incentives.

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North America



Cambridge, MA
+1.617.864.7900



Washington, DC
+1.202.955.5050



San Francisco, CA
+1.415.217.1000

Europe



London, England
+44.20.7406.7900



Brussels, Belgium
+32.2.234.77.05



Madrid, Spain
+34.91.418.69.70