



NEW ZEALAND INSTITUTE FOR THE STUDY
OF COMPETITION AND REGULATION INC.

ROUND II: USING OWNERSHIP TO RESOLVE INVESTMENT AND PRICING ISSUES IN TRANSMISSION AND DISTRIBUTION

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CORPORATE MEMBERS

Auckland International Airport
Limited

Contact Energy Ltd

Fonterra Co-operative
Dairy Group Limited

Meridian Energy Ltd

New Zealand Post Ltd

Powerco

Telecom Corporation
of New Zealand Ltd

Transpower New Zealand Ltd

Vector Ltd

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OVERVIEW

- Now examine how “customer” ownership might sufficiently resolve market power and investment problems while:
 - Preserving decentralised decision making
 - Avoiding the direct and indirect costs of regulation
- Start with a reminder about the costs of regulation
- Highlight how ownership and regulation are just forms of governance
- Make the case for customer ownership of distribution, and then extend to transmission
- Discuss where the model arises in practice
- Draw some policy conclusions



COSTS OF REGULATION

Direct costs are significant and growing:

- Regulator's own costs of **administration**
- Regulated companies' costs of **compliance**
- Company and customer costs of **participation**

Indirect costs can be even more telling:

- Distorted costs, prices, quantity, quality, financial risks, maintenance, **investment**, ...
- Unintended temporal and inter-temporal redistributions

Sooner or later customers wear these costs



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THE PROBLEM IS GOVERNANCE

Tirole (2001) definition:

“the design of institutions that induce or force management to internalize the welfare of stakeholders”

If the goal is protecting customers of natural monopolies from abuse, while sustaining efficient investments:

- Regulation → can be effective, but costly/distorting
- Market contracting → effective for larger customers, but ...
- Ownership → efficiency and market power implications

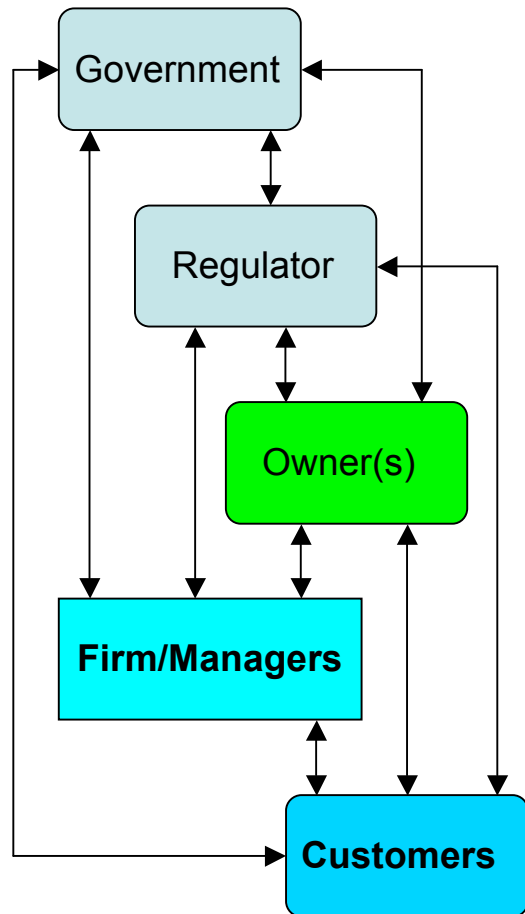
Which combination of these governance tools is best?



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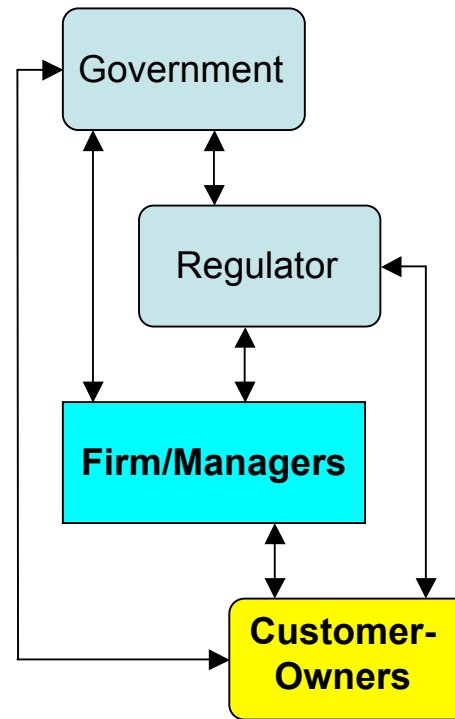
**State/Investor Ownership
With Regulation**

(a)



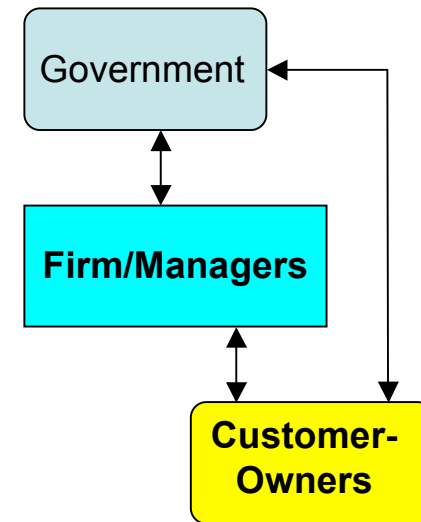
**Customer Ownership
With Regulation**

(b)



**Customer Ownership
Without Regulation**

(c)



Goal = alignment of firm/manager and customer interests

Arrow = governance conflict with associated costs

Source: Meade (2005)



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OWNERSHIP AS A SOLUTION

Extending Hansmann (*Ownership of Enterprise*, 1996) – ownership efficiently falls to those firm patrons facing the least combined costs of:

- Regulation
- Market contracting – including market power abuse
- Ownership, including:
 - Costs of separating ownership from control
 - Costs of collective decision making

If ownership is costly but can mitigate market power, then trade ownership costs against regulation costs



DISTRIBUTION

- First-order issue is vulnerability of customers to market power abuse due to natural monopoly characteristics
- Reliability and inter-temporal efficiency/equity in investment also a concern where ownership non-tradable
- Ownership solutions should work well where:
 - Business risks low, and assets highly bankable
 - Services and customers homogeneous
 - Technology and customer base stable



DISTRIBUTION (CONT'D)

Customer ownership of distribution, in particular, can mitigate market power:

- Direct participation in the governance process
- Choice of objective function – non-profit/multiple vs. for-profit
- Share in excess returns from market power → “monopoly hedge”

Customer ownership can also support investment:

- Investment conflicts due to non-tradable ownership mitigated by equal control rights (or lack thereof)
- Reduced need for regulation and its investment distortions
- Costs of inaction borne by those with a vested interest



TRANSMISSION

- Market power concerns arise as for distribution
- The coordination problem – investment complicated by:
 - Hold-ups
 - Network externalities
 - Interactions with generation, demand-side management, ...
- Key – grid off-takers (consumers) are most adversely affected by grid constraints and associated congestion:
 - Injectors (generators) more price-elastic than off-takers (?)
 - Injectors can actually favour congestion
- Market power/investment concerns suggest “customer” ownership as a solution (but not 1989 “club” model)



TRANSMISSION (CONT'D)

- Costs of grid ownership mitigated by indirect customer ownership of grid (i.e. via distribution ownership)
- Market power issues resolved as for distribution, even if indirectly
- Any market power abuse of generators is self-defeating (and/or merits much narrower regulation)
- Off-takers as a class have direct incentives to:
 - Resolve coordination problem with generators
 - Make credible commitments and avoid opportunism
- Does not resolve grid investment and pricing decisions, but:
 - Shifts them onto those with strongest incentives to resolve them
 - Removes an important layer of regulatory cost and uncertainty



THE MODEL IN PRACTICE?

- **UK** – flirted with a “club” in the early 1990s, but backed away due to distributor ownership of generation (and price controls used)
- **Denmark** – 40-50% customer ownership the norm, with municipals not far behind (although profits or revenues now controlled):
 - Covers generation, transmission and distribution/retailing
 - Renewables investments mostly customer-owned
- **US** – rural lines coops are legion:
 - Number almost 1,000 (vs 1,500 municipals); arise in 46 states; own 45% of all lines; supply 10% of population
 - 47% not subject to rate regulation, 19% subject to optional regulation (8:1 opting out)
 - Many also own upstream G&T coops, some of which also escape regulation
- **NZ** – 67% of distribution owned by customers, yet price controls imposed (and 1989 Transpower “club” didn’t fly)



POLICY IMPLICATIONS

Glachant (2002):

“public regulation is not better in principle than private negotiation for dealing with market failure”

“some externalities and asset specificities can be managed within private clubs of partners or users, limiting the scope of public regulatory bodies”

Don't assume centralised regulation is the only way:

- Offer regulatory “menus” conditioned on ownership
- Regulate customer-owned monopolies in electricity only where the need clearly exceeds *all* the associated costs
- Exploit customer ownership as an efficient decentralised solution to market power and investment problems



Thank you – any questions?



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