



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

BROADBAND IN NEW ZEALAND: a market in search of a competition policy?

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**Bronwyn Howell
General Manager**

<http://www.iscr.org.nz>; bronwyn.howell@vuw.ac.nz

CORPORATE MEMBERS

Contact Energy

Fonterra Co-Operative Dairy Group Limited

MainPower Trust

Meridian Energy

Powerco

Telecom Corporation of New Zealand Ltd

Victoria University of Wellington

Westpac Institutional Bank

OUTLINE

Some fundamentals of competition and regulation

policy and practice

Application to NZ UFB

Conclusion:

NZ broadband market appears to lack an overarching set of consistent and cohesive competition policy objectives

leads to ongoing uncertainty, limits to ability for the industry to evolve efficiently



WHAT ARE MARKETS?

Dynamic institutions

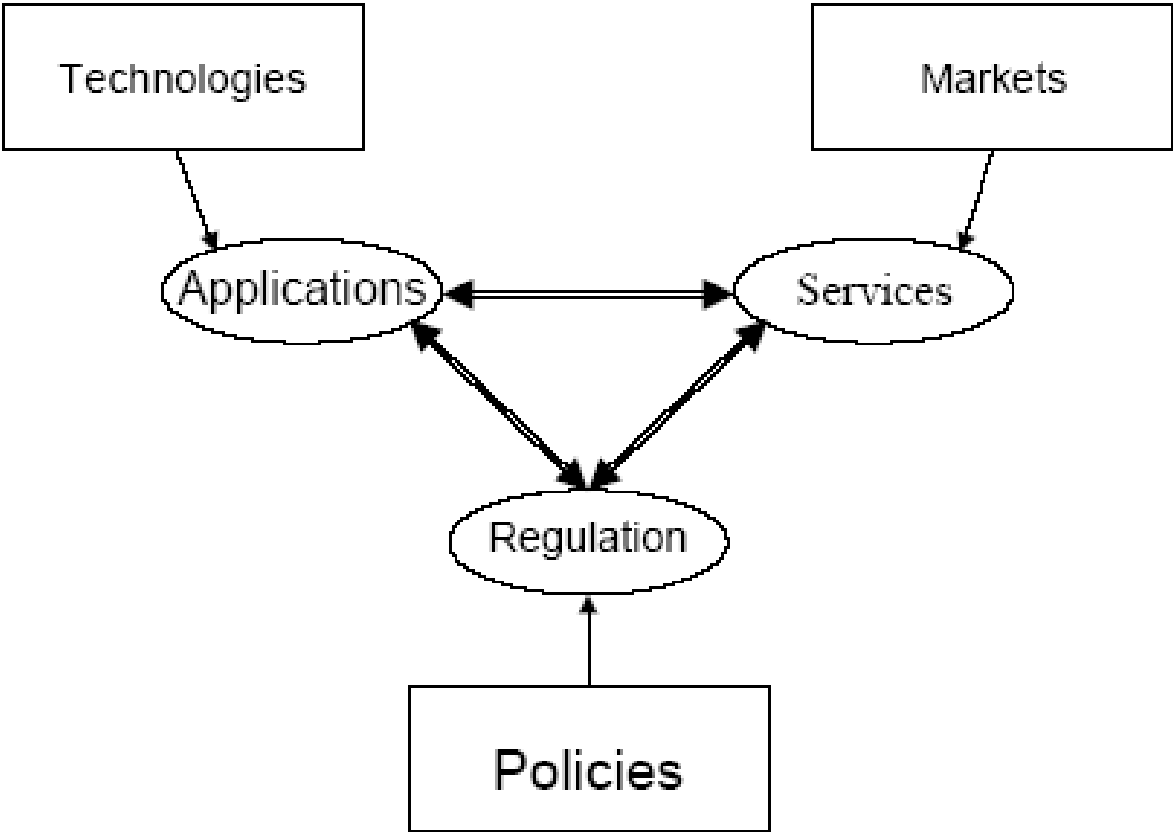
buyers and sellers interacting
in response to own incentives to increase individual welfare

Open, complex adaptive systems

interactions evolve over time as incentives alter
subject to external shocks (e.g. technological change,
regulatory intervention)
altering any or all of production methods, transactions, institutions,
activities, resource allocations



SYSTEMIC INTERACTIONS



TECHNOLOGICAL CHALLENGES

‘Natural monopoly’ cost characteristics of legacy copper networks challenged by falling costs of new technologies
bypass investments (at least in urban/metropolitan areas)

Ever more capable networks

e.g. fibre-optic cable

Convergence

to a standard digital format

Divergence

number of network types moving digital data
copper, HFC, mobile, wireless, satellite, fibre
application diversity



REGULATION AND MARKETS

Both subject to pressures from technological change

Regulation as an alternative to competition law
governance

but recent history has been to regulate to achieve more
efficient outcomes by promoting competition

Regulation too must constantly evolve

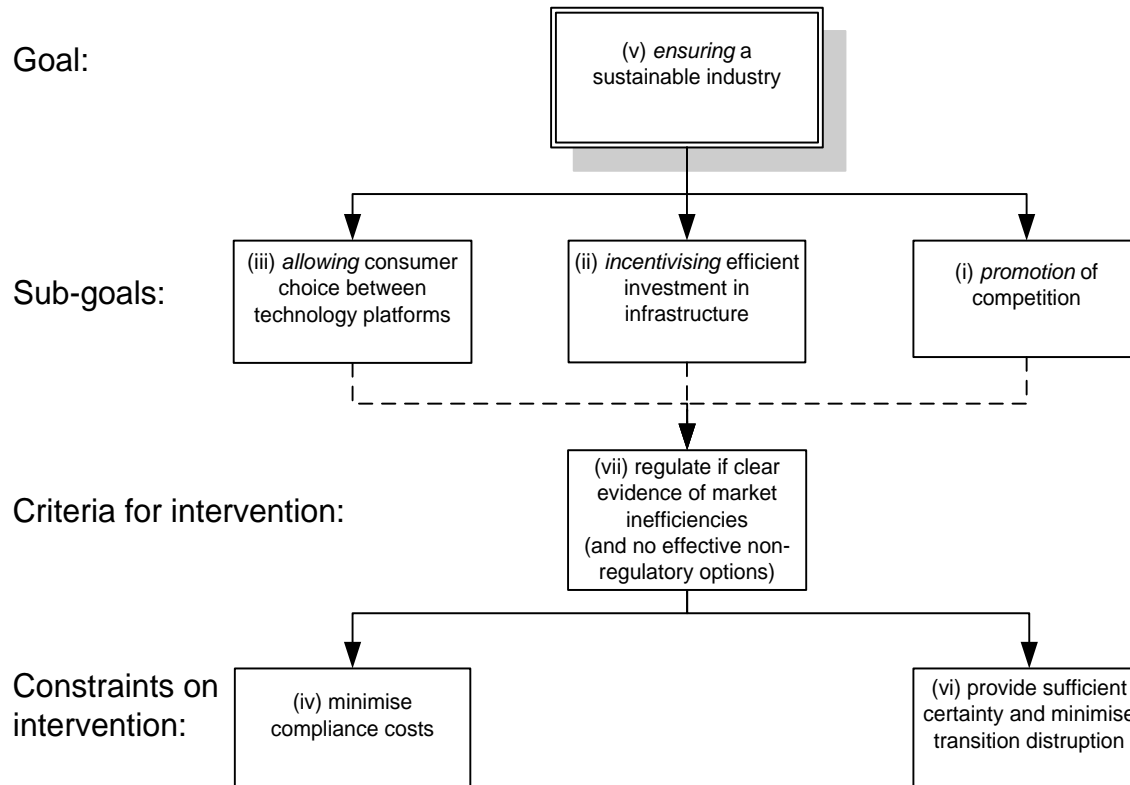
e.g. to changes in technologies, the balance of market
power

But regulation may also affect the rate of technological
innovation in a market

e.g. the time of investment in new ('frontier') technologies



REGULATION



PRINCIPLES FOR EFFICIENCY-RAISING REGULATION

Forward-looking

most efficient outcome *IN THE LONG RUN*

not used to “settle old scores”

Structures must be able to evolve

pre-determined, ossified industry structures militate against efficient evolutionary responses when indicated

stable *PRINCIPLES* (not industry structures) foster efficient industry evolution

Targets markets, not firms



DEFINING A RELEVANT MARKET

Dimensions

Product

broadband; fixed line; technology type?
access; backhaul?

Geographic

national; regional (rural/urban); regional (33 separate territories)?

Functional

Temporal

Customer

business or residential; wholesale or retail?



REGULATORY OBJECTIVES

Intervention only to increase long-term market efficiency

Sustainable industry

role of

subsidies?

regulation-dependent parties?

Trade-offs

allowing customer choice of technology

incentivising infrastructure investment

promotion of competition

Constraints

minimise compliance costs

sufficient certainty, minimal disruption



COMPETITION

A means to the end of increased efficiency
not an end in itself

What sort of competition?

infrastructure (facilities-based) competition

the long-run objective of Access Regulation

outcome of the 'Ladder of Investment'

efficacy of Access Regulation reduced

services competition (basis is Access Regulation)

as long-run solution presumes eventual infrastructure competition
infeasible

but presumes some inputs are replicable (retail, backhaul,
DSLAMs etc)

benchmark competition



UFB NOT IMPLEMENTED IN A VACUUM

Existing infrastructure investments

- Telecom (FTTC/ADSL2+ network)

 - unbundling competitors' investments (DSLAMs, backhaul, etc)

- other infrastructure competitors

 - TelstraClear HFC (Wellington, Christchurch)

 - CityLink dark fibre (Auckland, Wellington)

Increasing competition from mobile competitors

Rapidly maturing residential broadband access market

- very elastic w.r.t. faster connections (TelstraClear evidence)

- no obvious 'killer apps' (except HD/3D video on demand)



IMPLICATIONS FOR BROADBAND MARKET

Government investment a 'strategic shock'

What objective?

sustainable industry?

what market?

What subgoal?

allowing consumer technology choice?

incentivising efficient investment in infrastructure?

promotion of competition?

What principles govern the investment?

How does this affect regulation?



ASSUMPTION 1: FIBRE IS A 'FRONTIER TECHNOLOGY'

One 'bottleneck' infrastructure replaces another
Investment 'brings forward' the substitution of 'legacy'
copper networks with fibre connections?

scale economies => rapid substitution from copper to fibre required

Implications for regulation of copper network

structural separation antithetic to rapid, co-ordinated substitution of
subscribers from copper to fibre

sustained access regulation of copper network access leads to
fierce competition on copper network

avoids asset stranding (Telecom and unbundling entrants)

lower ADSL prices => delayed uptake of fibre

what role for 'ladder of investment'?

fibre ownership restrictions eliminate copper investment incentives



IMPLICATION 1

ONGOING REGULATION OF COPPER NETWORK COUNTER-INDICATIVE TO UFB UPTAKE OBJECTIVES

regardless of how the frontier technology might be regulated



ASSUMPTION 2: FIBRE NETWORK INDUCES INFRASTRUCTURE COMPETITION FOR COPPER BOTTLENECK

Infrastructure competition is end objective of Access Regulation (and 'ladder or investment)

Government has invested because

- (a) the ladder has not been climbed 'fast enough'???
- (b) Access regulation has chilled investment by both the incumbent and entrants????

If Government investment implies Access Regulation has 'failed', why persist with it?

if fibre truly superior, then copper access regulation regime irrelevant

ongoing AR simply distorts fibre uptake



IMPLICATION 2

ONGOING REGULATION OF COPPER NETWORK COUNTER-INDICATIVE TO UFB UPTAKE OBJECTIVES

And regulation of the frontier technology needs to be rethought if infrastructure competition is to be truly technology-neutral



SO WHAT IS GOVERNMENT COMPETITION POLICY?

Government investment to promote infrastructure competition?

Telecom rivals get contracts for Northland, Central North Island, Timaru

but also Christchurch, where infrastructure competition already exists

but Telecom gets contracts where infrastructure competition already exists

Wellington, Kapiti, Lower Hutt

as well as substantial areas where it doesn't

e.g. Dunedin, Auckland



AND WHAT IS GOVERNMENT POLICY ON REGULATION?

Investment because Access Regulation has failed?

Access Regulation is retained for all copper services exactly as if there was no UFB

No distinctions in regulation of copper network despite very different competition profiles in many areas

Telecommunications Commission oversees **COPPER ACCESS REGULATION** as before plus enforces UFB undertakings

But no power to meaningfully review **BROADBAND MARKET COMPETITION** in a technologically neutral manner

problematic given different approach taken to UFB contracts in different geographic regions



PRINCIPLES GOVERNING BROADBAND MARKET COMPETITION

What has been revealed so far suggests inconsistency,
lack of clarity

So unsurprising to find regulatory policy is at odds with
government fibre uptake objectives

Unclear how market under current regulation will
respond to exogenous shocks

technological change

political uncertainty



TECHNOLOGICAL CHANGE

Ever more capable mobile networks

especially relevant for sparsely populated locations (e.g. NZ)

More capability being eked out of copper

Sparsity of new applications necessitating ubiquitous high-speed symmetric access

Increasing evidence of elastic customer demand

speed isn't everything

high usage does not necessarily mean highly-valued usage
(especially for users inured to flat-rate pricing)

large skews in demand for high capacity networks



IS THERE A SOLUTION?

Resolving competition policy objectives before government contracts tendered/let would have reduced confusion, improved consistency comparison - Australian NBN

But still no substitute for first defining the market(s) and then identifying any inefficiencies before selecting an appropriate remedy that Increases market efficiency whilst simultaneously
minimises compliance costs
provides sufficient certainty for market participants and
minimises transition disruption



NZ

A broadband market in search of an overarching competition policy to guide regulatory decision making, market interactions and (ultimately) technological innovation in the sector



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