



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

POLICY ROUNDTABLE

Facilitating development of national Next generation Networks as integral to economic stimulus

**INTERNATIONAL TELECOMMUNICATIONS SOCIETY
PERTH AUGUST 16, 2009**

Bronwyn Howell

General Manager, ISCR
<http://www.iscr.org.nz>
bronwyn.howell@vuw.ac.nz

*Victoria Management School
Victoria University of Wellington*
<http://www.vuw.ac.nz/vms/>

CORPORATE MEMBERS

Contact Energy Ltd
Fonterra Co-operative
Dairy Group Limited
Meridian Energy
Powerco
Telecom Corporation
of New Zealand Ltd
Transpower New Zealand Ltd
Vector Ltd
Victoria University of Wellington
Westpac Institutional Bank

NATIONAL (GOVT-FINANCED) NGNS ECONOMIC STIMULUS INITIATIVES OR SOLUTIONS TO REGULATORY-INSPIRED MISSING MARKETS FOR INVESTMENT?

NZ 2007-8 (2008 election)

‘bid-off’ between major political parties

- who could promise more broadband investment
- which constituents should get it
- what technology would be deployed

2008-9 economic crisis arrives

- victorious party rebrands its winning bid ‘investment for economic stimulus’



GOVT-FUNDED (OR REGULATED) TELECOMS INVESTMENT HISTORICALLY ALWAYS PORTRAYED AS ‘ECONOMIC STIMULUS’

New Zealand examples

- telegraph investment strategically aligned with railway development
- initial telephony investment prioritised administrative and commercial applications
- universal service pricing a key policy plank (along with penny post) to assist in opening up the interior for settlement



CAN WE LEARN ANYTHING FROM THESE HISTORICAL EXAMPLES?

Getting the most (tangible economic) stimulus out of the investment requires some prioritisation

Does that benefit come from deploying the technology for

- a small number of very high-valuing users or
- ubiquitous deployment to capitalise on network effects?

Where do NGNs fit in this?

How does the regulatory/policy environment facilitate/hamper development of efficient deployment patterns?



NGNS AND FIBRE-OPTIC BROADBAND

Scale economies matter

- small number of networks
- very large fixed and sunk investments

Demand-side factors matter: specific challenges for NGNs/fibre

- unlike dial-up, ADSL, cable, the benefits ‘on the table’ are marginal not average (as broadband already widely deployed)
- applications used (not connections to the network) will drive the purchase decision



KEY REGULATORY/POLICY QUESTIONS

Ubiquitous vs targeted deployment?

Open vs closed access regimes?

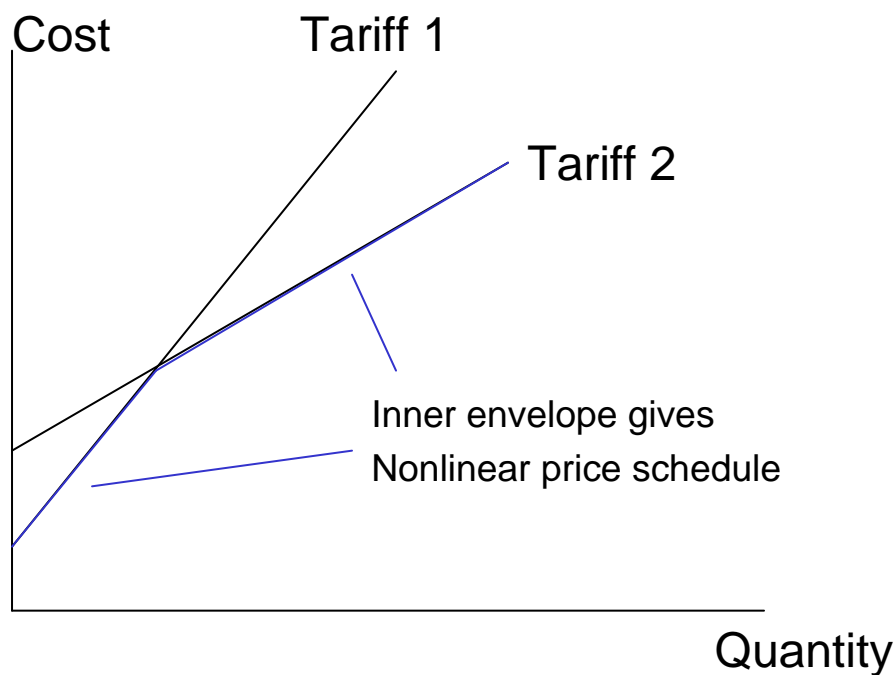
Vertically separated or vertically integrated firms?

Perfect competition or monopolistic competition?

Cost-based or other forms of price regulation?



TWO-PART TARIFFS AID DIFFUSION

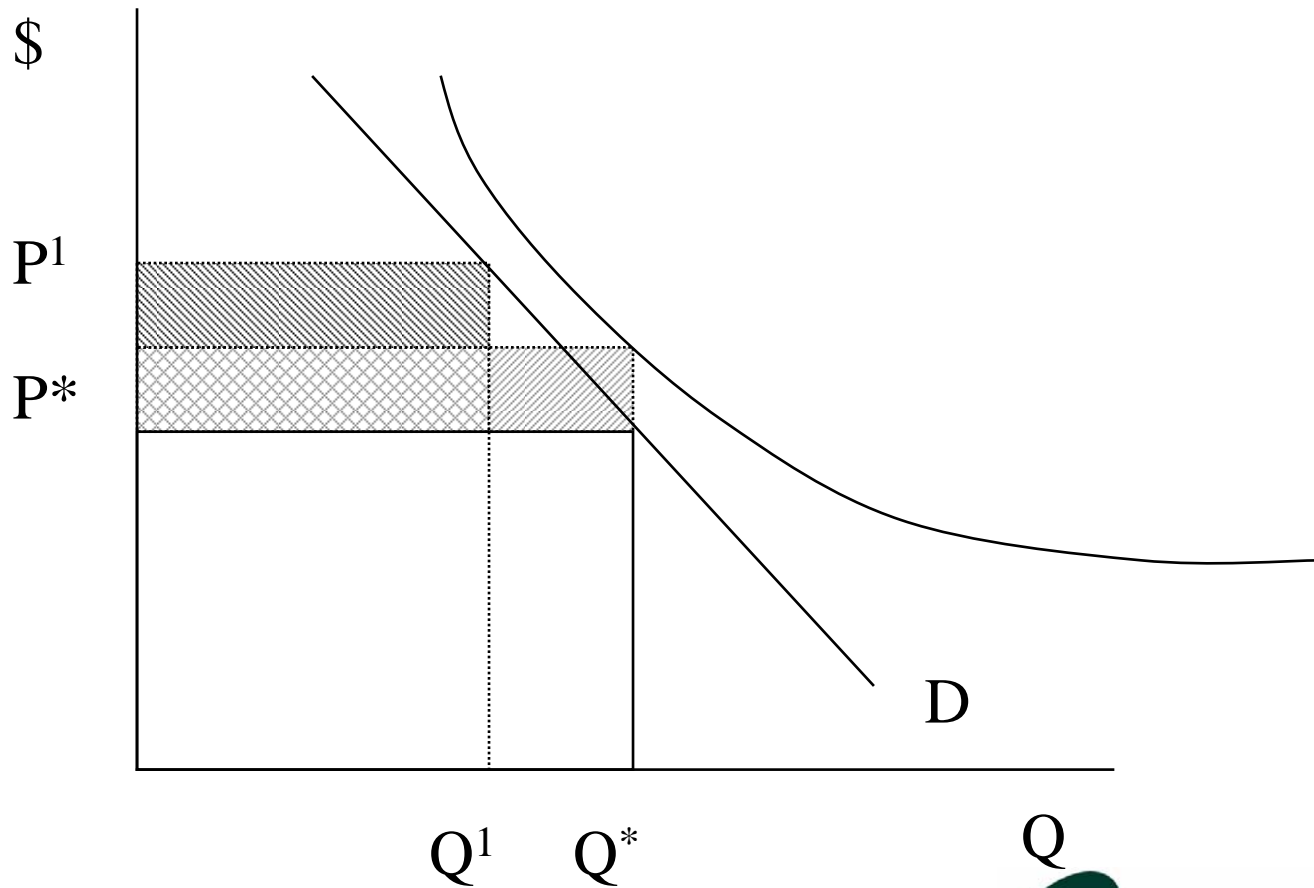


Consumers offered a choice of two-part tariffs

Cost = $5 + 2q$, or
Cost = $10 + q$
and consumers “self select” their tariff



PRICE DISCRIMINATION ENABLES EARLIER ADOPTION/HIGHER UPTAKE OF NEW TECHNOLOGY



REQUIRES

Customers with different valuations

Different customer types can be separated

- e.g. business vs residential

Prevention of resale between consumers

Regulatory acceptance that cost-based pricing can delay deployment

Note – structural separation isolates network operator from retail customer base so is antithetic to welfare-enhancing price discrimination

Likewise, mandatory non-discriminatory pricing to wholesale customers



FLAT RATE TARIFFS

Two-sided market

- ‘money side’ – paying more than it costs for their demand => low-volume users
 - value each transaction highly in order to pay high price
- ‘subsidy side’ – paying less than it costs for their usage => high volume users
 - consume until marginal value equals zero – i.e. low-valued usage

Two-sided markets prevail because the subsidised users have the more elastic demand curves/are most price sensitive

- ergo, highest-volume users have lowest economic valuations associated with their usage

So should NGN services be sold at flat rates?



PRICE DISCRIMINATION ACROSS NETWORKS

Charging above cost on the legacy network enables faster deployment of the frontier network

But rapid substitution to the new network requires that it be lower-cost for the same level of utility than the old (and likely less costly to the user) network

- ‘faster’ not always enough if usage volume is low
- new applications requiring new network capacity may not appeal to many users => reluctant to substitute
- noting that it is the marginal not average benefit that counts

Bundling

- increases benefit to user if judiciously applied – e.g. handset bundling in mobile markets, content and network services



OUR EXISTING POLICIES MAY NOT BE OPTIMAL IN AN NGN WORLD

Old solutions may give us new answers for maximising the benefits from new networks regardless of the prevailing economic circumstances

