



ORGANISATION FOR ECONOMIC
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Network neutrality: developments and evolution

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The views expressed in this presentation are those of the author and do not necessarily reflect the opinions of the OECD or its Membership.



OECD report on traffic prioritisation (2006-2007)

1 year of discussions/debates among member countries to reach a consensus

- **Traffic shaping can be good** as long as consumers and innovation are protected
- **Strong competition** is vital if we are to rely on markets
- Need to reduce **switching costs**
- Need to improve **transparency**
- Consider **publishing general principles** as market guidance if governments rely on *ex-post* remedies

Debate is moving to “middle ground”





Are we really that different?


The Reynolds' broadband choices

Taylor (FR)

1. 
2. 
3. 
4. 
5. 
6. 
7. 

My parents (US)

1. 
2. 

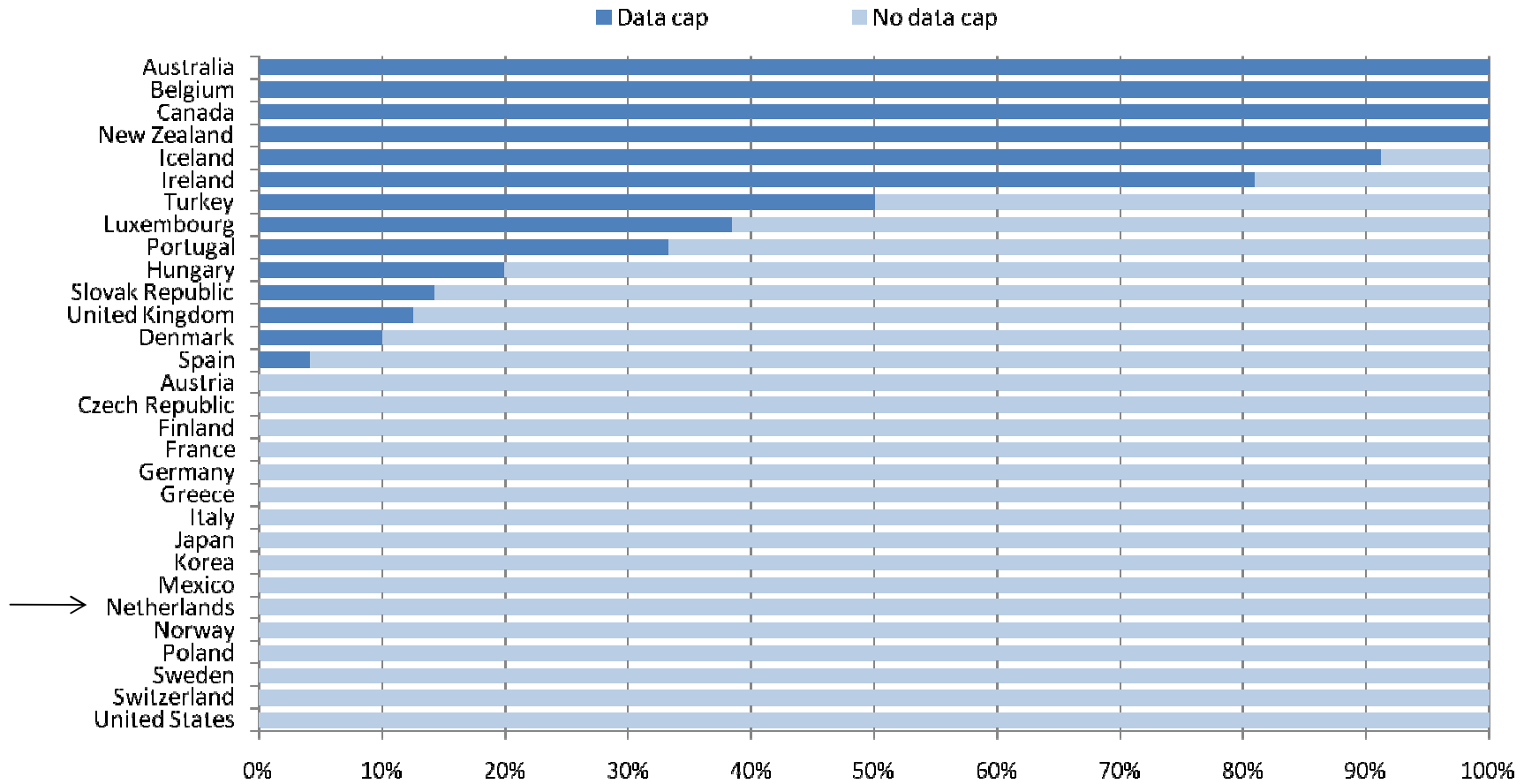

We even have a word
for this one in economics



How markets are responding (2009)

Paying per MB?

Data caps as a percentage of total surveyed offers (3+ operators per country), September 2008

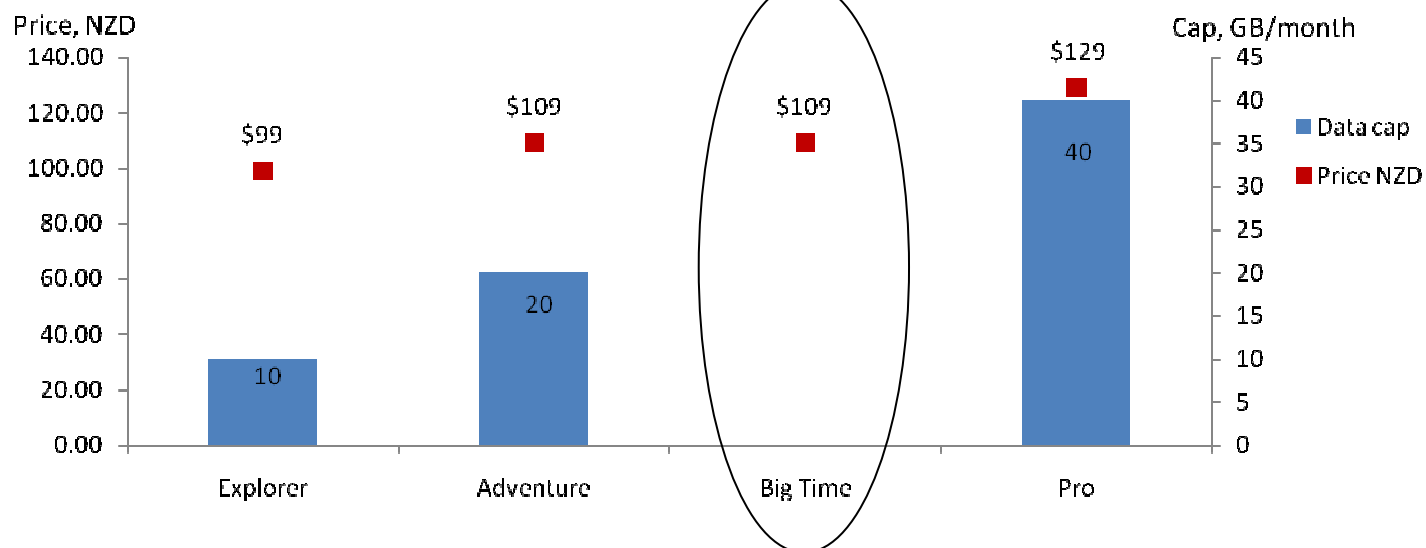


Effects of caps on use and innovation?

NZ: Choosing to be shaped



Telecom New Zealand: Broadband price structure (October 2009)



<i>Optional upgrade</i>	<u>Explorer Broadband</u> - 10 GB	NA	\$10.00
	<u>Adventure Broadband</u> - 20 GB	\$10.00	\$20.00
	<u>Big Time Broadband</u> - Traffic Managed	\$10.00	\$20.00
	<u>Pro Broadband</u> - 40 GB		
	<u>Additional nominated number</u>		

Minimum 12 month term applies.
There is no cost to change your plan at any time, but you can only change once per calendar month.

Unlike our other broadband plans Big Time has no fixed cap on the amount of data you can download or upload each month, and as such we manage all the traffic on it to optimise the experience for everyone on the plan. When the network is busy (generally inside the hours of 9am and 2am) you are likely to see reduced speeds, in particular in relation to file sharing traffic.

UK: Choosing to be shaped



Most popular deals
Fast & reliable Option 1
Heavy usage Option 2
Unlimited Option 3
Starter – calls, TV, broadband

Fast & reliable
Option 1

£7.78
a month

for 3 months,
£15.65 thereafter
(18 month contract)
OR
£15.65 a month
(12 month contract)

Get it now

Monthly usage:

10 GB

Unlimited
Option 3

£18.59
a month

for 3 months,
£24.46 thereafter
(18 month contract)
OR
£24.46 a month
(12 month contract)

Get it now

Monthly usage:

Unlimited

Starter package

£15.12
a month

for 3 months,
£30.33 thereafter
PLUS
£11.25 line rental
(18 month contract)

Get it now

Monthly usage:

10 GB

Or are they?

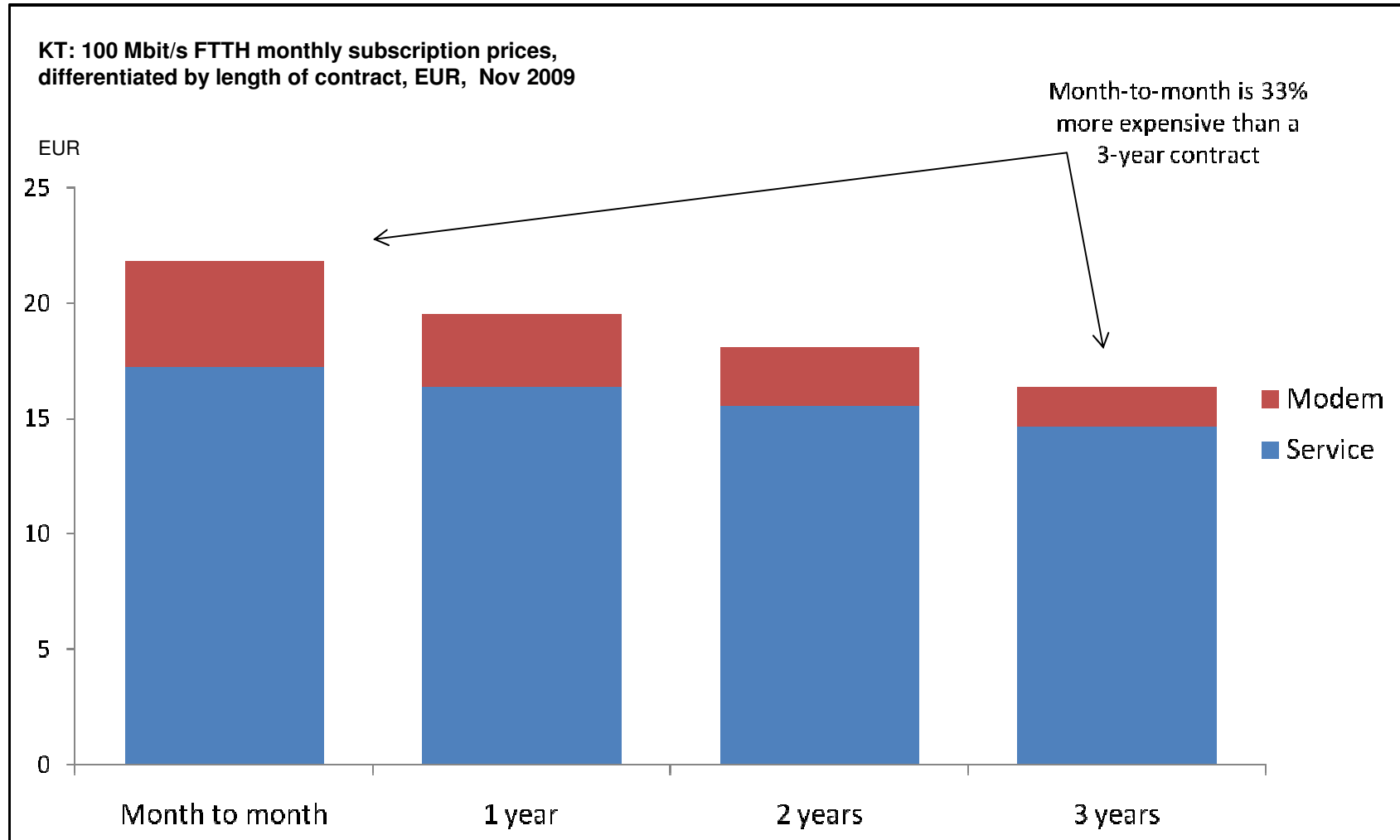
“Customers who are classified as **very heavy users will experience significantly reduced speed at peak times** (typically 5pm-midnight every day but these times may change depending on the demand on the network) for a period of 30 days, or for as long as very heavy use continues. **This applies to customers on all Options.** Option 3 allows unlimited downloads and uploads within the monthly rental price, so Option 3 customers will not be charged for over-use. However, this does not preclude BT from reducing your speed if you are a heavy user in order to protect the experience for the rest of our customers.”

Each BT Total Broadband package has a different monthly usage allowance, so you can choose the package that best suits your needs.

BT Total Broadband package	New monthly usage allowance (from 1 April 2009)
Option 1	10GB
Option 2	20GB
Option 3	Unlimited*

* Subject to Network Management

Korea: 3-4 year subscriptions



But fierce competition means operators pay your penalties for you when you switch early

Even when competition is good...

Taylor (FR)



- How quickly can I change providers if I'm affected?
- How much does it cost to switch? (penalties/install fees)
- How long are the contracts?
- Is there an interruption of service when switching?
- Are operators transparent about what they are doing?

Lacking competition?

- Same key questions apply but regulators may need to set down even stronger *ex-ante* guidelines and/or *ex-post* penalties
- Potential harm to innovation if all operators act in unison with their shaping policies

US: Define “reasonable”





Canada



- Transparency
 - 30 day notification for retail customers
 - 60 day notification for wholesale customers
- Focus on boosting capacity
- ISPs should prefer “Internet traffic management practices based on economic measures”
- Traffic shaping as a last measure

Mobile



- Need to consider fixed and mobile markets separately
- Operators have less bandwidth to share and there are often fewer operators
- Mobile has much more restrictive terms of service (e.g. no VoIP or P2P)
- I am not allowed to use Skype on any mobile data network in France



Conclusions

- Desire to have **markets to resolve** traffic prioritisation issues if possible
- The **level of competition** in the market will be a key factor in determining if government intervention is necessary
- **Ex-post remedies** can often be used against anti-competitive behaviour if it can be easily detected and attributed. *Ex-anti* regulation should only be considered in cases of persistent problems
- Need to **increase transparency** and disclosure
- Need to **minimise switching costs**
- Regulators should **make it clear up front** what types of traffic shaping will be considered anti-competitive



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