

Application of the concept of  
two-sided markets to electronic  
communications and possible  
implications for  
the regulation of the sector

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# Agenda

1. Overview of some of the issues.
2. Current role of 2 sided analysis defining markets for the Regulatory Regime.
3. Experience to date of 2 sided analysis in market analysis procedures.
4. Markets which may be affected by a 2 sided analysis
  1. Broadcasting
  2. Termination
  3. Broadband (net neutrality)
5. Conclusions

# Overview 1

- Pricing structure matters, how one side of the platform is charged affects the resulting consumption/welfare.
- 2 sides/groups, a platform with externalities on either side
- Cross group externalities, how much a larger membership of group 1 benefits group 2. “Dating Club”
- These can be positive or negative... I want more buyers on the other side of the auction website but I’d like less sellers on my side,
- Coase theorem must fail but not sufficient (asymmetry in information)
- Structure of charges must affect volume of transactions

# Overview 2

- Which side is more price sensitive? Finally the chicken and egg question is answered. The price sensitive side comes first (and/or affects the other sides utility more)... Changes are made to the elasticity of demand as pricing changes
- Identifying the price sensitive side of the market is not obvious nor necessarily consistent (Microsoft v Adobe Acrobat )
  - Microsoft saw developers as sensitive, charged them very little, got a lot of developers and consequently customers for the platform because they wanted to use the software. Adobe thought the same way but were wrong. They charged writers very little but with no readers no one wanted to write on adobe. Changed pricing strategy to stunning effect

# Overview 3

- Cross group network effects lower prices overall and platform profits (therefore platforms don't like them)
- Moving from a monopoly to a duopoly platform in a 2 sided market has a much more significant effect on competition than in a one sided market.
  - E.g. video gaming, 1 to 2 to 3
- Will more than one platform be used by consumers, is multihoming expected?
- Will there be more than one platform. Not if its costly for end users. If not do I want to bet everything (proprietary standards) or join a consortia and share the rewards?

<b>NETWORKED MARKET</b>	<b>SIDE 1</b>	<b>SIDE 2</b>	<b>PLATFORM PROVIDERS</b>
			<b>Rival Providers of Proprietary Platforms</b>
<b>PC operating systems</b>	<b>Consumers</b>	<b>Application developers*</b>	<b>Windows, Macintosh</b>
<b>Online recruitment</b>	<b>Job seekers*</b>	<b>Employers</b>	<b>Monster, CareerBuilder</b>
<b>Web search</b>	<b>Searchers*</b>	<b>Advertisers</b>	<b>Google, Yahoo</b>
<b>Video games</b>	<b>Players*</b>	<b>Developers</b>	<b>PlayStation, Xbox</b>
<b>Shopping Centres</b>	<b>Shoppers*</b>	<b>Retailers</b>	<b>Woluwe Shopping centre</b>
			<i>Rival Providers of Shared Platforms</i>
<b>Linux application servers</b>	<b>Enterprises</b>	<b>Application developers</b>	<b>IBM, Hewlett-Packard, Dell</b>
<b>Wi-Fi equipment</b>	<b>Laptop users</b>	<b>Access points</b>	<b>Linksys, Cisco, Dell</b>
<b>DVD</b>	<b>Consumers</b>	<b>Studios</b>	<b>Sony, Toshiba, Samsung</b>
<b>Myhome.ie</b>	<b>Home buyers*</b>	<b>Home sellers</b>	<b>100+ estate agent firms</b>

# Current role of 2 sided analysis in defining markets for telecoms.

- Current definitions form around standard demand and supply analysis.
- Standard competition law approach, SSNIP test of 5-10%
- 3 criteria
  - High barriers to entry
  - Dynamic behind the barrier
  - Sufficiency of Competition Law
- Current definitions bound by Article 15 Framework Directive.
- Definition though is not an end in itself
  - It is a tool to determine the competitive constraints on undertakings

# Current role of 2 sided analysis in defining markets.

- Where is the effect of 2 sidedness? Is it in the definition or in the subsequent analysis?
- Need to consider all the market and not just one side.
- What does pricing above Marginal cost tell us in these markets? Not much in fact if it's on 1 side
- Broadcasting and mobile have made some efforts in the market analysis to recast themselves and their actions.

# Experience to date of 2 sided analysis in market analysis

- Limited experience to date because often looking at only one side of the platform.
- Analytical framework and behavioural analysis confined normally to one side of the market and not to the whole (or even the platform within the whole)
- Exceptions are broadcasting (where it is the platform which we are looking at) and mobile termination. Neither outcome hinged on analysis.

# Markets which may be affected by 2 sided analysis Broadcasting

- Clearest example of a 2 sided market.
- Content providers have advertisers who want to be on the platform with the most viewers. Demand elasticity falls as more viewers come on.
- Viewers are much more price sensitive. Pricing matters much more on this side of the market.
- Common to see subsidies, introductory offers to stimulate adoption of a particular platform. Consider SKY and the effect of their pricing model.

# Broadcasting

- Case for regulation diminishes if viewed as two sided platform.
  - *Free-to-air broadcasting is a further example of a two sided market. Householders want to see (or listen to) content. Free-to-air broadcasters produce content but use advertising income and/or state contribution to cover their costs. Advertisers, in turn, want to reach households. For advertisers a prerequisite, in a free-to-air broadcaster, is that they reach the maximum number of householders as possible.* Draft Recommendation

# Markets which may be affected by 2 sided analysis Termination

- Competitive bottleneck (Armstrong 2005)
- Single (subscribers to a mobile network) to multi-homed (fixed-mobile call) base
- Excess termination washes out in subsidies etc.
- No concern for fixed side of market in price setting.
- Who pays for a call? Structure matters, is it single homed on both sides, multi-homed on both sides or is it single homed on one side and multi-homed on the other, how many platforms are there competing?

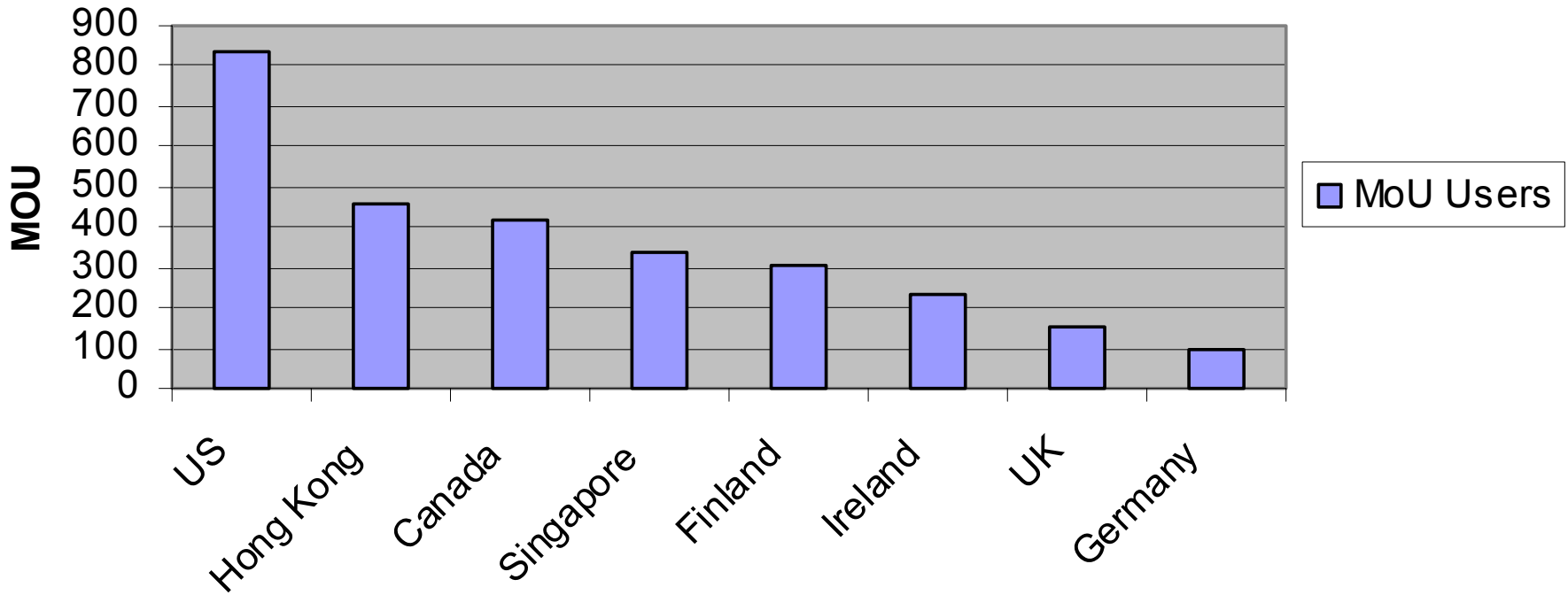
Needs two disjoint groups (internalise the externalities)

Pricing on membership or usage matters and can allow platform to capture externalities.

CPP where the cost of receiving a call is set to zero, all costs borne by calling party

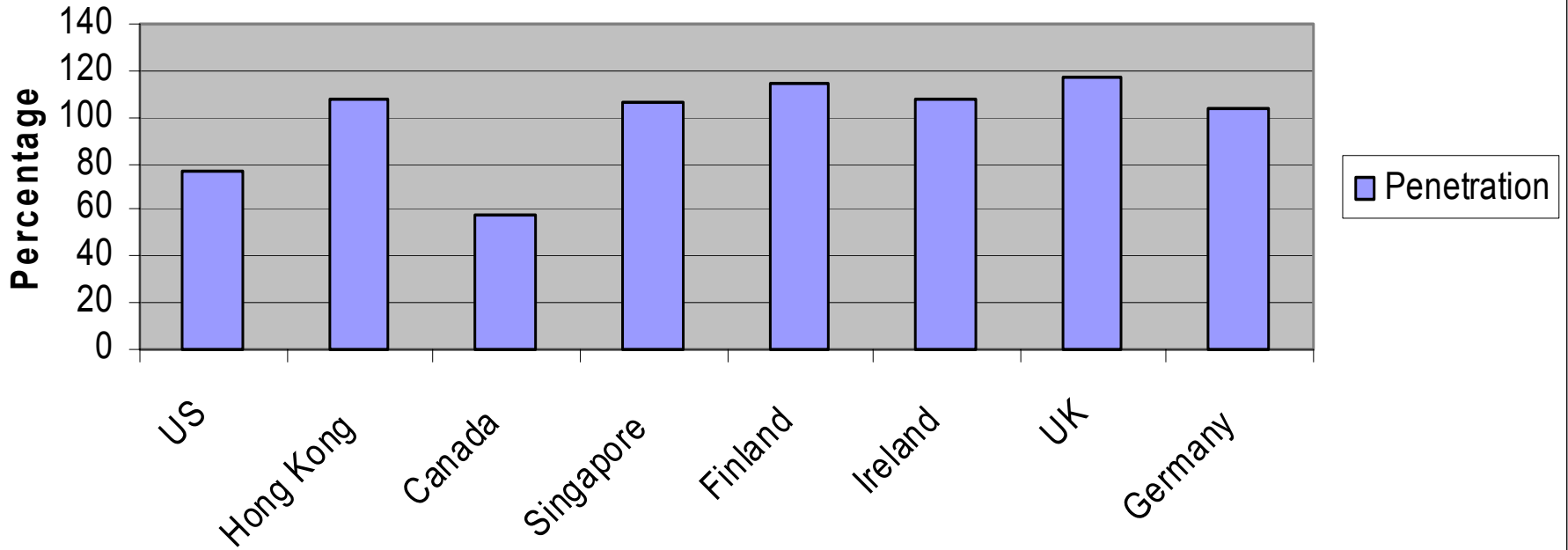
RPP where the cost is shared between receiving and calling party to reflect both parties utility

### Monthly MoU Users



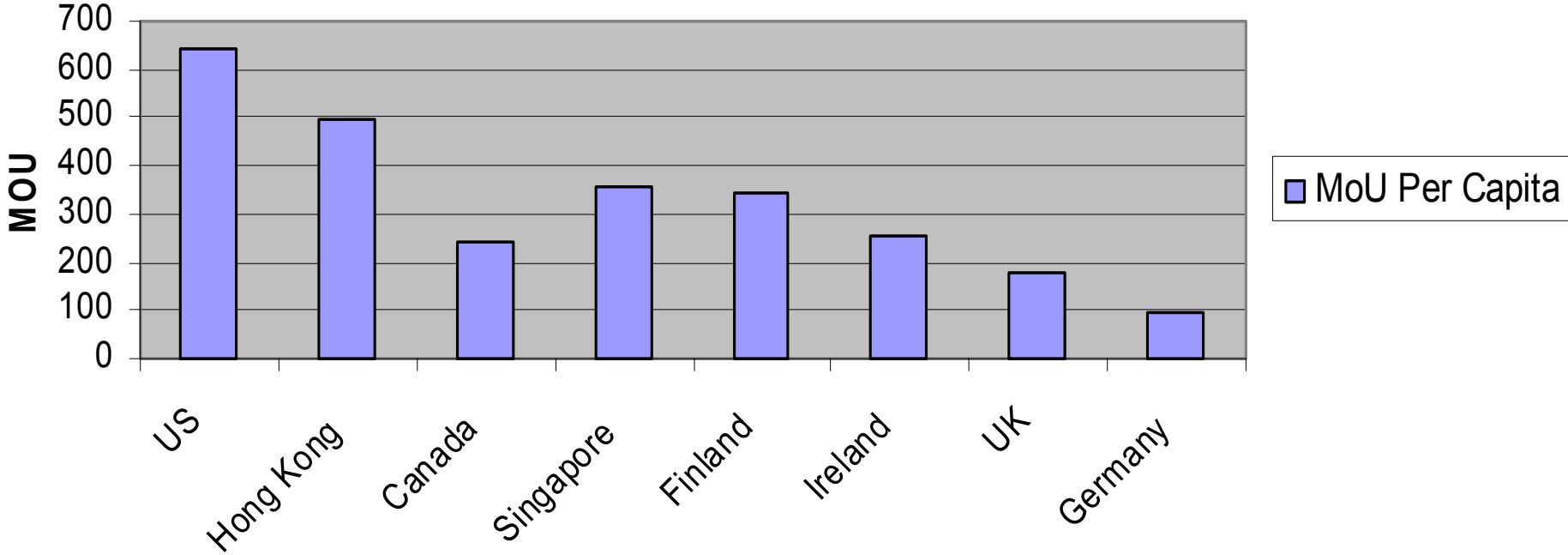
Source: Merrill Lynch 2006 Global Wireless Matrix

## Penetration Rate 2006



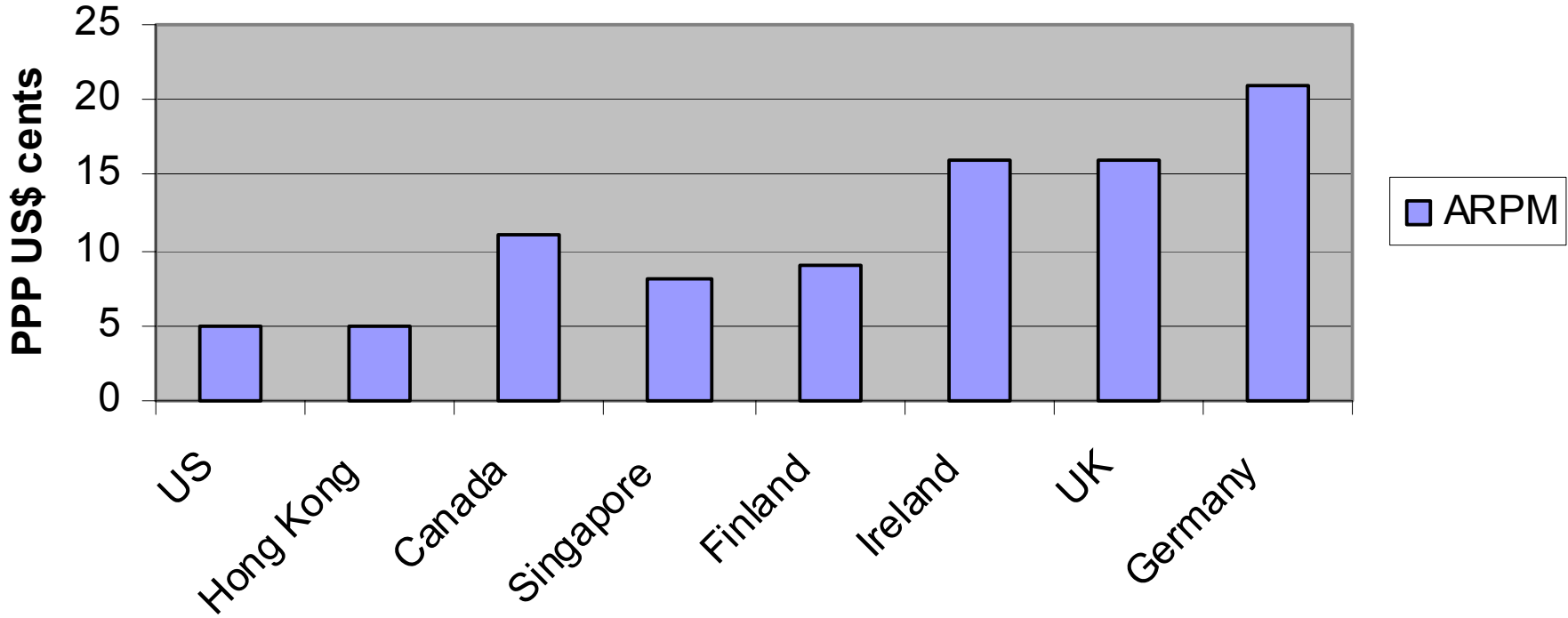
Source: Merrill Lynch 2006 Global Wireless Matrix

# Monthly MoU Per Capita



Source: Merrill Lynch 2006 Global Wireless Matrix

# ARPM



# Markets which may be affected by 2 sided analysis Broadband (net neutrality)

- Future consumer choices, what will the bundle look like? Will it look more like a entertainment package? Analogy with broadcasting...
- Number of competing platforms (modified Lerner Index appears to apply)
- Intensified competition in the presence of two sided market with more than one platform.
- Could two be enough?

# Broadband (net neutrality)

- Which might be the money side/ competitive side/demand elastic side?
- Consider the following, DT subsidises consumers so that access charges are set to zero, it charges suppliers/service providers  $X^1$  ( $>0, X^0$ ), subscriptions and usage rise dramatically.....
- What would happen under our framework?
- Access could not be sold below cost (margin squeeze).
- Net Neutrality concerns kick in and suppliers service providers cannot be charged (or only in very restrictive way... `)
- Google is offering broadband access to end-users for free in San Francisco by charging other content providers for advertising.

# Conclusions

- Presence of 2 sided markets ought to lead to a more nuanced regulatory approach.
- Strict market definitions will be tricky, applying a SSNIP test looking at one side may give perverse results. A price rise to one side of the market may/may not be profitable also depending on the other side of the market.
- The trigger for intervention may not be met but welfare maximising pricing may not be in place.

# Conclusions 2

- Analysis of behaviour ought to be more nuanced in the presence of two sided markets. Pricing below  $AVC$  may not be predatory (Margin Squeezes may not be bad).
- Modified Lerner indices apply, platforms which don't face competition can still exploit monopoly power.
- Less platforms may produce a sufficient level of competition. More platforms may not produce a better price structure (though they may improve the overall price level)

# Conclusions 3

- Effect on 3 criteria
  - High barriers to entry
  - Dynamic behind the barrier
  - Sufficiency of Competition Law
- How to view consortia standard setting?
- Role for Merger Policy?

# Thank You!

- Questions?

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