

# A New Regulatory Framework for the Digital Economy

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**11<sup>th</sup> International Workshop on Regulation**  
**Digital Economy: Regulatory Framework for a New Country**  
Cartagena, Columbia  
August 29, 2016



## Characteristics of Digital Ecosystem Markets

- The markets that make up the digital ecosystem – applications, content, communications, devices – share certain economic characteristics.

## Principles of a New Regulatory Framework

- The competitive dynamics of digital ecosystem markets have profound implications for regulatory policy.

## Applications to Zero Rating

- Applying proper principles to regulation of zero rating implies adopting a case-by-case approach.

# Characteristics of Digital Ecosystem Markets



## **Modularity**

- Applications, Content, Communications and Devices interoperate to produce consumer value.

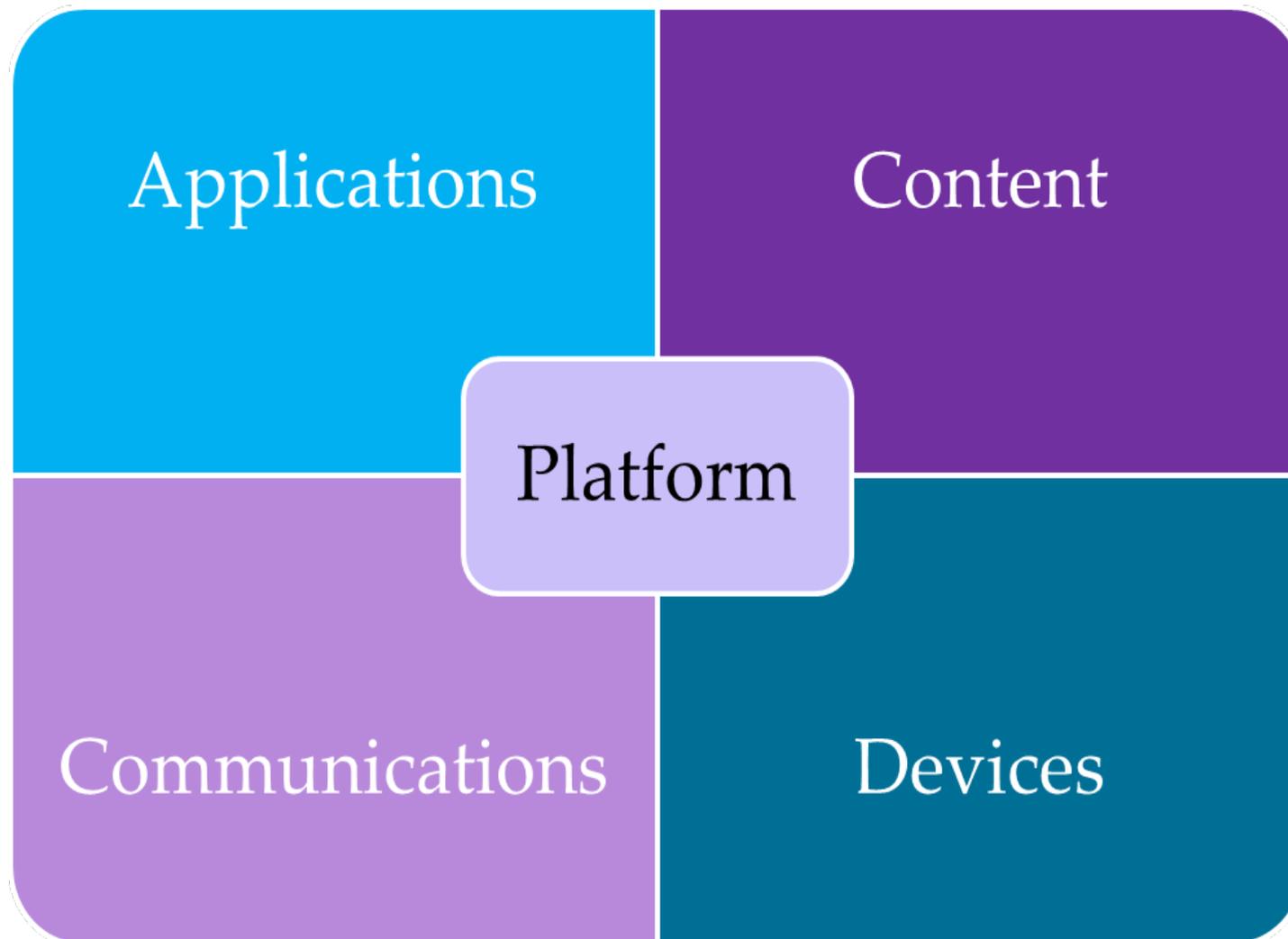
## **Economies of Scale and Scope**

- Falling average costs, multisided-ness and network effects determine optimal industry structure.

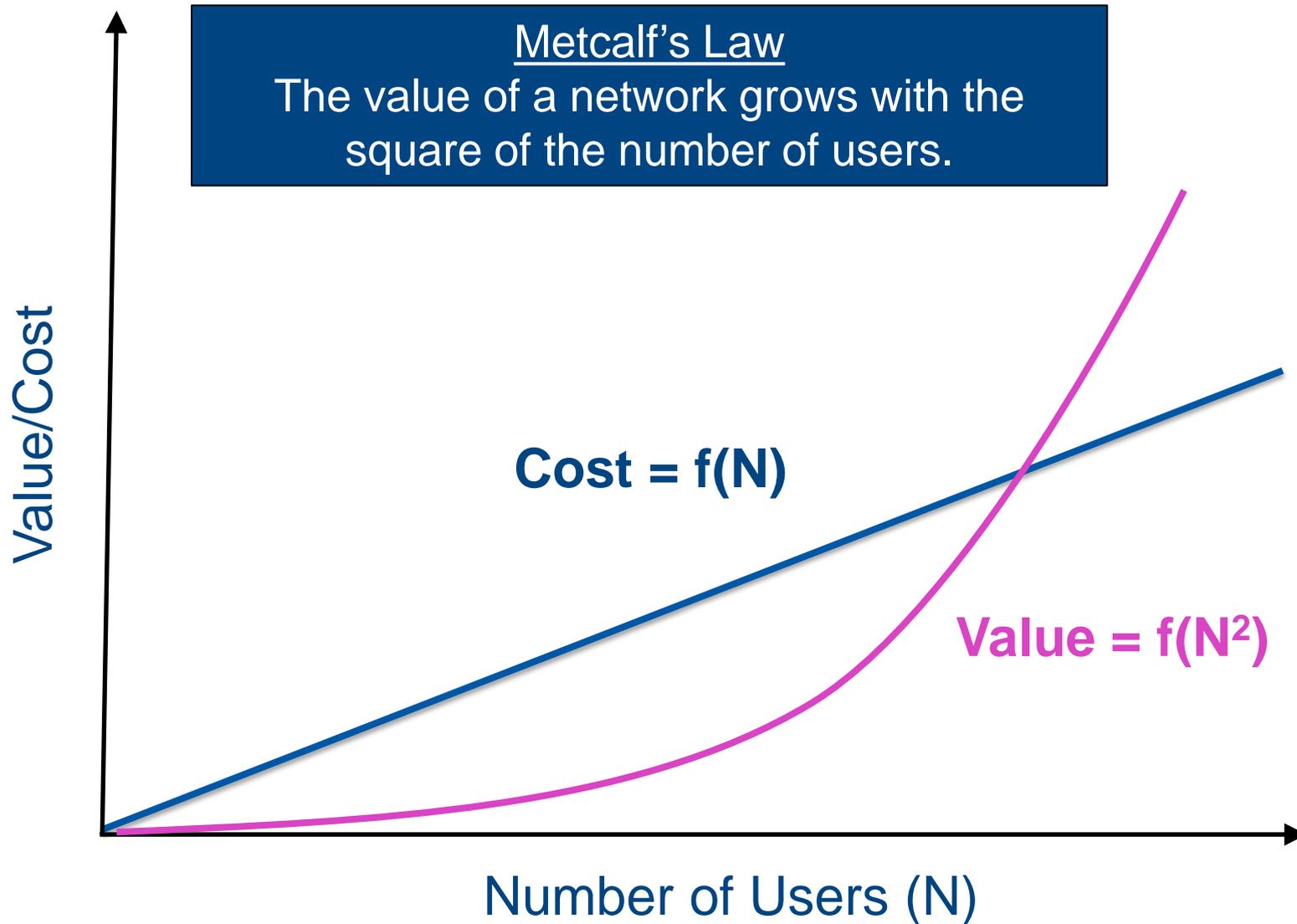
## **Dynamism**

- Competition on innovation rather than just price; potential for disruptive technological change.

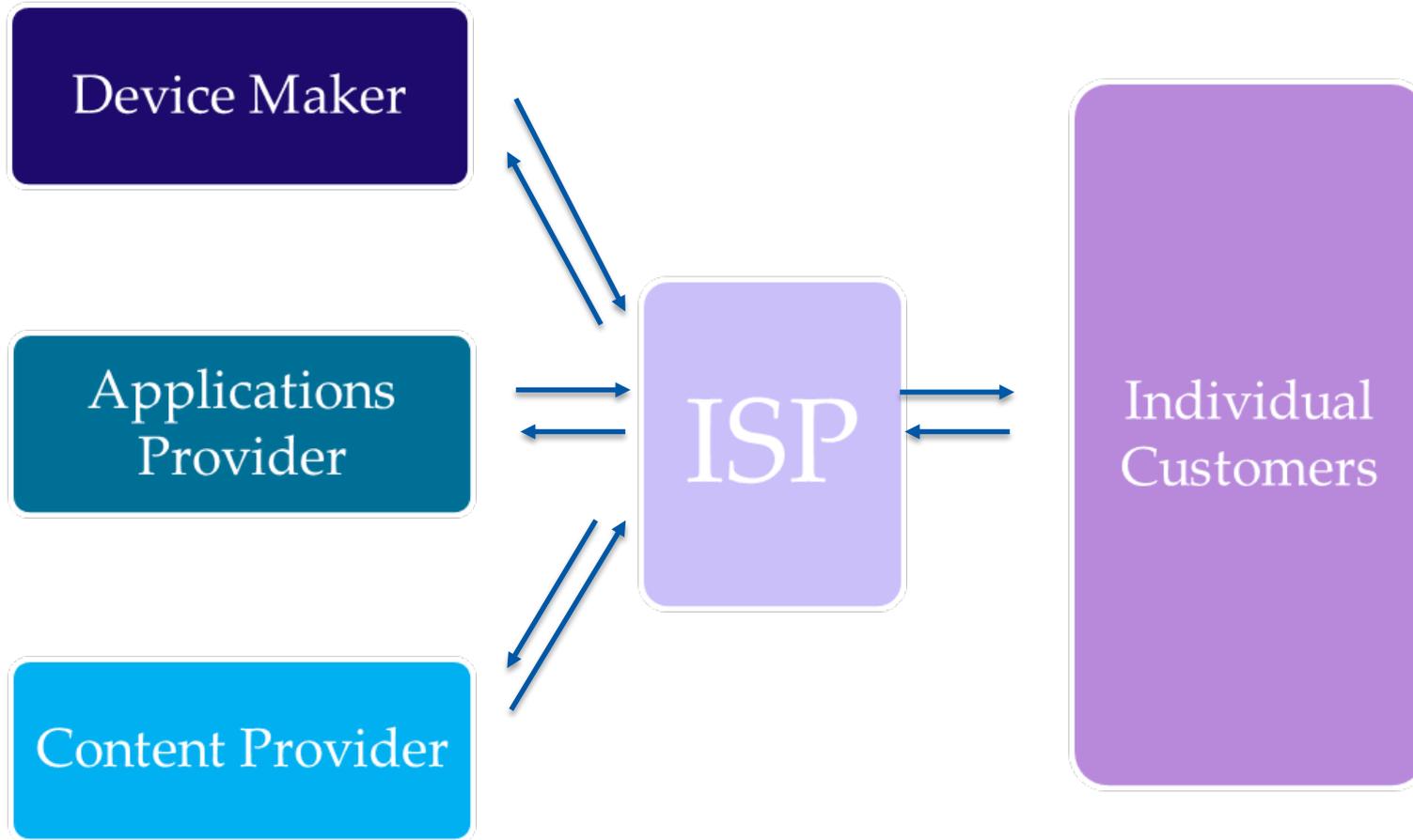
# Modularity



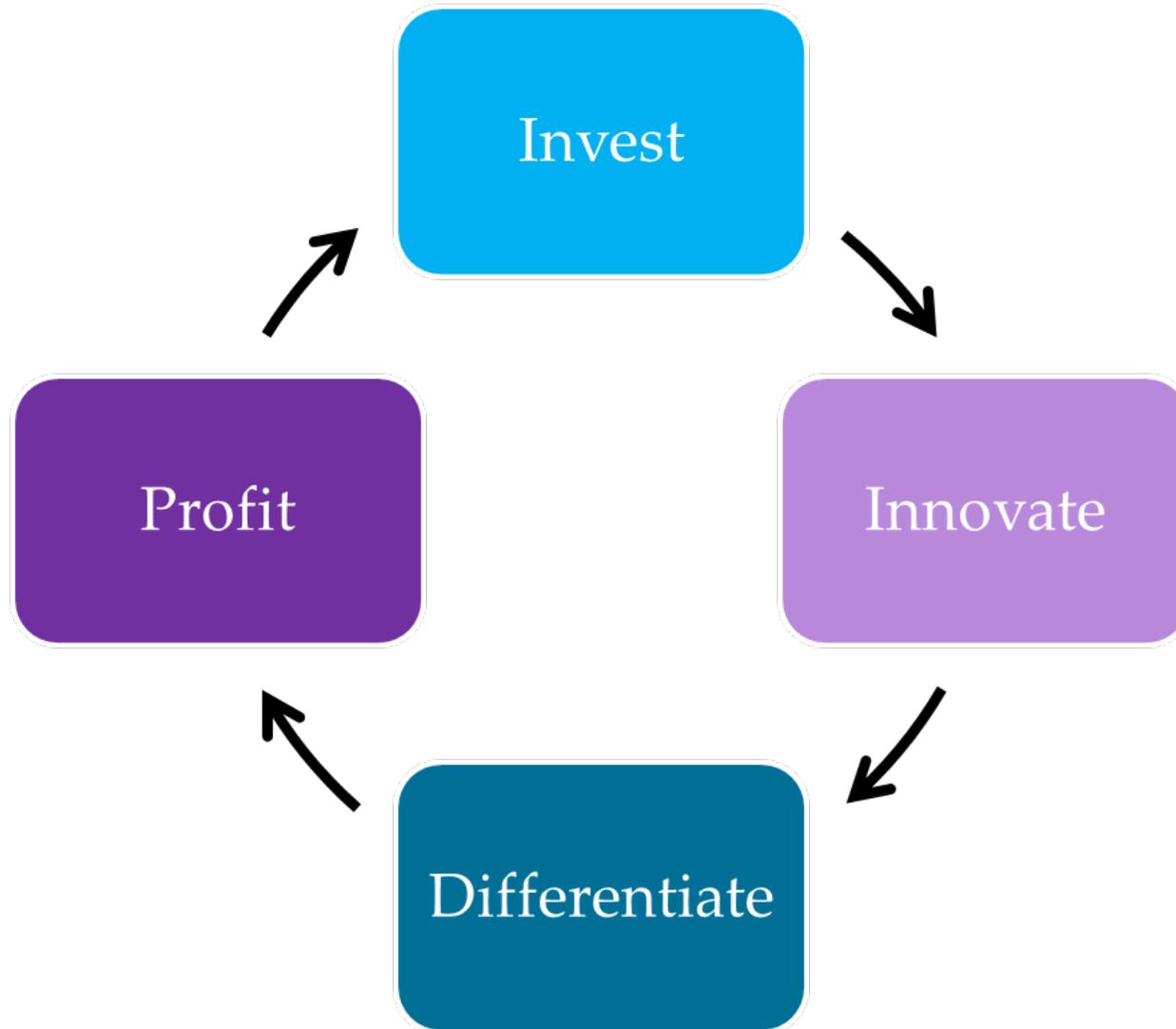
# Network Effects



# Multisided-ness



# Dynamism



# Competitive Dynamics of the Digital Ecosystem



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## Modularity

- All digital players engage each other across the value chain in a variety of roles
- Digital sector is not a collection of related but separate markets but rather a single, integrated ecosystem

## Economies of Scale and Scope/Network Effects

- Competition “for” the market, not “in” the market
- Consumers benefit from size and scope
- Competition occurs on both sides of multisided markets

## Dynamic Competition

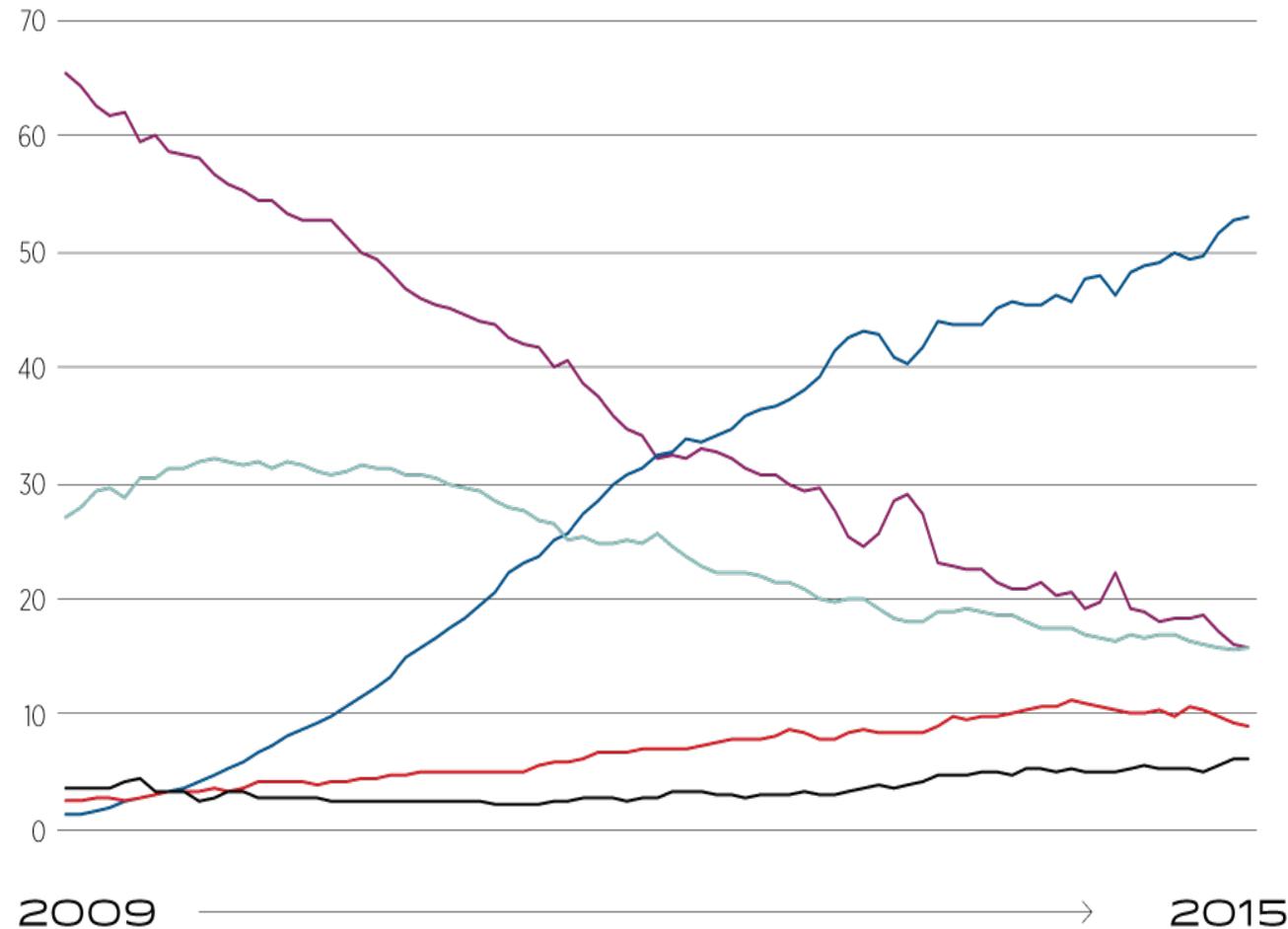
- Transformative innovation generates choice and value for consumers
- Static “dominant” positions are dynamically contestable

# Disruptive Entry: Internet Browsers



## Internet Browser Shares, 2009-2015

(Desktop, tablet and console; 2009-2015)



# Dynamic Competition - Enables Disruptive Entry



	<b>Incumbent(s)</b>	<b>Entrant(s)</b>
<b>MOBILE PHONES</b>	Blackberry, Nokia, Motorola	Apple, Samsung
<b>INTERNET BROWSERS</b>	Microsoft	Chrome
<b>MOBILE MESSAGING</b>	Wireless Companies	Skype, WhatsApp
<b>ONLINE MUSIC</b>	Apple	Pandora, Spotify
<b>LONG DISTANCE CALLS</b>	Wireline telco incumbents	Mobile carriers, Skype

# Challenges for Regulation



- Assessing and valuing the benefits of scale and scope
- Assessing and valuing benefits of bundling and “vertical integration”
- Predicting the impact of policies on innovation, balancing static vs. dynamic efficiencies
- Avoiding discriminatory regulation (substantive and procedural)
- Regulatory humility

# Costs and Consequences of Legacy Regulation



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## Regulating well is always difficult...

- Lack of information leads to regulatory errors, distorting markets and competition
- Market conditions and technologies change in unpredictable ways
- Regulations often impose substantial compliance burdens
- Regulation inevitably benefits some interests over others

## ...and more so in the digital ecosystem

- Complexity of digital markets increases regulatory error
- Rapid change accelerates regulatory obsolescence
- Innovation and entry are distorted by regulatory burdens and risks
- Higher regulatory distortions raise returns to rent-seeking

***Discriminatory, prescriptive regulations inhibit the growth of the digital ecosystem and reduce consumer welfare***

# Principles of a New Regulatory Framework



## Functionality-based

- Pursue regulatory goals based on achieving regulatory objectives, not legacy structures based on industries or technologies

## Dynamic

- Prefer performance based regulation with *ex post* enforcement over prescriptive, *ex ante* rules

## Bottom-up

- Evaluate regulation – including the need for regulation – in light of current market realities

***The new framework will reduce regulatory asymmetries, promote dynamic competition and innovation, and allow regulatory objectives to be achieved more effectively at lower cost***

# Applications of the New Framework



## Access Regulation

- *Ex ante* access regulation aims to increase static efficiency at the expense of dynamic efficiency
- Consistent standard across the ecosystem should limit regulation to enduring bottlenecks (if any)

## Barriers to Entry and Exit

- “Mother-may-I” regulation of communications carriers is discriminatory and harms competition
- Focus should be placed on consumer welfare rather than protecting status quo beneficiaries

## Privacy and Data Protection

- Communications carriers subject to specific, more stringent rules than other digital players
- Technology- and business-model-agnostic rules will benefit consumers and competition

## Merger Review

- Communications carriers currently subjected to more burdensome reviews than other digital competitors
- Reviews should take a dynamic perspective in analysis and apply equal standards to all players

## Spectrum Management

- Critical input for mobile wireless more heavily regulated than critical inputs to other players (e.g. IP rights)
- Spectrum should be managed to reduce scarcity and enhance flexibility through market mechanisms

## Universal Availability and Affordability

- Legacy policies are focused on communications infrastructure and local content
- A holistic approach should focus on leveraging economies of scale and scope across the entire ecosystem

# Procedural Discrimination in EU Merger Reviews



Sector	Time from Merger Notification to Final Decision (days)		
	Median	Average	Ten Longest Reviews (Average)
<b>Telecommunications</b> <i>(218 cases)</i>	35	59	436
<b>Other digital activities<sup>61</sup></b> <i>(214 cases)</i>	34	42	190

Source: European Commission <http://ec.europa.eu/competition/mergers/cases/>; NERA Economic Consulting

# The Economics of Zero Rating



## Market Expansion Effects

- ZR appears to expand the market by lowering prices, increasing choice, raising subscribership, captures economies of scale and scope.

## Consumer Welfare Effects

- Empirical evidence shows consumers benefit from expanded ecosystem, lower prices, learning effects.

## Competitive Effects

- ZR programs represent product differentiation, non-price competition among ISPs; potential for anticompetitive effects limited to special cases.

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