

A New Regulatory Framework for the Digital Ecosystem

NERA
ECONOMIC CONSULTING



A Report for GSMA

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Insight in Economics™

Our Approach



Explain ...
the economics of digital
markets

- Modularity and platform competition,
- Economies of scale and scope
- Dynamic competition

Critique...
legacy regulatory
frameworks

- Legacy frameworks are inherently discriminatory
- *Ex ante*, command-and-control regulation discourages innovation

Propose...
principles of a new
framework

- Functionality-based, non-discriminatory approach
- Performance-based rules with *ex post* enforcement
- Comprehensive, bottom-up reform

Apply ...
to specific policy areas

- Access regulation - barriers to entry and exit -
privacy and data protection - merger review -
spectrum management - universal availability and
affordability

Characteristics of the Digital Ecosystem



Modularity	Economies of Scale and Scope/Network Effects	Dynamic Competition
<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Competition “for” the market, not “in” the market Consumers benefit from size and scope; regulation should not impose barriers to their realization 	<ul style="list-style-type: none"> Transformative innovation generates choice and value for consumers Static “dominant” positions are dynamically contestable Regulation should not inhibit innovation and investment

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Dynamic Competition Enables Disruptive Entry



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

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Costs and Consequences of Legacy Regulation



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

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Regulatory Discrimination Impedes Competition



Unregulated Competitor

Business innovation

Implementation

Regulated Competitor

Business innovation

Regulatory analysis

Disclosure to competitors

Filing with regulator

Regulatory approval

Longer time to market

Innovations discarded

Risk of rejection

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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

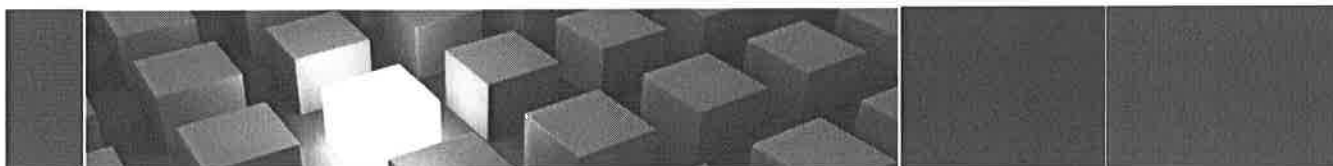
- Critical input for mobile wireless is more heavily regulated than critical inputs to other players
- Spectrum should be managed to reduce scarcity and enhance flexibility through market mechanisms

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

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