Competition Policy in the Digital Era

Delivering the Digital Age for citizens

- If government wants citizens to benefit from the Digital Age they need to ensure that the four ‘C’s are in place.

  - Regulatory environment supports change
  - Citizens are digitally literate
  - Relevant content
  - Connectivity
Aiming for the ‘Virtuous Circle’

Demand
Consumers buy products that offer the best value for money

Supply
Suppliers compete to offer the best value for money

Consumer Protection
Demand side needs:
- Access to information
- Ability to assess it
- Ability to act on it

Comp / Regulation
Supply side needs:
- A number of suppliers
- Suppliers that compete without significant barriers (entry, expansion, exit)

Competition Policy = competition law and economic regulation
Competition policy = 
Government policy + Enforcement of 
competition law and economic regulation to the communications industry as a whole

Competition policy is used as an intervention to facilitate the proper functioning of a competitive market

It is often said that:

Regulation is ‘Ex-Ante’

• Regulation is imposed, based on market analysis, to remedy market failure before the failure manifests itself (e.g., licence conditions for telecom operators)

Competition law is ‘Ex-Post’

• Competition law is used to enforce the rules after something has happened – e.g., abuse of dominant position
But there are nuances…

Regulation can be applied ‘ex-post’
- Example, breach of licence conditions resulting in ex-post enforcement

Competition law can be applied ‘ex-ante’
- Market investigations (in EU and UK)
- Merger control (in countries that adopt merger control)

What is Competition Policy?

‘EX-ANTE’ REGULATION
Especially for privatised utilities (energy, telecoms, water, rail)

‘EX-POST’ COMPETITION LAW

Regulators

Overlap

Competition Authorities
## Overlap: two ways to skin a cat

<table>
<thead>
<tr>
<th>Problem</th>
<th>Regulation Solution</th>
<th>Competition Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive Pricing</td>
<td>Pricing controls</td>
<td>Abuse of dominance</td>
</tr>
<tr>
<td>Rights to access</td>
<td>Access controls</td>
<td>Essential facility finding</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Regulatory accounts</td>
<td>Submit to regulations governing behaviour</td>
</tr>
</tbody>
</table>

### Competition / Monopoly

1. (Anticompetitive) Co-operation Agreements
2. Mergers/Joint Ventures*
3. Unilateral Action by ‘Dominant’ Companies

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*Anticompetitive Cooperations`
Economic Regulation = SMP Regulation

SECTOR: Communications
• Telecommunications regulation (SMP regulation)
• Spectrum regulation (e.g., assignment — spectrum policy usually reserved to Government)
Regulators can also regulate: television / broadcasting, radio and postal services

Tools/methods of regulation
Statutory powers/duty to regulate

Economic Principles
• Market failure
• Efficiency
• Market power

Legal Framework
• Regulator’s duties and functions
• Competition law

'SMP' Regulation

Market Definition / RETAIL MARKET
• Define product markets
• Define geographic markets

Is it necessary to regulate?
• Three criteria test at retail level and then at wholesale level

Market Assessment
• SMP analysis (market shares, barriers to entry, countervailing buyer power, etc.)

Competitive Market
• SMP not determined
• Previous SMP decisions removed / obligations withdrawn

Non-competitive Retail Market

Repeat for WHOLESALE MARKET
If closest wholesale market is non-competitive:
• Determine SMP
• Impose remedies
In Practice:

**“EX ANTE”**

- **SUPPLY SIDE**
  - Regulation (impact on enterprises and consumers)

- **DEMAND SIDE**
  - Competition (indirect impact on consumers)
  - Consumer Protection / Data Protection (direct impact on consumers)

**“EX POST”**

**The Overlapping Regulators**

<table>
<thead>
<tr>
<th>Two agencies:</th>
<th>Two agencies:</th>
<th>Two agencies:</th>
<th>One agency:</th>
<th>One agency:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competition authority + sectoral regulator</td>
<td>Regulator with concurrent powers in competition law</td>
<td>Regulator has excl. jurisdiction to apply comp. law to telcos</td>
<td>Only the regulator, only regulation</td>
<td>The integrated model</td>
</tr>
</tbody>
</table>

**EXAMPLES**
- Most countries
- Hong Kong, UK
- Malaysia, Singapore
- Cambodia
- New Zealand, Holland, Spain

**+++ ADVANTAGES**
- Comp. Law is applied equally to all sectors
- Comp. Law applied with expertise
- Comp. Law with sector expertise but no safeguards
- Convenience
- Complies with WTO
- Comp. Law and regulation across all sectors

**--- RISKS**
- Lack of cooperation (regulator’s expertise)
- Regulators apply regulation, Comp Auth defers to regulator
- Sectoral application of comp. law.
- Only telcos are subject to rules
- Need for funding and coordination. Risk of + agencies on one roof
In Competition Policy (comp law and SMP regulation)

1 — Markets must be defined

2 — Markets must be assessed

3 — Remedies

Defining Markets
SMP regulation and competition law

SMP Test
Is 'effective competition' present in the market?

Abuse Test
Has a position of dominance been abused?

Merger Test
Will the merger lead to SLC/SIEC?

Appropriate and proportionate regulation if competition law is insufficient

Clearance without remedies
Clearance with remedies
Blocked

Fines
Structural and/or behavioural remedies

Market definition is essential

Market Definition – Product/Geography

Demand-side substitution?
Supply side?

Apply SSNIP test: if a hypothetical monopolist of these products/ an incumbent raised prices by 5 – 10% above competitive level...

Yes

No

Sufficient for profits to be impacted?
Insufficient to impact profits

Yes: relevant product / geographic market

This is relevant product / geographic market

Step 2

Pre-defined starting point: member state / country

Yes: relevant market to include services and repeat test

No

Products / services offered by merging companies; area where they are sold

Dominance

Product / service which is the subject of the complaint; the area where this is offered

Merger Control

SMP Regulation

Start with 'Focal Product / Service': the area of reference
Tools for market definition

The SSNIP Test

- Abuse of a dominant position
  Could a hypothetical monopolist profitably sustain prices that are a small but significant amount above competitive levels (5-10%) (SSNIP)?

- Economic (SMP) regulation
  Could the current incumbent profitably sustain a SSNIP?

- Merger control
  Could the parties to a merger act unilaterally after the merger? Would a merger lead to an Upward Increment in Price?

SSNIP test

What if there is no price

…thanks to the advent of freemium products

Two observations:
(i) consumers may get a product for free on one side of the platform, but the platform operator may obtain revenue from the other side
(ii) accessibility of data could be a parameter of competition

In practice… modified SSNIP test.
Multi-sided markets (I)

Mobile networks underpin the digital economy. They make it possible for users to interact, in some cases bypassing the network altogether.

OTTs: Applications such as WhatsApp which require both a mobile number and data usage from the network operator.

End Users: Customers that directly use the mobile and voice services available through the mobile network.

Operating Systems: Manage the hard/software resources for each smartphone. Messaging and voice applications must be compatible across these systems to be successful within the market.

Multi-sided markets (II)

Similarly, but differently, OTTs are multi-sided markets using their ability to monetise data to fund ‘free’ applications.
### Market assessment in a nutshell

<table>
<thead>
<tr>
<th>Market Assessment</th>
<th>Merger control</th>
<th>SMP/Collective SMP in the defined market</th>
<th>Dominance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>Is this a ‘merger’?</td>
<td></td>
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<tr>
<td></td>
<td>Yes</td>
<td>Can the merger be expected to lead to SLC/SIEC over the foreseeable future?</td>
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<tr>
<td></td>
<td>Yes</td>
<td>Is any firm in a dominant position/a joint dominant position?</td>
<td></td>
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<tr>
<td></td>
<td>Yes</td>
<td>Is the dominant firm(s) abusing their dominance?</td>
<td></td>
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<tr>
<td></td>
<td>Yes</td>
<td>Fine the firm(s); if necessary impose future appropriate, proportionate remedies</td>
<td></td>
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<tr>
<td></td>
<td>Yes</td>
<td>Block merger/allow with appropriate, proportionate commitments</td>
<td></td>
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<tr>
<td></td>
<td>Yes</td>
<td>Apply appropriate and proportionate remedies</td>
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</table>
The “Pink Boxes”: What is market power? Measuring it, taking into account dynamic efficiencies

Measuring market power: market share

Market share is the starting point for measuring market power. However, market share is not conclusive evidence of market power; other factors require consideration. In general, when looking at market share:

- Firms having below 25% market share are not likely to raise concerns.
- If a market player has over 40% market share, concern regarding single dominance normally arises.
- Firms having between 25% and 40% market share are evaluated based on number of factors, such as firm’s ability to influence the market and experience in the market.
Measuring market power: Concentration

In a fragmented market... relatively low market share... may still confer (some) market power

Concentration Ratio / Index:

- Combined market share of the largest firms in a market (e.g., by revenue or number of users). Typically the 4 largest (CR-4).
- Allows for comparison of concentration between different markets.
- Can also be used to look at the concentration of top 3 firms, or 5, as needed.

KEY WEAKNESS: when the top firms (3, 4 or 5) share the market, the ratio is constant, e.g., the ratio is the same irrespective of the relevant strength of the firms.

RATIO = 100% whether:
- CR-4 = 25%+25%+25%+25% = 100%
- CR-4 = 70%+10%+10%+10% = 100%
**Measures of concentration (2)**

**Herfindahl-Hirschmann Index:**

The $\sum$ of squared market shares - between 0 (markets with perfect competition) and 10,000 (monopoly = 100%)

Addresses KEY WEAKNESS of concentration ratio.

Example:
- $\text{HHI} = 25\% + 25\% + 25\% + 25\% = 25^2 + 25^2 + 25^2 + 25^2 = 2,500$
- $\text{HHI} = 70\% + 10\% + 10\% + 10\% = 70^2 + 10^2 + 10^2 + 10^2 = 5,200$

In merger control:
- $\text{HHI} =$ below 1,500 = UNCONCENTRATED – GREEN LIGHT
- $\text{HHI} =$ 1500-2500 = MODERATELY CONCENTRATED – AMBER LIGHT
- $\text{HHI} =$ above 2500 = CONCENTRATED

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**Implications of the Digital Age on market shares**

Market share is likely to become more volatile as new players emerge and consumer tastes evolve. Care needed if introducing SMP regulation concepts for Internet players.

Due to freemium products, measuring market share on number of customers or data usage may be more appropriate than on revenue.

Obtaining data from global players and for non-measurable products is likely to be problematic.
Measuring market power — a dynamic concept in the Digital Age

<table>
<thead>
<tr>
<th>Factors</th>
<th>The Digital Age</th>
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</thead>
<tbody>
<tr>
<td>Lack of barriers to entry and expansion</td>
<td>Traditional barriers to entry are lowering:</td>
</tr>
<tr>
<td></td>
<td>• Open source software facilitates interoperability and new entrants</td>
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<td></td>
<td>• Switching between mobile operators is now a relatively simple process</td>
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<td></td>
<td>• Sunk costs are lowered, for OTTs at least</td>
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<tr>
<td></td>
<td>Barriers to expansion could also be lower:</td>
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<tr>
<td></td>
<td>• Brand recognition — e.g., Microsoft and Apple when entering new markets</td>
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<td></td>
<td>• Telcos moving to new parts of the value chain — e.g., operators + Internet players</td>
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<tr>
<td>Countervailing buyer power</td>
<td>Countervailing buyer power is increasingly important — even firms with high market shares need to innovate and stay relevant</td>
</tr>
<tr>
<td>Bidding markets</td>
<td>Where firms bid (e.g., for spectrum licences) bidding should deliver efficient market outcomes despite few or only one player ending up with ownership of the resource</td>
</tr>
<tr>
<td>Regulation</td>
<td>In the Digital Age, only the telcos are regulated</td>
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</tbody>
</table>

Types of efficiencies

The Digital Age is driving additional efficiency incentives which should be considered within competition policy.

What types of efficiencies are there?

- **Allocative efficiency**: Firms producing the optimal amount of goods and representing customer preferences.
- **Productive efficiency**: Firms produce the maximum amount of goods with the optimal input combination minimising their cost.
- **Dynamic efficiency**: Appropriate balance of short run efficiency with long run efficiencies — focusing on encouraging research, development and innovation.
Promoting efficiency — SMP regulation

Investment is vital to the progress of the sector. Remedies following a finding of SMP must follow a number of principles:

- Regulatory interventions should deliver outcomes in the least distortionary and burdensome manner.
- Remedies should be applied on a non-discriminatory basis to all market participants on a technology and service neutral basis.
- Intervention should be adaptive, reflecting the changing operating environment and recognising that remedies may warrant removal more quickly in fast changing markets.
- An efficient market requires transparency of market information and decision making.

Promoting efficiency – mergers

Competition authorities should consider efficiencies as well as the potential for competitive harm when evaluating mergers. What efficiencies may arise?

- Economies of scale and related impacts that can be passed onto consumers, such as lower prices and increased innovation by the merged firm.
- Proof of immediate efficiency benefits, often within a year, are a key factor in determining whether a merger case is cleared by competition authorities.
- Operators may benefit from a larger customer base, reducing costs per unit (economies of scale). This may increase profitability, enabling greater investment in network capacity and coverage.
- Mergers may allow the combined entities to combine assets — e.g., spectrum holdings. Investment opportunities may arise through the merged infrastructures allowing for the provision of higher quality services and wider coverage.
The “Yellow Boxes”: Is there a problem?

‘SMP’ Regulation – Assessment

Principles for market definition in SMP regulation based on EU principles and should be applicable in countries that have adopted the SMP regulatory system.

• Define markets as discussed in Session 3, then
• Step 1, apply the (cumulative) three-criteria test:
  - in the market(s) identified, are there any high and non-transitory entry barriers? If no, no need to regulate;
  - does the market structure tend towards effective competition within the relevant time horizon? If yes, no need to regulate;
  - would the application of competition law adequately address the market failure(s) concerned? If yes, no need to regulate
Merger Control – Assessment

Abuses of market power

A firm with market power may be able to limit competition and cause consumer harm within an industry, for example, through pricing strategy or exclusivity agreements. Types of potential abuses are:

- **Exploitative** — to exploit an existing dominant position, e.g., by imposing excessive prices.
- **Discriminatory** — discriminating amongst competitors. Traditionally, price discrimination was the main category of discriminatory abuse, although cutting supplies to some categories of customers was also considered as a potential discriminatory abuse.
- **Exclusionary** — examples include predatory pricing and loyalty rebates. Most problematic category of abuse, and includes behaviour which is perfectly legitimate, if entered into by a firm without market power, but potentially illegal if carried out by dominant firms.
Leveraging of market power

Firm uses its position of market power in one market, to exclude rivals from another, usually contiguous, market.

Bundling (in market assessment)

Bundling may lead to efficiency gains and improve consumer welfare, however it may also provide the opportunity for market foreclosure.

Criteria for intervening in bundled markets

1. Are the products in the bundle distinct? Yes
2. Do the bundling firm(s) have market power in home (or tied) market? Yes
3. Are consumers harmed? Yes
4. Is the potential harm outweighed by efficiencies which are passed to consumers and can’t be achieved less restrictively? No

Possible case for intervention
Remedies: The “Grey Boxes”: What do we do about it?

Types of intervention

**Behavioural**
- Anti-competitive agreements/ Cartels + SMP regulation
- Abuse of dominance / SMP regulation

**Structural**
- Commitments to allow mergers / Structural separation in regulation
## Remedies in SMP Regulation

<table>
<thead>
<tr>
<th>Issue</th>
<th>Potential Remedies</th>
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<tbody>
<tr>
<td>Excessive prices</td>
<td>Charge control</td>
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<tr>
<td></td>
<td>Ex ante margin squeeze</td>
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<tr>
<td></td>
<td>Cost accounting</td>
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<tr>
<td>Input foreclosure (e.g., refusal to supply)</td>
<td>Obligation to provide network access (general and/or specific)</td>
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<td>Requirement not to unduly discriminate</td>
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<td></td>
<td>Publication of Reference Offer</td>
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<td>Notification of changes to charges and technical information</td>
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<td></td>
<td>Equivalence of inputs</td>
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<td>Accounting separation</td>
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<td>Cost orientation</td>
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<td>Reduction in service quality (wholesale)</td>
<td>Quality of Service obligations (e.g., minimum standards, KPI reporting)</td>
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</tbody>
</table>

### Implications for the digital age

5. Implications for the digital age
The Smile Curve – traditional business loses out

Publishing
Music
Hotels
Taxi and logistics

Creation Delivery Discovery

In the Digital Ecosystem:

Business models are dependent on Platforms
In platform economics, network effects become even more important
The pace of change means that dynamic efficiency is key
In the Digital Ecosystem – no price?

SSNIP?

Market definition especially in Multi-sided platforms

Revenue thresholds favour new players (FB/whatsapp Brazil)

Mergers

NO PRICE?

Revenue-based market shares are less significant

M. Shares

Traditional industries trade on revenue & profits – new players on expectations

Business Models

Abuse?

Comp. cases often consider PRICE abuse (discrimination; predatory / excessive pricing; margin squeeze …)

Costs and Consequences of Legacy Regulation

Regulating well is always difficult …

- Information gaps can lead to regulatory errors, distorting markets and competition
- Market conditions and technologies can change in unpredictable ways
- Regulations often create substantial compliance burdens
- Regulation always benefits some interests over others

… and more so in the digital ecosystem

- The 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
Regulatory Discrimination Impedes Competition

Unregulated Competitor
- Business innovation
- Competition assessment
- Implementation
- Innovations may be discarded

Regulated Competitor
- Business innovation
- Competition assessment
- Regulatory analysis
- Filing with regulator
- Regulatory approval
- Disclosure to competitors
- Longer time to market
- Risk of rejection
- Implementation

Competition Policy Handbook
Competition Policy Case Studies


Case Studies — Structure

<table>
<thead>
<tr>
<th>Introduction</th>
<th>Sub-Saharan Africa</th>
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</thead>
<tbody>
<tr>
<td>Asia</td>
<td></td>
</tr>
<tr>
<td>Appendix 1 – Spectrum in Competition Policy</td>
<td>Appendix 2 – SMP Regulation in Practice</td>
</tr>
</tbody>
</table>

Flowchart 2 | Flowchart 1
Thank you!