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SESSION 2
INTRODUCTION TO COMPETITION ANALYSIS AND THE CHALLENGES OF THE NEW DIGITAL ECONOMY

Simon Molloy, ITU Expert
simon.molloy@skc.net.au

Agenda

1. Markets, social welfare, market power and market failure

2. Defining markets: substitutes and elasticity of demand

3. Significant market power and the SSNIP test

4. OTT and market definition in telecommunications

1. Markets, social welfare, market power and market failure

1. Markets, social welfare, market power and market failure (1)

What is a market?

- A market is any structure that allows buyers and sellers to exchange any type of goods, services and information. The exchange of goods or services, with or without money, is a transaction.
- A market is an information generating mechanism – it generates price signals through the interaction of buyers and sellers.

1. Markets, social welfare, market power and market failure (2)

How does a market benefit society?

- A market enables buyers find sellers who offer the lowest prices and sellers to find buyers who will pay the highest price.
- Sellers sell when price is above their production costs (producer surplus) and buyers buy when prices is below their subjective internal valuation (consumer surplus). The sum of consumer and producer surplus is the ‘social welfare’ benefit created by a market transaction.
- A market promotes competition between sellers to find the most efficient way to meet the demands of consumers – the right product, using the right resources, for the right consumer.

1. Markets, social welfare, market power and market failure (3)

Market failure

A market failure occurs where voluntary exchange in a market fails to allocate resources efficiently. The main categories of market failure are:

- **Abuse of market power**
- Externalities
- Public goods
- Imperfect information.

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2. Defining markets: substitutes and elasticity of demand

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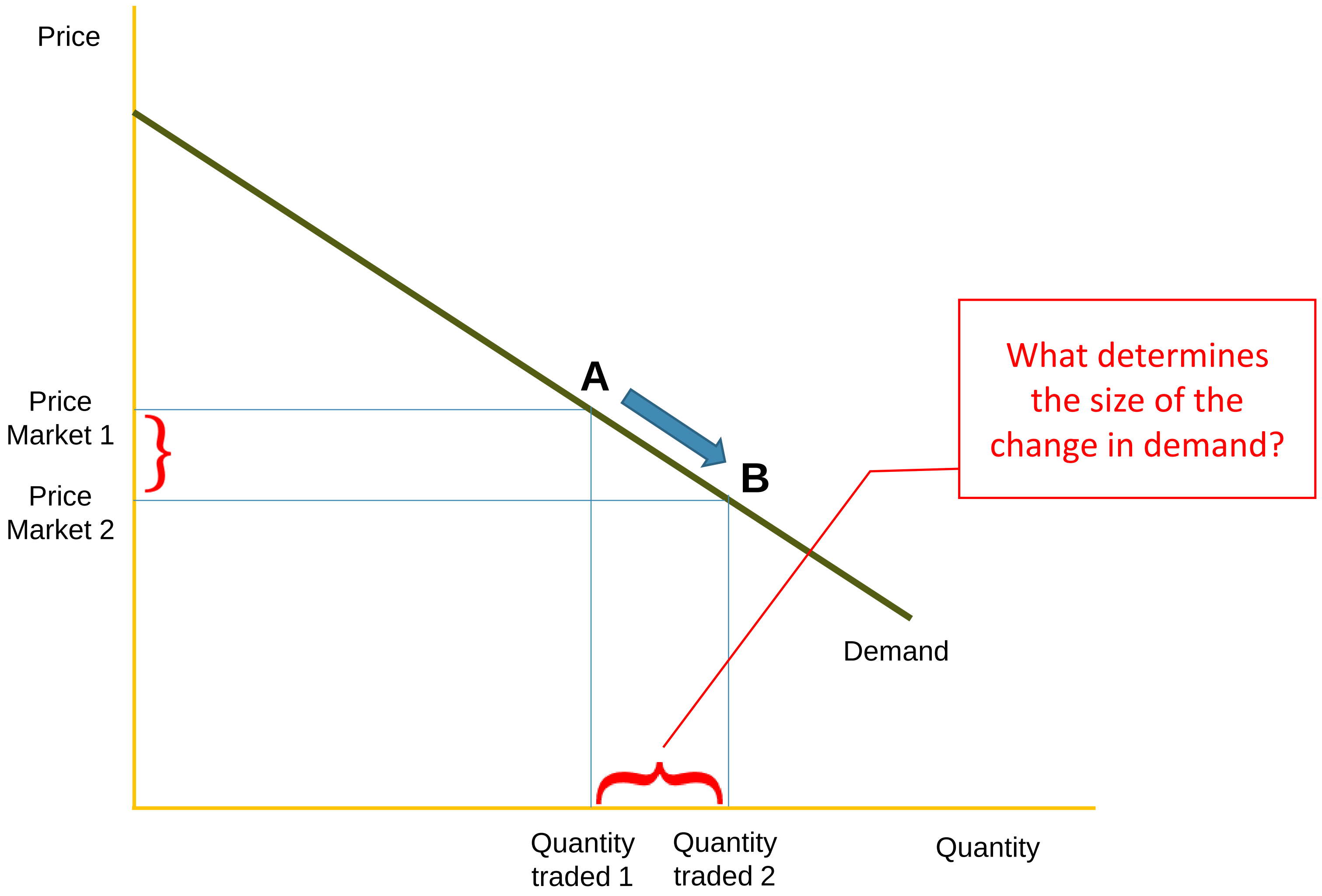
2. Defining markets: substitutes and elasticity of demand (1)

A market is defined by the boundaries of supply-side and demand-side substitutability

- Note that we are defining markets for regulatory and competition law purposes. The definitions will rarely be the same for other purposes – such as segmenting populations for market research and sales purposes.
- Dominance and competition do not occur at large – they occur within markets. Without a concept of markets these terms cannot have the meaning they possess in regulatory discussions.

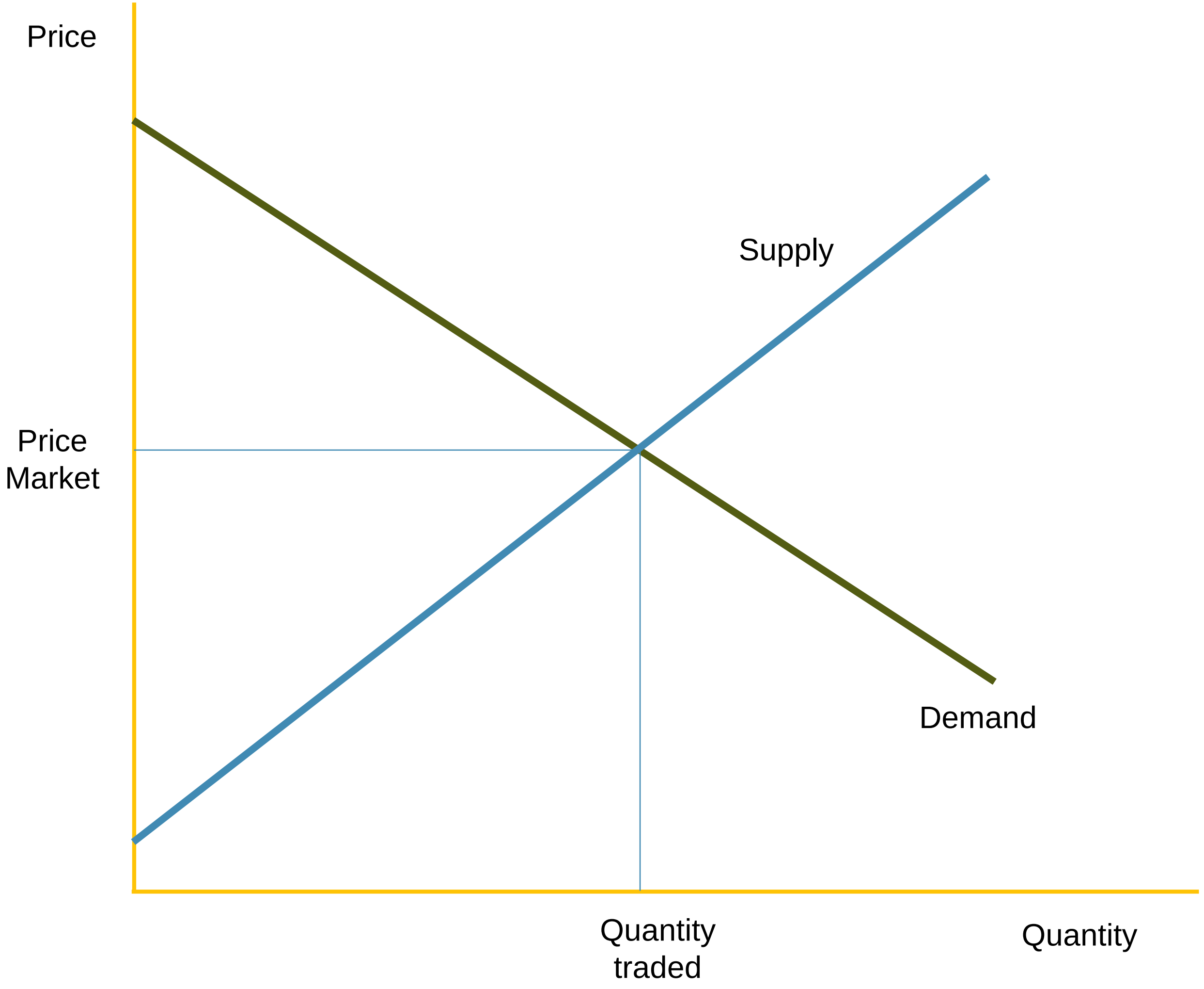
2. Defining markets: substitutes and elasticity of demand (2)

Demand, supply, elasticity: ‘a little economics revision’



2. Defining markets: substitutes and elasticity of demand (3)

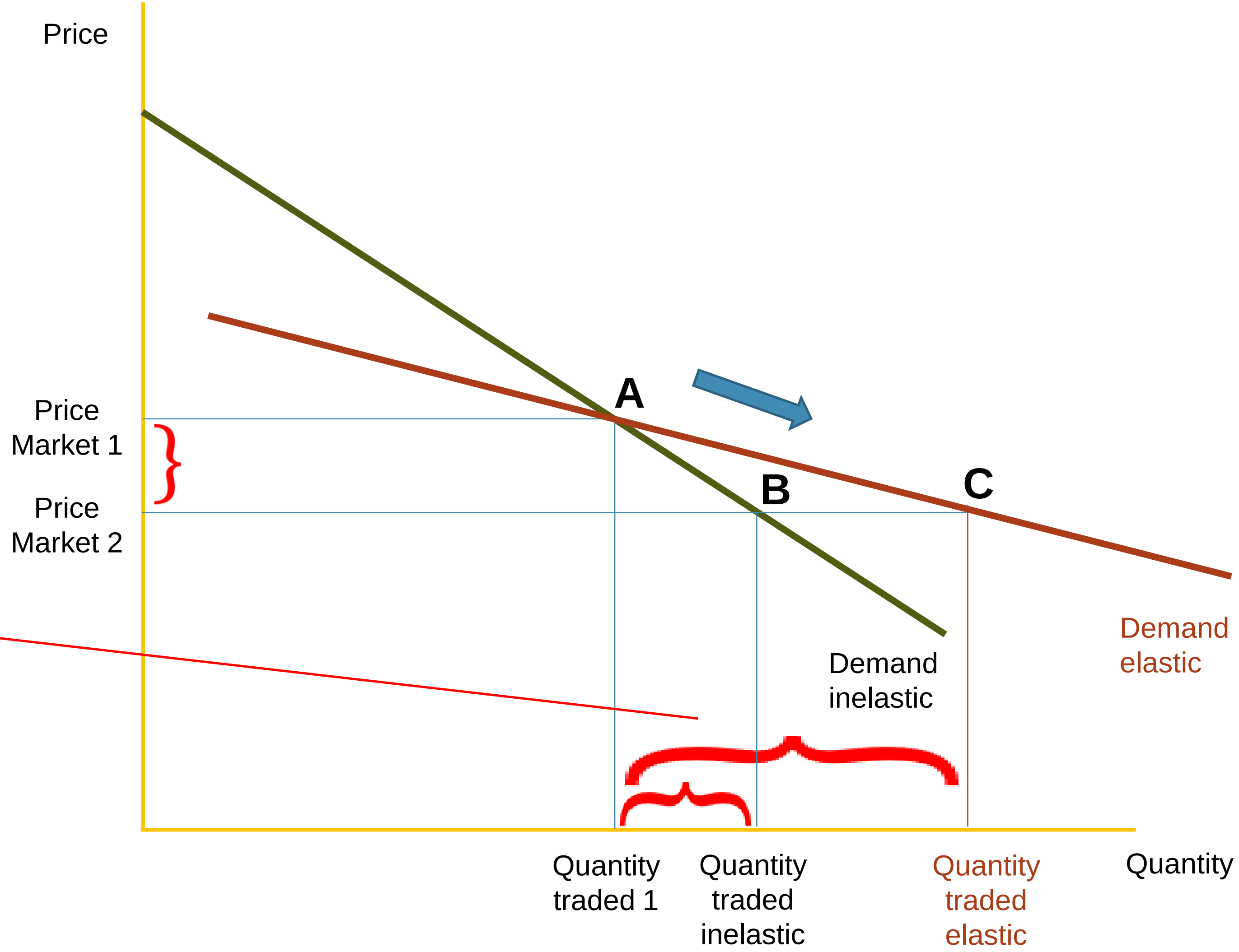
Demand, supply, elasticity: ‘a little economics revision’



2. Defining markets: substitutes and elasticity of demand (4)

Demand, supply, elasticity: ‘a little economics revision’

What determines the size of the change in demand?



2. Defining markets: substitutes and elasticity of demand (5)

What does ‘substitutability’ mean?

- Demand side substitutability means that consumers regard an alternative product as ‘similar’ to or ‘close’ to the one they are currently buying.

Close substitutes?

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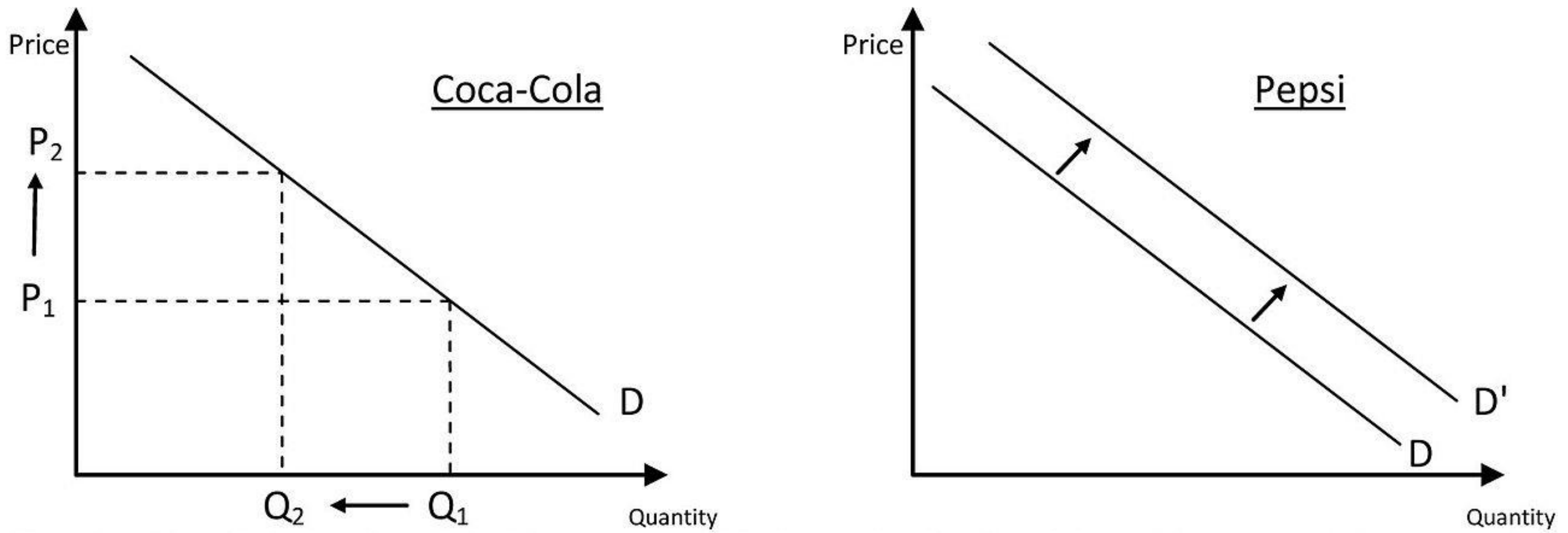
2. Defining markets: substitutes and elasticity of demand (6)

What does 'substitutability' mean? Now considering *two* products.



Suppose the price of Coca-Cola rises from P_1 to P_2 because one of the inputs rises in price. This would cause people to consume less coke, quantity decreases from Q_1 to Q_2. For the substitute good Pepsi the demand curve shifts out for all price levels, from D to D', leading to more of the substitute good consumed.

It means a *positive cross-elasticity* of demand = $\%\Delta P_{Coke} / \%\Delta D_{Pepsi}$

2. Defining markets: substitutes and elasticity of demand (7)

What does ‘substitutability’ mean?

Close substitutes?

2. Defining markets: substitutes and elasticity of demand (8)

What does ‘substitutability’ mean?

Close substitutes?

2. Defining markets: substitutes and elasticity of demand (9)

What does ‘substitutability’ mean?

Close substitutes?

2. Defining markets: substitutes and elasticity of demand (10)

What does ‘substitutability’ mean?

SMS

Close substitutes?

WhatsApp

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2. Defining markets: substitutes and elasticity of demand (11)

What does ‘substitutability’ mean?

MobiCom

Close
substitutes?

skype™

2. Defining markets: substitutes and elasticity of demand (12)

A market is defined by the boundaries of supply-side and demand-side substitutability

- When buyers exhaust practical substitution possibilities for goods and services then we have found the demand-side boundary of a market.
- When there is no practical prospects of entrants with relevant capacity seeking to enter a market in the short term then we have found the supply-side boundary of a market
- The actual definition will be expressed in terms of services, geography and customers.

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2. Defining markets: substitutes and elasticity of demand (13)

From market definition to regulation

1. **Market definition**

   (in terms of product, customers and geography)

2. **Market analysis**

   (to determine dominance in the relevant markets)

3. **Determination of remedies**

   (that are appropriate, proportionate and reasonable)

2. Significant market power and the SSNIP test

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3. Significant market power and the SSNIP test (1)

Market structure – the basics

4 types of Market Structures	*Perfect Competition*	*Monopolistic Competition*	*Oligopoly*	*Monopoly*
Number of firms	Many	Several	Few	One
Freedom of entry	Open Access	Open Acess	Controlled Access	Barriers of entry: Technical, legal & economic
Nature of Product	Uniform	Differentiated	Uniform or Differentiated	Specialized
Implications for demand curve	Horizontal line Perfect elastic	Downward sloping (elastic)	Downward sloping (inelastic) Game Theory	Downward sloping - Control over price and is more inelastic compared to Oligopoly - Straight line demand curve (MR 2x steep)
Average size of firms	Small Firms - Small enough that no firm affects the market price or quantities	Small Firms - Extremely competitive small degree of market control	Large in size - dominated	Large in size - provides all of the market's supply
Possible consumer demand	Price is unrelated to the quanity produced/ sold	Firms have the ability to control the price somewhat- Competitive goods are close substitutes	Non-price competition - consumers determine how much to buy = firm successful	Demand will not remain constant as the firms increase their output
Profit making possibility	MR=MC Marginal profit is zero TR - TC	MR=MC Makes no economic profit	MR=MC (Cartel & Collusion)	MR=MC Maximizes profits - the price the firm will charge a product at the maximum possible price
Government Intervention	Government Intervention	Government Intervention - Entry can be blocked by the government or regulation	Government Intervention - Collusions are illegal in most countries w/ penalties	Government Intervention - By taxation, price setting & nationalization
Criticism	Ideal - not seen in reality	Advertising	Agreements made between few firms that divide the market up. Agree on quota or a fixed price	Being able to make economic profits in short run and long run -using power to increase price -Inefficient in productivity & allocatively -Higher price for a product & producing a lower output

Source: http://chelsey-econ250-microeconomics.blogspot.com/2012/03/comparing-market-structures.html

3. Significant market power and the SSNIP test (2)

Hypothetical Monopolist Test (HMT)

- The HMT is a test for determining the scope of a market, based on a focal product that is provided by a hypothetical monopolist.
- If a hypothetical monopolist were to implement a small but significant non-transient increase in price (a SSNIP) would that be unprofitable because customers would use substitute products or new suppliers might enter the market?
- If the SSNIP would be profitable then we have found the limits of substitution and hence the boundaries of the market.
- If the SSNIP is unprofitable then the substitute services would be included in the market and the test run again.

3. Significant market power and the SSNIP test (3)

Defining the Relevant Market in Telecommunications, Review of Selected OECD Countries and Colombia, 2014

- Markets are most commonly defined on the basis of the ‘hypothetical monopoly’ test, also known as the SSNIP test, which is well established in antitrust practice.
- The objective of this exercise is to define the smallest possible markets both in the product and geographic dimension, whereby a hypothetical monopolist could profitably and permanently raise the price of the products by 5 to 10 per cent above the competitive level.
- Loosely, a market defined by such a methodology is “something worth monopolising”, and therefore high market shares within such a market might imply the ability to exercise market power.
- The relevant market includes all those products which the consumer regards as sufficiently interchangeable or substitutable to prevent such a price rise. To empirically test whether identified products impose significant price constraints, economists examine cross-price elasticities and diversion ratios.

3. Significant market power and the SSNIP test (4)

Practicalities of the HMT

Translation

- Small but Significant means 5–10% increase in prices
- Non-transient means at least 12 months, not just a short-term promotional price

Problems with the Test

- Not enough data on customer behaviour
- No reliable information on price elasticities of demand
- Cost data is often not available or reliable
- So the test is often little more than a thought experiment

3. Significant market power and the SSNIP test (5)

Practical Exercise – the HMT

The regulator wants to check whether similar products A, B and C are in the same market. It asks for data from the incumbent operator, which provides the following:

Price	Q1	Q2	Q3	Q4
A	15	14	14	14
B	10	10	10	10
C	14	14	12	12

Sales #	Q1	Q2	Q3	Q4
A	1000	1100	1200	1300
B	750	700	650	600
C	800	800	900	900

Questions:

1. What can you conclude from this information?
2. What more information would you like?

3. Significant market power and the SSNIP test (5)

Determining dominance

The objective:

- To assess the level of competitiveness in the market we have defined to identify any operators that may have a position of dominance or significant market power (SMP)

Dominance/SMP is defined as:

- *a position of* ***economic strength*** *enjoyed by an undertaking which* ***enables it to prevent effective competition*** *being maintained in the relevant market by affording it the power to* ***behave*** *to an appreciable extent* ***independently*** *of its competitors, customers and ultimately of its consumers.*

Note that it is the ***abuse*** of SMP, not having market power, that is the ultimate concern:

- Ex-ante regulation is concerned about the achievement of SMP as it creates a risk of harm from, and an incentive to engage in, anti-competitive behaviour

3. Significant market power and the SSNIP test (6)

Market share is just the first step

Market share is the threshold indicator of SMP but is not conclusive on its own:

- 40% is a the typical **threshold** indicator but alternatives may be specified in legislation.
- Market share may be ***measured*** by revenue, subscribers, capacity or traffic

A market share ≥40% enables the regulator to reach a hypothesis that the supplier has SMP.

- If more than one supplier has ≥40% market share, the hypothesis may be of joint dominance

To test this hypothesis, the regulator should analyse other factors that may be relevant to considerations of dominance in the relevant market.

3. Significant market power and the SSNIP test (7)

Typical criteria for single dominance

The existence of SMP is found by reference to a number of criteria and its assessment is based on a forward-looking market analysis based on existing market conditions.

Member States or NRAs should consider a combination of the following criteria, inter alia, as determinative of SMP:

− market share;

− control of essential facilities;

− barriers to entry;

− potential competition;

− easy access to financial resources;

− strength of the countervailing power of consumers;

− economies of scale;

− economies of scope;

− vertical integration.

3. Significant market power and the SSNIP test (8)

Once the (potential) competition problems in a market have been identified, the potential remedies to those problems can be developed

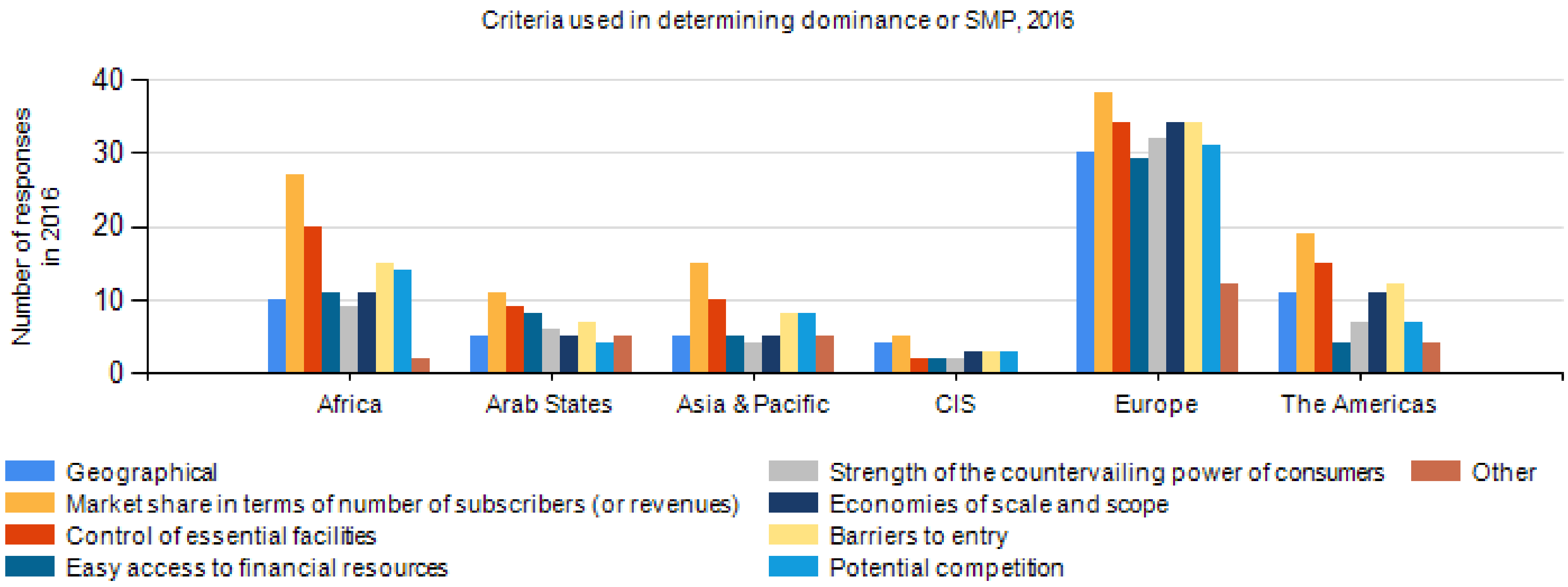
The commonly-used remedies can be broadly categorised as:

- access obligations (including interconnection and unbundling)
- transparency obligations
- non-discrimination obligations
- separation (including accounting and other reporting requirements)
- price controls and cost accounting

These are generally wholesale-focused remedies and they derive from the EU's Access Directive.

3. Significant market power and the SSNIP test (10)

Criteria used in determining dominance or SMP, 2016



Source: ITU ICTEye, 2016 (Regulatory Survey)

3. Significant market power and the SSNIP test (11)

Case study on SMP and market share

Examine the following data from the mobile market in a Pacific Island

	2013	2014	2015	2016	2017	2018
Total traffic	18.9	40.5	108.5	193.9	267.6	326.8
Growth per annum		114%	168%	79%	38%	22%
Market share (minutes) - A	88.3%	72.6%	59.9%	41%	36.8%	28.8%
Market share (minutes) - B	11.7%	27.4%	40.1%	59%	73.2%	71.2%
Market share (revenue) - A	90.1%	74.1%	59.1%	39.5%	22.9%	26.4%
Market share (revenue) - B	9.9%	25.9%	40.9%	60.5%	77.1%	73.6%

- Which mobile operator, if any, was dominant in 2013, 2016 and 2018?
- Which is the better guide on market dominance – market share based on traffic, or market share based on revenues? Why?
- What does this real-life example say about regulating for SMP based on market share alone?

4. OTT and market definition in telecommunications

4. OTT and market definition in telecommunications (1)

Key question: are OTT services *close substitutes* for telco services?

MobiCom — Close substitutes? — skype

SMS — Close substitutes? — WhatsApp

4. OTT and market definition in telecommunications (2)

The Australian Competition and Consumer Commission Communications Sector Market Study, April 2018

- The increased usage of OTT services, particularly data intensive content services (notably video content) **is driving rapid growth in data consumption**, which must be accommodated by broadband service providers

- **OTT services often compete with or displace the usage of these providers' own communications (voice and text) and content services**

- The **countervailing power of key OTT service providers** may also reduce the potential for broadband service providers to discriminate against these services

4. OTT and market definition in telecommunications (3)

The Australian Competition and Consumer Commission Communications Sector Market Study, April 2018

- The developments and trends we have observed suggest that **competition for the provision of OTT content services generally appears to be vigorous and dynamic.** In many areas, we are seeing new entry from international and local players, continued competitive responses and innovation of services, which means that consumers are benefting from greater choice
- Although OTT services do not directly contribute to the costs of additional network investment, **the availability of OTT services increases the value proposition of broadband services, which in turn is likely to drive further take-up and adoption of higher value plans.** It would appear that, currently, this complementarity between broadband access and OTT services is supporting continued investment by broadband service providers in their networks.

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4. OTT and market definition in telecommunications (4)

The Australian Competition and Consumer Commission Communications Sector Market Study, April 2018

- **Finding:** Over-the-top services continue to grow in popularity and are necessitating continued investment in capacity by network operators and service providers arising from the broad complementarity between these services and broadband access. However, **minor risks remain, including the potential for bottlenecks to emerge if capacity investment is not sufficient throughout the supply chain, and the potential for discriminatory traffic management to occur.**

4. OTT and market definition in telecommunications (5)

The Australian Competition and Consumer Commission Communications Sector Market Study, April 2018

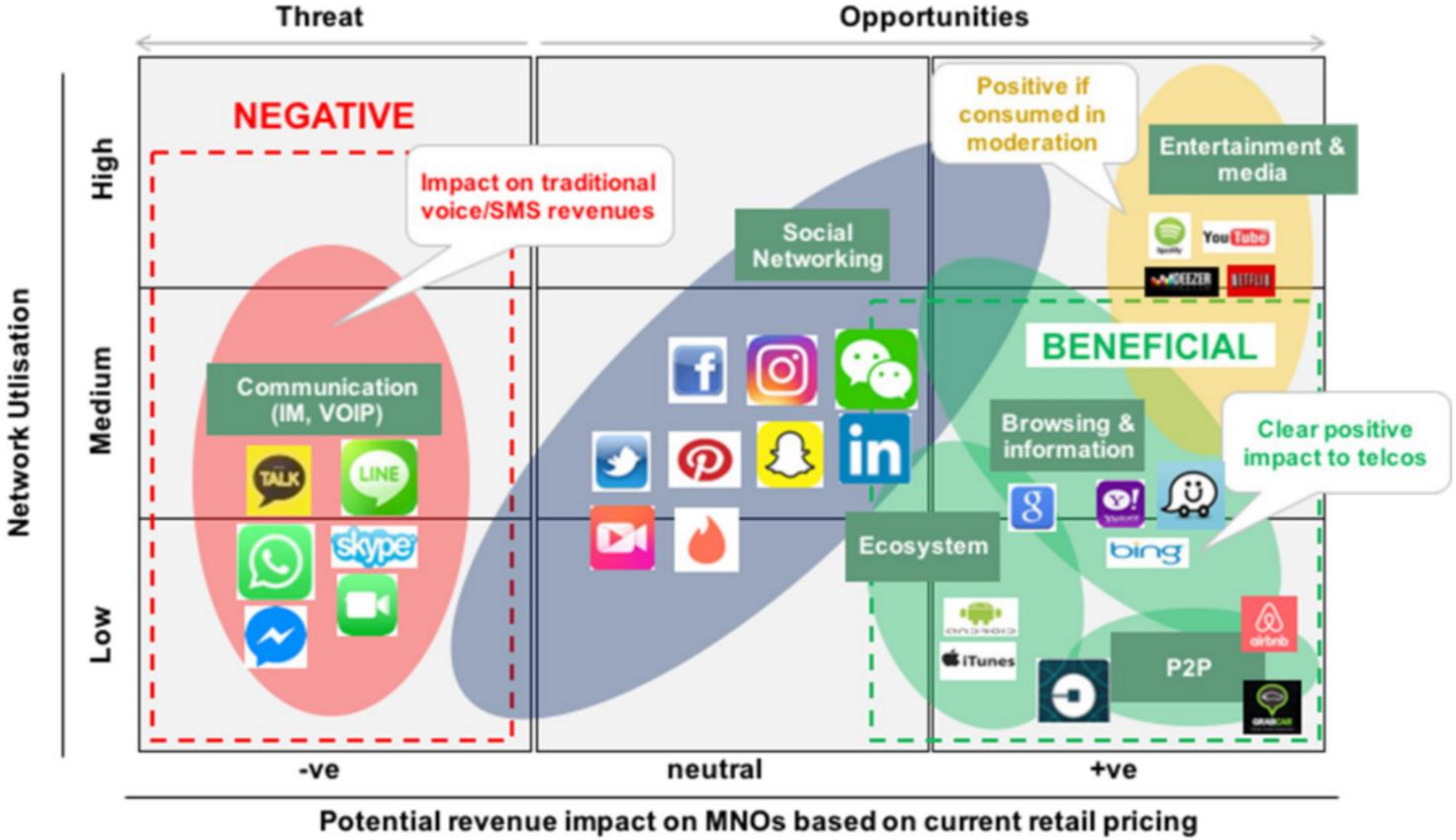
Digital Platforms Inquiry

On 4 December 2017, following a direction from the Federal Government, we commenced an Inquiry into digital platforms, such as Google and Facebook. The Inquiry is examining the effect that digital search engines, social media platforms and other digital content aggregation platforms are having on competition in media and advertising services markets. The Inquiry is in response to growing concerns that digital platforms are affecting traditional media's ability to fund the development of content. It will also consider the impact of digital platforms on the choice and quality of news and content being produced.

A preliminary report is to be submitted to the Treasurer by early December 2018 with a Final Report due by early June 2019.

4. OTT and market definition in telecommunications (5)

OTTs: threats and opportunities



OTT and market definition in telecommunications (6)

OTT regulatory issues: communications and ‘near communications’ issues

- Facilitate the availability, accessibility and affordability of ICT services – ***Long Term Interests of End Users***
- Consumer protection
- Embrace market developments and digital opportunities
- Create a competitive and enabling policy environment
- Promote investment and innovation
- Policy need balance innovation, investment and competition

- Loss of Privacy
- Data Security
- Social/Political Engineering
- Data Portability
- Loss of Control of Personal Data/Privacy

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