

Overview: Introduction to the competition law framework and reminder of key economic concepts

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Issues Covered

- ❖ The Law
 - Key areas, institutions and procedures of competition law
 - Type 1/type 2 errors
- ❖ The (industrial) economics
 - Demand and consumer behaviour
 - Supply and supplier behaviour
 - Elasticities
 - Spectrum from pure monopoly to perfect competition
 - Identifying the nature of competition in practice
- ❖ Objectives (Why intervene?)
 - Consumer surplus/welfare
 - Why care about competition?
 - Static v dynamic competition

Materials and what to read

Best general reference is:

- ❖ Massimo Motta, Competition Policy, CUP

There are a few old papers and reports which you may find interesting:

- ❖ Essays in Competition Policy – a collection of essays by Paul Geroski [former chairman of the CC]
- ❖ Vickers, J. (1985) Strategic Competition Among the Few. Oxford Review of Economic Policy, 1(3)



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Key areas of competition law

Primary:

- ❖ One set of rules restricting what a single powerful firm may do
- ❖ One set of rules restricting what a group of firms may do

Secondary: Reaching the bits which other parts cannot

- ❖ Mergers
- ❖ Joint-dominance
- ❖ Market investigations [ad-hoc regulation]



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Exclusionary vs Exploitative Behaviour

A distinction is sometimes made between

- ❖ Exclusionary behaviour
 - Aimed at protecting, enhancing or creating market power [possible under both Art 101 and 102 TFEU]
 - Gaining an advantage through raising rivals' costs
 - Very similar to what in the US is referred to as monopolisation
- ❖ Exploitative behaviour
 - Aimed as using existing power to extract rent [could be profit but could be "taking it easy" or other firm objective]

Type 1/type 2 errors

Definition:

- ❖ Type 1 error – false positive: reject the null hypothesis when it is true
- ❖ Type 2 error – false negative: accept the null hypothesis when it is false
 - Example: null is that merger is harmless; type 1 error would be to block a harmless merger; type 2 is to clear a harmful merger

Why does it matter?

- ❖ Illustration with tacit collusion
 - Parallel pricing could be competition or collusion. Chance for error high. Random chance of fine even if good: "If you have to do the time, do the crime"

If in doubt [e.g. economic theory of harm underdeveloped]

- ❖ Intervene or step back?
 - Are markets largely self-correcting [US], "first do little harm"
 - If entry unlikely to make harm temporary, then intervene first
 - [do you believe in industrial policy and picking winners?]

Key institutions

- ❖ Generalist enforcer
 - CMA; DgComp; FTC; DoJ
 - Administrative or court based
 - Appeal to specialist tribunal, e.g. CAT
- ❖ Specialist enforcer
 - Sector regulators
 - Appeal to ? UK: CMA or CAT
- ❖ Private enforcer
 - Firms; consumers; representative bodies
 - Venue: CAT or high Court
 - Appeal to Appeals Court
- ❖ Specialist vs generalist [concurrency?]
- ❖ Choice of court for private enforcement [forum shopping?]

Key procedures and timelines

- ❖ Chapter 1 & 2 [or EU equivalent Articles 101 and 102 TFEU]:
 - Triggered by an action with an associated theory of harm
 - No explicit time line
 - Possibility of negotiated settlements
- ❖ Mergers and Market enquiries:
 - Two stages to analysis; a “quick look” phase 1 followed where necessary by more detailed phase 2.
 - Strict time table for both stages
 - Different standard of proof: reasonable likelihood vs balance of probabilities
 - Possibility of [one-sided] settlements

Key components of a standard competition case

- ❖ Identifying the relevant parties and products and relationships between them (eg as trading partners)
- ❖ Defining the market (either tightly – in abuse cases) or loosely (in mergers/cartel cases)
- ❖ Identifying one or more theories of harm, and approaches to testing them. This is likely to include (amongst other things):
 - Assessing the key parameters of competition in the market
 - Assessing the market power of the party/parties
 - Examination of barriers to entry/expansion
 - Consideration of buyer power
- ❖ Identifying possible efficiencies, and approaches to testing them
- ❖ Possibly: consideration of remedies, fines and damages

A quick reminder of some key
(industrial) economics concepts,
models and results

Demand and consumer behaviour

Simplest case: unit demand; reservation prices

- ❖ Stack these from highest to lowest reservation price to get market demand curve
- ❖ Reservation price depends on: preferences; alternatives; income
- ❖ Easy to extend to each wanting more than one unit

Form utility function from preferences; maximise subject budget constraint

- ❖ Gives individual demand function [how much they would buy given prices and income]
- ❖ Aggregate across consumers to get market demand
- ❖ Demand function where people want a bit of everything [candy store?]

Characteristics approach

- ❖ Do not want good per se, but its constituent parts;
- ❖ Chose combination which gives most of what consumer want
- ❖ More natural demand structure to introduce new products

Behavioural consumers

- ❖ Above assumes consumers know their own preferences and chose the price/quality combination which given their income and their information gives then the greater satisfaction
- ❖ What if consumers deviate from this rational ideal?
- ❖ What are we allowed to assume about consumers?
 - “Exogenous standard” or “take them as you find them”
 - Difference between competition law and consumer law?

Supply and supplier behaviour

Firms are assumed to choose production process, output and prices to maximise their profits given prices and technology [and possibly the behaviour of others]

- ❖ Short run [technology fixed]: produce where the cost of producing one more unit equals the extra revenue that unit will generate
- ❖ If at that output level profits are negative, stop producing [participation constraint]
- ❖ Long run: adapt technology and then do the same
- ❖ With many firms, taking price as given, we can generate a supply curve by, for each market price, adding up the units supplied
- ❖ With one firm, the marginal cost curve becomes the supply curve
- ❖ AND REMEMBER COSTS ARE OPPORTUNITY COSTS

Market equilibrium

The price at which demand = supply

- ❖ Where market demand and aggregate supply cross

Elasticities

Measuring the sensitivity of demand

- ❖ Why not slope?

Reminder of the definition

- ❖
$$\varepsilon_d = \frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q} = \frac{\% \text{ change in demand}}{\% \text{ change in price}}$$

From monopoly to perfect competition

- ❖ Monopoly
- ❖ Duopoly/oligopoly
 - Bertrand
 - Cournot
- ❖ Monopolistic competition
- ❖ Contestable markets
- ❖ Perfect competition

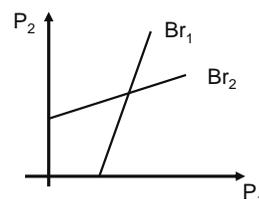
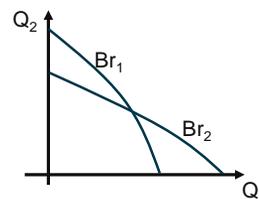
Monopoly

- ❖ Strictly speaking only one firm, but sometimes loose discussion allow for a fringe of smaller firms which basically supply at their capacity
- ❖ Famous link with elasticity [inverse elasticity rule]
 - $\frac{P-mc}{P} = -\frac{1}{\varepsilon_d}$
 - The less price sensitive consumers are, the higher the price-cost margin
- ❖ Tendency to focus on pricing behaviour, but innovation and advertising choice also relevant
- ❖ Key insights:
 - With uniform price, P is above mc = dead-weight-loss
 - If perfect price discrimination, price equal marginal cost for the marginal consumer = no DWL but all surplus to firm
 - If durable goods, possible that P = mc; no DWL
 - Strong incentive to avoid cannibalisation of existing versions

Duopoly/oligopoly

With only a few firms in the markets, strategic interaction comes to the fore

- ❖ Strategic variable Price – Bertrand model
- ❖ Strategic variable Output – Cournot model
 - Both come in homogeneous goods and differentiated goods variants
 - Using the elasticity of the residual demand function, the inverse elasticity rule still hold



Duopoly/oligopoly - Key insights

- ❖ Unless goods homogeneous, $P > mc$ [with homogeneous goods, elasticity is infinite]
- ❖ Closer substitutes imply more intense competition and lower profits [matters especially when considering entry incentives]
- ❖ Price-cost margin is falling in the number of firms in industry – and we can include monopoly in that
- ❖ Competition in both advertising and innovation may be inefficiently aggressive, distortion may exceed monopoly
- ❖ Effect of price-discrimination depends largely on whether firms agree on which sub-market is the most attractive
- ❖ Cournot in merger cases has some odd properties: merger simply kill off a competitor [then: why are parties willing to merge?]

Monopolistic competition

Classic non-strategic model where firms set prices and where locally they are monopolists. Usually combined with a free entry condition

- ❖ Used a lot in theory – easier to combine with general equilibrium theory
- ❖ Key insights
 - Can have excessive entry

Contestable markets

Major innovation [ca. 1980]

- ❖ Hugely influential in the privatisation/ deregulation debates
- ❖ Key assumptions:
 - Free entry and costless exit [+ immediate consumer reaction]
- ❖ Key insights
 - If equilibrium exist, $P = ac$, if one incumbent; $P = mc$ if two or more incumbent firms. Efficient outcome.
 - Big if and model very sensitive to assumptions
 - Strong reminder that entry is important
 - Strong reminder that market structure is not necessarily a great guide to market power
 - Better basis for welfare analysis and counterfactual than perfect competition [allows broader set of market structures]

Perfect competition

First textbook model. Large number of firms and consumers solely guided by [relative] prices. Total anonymity

- ❖ Equilibrium exist with $P = MC$
- If all markets perfectly competitive
- ❖ 1st welfare theorem: Equilibrium Pareto efficient
- ❖ 2nd welfare theorem: All Pareto efficient equilibria can be achieved through initial redistribution of resources
- ❖ Key insights
 - Perfect competition lead to efficient outcomes
 - We can separate efficiency and distribution

The world up-side down

Monopsony, oligopsony, buyer power

- ❖ Above assumed atomistic [non-strategic] buyers
 - Does that fit the purchase of prison places from private prisons?
 - More generally, is a procurement auction likely to yield benefits if buyer does not have power?
- ❖ Does it matter whether the buyer is the consumer or the customer?

A few words on the make-or-buy decision

The ultimate “make” solution: Ford’s Rouge factory in Dearborn developed between 1917 and 1928

- ❖ Henry Ford’s ultimate goal was to achieve total self-sufficiency by owning, operating and coordinating all the resources needed to produce complete automobiles
- ❖ Modern manufacturing, where most things are contracted out, is the other extreme
- ❖ Between these are complex interactions between different levels in the productive process governed by more or less complete contracts

Models of bargaining

One problem is to describe the process of how firms reach a vertical agreement

- ❖ One sided bargaining power [take-it-or-leave-it (TIOLI)]
- ❖ Sequential bargaining models
 - Or simple Nash bargaining [with some measure of relative bargaining power?]
- ❖ What is one firm bargain with several other firms who are horizontal rivals? [e.g. one wholesaler, two retailers]
 - What is assumed known in one bargain about what is happening in the other?

Objective(s) of competition law

Consumer surplus/welfare

Simple marginal reasoning:

- ❖ A - Consumer willingness to pay for additional unit
- ❖ B – marginal cost of producing that unit
- ❖ $(A - B) =$ gain from trade
 - IFF $A - B > 0$, trade should happen and institutions should aim to support this
- ❖ P – price which divided the G-f-T between consumer and firm
 - IF trade happens and either $P < B$ or $P > A$, then possible case for intervention
 - + Duress?
 - + Behavioural biases
 - What if $B < P < A$?



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Why care about competition?

Fundamentally we care about realising G-f-T.

- ❖ Recall that competition either real or potential led to $P = mc$.
 - ❖ Also recall 1st and 2nd welfare theorem
- More intense competition usually means that P is close to mc
- ❖ BUT there are cases where competition can be too intense
 - Excessive advertising
 - Too fast innovation [too much cannibalisation]
 - Too much entry
 - Too low prices [environmental harm] – too much volume [bank lending?]
 - ❖ How do we protect the public interest in these cases?



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Static v dynamic competition

Tension between efficiency today [$P=mc$] and investments for efficiency tomorrow [lower mc or better products]

- ❖ Significant investment in R&D and innovation from retained earnings
- ❖ Not surprising that the rate of innovation is typically found to be higher in oligopoly than either monopoly or perfect competition
- ❖ Challenging to allow for this in competition assessments
 - Excuse: “The current abuse is essential to generate the surplus to pay for R&D”
 - Motivates existence of patents and other IP rights

Conclusion/take-away point

Apart from a quick reminder, really a warning:

- ❖ Lack of robust general theory where we need it for antitrust and merger analysis
- ❖ Many disparate models – a toolkit
 - Skill is to know which model from the toolkit can give insights
 - Even bigger skill is to explain to the CAT that an apparently unrealistic model can yield critical insight

That is what makes the area fun for researchers and frustrating for practitioners!