Article 102: Exclusionary Practices

An overview of the economics of Predation and the Google Wars

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1

Overview

Introduction to 102 and dominance

- How to decide whether a firm is dominant?
- What is the role of market definition and shares?
- How does one construct a "theory of harm" to determine whether a conduct is abusive?

Predation

- How to apply the "incentive, ability, effect" paradigm in this case
- The role of price cost tests
- The potential for false negatives and false positives

The Google Wars

- Theories of harm based on leveraging/dynamic leveraging
- What challenges do digital industries raise for assessing market definition and dominance?
- Key issues in the Android and Shopping cases

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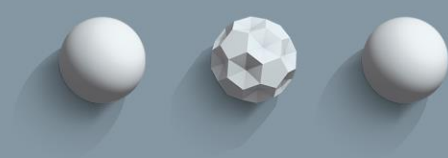
2

I. Introduction to 102 and dominance



The role of economics in abuse of dominance cases

Economic analysis can help:

1. Define the **relevant market** and establish/disprove **dominance**
2. Define/assess potential **theories of harm**
3. Evidence the key “limbs” of:
   - **Incentive**
   - **Ability**
   - **Effect**
   - **Objective justification**
4. Design appropriate remedies
5. Apply **“benchmark”** tests to assess compliance with competition law
6. Compute **damages** in subsequent litigation

Overview of Exclusionary practices in 102

Article 102

- Prevents abuse of dominant position
- Abuse can be exploitative or exclusionary

Refusal to Deal

- Firm refuses to supply downstream rival with input
- Firm refuses to supply upstream rival with distribution

Margin Squeeze

- Vertically integrated firm sets upstream and downstream price such that rivals can't compete

Predation

- Firm prices below cost to exclude a rival

Bundling/Tying

- Firm bundles/ties a 'must have' product with a competitive product to exclude rival in related market

Exclusivity/loyalty rebates

- Firm makes purchase/distribution conditional on not dealing with competitors
- Firm provides discounts (either incremental or retrospective) on additional purchases to exclude rivals

Dominance

In Article 102 EC Prioritisation Guidelines, dominance is:

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

Key element is that undertaking enjoys substantial market power over a period of time. (Para 10)

- Danger of using high profits as a signal –reward for past innovation
- Can't simply be transient – thus increasing weight put on barriers to entry
- Barriers to entry can take variety of forms: sunk cost investments, scale economies, network effects etc.

How to measure market power?

Three stage process:

- Define the market (product and geographic)
- Calculate market shares or other measures of concentration and benchmark
- Check against sources of market power to establish if there are any reasons why shares over/under-state degree of market power (entry, differentiation, expansion, supply side substitution, bidding markets).

Market definition not an end in itself rather a technique to understand competitive constraints

- Don't be exhaustive if obviously not going to be useful
- In practice some factors may be better treated in assessment of the substantive issue (e.g. competitive effects of a merger)
- Need to be aware of the cellophane fallacy

Will see later how digital markets raise particular challenges for assessing market definition and dominance

Using market shares to assess dominance

Market shares are just a first step, but the courts provide guidance on "how high is high":

- Above 70% - Strong presumption - "In themselves" evidence of dominant position (*TetraPak/Alfa-Laval, Hoffmann-La Roche, Hilti*).
- Above 50% - Rebuttable presumption of dominance (i.e presume in absence of countervailing indications) *AKZO*.
- Above 40% - Not conclusive evidence, needs additional evidence (*Hoffmann-LaRoche*)
- Below 40% - Have generally not been found dominant barring other supporting factors.
- Below 25% dominance is unlikely.

Various ways to skin a cat and need to consider what measure is most informative: Value versus quantity? Capacity shares versus actual? Time period versus static?

Barriers to entry

Timely constraint?

- “For expansion or entry to be considered timely, it must be sufficiently swift to deter or defeat the exercise of substantial market power.”

Sufficient constraint?

- “For expansion or entry to be sufficient, it cannot be simply small-scale entry, for example into some market niche, but must be of such a magnitude as to be able to deter any attempt to increase prices by the putatively dominant undertaking in the relevant market.” 102 Prioritisation Guidelines

Use of natural experiments?

- What happened when a firm entered?

Constructing a theory of harm

Suppose dominance is established. How do we determine whether a conduct is abusive? **Need a theory of harm**

Ability

- *Does the dominant firm have the ability to succeed in foreclosing the rival?*

Incentive

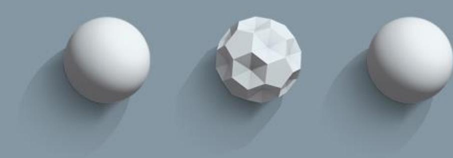
- *Does the dominant firm have the incentive to engage in the practice (all the practices incur a short term sacrifice for exclusionary gains)*
- *As we shall see this is not as obvious as it first seems…*

Effect

- *Will exit of rival/foreclosure generate a significant detrimental effect on customers/consumers?*
- *Harm to competitors not the same as harm to competition. Underlined by recent Intel judgment*

Other explanations: as we shall see, potentially abusive conduct can have alternative pro-competitive explanations. Need to distinguish between pro and anticompetitive explanations

II. Predation



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Predation

Standard definition:

"… a dominant undertaking engages in predatory conduct by deliberately incurring losses or foregoing profits in the short term, so as to foreclose or be likely to foreclose one or more of its actual or potential competitors with a view to strengthening or maintaining its market power, thereby causing consumer harm".

Predation distinguished from competitive behaviour as only rational because of recoupment after rival's exit

1. Sacrifice. Price at low/below cost levels → **2. Exclusion.** Rivals are marginalised or made to exit → **3. Recoupment.** Prices raised above competitive level. Consumer harm

Theory of harm is pretty clear and predation is one of the oldest concepts in competition law, but:

- Actually quite hard to rationalise (why can't rivals "weather the storm")?
- False positives are extremely dangerous: don't want to inadvertently soften competition
- Response has been cost-based rules to define "safe harbours"
- But, are these appropriate from an economic perspective?

Is predation irrational?

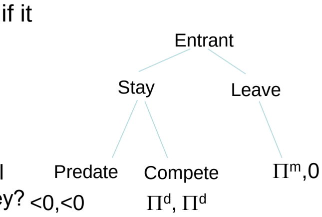
"Remember, treats are not possible without the credible threat of tricks."

Predation ToH is intuitive, but actually quite hard to make "stick" theoretically:

- Predation hurts predator (A) as well as prey (B)
- Predation only profitable if A can force exit of B
- A can't predate indefinitely – loses money
- If B can hold out, then A will stop
- A knows this, and therefore will never predate if it believes B will hold out
- Threat to predate will not be believed by B

Therefore predation is not possible! Most obvious "fixes" to this logic run into trouble:

- **Deep pockets.** Incumbent may have more financial resources, but why can't targeted firm borrow money?
- **Reputation.** Selten's "chain store paradox": *how would this game look if there were 100 markets?*



How to square the rationality circle

Imperfect capital markets

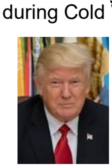
- "Deep pockets" can explain predation provided rivals can't get access to finance
- One explanation is imperfect financial markets
- If investors don't know a predation strategy is going on they may not want to "back a loser": giving dominant firm incentive to predate

Uncertainty and signaling

- If firm A is very cost efficient rivals may not be able to profitably coexist
- A can use low prices to "signal strength" and induce rivals to leave the market
- High-cost incumbent mimics low cost incumbent to signal low profits and deter entry/persuade exit (Milgrom and Roberts 1982, Econometrica)

Reputation for "toughness"

- Selten's chain store paradox shows repeated interaction/multiple markets not enough
- But can resolve this if there is uncertainty around incumbent's attitude
- Small probability of "crazy" behaviour can break the paradox (Milgrom and Roberts, 1982b)
- Can be worth investing in 'crazy' reputation in order to reap benefits later
- Applications in other settings (e.g. "mad man" strategy during Cold War)


What should be the evidential bar?

How do you tell the difference between prices that are the result of strong competition and those that are designed to harm competition?

- If dominant firm reduces prices following entry, it could be an anti-competitive strategy or a competitive response
- Not sufficient to show harm to competitor: loss of market share also consistent with competition

Risk of false positives – don't want to chill incentives to lower price and we actually like failed predation!

> *"Ronald [Coase] said he had gotten tired of antitrust because when the prices went up the judges said it was monopoly, when the prices went down they said it was predatory pricing, and when they stayed the same they said it was tacit collusion."*

So what should be the evidential bar for distinguishing predation from competition?

Screen 1: is recoupment possible/likely?

If market structure does not allow recoupment then predation unlikely to be a concern:

- If cannot recoup initial sacrifice post market exit then cannot be rational to engage in predation
- Would lose money today with no possible benefit
- Suggests assessing ability to recoup a useful first "screen"

Relevant factors:

- Need barriers to (re-)entry (does production require sunk investments or specific expertise? Are there switching costs or scale/network effects?
- Has entry occurred in the recent past?
- In network industries, can and do users multi-home (if so, significantly dilutes impact of network effects)?

Dominance as a screen?

- Restricting assessment to dominant firms makes it more likely these conditions are met
- Some risk of "false negatives" but likely to be worth it
- But, showing dominance is not the same as showing ability to recoup

Screen 2: cost-based tests

Economic theory does not predict the level of predatory prices. A predatory price is just one that involves a short-run profit sacrifice (i.e. is predicated on future recoupment)

Is there a case for cost-based benchmarks? But legal precedent tends to use cost-based tests. Why?

- Avoids danger of competition authorities second guessing commercial decisions (can we know what is the true profit maximising price)?
- Provides a degree of legal certainty (although still plenty to debate)
- Below cost pricing seems a reasonable indication of both profit sacrifice and foreclosure risk

BUT

- What measure of cost?
- Below cost pricing neither necessary nor sufficient for anticompetitive foreclosure

Implementing a cost-based test

Some definitions:

- *Fixed costs* – costs that are the same whatever level of output is produced
- *Variable costs* – costs which vary depending on the level of output
- *Marginal costs* –the costs of producing an extra unit of output
- *Avoidable costs* – the costs avoided by not producing a discrete amount of (extra) output, include both fixed and variable costs
- *Long run incremental costs* - all the (variable and fixed) costs that a company incurs to produce a particular product

Profit maximising firms will typically expect to cover marginal cost:

- Ensures some contribution towards profits (sales above MC add to the bottom line)
- If demand falls, still profitable to continue to operate as long as cover marginal costs
- But, there are exceptions…

Price/Cost Tests: case law

US Approach. Areeda Turner (1974) suggested price deemed predatory if price less than marginal cost P< MC

- Proxy MC with average variable cost (AVC) as easier to measure.

EU Approach. In AKZO Chemie the CJEU held that in relation to pricing below average variable cost was predatory in that:

- *"a dominant undertaking has no interest in applying such prices except that of eliminating competitors so as to enable it subsequently to raises its price by taking advantage of its monopolistic position, since each sale generates a loss".*
- Held that where firm prices above average variable costs but below average total costs (ATC>P>AVC) firm is covering all variable costs and some fixed costs. In such cases there is a need to show predatory intent
- But this means that you expect a firm behaving competitively to recover its fixed sunk costs which is rather stringent

Multi-product firms

With one product AVC is the same as AAC

With multiple products it is more complex

- What is the right cost test for producing leather, given you already make beef? The cost of raising the cow is incurred in any event
- AAC are lower than AVC – you would not avoid the costs of tending a cow even if you stopped producing leather

For multiple products AVC becomes AAC

- Similarly ATC becomes LRIC
- Defendants benefit from using AAC as reduces costs associated with activity and makes predation test easier to satisfy

Commission guidance on price cost tests

Pricing below Average Avoidable Costs P<AAC

- Pricing below AAC is indication of sacrifice as the firm is making losses merely by the production of that output

If LRAIC>P>AAC need to show intent

- Failure to cover LRAIC indicates that the dominant undertaking is not recovering all the (attributable) fixed costs of producing the good or service in question and that an equally efficient competitor could be foreclosed from the market

Note: the further you are from a short run test (i.e. MC) the lower predictive power the test has in differentiating between competition and exclusion…

Screen 3: intent

Was the price cut targeted at the 'prey' – i.e. in order to minimise losses?

Did the 'predator' make a prior assessment of whether the price cut would be profitable? Did it care at all?

Did the 'predator' consciously continue to make losses when action could have been taken to reduce them?

Internal documents commenting on the strategy being pursued

Operating below cost need not imply predation

Two-sided markets:

- Adobe reader handed out for free with monetisation on writer side of the market
- Need to adjust predation tests to account for value they generate for the platform as a whole

Promotional justifications:

- **Loss leading.** Price milk below cost in order to get people in supermarkets
- **Clearances.** Stock may be sold below cost (e.g. if it is below cost)

Scale economies.

- Prices might be below cost today, but above anticipated future costs once scale achieved
- Traditionally considered that dominant firms will always be at scale
- But is this true (e.g. Amazon might be considered dominant, but would still say it is below efficient scale)?

Unanticipated (costs and demand) shocks

Meeting competition defence?

III. Tying/bundling, leveraging and the Google Wars

Extending market power

Bulk of tech cases have involved accusation of **“extending”** market power from a **home market** where dominance is established into a **target market** where it is not. Broadly-speaking, theories of harm can be based on:

- **Leveraging:** use dominance in home market to obtain dominance in target market (e.g. Microsoft Media Player)
- **Preserving market power (dynamic leveraging):** use dominance in home market to undermine firms in target market who might pose a future threat (e.g. Microsoft servers). Classic references include Choi and Stefandis 2003; Carlton and Waldman (2002)

Logic may seem obvious, but economic theory suggests things are not as simple as they seem

A coherent theory of harm?

Need a proper theoretical analysis to see if accusations “hang together”:

- Leveraging cases involve **immediate benefits** and **long-term harm**
- Need to trade these off: e.g. consumers get internet explorer for free/less hassle of installation; but worse off if behaviour forecloses rivals
- Accepted that **“joined-up” behaviour across markets can generate efficiencies.** Reflected in policy on, for example, non-horizontal mergers
- This implies that it **may be difficult to “unpick” pro-competitive efficiencies from anticompetitive motivations**
- The famous **“one monopoly profit theorem”** shows that it is not a foregone conclusion that a monopolist will try to “conquer” other markets

There are circumstances where a dominant firm will extend its market power, but need a coherent and well-evidenced theory of harm

Case	Abuse	What are the home/target markets?	Anticompetitive motivation
Microsoft Media Player	Bundling Windows Media Player with Windows	**Home:** Desktop OS (Windows) **Target:** Media players	Foreclose rival media players; extend dominance
Microsoft server	Refusal to supply interoperability information to producers of server software	**Home:** Desktop OS **Target:** Server OS	Prevent server OS from evolving into threat to MS desktop OS monopoly
Google vs "verticals": shopping/maps	"Favouring" of Google's own "vertical" service in search results page	**Home:** General search (Google.com) **Target:** shopping sites/comparison	Foreclose rival verticals; increase advertising revenue
Google Android	Requiring OEMs to set Google Search as the default if they install Google Play app store	**Home:** Mobile OS? App stores? *Android* App stores? **Target:** Search	Establish dominance in other apps/prevent rival search engines from entering via "payments for default status"
Facebook	Excessive data collection? Other practices?	Cases so far don't seem to rely on "extension" of market power. Potentially future cases involving advertising?	Still developing…

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27

A. Market definition and dominance in the tech sector

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Market definition and dominance in tech

How should markets be defined?

- In terms of ***substitution patterns***: how constrained is one type of product/service by the availability of others?
- Not in terms of functionality (unless this affects substitutability)
- Normally look at responsiveness to **price** increases (although, in 102 cases, need to be careful of **"cellophane fallacy"**)

Various economic techniques can shed light on this question:

- **Survey evidence:** how many people say they would buy a banana instead if apples were unavailable/more expensive?
- **Natural experiments:** did people buy more apples when disease killed half the banana crop?
- **Econometric analysis:** how does demand for apples change as price of bananas change?

But, recent tech cases have features that make things more difficult

Issue 1: Android and "Indirect constraints"

Google only allows OEMs to install its app-store (Google Play) if they favour other Google apps. **Theory of harm requires Google Play to be dominant**

Google Play clearly the dominant *Android* app-store, but does it compete with non-Android app stores like Apple's?

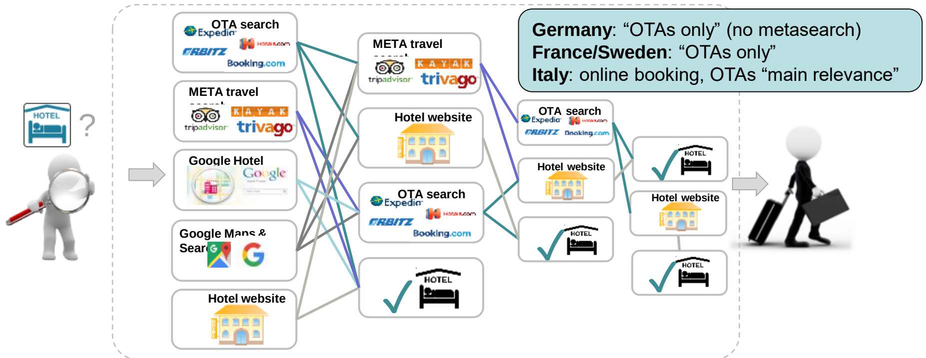
Question is one of **indirect constraints:** would increase in "price" of Google Play induce enough consumers to buy an iPhone instead?

Similar issues in other settings (e.g. would a monopolist servicer of Rolls Royce jet engines be able to raise prices/reduce service quality or would airlines buy engines from GE instead?)

Issue 2: OTAs and "zero prices"

Question: "Online travel agents" = *searching* + *comparing* + *booking on the same site*. Is this a *market?*

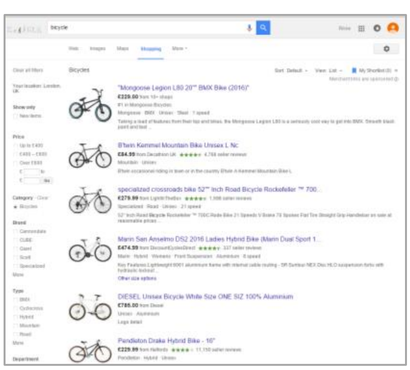
Answer: in principle need to consider how consumers can switch to replicating this functionality by using different combinations of sites



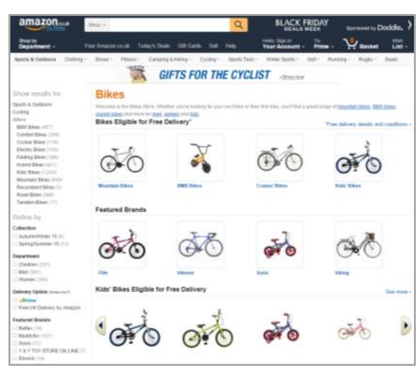
Alternative combinations increase elasticity of demand and therefore price setting on hotel side of the market

And what about shopping…?

Google shopping



Amazon shopping



…what about shopping?

Theory of harm: dominance in General Search leveraged into Vertical search

Premised on **"comparison shopping" being a separate market**

Is there a narrow market for **"comparison shopping"** worth monopolising, or a broader market for **"product search"** where Amazon/eBay etc. compete?

- **Narrow market:** foreclosure story more obvious: "leveraging dominance in General Search to drive online shoppers to its own Vertical, harming competition"
- **Broad market:** less clear cut: if "enough" customers would switch to Amazon (rather than Google itself) then "incentive and ability" to foreclose is less

How much competition does Google face in *product search?* Evidence (on both sides) not very dispositive – key is **how consumers search for the product, and constraints along "total stack" – including product *buying***

=> not enough from an economic perspective that "comparison shopping" is a distinct activity from "buying"

B: theory of harm in Android

Google's conduct

Android is an open-source product: OEMs (handset manufacturers) can install it for free

But, additional elements of Android, most notably the app store **Google Play** are not open source.

These additional elements are not available for download. They **have to be pre-installed** by the OEM

Google provides Google Play at zero price, but with conditions: OEMs must **pre-install** other Google apps (including search) and give them favourable positioning and **default status**

Similar to Microsoft's strategy in the Media Player and Browser cases

Theory of harm

Conduct

Google **ties "must have" products with its search application**, so that *Google Search* is

1. **Installed as default** on Android mobile devices
2. **Pre-installed with premium placement**
3. Sometimes **installed exclusively**

Impact

1. Allows Google to **leverage into mobile search**
2. **Increases barriers to entry and expansion** into mobile search
3. Results in **naked exclusion:** as competitors in search cannot achieve minimum viable scale

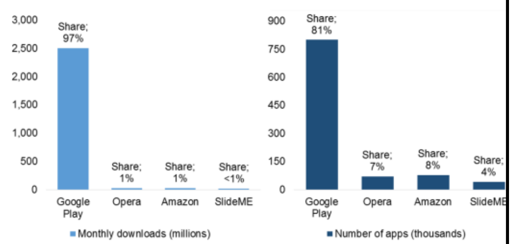
Android: assessing Ability and incentive

Question 1: Is Google Play important enough to OEMs to allow Google to extract valuable concessions?

Evidence in this regard:

- Installed by >95% of OEMs
- Rivals have fewer apps/developers
- Harder for consumers to switch to Android phones without GP (can't transfer existing apps)
- Consumers cannot install GP ex-post

Market share of Google Play



If GP "must have" for OEMs then it gives Google market power that can be leveraged in form of concessions that limit access for rivals

Android: Ability and Incentive

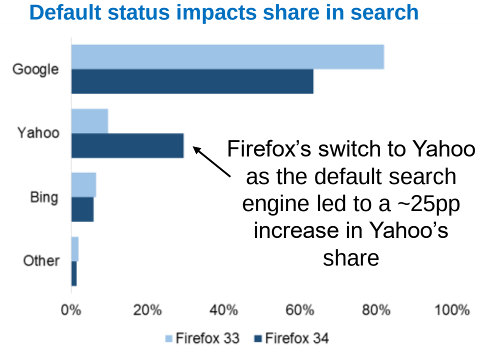
Question 2: does default status for Google Search have a foreclosing effect?

Importance of default status illustrated by:

- Impact of Yahoo purchase of default status in Firefox
- Research on "default bias" of consumers
- Fact Google is willing to pay $1bn for default status on iPhone

Why doesn't the one monopoly profit theorem apply? Choi shows OMPT breaks down in two-sided markets with zero price constraint

Default status impacts share in search



Google has incentive to prevent entry into search via "payments for default"

Effects on consumers and potential justifications

Anticompetitive Effect

Securing Google's dominant position in search has potential to:

- Increase prices for Search advertising
- Reduce quality of Google Search (e.g. more space given to paid ads/more collection of user data)
- Reduce incentive to innovate or improve search algorithms
- Dominance in search may reinforce other issues around preferencing etc.

Objective Justification

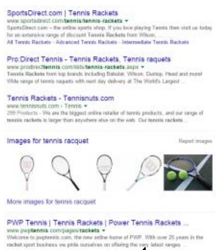
Ensure "cohesive" experience? A "Google experience" is necessary to compete with Apple's "walled garden"?

Prevents free-riding on Google's development of Android? Android needs to be monetised somehow and its approach is better than the alternatives?

C: Theories of harm in vertical search

Google’s conduct in vertical search

Price Comparison (EC case)



Mapping (Streetmap litigation)

Prominent link to Google shopping

Algorithm changes that pushed rival aggregators down the results

Introduction of “big map at top of the page”

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41

Theories of harm?

We know Google has received a €2.4bn fine, but, without decision, precise theory of harm unclear:

- Press release refers to “self favouritism” and “giving illegal advantage to own comparison shopping services” while proposed remedy focusses on “equal treatment”
- But, there is presumably a more formal economic underpinning to concerns
- Core mechanism one of leveraging existing market power in search to foreclose rivals?
- Literature does confirm that a rational search engine has an incentive to foreclose sites that compete with its own advertising even if doing so is welfare reducing

Raises the question of what is the standard for a finding of anticompetitive foreclosure?

- Do we need to show targeted price comparison sites as good/better than Google shopping?
- Or that they would have become so but for the conduct?
- Or is foreclosure of rivals enough?

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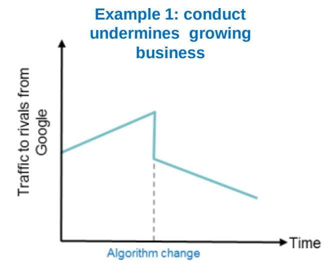
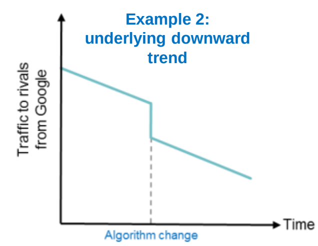
Assessing ability

Ability to foreclose rival vertical search providers clearer if:

- Search traffic is a large proportion of traffic
- Rival verticals unable to replicate traffic from other sources
- Conduct caused abrupt change in rivals' business performance
- Consumers biased towards "top links" and don't switch to alternative search engines even if results become less informative

Foreclosing effect less clear if rivals on downward trend already





Assessing incentive

Google benefits if more traffic goes through its vertical search rather than rivals' (particularly true in shopping where each "click" earns revenue)

Doesn't rely on separate markets: even if Google is in same "product search" market as price comparison sites it still stands to benefit from diverting traffic to its own service

Key questions:

- Did behaviour increase traffic to Google's service?
- Can Google undermine rivals in ways that are not noticeable/irritating to consumers?
- If not, do consumers refine their searches/switch to rival search engines if they don't find what they're looking for? Is this effect big enough to make a "favouring" strategy self defeating?

Plausible that Google has anticompetitive incentives, bigger question is whether actions are motivated by other pro-competitive reasons

Objective justification/consumer harm

Shopping

Harm: dynamic effect on innovation; increased market power vis-à-vis advertisers; consumers use inferior service

Objective justification:

- Most obvious justification for “downgrading” is that price comparison sites “low quality”
- But, then why promote an equivalent Google-branded service?

Mapping

Harm: dynamic effect on innovation; increased market power vis-à-vis advertisers; consumers use sub-optimal mapping services

Objective justification:

- Undeniable that the Google map thumbnail was a useful innovation
- Absence of downgrading makes behaviour less “targeted” at rivals
- But were there ways of achieving the benefits without favouring Google maps?

Objective justification and remedies

StreetMap judgment found that there was no evidence of foreclosure effect, but that, in any event, Google’s behaviour was justified

Instance where Google’s behaviour involved an innovation of benefit to consumers, but also brought with it risk of foreclosure

- Judgment found no **technically feasible alternative** that was less anticompetitive
- Implies that when there is a trade-off between pro- and anti-competitive effects, **need a realistic remedy to identify an abuse**
- Economics can play an important role (e.g. in designing auction-based solutions)
- But, also need to bear in mind technical issues (e.g. time lags in displaying data feeds from rival sites)

Breaking news: remedies in the shopping case

As of going to press, Google's proposed remedy seems to be:

- An auction for ad slots
- Both Google Shopping and rival price comparison sites participate
- GS operates as standalone entity and required to operate profitably

Google's SERP as of 28 September

So….

- *Why is the profitability restriction necessary?*
- What is the likely outcome of the auction process?
- What are the implications for profits of: i) Google; ii) rival PCSs?
- *Do you think this solves the competition problem?*

Which, if PCSs win in the auction might look like this:

London
Tel +44 (0)20 7664 3700
99 Bishopsgate
London EC2M 3XD
United Kingdom

Brussels
Tel +32 (0)2 627 1400
143 Avenue Louise
B-1050 Brussels
Belgium

Paris
Tel +33 (0)1 70 38 52 78
27 Avenue de l'Opéra
75001 Paris
France

Sydney
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