

# **Digital Markets: What Is Wrong with Them and What We Can Do about It**

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# Preview of the arguments

Markets do not always self-correct, because of scale and scope economies, switching costs, network externalities, behavioral biases...

- In such markets (e.g., *digital*), even if incumbents do not engage in any strategic (or unlawful) behaviour, there may be a tendency to persistent and growing market power
- Further, such markets are delicate: even small actions by dominant firms may exclude or marginalise rivals
- Public policies (antitrust, regulation, consumer protection laws) could promote market openness
- AAs should enforce competition law more forcefully, but regulatory and/or “market investigation” tools are also needed

# “Free entry” and self-correcting markets

- Economists usually teach that markets are self-correcting: market power implies high prices and profits  
→ new entry → lower prices, profits
- If this mechanism worked, limited role for Competition Law and enforcement
- Merging firms would also be disciplined by entry: there would be little room for merger control

# “Free” v. actual entry

Does this self-correcting mechanism really work?

- In some cases, it does
  - EU: Liberalisation in telecoms a success story
- In others, it does not
  - *Persistent dominance and increasing concentration in digital economies* (more on this below)
  - CMA ex post study on mergers: entry that CMA expected, very often never materialised
  - *NB*: small scale entry does not discipline market power!

→ *Not a matter of faith, but of market features*

# Obstacles to entry, I: economies of scale

Digital markets characterised by large fixed sunk costs and low marginal (and distribution) costs

- More difficult for entrants to challenge incumbents
- Example: huge investment for search engines (see the US Dept. of Justice's complaint towards Google)

Endogenous sunk costs industries:

“Race” for quality → higher fixed outlays (R&D, advertising) → entry barriers

- John Sutton's books show lower bound to concentration econometrically and with case studies (food and drink; high-intensity R&D industries)

# Importance of scale: DOJ v. Google

8. “[...] General search services, search advertising, and general search text advertising require complex algorithms that are constantly learning which organic results and ads best respond to user queries; the volume, variety, and velocity of data accelerates the automated learning of search and search advertising algorithms. When asked to name Google’s biggest strength in search, Google’s former CEO explained: “Scale is the key. We just have so much scale in terms of the data we can bring to bear.””
36. “The additional data from scale allows improved automated learning for algorithms to deliver more relevant results, particularly on “fresh” queries (queries seeking recent information), location-based queries (queries asking about something in the searcher’s vicinity), and “long-tail” queries (queries used infrequently).”
22. “Google’s search index contains hundreds of billions of webpages and is well over 100,000,000 gigabytes in size. Developing a general search index of this scale, as well as viable search algorithms, would require an upfront investment of billions of dollars. The costs for maintaining a scaled general search business can reach hundreds of millions of dollars a year.”

# Obstacles, II: demand externalities

*Network effects*: users' utility increases with the number of other users of the same product

- *Direct externalities*: e.g., social networks: Facebook, WhatsApp, Instagram, Twitter...
- *Indirect externalities*: software for OS (e.g., Microsoft); Google search, Waze benefit from more data (dynamic scale economies: machine learning improves if used on larger dataset → virtuous circle)
- [Firms may set zero prices for a long time to build base]

→ Incumbents are advantaged by installed base

- Policies fostering interoperability and multi-homing (e.g., no exclusivity) may soften the problem

# Remarks on network effects

- Miscoordination among users may contribute to further hinder entry
- Since coordination of consumers play crucial role, an incumbent may **manipulate expectations** so as to deter entry
- Network markets may be characterised by *tipping* (once a firm has reached a certain base, its position is unassailable): if potentially harmful practices, important to act before tipping is reached
- From the **welfare** point of view, there may be trade-offs.
  - Old consumers may be worse off if E takes the market (they may be 'stranded'), while the new ones are better off.
  - Since network effects are at play, consumers may benefit from stronger network effects if there is only one supplier. However, this may reduce innovation looking forward.

# Obstacles, III: two-sided externalities

*Two-sided externalities*: it is again a form of network effects, but *across groups* of users, e.g.:

More buyers in a platform → more sellers will list their products  
(Amazon marketplace; eBay)

More “eyeballs” on a website → more firms want to advertise there (Facebook, Google)

Often, effects mutually reinforcing (e.g., more users in a platform → more merchants want to list there → more revenue for the platform → quality improved → more users)

[Zero prices, or zero subscription fees, make sense in two-sided markets]

Again, two-sided externalities help incumbents with a strong installed base

# Obstacles, IV: switching costs

- Consumers tend not to change operator, or app, or O.S., due to switching (psychological, transactional, artificial) costs
  - iPhone users continue to buy iPhones; WhatsApp users do not want to lose their chats, groups etc...
  - One may continue to use *Booking.com* or *Expedia* because of additional points/benefits
  - See also below on default biases.
    - Evidence on liberalisation in EU: older, less educated people did not change utility provider despite much cheaper options
- Scope for regulatory intervention: the example of mobile number portability → *data portability*

# Obstacles, V: behavioural biases

Default bias (we do not download new apps but use pre-installed ones)

- e.g., Google pays billions (to OEMs, browser developers, wireless carriers) to have its search engine installed as preset default for mobile and computer search access points

Prominence (we don't go beyond first search results)

Attention to most salient features

Impatience, e.g., too much weight on immediate benefits (we don't cancel automatic renewals of subscriptions; we agree to give away privacy rights...)

- All these biases affect choices, mostly in favour of incumbents
- Policy may use 'nudges' (e.g., instead of one default browser, rotation among set of browsers)

# Digital markets

Digital industries characterised by all such features, to an unprecedented extent

The importance of data is also adding to incumbency's advantages

- Relying on users' data helps offer better products (e.g., Google search) – scale economies in machine learning
- Access to personalised data also allows to enter new markets or offer better services (e.g., a platform which tracks my behaviour in different domains can offer more targeted advertising...) – scope economies

Increasing market power of large digital platforms

- Possible tension between benefits (scale, network size) and costs (monopolistic conduct, possible abuses)

# What to do with digital markets

- When markets (e.g., digital markets) have such features, it takes little for dominant firms to take actions that hinder entry or marginalise smaller rivals. What to do?
- *I. Regulatory-like interventions*, to promote openness and contestability, e.g., data portability, interoperability, transparency, non-discrimination by dominant platforms
- *II. More antitrust enforcement*
- *III. Other policies*: serious enforcement of privacy rights laws, consumer protection, unfair trade laws...
- [Recent policy reports, e.g. Furman et al. (2019), Scott Morton et al. (2019), Crémer et al. (2019), make similar suggestions]

# Antitrust issues in digital markets

Big digital firms may use their market dominance to eliminate or marginalise (actual or potential) competitors: abusive practices

- Platforms often compete with rivals, while at the same time acting as gatekeepers, and may block/hinder access to rivals (*Google Shopping; Apple v. Spotify; Amazon Marketplace*)
- Tying or denial of interoperability may be used to exclude rivals (*Microsoft cases; Google Android*)
- Exclusive dealing to reinforce incumbency advantages (*Google AdSense*)

Merger control should also be reinforced:

- Acquisition of potential competitors (*Facebook / Whatsapp, / Instagram, Google / Waze*)
- Vertical mergers (*Facebook/GIPHY; Google/DoubleClick*)
- Non-horizontal mergers (*Google/Fitbit*)

# The Google Shopping case

- European Commission opened the investigation in 2010
- Infringement Decision and EUR 2.4 billion fine in 2017
- EU's General Court upheld the Decision on 10.11.2021
- Google 90+% of the general search market in several EU countries
- Conduct at issue (leverage through “self-preferencing”):
  - From 2008, Google's strategy to rely on its dominance in general internet search to push its comparison shopping service.
  - It has systematically given prominent placement to its own comparison shopping service, irrespective of its merits
  - It has demoted rival comparison shopping services in its search results. Rivals appear on average on page four or later of Google's search results.
  - G.'s own comparison shopping service is not subject to its generic search algorithms, including such demotions
  - Comparison shopping relies on traffic: more traffic → more clicks → more revenue → more retailers listing their products → more users...

# How it worked once



nike shoes



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About 351,000,000 results (0.84 seconds)

**Buy shoes with AAA**

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# How it works now



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€60.00

Nike Ufficiale

★★★★★ (85)

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Nike SB male Scarpe da maschietto Zoom Stefan Jano...

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# The Google Shopping page



price comparisons nike shoes



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Settings

Your location: Milan



SORT BY: DEFAULT ▾

MY SHORTLIST (0) ▾

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Show only

New items

Price

Up to €80

€80 – €150

Over €150

€ \_\_\_\_\_ to

€ \_\_\_\_\_

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Maxisport.com

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**€60.00** from 10+ shops

Scarpa da skateboard Nike SB Zoom Stefan Janoski - Ragazzi - Nero

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Scarpa Nike Air Force 1 - Ragazzi (35,5-40) - Bianco

★★★★★ (539)

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Scarpa Nike Air Force 1'07 - Uomo - Bianco

★★★★★ (1,815)

[More options](#)



**€60.00** from 4 shops

Scarpa NikeCourt Borough Low - Uomo - Bianco

★★★★★ (136)

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Scarpa da running Nike Air VaporMax Flyknit™Triple Noir™- Donna - Nero

★★★★★ (79)

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Nike Performance Mamba Instinct Scarpe da basket black/university ...

★★★★★ (41)

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Nike Performance AIR MAX Fullride TR 1.5 Scarpe da fitness black ...

★★★★★ (31)

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Nike Air Max 90 LE

★★★★★ (917)

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# Market Investigations (MIs) could fill a gap

Market features not caused by firms (but their practices may reinforce them), are not captured by competition law, but may cause markets not to function 'properly' (or to be at risk in the foreseeable future)

Conduct of firms difficult to address under current law or case-law, e.g.:

- Assessment of dominant firms' practices may be long, complex and uncertain;
- Appropriate remedies may be difficult to find
- Antitrust action would not solve a general problem, but just deal with one specific conduct/firm (but it may create a precedent);
- Strong information asymmetries (e.g., AAs cannot observe algorithmic bias and hence self-preferencing; big tech have huge datasets that they would not easily give to AAs ; and/or they may not have the technological ability to analyse)

→ MIs with power to impose remedies – like in the UK - might fill a gap and complement antitrust and regulation.

# EU's Digital Markets Act proposal (2020)

## Objectives:

Address market failures to ensure contestable and competitive digital markets for increased innovation and consumer choice

Address gatekeepers' unfair conduct

**For platforms designated as gatekeepers, imposes obligations, e.g.:**

- refrain from treating more favourably in ranking services and products offered by the gatekeeper itself
- allow end users to un-install any pre-installed software applications
- (side-loading) allow installation of 3rd-party applications or app-stores
- Prohibition of tying core platform services
- (data lakes) refrain from combining personal data across services
- Prohibition of parity clauses...

# Summary

Market features (such as scale and scope economies, switching costs, network externalities, behavioral biases) prevent digital markets from functioning well: even if incumbents do not engage in unlawful behaviour, there may be a tendency to persistent and growing market power

- In such markets, even ‘small’ actions by dominant firms may exclude or marginalise rivals → important for AAs to vigilate and intervene timely
- Merger control should also be strengthened
- Not only should AAs enforce competition law more forcefully, but also regulatory and/or “market investigation” tools may be needed
- Public policies (antitrust, regulatory, consumer protection) should promote market openness

# Annex

- Prominence matters
- DMA

**Table 19: Average click rate per rank of generic search results on the first Google general search results page in 2010**

Rank	Average click rate
1.	34.35%
2.	16.96%
3.	11.42%
4.	7.73%
5.	6.19%
6.	5.05%
7.	4.02%
8.	3.47%
9.	2.85%
10. (end of the first general search results page)	2.71%
11. (beginning of the second general search results page)	1.11%
12. and beyond	<1%

Note: this was 2010!

# EU's Digital Markets Act proposal (2020)

## **Problems:**

Unfair gatekeeper practices vis-à-vis business users

Weak contestability (or risk thereof) of platform markets

Regulatory fragmentation

## **Objectives:**

Address market failures to ensure contestable and competitive digital markets for increased innovation and consumer choice

Address gatekeepers' unfair conduct

Enhance coherence and legal certainty to preserve the internal market

# Core platform services: criteria

- Highly concentrated platform services;
- One or very few large digital platforms set the commercial conditions;
- Few large digital platforms act as gateways for business users to reach their consumers and vice-versa;
- Gatekeeper power often misused by means of unfair behaviour

➔ online intermediation services (incl. esp. marketplaces, app stores),  
online search engines  
operating systems  
cloud computing services  
video sharing platform services  
interpersonal electronic communication services  
social networking services  
advertising services

# Gatekeepers

A provider of a core platform service can be designated gatekeeper if:

- it has a significant impact on the internal market;
- it operates a core platform service which serves as an important gateway for business users to reach end users;
- it enjoys an entrenched and durable position in its operations or it is foreseeable that it will enjoy such a position in the near future (“emerging gatekeeper”)
- (a) Annual EEA turnover of EUR 6.5bn (last 3 FYs) OR average market capitalisation/equivalent fair market value of EUR 65bn (last FY) AND one CPS in at least 3 Member States
- (b) 45 million monthly active end users and 10,000 yearly active business users established in the Union in last FY
- (c) Where (b) is satisfied in each of the last 3 FY