

Digital Platforms: a policy and research agenda

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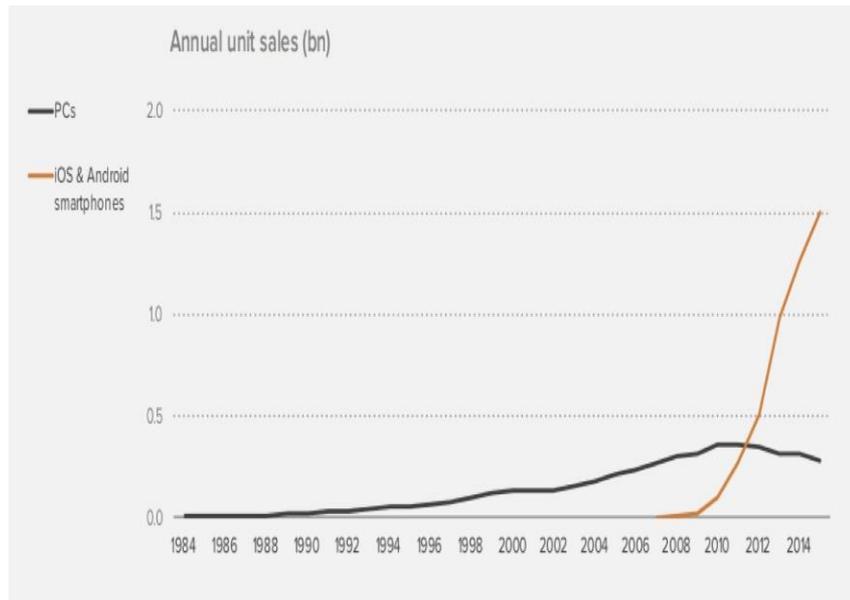
University of Manchester
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What are digital platforms?

- **Hybrid entities** using digital technology as an interface between users/consumers of a product or service and its suppliers.
 - co-ordinating a supply chain (traditional businesses);
 - connecting smaller suppliers to markets (intermediaries or wholesalers);
 - connecting end-users to each other (networks);
 - enabling individual suppliers and buyers meet to trade (exchanges/market places).

Why now?

Annual smartphone sales



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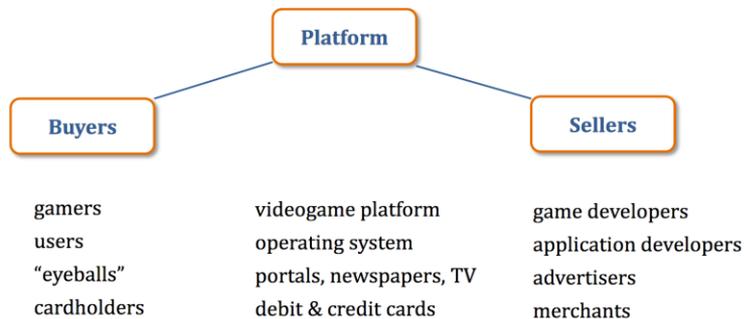
Source: Apple, Google, Gartner, a16z

- New solutions to old problems: search/transactions costs; and asymmetric or incomplete information
- Enabled by technology (ubiquitous fast BB and 3G/4G, smartphones, GPS,...)
- And by ideas (market design mechanisms matching heterogeneous demand & supply (incomplete information/transactions costs))
- Greater variety of products and services so value of matching increases
- Algorithms/software reduce matching costs

Typology & examples

	Production	Intermediation	Exchange
B to B	Internal platforms Slack AWS	Payment cards	Financial exchanges
B to C	AWS, software OS, games consoles	Ad-funded media, phone networks, Zoopla, travel	Ebay, Amazon Marketplace
P to P	Sharing economy work platforms (Thumbtack, Taskrabbitt)	Social media eg Facebook, UberX	Sharing platforms UberPool, accommodation (home swaps, Airbnb)

Balancing the sides



Asymmetry
determined by:

- Sensitivity to price
- Size of indirect network effects
- Demand for variety
- Information asymmetries

Business model choices and challenges

- ‘Chicken and egg’ problem
- Reaching critical mass
- Pricing structure
- Co-ordination vs individual incentives

- Many fail
- Few large European platforms
- Regulatory context challenging

Hi Rory,

We're one week into our closed beta and I've been receiving a lot of emails about how people can let their friends see what we're working on. I know that our waiting list is pretty long now (over 20,000!), and who really wants to wait in line if they know someone already on the inside? Probably not your friends :)

So here's an exclusive beta code you can send to three special people you really like. And I've included \$2.50 free credit with each!

<https://blendle.com/access/Cf4zK2>

Feel free to just forward this email directly to those lucky three - the invites only last for the next 72 hours. If you want a few more, just ask and I'll see what we can do!

Best,
Alex

Trust

- No trust, no business
- Trust mechanisms
- Contracts and risk sharing
- Platforms as private regulators
- Biases/algorithm design
- Platforms as collective institutions

Ratings vs other signals

Airbnb example

Figure 2: Revenue and Occupancy Rate
by the Creation Date of the Listings

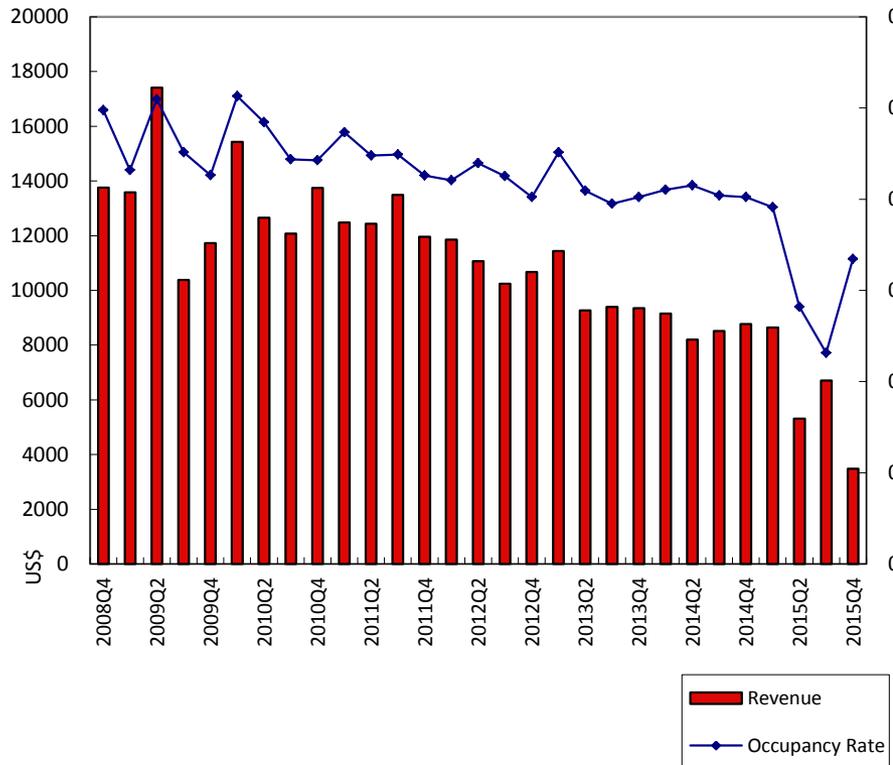
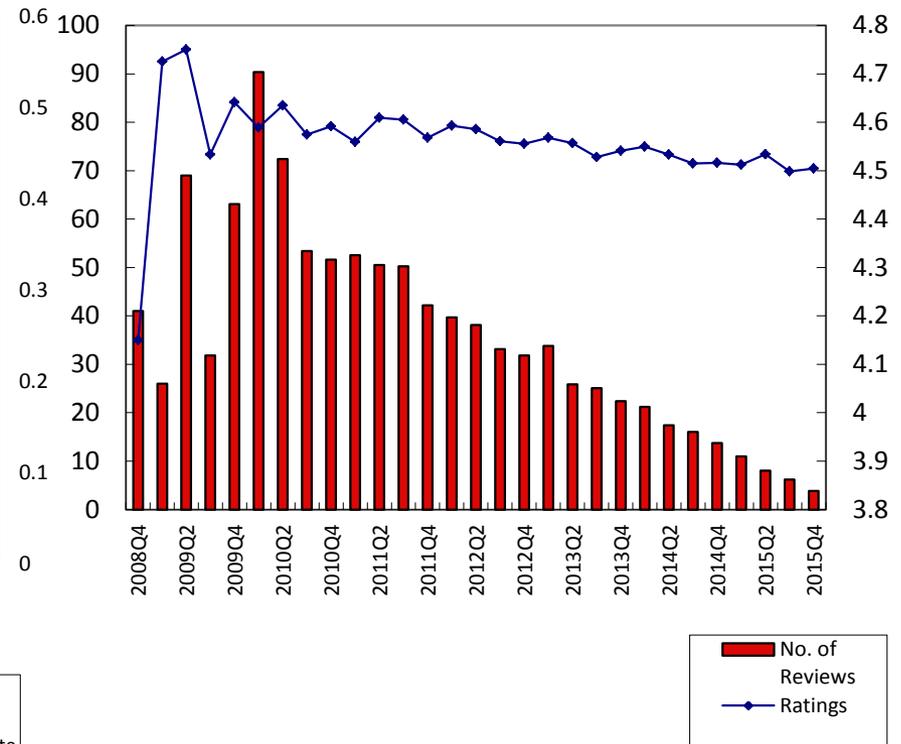


Figure 3: No. of Reviews and Rating
by the Creation Date of the Listing



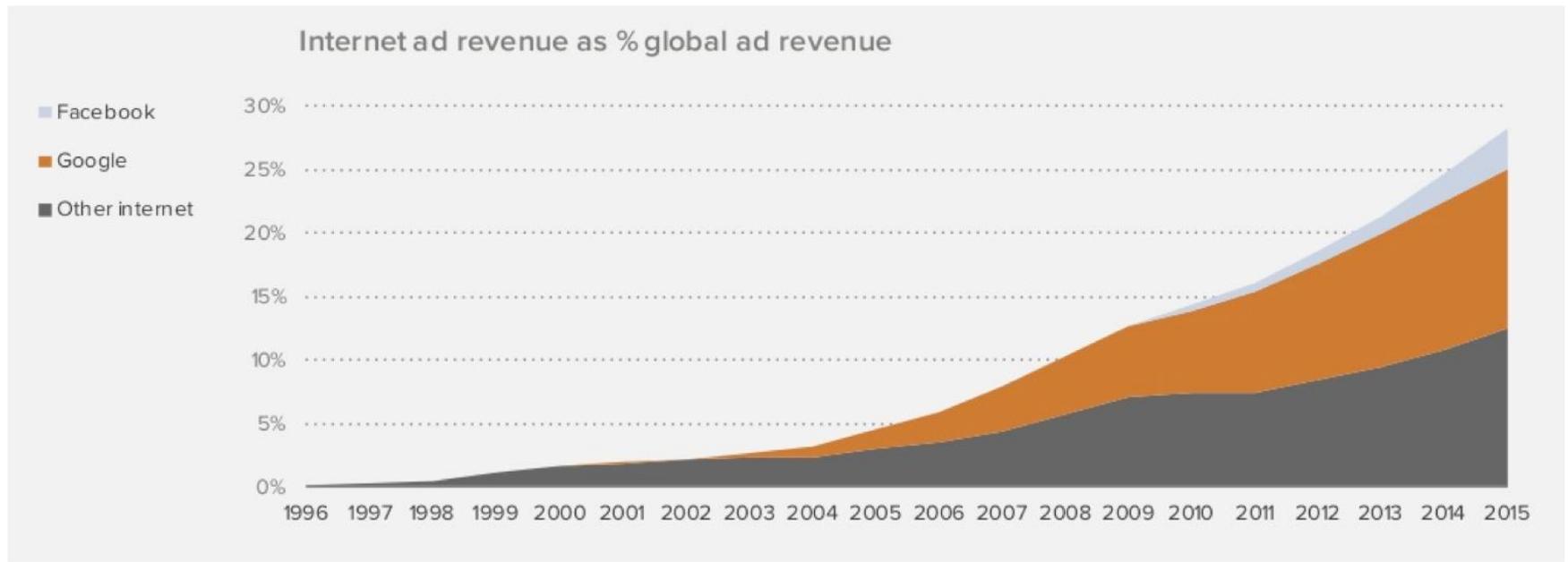
Understanding platform dynamics

- Understanding the business model choice
 - Why isn't everything a platform?
 - When do incumbents switch models – and when/why not?
 - Are there sectors platforms will not be able to enter successfully?
 - What is the geographic scope?
 - Do platforms work for one-off but not repeat transactions?
- Platform design questions:
 - Choice of pricing structure; feedback mechanisms; information provision
 - Creating liquidity in platform markets - agglomeration economics parallels (in virtual space)?
 - Lessons from network theory? How does network structure develop and what are its economic consequences?
- Understanding industry structure
 - Dynamic welfare issues: hold-up problem?
 - Allocation of value in platform ecosystems
 - Infrastructure for the smartphone ecosystem: physical infrastructure investment, the economics of the end-to-end network, net neutrality (fixed and mobile)

The problem of 'free'

- The psychology of free
- Accounting for the disbenefits (value of pixels/profitability of prominence/spend on ad blockers/data allowance costs)
- Distribution of benefits:
 - value of personal data;
 - privacy;
 - data governance and regulation;
 - data access & APIs.
- Algorithmic ad markets and ad fraud (parallel to HFT markets)
- Static vs dynamic efficiency: (lack of) investment in 'free' content
- Free as an entry barrier (like 'free' bank accounts)
- Is 'free' sustainable?

The ad-funded internet



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Source: Google, Facebook, Zenith, a16z

‘Behavioural’ issues

- ‘Free’ is one (is this immutable psychology or a social norm that could change?)
- Social/endogenous preferences influencing demand (virality/buzz management)
- Reasons for consumer inertia – reluctance to switch; how big are the transactions costs of ‘one click’?

Competition questions

- Consumer switching/inertia – incentives; and behavioural aspects
- What is the size of realized network benefits to consumers?
- How should we address the problem of market definition?
- Are ‘envelopment’ strategies (‘convergence’) acceptable?
- What is the extent of price discrimination? Can consumers fight back? Should a new arms race be averted by regulation?
- Few monopolies – are the newer titans different? (demand-side entry unlikely – supply-side disruption still possible? Does ‘tipping’ make ex ante regulation necessary?)
- Entry barriers
- Welfare evaluation – need for a ‘public interest’ assessment in competition policy?

- Theories of harm in platform markets
- Economics needs to deliver practical anti-trust enforcement tools
- Politics of powerful global platforms (many delivering public goods)

Other policy issues

- Public good characteristics of information – tensions of creating markets in a public good
- Platforms as data factories (investing in identifying participants, not in physical capital):
 - legal & social norms of information asset ownership
- Finance to achieve critical mass (US vs EU)
- Innovation – what incentives to invest and innovate?
- Consumer surplus vs revenues: who gets these efficiency gains created by platforms? Can we measure them?
- Repugnant platforms?





And many others

- Privacy and data
 - value of data harvested from users?
 - Is new regulation needed eg time-limited storage, individual right of ownership/resale, public ownership of data infrastructure?
 - Data ethics
 - Avoiding welfare-reducing policies (cookie law)
- Emergence of fight back? eg <https://diasporafoundation.org/>, Privacy Badger, \$herriff – among sophisticated consumers
- Regulating manipulation of consumers – social media examples
- Transparency – T&Cs, pricing policies
- Data storage
- New challenges in economic data
- Big data techniques & their legal status
- Lack of data
 - provided case by case by the platforms
 - rules of engagement with the state must include data provision
- Power, politics and nationality
- The special role of the media:
- Sharing platforms as public good providers
 - Outsourcing the commons to for-profit (US) corporations (Uber, Waze, parking spots)
- Tax
- Macro issues – productivity of capital and labour, distribution, speed of 'disruption' (unbundling and rebundling of tasks in production process)
- Norms and ethics: MySpace; Microsoft's 'Tay'; Facebook 'nudge' experiments

