Conference on Economics of Personal Data
Telecom-Paros Tech June 16 2014

Competition and Personal Data

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Outline of Presentation

- Mobile telephony: from “the death of distance” to “geography is back!”

- Two sources of rents: information and access to scarce user attention

- How information creates – and destroys – rents

- How scarce attention creates – and destroys – rents

- Implications for policies toward market dominance and collaborations between firms
Mobile telephony

- “The death of distance” marked the first phase of mobile telephony
- A very valuable service – but a commodity
- Value-added services marked the second phase – data transfer, photos
- Innovation-intensive (but the rents are constantly being competed away)
- The third phase: geography is back!
Two sources of rents:

- Collecting information about consumer behavior and preferences is subject to major scale economies – because information is (usually) a NON-RIVAL good.

- Capturing and holding access to the scarce attention of the consumer is also subject to major scale economies – but for a different reason – the limited processing capacity of the human brain.

- And attention is a RIVAL good.

- Information-sharing can be a solution – but attention-sharing cannot! Attention-sharing can even make everyone worse off...
The sources of rents in information-accumulation (I):

- Observation of consumer behavior reveals preferences that are useful for predicting future behavior

- Two factors that help refine such predictions: LOCATION information and NETWORK information – both subject to large scale economies

- Compare a web search for “Latest Iraq News” on two search engines

- Now compare “Watch strap Antibes” on two search engines on a computer

- And the same search on a smartphone
The sources of rents in information-accumulation (II):

- Collecting detailed information about consumer preferences creates RENTS from the better matching of consumer wants and production possibilities.

- Sometimes this leads to first-degree price discrimination – consumer is no better (and no worse off) than without information, but firm collects all the rent.

- When there is an intermediary (e.g., a search engine) the rent can be shared with the producer (e.g., via the second-price auction mechanism).

- Often the intermediary induces competition among producers and shares rent with the consumer (e.g., travel websites).
The sources of rents in information-accumulation (III):

- However, sometimes strategic use of the information by a third party may make the customer worse off than if the information had not been collected at all.

- Example: a medical diagnosis of a serious disease that does not help find treatment for the condition but leads to discrimination against the patient, by an insurer or an employer.

- Notice: sometimes such strategic problems result in collecting too little information, not too much!

- Example: Yervoy, an anti-melanoma drug commercialized by Bristol-Myers-Squibb in 2011 (see Scott Morton & Seabright 2013).
The economics of scarce attention

- Of interest to neuroscientists, economists and marketers. Herbert Simon: “A wealth of information creates a poverty of attention”

- Neuroscientists are fascinated by the mechanisms that allocate attention in the short term (see Torkel Klingberg: The Overflowing Brain), by how these can be manipulated, and by the fact that we have so little awareness of our attention deficits

- Economists are interested in the question whether attention is optimally allocated, or whether there is an “overfishing” problem

- Marketers want to know how to fish more..
Economic puzzles about scarce attention

Examples of informal claims:

- Employers receiving thousands of online applications make worse hiring choices than those receiving fewer manual applications – they turn to networks that limit their choices in undesirable dimensions (gender, race)

- Professors receiving many email requests from students end up processing fewer good ideas than those insisting that students come to their offices in person

- How can greater choice lead to lower utility for the chooser in the absence of strategic effects?

- Processing costs?

- Statistical externalities?
Rents from scarce attention

- Once an intermediary (search engine, news portal, smart phone interface) has the attention of a user it can influence the user’s subsequent choices. Call these GATEKEEPER effects.

- This is not just a matter of the intermediary ANTICIPATING the user’s preferences (like a weather forecaster anticipating the weather) – though the anticipation effect is certainly present.

- Glick et al (2014) control for anticipation effects – which are strong – and find strong residual gatekeeper effects.

- They test whether these are due to REPUTATION or CONSPICUOUSNESS – both are present with reputation effects being stronger.
Policy implications (I)

- Information-accumulation about consumer preferences can be rent-creating or strategically manipulative

- Consumers need safeguards against strategic manipulation – this is about privacy but not just about privacy. It’s about choosing with whom to share information when information can be passed on

- Be careful: information LEAKS!

- When information is rent-creating, leakage is usually beneficial as it creates competition. Information-sharing can be PRO-COMPETITIVE!

- Even when it doesn’t, first-degree price discrimination is not so bad...
Policy implications (II)

- Monopolisation of scarce user attention is a more difficult problem to assess and to deal with

- It often arises as a by-product of information accumulation

- The main reason for the difficulty: attention is a RIVAL good

- It can’t easily be shared.....

- The next best solution: it can be CONTESTED

- This reminds me of an old old problem in economics: whom do you trust?
Conclusions

- We live in an information-rich environment that has created new challenges us as individuals and also for public policy.

- It has not led to the “irrelevance of geography” – quite the opposite.

- It creates two quite different sources of rent: information accumulation and access to scarce user attention.

- They are different because the former is NON-RIVAL but the latter is RIVAL – but the two sources of rent are also complementary.

- Public policy has to adapt to some very difficult challenges.
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