

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

## Competition and Personal Data

**Paul SEABRIGHT, Toulouse School of Economics (TSE) and Institute for Advanced Study in Toulouse (IAST)**



# 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(eg a search engine) the rent can be shared with the producer (eg via the second-price auction mechanism)
- Often the intermediary induces competition among producers and shares rent with the consumer (eg 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

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

## Competition and Personal Data

**Paul SEABRIGHT, Toulouse School of Economics (TSE) and Institute for Advanced Study in Toulouse (IAST)**

