

Search and Antitrust: The Question of Integration

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Based on joint research with Greg Taylor

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- ▶ Integration between SE and “complementary” websites is common (Maps, Videos Finance, Flights, shopping etc.).
- ▶ Prominent issue in antitrust investigations around Google.
- ▶ Two areas of concern:
 1. Does integration lead SE to promote inferior products?
 2. Does it affect firm’s incentives to compete to the detriment of consumers?
- ▶ Should we expect market forces to prevent harmful behavior?

I’ll quickly go over two papers written with Greg Taylor:

- ▶ “Quality Provision in the Presence of a Biased Intermediary”, WP, 2015
- ▶ “Integration and Search Engine Bias”, RAND, 2014

Investment and Foreclosure

Relation between bias and investment incentives is a first-order concern

- ▶ Joaquin Almunia:

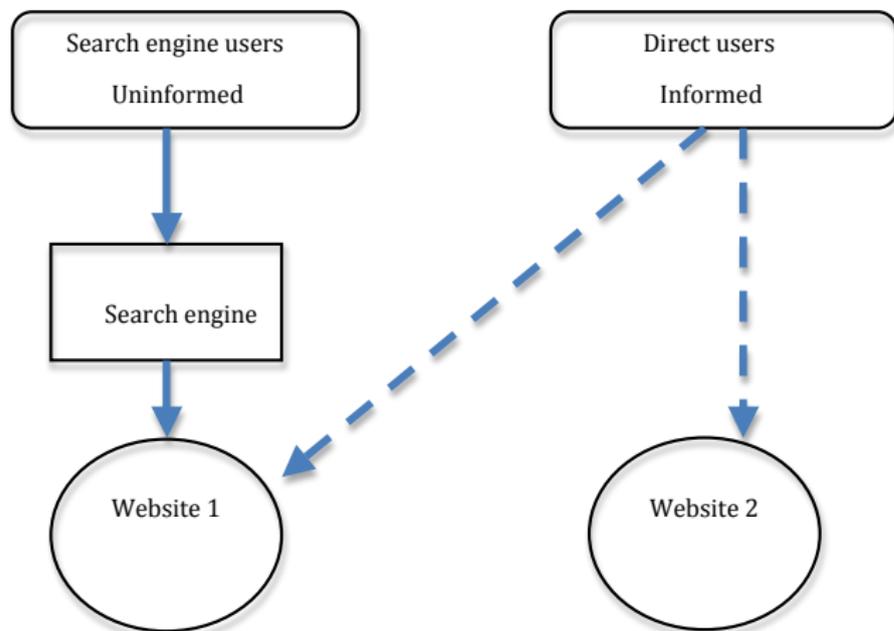
*I believe that the new proposal obtained from Google [...] provides users with real choice between competing services presented in a comparable way; it is then up to them to choose the best alternative. **This way, both Google and its rivals will be able and encouraged to innovate and improve their offerings.***

- ▶ European Commission's Statement of Objections:

Google's conduct has a negative impact on consumers and innovation.

Claims intuitively appealing, yet no formal model in the literature.

A model



Model in which websites compete in quality.

- ▶ Investment in quality is fixed cost (indep of number of consumers)
- ▶ **Quality increases website's per-user revenue.**

Three main results:

1. Website 2 invests less under integration;
2. Website 1 can invest more or less;
3. Website 1 invests more than website 2.

Intuition: Under no-integration, 2 incentives to invest:

- (i) improve ranking (and thus traffic);
- (ii) increase revenue on existing traffic.

Integration kills incentive (i) for both websites, reduces (ii) for W2 and increases (ii) for W1

Discussion

- ▶ Foreclosure of W2. Can happen even when share of uninformed is small.
- ▶ W1's quality can increase: integration can make consumers better-off. Depends on returns to scale. Empirical question.
- ▶ Ex ante bias, but not ex post bias.
- ▶ Disciplining effect of competition between SE ? → limited.
- ▶ Application to Android context.

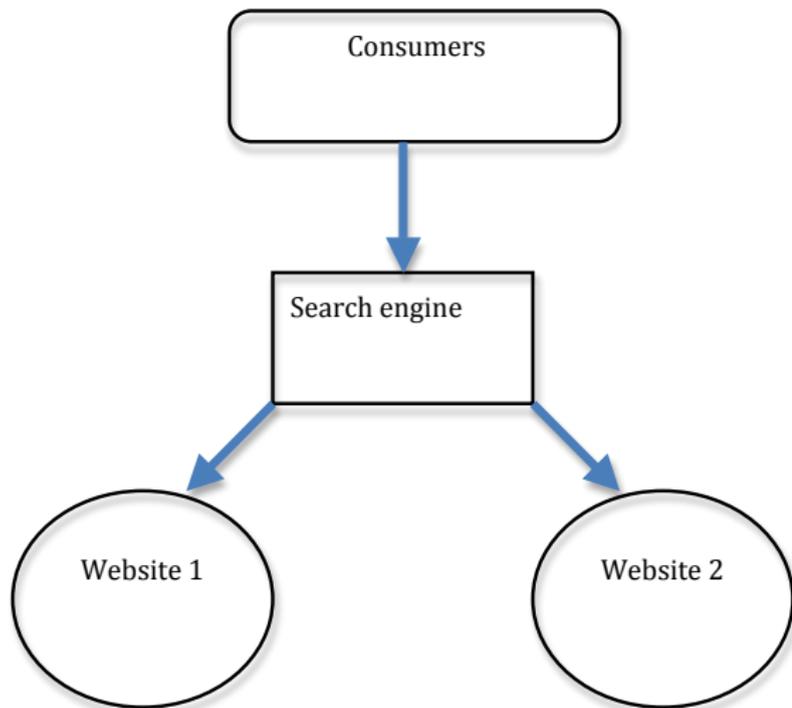
Effects of Integration on advertising

In some contexts, advertising plays an important role on consumer welfare:

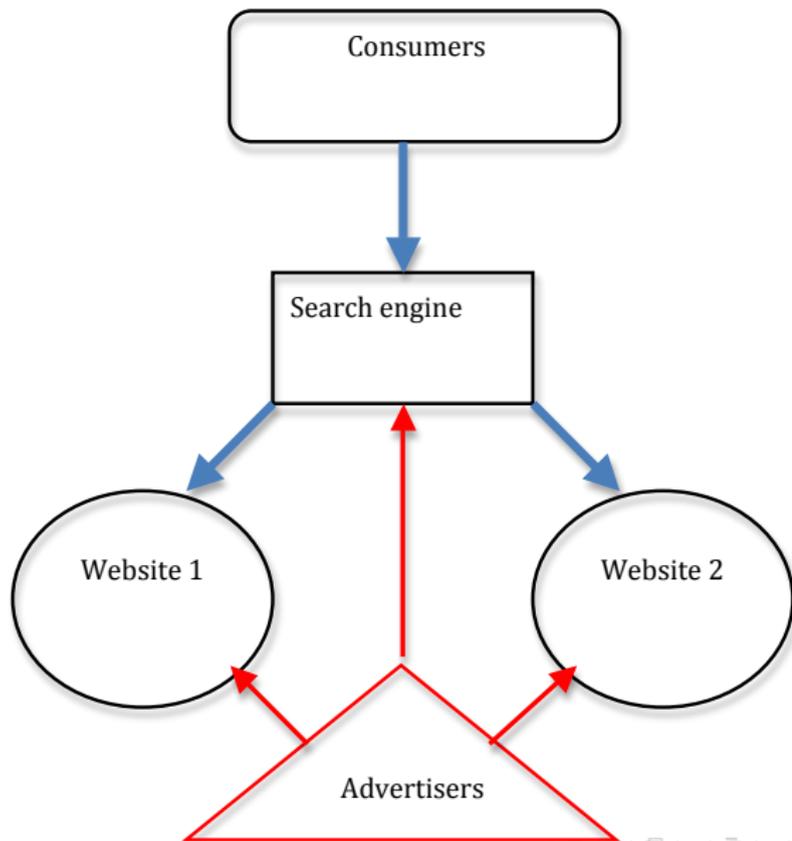
- ▶ Shopping: consumers' surplus depends on the presence of merchants (advertisers)
- ▶ Video: advertising distracts from content.

How does integration affect advertising equilibrium?

A model



A model



About 207,000,000 results (0.30 seconds)

GoCompare Car Insurance - GoCompare.com**Ad** www.gocompare.com/Car-Insurance ▾

You could Save up to £213 Today! Compare Deals from Top UK Brands.

Compare Car Insurance - MoneySuperMarket.com**Ad** moneysupermarket.com/Car-Insurance ▾

Compare 145+ Car Insurance Quotes. 51% Could Save up to £217 Today!

Compare 120+ Car Insurance Quotes & Save £205

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51% of our users could save up to £205. Compare over 120 providers

 Churchill	 Privilege	 Admiral
 Hastings Direct	 esure	 Diamond
 Swinton	 LV=	 RAC

 Enter registration number

Start a quote

Retrieve your quotes

Compare Cheap Car Insurance Quotes at Gocompare.com™www.gocompare.com/car-insurance/ ▾

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Car Insurance From £178www.aviva.co.uk/Car_Insurance ▾

4.1 ★★★★★ rating for aviva.co.uk

10% Paid This For Standard Cover.

Not On Price Comparison Websites!

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Save 15% on Car Insurance Online.

Car Insurancewww.aplan.co.uk/Oxford ▾

Get a quote for your car insurance.

Comments

- ▶ Previous model: “vertical” integration.
- ▶ This model: both vertical and horizontal integration: SE, W1 and W2 sell ad space to advertisers.
- ▶ SE, W1 and W2 choose quantity of ads (similar with price).
- ▶ Caveat 1: search engine in monopoly position, essential for consumers.
For shopping, Amazon or eBay often are first point of search.
- ▶ Caveat 2: W1 and W2 cannot buy ad space from SE in model.

Main results in symmetric case

- ▶ Integration \Rightarrow more consumers towards W1.
- ▶ SE/W1 restrict ad space; W2 increases ad space;

Intuition

- ▶ Internalization of cross-price effect.

Implications

- ▶ Consumers see fewer ads on average.
- ▶ If value of marginal advertiser $>$ attention cost: consumers may benefit from integration; (And W1 endogenously better than W2)
- ▶ If not, consumers are hurt by integration.
- ▶ Let's assume consumers like ads. Should we regulate? not necessarily: "objective" SE could quickly gain market share if competition is "one click away".

The question of bias

- ▶ We've seen that integration may but need not lead to ex-post bias.
- ▶ Bias can also happen without integration.
- ▶ Integration can even reduce bias!