#### Discussion of Bergemann & Bonatti FTC/Northwestern Microeconomics Conference November 18, 2010

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- This is a paper about informative advertising
  - Different consumers want different products
  - Whether they ever learn about those products depends on whether the products are advertised in media that they pay attention to
  - Welfare is increasing in the number of matches

- The authors model numerous environments
  - Single advertising "market" (one offline medium)
  - Continuum of advertising markets (one offline medium)
  - Two symmetric offline media
  - Two offline media of different sizes
  - Two offline media of different types
  - One offline and many online media

- There are three key parameters in the model
  - $\lambda$  is the concentration in the product "market"
    - Bigger when more consumers want a smaller number of products
  - $-\gamma$  is the concentration of consumers in advertising markets
    - Bigger means easier to target the right consumers
    - Social welfare is increasing in  $\boldsymbol{\gamma}$
  - $-\beta$  is the fraction of time spent on online media
- The paper performs various comparative statics exercises on these parameters (and some others) for each environment
- Effects on advertising prices, on advertising prices per consumer reached, and on who advertises on, and who pays attention to, which media

- The comparative statics results are often non-monotonic
  - For example, in the one market/one medium environment, the price of advertising is increasing in  $\lambda$  if  $\lambda$  is low, and vice-versa
    - If  $\lambda$  is low, then increasing it increases the "market share" of the firms that were already advertising, increasing their valuation of advertising
    - If λ is high, then increasing it reduces the valuation of the marginal firms, but increases the valuation of infra-marginal firms (whose market shares have gotten bigger)
    - Diminishing marginal returns (no extra benefit to reaching a consumer twice) cause the net effect on price to be negative
- There are many results like this
  - Combinations and re-combinations of different effects

## Questions

 How much work is being done by the assumption that each consumer buys nothing unless they receive a message from their ideal product?

 Particularly for the result that better targeting causes lower advertising prices

 I'm also a bit confused about how there can be a continuum of products and advertising markets

## Comments

- The modeling is elegant and very impressive
- Results are built up logically step-by-step
  - This is mostly a good thing, but it did cause the most important results (offline vs. online) to be deferred to the very end of the paper
  - I also found it a bit hard to keep track of all the different effects and cases

## Comments

- My main concern regards the real-world relevance of informative advertising about the existence of a product
- There is certainly informative advertising about prices
- But how much is there really about product existence?
  - And is there really often nothing similar to buy instead?
- Moreover, the model assumes that consumers pay attention to media for the *purpose* of learning about products
  - This makes me confused about the bicycles example
- In my view, the overwhelming majority of advertising is persuasive and not informative in nature
  - "One Quarter of GDP is Persuasion" (McCloskey & Klamer, 1995)

### Conclusions

- The model is very rich and ambitious
- It is carefully and logically developed, but the large number of results made it somewhat difficult to focus on what was important
- In my view, informative advertising regarding product availability, though real, is minor relative to the issue of persuasive advertising