The Rise of Empirical Methods in Merger Analysis:

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Main Sources of Progress in Merger Analysis

- Diffusion of a portfolio of empirical methods.
- Greater access to (better quality?) data.
- Greater specialisation of staff both inside the agencies and among consultants.
- Better communication between the economic and the legal sides of the profession.
- Greater reliance on a coherent theoretical framework (e.g. non-horizontal guidelines).

One Simple Concern

- In practice, the use or empirical methods in merger analysis is sometimes divorced from their theoretical foundations.

- This can (and sometimes does) lead to the application of empirical techniques that cannot possibly account for the industry's actual behaviour.

Some Common Empirical Approaches

- Herfindahl index.
- Margin analysis.
- Switching analysis.
- Residual demand estimation
- Simple market simulations.
- Full structural estimation/simulation

A common underlying assumption

- Many of these approaches are grounded in theoretical models of (posted) uniform price competition, or the quantity-setting equivalent.
- The very concept of (residual) demand elasticity or the very logic of margin analysis are tied to this behavioural assumption.
- But is this crucial assumption always (broadly) satisfied when we look at actual industries?

Another Polar Case

- A well-known, extreme example of situations that we approach differently are what we call *bid markets*.
- In such situations we do rely on alternative empirical techniques, from simple direct evaluation of competitive constraints to full-fledged structural estimation of auction mechanisms.
- However many industries fit uneasily into either of these two extreme cases: bid markets without formal auction mechanisms, bargaining, posted prices followed by individual negotiations,….

What we do not know

- How much of a mistake do we make when we use traditional empirical methods on such “intermediate” cases?
- Among our traditional methods, are some more robust to “getting industry behaviour wrong” than others?

A Few Guesses

- Market shares/Herfindhal: probably OK, at least as a ‘first cut’.
- Margin analysis: likely hopeless.
- Residual demand estimation: the use of firm-specific cost shifters as instruments *might* help us capture changes in competitive constraints even in the absence of uniform pricing.
- Switching analysis: good robustness.

What we can do?

- Question further the suitability and robustness of existing empirical methods.
- Develop new empirical techniques, perhaps based on the theoretical relationship between traditional models of oligopoly and auction theory (Klemperer)
- Put more emphasis on simpler, more direct empirical methods, especially when the fit with a (posted) uniform price model is in doubt.

An Example: Ryanair

- Looking for simple, direct evidence that Aer Lingus imposes a competitive constraint on Ryanair: does the presence of Aer Lingus on a given route affect Ryanair's behaviour on this route? The analysis showed that Ryanair's average prices were lower on routes where Aer Lingus was present.
- Possible objection: showing there is a simple price effect is not equivalent to predicting merger effects in a full-fledged simulation framework.
- To estimate a fully structural model, one must be reasonably certain of the nature of competition in the industry. More importantly in this case, one cannot always build and estimate a credible structural model undel the time pressure and data limitations faced.
- The simpler approach tells us something irrespective of whether the no-frills airline industry is best modelled as a traditional posted uniform price oligopoly (with or without prior choice of capacity). It is also much more economical in terms of time and data.