

The Conference Board 2003 Antitrust Conference

Hot Topics in Economics: Using New Economic Arguments and Evidence in Antitrust Investigations and Litigation General Comments With Branded Products Mergers as an Example



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* Opinions are those of the author, not necessarily those of the Commission or individual Commissioners

The Cutting Edge in Antitrust Economics Analyses is

- Quantitative and Qualitative Analyses based in:
 - Sound economics
 - Recognition of data limitations
 - *All* the relevant evidence/information
- Analyses that “stand up” to plausible testing of assumptions (“robustness”)
- We have made a lot of progress at the FTC Bureau of Economics in developing sound analyses useful to our lawyers and decision-makers
 - Unfortunately less progress in the “outside” response

FTC Data/Economics Issues: Web Site Materials

<http://www.ftc.gov/ftc/economic.htm>

- “*Best Practices for Data, and Economics and Financial Analyses in Antitrust Investigations*”
<http://www.ftc.gov/be/ftcbebp.pdf>
- “*FTC Perspectives on the Use of Econometric Analyses in Antitrust Cases*” <http://www.ftc.gov/be/ftcperspectivesoneconometrics.pdf>
- “*Demand System Estimation and its Application to Horizontal Merger Analysis,*” <http://www.ftc.gov/be/workpapers/wp246.pdf>
- **Cruise Ship Investigation Analyses**
<http://www.ftc.gov/be/hilites/ftcbeababrownbag.pdf>
- “*Empirical Analyses of Potential Coordinated Effects*”
<http://www.ftc.gov/be/seminardocs/gmucoleman.pdf>
- Chairman Muris
“*Improving the Economic Foundations of Competition Policy*”
<http://www.ftc.gov/speeches/muris/improveconfoundatio.htm>

Empirical Analyses: The “Reality”

- Useful empirical analyses often do not involve sophisticated econometric analyses
- Useful empirical analyses often do not involve any significant statistical analyses
- Useful empirical analyses involve sound data analyses based on sound economics
- What is (or should be) “happening” because of increased transparency and new leadership is a **convergence of agency-related analyses toward actual practice in litigation**
 - **Of course there is somewhat more latitude for sophisticated analyses at the agencies than generally in private litigation**

Empirical Analyses: “The” “Productive” Approach

- Form relevant hypotheses arising from critical issues (market definition, competitive effects, barriers)
- Identify data/facts relevant to hypotheses
- Understand limitations of data/facts
- “Test” hypotheses with data/facts
- Subject tests to *robustness* checks

Examples of Relevant Quantitative Analyses

- See FTC Bureau of Economics Econometrics Working Paper
<http://www.ftc.gov/be/ftcperspectivesoneconometrics.pdf>
- Re: *Coordinated Interaction* See:
Cruise Ship Investigation Analyses
<http://www.ftc.gov/be/hilites/ftcbeababrownbag.pdf>
and “*Empirical Analyses of Potential Coordinated Effects*”
<http://www.ftc.gov/be/seminardocs/gmucoleman.pdf>
- We also use a lot of financial analyses beyond efficiencies and failing firm analyses

Natural Experiments

- Among the most useful analyses are the analyses of “natural experiments” relevant to market definition and competitive effects issues
 - Over time or space.
Examples:
 - Changes in relative prices re: market definition
 - Changes in capacity
 - Effects of differences in number of competitors and/or in specific competitors on price

Branded Products Mergers

- How “usual” practice evolved since 1992 *Guidelines*
 - Demand analyses of scanner data
 - Simulation models
 - Analyses of market research documents
 - (The actual practice by economists inside the agencies was much broader than scanner data estimation and simulation models)
- But
 - The reality of the “effectiveness” of these analyses
 - The FTC Bureau of Economics Working Paper and further work in B.E.have “intervened”

How Do FTC Economists Analyze Branded Products Mergers?

- We have made a number of changes/additions to our analyses of branded products mergers
- Documents, market research, interviews
- Scanner data estimation and simulations
- Other uses of scanner data
- Additional types of data
 - Manufacturer-level data
 - Company financial data

How Do FTC Economists Analyze Branded Products Mergers?

- We do scanner data estimation and simulations where possible, with attention to issues raised in BE Working Paper on scanner data estimation
- We also use of scanner data beyond structural demand estimation
- *Many* analyses of **manufacturer-level** data
- Natural Experiments have frequently been important

How Do FTC Economists Analyze Branded Products Mergers?

- Analyses of marketing research documents:
 - Market definition and competitive effects
- Assessment of new product development activities
- Financial/business analyses
 - Assessment of financials of new products/expansions
 - Assessment of competitive strength of divestiture candidates

Scanner Data Analysis Issues

- Channel coverage issues
- Price aggregation and not properly accounting for *promotions* can bias own-and cross-elasticities (FTC Working Paper 2002, and Hendel and Nevo 2002)
 - Marketing and economic research establishes that price promotions when combined with other promotions can move a lot of volume
 - Sun, Neslin and Srinivasan (2002) find that static demand estimation can lead to estimated cross-elasticities being too high.
 - FTC case example that indicated that two products did not compete although structural demand analyses indicated that they did
- **Manufacturer/Retailer Issues**

Manufacturer-Level Pricing

- Manufacturers have two pricing instruments
(*See: FTC Perspectives on the Use of Econometric Analyses in Antitrust Cases*)

<http://www.ftc.gov/be/ftcperspectivesoneconometrics.pdf>

- **“List Prices”** (and “standard discounts”)
 - Brand manager level documents may disclose useful details about “list” pricing and promotional budgets
- **Trade Promotions**
 - Lower level sales documents may provide useful detail re: promotional **“targeting”**
- **A merger may affect one or both**

Manufacturer-Level Pricing

- What can we determine about **actual** manufacturer-level pricing (“**list**” and **promotions**)?
 - Price analyses and decision documents
 - Regional sales documents re: promotional spending
- In actual brand management, analyses of scanner data (of many kinds) are an **input** into pricing decisions
- **Does a simulation model adequately “explain” the past? (more below)**
- **Use of manufacturer-level data to analyze “natural experiments”**

“List” Price Theories

- Unilateral or Coordinated Interaction?
- Is a “list” price theory viable – or is it likely that list price changes are “spent back” in increased promotional spending?

Manufacturer-Level Data in Consumer Products

Pro Forma Manufacturer Income Statement			
Gross Sales	\$1,100,000.00		
Net Sales	\$1,000,000.00		
Unit Volume (lbs.)	500000		
Average Net Revenue ("LIST" PRICE)		\$2.00	
Estimated Average Revenue at Retail		\$3.10	
Average Variable Manufacturing Cost		\$1.00	
Average Total Manufacturing Cost		\$1.30	
Trade Promotions (net of slotting)	\$100,000.00		
Trade Promotions/Net Revenue		\$0.10	10%
Slotting	\$15,000.00		
Average Revenue Net of Trade Promotions (AVERAGE NET PRICE)		\$1.80	
Variable Margin on A.R. Net of T.P.		\$0.44	24.7%
Advertising	\$100,000.00		
Advertising/Sales		\$0.10	10.0%
Coupon Redemptions	\$15,000.00		
Coupon Redemptions/Retail Sales		1.0%	
% of Sales Accounted for By New Products Introduced in Last 3 Years		22.4%	

Targeted?

How Important is this Dimension of Competition?

Retail Promotions Analyses Using Scanner Data

- Analysis of retail promotions provides additional information on the degree of interaction across and within segments

Analysis:

- **Product Segment A** within **Product Category X**:
 - Effects of price/display/feature promotions of **Product a** on **Product a** and on other products in **Product Segment A** and on other products in **Product Category X**, controlling for promotions of other products
 - *i.e.*, when one brand went on promotion and others did not – what was the impact on that brand and on other brands in and outside the product segment
 - **Data: Retailer/"City"-specific data**

Retail Promotions Analyses Using Scanner Data

- One advantage is this analysis (using retailer/city-specific data) deals with promotions/price aggregation issues in structural demand analyses (see B.E. Working Paper)
- Provides additional information on the degree of interaction within and across segments
- Caveats:
 - Doing this at the segment level may be difficult if at least one brand in the segment tends to be on promotion most of the time
 - Identifying “promotions” can be “tricky”
- This test (which is a “stronger” test) is another test of substitutability – and it does not always lead to same conclusion as structural demand estimation

Retail Promotions Analyses Using Scanner Data

- How important are promotions to “own” sales?
- Where does promotions volume come from?
- What does the evidence indicate re: a potential theory of reduced promotional spending?
 - Unilateral or coordinated interaction?
 - Is the theory lower spending per promotion or fewer promotions?

Other Uses of Scanner Data

- Analyzing extent of transactions price overlaps for different products/segments
- Use of UPC level data to:
 - Assess the importance of new product introductions
 - Assess the similarity of products offered by various competitors
- Analyses of scanner data to assess impact of entry in various SMSAs

“Simulations”: Unilateral Effects Analyses, Generally

- The 1992 *Guidelines* **assume** that pricing decisions are determined by demand elasticities and costs
- Assumptions do not make it true. There are a number of issues here:
 - Pricing models can be *very* sensitive to product groupings
 - Price positioning across a company’s products or with respect to “competitive” products can be important
(We have seen situations in which companies clearly did not price according to *apparent* segment elasticities but rather adopted more uniform pricing across segments).
 - Branded products are “obviously” not managed to maximize short run profits given short run elasticities of demand (*e.g.*, market share objectives)
 - The “cutting edge” of competition in many product categories is new product introductions

“Simulations”

- There are a number of issues impacting the utility of simulations.
 - All the issues involved in reliably estimating *retail* structural demand from scanner data
 - Retail/wholesale
 - Viability of simplistic pricing/equilibrium model
- There has to be significantly more than “hand-waving” to establish that the simulation model reasonably “represents” **actual** pricing

“Tests”

- Past price changes
- Past entry or line extensions

“Simulations” are Never “the” Answer

- However, simulations can be useful in the hands of a careful, objective analyst (who is knowledgeable about all the relevant evidence) in putting the information together on demand elasticities, costs, *etc.* into an analytical framework
 - The simulation model can be used to test *potential* effects of alternative assumptions, demand elasticities, *etc.*
 - A key issue of course is the ability of the simulation model to approximate real pricing

Analyses of Manufacturer-Level Data

- Competitive analyses of manufacturer prices and promotional spending
- Effects of entry/extensions
- Financial analyses of profitability of entry

Financial Analyses

- Profitability (ROS, ROA, *etc.*)
- Financial analyses of profitability of entry/expansion

Use Of Marketing Documents and Market Research Studies

- Can help with
 - Assessment in differences across channels
 - Product market definition
 - Assess relative substitutability
 - “Second Choice” evidence
 - Design of econometric analyses
 - Manufacturer-level pricing
 - Competitive Effects
- Need to understand methodologies and limitations of market research documents

Analyses of Marketing Research Documents

- Analyses of marketing research documents to assess substitutes – “2nd Choice” Analyses
- Use of marketing research documents and financials to assess differences in channels

Brand Shifting Analyses and Interaction Indices

- Such studies are often conducted for companies by Nielsen and IRI or other market research companies
- Normally based on household panel data
- Measures the propensity of household to buy different brands
- Can provide evidence bearing on whether the merging firms' brands are close substitutes

Limitations of Marketing Research

- Do not relate changes in brand purchased to changes in price -- not a cross-elasticity
- If household data used, study will include brands that are not true substitutes because different members of households may use different brands (e.g., toothpaste).
 - Studies based on individual-level data preferable.

Remedies

- Analyses relevant to assessment of viability of remedy:
 - Competitive performance of divestiture candidates
 - Financial analyses of divestiture candidates

Lessons

- I have talked *specifically* only about branded products mergers
- The lessons are the same:
 - Economically sound, robust empirical analyses firmly cognizant of all the relevant information in the case