Economics Research at the

I. Introduction

The primary role of the Bureau of Economics is supporting the Federal Trade Commission's (FTC) dual missions of promoting competition (antitrust) and protecting consumers. On the antitrust front, the past year was marked by two cases seeking the breakup of consummated mergers,[1] and major investigations of two mergers among branded consumer goods producers.[2] On the consumer protection side, the FTC battled an assortment of fraudulent products, like weight-loss devices, and deceptive financial practices cases, including deceptive lending, injurious mortgage loan servicing, deceptive credit counseling, and pyramid schemes disguised as business opportunities.[3]

In merger cases, FTC economists develop theories to describe how a particular transaction affects market power, and then develop evidence (documentary and/or empirical) to test these theories. Consumer protection investigations often focus on evaluating how consumers and firms respond to information.

[1] An administrative law judge ruled in favor of the FTC that the acquisition of the Water Division and the Engineered Construction Division of Pitt-Des Moines Inc. (man¬ufacturers of specialized storage tanks) violated

Economists also estimate consumer injury from deceptive practices, often leading to substantial monetary settlements.[4]

Economists often find, however, that individual cases raise more questions than they can answer based on current theory and research. This year's crop of cases is no exception. For the consummated merger cases, rather than trying to predict whether a proposed merger will be anticompetitive, we instead had to determine whether a consummated merger was anticompetitive. The branded goods mergers raised methodological questions about how competition among upstream producers manifests itself in data in cases involving retail distribution channels. The importance of the retail channel in understanding manufacturer mergers is relatively understudied, but potentially quite important.

II. Consumer Protection

1. ADVERTISING HEALTH CLAIMS

Markets generally work better when consumers have better information about goods and services. Whether, and how consumers receive such information is often dictated by government polices invoked in the name of consumer protection. The FTC's consumer protection mission, which is based on the agency's broad mandate to prohibit "unfair or deceptive acts or practices," provides fertile ground for anyone interested in the economics of information. FTC economists have estimated the effects of food, cigarette, and dietary supplement advertising. They have evaluated the effects of disclosures in experimental settings and conducted econometric studies of credit discrimination and predatory lending. They have conducted surveys of industry practices (McKernan et al., 2003), assessed privacy policies, and examined how changes in market institutions, such as so-called "negative option" plans,[5] would affect consumers. Some of this work is conducted as part of case investigations or litigations. While all of these activities are important to the development of sound consumer protection policies, in this article we highlight the role of research on the regulation of health claims and mortgage disclosures because this research illustrates the potential effect of information research on recent policy outcomes.

Today, information on the health consequences of various dietary choices can be found on many food labels. The back panel of a box of Honey Nut Cheerios explains, for example, that too much cholesterol "... can put you at risk of heart disease" and that "lowering cholesterol can have a big impact on health." The panel further explains that "Soluble fiber from whole grain oat foods, like Honey Nut Cheerios, has the irresistible taste of golden honey and nuts AND soluble fiber to help keep your heart healthy." Food labels can provide valuable information to consumers, particularly young consumers who may not know

[5] A negative option is a marketing program that requires consumers actively to refuse to receive future products.

much about the link between diet and health. Twenty years ago, however, the Food and Drug Administration (FDA) prohibited such information on food labels. Only after decades of debate and research has the government adopted policies that allow any explicit health advice on food labels. Economists at the FTC played a significant role in the policy change.

To appreciate the magnitude of the shift in health claim policy it is helpful to recount the history of the health claims debate. In 1984 the Kellogg Company challenged the FDA’s restrictions on health information in marketing by incorporating dietary recommendations from the National Cancer Institute (NCI) into its labeling and advertising for All-Bran cereal.[6] FDA staff reportedly responded to the campaign by stating that . . . “the claims make the product a drug and in any event are misleading” (Calfee

Recognizing the potential importance of the health claim debate for consumers, the Bureau of Economics conducted a body of research on this topic. Two studies were released in 1989. One study advocated a benefit-cost standard for health claims (Calfee and Pappalardo, 1989). The authors argued that the FDA should evaluate health claims about potentially uncertain relationships between diet and disease using a flexible expected value rule balancing the potential harm from allowing too much information against the harm from allowing too little. A case-study of evidence for claims about fats, serum cholesterol, and heart disease illustrated how the rule could be implemented and showed that longstanding regulations likely harmed consumers. The second report estimated how the sales of high fiber cereals and breads had responded to changes in health claim regulations policy (Ippolito and Mathios, 1989). Despite growing evidence of a link between high fiber diets and reductions in cancer risks, a shift toward high fiber cereals was not detected until health claims linking fiber to cancer appeared in advertisements.[9] The research also showed that advertising was especially effective at providing health information to nonwhite women and women in female-headed households.

While the FDA debated how to respond to 500 formal comments it received in reference to the 1987 proposal, Congress passed the Nutrition Education and Labeling Act of 1990 (NLEA). Under the regulations implementing the NLEA some health claims would be allowed, although many claims about promising scientific findings would be prohibited, even when the downside risk from consuming foods based on the claims was negligible and the manufacturer accurately portrayed the level of scientific support for the claims.

FTC staff filed numerous advocacy comments on evolving regulatory proposals. In the past year, health information comments were filed on prescription drug advertising, health claims for food and dietary supplements, and the possible links between obesity. (see "Fulfilling the Original Vision: The FTC at 90", Federal Trade Commission", April 2004, pp. 31–33 and 36–37, http://www.ftc.gov/os/2004/04/040402abafinal.pdf).

[8] FTC Staff (1987). The comment that was voted out 3–2 with Commissioners Bailey and Strenio dissenting. According to the document "Commissioners Bailey and Strenio do not disapprove of FDA's proposed rule but wish to disassociate themselves from the reasoning set forth in the Commission staff's comment".

[9] The authors did not find a shift toward high-fiber cereal during 1978–1984, despite publication of a number of scientific studies linking fiber and cancer and the recommendations of public health officials that consumers increase their fiber consumption. During the period when fiber-cancer claims began to appear in the marketing of food products (1985–1987), however, the fiber content of cereals increased by 7%.

The Bureau continued to conduct research following implementation of the NLEA. In 1996 the Bureau released a study showing that consumption of unhealthy fats fell faster when health information was relatively easy for manufacturers to convey (between 1985 and 1990) than during prior years when regulations were more restrictive (between 1977 and 1984) (Ippolito and Mathios, 1996). In 1998 the FTC issued a study testing the effects of various advertising claims on consumer understanding using advertising copy-tests.[10] In one set of tests the authors examined whether respondents could distinguish among health claims supported by different claimed levels of scientific proof – an issue central to the debate over the value of allowing claims about promising scientific findings. The authors found that disclaimers could effectively communicate that the underlying science was moderately uncertain and that some differentiation between different levels of scientific substantiation was possible. In addition, the study demonstrates that research is often needed to test whether information problems exist and whether remedies will work as intended.

The Bureau also supported research to examine how regulation affects advertising content. One study investigated the relationship between information regulations and food advertising content prior to the NLEA (Pappalardo and Ringold, 2000). The authors collected 40 years of data on the science on fats and heart disease, popular press coverage of this relationship, and the content of advertising for margarine and cooking oil prior to the NLEA. The authors found that FDA regulations stifled the flow of health information to consumers while similar information appeared in advertising to doctors and nutritionists (those in the best position to judge the advertising validity). In 2002 the Bureau released a broader study of advertising content (Ippolito and Pappalardo, 2002). The authors analyzed 11,647 food advertisements that appeared in tanti]3()-8(la()-24stisnthat1blTJ tandund d [(NLEA iEc 0.5eo0.0003 Tcs0005th)LEA 7nti–19)4(

resulted in signifi

example, heart and serum cholesterol claims appeared in 58%

implementation of the NLEA. Overall, the content analy

[10] See Murphy et al. (1998). Canti]y-tests are often conducted by market researchers to investigate the effective24ss of

a general signal of quality – food advertisements have been a source of extensive information for decades and, if allowed, food manufacturers would compete on the basis of diet and health.

Has the FTC research affected policy? The FDA continues to assess its information policies, and is slowly moving toward a policy that puts more weight on the potential harm from prohibiting claims that could benefit consumers. At least two signals suggest that our research may have contributed to this positive movement. The first signal appears in a district court opinion. The second appears in an FDA policy statement. The FDA's post-NLEA regulations were challenged in court by dietary supplement manufacturers, who believed that the FDA's health claim regulations violated the First Amendment.[11] Although the district court ruled in favor of the FDA in 1998, the U.S. Court of Appeals for the D.C. Circuit reversed the lower court in 1999. More specifically, "The appeals court held that, on the

certainty of settlement cost estimates. FTC comments supported most of the proposed changes but raised concerns about a proposed disclosure of payments from lenders to brokers for loans with above-par interest rates. One concern was that the new disclosure would inappropriately focus consumer attention away from the bottom line: confusing consumers about the relative prices of different loans. Another concern arose because the new disclosure would be required for mortgage brokers, but not for direct lenders.

In early 2004 the Bureau released a report describing a controlled experiment with more than 500 recent mortgage customers that was designed to test HUD's proposed compensation disclosure (Lacko and Pappalardo, 2004). Participants were shown cost disclosure forms for two loans – one from a broker and one from a direct lender – and asked which was less expensive.[6] The findings were striking. When the broker loan was less expensive than the lender loan, approximately 90% of respondents in the control groups (who did not view the new disclosure) correctly identified the less expensive loan. In contrast, when respondents were shown the new disclosure, about two-thirds of consumers correctly identified

III. Antitrust Retrospectives

1. ENFORCEMENT DATA

In contrast to other areas where the government intervenes in markets,[15] there is relatively little retrospective analysis of U.S. merger policy. With the exception of the small minority of mergers that were litigated, until earlier this year, antitrust experts did not have information sufficient to determine the levels of market concentration of proposed mergers investigated by the FTC. In part, this dearth of research can be explained by a lack of publicly available data.[16] In an attempt to fill the research gap, since the early 1980s the FTC has devoted significant resources to the analysis of horizontal merger

anticompetitive in any relevant market.[21] It is extraordinarily difficult for the agencies to determine how big and whether efficiencies claimed by merging parties are credible and merger specific.[22] In contrast, it is relatively straightforward to determine whether two merging firms are important competitors with each other. By studying consummated mergers, we hope to develop a better understanding of merger efficiencies and how to include them in prospective merger analysis. FTC economist Denis Breen's (2004) working paper, "The Union Pacific/Southern Pacific Rail Merger: A Retrospective on Merger Benefits," provides a careful analysis of the efficiencies resulting from a major rail merger. The Union Pacific/Southern Pacific (consummated in September 1996) merger was controversial, largely because of severe problems associated with integrating the two railroads and a number of major service disruptions that occurred in mid-1997 to 1998. Breen finds, however, that many of the efficiencies claimed by the merging parties were realized. Further, his analysis suggests that the efficiencies generated by integrating the duplicative parts of the competing rail networks would not have occurred but for the merger. While only a single case study,[23] Breen's paper suggests that the efficiency benefits of mergers can be substantial and that alternative mechanisms short of a merger, such as a contract or joint venture, would be unlikely to generate similar cost savings.

A recent paper by FTC staff economists, Taylor and Hosken (2004), estimates the price effects of a major consolidation in the re government.[24] In fact, the change in concentration resulting from the MAP joint venture in the Midwest was larger than that for many petroleum mergers subsequently challenged by the government. Using wholesale quantity data for all gasoline sold in the state of Kentucky, the market concentration, as measured by the HHI, increased by about 800 points to 2263 following the merger.[25] The study examines the retail and wholesale (rack) prices of gasoline in a market arguably most likely to experience a price increase following the merger: Louisville, Kentucky. Louisville appeared to be a good candidate for a post-merger anticompetitive price increase because Marathon and Ashland were both major market participants, the market was concentrated, and the Louisville metropolitan area used a somewhat unique "reformulated" gasoline not used by nearby regions. Thus, refiners and distributors operating nearby (selling conventional, not reformulated, gasoline) may not have been able to discipline an anticompetitive price increase in Louisville.

< insert Figure 2 here >

Figure 2 graphically summarizes the results of the study. It is a plot of the difference in Louisville's and Chicago's rack (wholesale) and retail gasoline prices (and implied retail margin) pre-and post-merger.[26] Taylor and Hosken find no change in retail prices following the transaction. Roughly 15 months following the joint venture, however, the relative wholesale (rack) price of gasoline increased roughly three to five cents a gallon in Louisville. The wholesale price increase appeared to be the result of a supply shock for the production of the reformulated gasoline consumed in Louisville rather than of the

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[24] MAP was consummated on January 1, 1998. According to industry publications, the joint venture was reviewed by the FTC; however, the FTC took no action to modify the transaction (see Taylor and Hosken, 2004, pp. 7–10 for a description of the transaction).

[25] Ideally, concentration would be measured using retail and wholesale market share data for the region being studied, Louisville, Kentucky. Unfortunately, the Department of Energy's, Energy Information Administration only has quantity data to calculate HHIs at the state level for wholesale (prime supplier) sales of all gasoline

joint venture.[27] Interestingly, the wholesale price increase was not passed through at retail: gasoline retailers paying the rack price absorbed most of the price increase in the form of lower retail margins. Rack-supplied stations were probably unable to pass through their wholesale price increase because they competed with other stations in Louisville that did not experience a wholesale price increase (roughly 30% of gasoline sold in Louisville was sold by company-owned stations that paid a “dealertank-wagon” wholesale price that did not increase) and with stations in the Indiana suburbs of Louisville selling conventional gasoline (that did not experience a wholesale price increase). This study illustrates the importance of examining both wholesale and retail prices in estimating the price effects of gasoline mergers. An examination of only wholesale prices would have suggested that the merger raised consumer prices. More generally, the paper shows the importance of incorporating institutional factors into studies analyzing the competitive effects of mergers.

IV. The Role of the Retail Sector

Merger investigations must be completed within

pricing behavior of multi-product retailers that sell two types of goods: goods for which price discrimination over time is feasible (goods that can be stored for future consumption), and goods that must be consumed in the current period. Their model confirms some of the intuition of existing papers, but also better describes real-world pricing behavior.

Recent empirical work suggests that retail prices change much more frequently than can be explained by fundamental shifts in cost or long-run changes in demand.[29] The reasons for large persistent changes in retail prices are likely endogenous, in ways that complicate demand estimation. As noted above, retailers (and manufacturers) face incentives to price discriminate over time for those products that consumers can store, and recent empirical evidence suggests consumer inventory behavior is important for such goods.[30] This finding suggests that static demand models likely overestimate demand elasticities.[31] In addition, retailers discount more popular products (those in more consumers' bundles) more often than less popular items. This likely results because low prices on popular items are more likely to bring consumers into the store (so called "loss-leaders"). Relatedly, products are more likely to go on sale during periods of peak demand when the standard static model predicts prices should increase.[32]

Taken together, these empirical and theoretical results suggest that competition between retailers is much more subtle and complex than can be captured with simple price-setting models of competition. Supermarkets compete for consumers by offering discounted prices on a bundle of products, where the set of prices discounted changes from week to week. Consumers generally purchase bundles of products at a single store (to economize on shopping costs). In addition, because consumers shop for bundles of

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[29] See, e.g., MacDonald (2000), Chevalier et al. (2003), and Hosken and Reiffen (2004a, b).

[30] Hendel and Nevo (2002) and Pesendorfer (2002) find strong empirical evidence that consumers buy products on "sale" and take them into consumer inventory.

[31] When prices are lower than they are expected to be in the future, consumers may purchase for both current and future consumption. The standard demand model measures a purchasing elasticity (how purchases respond given a change in relative prices) rather than a consumption elasticity (how consumer consumption responds to a change in relative prices). The consumption elasticity is what is relevant to welfare analysis.

[32] This finding is supported by recent empirical research, (see Chevalier et al., 2003; Hosken and Reiffen, 2004b).

roducts, estimating demand for any single product may be omitting important multi-product considerations.

2.

Bargaining between manufacturers and retailers and the existence of non-linear contracts further complicates the problem of drawing inferences about the effects of upstream manufacturing mergers. A recent Bureau working paper, O'Brien and Shaffer (forthcoming), examines a merger between manufacturers selling competing differentiated products to a monopoly retailer. In their model they find that if manufacturers can offer retailers non-linear contracts and bundle the merging firms' products, the merger leads to lower retailer profits while having no effect on consumer welfare. The only effect of the merger is to transfer rents from retailers to manufacturers. Their paper is particularly interesting in that it shows that an upstream manufacturing merger can harm retailers without harming consumers. While their models. For example, the Bureau's work on health claims emphasizes the role of advertising as information. Yet, there are many questions about the role that strategic choices of price, quantity of marketing, type of marketing (in-store promotion, national advertising campaign, promotions in local newspapers, new labels), and marketing message (price message, taste message, health message, reminder message) play in demand estimation and merger prediction. For example, much advertising for consumer products takes place while items are being offered at a low-price. Post merger, if retailers raise their prices, will this lead to a change in advertising or promotional levels (Froeb et al., 2004).

V. Conclusion

Economic research on matters affecting antitrust and consumer protection policy is essential to effective government policy. Research by Bureau economists has played a crucial role in improving government policy. Fifteen years ago, the American Bar Association recommended that the FTC devote . . . "more resources to basic research on consumer protection issues" (ABA Reprint, 1989, p. 435) and recognized that

> It is important for economists at the FTC to learn how retail markets for consumer goods actually work. It is also important for consumer protection attorneys to learn, or be reminded, how seemingly sensible remedies in these markets may have unexpected costs and drawbacks.
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> Properly harnessed, economic analysis has the potential to shape consumer protection policy in much the same fashion as it has influenced antitrust. (ABA Reprint, 1989, p. 435).

Did the FTC succeed in conducting the research necessary to move consumer protection policy forward during the intervening years? In the case of at least one area – the regulation of health information in food marketing – we believe that the answer is "yes." And we have evidence that our early research on mortgage disclosures is shaping policy outcomes. However, resources are limited, and there are many more questions than FTC economists can answer – such as, the potential benefits of health claims for foods that do not meet the FDA's "good food" thresholds to qualify for such claims, and the possible role of advertising on obesity. We invite inquiries from academic researchers who are looking for research topics relevant to policy.

The contributions of economic research to the antitrust mission are more subtle. Rather than affecting broad new rules, Bureau research aids economists and lawyers in conducting antitrust investigations. For example, consistent with the ABA's recomme

Figures and Tables

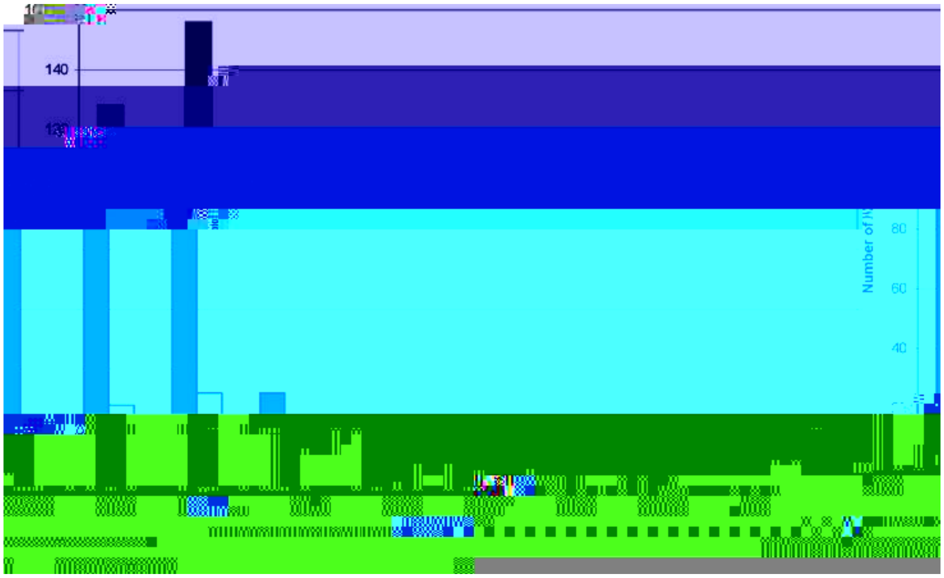

Figure 1: TC merger enforcement data: 1996–2003.

Figure 2: Marathon/Ashland merger retrospective difference in Louisville and Chicago rack price, retail price, and retail margin.

References

American Bar Association (1990) 'Report of the American Bar Association Section of Antitrust Law Special Committee to Study the Role of the Federal Trade Commission', Reprinted from Antitrust & Trade Regulation Report, Vol. 56 No. 1410, Special Supplement, pp. S–1–S–53 (April 6, 1989) in P. E. Murphy and W. L. Wilkie, (eds.), Marketing and Advertising Regulation: The Federal Trade Commission in the 1990s