

**COMMENTS TO THE FEDERAL TRADE COMMISSION AND DEPARTMENT
OF JUSTICE ANTITRUST DIVISION**

HMG REVIEW PROJECT – COMMENT, PROJECT NO. P092900

MARGINS IN MERGER ANALYSIS

David T. Scheffman¹

These comments are submitted in response to the Federal Trade Commission and Antitrust Division's request for comments on the proposed revisions to the Horizontal Merger Guidelines ("Guidelines") issued on April 20, 2010.

I have long been a critic of the unilateral effects analysis of differentiated products mergers that were first introduced in the 1992 Guidelines. In this submission I will attempt to clarify and expand on my concerns.

To begin, economic theory certainly has an important role in the antitrust analysis of mergers. I have been a part of developing economic theory for application to antitrust and merger analyses. However, antitrust analysis, particularly of mergers, must fundamentally be an empirical analysis. Economic theory provides various potentially viable bases of concern. But except for a clear merger to monopoly, theory, alone, cannot provide a basis for a presumption.

The fundamental theory underlying the analysis of potential unilateral effects for differentiated products – various versions of the basic "differentiated Bertrand," in which I would include UPP" – does provide potentially relevant theoretical approaches to analyses of anticompetitive effects. But as in all other situations in which economic theory is used to identify potential competitive effects, the validity of the theory requires a detailed empirical investigation of the specifics. Theory, alone, cannot be the basis of a presumption of anticompetitive effects.

Differentiated Bertrand theory (in its various forms) is unique among economic theories in its very powerful and quite general conclusions – generally predicting that any merger between competitors will raise at least some prices. This is a curious result. How can it be that any competitor uniquely constrains *each* competitor (assuming positive cross price elasticities). As I have explained recently in my paper with Joe Simons, that theoretical result comes not simply from economic theory but from a technical

¹ Senior Advisor, Cornerstone Research, and Adjunct Professor of Business Strategy and Marketing, Owen Graduate School of Management, Vanderbilt University. I thank Joe Simons and Mark Frankena for helpful comments.

mathematical assumption that is made for analytical simplicity rather than an assumption based in economic theory or empirical support.²

As “differentiated Bertrand” in its various forms has come to be applied in antitrust analysis of mergers, remarkably, two parameters provide a basis of the analysis – margins and diversions. If we step back from differentiated Bertrand, it is quite curious that these two parameters, alone, would be a basis of concerns sufficiently substantial to be proposed as a presumption. Many mergers involve firms with sizeable margins, and many if not most mergers involve diversions between the parties in the event of unilateral price increases. Specifically, firm A proposes to merge with firm B. When firm A raises its price, some of the sales lost by firm A are diverted to firm B. In the typical relatively concentrated industries encountered in merger investigations it would be very unusual if there were not such diversions.³

Notice that I have said nothing about differentiated products here. Thus many mergers reviewed by the Agencies involve firms with “high” margins and most mergers involve diversions – which would be problematic under the unilateral differentiated products analysis. The Agencies, however, have only selectively applied that analysis. This raises issues, which I will not address here, regarding the basis used for putting a given merger in the differentiated unilateral effects “bucket” – something that the Guidelines have never clarified.

Outside the category of what are regarded by the agencies as mergers “fitting” into the unilateral differentiated products “bucket,” economic theories are not imposed. Rather, various theories are tested against the specifics of the industry and the fact situation. For example, in situations in which an auction theory might be appropriate, this theory is tested against the specific facts of the competitive situation before any inferences are drawn. If the theory is not supported by the facts, the analysis proceeds with more general fact-based theories of potential competitive effects.

In virtually no merger other than one categorized by the agencies as fitting the unilateral differentiated products paradigm is there a *presumption* that the parties to the merger uniquely constrain each other’s prices (or at least one constrains the other). This is despite the fact that, as just discussed, relatively high margins and diversions are common in mergers reviewed by the Agencies. Instead, the analysis properly focuses on evidence bearing on what actually constrains prices.

² David Scheffman and Joseph Simons, “Unilateral Effects for Differentiated Products: Theory, Assumptions, and Research,” *Antitrust Source*, April 2010.

³ And most products are not truly “commodities,” *i.e.*, they will not lose all their sales if their price is increased.

Margins

As I have explained elsewhere, and has long been well known, all the models underlying the differentiated products unilateral effects analysis, including the recently much discussed UPP, have as one result that the own-price elasticity of demand for a given product can be computed simply from the product's price-(marginal) cost margins. Again, as I have explained recently in my paper with Joe Simons, that result comes not simply from economic theory but requires a technical mathematical assumption.⁴

The only litigated merger that I know of in which this theoretical relationship between margin on own-price elasticity was put forward by the government was seriously questioned by the judge in the FTC's preliminary injunction litigation of the Swedish Match matter:

Moreover, Dr. Simpson's [one of the FTC's economic experts] use of the Lerner Index [the theoretical relationship between margin and own-price elasticity] in this case is at least questionable. The FTC's own expert, Dr. Orley Ashenfelter, testified at the hearing that if price and quantity data are available, as they are here, he normally would use econometrics, not the Lerner Index, to estimate demand elasticity.⁵

I will not expand on that discussion here. Instead I will provide a discussion of the key determinants of margins, which have *nothing* to do with demand elasticities.

Economic theory, financial economics and accounting, and common sense make clear that the most important determinant of margins is *cost structure*, specifically the mix of fixed and variable costs. A firm will not continue to operate indefinitely if it cannot expect to at least cover its non-sunk costs. Except for a firm that has substantial sunk costs and has for a considerable time been in a depressed industry, a firm would be expected to cover its costs. This is typically the case in the prototypical industries where the agencies apply differentiated products unilateral effects analysis – branded consumer products. Thus the typical case is that a product's price will exceed its total average costs, and therefore the price will generally exceed marginal or variable costs – *i.e.*, products will have positive margins.

Staying with consumer products, as one example, there are many business models for consumer products firms. Some firms produce their products from primary inputs, *e.g.*, primary food products such as wheat and milk for branded consumer food products, using highly automated (low variable labor) manufacturing processes. Such firms would typically have a substantial percentage of their costs being fixed. Other firms have other

⁴ David Scheffman and Joseph Simons, "Unilateral Effects for Differentiated Products: Theory, Assumptions, and Research," *Antitrust Source*, April 2010.

⁵ *FTC v. Swedish Match*, 131 F. Supp. 2d 151, 161 (D.D.C. 2000).

producers make their products for them, *i.e.*, use contract manufacturing. Such firms would typically have a significantly smaller percentage of their costs being fixed. Of course this comparison is much broader than the consumer goods industry. In many industries firms vary significantly in their degree of vertical integration. Thus, margins will differ due to differences in cost structure, having nothing to do with demand conditions.

Firms also differ in the extent that they are vertically integrated into distribution. Some self distribute, with much of their costs being fixed and other use third party distribution, where most of their costs are variable. Again, margins differ due to *cost structure*, having nothing to do with demand conditions.

For example, we could have two otherwise similarly situated firms – say, both selling corn flakes – that would have quite different cost structures, and therefore quite different margins. One is vertically integrated in manufacturing and distribution and one is not. Holding other things constant, the vertically integrate firm is necessarily going to have significantly higher margins than does the non-integrated firm. But according to the fundamental prediction of “Bertrand theory” models (and UPP), other things equal, the firm with significantly higher variable costs should have significantly higher prices. Of course this is highly implausible. And it is not consistent with what we observe about actual products.

What is perhaps even more striking is that in the consumer goods products industry (among others), shifting between self-manufacture and contract manufacture – totally, or to a significant extent – occurs with some frequency. The “Bertrand theory” (and UPP) model predicts that move should lead to substantial changes in price – even though there only a change in *cost structure*, with no change in demand. I am unaware of evidence of that occurring.

Finally many industries are generally going to have high margins – *e.g.*, packaged software. Thus a relatively minor and not highly differentiated product for, say, home financial management, likely has quite high margins, but it is quite implausible that such a firm has pretty inelastic demand.

Examples like these make clear that inferring demand elasticities from margins is not valid. To get reliable estimates of demand elasticities, evidence has to come from the demand side. Since the predictions of the various Bertrand-type models, including UPP, depend fundamentally on there being a mathematical relationship between margins and own-price elasticity, those models cannot, as a matter of empirical economics or public policy, provide a basis for presumptions about anticompetitive effects.

However, to the extent short run static analysis is appropriate, which raises other significant issues, and which needs to be determined on a case by case basis, properly measured margins *are* relevant to assessing the *potential* incentive to raise prices post merger. This is just, if properly applied, “Critical Loss analysis,” which simply the

“arithmetic” of the Guidelines. But, of course the arithmetic of the Guidelines do not establish a relationship between margins and own-price elasticities of demand.

Implications

Again, I am not saying that the differentiated products unilateral effects theory is never appropriate as a *potential* basis of concern. But the key conclusion that drives the results, that margins are mathematically related to own-price elasticities, cannot be assumed – and, in fact, it is not likely to be valid. However, as explained in my paper with Simons, a combination of relatively high (properly measured) margins, and significant (properly measured) diversions, does create a *potential* incentive to increase prices post-merger. But this is also true for most mergers. The basic issue for unilateral effects analysis is what constrains the prices of the parties to the proposed merger. This is the case also for mergers assumed to fit into that “bucket.”

Recommendations

There are a number of things in the draft Guidelines that move the ball forward in a manner consistent with sound economics and public policy. However, language in the draft that creates a presumption regarding analysis of unilateral differentiated products based primarily on margins and diversions is not sound economics or public policy.