Market Definition, Upward Pricing Pressure, and the Role of Courts: A Response to Carlton and Israel

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In Dennis Carlton and Mark Israel's essay, *Will the New Guidelines Clarify or Obscure Antitrust Policy?* in the October 2010 issue of *The Antitrust Source*, the authors identify several elements of the recently released 2010 Horizontal Merger Guidelines[1] that they claim could make "antitrust analysis more opaque rather than more clear" to courts and foreign antitrust agencies.[2] Among other things, the authors express concern that a reduced emphasis on market definition and an "overemphasis" on particular analytical techniques, like Upward Pricing Pressure (UPP), will deprive courts and foreign antitrust agencies of an "easy to use tool" by replacing market definition with newer techniques that are "in vogue today" but which lack empirical support and "may fall out of favor tomorrow based on additional research."[3] The authors "fear" that courts and foreign antitrust agencies lack the kind of formal training in economics that is needed to understand the limitations of these new techniques. Thus, foreign agencies may apply the newer techniques naively to challenge mergers that would have enhanced consumer welfare and courts may end up rendering arbitrary and highly discretionary rulings in litigated merger challenges.

The authors' objections misapprehend the actual environment in which courts operate, while at the same time overplay the burdens and risks of using UPP as a tool in merger evaluations.[4]

Alleged Adverse Effects of Downplaying the Use of Market Definition

Unlike its predecessor, the 2010 Guidelines do not recommend a rigid five-step analytical framework, the first step of which is market definition and measurement of market concentration.[5] Nevertheless, market definition and measurement of market concentration remain important elements of analysis in the 2010 Guidelines.[6] In particular, the analysis of coordinated effects remains

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1 U.S. Dep't of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines (2010) [hereinafter 2010 Guidelines], *available at* http://www.ftc.gov/os/2010/08/100819hmg.pdf.

2 Dennis W. Carlton & Mark Israel, *Will the New Guidelines Clarify or Obscure Antitrust Policy?*, ANTITRUST SOURCE, Oct. 2010, http://www.abanet.org/antitrust/at-source/10/10/Oct10-Carlton10-21f.pdf.

3 *Id.* at 3.

4 I do not specifically address the authors' concerns with regard to the effect of the 2010 Guidelines on foreign antitrust agencies except to the extent that if the underlying reason for the authors' concern is that both of these audiences lack formal training in economics, then some of my comments would apply to the authors' concerns with regard to foreign antitrust agencies as well. In any case, it may be reasonable to believe that when revising the U.S. Guidelines, improving merger policy and merger enforcement in the United States was likely a higher priority than clarifying antitrust principles for foreign agencies.

5 U.S. Dep't of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines (1992, rev. 1997) [hereinafter 1992 Guidelines], *available at* http://www.justice.gov/atr/public/guidelines/hmg.pdf.

6 2010 Guidelines, *supra* note 1, §§ 4, 5.

firmly grounded in structural considerations.[7] It is only with regard to analysis of unilateral price effects in mergers involving differentiated products that the 2010 Guidelines can be described as downplaying the use of market definition when it states, "[t]he Agencies rely much more on the value of diverted sales than on the level of HHI for diagnosing unilateral price effects in markets with differentiated products."[8]

The Role of Courts in Defining Markets

Carlton and Israel claim that market definition is "easy to use. One does not need a Ph.D. in economics to understand how to use it *once it has been established*. This means that courts or competition authorities not staffed with lots of highly trained economists can have some grounding in making antitrust decisions."[9]

Yet in merger cases that are litigated, the courts do not find themselves "using" market definition that has been "established" and agreed upon by the litigating parties; instead, the courts almost invariably find themselves having to evaluate the merits of two different market definitions proffered by the two litigating parties in order to decide which, if either, is appropriate for purposes of assessing a merger's potential competitive effects. The structural paradigm in which market shares are used to determine whether or not a merger is presumptively anticompetitive gives the Agencies an incentive to define markets narrowly while it gives the merging parties an incentive to define markets broadly. Battles over market definition have been legion.[10]

A recent well-known example of a court having to choose between two different definitions of the relevant market, with drastically different market share implications, is the Federal Trade Commission's challenge to the acquisition of Wild Oats by Whole Foods. In that case, the FTC claimed that the relevant market for evaluating competitive effects of the merger consisted of premium natural organic supermarkets (PNOS).[11] Under a PNOS market definition, the acquisition constituted a merger to monopoly in several distinct geographic markets around the country and a highly concentrating merger in some others.[12] Whole Foods, however, took the position that the appropriate relevant market included conventional supermarkets as well.[13] The FTC and Whole Foods each offered the opinion of expert economists who sought to defend their respective market definitions. To determine which of these two market definitions was more appropriate, the courts had no choice but to evaluate the merits of each expert's market definition approach.[14]

Since litigating parties rarely reach a consensus as to the definition of the relevant market—and, under the structural paradigm, they have no incentive to do so—courts have been doing more than

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[7] *Id.* § 7.1.

[8] *Id.* § 6.1.

[9] Carlton & Israel, *supra* note 2, at 2 (emphasis added).

[10] Jonathan Baker notes: "Throughout the history of U.S. antitrust litigation, the outcome of more cases has surely turned on market definition than on any other substantive issue." Jonathan B. Baker, *Market Definition: An Analytical Overview*, 74 ANTITRUST L.J. 129 (2007). For examples of litigated merger cases in which the courts have had to evaluate the merits of conflicting market definitions advanced by the litigating parties, see United States v. Oracle Corp., 331 F. Supp. 2d 1098, 1166–67 (N.D. Cal. 2004); United States v. SunGard Data Sys., Inc., 172 F. Supp. 2d 172, 188 (D.D.C. 2001); and FTC v. Staples, Inc., 970 F. Supp. 1066 (D.D.C. 1997).

[11] Complaint ¶¶ 34–35, FTC v. Whole Foods Market, Inc., 502 F. Supp. 2d 1 (D.D.C. 2007) (No. 07-01021-PLF), *available at* http://www.ftc.gov/os/caselist/0710114/070605complaint.pdf.

[12] *Id.* ¶ 43.

[13] *Whole Foods Market*, 502 F. Supp. 2d at 15.

[14] *Id.* at 34–46.

just "using" market definition "once it has been established"; they have been playing a decisive role in establishing market definition. Thus, the de-emphasis of market definition in the 2010 Guidelines will not rob the courts of some universally agreed upon and "easy to use" black box.

Arbitrary and Discretionary Court Rulings. As to Carlton and Israel's claim that, "[t]o eliminate Market Definition would likely lead to arbitrariness and discretionary havoc in courts," the use of market definition itself does not have a history that is free from "arbitrary" judicial decisions.[15] The authors concede that "[t]o identify rigorously the proper market definition requires applying sophisticated econometrics to data."[16] However, many courts—presided over by generalist judges—lack the economic sophistication that is required to evaluate the merits of competing econometric analyses of market definition that are submitted by opposing experts. It is, therefore, not inconceivable that courts might very well issue discretionary rulings based on subjective and arbitrary arguments.

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Here, again, *Whole Foods* serves as an illustrative example. The court of appeals held that the lower court had erred by accepting the defendants' expert opinion that the relevant market should be defined by the purchasing behavior of marginal customers of Whole Foods who cross-shop at conventional supermarkets.[17] Instead, in the majority opinion of the court of appeals, "core customers" of Whole Foods—those who consider only another premium natural organic supermarket to be the next best alternative—were unlikely to shift their purchases to conventional supermarkets in response to a (hypothetical) price increase following the merger, and thus those core customers could likely constitute a relevant market.[18]

The authors do not explain why de-emphasizing market definition and instead emphasizing metrics that seek to measure actual effects (in particular, the value of diverted sales) would lead to any greater incidence of arbitrariness and discretionary rulings in courts.[19]

Alleged Overemphasis on Particular Analytical Techniques: UPP

Carlton and Israel acknowledge that the 2010 Guidelines do not refer explicitly to the specific UPP test that was proposed in an article by Joseph Farrell and Carl Shapiro, but they take issue with the mention in the 2010 Guidelines of the phrase "upward pricing pressure."[20] The authors state that "[i]t therefore seems highly likely that courts, practitioners, and foreign antitrust agencies will see the discussion of unilateral effects as implicitly referencing and endorsing UPP as a method for the review of differentiated products mergers."[21] The authors then add: "Despite its simple

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15 Carlton & Israel, *supra* note 2, at 2.

16 *Id.* at 1.

17 *Whole Foods Market*, 548 F.3d at 1037, 1041.

18 *Id.*

19 The value of diverted sales of a merging firm's product measures the extent by which the merger increases the opportunity cost of selling the product, based on pre-merger margins. All else being equal, an increase in the opportunity cost of selling a product exerts upward pressure on its price.

20 The specific UPP test proposed by Farrell and Shapiro consists of subtracting a standard efficiency credit from the value of diverted sales in order to calculate any net upward pricing pressure. *See* Joseph Farrell & Carl Shapiro, *Antitrust Evaluation of Horizontal Mergers: An Economic Alternative to Market Definition*, B.E. J. Theoretical Econ., Policies & Perspectives, vol. 10, issue 1, art. 9 (2010), http://www.bepress.com/bejte/vol10/iss1/art9.

21 Carlton & Israel, *supra* note 2, at 3–4.

form, proper application of the UPP methodology raises issues that may create difficulties for all but the most sophisticated users."[22]

In the following, I first explain why employing the value of diverted sales as a metric is neither a big picture change in how mergers are evaluated, nor an over emphasis on any particular analytical technique relative to market definition. Thus, if courts have enough economic sophistication to understand market definition, they should have no difficulty in following an analysis based on the value of diverted sales. I then explain why the specific Farrell-Shapiro UPP test—which is not referenced in the 2010 Guidelines—is unlikely to become the principal basis on which courts may have to rule as to whether any given merger is anticompetitive. Thus, any inability on the part of courts to appreciate the subtler limitations of the specific Farrell-Shapiro UPP test is unlikely to be the reason for any "discretionary havoc" in litigated merger cases.

The 2010 Guidelines Do Not Change the Fundamental Balancing Act in Merger Analysis. At a fundamental level, the 1992 Guidelines recommended that merger analysis be undertaken in two broad steps. First, any potential incentives of the merging firms to increase prices following the merger should be assessed based on considerations of demand-side substitutability alone. Second, any such incentives should then be balanced against potential procompetitive supply-side considerations, i.e., merger-specific efficiencies, the potential for de novo entry, and the potential for product re-positioning by incumbent firms. The 2010 Guidelines have not changed this fundamental balancing act. Unlike the 1992 Guidelines, the 2010 Guidelines recommend that the first step—assessing the extent to which a merger might create incentives for the merging firms to increase prices based on considerations of demand-side substitutability alone—be undertaken not by using market definition and measurement of market concentration but by using a different metric, viz., the value of diverted sales.

To my knowledge, there is no known theoretical relationship between change in market concentration and incentives of merging firms to increase prices following a merger involving differentiated products.[23] On the other hand, using the value of diverted sales as a measure of incentives to raise prices following a differentiated products merger (before supply-side considerations have been taken into account) provides some conceptual foundation to the exercise by appealing directly to the theory of how a merger can change the merging firm's pricing incentives.[24]

Measuring Value of Diverted Sales Will Not Impose a Heavier Analytical Burden on Courts Relative to Defining Relevant Markets. Even though the Guidelines are not binding on them, courts have largely embraced the hypothetical monopolist paradigm enunciated in the Horizontal

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22 *Id.* at 4.

23 The authors state (presumably with reference to the way courts or foreign antitrust agencies, which lack "lots of highly trained economists," approach merger analysis) that, "[f]requently, the initial step in a merger analysis is defining a market and then seeing whether the resulting increase in concentration post-merger would likely lead to an increase in price." Carlton & Israel, *supra* note 2, at 1. The only well-known theoretical model that I am aware of in which the Herfindahl-Hirschman Index (HHI)—a commonly used measure of market concentration—bears a conceptual relationship to prices (to be precise, to the average variable margin) is the Cournot model, which is used to study imperfect competition in homogeneous goods markets. Even in the Cournot model, the merger induced change in HHI—which is measured by allocating to the merged firm the combined pre-merger market shares of the merging firms—bears no conceptual relationship to the change in price following the merger. *See* Joseph Farrell & Carl Shapiro, *Horizontal Mergers: An Equilibrium Analysis*, 80 Am. Econ. Rev. 107 (1990).

24 See *supra* note 19 for an explanation of how the value of diverted sales is related to merger induced change in pricing incentives.

Merger Guidelines as a way to define markets.[25] In any analytically sound undertaking of market definition, courts cannot begin to answer whether a hypothetical monopolist owning a group of products would find a price increase on one of its products profitable without measuring how much of any profits that it loses as a result of the price increase would likely be diverted/recaptured through additional sales of its other products. If Carlton and Israel believe that lay courts have sufficient sophistication to do that, then it is hard to see why courts are so wanting in economic sophistication that they cannot verify whether the value of diverted sales has been reasonably measured. The recommendation in the 2010 Guidelines that the Agencies treat the value of diverted sales rather than market concentration to be a more reliable predictor of unilateral effects does not overemphasize a particular analytical technique; the technique is simply part of the matrix of tools that are essential to undertake the proper definition of a relevant market.[26]

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Why Let the Perfect Be the Enemy of the Good? Carlton and Israel express that, somehow, use of the phrase "upward pricing pressure" in the 2010 Guidelines may cause "courts, practitioners, and foreign antitrust agencies" to embrace the specific UPP test that is described in Farrell and Shapiro's paper.[27]

As a specific concern with the UPP test, the authors point out that by looking at the pricing incentive of each of the merging firms' products in isolation, the simplest version of the UPP test ignores feedback effects between the prices of these products and may, under some circumstances, overstate the price effects of a merger. The authors are correct that the simplest version of the UPP test does not account for full equilibrium price adjustments following a merger, be it for the merging firms' products or those of non-merging firms. But I am not aware of any well-known, robust, and simple technique—something no more analytically complex than market definition—that could reliably predict the full equilibrium price effects of a merger.[28]

Furthermore, Farrell and Shapiro clearly state in their paper that, "[i]n the pure form of the UPP test, a merger is *flagged for further scrutiny* if the net effect of the two forces creates upward pricing pressure."[29] Thus, in their view, the UPP test is not meant to be used as the last word on

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[25] Gregory J. Werden comments that "Courts have noted that they are not bound by the Merger Guidelines, but in many of the same opinions they proceeded to endorse or apply the Guidelines hypothetical monopolist paradigm. Moreover, no case has explicitly rejected the Guidelines' approach, nor has any decision not subsequently reversed on appeal found a relevant market that the court specifically indicated could not be supported by the hypothetical monopolist test." Gregory J. Werden, *The 1982 Merger Guidelines and the Ascent of the Hypothetical Monopolist Paradigm*, 71 ANTITRUST L.J. 253, 263–64 (2003).

[26] The types of information needed to measure the value of diverted sales are no different from the types of information needed to properly define relevant markets. In describing unilateral effects that may arise in mergers involving differentiated products, the 2010 Guidelines state: "The Agencies consider any reasonably available and reliable information to evaluate the extent of direct competition between the products sold by the merging firms. . . . *The types of evidence relied on often overlap substantially with the types of evidence of customer substitution relevant to the hypothetical monopolist test.*" 2010 Guidelines, *supra* note 1, § 6.1 (emphasis added).

[27] Carlton & Israel, *supra* note 2, at 3–4.

[28] One way in which the full equilibrium price effects of a merger can be predicted is by use of a full-blown merger simulation model. The authors point out that "[t]here is only weak empirical evidence establishing the usefulness of merger simulation as a tool to predict anti-competitive mergers." Carlton & Israel, *supra* note 2, at 4. I do not disagree with the authors' claim. However, I fail to see why in this regard the 2010 Guidelines should be of concern to the authors. The 2010 Guidelines state: "The Agencies do not treat merger simulation evidence as *conclusive in itself* . . . ." 2010 Guidelines, *supra* note 1, § 6.1 (emphasis added). The 2010 Guidelines' acknowledgement that merger simulation evidence is not conclusive in itself would appear to suggest that the Agencies will be unlikely to bring merger challenges in court based solely on the predictions of merger simulations. The presence of other corroborative evidence should reduce the risk that a court would render a wrong verdict in a merger case simply because it may lack the economic sophistication needed to stress test a merger simulation model.

[29] Farrell & Shapiro, *supra* note 20, at 2 (emphasis added).

whether a merger will likely have unilateral price effects; rather, it is a rough and ready screen that is meant to identify mergers for further scrutiny. It would appear to be highly unlikely for an Agency to bring a merger challenge in court based only on the results of a UPP calculation. Thus, a court would appear to be highly unlikely to find itself in the position of having to determine whether a merger is illegal based only on the value of a UPP statistic.

The claim that a court may find it difficult to discern the subtler limitations of the specific UPP test that was proposed by Farrell and Shapiro can then hardly be a reason to continue to base merger enforcement on market concentration—a metric that can have scant economic relevance to price effects in mergers involving differentiated products.[30] In this sense, the authors' misgivings about the use of the phrase "upward pricing pressure" in the 2010 Guidelines appear to be a case of allowing the perfect to be the enemy of the good.[31]

Conclusion

When the Agencies announced the Guidelines Review Project that led to the 2010 Guidelines, one of the declared goals was to "incorporate *learning* and *experience* gained since 1992."[32] During this time, the DOJ and the FTC have seen that challenging mergers between firms that produce differentiated products using the old structural approach of market definition and measurement of market concentration can sometimes lead to arbitrary outcomes in court—in part, because of subjective and discretionary judgment used by some courts regarding how to define relevant markets. Relevant markets defined in such manner can turn out to be too broad for HHI measures to rise to the level that would enable a structural presumption of unilateral harm ("experiences"). At the same time, theoretical research in the economics of competition among firms that produce differentiated products has shown that the change in pricing incentives following a merger is directly related to cross-price elasticities (diversion ratios) between the merging firms' products and their relative margins.[33] Section § 6.1 of the 2010 Guidelines that is devoted to unilateral effects in mergers involving differentiated products is a natural reflection of these experiences and learning. ●

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30 Carl Shapiro notes: "if products 'in' the market are but distant substitutes for the merging products, their significance may be overstated by inclusion to the full extent that their market share would suggest; and if products 'out' of the market have significant cross-elasticity with the merging products, their competitive significance may well be understated by their exclusion." Carl Shapiro, *Mergers with Differentiated Products*, ANTITRUST, Spring 1996, at 23, 28.

31 As another example of overemphasis on analytical techniques, the authors claim that the new HHI thresholds lack empirical support, and that "the value of any such general HHI thresholds for merger review is extremely limited since we know the effect of industry concentration on price varies enormously across industries." Carlton & Israel, *supra* note 2, at 3. I do not disagree with the authors' claim. That said, I fail to understand why the authors nevertheless feel that the alleged de-emphasis on market definition may obscure antitrust policy, especially with respect to unilateral effects analysis of mergers involving differentiated products. The authors fail to state exactly what use of a relevant market they have in mind other than measuring HHI.

32 *See* Horizontal Merger Guidelines: Questions for Public Comment 1 (Sept. 22, 2009) (emphasis added), *available at* http://www.ftc.gov/bc/workshops/hmg/hmg-questions.pdf, at 1 (emphasis added).

33 See, for example, the post-merger necessary conditions for equilibrium prices that are derived in Gregory J. Werden & Luke M. Froeb, *Unilateral Competitive Effects of Horizontal Mergers*, *in* THE HANDBOOK OF ANTITRUST ECONOMICS 51 (Paolo Buccirossi ed., 2008).