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VERTICAL MERGERS: THEORY AND POLICY

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INTRODUCTION

The title of the George Mason University Symposium session where this paper was originally presented was “20 Years Later: Is it Time for New Vertical Merger Guidelines?” Our short answer to this is no. Although there has been new theoretical literature on the economics of vertical mergers since the “Non-Horizontal Merger Guidelines” were promulgated as part of the *U.S. Department of Justice Merger Guidelines*, issued June 14, 1984, neither theory nor empirical research provides a basis for a revision of Guidelines with respect to vertical mergers. That is not to say that the “Non-Horizontal” guides are a model of clarity of exposition or of economic analysis. However, vertical merger analysis is necessarily both highly complex and highly fact and institution specific. This conclusion is strongly reinforced by the recent literature on vertical mergers. Thus, in our view it would not be worthwhile to attempt to provide more “guidance.” Finally, as we will explain, there is no need to “search” for potentially problematic vertical mergers. Complaining customers and competitors will alert the agencies to many more mergers than are actually anticompetitive.

In this paper we review some of the recent theoretical economics literature on vertical mergers, discuss the policy issues and implications, and discuss in some detail two recent FTC vertical merger investigations that we believe are instructive as to the sort of competitive issues that can arise in vertical mergers.

To begin, it has long been known that the analysis of vertical mergers is much more complex than the analysis of horizontal mergers. There are two relatively straightforward reasons for this. A vertical merger may eliminate “double marginalization” which, other things equal, increases the incentives to increase output. Second, it is widely conceded that as a general matter, vertical mergers are inherently more likely to create substantial efficiencies than horizontal mergers. As a theoretical matter, there are other

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more complex reasons for the additional complexity of vertical merger analysis.

I. ECONOMIC THEORY OF VERTICAL MERGERS

There is a long history of theoretical research on the potential competitive effects of vertical mergers. The older literature typically featured a monopolist or dominant firm at one level and made important contributions to our understanding of vertical mergers.² This literature demonstrated that the competitive effects of vertical mergers are theoretically ambiguous, as a general matter, with important factors including: (1) the degree of vertical integration (whether "partial" or "full"); (2) input substitutability downstream³; (3) the presence of transactions or contracting costs⁴; (4) the degree and type of competition at each vertical level⁵; (5) the ability to price discriminate, absent merger⁶; and (6) the feasibility of non-linear pricing.⁷ Beyond the many factors potentially impacting the effects of a vertical merger, to accurately assess the potential competitive effects of a vertical merger will generally be highly complex and fact-intensive, with the possibility that such an assessment may, at the end, be inconclusive.

The subsequent literature on "raising rivals' costs" and "non-price predation" (we will denote these two related literatures as the "RRC" litera-

² See, e.g., Roger D. Blair & David L. Kaserman, *Vertical Integration, Tying, and Antitrust Policy*, 68 AM. ECON. REV. 397 (1978). The basic literature is much older.

³ See generally Frederick Warren-Boulton, *Vertical Control with Variable Proportions*, 82 J. POL. ECON. 783 (1974); Fred M. Westfield, *Vertical Integration: Does Product Price Rise or Fall?*, 71 AM. ECON. REV. 334 (1981) (arguing that vertical mergers, which reduce demand for non-monopolized inputs, lead to a substitution for monopolized products).

⁴ See generally Benjamin Klein & Kevin M. Murphy, *Vertical Restraints as Contract Enforcement Mechanisms* 31 J.L. & ECON. 265 (1988); Oliver Williamson, *Assessing Vertical Market Restrictions: Antitrust Ramifications of the Transaction Cost Approach*, 127 U. PA. L. REV. 973 (1979).

⁵ See Joseph J. Spengler, *Vertical Integration and Antitrust Policy*, 58 J. POL. ECON. 347, 347-352 (1950); Michael A. Salinger, *The Meaning of 'Upstream' and 'Downstream' and Implications for Modeling Vertical Mergers*, 37 J. INDUS. ECON. 373 (1989) (discussing a model of vertical mergers) [hereinafter Salinger, *The Meaning*]; Gerard Gaudet & Ngo Van Long, *Vertical Integration, Foreclosure, and Profits in the Presence of Double Marginalization*, 5 J. ECON. & MGMT. STRATEGY 409 (1996).

⁶ See generally Martin K. Perry, *Price Discrimination and Forward Integration*, 9 BELL J. ECON. 209, 209-17 (1978).

⁷ See Oliver Hart et al., *Vertical Integration and Market Foreclosure*, in BROOKINGS PAPERS ON ECONOMIC ACTIVITY, MICROECONOMICS 205-286 (Martin N. Baily and Clifford M. Winston, eds., 1990). For a detailed discussion of the potential competitive effects of vertical merger under these various conditions and others involving incomplete and imperfect information not cited here, see, for example, Janusz Ordover & Garth Saloner, *Predation, Monopolization, and Antitrust*, in HANDBOOK OF INDUSTRIAL ORGANIZATION 537-596 (Richard Schmalensee & Robert D. Willig eds., Elsevier Science B.V. 2000) (summarizing the non-price predation literature).

ture)⁸ developed new analyses of vertical issues, including vertical integration. The original RRC papers focused on the effects of various strategies, including vertical integration, by dominant firms that would raise rivals costs.⁹ More than earlier literature, the RRC literature focused on the potential of a vertical merger to anticompetitively raise costs (“foreclose”) downstream rivals of the vertically integrated entity. The model generally involved a dominant firm downstream that has the ability to raise prices upstream. However, the conclusion of this analysis is, again, that the net impact of a vertical merger is ambiguous.

More recent literature has worked to develop conditions under which, as a matter of theory, a vertical merger involving firms that are not dominant might be anticompetitive.¹⁰ Notable papers include Salinger (1988), Ordover, Saloner and Salop (1990) (“OSS”), and Riordan and Salop (1995).¹¹

This subsequent literature clarified the nature and the importance of potential counter strategies by rivals (e.g., why would rivals not compete to purchase what was being acquired in the merger, or have other strategies they could utilize to thwart having their costs raised). In addition, some of this literature, based more firmly in modern game theory than was the earlier literature, raised in a more pointed way the issue of *credibility*, (i.e., whether it was rational after the merger for the merged entity to refuse to deal, etc.) Finally, it is well established in this literature (if not in the law) that injury to rivals cannot, alone, be the basis of concern with a vertical merger.¹²

We now turn to explaining in more detail why the theoretical models in recent papers we have cited “produce” anticompetitive vertical mergers. To begin, the models allow only a very limited role for efficiencies¹³ and, in some cases, assume away the source of potential procompetitive effects from a vertical merger, (e.g., the existence of so-called “double-

⁸ For a summary of the “raising rivals’ costs”/“non-price predation” literature see David T. Scheffman & Richard S. Higgins, *Twenty Years of Raising Rivals’ Costs: History, Assessment, and Future*, 12 GEO. MASON L. REV. 371 (2003); see also Steven C. Salop & David T. Scheffman, *Cost-Raising Strategies*, 36 J. INDUS. ECON. 19, 19-34 (1987) [hereinafter Salop & Scheffman (1987)].

⁹ See, e.g., Salop & Scheffman (1987), *supra* note 8; Salinger, *The Meaning*, *supra* note 5.

¹⁰ See Janusz Ordover, et al., *Equilibrium Vertical Foreclosure*, 80 AM. ECON. REV. 127 (1990) [hereinafter Ordover (1990)].

¹¹ Michael A. Salinger, *Vertical Mergers and Market Foreclosure*, 103 Q.J. ECON. 345 (1988) [hereinafter Salinger (1988)]; Michael H. Riordan & Steven C. Salop, *Evaluating Vertical Mergers: a Post-Chicago Approach*, 63 ANTITRUST L.J. 513 (1995) [hereinafter Riordan & Salop (1995)]. See also Ordover (1990), *supra* note 10.

¹² See Riordan & Salop (1995), *supra* note 11; David Reiffen & Michael Vita, *Comment: Is There New Thinking on Vertical Mergers*, ANTITRUST L.J. 917 (1995) [hereinafter Reiffen & Vita, *Comment*].

¹³ It has long been accepted by most, if not all, economists that as a general matter, vertical mergers are more likely to generate efficiencies than horizontal mergers. See Reiffen & Vita, *Comment*, *supra* note 12.

marginalization.”) Of course, any significant efficiencies would make the results of these models even more ambiguous.

Salinger (1988) is instructive on key issues.¹⁴ The upstream of Salinger’s model has homogenous product quantity-setting competitors with constant marginal cost. They compete in a Cournot oligopoly selling to similar homogeneous product Cournot competitors downstream.¹⁵ Salinger also assumes that the upstream product is used in fixed proportions downstream. In the simplest vertical merger, one upstream Cournot competitor merges with one downstream Cournot competitor. Salinger makes some assumptions that he argues imply that post-merger the vertically integrated entity will not make sales to its unintegrated downstream rivals.¹⁶ This result is clearly very important, because if the vertically integrated entity continues to participate in the merchant input market, the competitive effects of the vertical merger would become particularly ambiguous.¹⁷

In the Salinger model, because the vertically integrated entity exits the merchant market (withdrawing sales to downstream firms), the number of upstream competitors supplying the other downstream competitors is reduced from N to $N-1$. Other things equal, in a Cournot oligopoly this would lead to an increase in price in the merchant market. However, along with the number of competitors supplying the merchant market being reduced by one, the merchant market demand is reduced because of the now self-sufficient vertically integrated entity. Thus, the effect of the merger on the merchant market price is ambiguous.

Similarly, the effect of the merger on *downstream* prices is also ambiguous, even if the merchant market price rises. One version of this result is established in the earlier RRC literature. This can occur because although the costs of the downstream competitors are raised, the vertically integrated entity’s incentives to expand output arising from the lower post-merger costs of the downstream operation may outstrip the output reduction of the downstream competitors. One contribution of Salinger’s paper is to demonstrate that a vertical merger that leads to the upstream entity exiting the merchant market, which was not a focus of the RRC literature, also has indeterminate effects on prices upstream and downstream.

The basic source of the ambiguity of competitive effects of a vertical merger in the older literature, the RRC literature, and in the Salinger paper, is that the vertically integrated firm increases its sales downstream (because its costs are reduced due to elimination of double-marginalization)—which,

¹⁴ See Salinger (1988), *supra* note 11.

¹⁵ See *id.* at 347-54.

¹⁶ This result stimulated later research focused on whether the post-merger incentives of the integrated entity would be consistent with this result. See Richard Higgins, *Competitive Vertical Foreclosure*, 20 *MANAGERIAL & DECISION ECON.* 229, 229-37 (1999).

¹⁷ Higgins shows that in Salinger’s model with linear demand and constant marginal cost, without Salinger’s foreclosure assumption, a vertical merger is always procompetitive. See *id.*

of course, is one potential source of efficiency for a vertical merger. In simple terms, Salinger's basic results are similar to the familiar monopoly vertical merger results (i.e., the competitive effects are indeterminate) only "more so."

Thus, although the Salinger paper is useful for providing a *relatively* simple (but still quite complex) analysis explicating the potential competitive effects of a vertical merger outside the typical dominant firm model, it does not provide a basis for more concern about vertical mergers than expressed in antitrust policy and case law for the past approximately twenty-five years. The Salinger paper also does not significantly clarify the facts and analyses required to determine the potential competitive effects of any specific vertical merger.

Since the Salinger paper, other papers have made assumptions to get around the basic indeterminacy of the Salinger model. In simple terms, the indeterminacy of outcomes in the Salinger model arises, in part, because of imperfect competition upstream and downstream, which automatically creates the double-marginalization issue. So, the key to attempting to "get rid of" the indeterminacy is to "get rid of" imperfect competition at one level.

For example, in OSS¹⁸ there is a homogeneous product duopoly in the upstream market but the competition is modeled as Bertrand, not Cournot. Bertrand competition with a homogeneous product leads to *perfect* competition. This removes the double-marginalization issue from consideration, since under perfect competition, the market price in the merchant market is marginal cost. However, since the upstream market is assumed to have only two firms, with a vertical merger and the merged entity refusing to sell to downstream rivals at a price below a critical level, those rivals now face an upstream monopolist serving the merchant market.

But the key to the results is that vertical integration does not lower the costs of the downstream integrated entity, because pre-merger the downstream entity was being supplied by a perfectly competitive upstream industry. Without lower costs, the vertically integrated firm does not have an incentive to increase its downstream output post-merger, *ceteris paribus*. Then, since the downstream rivals face higher prices in the merchant market, downstream prices rise. However, this assumes away any efficiencies (including removal of double-marginalization) and takes a situation that is highly competitive upstream that is turned into a merchant market monopoly post-merger. The limitations of the very strong assumptions does not make much progress in assessing vertical mergers, or in changing presumptions about the potential competitive effects of vertical mergers.

However, the part of the "Non-Horizontal Guidelines" discussing the acquisition of a downstream disruptive buyer is an analogous story (i.e., the disruptive buyer makes the upstream market much more competitive than it

¹⁸ See Ordovery (1990), *supra* note 10; Janusz A. Ordovery, et al., *Equilibrium Vertical Foreclosure: Reply*, AM. ECON. REV. 698, 698-702 (1992).

would otherwise be). In terms of later terminology, we could call this a “Maverick” theory for *vertical* mergers.

In another paper Riordan and Salop¹⁹ flesh out the specifics of the analysis of vertical mergers. In the spirit of “Post-Chicago,” the primary focus of their analysis is “foreclosure” (i.e., whether prices paid in the merchant market by downstream rivals are elevated post-merger). Unfortunately, foreclosure is neither necessary nor sufficient for a vertical merger to be anticompetitive. For example, they point out that even if prices in the merchant market are increased, thereby raising costs of downstream rivals (in the terminology of the paper, they are “foreclosed”) as a result of the vertical merger, there is not necessarily an anticompetitive effect.²⁰ And there are theories of anticompetitive mergers that do not involve foreclosure (e.g., a vertical merger that facilitates collusion). They also note that “because many vertical mergers create vertical integration efficiencies between purchasers and sellers, many if not most vertical mergers are either pro-competitive or competitively neutral.”²¹

Riordan and Salop set out a four part analysis to assess the potential for “anticompetitive exclusion” arising from a vertical merger. The paper makes clear that the analysis of a vertical mergers is necessarily highly complex and fact-intensive—much more so than the analysis of a complex horizontal merger. And not only is such an analysis highly complex and fact intensive, it is quite possible at the end of an exhaustive investigation, that the conclusion will still be fundamentally indeterminate. However, we agree with Riordan and Salop that it is possible for a vertical merger to be anticompetitive,²² and that antitrust enforcement should seek to prohibit such mergers. The policy issue is what sorts of vertical mergers could justify the substantial enforcement resources required, given that for most vertical mergers an exhaustive investigation is still going to result in indeterminacy of the potential competitive effects of the merger. We turn now to this issue.

II. POLICY

The existing treatment of vertical mergers in the DOJ/FTC Merger Guidelines (not revised since 1984) have four theories of anticompetitive vertical effect: potential competition (one of the parties to the proposed merger would have entered the other level but for the merger), raising bar-

¹⁹ See generally Riordan & Salop (1995), *supra* note 11.

²⁰ *Id.* at 528-41.

²¹ *Id.* at 519.

²² However, we would not term this a “post-Chicago” result. It has long been accepted as a matter of economic theory that it is possible for a vertical merger to be anticompetitive.

riers-to-entry, facilitating tacit coordination, and evasion of regulation.²³ If carefully applied, these are valid bases for concerns. That a vertical merger could increase entry barriers (as opposed to thwart entry by one of the parties to the merger) as sketched in the Non-Horizontal Merger Guidelines probably has few if any valid applications. The facilitating coordination theory should be applied with great care, based on hard evidence rather than hand-waving about the "check list" of factors facilitating collusion.²⁴ The FTC has often used the regulatory evasion theory in natural gas and gasoline transportation industries where, until the mid-eighties, FERC applied cost-of-service regulation of pipeline transportation but not gas prices.²⁵ More prevalently, the regulatory evasion theory has been applied in telecommunications beginning with the 1984 break-up of the Bell System, with prohibitions on the old regional Bell operating companies (the RBOCs) entry into long-distance service, principally for fear of foreclosure of non-affiliated long-distance companies.²⁶

Vertical mergers that have a significant potential for being anticompetitive (and unfortunately, many more) will necessarily stimulate complaints by competitors and customers at one or both levels. Customers who view the upstream entity of the vertical merger as an important supplier will generally be apprehensive (for reasons that include, but are generally broader than antitrust issues) about a supplier that is important to them entering into competition with them through a vertical merger. Such concerns, if not addressed, are likely to result in complaints to the antitrust agencies. Similarly, competitors at either level are likely to have concerns whether the merger is going to strengthen competition or be anticompetitive, or if the downstream entity is an important customer of some or all of them. Again, those concerns are likely to be communicated to the antitrust agencies. These types of complaints are generally more likely to surface than customer complaints about horizontal mergers—a competitor becoming a supplier or losing a major customer due to the acquisition by a rival is generally going to be a more pointed circumstance than a reduction in the number of competitors. Thus, in our view, the important policy issue is not finding potential anticompetitive mergers, but sorting out those for which business rather than bonafide antitrust concerns are the real issue.

²³ See DOJ Vertical Merger Guidelines, 49 Fed. Reg. 26, 824, 28, 35-36 (1984).

²⁴ See David T. Scheffman & Mary Coleman, *Quantitative Analyses of Potential Competitive Effects from a Merger*, 12 GEO. MASON L. REV. 319 (2003).

²⁵ See, e.g., Occidental Petroleum Corp., 109 F.T.C. 167 (1986). *FTC v. Questar Corp.*, No. 2:95CV 1137S (D. Utah 1995) (transaction abandoned). *San Diego Gas & Elec. Co. and Enova Energy, Inc.*, No. EC97-12-000 (June 24, 1997) ("Order Conditionally Approving Disposition of Facilities . . .").

²⁶ The entry requirements are described generally in the 1996 Telecommunications Act and are further defined in the several lawsuits spawned by the legislation. See generally *Southwestern Bell Tel. Co. v. FCC*, 168 F.3d 1344 (D.C. Cir. 1999).

In our view, focusing on “exclusion” is likely to be counterproductive. Whether or not there is a likelihood of anticompetitive exclusion there are likely to be complaints from those claiming that they will be anticompetitively excluded. That is not to say that those complaints should not be evaluated. Rather, as will be discussed below, it is the opinions of the customers of the downstream competitors that are most relevant.

What constitutes a viable and applicable vertical merger theory not based on facilitating collusion or regulatory evasion, or two-level entry? Two recent FTC cases (*Synopsys/Avant!* and *Cytec/Digene*) provide a good basis for this discussion.²⁷ In each case a company with alleged strong market power at one level was merging with a company at another level. The theory in each case focused on whether the vertical merger would foreclose competition that would otherwise arise and would erode the market power. This is a relatively straightforward theory. In simple terms, it is a potential competition theory, but probably more popularly termed these days a “monopoly maintenance” theory.

Whether a monopoly maintenance theory would apply to a particular vertical merger requires a detailed factual analysis of the specific industry in which the merger is occurring, and several conditions must apply:

First, one party to the merger, “*D*,” must have “strong” unilateral market power (i.e., not just face a downward sloping demand because of product differentiation) in the (properly defined) relevant market in which it competes. Of course high market share, alone, does not demonstrate strong (or any) unilateral market power. A competitor with high market share may not have significant market power because of the ability of competitors and/or customers to thwart such market power.²⁸

Second, there must be a significant threat to *D*’s dominant position from expansion or entry from one or more firms (upstream or downstream, relative to *D*). The more immediate is this threat, the more compelling is the potential vertical theory. As is usual in merger analysis, the more distant

²⁷ See Joseph J. Simons, Merger Enforcement at the FTC, Keynote Address to the Tenth Annual Golden State Antitrust and Unfair Competition Law Institute (Oct. 24, 2002), available at <http://www.ftc.gov/speeches/other/021024mergeenforcement.htm>; Press Release, FTC, FTC Seeks to Block Cytec Corp.’s Acquisition of Digene Corp. (June 24, 2002), available at http://www.ftc.gov/opa/2002/06/cytec_digene.htm; Press Release, FTC, FTC Votes to Close Investigation of Acquisition of Avant! Corp. by Synopsys, Inc. (July 26, 2002), available at <http://www.ftc.gov/opa/2002/07/avant.htm>; Statement of Commissioner Sheila F. Anthony, Fed. Trade Comm’n, on Synopsys Inc./Avant! Corporation (July 26, 2002), available at <http://www.ftc.gov/os/2002/07/advantanthonymnt.htm>; Statement of Commissioner Thomas B. Leary, Fed. Trade Comm’n on Synopsys Inc. / Avant! Corporation, available at <http://www.ftc.gov/os/2002/07/avantlearystmnt.htm> (last visited Oct. 15, 2004); Statement of Commissioner Mozelle W. Thompson, Fed. Trade Comm’n, on Synopsys Inc./ Avant! Corporation, available at <http://www.ftc.gov/os/2002/07/avantthompsonstmnt.htm> (last visited Oct. 15, 2004).

²⁸ See generally David T. Scheffman & Pablo T. Spiller, *Buyers’ Strategies, Competition, and Entry Barriers*, 30 ECON. INQUIRY 418 (1992) (discussing customer power).

the potential for competitive harm, the more difficulty we have in assessing whether such harm is likely and whether other factors might intervene in the interim to make harm more or less likely.

Third, the merger must create a credible and significant possibility of foreclosing this threat to *D*'s dominant position or of removing an important constraint on market power that is exercised by *D*. This might occur for several reasons. For example, the other merging party might be particularly well positioned to enter into the other vertical level. In some sense, this is a potential competition theory and is more of a traditional horizontal issue. Analysis of this possibility would require review of the potential entrant's future plans and reasons why it would be well suited to entering the other market. As another example, the merging party's product might provide an important potential input to a competitor. That is, without this input (or competitive access to this input), the potential new entrant would not be competitive. In this case, it would be necessary to explain why the owner of this "input" could not extract the rents from its monopoly position without a merger (i.e., the so-called "one monopoly rent" issue).

Fourth, credible, informed, representative customer opinions are very important. The most important opinions are those of the customers of the downstream competitors. If credible, informed, representative downstream customer opinions do not favor blocking a vertical transaction and such customer opinions support a significant potential for efficiencies (for them), it should be very unusual for a vertical merger to lead to an enforcement action. On the other hand, if such customer opinions strongly disfavor the merger and the opinions are not limited to "normal" business concerns, that should in most cases lead to an enforcement action (assuming that the first four conditions above are satisfied).

Fifth, the evidence (including customer opinions) of significant efficiencies from the merger must be weak. For example, the potential efficiencies from vertical merger of eliminating double marginalization are not likely to be significant or by combining the two products, there would only be insignificant improvement in the "quality" of the new, combined product.²⁹

As discussed above, *Synopsys/Avant!* and *Cytec/Digene* provide good examples of the application of this approach, where the particular facts of each case led to two different outcomes. In both cases, one of the firms was alleged to have substantial market power at one level (Synopsys—in logical synthesis software used in chip design; and Cytec—in liquid PAP tests). In each case, there was also an alleged threat to each firm's market power arising from competition at the other level. In the future, product developments downstream involving integrating upstream and downstream functionalities might threaten Synopsys' alleged market power. Cytec faced new entry that

²⁹ There are a number of potential sources of inefficiency that in particular instances may only be internalized through vertical merger (e.g., "asset specificity," suboptimal input usage, etc.).

had received FDA approval in liquid PAP testing, but the FTC alleged that competition could be thwarted by interfering with the ability of rivals to have their product interface with Digene's product. It should be noted that Cyttec faced a much more immediate and less speculative threat than did Synopsys. The remaining facts of the cases, however, are quite different.

In *Cyttec/Digene*, it was alleged that there was credible evidence that access to Digene's HPV test was necessary for successful entry into liquid PAP testing, because the HPV test was a follow-on test used if the PAP test was positive. In addition, because many liquid PAP tests never actually are used in conjunction with HPV tests (although having that option is important), Digene would not be able to capture the monopoly rents of both markets through its pricing of HPV. By not cooperating with upstream entrants to gain FDA approval for using their tests in combination with Digene's test, the ability of those entrants to compete would be limited. In addition, Cyttec/Digene might be able to bundle the two products in a way that increased combined prices and limited upstream competitors from competing. The FTC alleged that there were no likely substantial efficiencies that would accrue from the merger. Finally, knowledgeable representative customers were concerned about the transaction for reasons consistent with antitrust concerns and supported the FTC's challenge.

In *Synopsys/Avant!*, on the other hand, it was not clear that access to Avant!'s "place and route" product was necessary for backward integration by other firms. It was also not clear that Synopsys would have the incentive to deny access to other firms or to significantly disrupt their ability to interface with the Synopsys product.³⁰ There was evidence that the merger might speed integration of the products and provide substantial benefits to customers, and this was supported by customer opinions—customers downstream from the two levels directly impacted by the proposed merger, that did not support the FTC attempting to block the transaction.

Notice that in both cases, the basic theory was monopoly maintenance. The FTC concluded in both cases that one party to each merger had substantial market power. The key factors in the FTC's two decisions were the credibility of efficiencies and the opinions of customers downstream from the two levels directly impacted by the proposed merger. That is, the proper focus was not alleged foreclosure of rivals but the potential downstream competitive effects.

³⁰ "Upon listening to industry experts and analyzing Synopsys's post acquisition incentives, I find it entirely plausible that the theory of competitive harm articulated above could come to pass. But it has proven difficult to pinpoint concrete evidence to test this theory, or to evaluate whether any likely harm would be outweighed by integrative efficiencies." Statement of Commissioner Sheila F. Anthony, Fed. Trade Comm'n, on *Synopsys Inc./Avant! Corporation* (July 26, 2002), available at <http://www.ftc.gov/os/2002/07/advantanthonymnt.htm>.

CONCLUSION

Since the promulgation of the “Non-Horizontal” Guidelines, the literature on the theory on the potential competitive effects of vertical relationships and of vertical mergers, specifically, has made important contributions. However, the advances have, on net, underlined the inherent potential ambiguity of the potential competitive effects that can arise from a vertical merger. The focus of much of this literature on “foreclosure,” is probably misleading as to relative emphasis. There is broad agreement by economists that it is the competitive effects downstream (i.e., the effects of the vertical merger on customers of the downstream competitors) that is the proper focus the competitive analysis. For a variety of reasons not related to antitrust issues, many vertical mergers are going to generate claims of foreclosure by competitors at one or both levels. We argue here that beyond the theories put forward in the “Non-Horizontal” Guidelines, “monopoly maintenance” is a theory that can, with the right sort of evidence, be implemented to successfully analyze the potential competitive effects of vertical mergers. One of the most important sorts of evidence in such cases can be the opinions of sophisticated, representative, and informed customers of the downstream competitors.

Although economic theory is obviously important to sound antitrust policy and litigation, theory, alone, is necessarily limited. What is needed, as a general matter in antitrust, and vertical mergers specifically, is much more empirical research that can help us distinguish anticompetitive conduct from conduct that is benign or procompetitive. For example, it may be possible to do retrospective case studies of vertical mergers such as Synopsys/Avant!, or mergers such as AOL/Time Warner, where the FTC negotiated consents that were stimulated, in part, by vertical concerns. Unfortunately, these areas are ones for which conclusive empirical work is going to be very difficult.