CROSS-MARKET HOSPITAL MERGERS: ECONOMIC THEORY CHALLENGED BY FACTS AND ANTITRUST LAW

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I. INTRODUCTION

A developing economic literature is focusing on potential price effects from mergers between hospitals that do not compete with one another.[2] So-called "cross-market" mergers occur between hospitals that have non-overlapping service areas and — as the name indicates — are located outside each other's relevant geographic market. Cross-market hospital mergers involve firms that are not each other's rivals for inclusion in health insurer networks or for patient admissions. Patients, employers, and health insurers do not view these merging parties as reasonable substitutes for patient services.

In an antitrust context, cross-market hospital mergers obviously contrast in material ways from horizontal mergers. The latter involve hospitals that are located in the same geographic market, typically to some degree are considered substitutes, have overlaps in their service areas, compete for the same set of potential patients, compete over price, and compete for inclusion in commercial insurer networks. Horizontal mergers eliminate competition between the parties, and the Federal Trade Commission and Department of Justice have a well-documented history of proving in court that such mergers sometimes may lessen competition substantially or tend to create a monopoly, in violation of Section 7 of the Clayton Act, 15 U.S. C. § 18.

The federal antitrust agencies have not sued to enjoin any cross-market hospital mergers. This no doubt reflects the fact that the parties to these transactions have virtually no pre-merger competitive interaction. Nonetheless, cross-market hospital mergers are drawing attention over concerns that, under certain circumstances, they may increase the merging parties' bargaining power when negotiating with health insurers for contracts to participate in health plan networks.

This article discusses the theory's basic underpinnings and offers a brief overview of published studies on the price effects of consummated cross-market hospital mergers. It discusses shortcomings in the theory that constrain it as a viable tool for antitrust enforcement. These arise from a lack of an empirically grounded and reliable analytical framework tied to competition and market power and from questions about whether antitrust law is a remedy to the alleged harms.

2 See G.S. Vistnes & Y. Sarafidis, *Cross-Market Mergers: A Holistic Approach*, 79 Antitrust L.J. 253 (2013) ("V&S"). See also L. Dafny, K. Ho & R.S. Lee, *The Price Effects of Cross-Market Mergers: Theory and Evidence from the Hospital Industry* (Oct. 5, 2018), available at www.people.fas.harvard.edu/robinlee/papers/PriceEffects.pdf ("DH&L"); M.S. Lewis & K.E. Pflum, *Hospital Systems and Bargaining Power: Evidence from Out-of-Market Acquisitions*, available at http://www.kevinpflum.com/papers/Lewis.Pflum.Hospital.BP.pdf (also published at 48 RAND J. Econ. 579) (2017) ("L&P"). The latter two papers tie cross-market theory to empirical analyses of consummated hospital mergers. D.A. Argue and S.D. Stein provide a critique and analysis of this theory in "*Cross-Market Health Care Provider Mergers: The Next Enforcement Frontier*," 30 *Antitrust* 25 (Fall 2015) (commenting on the above-cited Vistnes & Sarafidis and earlier publications by Lewis & Pflum and Dafny, Ho and Lee) ("Argue & Stein"). See also D.A. Argue and L. Fowdur, "*An Examination of New Theories on Price Effects of Cross-Market Hospital Mergers*, (2016), *available at* https://pdfs.semanticscholar.org/c909/cc1194b13cda18059ec26d85a2c4f1623b00.pdf (presented to American Hospital Association) ("Argue & Fowdur"). The shorthand references "V&S," "DH&L" and "L&P" in this paper were first used by Argue & Stein.

II. CROSS-MARKET HOSPITAL MERGER ANTITRUST THEORY

Cross-market antitrust theory generally posits[3] that the potential for economic harm from such a hospital merger may arise where at least one area employer that offers health insurance to its workers has employees who reside and/or work in each merging hospital's service area (a "multi-region employer"). This feature links the two separate hospital geographic markets such that, according to the theory, an opportunity may arise for the merged system to acquire bargaining leverage in rate negotiations with payors. Under the theory, this result is possible even though each merging hospital faces the identical set of rivals and competitive conditions in its individual relevant market after the merger that it faced before the merger.

A. Payor-Hospital Bargaining — General

How does cross-market theory explain this? It starts from a model of payor-hospital bargaining over the terms of a hospital's participation in the payor's health plan network — a model the FTC advances for intra-market mergers — that generally is as follows. Assume a market in which Hospital A is negotiating with a payor over a traditional fee-for-service network contract. Generally, as to rates, Hospital A weighs the trade-off of either accepting a lower-than-desired price or risking exclusion from the network; exclusion tends to put the hospital at a disadvantage relative to its competitors in competing for patients.

The payor weighs the trade-off of either paying a higher-than-desired price or risking Hospital A's refusal to participate in the network; this exclusion may diminish the network's appeal for employers and their employees,0 and tend to lessen the network's sales potential. Hospital A and the payor each have their own "walkaway" or "threat" price – a price at which it would refuse to sign a contract because the price (for Hospital A) is too low or (for the payor) is too high. Under this model, the contract price typically falls between the two walkaway points.

Under this bargaining model, the price at which the parties reach agreement approximates the value that health plan enrollees and their employers place on having in-network access to Hospital A. This value tends to be higher, and so too the negotiated price, to the extent other in-network hospitals are viewed as significantly weaker alternatives to Hospital A — a situation that strengthens Hospital A's bargaining position. The reverse is also true. Adding Hospital A to a network that already includes an essentially equal alternative to Hospital A adds relatively less incremental value to the network, and therefore tends to weaken Hospital A's bargaining position. From the payor's perspective, exclusion of Hospital A from the health plan network will reduce to some degree the network's marketability to employers. The significance of that reduction, and the extent to which the payor will pay a higher rate to Hospital A to avoid its exclusion, depends on whether the network includes a reasonable substitute for Hospital A. Absent such a substitute, excluding Hospital A may require the payor to reduce premiums to compete successfully for the employer's business.

B. Applying this Bargaining Theory to Cross-Market Mergers

Next, assume that Hospital A merges with Hospital B, which is located in a different geographic market.[4] Two sets of economists — Gregory Vistnes & Yianis Sarafidis ("V&S") and Leemore Dafny, Kate Ho and Robin S. Lee ("DH&L") — identify two scenarios in which the authors posit that this merger might enable each hospital to obtain a higher price, even though the competitive landscape within each hospital's respective market remains the same before and after the merger. Each scenario stems from factors that cause a linkage or non-separability between the markets in a payor contracting context, as described below.

The cross-market link has potential hospital price implications under this theory, if an employer whose employees reside in different hospital markets desires to purchase coverage from health plans that meets all of its employees' needs. The link may also have price implications if health plans operate a marketing strategy that charges the same premium to an employer per employee regardless of where the employee lives. V&S refer to the first scenario as the "employer choice" model and the second as the "health plan pricing" model, but the scenarios are commonly known by the terminology of "common customers" and "common insurers," respectively, that DH&L use.

3 Space does not permit a fully comprehensive description of the economic analyses set forth in the papers cited in note 1. The article attempts only to summarize cross-market theory's basic analytical underpinnings in these papers and to offer observations about them.

4 The models discussed here also apply to cross-market mergers involving multi-hospital systems. The example above of a merger between single hospitals is only for convenience.

Both scenarios stem from the merged system's ability (under the theory) to negotiate with payors from a position that enables it credibly to threaten the network with the loss of two hospitals simultaneously if the parties do not strike a deal. The models assume that the merged system can make this threat because it will negotiate on an "all or nothing" basis (i.e. neither hospital will participate in the network unless the insurer agrees to include both). The models also assume that payor networks will include hospitals from a broader region than a single geographic hospital market.

Prior to the merger, a threat by either individual hospital not to contract with an insurer affects only one hospital market. The central question under cross-market merger antitrust theory is whether a post-merger ability to threaten a payor simultaneously in two hospital markets, when prior to the merger each hospital could threaten the payor in only one, creates anticompetitive bargaining leverage for the merged system. As explained by V&S, this leverage will result at the expense of health plans "[i]f the loss in profits [to the plan] from losing both hospitals is greater than twice the loss from losing either individual hospital."[5] DH&L describe that same concept in stating that a cross-market merger can increase hospital bargaining power only if "the sum of the marginal contributions of each hospital to the insurer's objective (e.g. profits) is less than the marginal contribution of *both* hospitals jointly to the insurer."[6]

As noted, the literature describes two potential scenarios that link two separate hospital markets. In one, the common customer model (where the multi-region employer desires to offer health plan options that are attractive to a majority of its employees), simultaneous loss of multiple hospitals in a provider network would likely make the network less attractive to the multi-region employer. Under the assumption that losing multiple hospitals from a network disproportionately affects network value (relative to the sum of losing each hospital individually), the theory implies that the merger provides the hospital system with increased bargaining leverage.

The other scenario, the common insurer model, pertains to health plans that have a business strategy to charge the same premium to all employees of a multi-region employer, no matter in which hospital market the employees live or work. Economists have different theories about how this effect could come about. According to V&S, if a plan that uses this strategy loses a network hospital in one market and finds it necessary to reduce premiums to compete for the employer's business, then the plan would reduce premiums in all markets where employees of that employer reside or work. Affecting the amount of that reduction is the plan's prediction of how its health plan rivals will respond. V&S model a hypothetical scenario to show that "a multi-market hospital system can threaten a health plan with a greater profit loss than the systems' individual hospitals could threaten on their own."[7]

According to DH&L, the common insurer effect might occur through two different mechanisms. In one, a hospital subject to a regulatory cap may find that it can raise rates in another market after a merger with a non-regulated hospital. In the second, which the authors identify but largely dismiss as irrelevant, the combined system could "internalize pricing effects across markets" with different elasticity of demand for insurance.[8]

DH&L and Matthew S. Lewis & Kevin E. Pflum ("L&P") provide empirical analyses of cross-market mergers consummated in the decade or so prior to 2010. L&P, using a "difference in differences" approach, estimated hospital prices after numerous cross-market transactions across the U.S., finding that the average estimated net reimbursement rates at these hospitals increased by about 17 percent after joining an out-of-market hospital system.[9] DH&L estimated that hospitals, post-cross-market merger within the same state, raised prices by 7-10 percent; they also report that their evidence suggest that mergers of "proximate" hospitals -- defined as being within a 30-90 minute drive time -- had the largest price increases.[10] The V&S article does not contain empirical analyses of particular cross-market hospital mergers.[11]

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5 V&S, *supra* note 2 at 275.

6 DH&L, *supra* note 2 at 5-6 (emphasis in original).

7 V&S, *supra* note 2 at 283.

8 DH&L, *supra* note 2 at 12.

9 L&P, *supra* note 2 at 3.

10 DH&L, *supra* note 2 at 28.

11 V&S, *supra* note 2 at 259 (noting that citations to trade press reports about higher prices after cross-market mergers are not to suggest "proof" of an antitrust problem but "an indication that there is a need for a more careful analysis" of such mergers). The authors aim to "show that under some circumstances, cross-market hospital mergers *may* reduce competition even in the absence of any significant patient substitution between the merging hospitals" but "do not … mean to imply that most (or even many) such mergers should raise competitive concerns or a presumption of competitive harm." *Id.* (emphasis in original).

Readers should review the articles in full to understand the methods, conclusions and caveats that the authors ascribe to their results. Two pieces by economist David Argue — one with Scott Stein and another with Lona Fowdur — examine the V&S, DH&L and L&P analyses in more detail and with their expertise and perspectives as economists.[12] Below are observations about the V&S, DH&L and L&P analyses, some of which Argue et al. also addressed.

III. CHALLENGES IN CROSS-MARKET THEORY, PREDICTED EFFECTS AND LEGAL REMEDY

A. Some Theoretical and Empirical Issues

1. The theory assumes that a cross-market health system has good information about employers and health plans that enables it to exercise pricing power. One source of this power arises from a multi-region employer's policy to select health plans that appeal to a majority of its employees. The authors do not explain how a hospital necessarily would know that the employer had that policy and not an equally rational policy to purchase a health plan that best serves employees in the first market and another health plan that best serves employees in the second market. The latter policy would sever the link between markets that is central to the cross-market effects theory. (Even if the employer had the first policy prior to the merger, by changing to the latter after the merger, it would sever the link and avoid the hypothetical price increase.) Lack of information could also undermine the theoretical bargaining power when a health plan's pricing strategy is to charge the same premium to all employees of a multi-market employer; it is unclear how a hospital would know the payor's downstream pricing strategy.

2. Important for a price effect under V&S and DH&L is a disproportionate effect of a merged system's participation in an insurer's network on the insurer's profits, relative to the effect of each individual hospital within the system. It is not obvious why this situation would typically exist. Employees in the first market are displeased when a network excludes a hospital in their market, but are indifferent to network exclusions in the second market; employees in the second market show the identical bias. The employer wants to satisfy all its employees and presumably values them equally. An exclusion in one market would seem as likely to dissatisfy the employer as much as an exclusion would in the other market, both before and after the merger.

3. V&S and DH&L focus on multi-region employer influences on hospital-payor bargaining, but the fact remains that in each relevant geographic market involved in the cross-market merger, the hospital must continue to compete on price and quality within the unchanged constraints imposed by its competitors in that market. It is unclear how a cross-market merged firm would navigate between its theoretical increase in cross-market bargaining power due to the existence of multi-region employers and their employees, and at the same time remain price competitive within each of its geographic markets, in which single-market employers presumably are located as well. As DH&L note, "in reality, insurers compete to be offered by multiple employers; furthermore, the prices and networks over which they bargain are not typically employer-specific."[13] This makes it very difficult to discriminate on price to specific employers, and a risky strategy for cross-market firms if its prices are not competitive in each relevant market.

It might be easier to discriminate if the hospital system negotiated directly with multi-region employers, but employers could respond by not contracting directly. If a multi-region employer did seek to contract directly with a hospital, then it would seem more likely that the hospital system, rather than discriminate, would offer competitive rates to secure the account and not drive the employer to another cross-market system or to a commercial insurer. Moreover, if a cross-market merger did result in pricing power, "entry" via merger by another pair of cross-market hospitals potentially could restore bargaining leverage to the payor or multi-region employer.

4. Addressing the price effects found by L&P and DH&L, Argue & Stein assert that "[d]ata issues abound in these empirical models."[14] One issue is that the models' underlying data sources do not include actual transaction prices negotiated pre-merger and post-merger by any cross-market hospital system with commercial insurers. Instead, L&P and DH&L used merging parties' publicly reported aggregated pre- and post-merger total revenue data, after subtracting Medicare revenue but not Medicaid revenue (the latter, unlike Medicare revenue, is not publicly

12 See *supra* note 2 (citing pieces). Argue & Stein is from 2015; Argue & Fowdur is from 2016. Their comments pertain to earlier versions of the L&P and DH&L articles discussed herein (dated 2017 and 2018, respectively).

13 DH&L, *supra* note 2 at 11.

14 Argue & Stein, *supra* note 2 at 29.

available), and made various adjustments to formulate their proxies for prices. Not reported is how closely these aggregated proxies match actual price changes for hospital services. In their empirical analysis, moreover, DH&L did not identify and instead only estimated the existence of common customers — a foundational element of their anticompetitive effects theory. They explain that this is due to a lack of, or access to, the data by which to find them.[15] L&P "found *no* evidence that prices were influenced by employers operating in multiple markets," but did not draw conclusions from that.[16]

5. A reasonable potential explanation for a hospital price increase after a cross-market merger is the transfer of one merging party's superior bargaining team to the other merging party. Particularly if one party is significantly larger, has more resources, and maintains more and better data, this would not be a surprising outcome. DH&L do not dispute this, but state that this factor does not explain why they found price effects to be greater where the merging parties' markets were adjacent (separated by a 30-90 minute drive time) as opposed to being more than 90 minutes apart.[17] This response leads to another questionable aspect of the price study: By arbitrarily defining a separate market to be as short a drive away as 30 minutes, DH&L may have captured intra-market, not cross-market, effects. Arbitrary market definition may skew the empirical results in many other ways as well.

6. Another reasonable potential explanation for a hospital price increase after a cross-market merger could be that the merged firm improved quality in the system and the new price is quality adjusted. DH&L state that they controlled for this as to target hospitals, and found that "*acquirers* are raising their own prices, suggesting that significant quality improvements … are unlikely to be the source of price increases.[18] This comment lacks empirical foundation. There is no inherent reason why a buyer's quality cannot improve following a merger. Efficiencies from the merger could have funded the improvements, as could capital expenditures that were budgeted in prior years and unrelated to the merger. The price increase at the acquiring hospital also could have occurred pursuant to a contract preceding the cross-market merger.

B. Application of Antitrust Law

An antitrust challenge to a cross-market merger would face significant difficulties. Under of Section 7 of the Clayton Act, a cross-market hospital merger does not eliminate competition because the parties were not rivals and does not change market concentration. The transaction is not horizontal and therefore falls outside the framework of the FTC-DOJ Horizontal Merger Guidelines. It is not vertical because it occurs at the same level of distribution. Vertical mergers have two principal potential anticompetitive risks: Foreclosure of competitors from an upstream or downstream input that is necessary to compete, and facilitation of collusion when a horizontal rival deals with the integrated firm in a vertical transaction. Neither risk applies to a cross-market merger.

Regarding vertical mergers, the U.S. Court of Appeals for the District of Columbia Circuit recently said this: "Unlike horizontal mergers, the government cannot use a short cut to establish a presumption about the change in market concentration, because vertical mergers produce no immediate change in the relevant market share. Instead, the government must make a 'fact-specific' showing that proposed merger is 'likely to be anticompetitive.'"[19] No short cut to establish a presumption applies to a cross-market merger either,[20] and making a fact-specific showing of anticompetitive harm in the absence of a horizontal or vertical relationship makes such a showing very difficult. Legal challenges to mergers that are neither horizontal nor vertical (i.e. conglomerate mergers) are extremely rare and the antitrust agencies effectively abandoned the theories underlying them over forty years ago.[21]

Hospital organizations often provide many health services in addition to inpatient and outpatient care, such as physician, ancillary (e.g., imaging and home care) and sometimes health insurance. The relevant geographic markets for any of these other services may not exactly match the market for inpatient services. A cross-market hospital merger may therefore have a horizontal or vertical component that would fall within the ambit of Section 7. This possibility does not advance the cross-market hospital merger theory, which addresses market effects for services for

15 DH&L, *supra* note 2 at 24-25.

16 L&P, *supra* note 2 at 38-39 (emphasis added).

17 *Id.* at 14.

18 DH&L, *supra* note 2 at 3, 15 (emphasis in original).

19 *United States v. AT&T, Inc.*, 916 F.3d 1029, 1032 (D.C. Cir. 2019) (citations omitted).

20 DH&L appear to acknowledge the cross-market theory's limitations as predictive tool for enforcers, stating that "the direction of a cross-market effect in any particular setting may not be possible to sign theoretically." DH&L, *supra* note 2 at 10.

21 See ABA Section of Antitrust Law, Antitrust Law Developments (8th ed. 2017) at 404 and cases cited therein.

which the parties have no pre-merger interaction.

Cross-market merger theory faces similar challenges under other antitrust statutes. Section 1 of the Sherman Act, 15 U.S.C. § 1, prohibits agreements that restrain trade unreasonably. The pre-merger absence of actual or potential competition or vertical dealings between the parties, such that the merger restrains no pre-existing commerce, leaves the cross-market merger theory seemingly as difficult to prove under Section 1 as Section 7.

Section 2 of the Sherman Act, 15 U.S.C. § 2, prohibits monopolization, attempts to monopolize and conspiracies to monopolize achieved through exclusionary conduct. Even if either merging party had a market share at monopoly or near-monopoly levels, a post-merger price increase, in the absence of exclusionary conduct, would not state a claim under Section 2. The "charging of monopoly prices" without such conduct "is not unlawful." *Verizon Communications v. Trinko*, 540 U.S. 398 (2004).

It is unlikely that a court would rule that a cross-market merger agreement itself meets the exclusionary element, since it does not exclude competitors or increase market share. Analogies to forms of conduct that can be anticompetitive under Section 2, such as tying arrangements, monopoly leveraging and bundled pricing, also suffer from the absence of competitor foreclosure.

The premerger absence of actual or potential competition or vertical relationships would likely raise similar hurdles for a claim under Section 5 of the FTC Act, 15 U.S.C. § 45, which proscribes unfair methods of competition.

Cross-market hospital mergers have many potential benefits, such as enhancing scale to absorb more financial risk and drive down costs and increase quality, improving capabilities to manage population health, streamlining costs, improving analytics by accessing more key health data, bringing needed healthcare services to rural and disadvantaged areas. They can do this without eliminating competition between the merging parties. Merger policy should continue to allow these transactions to proceed without the cost and potential chilling effect of investigations. This policy should prevail at least until, and unless, economic learning and empirical evidence develop to a point of reliably predicting, upon application of a sound analytical framework, when a merger between hospitals in separate markets may likely harm consumers in violation of antitrust law.

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