

THE LONG, SLOW DECLINE OF ELZINGA-HOGARTY AND WHAT COMES AFTER



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I. THE LONG, SLOW DECLINE OF ELZINGA-HOGARTY

The history of federal hospital merger enforcement could be likened to an episode of *The Walking Dead*: the protagonist, thinking her opponent vanquished, looks up to find the same foe, though worse for the wear, attacking her anew. After some successes in the 1980s, federal antitrust agencies lost six successive attempts to block hospital mergers in the 1990s. During that decade, courts accepted broad relevant geographic markets (“RGMs”). The apparent presence of many hospitals competing with the merging parties contributed to most of these losses. Economists retained by merging hospitals used the Elzinga-Hogarty (“E-H”) test to identify broad RGMs (as had economists retained by the Department of Justice (“DoJ”) and the Federal Trade Commission (“FTC”) in the late 1980s and early 1990s). E-H delineates a geographic market by iteratively analyzing patient flows to and from a hypothetical market. By the early 2000s, academic research had identified critical flaws in E-H, provided a more precise framework for studying competition between hospitals and generated new empirical tools for analyzing hospital markets.²

Starting in 2004, the FTC, armed with these new insights, went on a winning streak. It won a challenge to a consummated hospital merger, blocked several prospective mergers in court, and used the threat of litigation to induce several other hospitals to abandon their merger plans. Applying a similar analytic approach, the FTC also successfully challenged a physician group merger. Along the way, it also prevailed in two Circuit Courts of Appeals. Courts had come to accept the new approach to hospital merger analysis, and the E-H test was dead and buried. Or so it seemed.

In December 2015, the FTC filed for preliminary injunctions against two proposed hospital mergers: between Hershey Medical Center and PinnacleHealth in Pennsylvania and between Advocate Health Care and NorthShore University HealthSystem in the north Chicago suburbs. In both cases, District Court judges concluded that the FTC failed to define a proper RGM and denied an injunction. Both Courts relied on the logic of the E-H test, even though they did not explicitly refer to it by name. The agencies’ nemesis from the 1990s had come back to life.

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² For a detailed treatment, see Capps, “From Rockford to Joplin and Back Again: The Impact of Economics on Hospital Merger Enforcement,” *Antitrust Bulletin* 59, no. 3 (2014): 443–78.

The FTC chose to fight on, and, on appeal, the respective Circuit Courts reversed both decisions. They accepted the FTC's proposed RGMs, recognizing that the lower Courts' analyses shared the flaws of the E-H test. Both mergers were subsequently abandoned.

It appears the E-H test may now have breathed its last breath.

A. The E-H Test and its Perils

In 1989, the DoJ successfully blocked the merger of Rockford Memorial and Swedish American hospitals in Rockford, Illinois, applying E-H to define the RGM. *Rockford Memorial* effectively enshrined E-H as the standard method for geographic market definition in hospital merger cases for the next decade.³

The E-H approach to defining the RGM examines the fraction of sales of the relevant product in the geographic area by purchasers from outside the area (inflows) and the fraction of purchasers within the area that obtains the product from outside the area (outflows). An RGM must account for at least 75 percent of sales by firms inside the RGM, and inflows and outflows of the relevant product must be low.⁴ When applied to hospitals, E-H tends to generate large relevant geographic markets with many competitors. Nearly all mergers in such broad RGMs would fail to meet the concentration threshold in the Horizontal Merger Guidelines ("HMG") for a "presumptively anticompetitive" merger.⁵

Even as courts used E-H to justify approval of hospital mergers, research demonstrated that hospital mergers systematically led to higher prices. In a 2000 paper, Vistnes advanced a *two-stage model of hospital competition* that helped resolve this tension. In the first stage, hospitals negotiate with insurers for network inclusion; in the second stage, hospitals compete for patients.⁶ Prices are determined in the first stage, where insurers are the primary customers. Therefore, while patient flow patterns "may suggest significant second stage competition, they shed little light on the magnitude of first-stage competition," namely, the extent to which merging hospitals could exercise market power and raise prices to insurers.⁷ Subsequent research showed that a hospital's bargaining leverage with insurers depends on the incremental value that the hospital brings to insurer networks.⁸ A 2003 paper by Capps et al. developed a metric for assessing this bargaining leverage, which they call Willingness to Pay ("WTP").⁹ A hospital will command higher prices from insurers when there are few substitutes available *from the perspective of insurers*, thereby giving that hospital a high WTP.

These insights highlighted conceptual flaws of E-H for analyzing hospital mergers. E-H assumes that because *some* patients travel outside the geographic area for hospital care, *many* patients would travel if prices increased. However, since insurance largely insulates patients from the actual price of healthcare services, they are unlikely to respond to a price increase by switching providers (the "payer problem").¹⁰ Moreover, while some patients may be willing to travel for hospital care, others will prefer to receive care locally. To market health plans to these patients, insurers need to include local providers in their hospital networks. Accordingly, a merger that reduces competition in a relatively small geographic area will enable the combined system to increase prices to insurers that market plans in that area, even though some patients in the area may

3 *United States v. Rockford Mem'l Corp.*, 717 F. Supp. 1251, 1266-78 (N.D. Ill. 1989), *aff'd*, 898 F.2d 1278 (7th Cir. 1990).

4 Elzinga & Hogarty, "The Problem of Geographic Market Delineation in Antimerger Suits," *Antitrust Bulletin* 18, no. 1 (1973): 45-82; Elzinga & Hogarty, "The Problem of Geographic Market Delineation Revisited: The Case of Coal," *Antitrust Bulletin* 23, no. 1 (1978): 1-18.

5 US Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, Aug. 19, 2010, <https://www.justice.gov/atr/horizontal-merger-guidelines-08192010>.

6 Vistnes, "Hospitals, Mergers, and Two-Stage Competition," *Antitrust Law Journal* 67, no. 3 (2000): 671-92.

7 *Id.* 673.

8 Town & Vistnes, "Hospital Competition in HMO Networks," *Journal of Health Economics* 20, no. 5 (2001): 733-53.

9 Capps, Dranove & Satterthwaite, "Competition and Market Power in Option Demand Markets," *RAND Journal of Economics* 34, no. 4 (2003): 737-63.

10 Elzinga & Swisher, "Limits of the Elzinga-Hogarty Test in Hospital Mergers: The Evanston Case," *International Journal of the Economics of Business* 18, no. 1 (2011): 133-46.

be willing to bypass their local providers (the “silent majority fallacy”).¹¹ The consequence of these flaws is that E-H tends to overstate the size of geographic markets and understate the potential for local mergers to enhance market power.

B. The Hershey-Pinnacle Merger

In December 2015, the FTC filed to block the merger between Hershey and Pinnacle, alleging that it would give the parties a 64 percent market share in a four-county area around Harrisburg, Pennsylvania.¹² The District Court ruled against the FTC, finding that “FTC’s four county ‘Harrisburg Area’ relevant geographic market is unrealistically narrow and does not assume the commercial realities faced by consumers in the region.”¹³ In reaching its conclusion, the Court quoted the Eighth Circuit’s *Little Rock Cardiology* opinion for the proposition that the “end goal [of geographic market definition] is to delineate a geographic area where, in the medical setting, few patients leave. . . and few patients enter.”¹⁴ Though the *Little Rock Cardiology* decision does not specifically refer to E-H, its analysis is based on the E-H test employed in *Rockford Memorial*.

The Court observed that 43.5 percent of Hershey’s patients came from outside the four-county area and concluded that high inflows “controvert the FTC’s assertion that [general acute care] services are ‘inherently local.’”¹⁵ The Court also asserted that the “19 hospitals within a 65 minute drive of Harrisburg” would “readily offer consumers an alternative” to accepting a price increase, even though 91 percent of area residents received care at a hospital within the four counties.¹⁶ In other words, the Court rejected the proposed four-county area as an RGM because it did not satisfy the E-H criteria that inflows and outflows are both small.

The FTC appealed the decision to the Third Circuit, which found that “[a]lthough the District Court correctly identified the hypothetical monopolist test, its decision reflects neither the proper formulation nor the correct application of that test.”¹⁷ Under the hypothetical monopolist test (“HMT”), a candidate RGM satisfies the test if a hypothetical monopolist of all firms in the region could profitably impose a small but significant and non-transitory increase in price (“SSNIP”).¹⁸

The Third Circuit correctly observed that the District Court had applied the E-H method from *Rockford Memorial*, which — referencing the payer problem and silent majority fallacy — it labeled a “discredited economic theory.”¹⁹ It criticized the lower Court for ignoring the fact that only 9 percent of patients leave the four-county area to receive care and for incorrectly neglecting the two-stage model of hospital competition.²⁰

Patients are relevant to the analysis, especially to the extent that their behavior affects the relative bargaining positions of insurers and hospitals as they negotiate rates. But patients, in large part, do not feel the impact of

11 Capps, Dranove, Greenstein & Satterthwaite, “The Silent Majority Fallacy of the Elzinga-Hogarty Criteria: A Critique and New Approach to Analyzing Hospital Mergers,” NBER Working Paper No. 8216 (2001), available at: <http://www.nber.org/papers/w8216>; Capps, Dranove, Greenstein & Satterthwaite, “Antitrust Policy and Hospital Mergers: Recommendations for a New Approach,” *Antitrust Bulletin* 47, no. 4 (2002): 677–714.

12 Complaint, *FTC et al. v. Penn State Hershey Medical Center et al.*, No. 1:15-cv-2363 (M.D. Pa. Dec. 9, 2015), available at: <https://www.ftc.gov/system/files/documents/cases/151214hersheypinnaclecmpt.pdf>, ¶¶ 4, 6.

13 Opinion, *FTC et al. v. Penn State Hershey Medical Center et al.*, No. 1:15-cv-2363 (M.D. Pa. May 9, 2016), at 11.

14 *Id.* at 9 (internal quotation marks omitted), quoting *Little Rock Cardiology Clinic PA v. Baptist Health*, 591 F.3d 591 (8th Cir. 2009) (quoting *United States v. Rockford Mem’l Corp.*, 717 F. Supp. 1251, 1267 (N.D. Ill. 1989), *aff’d* 898 F.2d 1278 (7th Cir. 1990)).

15 *Id.* at 9–10.

16 *Id.* at 10. Brief of Appellants FTC and Commonwealth of Pennsylvania, *FTC et al. v. Penn State Hershey Medical Center et al.*, No. 1:15-cv-2363 (3d Cir. June 2016), available at: <https://www.ftc.gov/system/files/documents/cases/160601pinnacleappealbrief.pdf>, at 10.

17 Opinion, *FTC et al. v. Penn State Hershey Medical Center et al.*, No. 1:15-cv-2363 (3d Cir. Sept. 27, 2016), available at: <https://www.ftc.gov/system/files/documents/cases/160927pinnacledecision.pdf> [hereinafter Third Circuit Appeals Court Opinion], at 16.

18 HMG § 4.1.1. Interestingly, the Third Circuit also noted in passing that the HMT is not necessarily “the only test that the district courts may use in determining whether the Government has met its burden to properly define the relevant geographic market.” Third Circuit Appeals Court Opinion, at 28.

19 *Id.* at 16, 17, 19.

20 *Id.* at 21, 22–23.

price increases. Insurers do. And they are the ones who negotiate directly with the hospitals to determine both reimbursement rates and the hospitals that will be included in their networks.

The Circuit Court concluded that a proper application of the HMT in hospital merger cases must be performed “through the lens of the insurers,” which the District Court had not done.²¹ It held that the FTC had properly defined the RGM, reversed the District Court’s decision, and directed it to issue a preliminary injunction. The parties then abandoned the transaction.

C. The Advocate-NorthShore Merger

Also in December 2015, the FTC and the State of Illinois filed to block the proposed merger of Advocate and NorthShore. The FTC alleged an RGM of northern Cook and southern Lake Counties (“the North Shore Area”) in which the parties owned six of eleven hospitals and had a 55 percent share.²²

The FTC’s expert, Steven Tenn, proposed a candidate RGM consisting of hospitals satisfying specific criteria, including that they are not “destination hospitals,” such as academic medical centers that offer advanced services that patients travel long distances to obtain.²³ Based on diversion analysis and other evidence, Dr. Tenn concluded that hospitals within his candidate RGM were sufficiently close substitutes that a hypothetical monopolist of the 11 included hospitals could profitably impose a SSNIP.²⁴

The District Court rejected that RGM. It found that Dr. Tenn “offers no economic basis for the ‘destination hospital’ designation in his first criterion. . . . Even if he had, his rationale for excluding such hospitals—that they are not substitutes for Advocate and NorthShore—assumes the answer to the very question the geographic exercise is designed to elicit; that is, are the destination hospitals substitutes for the merging parties?”²⁵ The Court also dismissed evidence that patients prefer to receive hospital care near their homes as “equivocal.”²⁶

On appeal, the Seventh Circuit reversed the District Court’s decision, determining that the lower Court had incorrectly applied the HMT and that its analysis of the candidate RGM was flawed.²⁷ It explained that using the HMT to identify the RGM is an iterative process: “[I]f a candidate market is too narrow, the test will show as much, and further iterations will broaden the market until it is big enough. . . . The district court seems to have mistaken those iterations for circularity.”²⁸

The Circuit Court also concluded that Dr. Tenn’s exclusion of “destination hospitals” was valid, stating that “demand for those few hospitals differs from demand for general acute care hospitals like these parties’ hospitals, which draw patients from much small geographic areas.”²⁹ And the Court rejected the assertion that the evidence that patients prefer to receive hospital care locally was “equivocal,” stating instead that “evidence on that point is strong.”³⁰

21 Id. 23.

22 Complaint, *In the Matter of Advocate Health Care Network et al.*, No. 9369 (FTC Dec. 2015), available at: <https://www.ftc.gov/system/files/documents/cases/151218ahc-pt3cmpt.pdf>, ¶¶ 23, 29.

23 Opinion, *FTC et al. v. Advocate Health Care et al.*, No. 15 C 11473 (N.D. Ill. June 20, 2016), available at: https://www.ftc.gov/system/files/documents/cases/2016.20.16_eef_no_485_redacted_opinion_and_order.pdf, at 7.

24 Id. at 8. For example, Dr. Tenn estimated that 48 percent of patients admitted to a hospital in the North Shore Area would seek care at another hospital in the area if their first choice became unavailable.

25 Id. at 9.

26 Id. at 10.

27 Opinion, *FTC et al. v. Advocate Health Care et al.*, No. 15 C 11473 (7th Cir. Oct. 31, 2016), available at: https://www.ftc.gov/system/files/documents/cases/161101advocate_ca7_opinion.pdf.

28 Id. at 20–21 (citations omitted).

29 Id. at 21.

30 Id. at 22.

Finally, although the District Court's analysis was not a direct application of E-H, as it was in the *Hershey* matter, the Seventh Circuit recognized that it nevertheless embedded a version of the silent majority fallacy. The Circuit Court observed that “insurers are the most relevant buyers” and that even if some patients are willing to travel, many are not.³¹ For that reason, “an insurer’s network must include either Advocate or NorthShore to offer a product marketable to employers” in the North Shore Area.³² Therefore, it found that the District Court erred in “focus[ing] on the patients who leave a proposed market instead of on hospitals’ market power over the patients who remain.”³³

The parties likewise abandoned the transaction after the District Court reevaluated the case and issued a preliminary injunction. The FTC’s winning streak in hospital merger cases was fully restored.

D. Implications for Hospital Merger Analysis

The precedent set by *Little Rock Cardiology* still holds in the Eight Circuit. Nevertheless, in light of the more recent decisions by the Third and Seventh Circuits discussed above, and other opinions in the Sixth and Ninth Circuits, arguments that rely on E-H are unlikely to succeed going forward.³⁴

Although E-H may be unreliable for defining RGMs, patient flow analysis may aid evaluation of hospital mergers in other ways. One example is the use of diversion ratios, as Dr. Tenn employed in *Advocate* to measure the fraction of patients that would substitute among the hospitals included in his North Shore Area RGM rather than substitute to outside hospitals. Diversion ratios also provide a direct measure of how closely substitutable merging hospitals are.³⁵

This is consistent with recent court decisions. Although the Third Circuit ruled in *Hershey* that “relying solely on patient flow data is not consistent with the hypothetical monopolist test,” it nevertheless found it informative that 91 percent of patients residing in the four-county area did not leave the area for hospital care.³⁶ In *Advocate*, the Seventh Circuit, in addition to placing great weight on Dr. Tenn’s diversion ratios, found the fact that 80 percent of patients travel less than 20 minutes for care compelling evidence that hospital services are largely local.³⁷ In the same case, on remand, the District Court agreed:³⁸

[T]he Court agrees with plaintiffs that “the Seventh Circuit did not hold that it is inappropriate to consider patient-level diversions;” it merely criticized how defendants and this Court interpreted them. . . . The purpose of the diversion ratios is to show whether the level of substitution between hospitals in the North Shore Area is high enough that, should a merger occur, the merged entity could profitably impose a SSNIP. (Citations omitted.)

Overall, the Courts recognized that patient travel patterns may be informative, but only if they are correctly interpreted in the context of the two-stage model of hospital competition.

31 *Id.* at 24.

32 *Id.* at 23.

33 *Id.* at 25.

34 *ProMedica Health Sys., Inc. v. FTC*, 749 F.3d 559 (6th Cir. 2014); *St. Alphonsus Med. Ctr.-Nampa Inc. v. St. Luke’s Health Sys., Ltd.*, 778 F.3d 775 (9th Cir. 2015). Showing that legal approaches can evolve in response to advances in economics, in 2015, the Supreme Court in *Kimble* stated that it “felt relatively free to revise . . . analysis as economic understanding evolves and . . . to reverse antitrust precedents that misperceived a practice’s competitive consequences.” *Kimble v. Marvel Entm’t, LLC*, 135 S. Ct. 2401 (2015), at 2412–2413.

35 See HMG § 6.1.

36 Third Circuit Appeals Court Opinion, at 20, 21.

37 Opinion, *FTC et al. v. Advocate Health Care et al.*, No. 15 C 11473 (7th Cir. Oct. 31, 2016), available at: https://www.ftc.gov/system/files/documents/cases/161101advocate_ca7_opinion.pdf, at 22–23.

38 Opinion, *FTC et al. v. Advocate Health Care et al.*, No. 15 C 11473 (N.D. Ill. Mar. 16, 2017), available at: https://www.ftc.gov/system/files/documents/cases/advocate_health_care_opinion_granting.pdf, at 14.

II. FUTURE BATTLEFRONTS IN HOSPITAL MERGER ENFORCEMENT

These cases provide clarity regarding hospital mergers that are likely to face stiff antitrust challenges. Absent strong failing firm or efficiencies arguments (and no strong alternative buyers), challenges to three-to-two and two-to-one mergers in smaller metro areas are likely to succeed. This does not describe most mergers, however. Given the ongoing wave of hospital consolidation, enforcement battles are unlikely to stop, but they likely will shift to different fronts.

A. Urban Mergers

While the repudiation of E-H and the adoption of the new two-stage modeling approach has clear implications for market definition in smaller metro areas, what is perhaps more startling is what the new approach says about market definition in larger metropolitan areas. Consider Chicago, which has nearly 80 hospitals, but no system that dominates the entire area. On the surface, the presence of so many hospitals and systems in a major metropolitan area suggests that further consolidation would not be presumptively anticompetitive. Yet the FTC chose the Chicago area as the battleground for its first case involving the new approach — its 2004 challenge to the consummated merger of Evanston Northwestern Hospital and Highland Park Hospital. FTC expert economist Deborah Haas-Wilson foreshadowed Dr. Tenn's analysis in *Advocate* by describing how area employers specifically value access to hospitals in Chicago's lakefront North Shore suburbs, an area immediately east of the RGM defined by the FTC in *Advocate*. Using the logic of the two-stage bargaining model, Dr. Haas-Wilson successfully argued that these suburbs represented an RGM.

The FTC has now successfully argued that two different slices of Chicago northern suburbs are RGMs. Nevertheless, questions remain about merger enforcement in large metro areas. For example, while the two-stage approach suggests that narrow slices of metropolitan areas may be RGMs, a purely qualitative analysis may lack a limiting principle, leading to the (likely incorrect) conclusion that all mergers of neighboring hospitals are anticompetitive. Economists can use the WTP measure to more precisely define an RGM, but it is not clear whether courts will find this quantitative approach dispositive. Perhaps with this in mind, Dr. Tenn employed multiple qualitative and quantitative criteria in arriving at his RGM. And while the Court was ultimately satisfied that a diversion ratio of 52 percent away from the area was sufficiently low to satisfy the HMT, both court precedent and economic literature provide little guidance regarding the correct threshold.

Similar questions regarding thresholds confront the other metrics commonly used by the agencies to evaluate hospital mergers. For example, in hospital merger cases, post-merger concentration has largely been well above the HMG thresholds for deals to be presumptively anticompetitive. Will courts block mergers that result in lower levels of concentration?

These issues, which have largely not been tested, are most likely to arise in merger cases in large urban areas.

B. Cross-Market Mergers

Of the hundreds of hospital mergers since 2000, the federal antitrust agencies have challenged only a handful. A key reason is that hospital merger enforcement has focused primarily on mergers that increase concentration within local markets. Most acquisitions, however, are by out-of-market systems. These are cross-market mergers.

A number of economists have recently begun studying such mergers. Motivated by concerns expressed by insurers that cross-market mergers enhance hospital bargaining leverage, a 2013 paper by Vistnes and Sarafidis proposed that merging parties may be able to command higher prices when they both serve a common customer, for example, a large employer with presence in both geographic markets. The basic intuition is that “even though a health plan may be able to continue marketing its plan to employers when they have one or two important ‘holes’ in their provider network, at some point a plan may have so many holes in its network that employers will be unwilling to offer that plan to their employees.”³⁹ This means that even if hospitals are not substitutes from the perspective of individual patients, they may be somewhat substitutable from the

39 Vistnes & Sarafidis, “Cross-market Hospital Mergers: A Holistic Approach,” *Antitrust Law Journal* 79, no. 1 (2013): 255.

perspective of insurers and employers. Under this theory, a cross-market merger could give hospitals the leverage needed to extract higher rates from insurers. Lewis and Pflum (2015) propose that information exchange between the merging entities may enhance their negotiating ability.⁴⁰ That is, mergers do not create additional bargaining leverage, but rather a greater ability to use existing bargaining leverage.

Recent empirical research has found evidence that cross-market mergers do lead to higher prices. Dafny et al. (2016) present evidence that price increases resulting from cross-market mergers are larger when the merging hospitals share common insurers and when they are closer in proximity, suggesting the effect is driven by common customers.⁴¹ Meanwhile, Lewis and Pflum (2016) cautiously interpret evidence that price increases are larger when the acquiring system is large or the acquired hospital is small to imply that improvements in negotiating ability may play a role.⁴² Thus far, the antitrust agencies have not challenged cross-market mergers, but this could change as economic research lends greater insight into their potential effects.

Given this evidence, it could be tempting to conclude that the now standard approach to geographic market definition may, in fact, be drawing the market too narrowly, since hospitals can be somewhat substitutable from the perspective of insurers even when they are not from the perspective of patients. However, such a conclusion would be mistaken. In any merger analysis, there may be multiple RGMs. Even if distant hospitals were to provide some price constraint, this would not generally imply that a merger that increases concentration in a smaller RGM would not also lead to an increase in market power.

C. Vertical Mergers

After decidedly mixed results in the 1990s, a second wave of vertical integration (“VI”) that centered on local hospital systems launched in the mid to late 2000s, when hospital systems began acquiring physician practices at an rapid pace and increasingly entering into accountable care organization (“ACO”) arrangements, which effectively are partial risk contracts.⁴³ Indeed, growing demand by insurers, including Medicare, for risk-based contracts could be driving VI.

A 2017 paper by Capps et al. provides evidence that VI has led to an increase in physician prices of as much as 14 percent three or more years post-integration, accounting for effects on both “facility fees” meant to cover costs for office space and equipment and “professional fees” meant to cover the cost of physician labor.⁴⁴ In most insurer contracts, facility fees are mechanically higher when a hospital owns the facility, even if the “facility” is a physician office. This accounts for about half of the observed price increase. At the same time, a hospital, especially if it has some degree of market power, may have previously negotiated higher professional fees and may bill at those higher rates when it acquires a physician practice. Capps et al. do not find evidence of offsetting improvements in efficiency (i.e. no consistent pattern of lower utilization). The latter finding echoes that of earlier studies and suggests that VI may be anticompetitive or simply inefficient on average.⁴⁵

If VI does not enhance the hospital system’s bargaining leverage, then price increases could be negotiated away in future contracts. The fact that they seem to persist for at least three years suggests that VI does increase leverage. Theories advanced in studies of cross-market mergers offer some insight into how VI might increase bargaining leverage. Even though

40 Lewis & Pflum, “Diagnosing Hospital System Bargaining Power in Managed Care Networks,” *American Economic Journal: Economic Policy* 7, no. 1 (2015): 243–74.

41 Dafny, Ho & Lee, “The Price Effects of Cross-Market Hospital Mergers,” NBER Working Paper No. 22106 (2016), available at: <http://www.nber.org/papers/w22106>.

42 Lewis & Pflum, “Hospital Systems and Bargaining Power: Evidence from Out-of-Market Acquisitions,” *RAND Journal of Economics*, forthcoming, available at: https://mslewis.people.clemson.edu/Research/Lewis_Pflum_hosp_bp.pdf.

43 Capps, Dranove & Ody, “The Effect of Hospital Acquisitions of Physician Practices on Prices and Spending,” 2017. This is an updated version of a paper appearing as Northwestern University Institute for Policy Research Working Paper WP-15-02.

44 Id.

45 For a good review of this literature, see Burns, Goldsmith & Sen, “Horizontal and Vertical Integration of Physicians: A Tale of Two Tails,” in *Annual Review of Health Care Management: Revisiting the Evolution of Health Systems Organization, Advances in Health Care Management*, ed. Friedman, Goes & Savage, 39–117 (Bingley, U.K.: Emerald Group Publishing, 2013).

hospital and physician services are not direct substitutes, they are both sold by insurers as a part of a bundle. Since insurer profitability may depend in part on the quality of these bundles, mergers could result in price increases even when components of the bundle are not direct substitutes to end consumers. Unfortunately, this logic lacks a limiting principle and might justify opposition to all VI. The economics literature, as it currently stands, provides little guidance to enforcement agencies in vertical merger investigations.

In practice, the agencies have rarely challenged vertical mergers, and when they have, those challenges have usually resulted in behavioral remedies rather than injunctions.⁴⁶ The exception is when VI includes an important horizontal component, in which case the agencies may simply challenge the merger on horizontal grounds. The most important example is *FTC v. St. Luke's*, in which the FTC prevailed by showing that St. Luke's acquisition of Saltzer Medical Group would likely increase prices for physician services.⁴⁷

While St. Luke's did not successfully rebut the FTC's horizontal arguments, it argued that VI would generate substantial efficiencies. St. Luke's efficiency expert Alain Enthoven testified that the market was rapidly integrating and this both enhanced efficiency and served policy goals, for example, by promoting ACOs. The FTC's expert, David Dranove, countered that the economic evidence in favor of efficiencies from VI was "unambiguously ambiguous" and that independent providers could contract with one another to create ACOs. The Court ultimately rejected St. Luke's efficiency defense. Moving forward, questions remain regarding both efficiency arguments and theories of harm based on VI.

III. CONCLUSION

Court decisions in *Hershey* and *Advocate* have reaffirmed that the flaws of E-H make it inappropriate for geographic market definition in hospital merger cases. Specifically, evidence concerning patient travel patterns must be interpreted in light of the two-stage model of hospital competition. The likely effect is that future mergers of competing hospitals in smaller metropolitan areas are likely to be blocked, absent mitigating circumstances. Such mergers may still attempt to evade federal antitrust scrutiny under the state action doctrine by pursuing Certificates of Public Advantage.⁴⁸ Time will tell whether such efforts are merely a coincidence or the beginning of a trend. Nevertheless, a number of open questions regarding federal hospital merger enforcement remain, including the agencies' treatment of urban mergers, cross-market acquisitions and vertical integration.

46 Salop & Culley, "Vertical Merger Enforcement Actions: 1994–2015," Georgetown Law Faculty Publications and Other Works 1529 (2015), available at: <http://scholarship.law.georgetown.edu/facpub/1529>; FTC, "The FTC's Merger Remedies 2006-2012: A Report of the Bureau of Competition and Economics," January 2017, available at: https://www.ftc.gov/system/files/documents/reports/ftcs-merger-remedies-2006-2012-report-bureaus-competition-economics/p143100_ftc_merger_remedies_2006-2012.pdf.

47 *FTC et al. v. St. Luke's Health System, Ltd. et al.*, No. 1:13-CV-00116-BLW (D. Id. Jan. 24, 2014).

48 See FTC, "Cabell Huntington Hospital/St. Mary's Medical Center, In the Matter of" (July 6, 2016), available at: <https://www.ftc.gov/enforcement/cases-proceedings/141-0218/cabell-huntington-hospitalst-marys-medical-center-matter>; Tennessee Department of Health, "COPA Application Proceedings" (May 22, 2017), available at: <https://www.tn.gov/health/article/certificate-of-public-advantage-application-proceedings>.