



# ECONOMICS COMMITTEE NEWSLETTER

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## **Welcome**

It is our pleasure to welcome you to the winter 2017 edition of the Economics Committee Newsletter. The newsletter aims to provide a forum where members of the Section of Antitrust Law and the Section's Economics Committee can share their views on topics related to the relationship of antitrust law and economics worldwide.

In this edition of the newsletter, we include three articles by economists and practitioners in the field. Megan Accordino, Eric Korman, Lorna Omondi, and Charlene Zhou provided their insights on the review of the Federal Energy Regulatory Commission's determination of submarkets in wholesale electric power mergers. Almudena Arcelus, Lucia Antras, Emily Cotton, Shannon Seitz, and Rachael Tibolt consider market definition analysis in Internet search context with special consideration of Google cases around different jurisdictions. Finally, Andrea Asoni analyses the geographic market definition in the hospital sector through two recent Court of Appeal decisions on merger cases. Whatever your background, these articles will provide valuable insights and perspectives.

The newsletter is intended to provoke discussion. As a result, the opinions expressed are only those of the authors and not necessarily those of the American Bar Association, the Section of Antitrust Law, the Economics Committee or its subcommittees or any other individuals or entities.

We hope that you enjoy the newsletter!

Kind Regards

Cani Fernández (Cuatrecasas SLP) and Daniel P. Weick (Wilson Sonsini Goodrich & Rosati), Co-editors.

## **The *Hershey* and *Advocate* appellate decisions and the analysis of geographic markets in hospital merger cases**

Andrea Asoni<sup>1</sup>

### **I. Introduction**

Geographic market definition is at the heart of antitrust analysis. Economists, lawyers, and the courts often spend a considerable amount of time and resources to understand the boundaries of the market at hand. Geographic markets can be as large as the entire planet or as small as a section of a city. They depend on the facts of the case (industry, location of the suppliers and the customers, customer preferences, etc.) as interpreted by the law and the prevailing economic theory.

Two recent Court of Appeals decisions – in *FTC and Commonwealth of Pennsylvania v. Penn State Hershey Medical Center and Pinnacle Health System*<sup>2</sup> and in *FTC and State of Illinois v. Advocate Health Care Network, et al.*<sup>3</sup> – have discussed at length geographic market definition in hospital merger cases. In both cases only the geographic market was at issue.<sup>4</sup> In both cases the appellate courts reversed District Court decisions that had rejected the geographic market proposed by the government as too narrow and found merit in theories leading to broader geographic markets. The appellate courts instead found that the District Court decisions were based on an incorrect understanding of the hypothetical monopolist test<sup>5</sup> and a misleading interpretation of the economic facts. The economic approach used by the District Court in fact suffered from both the “payer problem” and the “silent majority fallacy” discussed in detail below.<sup>6</sup>

The remainder of this article reviews the implications of the two appellate decisions for geographic market definition in hospital merger cases. In particular:

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<sup>2</sup> 838 F.3d 327 (3d Cir. 2016).

<sup>3</sup> 841 F.3d 460 (7th Cir. 2016).

<sup>4</sup> In both cases the product market was inpatient general acute care services sold to commercial health plans and their members.

<sup>5</sup> U.S. Dep’t of Justice & Federal Trade Commission, *Horizontal Merger Guidelines*, at 13-15 (2010) (“Guidelines”).

<sup>6</sup> Both issues will be discussed in the rest of this article. See sections 2 and 3.

(1) Both decisions embrace the two-staged nature of competition in the hospital industry. Hospitals compete, first, to be included in the health insurance provider networks; and, second, to attract patients. Significantly, the nature of competition is different in the two stages: while competition in the first stage is focused on prices, second-stage competition occurs along other dimensions, for example hospital characteristics such as quality, distance, etc. Ignoring the two stages of hospital competition might lead to underestimating the importance of health plans' preferences in the definition of the geographic market.

(2) Both decisions reaffirm the hypothetical monopolist test as the standard to define geographic markets and reject alternative methodologies, such as looking at customer flows in and out of the proposed market. The latter methodology might be appropriate for homogeneous products and customers but not for hospital care: Hospitals offer differentiated products and patients have heterogeneous preferences. In particular, while some patients might travel far from their residence to get hospital treatments this should not lead to believe that the geographic market is broad. Courts should instead focus on the market power bestowed on local hospitals by the preferences of those who do not travel.

(3) Both decisions recognize a (potential) special status for academic medical centers: antitrust practitioners should carefully consider their role in the delivery of medical services to far away populations and weigh whether they should be included or not in the candidate geographic market.

## **II. The two stages of hospital competition**

Both decisions embrace the view that competition among hospitals occurs in two stages: first, hospitals compete to be included in the networks of providers put together by health insurance companies. Second, hospitals compete to attract patients.<sup>7</sup> This distinction is important because hospitals<sup>8</sup> typically compete along different dimensions in the two stages.

In the first stage, hospitals compete mainly on prices. Hospitals benefit from the inclusion in the health insurance provider networks because of the (expected) increase in patients' volume: By being included in one more network the hospitals have access to a broader segment of the patient population, are able to receive more referrals from physicians, etc. Insurance companies benefit from the inclusion of a hospital in their network because of the broader appeal, for

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<sup>7</sup> Gregory Vistnes, "Hospitals, Mergers, and Two-Stage Competition," 67 *Antitrust Law Journal* 671 (2000).

<sup>8</sup> I will refer to hospitals throughout the article but the reasoning applies to hospital systems as well.

example to more employers, of their network, and/or because of the nature of the services offered by the hospitals, for example specialty (i.e. cancer, children, etc.), or the quality of the services offered.

Hospitals and insurance companies negotiate over the price of this inclusion, mainly the reimbursement rates that insurance companies pay the hospitals for the services provided to their members. Other aspects of this negotiation can include the mode of reimbursement, for example fee-for-service or capitation, or the rate of growth of the reimbursement rates over time.<sup>9</sup> Hospitals desire higher reimbursement rates while insurance companies prefer lower ones.

In the second stage hospitals compete to attract patients who are typically not sensitive to hospital prices. The main reason is that patients pay a small share of the price of the medical services received, typically through a co-pay, co-insurance, or deductible. While the share paid by the patients has been recently increasing it is still relatively minor.<sup>10</sup> Hospitals try to attract patients focusing on non-price factors: for example, quality of medical care, quality of non-medical care (i.e. comfort), range of services offered, etc. Location is one of the important factors of the patient decision.

The two stages of competition are related because the more patients a hospital can attract, the more bargaining power it has against the insurers. Hence, understanding patients' preference is important because it affects the negotiations between healthcare plans and hospitals.

However, according to the recent appellate decisions, a merger should ultimately be judged on its effect on the ability of the insurance providers to create a network that excludes the merging parties. The insurance system creates a wedge between the hospitals' customers and those who pay for the services, the

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<sup>9</sup> Insurance companies are increasingly adopting "tiered" networks. These are networks with multiple tiers defined by the share of the cost shouldered by the patients. For example, the higher tiers will have lower co-pay rates while lower tiers will have higher co-pays. Patients, while having access to all the hospitals in the network, will have a financial incentive to go to higher tiered/lower cost hospitals. Hospitals will negotiate with the insurance companies not only regarding the inclusion in the network but also on the tier. In practice, hospitals and health plans will have similar negotiating incentives to those existing in a non-tiered network negotiation.

<sup>10</sup> According to research by the Kaiser Foundation patient total cost sharing, which includes deductibles, co-payments, and co-insurance, for employees of large companies went from 13% in 2004 to 15% in 2014. Interestingly, the share of co-payment and co-insurance decreased from 10% to 8% but this decrease was more than compensated by the increase in deductible cost sharing, from 3% to 7%. See <http://www.healthsystemtracker.org/insight/payments-for-cost-sharing-increasing-rapidly-over-time/> (last accessed January 7, 2017).

insurers. This is sometimes referred to as the “payer problem.”<sup>11</sup> In both decisions the courts emphasize that since patients are insensitive to prices, because the services are largely paid by insurers, the parties that are directly affected by the merger are the health insurers. In the words of the Seventh Circuit in the *FTC v. Advocate* case: “[T]he geographic market question is therefore most directly about ‘the likely response of the insurers,’” not patients, to a price increase.”<sup>12</sup> Similarly, in the *FTC v. Penn State Hershey* case, the Third Circuit states that “the District Court failed to properly account for the likely response of insurers in the face of SSNIP. In fact, it completely neglected any mention of the insurers in the healthcare market. This incorrect focus reflects a misunderstanding of the ‘commercial realities’ of the healthcare market.”<sup>13</sup> In both cases the insurers testified that it would be impossible to market a plan in the proposed geographic market without the merging parties.<sup>14</sup>

Understanding the two-staged nature of hospital competition is important because it separates the role of the patients and the insurers, and emphasizes the role of the insurers as the ultimate payers. Both District Courts ignored the crucial role of the insurers and focused on patients’ behavior. The appellate decisions instead reframe the analysis of patients’ behavior as a factor in the negotiation between plans and hospitals, which should be central to the definition of the geographic market.

### **III. The hypothetical monopolist test is the correct methodology to define geographic market**

In both decisions the appellate courts find that the District Courts either ignored or incorrectly interpreted the results of the hypothetical monopolist test, and rather relied on different methodologies that the appellate courts found unreliable in the case of hospital mergers.

In both cases, the District Courts concluded that the geographic market proposed by the government was incorrectly defined and too narrow. They argued that patients travelling in and out of the proposed geographic market to

<sup>11</sup> See, e.g., Kenneth G. Elzinga and Anthony W. Swisher, *Limits of the Elzinga–Hogarty Test in Hospital Mergers: The Evanston Case*, 18 INT’L J. ECON. BUS. 133 (2011).

<sup>12</sup> *Advocate*, 841 F.3d at 471.

<sup>13</sup> *Penn State Hershey*, 838 F.3d at 342.

<sup>14</sup> See, e.g., *id.* at 345 (“[I]nsurers would have no choice but to accept a price increase from a combined Hershey/Pinnacle in lieu of excluding the hospitals from their network.”); *Advocate*, 841 F.3d at 465 (“[Insurers] testified unequivocally that it would be difficult or impossible to market a network to employers in metropolitan Chicago that excludes both NorthShore and Advocate.”).



get care supported broader markets. In *FTC v. Advocate*, the District Court pointed to the 52% of patients in the proposed market who would receive care outside of it, if their first choice hospital became unavailable; and to the (at most) 29% of patients who would divert to an academic medical center outside the proposed geographic market, if their first choice hospital became unavailable.<sup>15</sup> In *FTC v. Penn State Hershey*, the District Court observed that almost 44% of Hershey's patients came from areas outside the proposed market and concluded that this was a strong indication that the geographic market created by the FTC was too narrow.<sup>16</sup>

These conclusions were rejected by the appellate courts because they are inconsistent with the hypothetical monopolist test.<sup>17</sup> They are rather consistent with an approach that has been criticized in the context of hospital mergers, the Elzinga-Hogarty test.<sup>18</sup> Under this approach a geographic market would be properly defined if: (1) few customers would come from outside of the candidate market to purchase the relevant product (or LIFO, "little in from outside"); and (2) few customers would leave the candidate market to purchase the relevant product (or LOFI, "little out from inside").<sup>19</sup> The intuition behind the test is that a large number of customers buying outside the candidate market, or buying from outside the market, are able to discipline prices inside the market. The Elzinga-Hogarty test works better when both products and customer preferences are homogeneous, for example in the beer and coal industries. However, it becomes less reliable when patients have heterogeneous preferences and the products are differentiated. As discussed in the rest of this article, hospital inpatient services are differentiated and patient preferences are heterogeneous.

The hypothetical monopolist test is not predicated on empirical regularities but starts with a question: could a hypothetical monopolist selling in the candidate geographic market impose a small but significant and non-transitory

<sup>15</sup> *Advocate*, 841 F.3d at 475. Technically, these patients are not currently travelling out of the market to get care, but they would if their preferred hospital became unavailable. However, the District Court logical error – emphasizing the role of patients who leave rather than focusing on those who stay – is analogous to the one described below. *Id.* at 476.

<sup>16</sup> *Penn State Hershey*, 838 F.3d at 340.

<sup>17</sup> *Id.* at 339.

<sup>18</sup> Economists Kenneth Elzinga and Thomas Hogarty first proposed this test while studying the beer and coal industries. See Kenneth G. Elzinga and Thomas F. Hogarty, *The Problem of Geographic Market Delineation in Antitrust Suits*, 18 ANTITRUST BULLETIN 45 (1973); and Kenneth G. Elzinga and Thomas F. Hogarty, *The Problem of Geographic Market Delineation Revisited: The Case of Coal*, 23 ANTITRUST BULLETIN 1 (1978).

<sup>19</sup> There is no formal definition of what percentage of customers need to go outside the market or come from outside the market for the test to be valid. Market definition would be considered strong if less than 10% of customers were coming from outside the market, or leaving it; it would be considered weak if between 10% and 25% of customers were coming from outside the market, or leaving it.

increase in price (SSNIP)? If the answer is yes, then the geographic market is properly defined.<sup>20</sup> If not, one needs to consider a larger candidate market and repeat the experiment. The hypothetical monopolist test has an iterative nature – as explicitly noted by the Seventh Circuit in the *Advocate* case<sup>21</sup> – and, more importantly, it focuses on the relevant antitrust question of market power. Customer (patient, in this case) flows are an imperfect proxy for market power, and can lead to misleading conclusions if the underlying assumption of the Elzinga-Hogarty approach are ignored. This is the core difference between the Elzinga-Hogarty test and the hypothetical monopolist test, and the reason why, given the same set of data, the two tests can come to opposite conclusions.

Consider the facts of the cases: In the *FTC v. Advocate* case more than 25% of patients residing in the FTC-proposed geographic market received care outside of it.<sup>22</sup> In the *FTC v. Penn State Hershey* case, almost 44% of Hershey's patients came from outside the FTC-proposed geographic market.<sup>23</sup> The Elzinga-Hogarty logic suggests that the relevant geographic markets are larger than the ones proposed. The hypothetical monopolist test instead takes a step back and focuses on the crucial question: is the fact that 25% of patients travel outside the market to get hospital care enough to prevent a hypothetical monopolist from raising prices on the remaining 75%?

The Elzinga-Hogarty test implicitly assumes that the answer is yes. This is likely true if both the products and consumer preferences are relatively homogeneous. However other industries, healthcare delivery among them, are characterized by heterogeneous preferences and products: for example, people have different illnesses and might need different hospital services; some hospitals might focus their resources in certain specialties; hospitals might provide different levels of quality or service. Another important dimension of differentiation is distance: depending on their illness, some people are more willing to travel than others. In hospital care, as well as in other retail industries, convenience is one of the dimensions that customers choose on and hospitals' locations become important differentiators.

Because of patients' heterogeneous preferences for travelling, the Elzinga-Hogarty approach tends to generate large geographic markets. The hypothetical

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<sup>20</sup> This does not imply that the geographic market is also the narrowest market possible. Even if a narrow candidate market passes the hypothetical monopolist test, the test can be repeated on a broader candidate market which can also pass the test.

<sup>21</sup> *Advocate*, 841 F.3d at 473.

<sup>22</sup> *Id.* at 474.

<sup>23</sup> *Penn State Hershey*, 838 F.3d at 339.



monopolist test instead generates geographic markets that are much narrower, especially in urban areas, because it focuses on the ability of hospitals to raise prices on the patients that are not willing to travel. An implicit assumption of the Elzinga-Hogarty approach is that the preferences of the patients who travel farther from their residence to get hospital care (the “travelling patients”) are similar to the preferences of those who get hospital care in their local area (the “non-travelling patients”). However, if the different travelling patterns are the result of different preferences for travelling, the Elzinga-Hogarty approach will fall prey to the “silent majority fallacy:” by focusing on the behavior of the minority travelers the approach will overlook the market power created by the non-travelling patients’ preferences.<sup>24</sup>

In both the *FTC v. Advocate* and *FTC v. Penn State Hershey* cases, the appellate courts fault the lower courts for not having applied the hypothetical monopolist test correctly (or misunderstood its nature). The lower courts focused on patient flows data and drew incorrect conclusions because they did not ask the most fundamental question of market power.

### **3.1 Implementation of the hypothetical monopolist test to hospital mergers**

The Agencies, together with economists in academia and the private sector, have developed a consistent methodology for hospital mergers. This methodology can be used both to delineate geographic markets and to assess unilateral effects; while the implementation details vary, typically there are two stages:<sup>25</sup> first, economists estimate patients’ preferences. This process takes into account both the characteristics of the hospitals (location, teaching status, services provided, etc.) and the patients (age, gender, illness, race, etc.). The estimated preferences are used to calculate “diversion ratios”, i.e. where patients would go if prices at the hospital of their choice were raised or if it were excluded from the network, and the “willingness-to-pay” for each hospital. The higher a hospital’s willingness-to-pay, the more market power it has against healthcare plans when negotiating

<sup>24</sup> See, e.g., Cory S. Capps, David Dranove, Shane Greenstein, Mark Satterthwaite, “The Silent Majority Fallacy of the Elzinga-Hogarty Criteria: A Critique and New Approach to Analyzing Hospital Mergers,” NBER Working Paper no. w8216 (2001).

<sup>25</sup> See, e.g., Robert Town and Gregory Vistnes, “Hospital competition in HMO networks,” *Journal of Health Economics* 20 no. 5 (2001): 733–753; Cory Capps, David Dranove and Mark Satterthwaite, “Competition and Market Power in Option Demand Markets,” *The RAND Journal of Economics* 34 no. 4 (2003): 737–763; Gautam Gowrisankaran, Aviv Nevo and Robert Town, “Mergers When Prices Are Negotiated: Evidence from the Hospital Industry,” *American Economic Review* 105 no. 1 (2015): 172–203; and Joseph Farrell, David J. Balan, Keith Brand, and Brett W. Wendling, “Economics at the FTC: Hospital Mergers, Authorized Generic Drugs, and Consumer Credit Markets,” *Review of Industrial Organization* 39 no. 4 (2011): 271–296.

prices. In the second stage, economists analyze the relationship between willingness-to-pay and prices. The ultimate goal is to predict price changes following the merger but the results can be used to estimate geographic markets as well.

The appellate courts do not discuss the merit and the inner workings of this methodology but embrace its core principles – heterogeneous preferences and products – and find the results in terms of narrower geographic markets in line with the hypothetical monopolist test and consistent with the commercial reality of the hospital care markets.

#### **IV. The role of academic medical centers**

Both decisions are consistent with the idea that academic medical centers require special consideration. As discussed above, conditional on their illnesses people might have different preferences for travelling. In particular, people are more likely to travel away from their local area to get complex and advanced care in academic medical centers. Both appellate courts accept that a preference to travel to reach academic medical centers should not be interpreted as a preference to travel to get (basic) medical care. This is a special scenario of the silent majority fallacy: patients travelling to an academic medical center have different preferences than those staying in their local area.

In the *FTC v. Advocate Health* case the Seventh Circuit sides with the FTC expert's decision to exclude distant academic medical centers from the proposed geographic market, despite evidence that a non-negligible share of patients leave the proposed geographic market to reach them. In the *FTC v. Penn State Hershey* case, the Third Circuit discounts the evidence that many patients travel from outside the proposed market to get care at Penn State Hershey, partially on account of the fact that Penn State Hershey is a leading academic medical center and a teaching hospital.

The decisions should not be read to say that academic medical centers should automatically be excluded from the market, but rather that their inclusion should be carefully considered.

#### **v. Conclusions**

These recent appellate decisions have reaffirmed certain key elements for the determination of the geographic market in hospital mergers. First, the hypothetical monopolist test is central. Antitrust practitioners, academics,

economists, and counsels should focus on what prevents a hypothetical monopolist from raising prices in a certain area. Evidence of patients travelling in or outside the area can be misleading because of the silent majority fallacy. Second, hospital markets are often narrow. As in many retail markets, customers are driven by convenience, and distance strongly influences customer decisions. Third, hospitals compete in different markets. They negotiate prices with healthcare plans and compete to attract patients. Since the insurance model drives a wedge between those who purchase the service (the patients) and those who pay for it (the health insurers), antitrust practitioners should focus on payers rather than patients to determine the boundaries of the geographic market.