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How do health insurer market concentration and bargaining power with hospitals affect health insurance premiums?

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ABSTRACT

The US health insurance industry is highly concentrated, and health insurance premiums are high and rising rapidly. Policymakers have focused on the possible link between the two, leading to ACA provisions to increase insurer competition. However, while market power may enable insurers to include higher profit margins in their premiums, it may also result in stronger bargaining leverage with hospitals to negotiate lower payment rates to partially offset these higher premiums. We empirically examine the relationship between employer-sponsored fully-insured health insurance premiums and the level of concentration in local insurer and hospital markets using the nationally-representative 2006–2011 KFF/HRET Employer Health Benefits Survey. We exploit a unique feature of employer-sponsored insurance, in which self-insured employers purchase only administrative services from managed care organizations, to disentangle these different effects on insurer concentration by constructing one concentration measure representing fully-insured plans' transactions with employers and the other concentration measure representing insurers' bargaining with hospitals. As expected, we find that premiums are indeed higher for plans sold in markets with higher levels of concentration relevant to insurer transactions with employers, lower for plans in markets with higher levels of insurer concentration relevant to insurer bargaining with hospitals, and higher for plans in markets with higher levels of hospital market concentration.

1. Introduction

The US healthcare industry has become increasingly consolidated. While the wave of hospital mergers in the 1990s gave way to numerous studies of the implications of hospital consolidation, newfound attention in recent years has focused on consolidation in the US health insurance industry. Robinson (2004) documents the increasing concentration of these markets over the first half of the 2000s, as well as the predominance of insurance markets dominated by a small number of large, nationwide insurers. Similarly, a report from the American Medical Association (2013) highlights the preponderance of health insurance markets across the country that are highly concentrated, as defined by the standards set forth by the Department of Justice (DOJ) and Federal Trade Commission (FTC) in their Horizontal Merger Guidelines (2010).

This increased level of interest in insurer concentration is warranted for several reasons. Understanding the effects of these high levels of market concentration and their implications for premiums is valuable generally, but particularly so for an industry facing such high and rapidly rising premiums. Further, there are a number of policy provisions included in the 2010 Patient Protection and Affordable Care Act (ACA) that have important implications for the level of competition in the US health insurance industry. The creation of health insurance exchanges and the inclusion of variant forms of health insurers (such as CO-OP plans and nonprofit plans directed by Office of Personnel Management) as competitors alongside more traditional insurers are examples of ACA provisions targeted toward increasing competition in the private health insurance industry.

However, the ultimate effect of the level of health insurance concentration on health insurance premiums is not straightforward, because there are potentially offsetting effects of the level of insurer competition on premiums. On one hand, higher levels

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of insurer concentration should lead to increased insurer market power in the markets where insurance is sold (to employers and individuals), likely resulting in relatively higher premiums due to higher plan profit margins, all else equal. On the other hand, insurers also engage in bilateral bargaining over transaction prices with providers, one of the key drivers of insurer costs. Thus, higher levels of insurer market concentration may yield stronger insurer bargaining leverage with local providers, thereby enabling them to negotiate lower provider prices, which may partly be passed on to insurance purchasers in the form of lower premiums. This purchasing power effect is particularly important, given the recent movement toward increased consolidation among provider markets driven by the ACA and other trends (Cutler and Scott Morton, 2013).

Moreover, the effects of insurer market power may depend on the amount of provider market power, and vice versa. The extent to which insurers can use their bargaining leverage to negotiate lower provider prices likely depends on the level of competition in the local provider market, as these prices may already be at or near the point at which economic profits are zero in relatively competitive provider markets. Furthermore, the extent to which hospitals can use their bargaining leverage likely depends on local insurance market conditions. A better understanding of the extent to which higher prices resulting from concentrated provider markets are passed through to consumers in the form of higher premiums (rather than simply representing a transfer of rents from insurers to providers) is particularly relevant for antitrust enforcement in terms of evaluating the extent to which hospital market consolidation ultimately harms consumers.[2]

1.1. Our empirical contribution

In this paper, we empirically analyze the relationships between insurer concentration, hospital concentration, and employer-sponsored health insurance premiums. Our primary empirical contribution is that we identify a way to disentangle insurer concentration's differing effects on higher insurer profits and lower provider prices. We do so by exploiting a unique feature of the market for employer-sponsored insurance whereby smaller employers tend to purchase fully-insured coverage whereas larger employers tend to self-insure and purchase only administrative services from managed care plans (such as provider network assembly and claims processing). An insurer's market share in the fully-insured market is mainly relevant to the plan's profits, while an insurer's market share in the fully-insured and self-insured markets combined is mainly relevant to provider prices.

More specifically, we construct two distinct measures of health insurance market concentration to disentangle these two effects. Both concentration measures use the HealthLeaders-InterStudy census of private insurers to construct Herfindahl-Hirschman Indices (HHI) of market concentration, and we consider HHIs alternatively using Core-Based Statistical Areas (CBSA), with the Metropolitan Divisions therein, and counties as the geographic market boundaries. One HHI market concentration measure focuses on the profit portion of the premium's administrative overhead tied to the transactions between fully-insured plans and employers by only using HealthLeaders-InterStudy's fully-insured plans in its HHI's market share calculation. We hypothesize that, all else equal, concentration in the fully-insured market will be associated with relatively higher health insurance premiums.

The second HHI market concentration measure focuses on the hospital price's portion of the premium tied to the negotiations between insurers and hospitals. While self-insured enrollment represents a distinct product that is sold to employers, the insurer's patient volume across the entire combined "book of business" (i.e., the fully-insured market and the self-insured market) represents its market share relevant to the price negotiations with hospitals. We therefore use these HealthLeaders-InterStudy data to measure each plan's fully-insured and self-insured combined market share in this HHI calculation representing insurer bargaining with providers. We hypothesize that concentration in the fully-insured and self-insured markets combined will be associated with relatively lower health insurance premiums. (We also hypothesize that higher hospital market concentration – derived from the American Hospital Association's (AHA) Annual Survey – will be associated with relatively higher health insurance premiums.)

Using plan-level premium data from the restricted-use Kaiser Family Foundation/Health Research and Educational Trust (KFF/HRET) Employer Health Benefits Survey for years 2006 through 2011, we find that premiums are indeed higher among markets with higher levels of insurer concentration representing fully-insured coverage sold to employers (and higher among more concentrated hospital markets), and we find that premiums are indeed lower among markets with higher levels of insurer concentration representing insurer bargaining with hospitals (derived from combined fully-insured and self-insured market shares).

Regarding the organization of the remainder of the paper, we first summarize the relevant literature on the effects of insurer and hospital concentration and then describe the conceptual framework. We then explain our empirical model, data, and market definitions. Our results, discussion, limitations, and conclusions follow.

2. Relevant literature

The majority of studies related to competition in the US healthcare industry over the past few decades have focused on competition and consolidation among hospitals. Gaynor and Vogt (2000), Vogt and Town (2006), and Gaynor and Town (2011, 2012) provide excellent reviews of this literature. While many of these studies yield unique findings, the results generally suggest that increasing consolidation in the hospital industry is associated with higher hospital prices.

The literature on the association between insurance premiums and the level of competition in the US health insurance industry, particularly within the employer-sponsored market, is more limited, largely due to data limitations. Early studies by Wholey et al. (1995) and Dranove et al. (2003) find that markets with more HMO competitors are associated with lower premiums. Dafny (2010) finds evidence of price discrimination as a consequence of insurer market power. Using a proprietary dataset containing information about the insurance benefits offered by large employers between 1998 and 2005, she utilizes variation in the profitability of these large employers to illustrate that insurers in concentrated insurance markets impose higher premium increases on more profitable employers (assumed to be less price sensitive). Dafny et al. (2012) observe a positive effect of insurer consolidation on health insurance premiums by exploiting the 1999 merger of nationwide insurers Aetna and Prudential as a source of differential changes in local insurance market concentration across the country. Using this instrument and the same dataset of large employers as above, they find a significant effect of increases in local insurance market concentration on increases in health insurance premiums. Additionally, they explore the possible effects of insurance consolidation on bargaining power with providers, finding that

[2] We thank Chris Garmon for highlighting this point.