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Ex ante or ex post competition policy? A progress report

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ABSTRACT

When intervening in markets, say to block a merger, competition authorities are constrained by the limited information they have about the social desirability of the available alternatives. Compared to ex ante control, ex post control is based on the more accurate information that becomes available in the intervening period, but entails temporary losses to social welfare and reversal costs incurred to unscramble the eggs. Through a toy model, we identify situations in which the competition authority finds it optimal to commit to forego the option of ex post review in order to avoid chilling ex ante socially beneficial mergers. On the other hand, the case for ex post review is strengthened if post-merger market conducts can signal the merged firm's private information about the consequences of the merger.

The process of formulating competition policy frequently requires public antitrust authorities to make difficult judgments amid uncertainty about the competitive significance of various forms of business conduct. Will a merger of two significant rivals retard or increase competition? Are the restrictions that limit the freedom of participants in a joint venture reasonably necessary to ensure the development of a new product? Are the business justifications offered to support a refusal to deal or an exclusive contract genuine or contrived? (Kovacic, 2001, page 844).

1. Introduction

A key challenge of competition policy is to base intervention on accurate information. For example, when deciding whether to block a merger, a competition authority faces the daunting task of assessing the likely effects of the merger on consumers. In the merger review process the authority should forecast how the market evolution will be affected by the merger: What is the right way to define the market? How will the remaining competitors react to the merger? Will new players enter the market? How will technology develop? How will demand evolve? Alternatively, the authority could take a "wait and see" approach by letting the merger go through so as to have a more accurate picture of the actual effects of the merger. However, unscrambling the eggs can be very costly once the merger is already in place:

> Fashioning a divestiture package after the close of a merger is difficult. Where two companies have combined their business operations and have begun the process of assimilating product lines, combining real estate, shedding duplicative manufacturing capabilities, or aggregating intellectual property, a post-close order of divestiture may be difficult, costly, punitive to the business involved in the merger, and, overall, detrimental to customers (Sher, 2004, pages 81–82).

The question then arises of the choice between (and optimal mix of) ex ante control and ex post control.

This paper highlights some of Ottaviani and Wickelgren's (2010) findings on the optimal timing of approval regulation. Even though the analysis applies to many other regulatory approval processes, for concreteness we focus on competition policy, with a particular emphasis on merger control. In the Unites States the principal federal statute relevant for the merger review process is Section 7 of the 1914 Clayton Act which prohibits mergers and acquisition whose effect "may be substantially to lessen competition, or to tend to create a monopoly."[1] The probabilistic language of the Clayton Act could have given the government substantial latitude in blocking mergers. However, the government found it difficult to prove the merging parties' intent to merge and so obtain preliminary injunction to block transactions before they are enacted. Once firms had already mingled their assets, it became difficult to reinstate the pre-merger market structure.[2] To alleviate this problem, the Hart–Scott–Rodino (HSR) Antitrust Improvement Act of 1976 introduced the current premerger

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[1] The existence of some loopholes made it very difficult to apply Section 7 of the Clayton Act until the passing of the Celler–Kefauver amendments in 1950. Lewis (1972) reports that the number of Section 7 suits brought by the U.S. government increased from 21 in the period 1914–1955 to 167 in the period 1956–1971.

[2] For the period before the institution of the premerger notification program, Elzinga (1969), Pfunder et al. (1972), and Rogowsky (1986) provide evidence on the ineffectiveness of divestiture orders in reinstating pre-merger conditions.

notification program that requires parties involved in sufficiently large mergers to notify their intention to merge before closing the deal.[3] Following notification, mergers are cleared or challenged.

Nevertheless, the government can still challenge consummated mergers.[4] As stated by former Federal Trade Commission (FTC) Chairman Timothy J. Muris (2001): "We are quite prepared to go after consummated mergers or mergers that are too small to require an HSR filing." Even though this option is rarely used, in recent years mergers have attracted increased ex post scrutiny. Note that ex post interventions after HSR approval are not precluded under the current system, although they are rare.[5] Since 2009 the FTC has challenged seven consummated mergers, compared to an average of one per year in the past. There has been a similar spike in civil investigative demands issued by the Department of Justice, with seven in 2009, two in 2008, and one in 2007.

We proceed to analyze the tradeoff between ex ante and ex post regulatory control through a streamlined model. The model is a binary-state version of the continuous-state model of Ottaviani and Wickelgren (2010), to which we refer for a more detailed discussion of the literature. Besanko and Spulber (1993) formulate an early model of the merger review process, but in their setting the authority does not choose the timing of the decision, as in our model. Our model can be seen as a simple collective experimentation problem (see Strulovici, 2010), given that information about the effect of the merger is generated only if both the firm makes the acquisition and the antitrust authority allows it.

Even though our presentation focuses on merger control, the tradeoff between ex ante and ex post regulation is relevant for many other competition policy decisions, such as those regarding agreement among competitors and vertical restraints. Through the adoption of Council Regulation (EC) 1/2003 (so called Modernisation Regulation), the EU has recently implemented a move toward ex post control in the regulation of agreements among competitors, thereby phasing out an ex ante control system (originally established by Regulation 17/62) based on mandatory notification.[6] In the area of consumer financial protection and financial stability, instead, the recent financial crisis has spurred a move toward increased ex ante regulation.

Section 2 introduces our toy model. Section 3 analyzes the baseline model with symmetric learning about the consequences of the merger. Section 4 extends the model to allow the firm to observe privately the effect of the merger and to signal it to the antitrust authority though its market conduct. Section 5 concludes with a summary of the findings and an overview of our broader research on the timing of approval regulation.

2. Toy model

In period 0, a firm is contemplating an acquisition. The change in profits from the acquisition will depend on the market power generated as well as on the efficiency gained. Assume for the moment that the efficiency gains are common knowledge to both the firm and the antitrust regulator and that these increase profits and consumer surplus, while the amount of market power generated is uncertain.[7] With probability q the post-acquisition level of competition in the market is high, in which case the net payoff from the deal for the firm is π_H and the social payoff is $\theta_H>0$, and with probability $1-q$ the deal generates a lot of market power so there is little competition in the market, in which case the payoff to the firm from the acquisition is π_L while the social payoff is $\theta_L<0$. Notice that L and H represent low and high social payoffs, not private payoffs. These are per period payoffs that occur in each of $n+1$ periods starting in period 1.

3. Symmetric learning

If the antitrust authority decides whether or not to approve the deal in period 0, it will do so if and only if

$$q\theta_H + (1-q)\theta_L > 0.$$

Then, expected social welfare is $\max\{(n+1)[q\theta_H+(1-q)\theta_L],0\}$. We proceed under the assumption that the merger generates positive expected profits for the firm, $q\pi_H+(1-q)\pi_L>0$.

Alternatively, say the antitrust authority can allow the deal in period 0 and then review it in period 1. We assume at this point that after seeing what happens for one period, the amount of market power the deal generates becomes known to all. In case the antitrust authority decides to undo the merger after one period, however, the firm must bear a private cost of k to "unscramble the eggs." While private, this cost also detracts from social welfare. Then, in period 1, the antitrust authority will undo the merger in state L if and only if $n\theta_L<-k$, while it will never undo the merger in state H because $\theta_H>0$.[8] If $n\theta_L<-k$, then expected social welfare from ex post review is:

$$q(n+1)\theta_H + (1-q)(\theta_L-k). \tag{1}$$

If instead $n\theta_L\geq -k$, there is never any ex post scrutiny of the deal.

Clearly, if $n\theta_L<-k$, ex post review is optimal if $q\theta_H+(1-q)\theta_L>0$. The interesting issue is whether to prohibit the deal ex ante or wait for ex post review if $q\theta_H+(1-q)\theta_L<0$. Prohibiting the deal leads to expected social welfare of zero. We can rewrite the social welfare from ex post review Eq. (1) as:

$$(n+1)[q\theta_H + (1-q)\theta_L] + (1-q)\Delta, \tag{2}$$

where $\Delta=-n\theta_L-k>0$ is the social welfare gain from prohibiting a merger that generates a lot of market power. The first addend in Eq. (2) is negative since we are considering an acquisition that generates negative expected social welfare. The second addend in Eq. (2) is positive and represents the option value from waiting to learn more about the actual effects of the merger.

As one should expect, this option value is increasing in the savings that can be achieved from undoing a socially harmful merger, represented by $\Delta=-n\theta_L-k$. It is also larger the smaller is q, that is, the smaller is the probability of the good state. Of course, larger q also means the first term is not so negative. That said, if we hold constant the expected social loss from the merger, ex post review is more likely to be superior as Δ increases, because the bad state is either more likely (as q is reduced) or more socially harmful (as the social loss θ_L is larger in absolute value or the second period's length n increases). That is, for any given (negative) mean effect of the deal, ex post review is more desirable if the merger is very likely to be bad and very harmful when it is, but when it is good, the social welfare gain is quite large compared to a situation where there is less variance in the effect of the deal.

One potential concern about ex post review, however, might occur in situations in which the deal would be approved ex ante, that is when $q\theta_H+(1-q)\theta_L>0$. The possibility of ex post review might discourage such mergers that are in expectation socially desirable. Under ex post review the antitrust authority will effectively allow the merger only in the state in which the firm wishes it had not merged. If the firm's

[3] We refer to Johnson and Parkman (1991) for more details on the institution of the premerger notification program.

[4] See Compton and Sher (2003), Sher (2004), and Leibeskind (2004).

[5] See Evanston Northwestern–Highland Park Hospital and Chicago Bridge & Iron for two recent highly publicized cases of post hoc reviews of mergers where were notified and initially cleared.

[6] See Barros (2003) and Loss et al. (2008) for details and analyses.

[7] Later in this illustration when we discuss signaling, we will consider a case in which the market power effect of the merger is known but the level of efficiencies are unknown in period 0.

[8] Here we are assuming that the firm stays merged in state H, which would be the case if $n\pi_H\geq -k$.